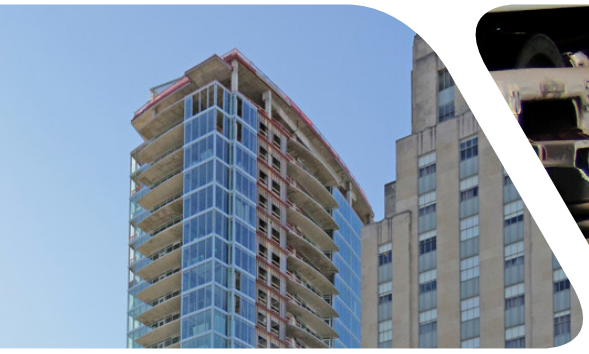
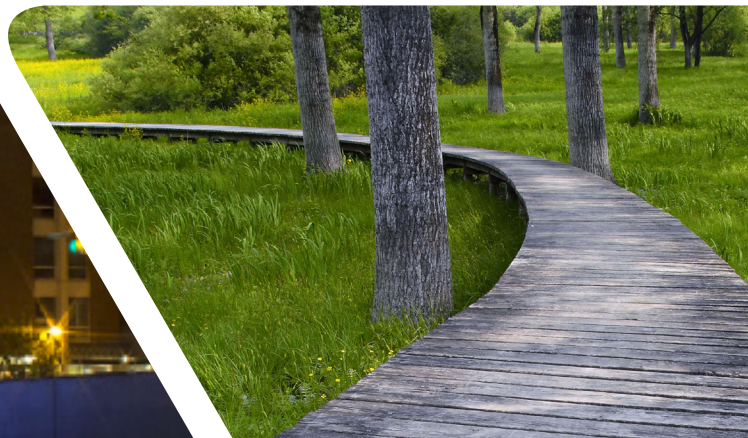
DCHC MPO

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

STATE OF THE REGION

2018





DCHC

Metropolitan Planning Organization

Planning Tomorrow Today

Image: Historic Downtown Hillsborough
Photo Credit: Renaissance Planning

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EXECUTIVE SUMMARY

WHAT IS STATE OF THE REGION?

The State of the Region Report is a snapshot of the Durham-Chapel-Hill-Carrboro (DCHC) Metropolitan Planning Organization (MPO) region's transportation system, and the issues, trends, opportunities and challenges we face in providing effective and efficient transportation for all users.

Historically, State of the Region reports focused exclusively on mobility, particularly how cars, trucks, buses, and people moved through the transportation network. In recent years, it has become increasingly clear that understanding the transportation system requires a more comprehensive approach. This State of the Region Report identifies five key focus areas to guide policy and investment for the DCHC transportation network.

FOCUS AREAS

MOBILITY

SAFETY

LAND USE & DEMOGRAPHICS

ECONOMIC DEVELOPMENT

MULTIMODAL ACCESSIBILITY

WHY DOES IT MATTER?

This report sheds light on how the transportation system fits into DCHC's goals of providing great quality of life, economic viability, and environmental sustainability through transportation. A robust, data-focused evaluation of the issues that affect and are affected by transportation is critical to meeting those goals. The State of the Region Report is designed to provide insight into how each part of the transportation system is performing relative to these goals.

WHAT ARE THE KEY FINDINGS?

The DCHC region is a growing hub of activity in the southeast United States. A complex transportation network connects the major growth centers within the region (including downtown Durham and Chapel Hill), and connects the region to nearby activity centers, including the city of Raleigh and the broader Southeast United States. The major highways that serve as these connectors are increasingly busy, carrying more trips than ever. Daily traffic and VMT are on the rise, including a rise in annual truck traffic. The value of freight cargo is also rising, indicating a shifting economy towards advanced manufacturing and technology. These trends contribute to rising congestion and commute times, and lead to safety concerns. In particular, vehicular and pedestrian crash rates are on the rise. The DCHC MPO set incident targets to monitor crashes and fatalities; incidents across the region have surpassed desired targets each year since 2012. While the region is dominated by vehicular travel, transit use is slowly rising, as are alternate modes of commuting such as ride sharing and working from home. These trends also reflect the changing dynamics of the knowledge economy, indicating the interrelationship between mobility and safety, and broader dynamics of land use, economics, and accessibility.

WHAT ARE THE DRIVERS OF CHANGE?

Dynamics at the national and regional scale have a strong influence on travel choice and transportation patterns in the DCHC region. Some of the most powerful forces in the region include steadily growing trends in population, employment, and development. The nature of this growth is tied to changing dynamics in the economy – a shift towards a knowledge based economy changes industrial location and the resulting commute patterns.

OUR REGION

The MPO region includes: the larger municipalities of Durham and Chapel Hill; the growing small towns of Hillsborough and Carrboro; all of Durham County; and portions of Orange and Chatham County. Other member agencies include the North Carolina Department of Transportation (NCDOT) and Triangle Transit. Collectively, the region is one of the strongest, fastest growing economies in the United States. This growth has improved quality of life for many residents and continues to attract new residents.

PEOPLE

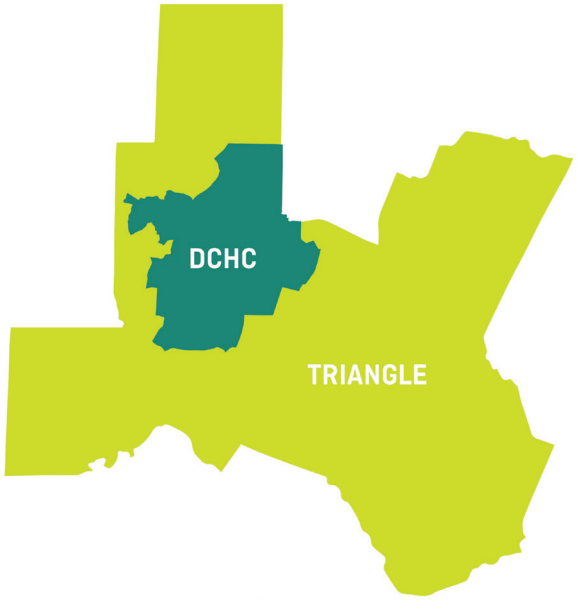
Between 2016 and 2017, the Durham-Chapel Hill Metropolitan Area grew by approximately 22 people every day. The larger Triangle area (which includes DCHC and Raleigh Metro areas) grew by 100 people per day in that same period. The Triangle area is attractive to residents of all ages – from millennials to seniors. It is critical that a wide range of transportation options are provided to meet a variety of needs. By 2040, the MPO region is expected to add over 230,000 new residents. Twenty percent of Triangle residents will be 65 or older in 2030, compared to 10% in 2000.

JOBS

The Durham-Chapel Hill metro area, and greater Triangle metro area, consistently rank as areas in the United States with the high job growth and quality of life. In 2016, the DCHC Metro hosted approximately 297,000 jobs - a 14% increase from 2010 employment. The larger Triangle area hosted approximately 970,000 jobs in 2016, representing a 17% increase since 2010.

The DCHC REGION is home to 3 major universities including North Carolina Central University (NCCU), The University of North Carolina at Chapel Hill (UNC), and Duke University.

RESEARCH TRIANGLE PARK (RTP) is a national hub of innovation and entrepreneurship and is home to 200 companies and 50,000 jobs



Between 2016 and 2017
The DCHC REGION grew by 22 people per day
The TRIANGLE REGION grew by 100 people per day

Source: 2012-2016 American Community Survey (ACS) 5-Year Estimate

TRAVEL

From 2010 to 2016, the DCHC regional population increased by roughly 48,000 (or 10%). Approximately two thirds of that growth occurred in the region's five cities and towns. Population growth contributes, in part, to increases in vehicle travel. However, daily vehicle miles traveled (VMT) in the region increased by approximately 2,900 VMT (or 19%). VMT is therefore growing almost twice as fast as population. This increase could be attributed to a rise in employment within the three counties, but also demonstrates the auto-dependency of residents in the region. The MPO anticipates that VMT will double between 2010 and 2040.

There are **294,618** PEOPLE in
There are **197,607** JOBS in **DURHAM COUNTY**

There are **68,778** PEOPLE in
There are **15,745** JOBS in **CHATHAM COUNTY**

There are **139,807** PEOPLE in
There are **74,735** JOBS in **ORANGE COUNTY**

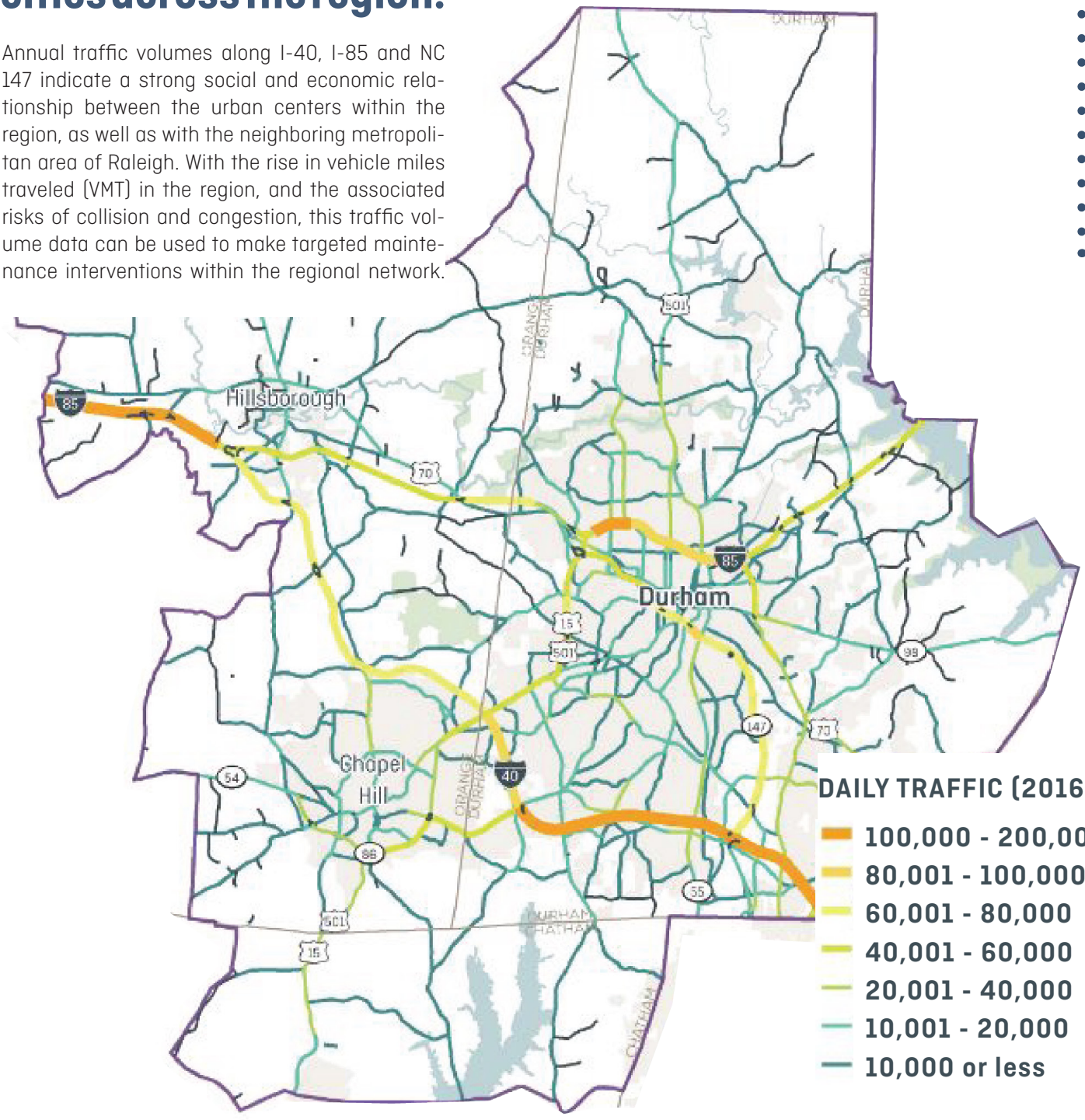
There are **1,786,119** PEOPLE in the
There are **970,000** JOBS in the **TRIANGLE REGION**

Source: 2012-2016 ACS 5-Year Estimate

KEY FINDINGS

Busy roads connect cities across the region.

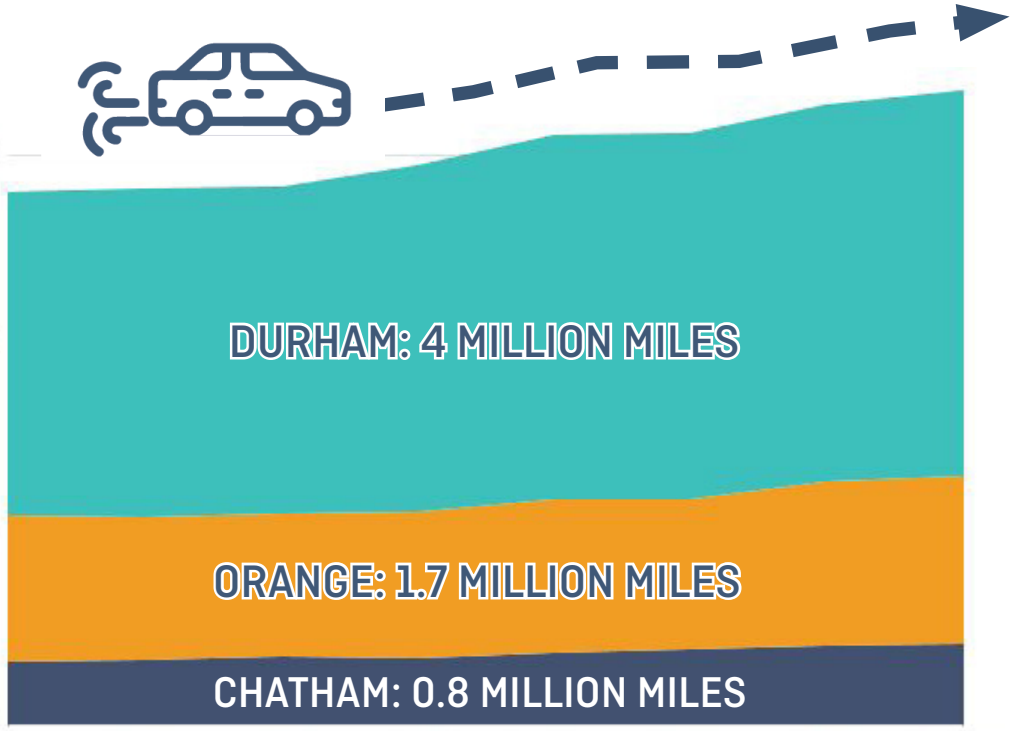
Annual traffic volumes along I-40, I-85 and NC 147 indicate a strong social and economic relationship between the urban centers within the region, as well as with the neighboring metropolitan area of Raleigh. With the rise in vehicle miles traveled (VMT) in the region, and the associated risks of collision and congestion, this traffic volume data can be used to make targeted maintenance interventions within the regional network.



Source: NCDOT Traffic Survey Group, Average Annual Daily Traffic 2016

Those roads are carrying more trips every year.

Between 2010 and 2017, annual VMT rose across the region. Chatham County had the largest growth in VMT at 27%, followed by Durham County (19%) and Orange County (15%). The continued increase in vehicular travel, paired with population increases, suggests that regional demand for travel is as high as ever. This can lead to increased congestion and crashes, requiring the MPO to continue advancing policy and investment solutions.



Source: Federal Highway Administration (FHWA) Annual VMT, 2010-2017, by county

It's not just cars, it's trucks too.

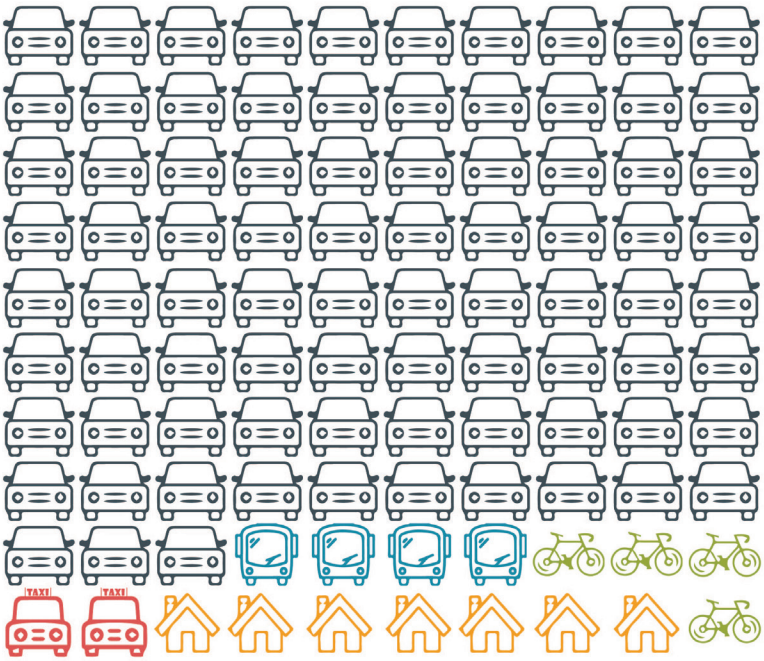
The amount and value of truck freight has increased slowly every year. Interestingly, forecasts for 2020 show a larger increase in the value of goods carried than the tonnage of goods carried. This reflects a changing economy in the area. National forecasts project that freight in the region will be less reliant on raw materials such as agriculture and livestock, and more focused on downstream materials such as advanced manufacturing or biopharmaceuticals. This change does not affect freight traffic greatly, but implies that any degradation of the transportation network will concern those who have a financial stake in the higher-value goods on our roadways.

The value and tonnage of freight cargo are increasing, and will continue to rise.

Source: FHWA Freight Management and Operations, Freight Analysis Framework (FAF)

But not everyone uses a car.

According to commuter data, the region is dominated by vehicular travel. In 2015, 83% of commuters opted for vehicular travel. Only 4% used public transit, and 4% cycled or walked. In addition, 7% of employees worked from home. The future of the region's transportation network will likely remain dominated by vehicles, but non-vehicular modes may play an increasingly important role.



83% VEHICLE

BIKE OR WALK 4%

WORK FROM HOME 7%

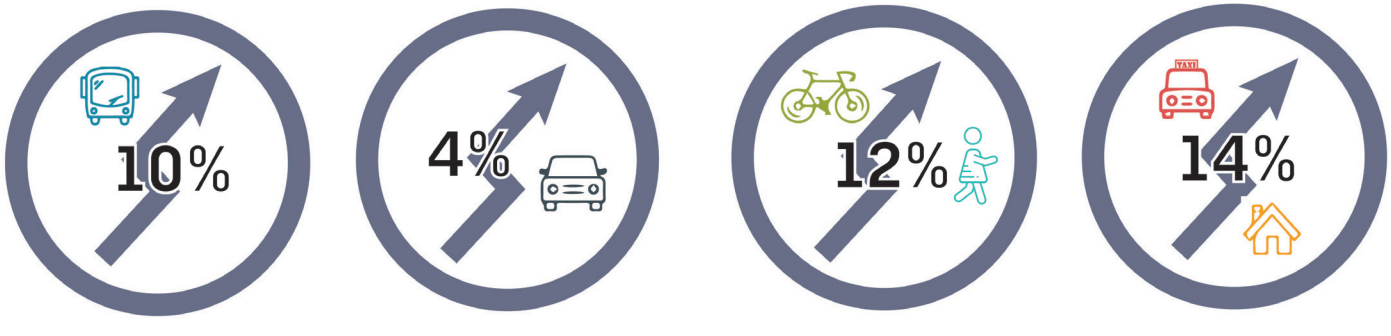
OTHER 2%

4% TRANSIT

Source: 2011-2015 American Community Survey (ACS) 5-Year Estimate

Transit use is on the rise.

Between 2013 and 2015, transit ridership amongst commuters increased by 10% across the three counties in the region, while vehicular travel rose by just 4%. Some growth is expected across all modes in response to rising population and employment, but the growth in transit and non-motorized travel relative to vehicular travel suggests commuters may be opting for alternative modes.



Source: 2009-2013 and 2011-2015 ACS 5-Year Estimates

Air travel is also increasing.

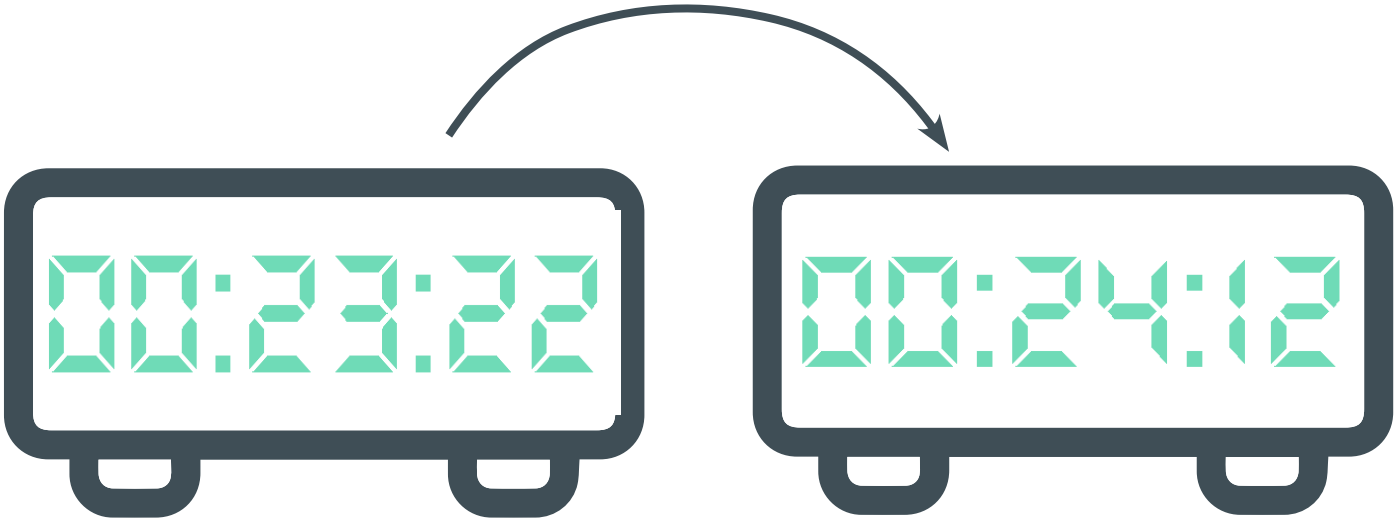
A healthy increase in passenger volumes suggests increased economic activity in the Triangle region, and provides a clear example of how travel behavior and economic activity are strongly linked. Increased air travel can have multimodal impacts, as vehicular and truck traffic to and from the airport is likely to increase. Additionally, larger volumes of air travelers increases the possibility of a financially-viable commuter rail connection to the airport.

More passengers use Raleigh-Durham International Airport than ever before

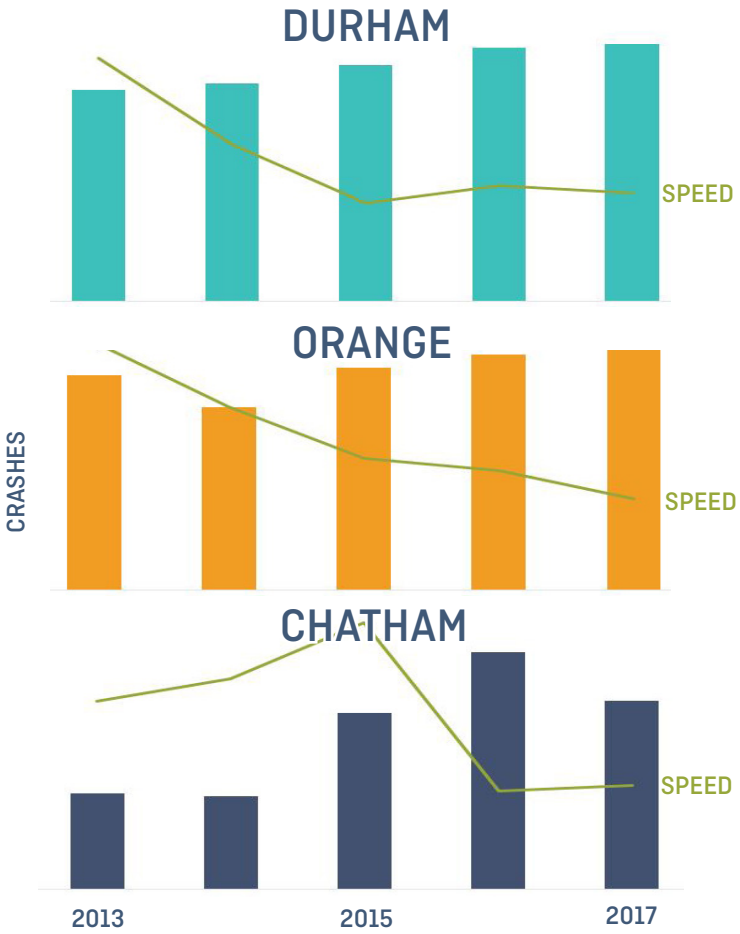
Source: Raleigh-Durham Airport Authority

All of this travel creates longer commute times...

In 2015, the average travel time for commuters was 24 minutes and 12 seconds. Across the region, average travel time increased by 50 seconds, between 2013 and 2015. Congestion is likely the dominant driver of this change given that on average 83% of commuters in the region drive to work.



Source: 2009-2013 and 2011-2015 ACS 5-Year Estimates



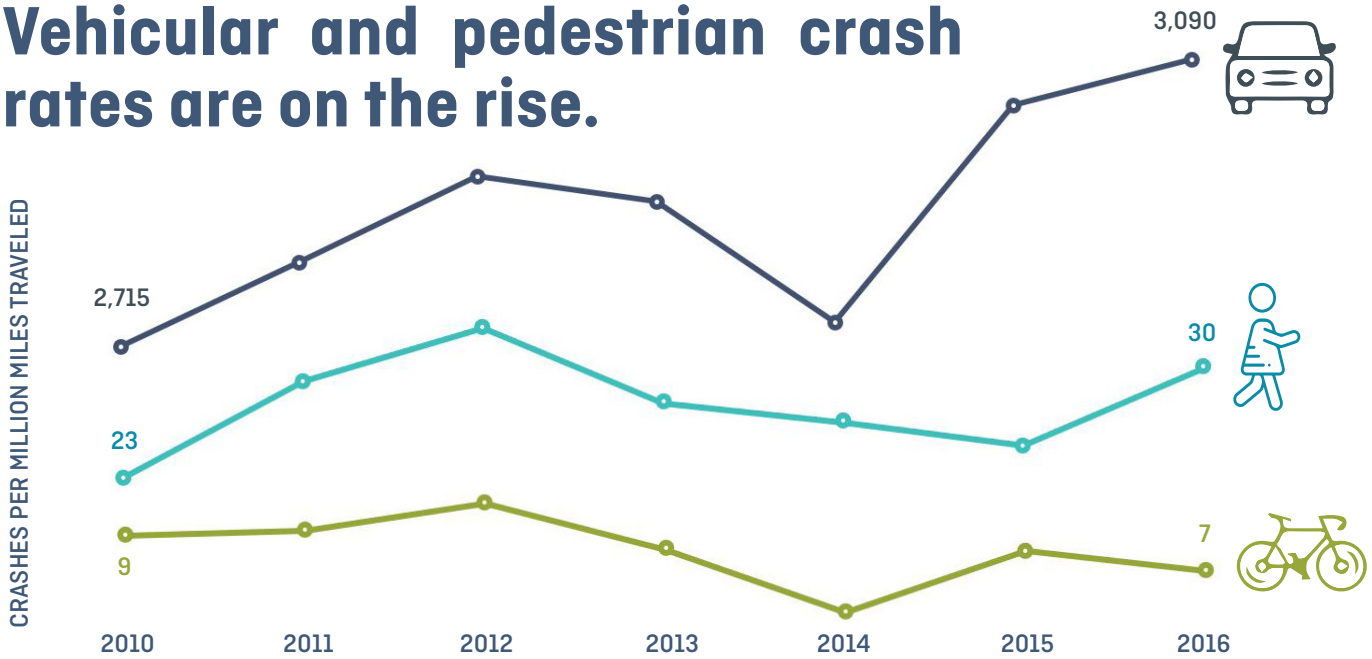
Crash Data Source: North Carolina Department of Transportation (NCDOT) Traffic Engineering Accident Analysis System (TEAAS)
Speed Data Source: INRIX

...and it leads to safety concerns.

Average speed fell in all three counties between 2013 and 2017. In contrast, the number of crashes has generally increased. Reduced speeds that are accompanied by higher rates of vehicular crashes can be an indicator of increased congestion. This finding suggests that effective intervention will require improvements to safety infrastructure coupled with speed regulation.

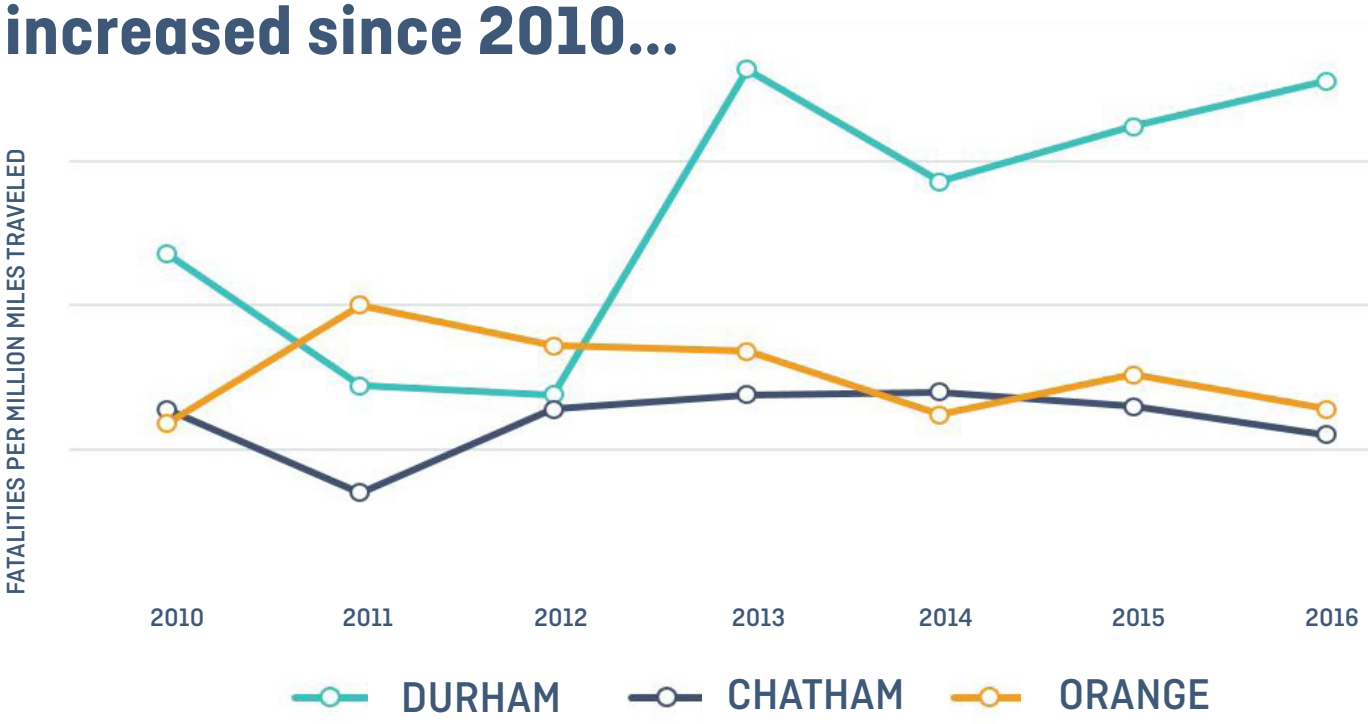
The region suffers from congestion.

Vehicular and pedestrian crash rates are on the rise.



Source: NCDOT TEAAS Crash Data, 2010-2016

The fatality rate in Durham County has increased since 2010...



Source: NCDOT Traffic Crash Data, County Profiles 2010-2016

ANNUAL FATALITIES VS TARGETS

ANNUAL SERIOUS INJURIES VS TARGETS

Source: NCDOT Traffic Crash Data, County Profiles 2012-2016

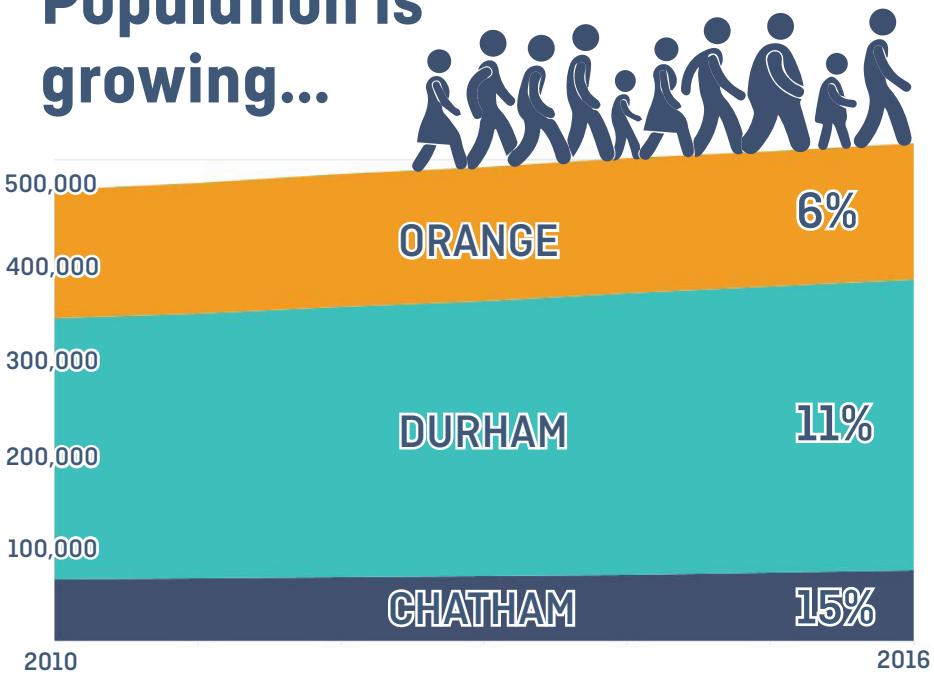
...and fatalities and injuries are above desired targets throughout the region.

Between 2010 and 2016, the average crash rates across the region for vehicles and pedestrians rose. The vehicular crash rate rose by 14%. But of the three counties, only Durham saw a rise in the rate of fatalities.

The MPO sets targets for reducing vehicular fatalities and non-motorized fatalities and serious injuries. Despite a small decline in the number of non-motorized fatalities and injuries between 2012 and 2013, the overall average number of motorized and non-motorized fatalities has increased steadily each year beyond the DCHC safety targets. According to this metric, the region is not meeting its standards for safety, and interventions will be required to reduce fatalities for drivers, pedestrians and cyclists.

DRIVERS OF CHANGE

Population is growing...



Source: 2006-2010 and 2012-2016 ACS 5-Year Estimate

Since 2010, the population in the DCHC region has grown by 10%, reaching over 500,000 residents. The majority of these residents (almost 60%) live in Durham County. Population trends reflect land use trends, as evidenced by the age distribution. The presence of two major universities, as well as key employment centers such as Research Triangle Park (RTP), explains the high concentration of working-age adults (20 - 54 years) in Durham and Orange Counties. Travel patterns are likely to reflect this population distribution in the form of home-to-work trips along major highways, connecting employment hubs across the region.

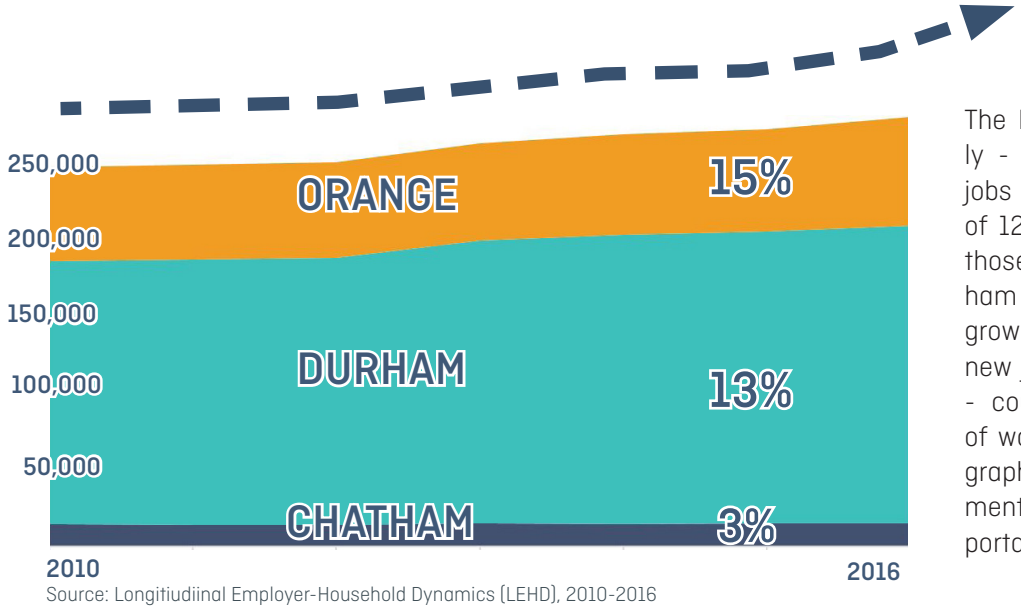
...and development is on the rise.

Residential Building Permits Increased Every Year Since 2010

Source: U.S. Census Building Permit Survey, 2010-2015

The data show a steady increase in residential building permits since 2010, with all three DCHC counties seeing their highest rate of approved permits in 2015. This residential growth is inextricably linked to the growth of the regional transportation network. If residential development continues to increase, so too will traffic volumes. The distribution and location of development also has a strong influence on the pattern of travel throughout the region.

Employment is growing,



Source: Longitiudiinal Employer-Household Dynamics (LEHD), 2010-2016

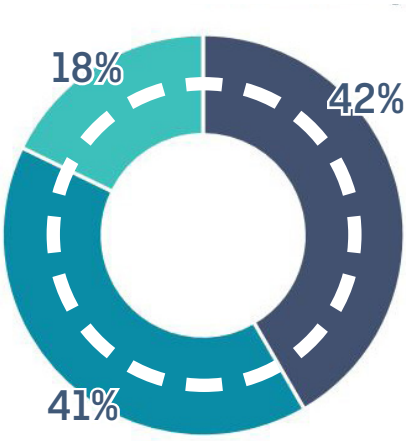
The DCHC region is growing steadily - adding roughly 30,000 new jobs since 2010 (the equivalent of 12 jobs per day). The majority of those jobs (70%) are located in Durham County, but Orange County is growing too - adding almost 10,000 new jobs since 2010. This growth - coupled with the concentration of working-age adults and the geographic distribution of key employment centers - may affect transportation patterns across the region.

most residents are working-age adults,

Source: 2012-2016 ACS 5-Year Estimate

and jobs in the region create all-day travel.

Different types of jobs use transportation networks differently. For the DCHC region, more than 80% of all jobs are in the Peak Hour or All Day categories, and these industries have grown considerably in the last 5 years. A surge in peak hour trips can lead to major congestion challenges. In addition, the types of jobs that are thriving in this region generally locate in denser, urban areas. These development patterns allow for more multimodal transportation options such as transit, biking, and walking.



Source: Longitiudiinal Employer-Household Dynamics (LEHD), 2016

Image: Historic Downtown Hillsborough
Photo Credit: Renaissance Planning

MOBILITY

What Is It?

This section includes indicators for four key types of travel in the region:

- Vehicular Travel;
- Transit, Bicycle and Pedestrian Travel;
- Air and Freight Travel; and
- Commuter Travel.

Why Does It Matter?

The DCHC region is a diverse, complex network of cities, towns, and activity centers. The region plays an important role in the southeast United States and in the national economy. The ways that people and goods move throughout the region, and across its borders, depends on a strong, multi-modal transportation network. To develop a robust understanding of this network, it is essential to monitor levels of activity for all modes of travel, changes over time, and the relationship between different travel indicators. In doing so, the DCHC MPO can effectively respond to shifting travel patterns in a way that best serves all residents.

Key Findings

The DCHC region is dominated by a number of key activity centers, including downtown Durham, downtown Chapel Hill, downtown Hillsborough, Duke University, UNC Chapel Hill, Research Triangle Park (RTP), and Raleigh-Durham International Airport (RDU). Travel between the activity hubs is facilitated by a network of highways that support much of the vehicular, freight and commuter traffic in the region. Levels of traffic and congestion have increased over the past decade, due in part to rising population and economic growth. While most commuters choose vehicular travel, the region is increasingly multimodal, with slowly rising levels of transit, bicycle, and pedestrian traffic, especially in downtowns and on bicycle- and pedestrian-friendly infrastructure, such as the popular American Tobacco Trail.

VEHICULAR TRAVEL

What Is It?

Travel by car is still the backbone of travel in America and the DCHC region. The indicators in this section are focused on vehicular travel, and include average annual daily traffic on the region's roads, changes in vehicle miles traveled (VMT) over time, and the cost of fuel.

Why Does It Matter?

The Census Bureau estimates that approximately 85% of all trips to work are made by car, and it is likely that non-work trips are even more auto-dependent. By understanding the trends affecting - and affected by - vehicular travel, the MPO will be able to spot problems early on and act decisively on emerging opportunities.

Key Findings

While VMT patterns are cyclical throughout the course of each year, overall VMT rose steadily between 2010 and 2017. This is true for all three counties in the region - Durham, Chatham, and Orange. The roadways that carry most of the region's vehicular traffic include Interstate 40 (I-40), Interstate 85 (I-85), and NC Highway 147 (NC 147), indicating an inter-connected region in which people are traveling across city and county boundaries for work and for leisure.

VEHICULAR TRAVEL

DAILY TRAFFIC

This indicator shows the number of vehicles using particular roads within the regional transportation network each year.

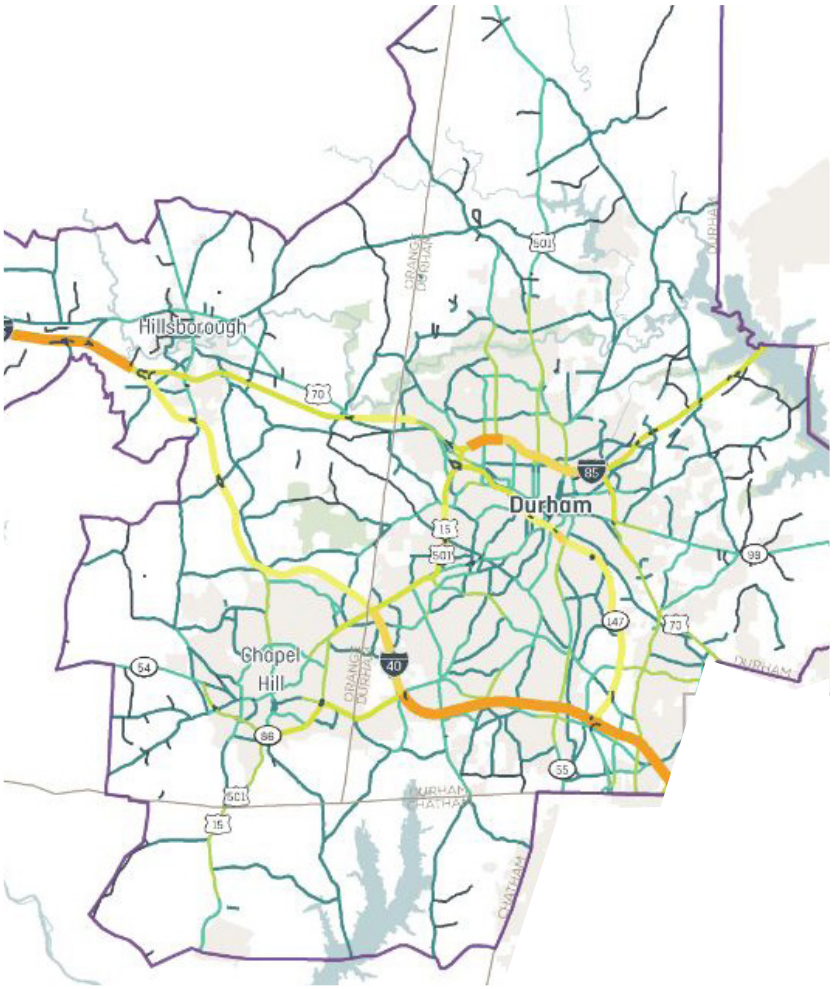
WHY THIS INDICATOR MATTERS

Daily vehicular traffic patterns are a strong indicator of regional economic activity. High volume along particular roads indicates a pattern of origins and destinations, both within the region and beyond. Understanding the relationship between places is essential for maintaining strong regional connectivity.

WHAT'S HAPPENING

NCDOT and the DCHC MPO collect information about traffic volume throughout the region. Traffic volume is measured as annual average daily traffic (AADT).

This map shows the AADT for all vehicles in 2016. The highest volume of traffic appears along I-40 between Chapel Hill and Raleigh and along I-40/I-85 between Hilsborough and north west to Burlington (not shown). More than 100,000 vehicles use these stretches of highway annually. There is also substantial vehicular traffic on the I-85 and NC 147.



Source: NCDOT Traffic Survey Group, Annual Average Daily Traffic (AADT) 2016

FINDINGS

Annual traffic volume along I-40, I-85 and NC 147 indicate a strong social and economic relationship between the urban centers within the region, as well as with the neighboring metropolitan area of Raleigh. With the rise in vehicle miles traveled (VMT) in the region, and the associated risks of collision and congestion, this traffic volume data can be used to make targeted maintenance interventions within the regional network.

DAILY TRAFFIC (2016)

- 100,000 - 200,000
- 80,001 - 100,000
- 60,001 - 80,000
- 40,001 - 60,000
- 20,001 - 40,000
- 10,001 - 20,000
- 10,000 or less

VEHICULAR TRAVEL

VEHICLE MILES TRAVELED

This indicator shows the annual miles traveled by all vehicles on the region's roadways in Orange, Durham, and Chatham counties between 2010 and 2017. Data for Wake, Johnston, Franklin, Granville, and Harnett Counties is provided for comparison.

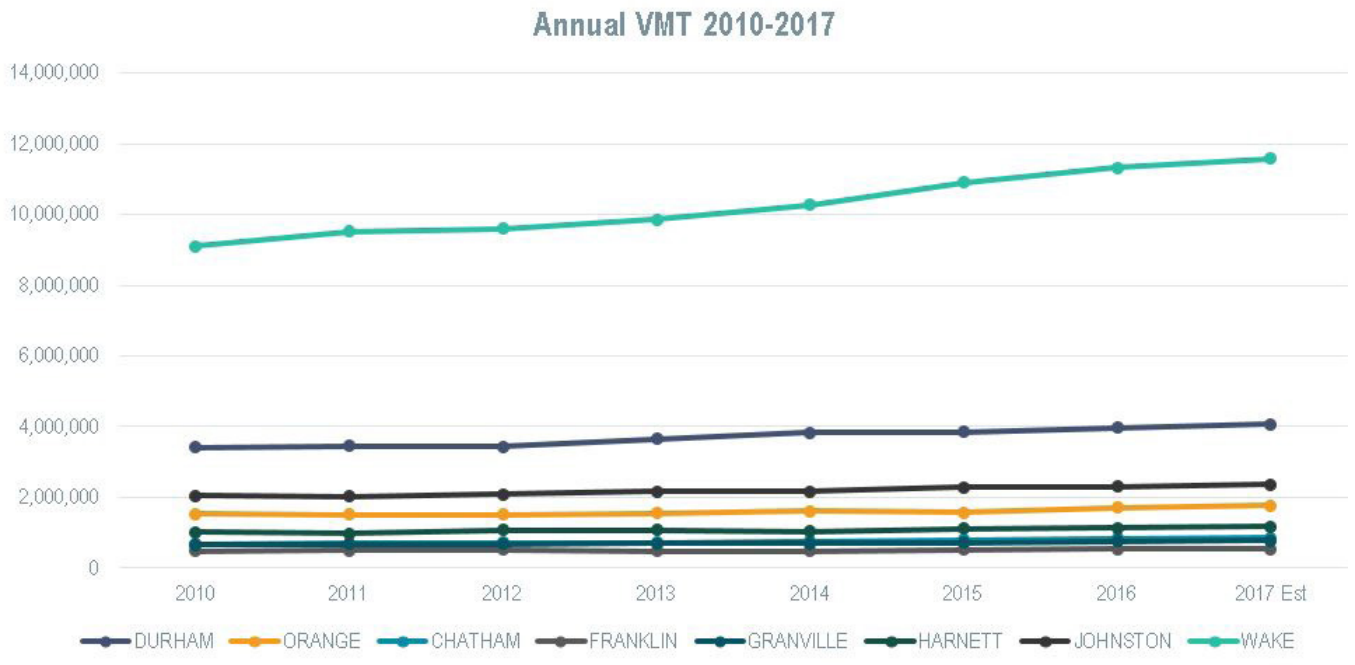
WHY THIS INDICATOR MATTERS

Vehicle miles traveled (VMT) is a cornerstone indicator of transportation network utilization and efficiency. This region, like nearly all others in the U.S., is predominantly auto-oriented. VMT measures the amount of total vehicular travel on a region's roadways per year. Significant increases indicate the need for MPO intervention through demand management or increased capacity.

WHAT'S HAPPENING

The Federal Highway Administration (FHWA) collects VMT data throughout the country, and has updated their statistics through the first half of 2017. Since 2010, annual VMT has risen in Durham, Chatham and Orange Counties, as well as in the counties that comprise the larger Triangle region. Chatham County had the largest growth in VMT within the DCHC region from 2010 to 2017 at 27%, followed by Durham County (19%) and Orange County (15%).

Despite the increase in vehicle travel, DCHC is still dwarfed by Wake County, where annual VMT is approaching 12 million. In contrast, annual VMT in Durham, Orange, and Chatham Counties combined is just above 6 million.



FINDINGS

The continued increase in vehicular travel, paired with population increases, suggests that regional demand for travel is as high as ever. This can lead to increased congestion and crashes, requiring DCHC to continue advancing their policy and investment solutions to address such issues.

VEHICULAR TRAVEL

VEHICLE MILES TRAVELED

This indicator shows the monthly vehicular travel for each of the three MPO counties, and for the MPO region overall in 2016 (from January to December).

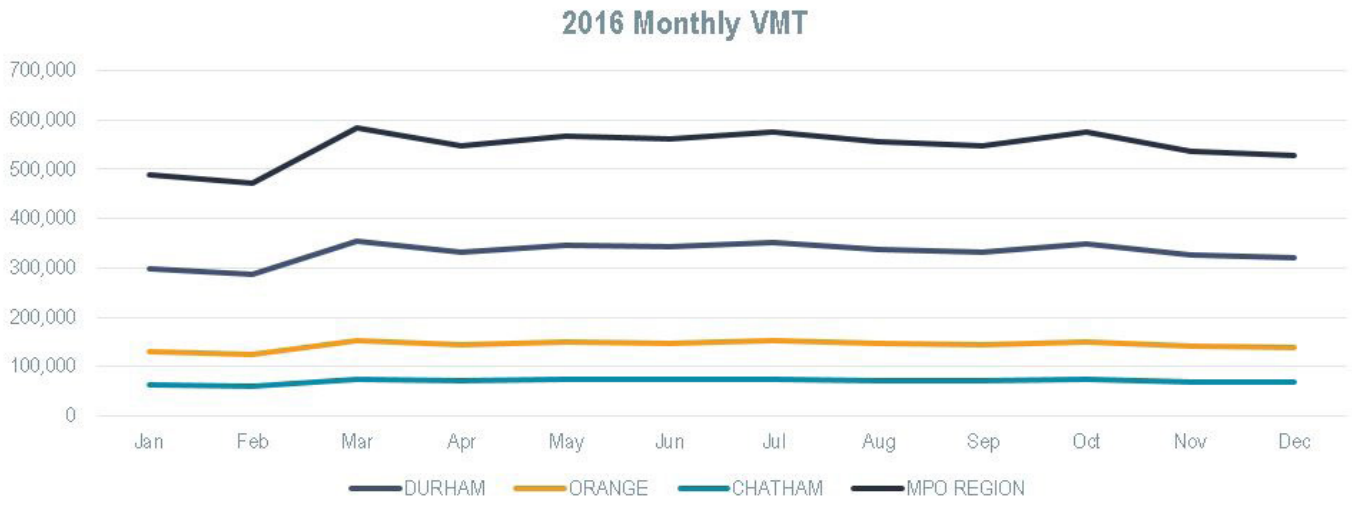
WHY THIS INDICATOR MATTERS

Vehicle miles traveled (VMT) is a cornerstone indicator of transportation network utilization and efficiency. In addition to looking at annual VMT trends over time, it is also valuable to look at a one-year snapshot of VMT by month. Understanding the cycle of VMT each year can provide necessary insight for maintenance and upgrade schedules.

WHAT'S HAPPENING

The Federal Highway Administration (FHWA) collects VMT data throughout the country, and has updated their statistics through the first half of 2017. The graph shows January to December VMT data for 2016 - the most recent year with 12 months of data available.

VMT in 2016 was cyclical. Total VMT in the region rose and fell month to month. All three counties experienced their lowest VMT in February, a 24% increase to peak VMT of 582,681 in March, remained generally stable from April to October, and then declined again towards the end of the year.



FINDINGS

The month-to-month cyclical nature of VMT can be attributed to the number of days for which data is collected each month (for example February is consistently the lowest). The seasonal nature of VMT in 2016 is mirrored in data trends since 2010 and in the 2017 estimated data. Since 2010, VMT in the region has been lowest over the winter months (November to February). VMT is also higher in summer months, with peak months in March and October. These trends are generally mirrored in nationwide VMT statistics.

VEHICULAR TRAVEL

MOTOR FUEL PRICES

This indicator looks at gasoline prices and trends over the last 5 years, as well as at the effect of gas prices on VMT.

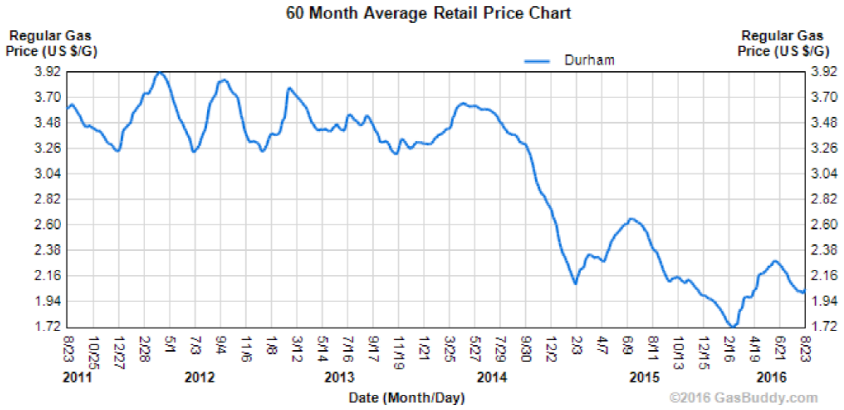
WHY THIS INDICATOR MATTERS

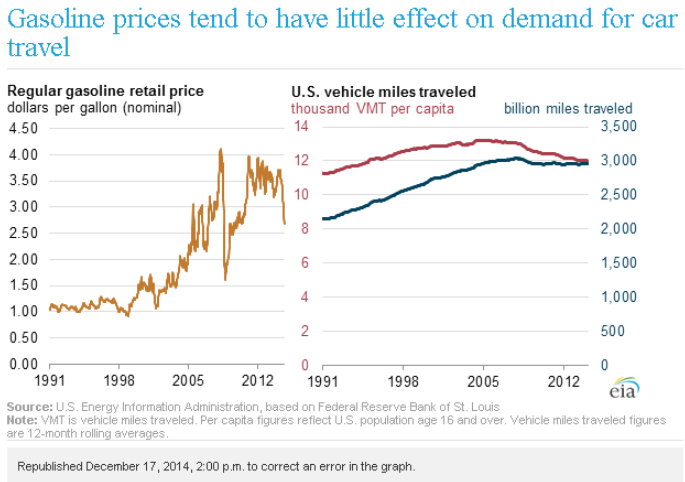
Gas prices can influence travel patterns and travel behavior and prices can also be highly volatile. Knowing the impact that this volatility has on how people travel can provide important insights for transportation planning.

WHAT'S HAPPENING

The top chart to the right shows gas prices fell dramatically during 2014, following a three-year period where prices hovered around $3.50 per gallon. By the start of 2015, prices were down close to $2.00, and by the start of 2016 had fallen to less than half of the peak five-year price. Seasonal fluctuations continue to make prices somewhat volatile in the short-term, but there is little to suggest that any long-term pattern is emerging in prices.

These major fluctuations could be expected to influence travel behavior, but several studies suggest otherwise. One example, in the bottom chart to the right, shows that price changes in the long term are much more volatile than changes in vehicle miles traveled (VMT), though there is definitely a small link between gas prices and VMT.





FINDINGS

The relative stability of VMT compared to the drastic changes in fuel prices provides some confirmation of larger national studies that are finding only weak connections between fuel price and vehicle travel. Rather than observing fuel prices influence behavior, it seems that the introduction of fuel-efficient cars has allowed for drivers to continue their travel patterns without concern for fuel price fluctuations.

TRANSIT, BICYCLE & PEDESTRIAN TRAVEL

What Is It?

Despite the dominance of vehicular travel in the region, many residents still rely on public and non-motorized transit to reach their places of work and essential services. The indicators in this section present ridership for the four transit services in the region and the associated costs of providing service. Indicators also show pedestrian and bicycle traffic at key locations in the region.

Why Does It Matter?

A thriving multi-modal transportation network is essential for the region to best serve its residents, and to attract new business, investment, and visitors. Monitoring the level of use for transit, bicycle ,and pedestrian infrastructure can help the MPO identify opportunities and make targeted interventions.

Key Findings

In the 2015-2016 fiscal year, average annual daily ridership on the four transit agencies in the region was approximately 35,000. Duke Transit had the highest ridership - almost 18,000 riders - but the service is available only to students, staff and faculty associated with Duke University. Publicly available transit services have lower ridership statistics and as a result, higher costs per passenger. GoTriangle - the only agency providing inter-city connections had just over 2,000 riders in the same year, and the highest costs per passenger. In a region dominated by inter-city and cross-county daily travel, GoTriangle provides essential access to resources and opportunities, and requires continued monitoring and investment.

TRANSIT TRAVEL

TRANSIT RIDERSHIP

This indicator shows the average annual ridership for each of the four transit service providers in the region, from 2013 to 2016. It also shows the operating cost per passenger for each transit service provider.

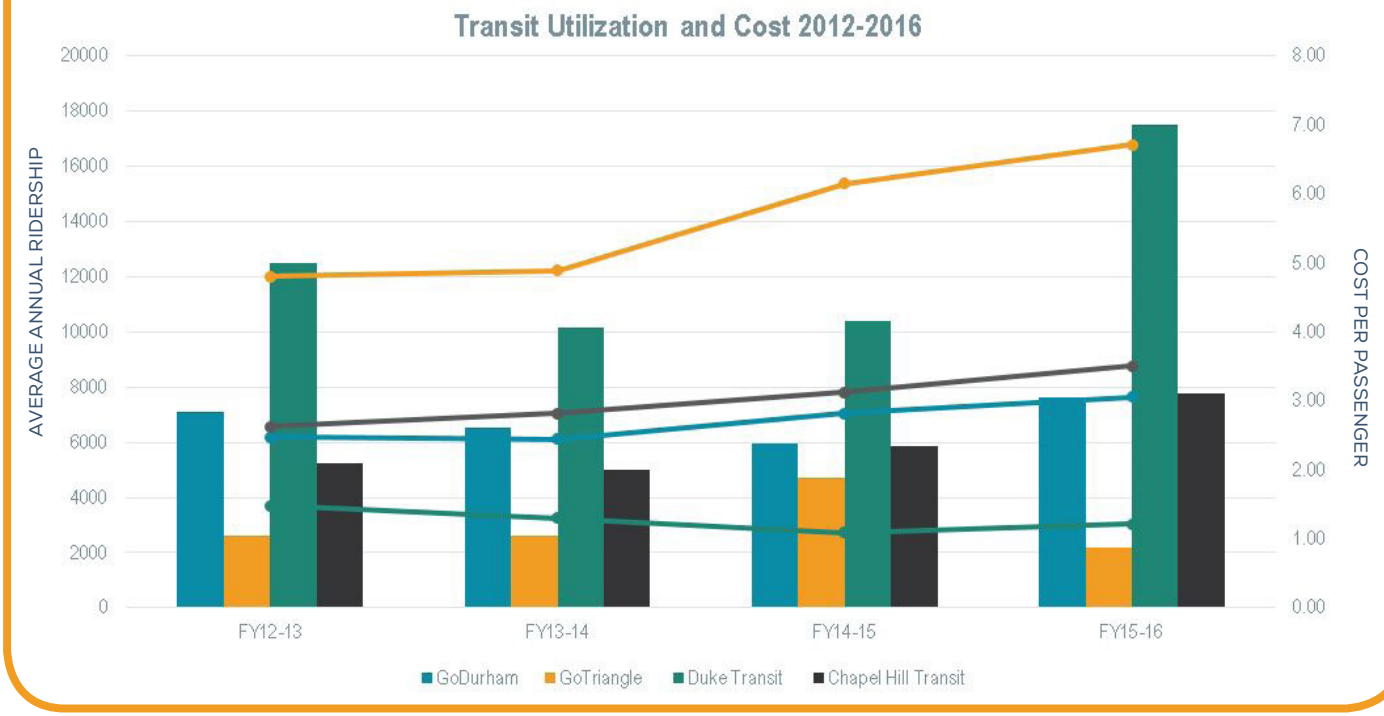
WHY THIS INDICATOR MATTERS

In a region dominated by vehicular and highway travel, residents withouts cars rely heavily on the local transit services. In addition, nationwide trends suggest that consumers and workers increasingly value access to a strong public transit network. To best serve all residents of the region, and to ensure the region remains competitive in connectivity and quality of life indicators, it is important to monitor transit ridership and the costs associated with providing those services.

WHAT'S HAPPENING

In the graph below, bars represent average annual ridership for each transit agency over time and lines represent operating cost per passenger over time. There is an inverse relationship between the two indicators, due to economies of scale. However, the cost of providing GoTriangle service - the greatest of the four agencies - is higher due to their inter-city routes, which are longer and therefore more expensive to provide.

Duke Transit maintained the highest ridership since 2013, followed by GoDurham, Chapel Hill Transit, and finally GoTriangle. Duke Transit and GoDurham follow similar trends over time - falling from 2013 to 2015 and rising again in 2016 - likely due to a geographic overlap of their service areas.



Source: Annualized Average Daily Ridership and Operating Cost per Passenger by Agency, FY12-13 through FY15-16. Collected by DCHC MPO.

FINDINGS

While there is no consistent trend between the four transit agencies, it is important to continue to monitor ridership, and work to increase ridership as cost saving mechanism. Monitoring, increasing and supporting ridership on inter-city routes is especially important in a region dominated by three distinct economic hubs and a large commuter population. A strong public transit network is essential for many residents, especially low income, disabled, elderly, or otherwise vulnerable populations. It is also an important factor in ensuring the region remains a competitive economic center and attractive destination.

BIKE-PED TRAVEL

DAILY TRAFFIC

This indicator estimates 2015 average annual daily bicycle traffic (AADBT) and average annual daily pedestrian traffic (AADPT) by showing bike and pedestrian counts at key locations in Durham and Orange Counties.

WHY THIS INDICATOR MATTERS

It is important to monitor not only vehicular and transit statistics, but also bicycle and pedestrian travel. The relationship between facility type and bike and pedestrian activity can provide insight into how the built environment influences travel behavior. This information can be used to make policy and infrastructure decisions.

WHAT'S HAPPENING

In 2015, bicycle and pedestrian counts were collected at five key locations in Orange and Durham Counties as part of a NCDOT pilot study to assess seasonal variation. The Libba Cotten Bikeway in Carrboro (Orange County) had the highest count of average daily bicycle traffic at 558, and Martin Luther King Boulevard in Chapel Hill (also Orange County) had the highest count of average daily pedestrian traffic (670). Both facilities are major commuting routes between residential neighborhoods and the UNC campus. The American Tobacco Trail and Old NC Hwy 86 function more as a recreational facilities. Longitudinal data from all three counties is needed to determine bicycle and pedestrian traffic trends in the region.

Municipality	Site Name	Installation Type	AADBT 2015	AADPT 2015
Chapel Hill	Martin Luther King Blvd	Roadway & Sidewalk	100	670
Carrboro	Old NC Hwy 86	Bike Lane	162	69
Carrboro	Libba Cotten Bikeway	Shared Use Path	558	440
Durham	American Tobacco Trail - Bridge	Shared Use Path	260	349
Durham	American Tobacco Trail - Downtown	Shared Use Path	186	146

FINDINGS

This snapshot of bicycle and pedestrian traffic at five locations does not provide insight into broader trends across the region. However, the relationship between facility type and the number of cyclists and pedestrians can provide clues to user preferences. The bike lane on Old NC Highway 86 has more than twice the amount of cyclists than pedestrians. The shared use paths with no vehicular access have similar numbers of cyclists and pedestrians. The Martin Luther King roadway, which has a sidewalk and no designated bike lane, has almost 7 times the number of pedestrians as cyclists. Continuing to understand the relationship between facility type and user behavior will be important moving forward. It will also be essential to understand longitudinal bike-ped trends, in relationship to bicycle and pedestrian related crashes, injuries, and fatalities. The MPO will continue this pilot study in future years to acquire longitudinal data and determine long term trends.

AIR & FREIGHT TRAVEL

What Is It?

This section looks at air travel at the region's major airport, Raleigh-Durham International (RDU), as well as freight travel - the transportation of goods by truck, train, or aircraft.

Why Does It Matter?

The DCHC region is a major economic hub in the southeast United States, as well as a destination for visitors from across the country and transnational migration. Air and freight travel patterns play an important role in connecting the region to the rest of the country (and the world) and have major impacts on the local transportation system.

Freight movement in particular is an essential part of both the region's economy and the region's transportation. Freight transports billions of dollars worth of goods to and through the region, but can also take a toll on local infrastructure. Monitoring freight activity and freight impacts can help identify opportunities for investment and mitigation to help freight and non-freight activities move safely and efficiently.

Key Findings

Between 2005 and 2015, RDU rose to the 39th busiest airport in the nation. The number of annual passengers has been climbing steadily since 2009, reaching almost 10 million in 2015. Freight travel is also increasing - both truck tonnage and overall value of cargo are expected to continue to rise through 2020. The increase of travelers to region, as well as cargo transported across its roads will have a strong effect on the transportation network. Major highways including I-40 and I-85 will support much of this increased activity and will require continued investment and maintenance.

AIR TRAVEL

RDU PASSENGERS

This indicator looks at passenger travel at RDU Airport from 2006 to 2015.

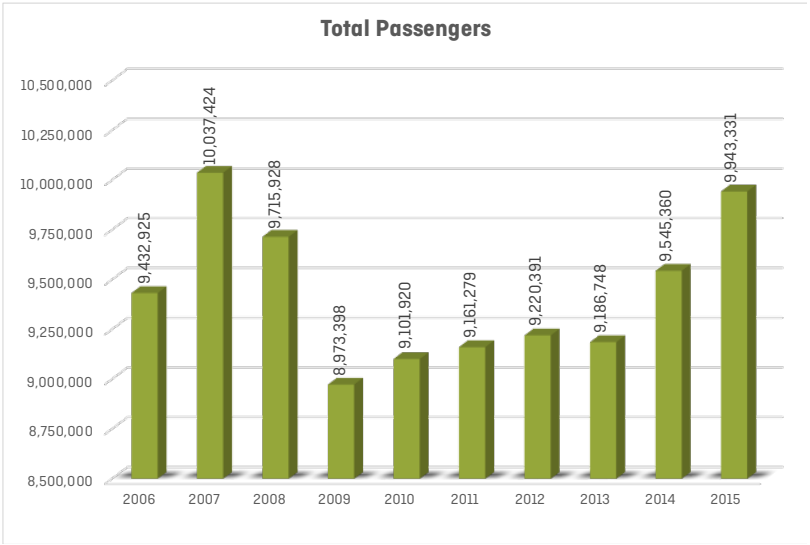
WHY THIS INDICATOR MATTERS

Air travel is a strong barometer for economic activity in a region, and can help spot trends in travel demand from visitors, businesses, and trucking.

WHAT'S HAPPENING

RDU Airport served nearly 10 million passenger trips in 2015, counting both enplanements (on-boarding) and deplanements (off-boarding). Passenger totals increased by nearly 400,000 between 2014 and 2015, and there has been a clear upward trend in passenger trips since 2009. As a result, RDU now has the 39th highest passenger volume in the U.S., up from 45th in 2005.

Some of the recent increase in passengers may reflect a drop in average air fares, as year-end fares at RDU in 2015 were about $35 less than 2014 prices, at an inflation-adjusted $362. However, 2015 prices are nearly identical to 2011 and 2012 numbers, so price is clearly not the only thing contributing to increased passenger air travel.
No data was identified on the number of flights in and out of RDU over the analyzed period, but RDU has clearly grown in the last half-decade.



Largest U.S. Airports (Passenger Travel)

2005		2015
45th	→	39th

Source: Raleigh-Durham Airport Authority

FINDINGS

The healthy increase in passenger volumes suggest increased economic activity in the Triangle region, and provide a clear example of how travel behavior and economic activity are strongly linked. Increased air travel can have multi-modal impacts, as vehicular and truck traffic to and from the airport is sure to increase. Additionally, larger volumes of air travelers increases the possibility of a financially-viable commuter rail connection to the airport.

FREIGHT

DAILY TRUCK TRAFFIC

This indicator looks at the annual average daily truck travel throughout the regional transportation network in 2016.

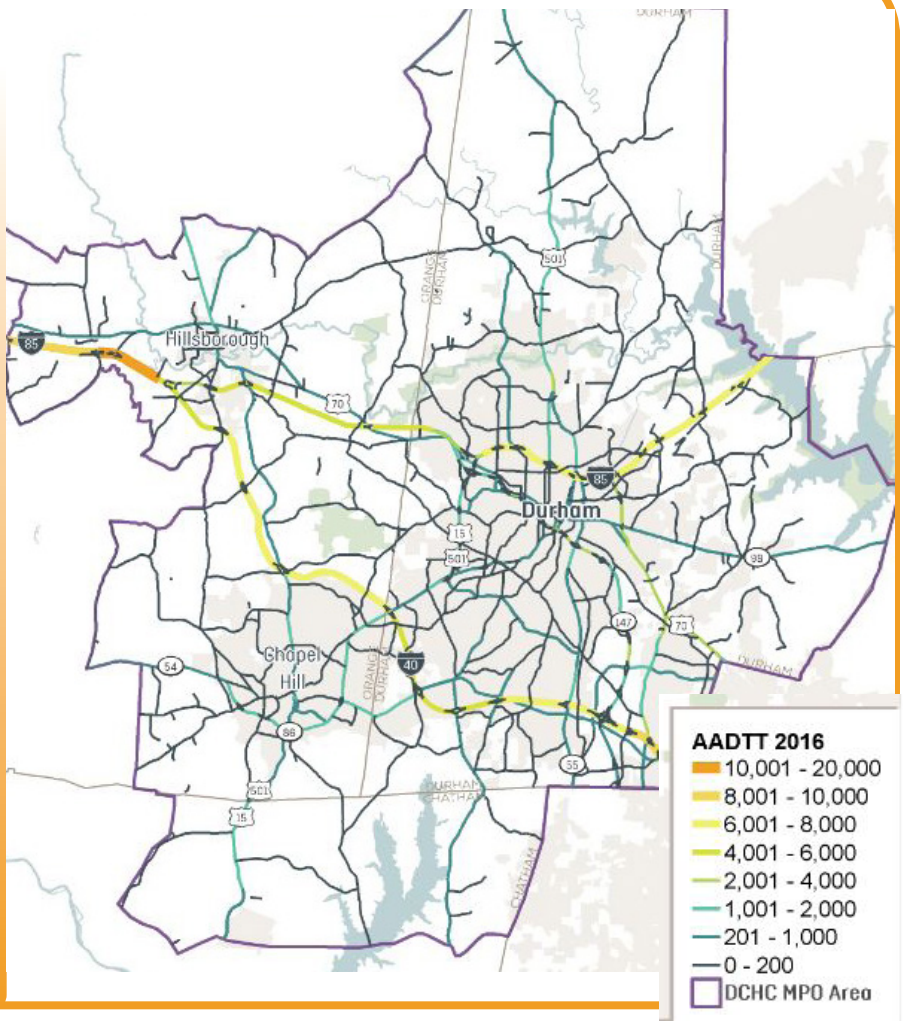
WHY THIS INDICATOR MATTERS

Freight trucks routinely use the largest roads in our network - interstates, state highways, and major arterials. As such, changes in volume of truck traffic should be closely monitored. In conjunction with truck tonnage and cargo value, this indicator helps to understand the role that truck-based freight is playing in the region.

WHAT'S HAPPENING

The North Carolina Department of Transportation (NCDOT) collects information about traffic volume throughout the region. Traffic volume is measured as annual average daily traffic (AADT). Traffic volume is also available for annual average daily truck travel (AADTT), including the number of Single Unit and Multi Unit Trucks on the roads.

This map shows AADTT for all trucks in 2016. The highest volume of truck traffic (indicated by wide orange and yellow lines) appears along the major interstates and highways. Between 4,000 and 8,000 trucks used I-85 and I-40 in 2016. In particular, a segment of the I-85 between Hillsborough and Burlington (to the northwest - not shown on the map) was traveled by over 10,000 trucks in 2016. On average, between 1,000 and 4,000 trucks traveled on US 15-501 and NC 147 in 2016.



FINDINGS

I-85 and I-40 carry the greatest burden of freight traffic to - and through - the region. A high-quality transportation network, particularly interstates and highways, will ensure that the region continues to function as a node for trans-national freight.

FREIGHT

TRUCK TONNAGE AND CARGO VALUE

This indicator looks at the amount of goods being transported by truck, both in terms of weight and monetary value.

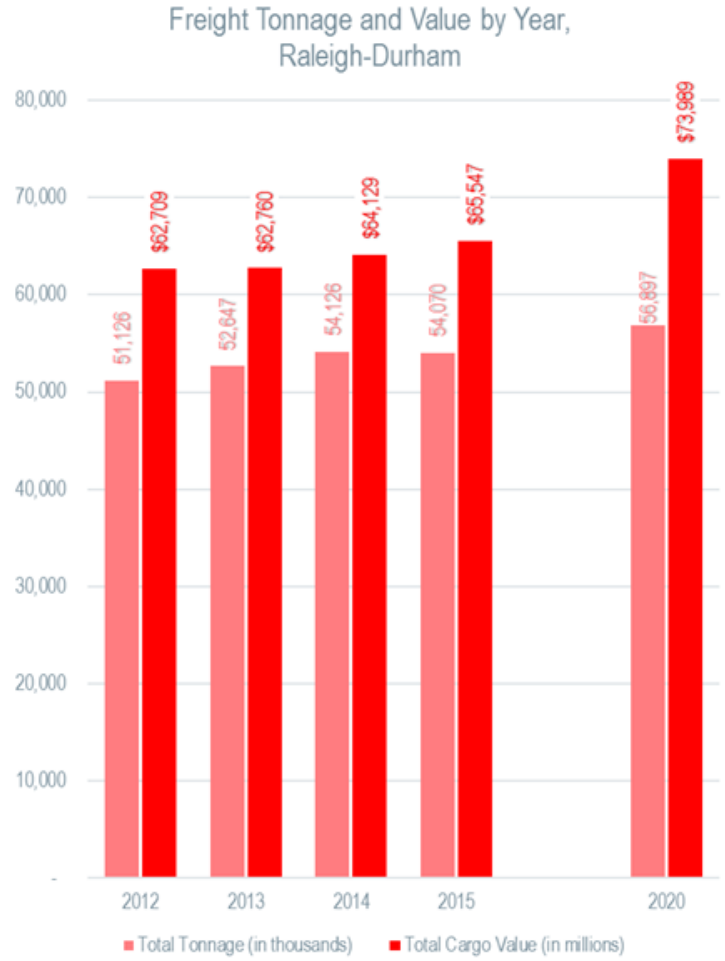
WHY THIS INDICATOR MATTERS

In conjunction with truck volumes, this indicator helps to understand the role of truck-based freight in the region. Because trucks routinely use the largest roads in our network - interstates, state highways, and major arterials - changes in volume of truck traffic and the "value" of that traffic should be closely monitored.

WHAT'S HAPPENING

The Federal Highway Administration (FHWA) has created the Freight Analysis Framework (FAF) to help quantify freight movement throughout the United States. The fourth version of the FAF, FAF4, is currently being released. At this stage, regional freight information is only provided for Raleigh-Durham combined, but can still be useful for DCHC, particularly as FAF4 provides both historical data and forecasted future change.

The chart to the right shows annual truck-based tonnage carried and the value of that cargo. In general, the amount and value of truck freight has increased slowly every year. Interestingly, FHWA forecasts for 2020 show a larger increase in the value of goods carried than the tonnage of goods carried.



FINDINGS

The projected change in value of goods reflects a changing economy in the area. National forecasts expect that freight in the region will be less reliant on raw materials such as agriculture and livestock, and more focused on downstream materials such as advanced manufacturing or biopharmaceuticals. This change does not affect freight traffic greatly, but implies that any degradation of the transportation network will concern those who have a financial stake in the higher-value goods on our roadways.

COMMUTER TRAVEL

What Is It?

Commuter travel indicators present travel choices and patterns for home-to-work trips in the region. These include modal breakdowns, how those change over time for each county, as well as average annual travel time.

Why Does It Matter?

The DCHC region is home to a number of key employment hubs including Duke University, the University of North Carolina at Chapel Hill, and Research Triangle Park. A large proportion of the population is made up of working-aged adults. Commuter trips to and from the major economic centers therefore makes up a large part of all trips in the region. How residents choose to make those trips, and how long they take, can provide essential insight into travel demand and decision-making, as well as the potential impacts for transit agencies, bicycle and pedestrian infrastructure and the regional transportation network.

Key Findings

Commuters in the region overwhelmingly choose to drive to work. Almost 90% of workers in Chatham and Durham Counties use vehicles as their primary mode of transportation to work. In Orange County, 15% of workers choose a transit, walk or bike commute. Changes in mode share between 2013 and 2015 suggest that driving to work may be slowly declining in all three counties. During the same period, commute times slightly increased, possibly due to mode shifts and increased congestion in the region.

COMMUTER TRAVEL

TRAVEL MODE

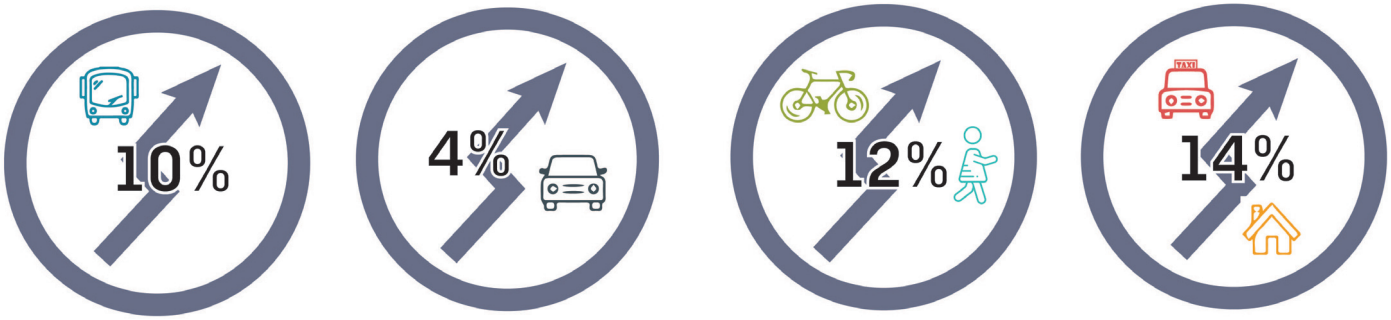
This indicator shows the mode share of all commutes in the region in 2015 by four key travel modes: vehicle, transit, biking or walking, and other.

WHY THIS INDICATOR MATTERS

In a region dominated by strong economic centers and a population of predominantly working-aged adults, commuter trips to and from work are a major part of overall travel. Understanding the modal distribution of these trips, and how that distribution is changing over time, is important for maintaining a transportation network that best serves the region's working population.

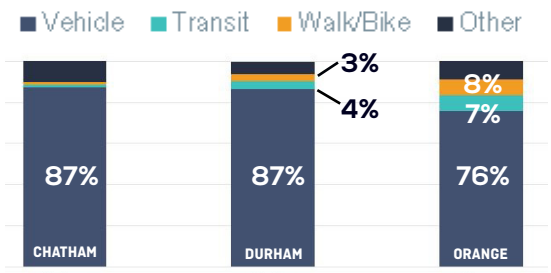
WHAT'S HAPPENING

Between 2013 and 2015, transit ridership amongst commuters increased by 10% across the 3 counties in the region, while vehicular travel rose by just 4%. Some growth is expected across all modes in response to rising population and employment, but the growth in transit and non-motorized travel relative to vehicular travel suggests commuters may be opting for alternative modes.



PERCENT CHANGE IN MODAL TRAVEL
2013 - 2015

Source: 2009-2013 and 2011-2015 ACS 5-Year Estimate



2015 MODAL BREAKDOWN

Source: 2011-2015 ACS 5-Year Estimate

FINDINGS

According to commuter data, the region is dominated by vehicular travel. However, there seems to be a slow increase in the number of workers opting for non-vehicular modes, including transit, walking or biking. The future of the region's transportation network will likely remain dominated by vehicles, but non-vehicular modes may play an increasingly important role.

COMMUTER TRAVEL

TRAVEL TIME

This indicator looks at the average travel time for commute trips in 2013 and 2015, as well as the change over time, for all three counties in the region.

WHY THIS INDICATOR MATTERS

Commute times affect a large portion of the population and can impact quality of life indicators, the environment, and other transportation indicators such as mode share and VMT. An increase in travel time can also indicate increased congestion.

WHAT'S HAPPENING

Travel time in all three counties marginally increased between 2013 and 2015. Durham County experienced the largest increase (6%) from 26.6 to 28.3 minutes. Orange County saw a 2.3% increase from 21.5 to 22 minutes. Chatham County had the smallest increase from 22 to 22.3 minutes, a 1.3% increase.

TRAVEL TIME (IN MINUTES)

	2013	2015	2013-2015 percent change
Durham County	26.6	28.3	6%
Orange County	21.5	22	2.3%
Chatham County	22	22.3	1.3%

FINDINGS

It is important to assess travel time in relation to other transportation indicators including VMT, crash statistics, and mode share. The region experienced an increase in VMT between 2010 and 2016. In addition, all three counties crashes increase, while average speeds decrease. This suggests that congestion is the primary driver of longer travel times. A small percent of the change may be due to some commuters shifting to transit and non-motorized travel, but congestion is likely the dominant driver of this change given that on average 83% of commuters in the region drive to work.

SAFETY

What Is It?

This section examines safety indicators including crashes, speeds, injuries and fatalities for drivers, cyclists, and pedestrians.

Why Does It Matter?

Safety indicators directly link transportation infrastructure to the people who use it. An unsafe transportation network with high rates of crashes, fatalities, and injuries comes at a high cost for individuals and for the region as a whole. Creating a safer built environment, and reducing the harm experienced by users, is a top priority for the DCHC MPO.

Key Findings

As the largest county by population and VMT, Durham has the highest rates of crashes and fatalities in the region. The county is also experiencing a consistent upward trend in incidents. Orange County is generally experiencing a decline in incidents, except for vehicular crashes which continue to rise across the region. This region-wide increase in vehicular crashes is occurring alongside a downward trend in average annual speeds, which suggests the regional transportation network is more congested overall. The region is also missing its targets for reducing fatalities. Higher rates of bicycle and pedestrian incidents suggest that walking and biking may be on the rise, yet the infrastructure to support these mode choices may be insufficient.

VEHICULAR CRASHES

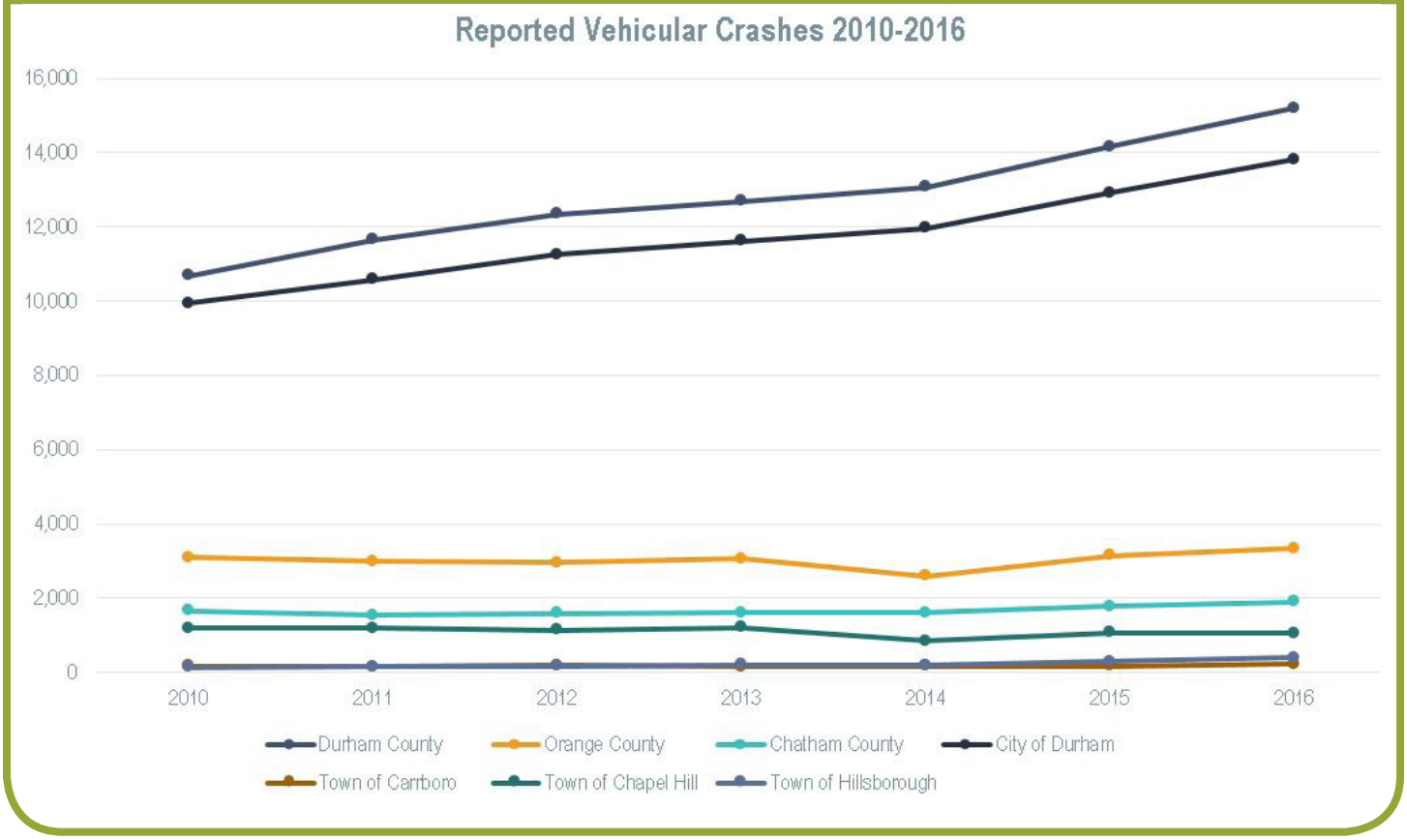
This indicator shows reported crashes involving vehicles from 2010 - 2016. It is provided for the three counties in the DCHC region and for four municipalities.

WHY THIS INDICATOR MATTERS

Crash rates, and trends in crash rates in particular, must be recorded and monitored for traveler safety.

WHAT'S HAPPENING

The North Carolina Department of Transportation (NCDOT) keeps track of crashes throughout North Carolina with its Traffic Engineering Accident Analysis System (TEAAS). Crash data from 2010 to 2016 was collected. There were more than 5,000 more crashes throughout the DCHC region in 2016 than in 2010, 90% of which were in Durham County. Crashes in Durham County rose by 42% and in the City of Durham by 40%. Orange and Chatham Counties and their cities had only small increases over the same period. Crashes in the Town of Chapel Hill declined between 2010 and 2016.



Source: NCDOT TEAAS Crash Data, 2010-2016

FINDINGS

The overall 33% increase in crashes throughout the three counties is high relative to the 11% increase in VMT across the region. Most of this change can be attributed to the increase in crashes in Durham County and City of Durham. When compared against VMT, the rate of crashes per vehicle mile in Durham County (0.0039) is double the rate in Orange County (0.0019). The upward trend is a cause for concern, and should be evaluated further, as should the disproportionate number of vehicular crashes in Durham. Durham vehicular safety overall needs to be closely monitored for root causes.

PEDESTRIAN AND BICYCLE CRASHES

This indicator shows reported crashes involving bicycles and pedestrians from 2010 to 2016. It is provided for the three counties in the DCHC region and for four municipalities.

WHY THIS INDICATOR MATTERS

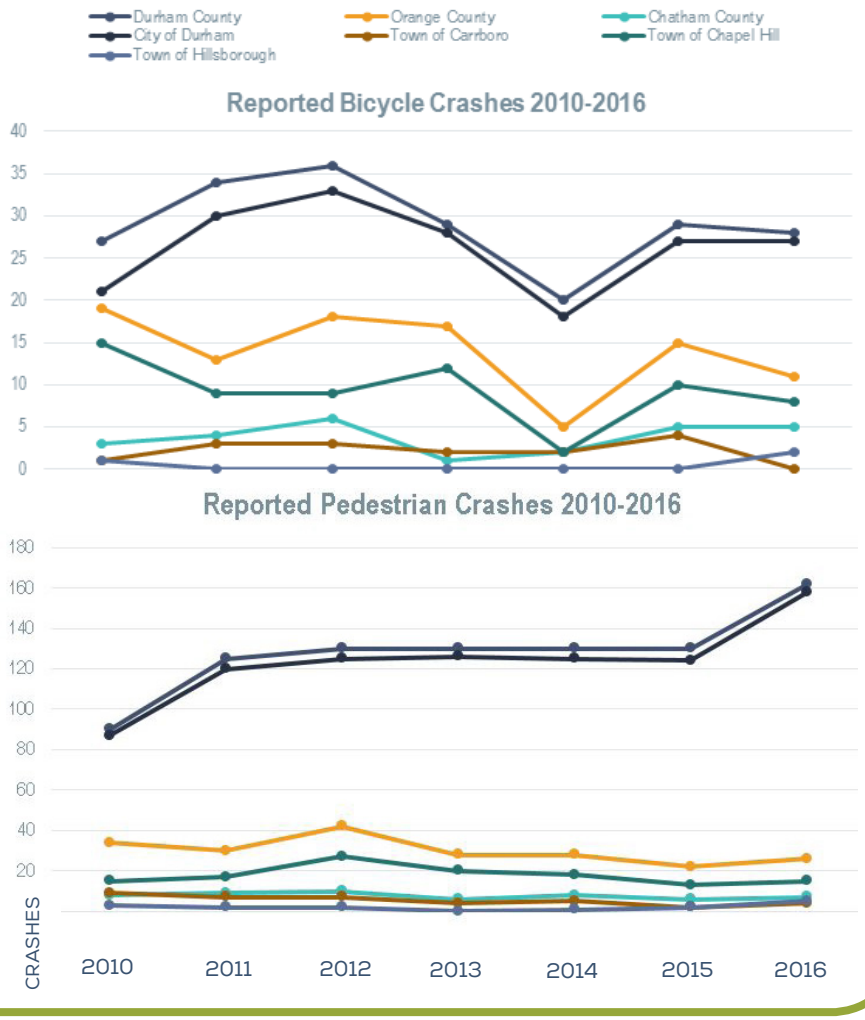
Crash rates, and trends in crash rates in particular, need to be monitored for traveler safety. Cyclists and pedestrians are particularly vulnerable during crashes, and upward trends in bicycle and pedestrian crashes can signify an urgent need for intervention.

WHAT'S HAPPENING

Pedestrian crashes declined slightly in Orange and Chatham Counties between 2010 and 2016, but increased in Durham County by 80%, from 90 crashes to 162 crashes. 36% of this increase occurred between 2015 and 2016, despite remaining stable from 2011 to 2015.

Bicycle crash trends have been more erratic. Despite a decline in bicycle crashes between 2012 and 2014 (44% in Durham and 72% in Orange), they increased again between 2014 and 2016. In Durham, bicycle crashes in 2016 returned to the same level as 2010.

It is important to note that there is no available data on total bicycle or pedestrian trips, making comparisons across jurisdictions difficult. However, it is notable that the City of Durham reported roughly six times as many pedestrian crashes as Chapel Hill but only three times as many bicycle crashes.



Source: NCDOT TEAAS Crash Data, 2010-2016

FINDINGS

The overall reduction in pedestrian and bicycle crashes in Orange County is a positive indicator, and could reflect the significant increase in bicycle and pedestrian infrastructure, such as dedicated bicycle lanes, sidewalks, trails, and crosswalks. The uptick in cycling accidents from 2014 to 2015 was followed by a steady decline between 2015 and 2016 and should be monitored to ensure that it continues to decline in the future. The recent increase in pedestrian accidents in Durham County should also be monitored to understand if this is a short-term change or representative of a larger problem.

SPEED AND CRASHES

This indicator looks at the relationship between average annual vehicular speeds and annual vehicular crashes in each county of the DCHC region from 2013 to 2017.

WHY THIS INDICATOR MATTERS

Understanding the relationship between vehicular crashes and speeds can help guide meaningful policy interventions that improve safety in region.

WHAT'S HAPPENING

The North Carolina Department of Transportation (NCDOT) keeps track of crashes throughout North Carolina. Crash data from 2013 to 2017 was collected and visualized with average annual vehicular speeds.

On all three graphs the solid green line indicates the year-to-year average speed, and the dotted green line shows the overall trend. The trend lines for speed show that speed has, on average, fallen in all three counties between 2013 and 2017.

In contrast, the number of crashes has generally increased in all three counties from 2013 to 2017. The trendline analysis indicates that vehicular crashes increased by 21% in Durham County and Orange County and 12% in Chatham.

Source: NCDOT TEAAS Crash Data, 2013-2017, INRIX Speed Data

FINDINGS

Reduced speeds that are accompanied by higher rates of vehicular crashes can be an indicator of increased congestion. This finding suggests that effective intervention will require improvements to safety infrastructure coupled with speed regulation.

VEHICULAR FATALITIES

This indicator shows reported vehicular fatalities for each of the three DCHC counties, from 2010 to 2016.

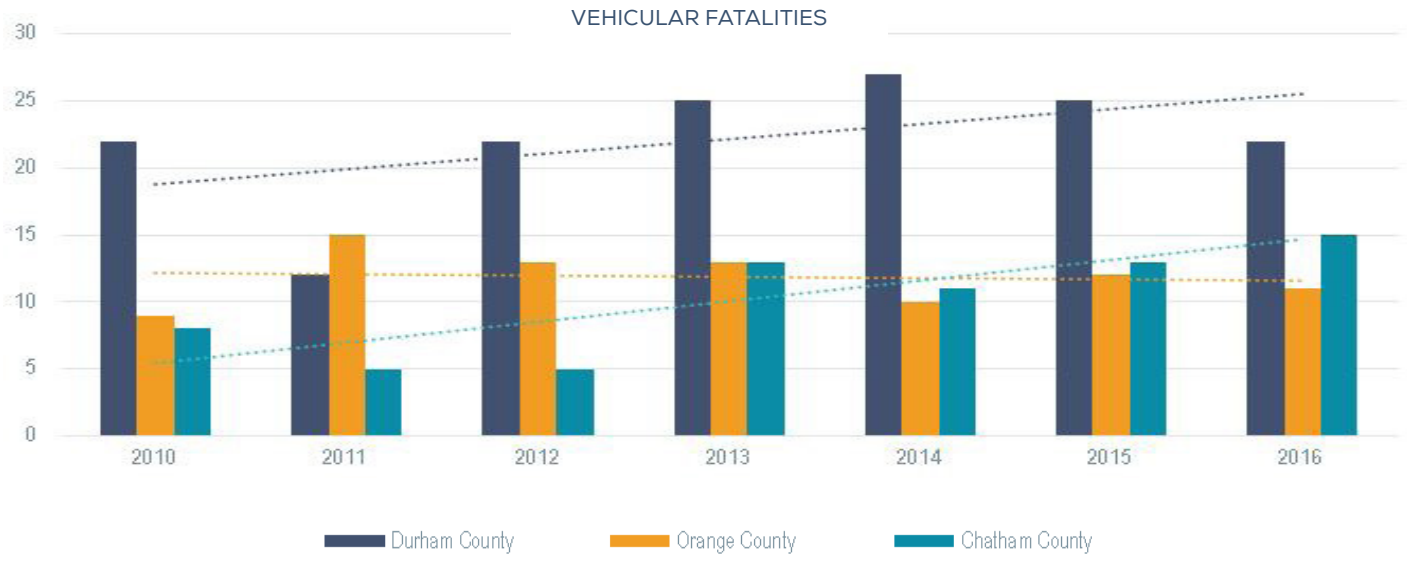
WHY THIS INDICATOR MATTERS

Fatality rates, and trends in fatality rates in particular, need to be monitored to protect the lives of residents across the region.

WHAT'S HAPPENING

Durham, the county with the largest population of the three DCHC jurisdictions (approx. 300,000), has both the highest rate of VMT and the highest rate of vehicular fatalities. Orange County (population 140,000) has seen fatalities decline between 2011 and 2016, while Chatham (population 70,000) has seen fatalities increase over the same period. In 2016, Chatham surpassed Orange County in fatalities by 36%, despite being the least populous county with the lowest VMT in the region.

Between 2010 and 2016, vehicular fatalities increased by 22% in Orange County and 88% in Chatham County. Despite variability over the seven-year time period, the number of vehicular fatalities in Durham County was the same in 2016 as in 2010. However, trend lines indicate that vehicular fatalities may continue to fall in Orange County and rise in Chatham and Durham.



Source: NCDOT TEAAS Crash Data, 2010-2016

FINDINGS

Between 2010 and 2016 there was a downward trend in vehicular fatalities in Orange County and an upward trend in Durham and Chatham County. Most concerning is the increase in fatalities in Chatham County, which surpassed Orange County every year since 2014, despite being smaller both in population and VMT. Targeted intervention is required to reduce fatalities in Chatham to a rate that is proportional with its size and levels of VMT.

BIKE & PEDESTRIAN FATALITIES

This indicator shows reported pedestrian and bicycle fatalities for each of the three DCHC counties from 2010 to 2016.

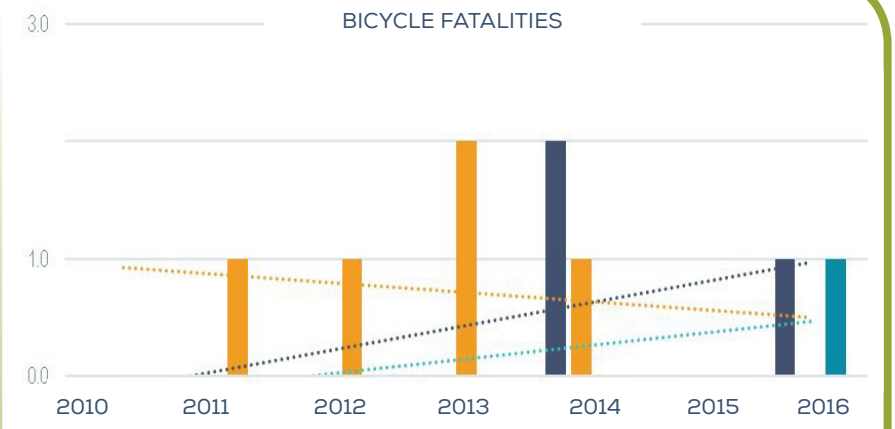
WHY THIS INDICATOR MATTERS

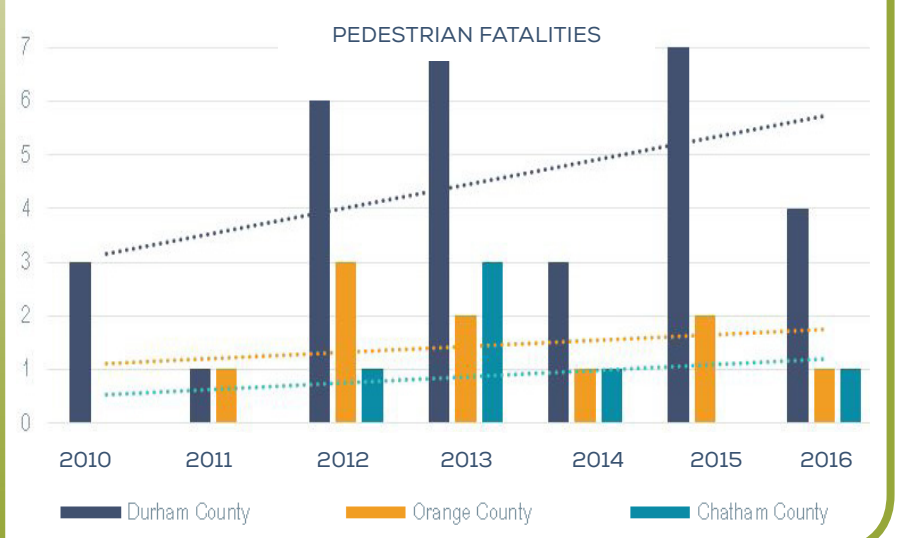
Fatality rates need to be monitored to protect the lives of residents across the region. Cyclists and pedestrians are particularly vulnerable during crashes, and trends in bicycle and pedestrian fatalities can signify an urgent need for intervention.

WHAT'S HAPPENING

There were 5 reported bicycle fatalities in Orange County between 2010 and 2016, compared to 3 in Durham County and 1 in Chatham County. This is likely due to higher rates of cycling in Orange County. Overall, Orange County shows a downward trend since 2010, while Durham and Chatham saw spikes in bicycle fatalities in 2014 and 2016, perhaps indicating an upward trend for those counties.

Durham has the highest number of pedestrian fatalities from 2010 to 2016 and generally exhibits an upward trend. Orange and Chatham Counties also show slight upwards trends in pedestrian fatalities, despite the fact that the number of pedestrian fatalities was the same for Orange County in 2016 as in 2011.





Source: NCDOT TEAAS Crash Data, 2010-2016

FINDINGS

It is likely that there are more bicycle fatalities in Orange County because the county has a higher rate of cycling in general. Whatever the cause, the data indicates that safety interventions may be working and that cycling fatalities in Orange County are declining. Meanwhile, an increase in cycling in Durham and Chatham is likely the cause of increased fatalities and requires safety interventions. Pedestrian fatalities tend to be on the rise across the region, suggesting a need for additional pedestrian safety interventions.

FATALITY REDUCTION TARGETS

This indicator shows the relationship between regional fatality counts by mode over time (using five-year averages in one-year intervals) and the DCHC safety target for reducing fatalities.

WHY THIS INDICATOR MATTERS

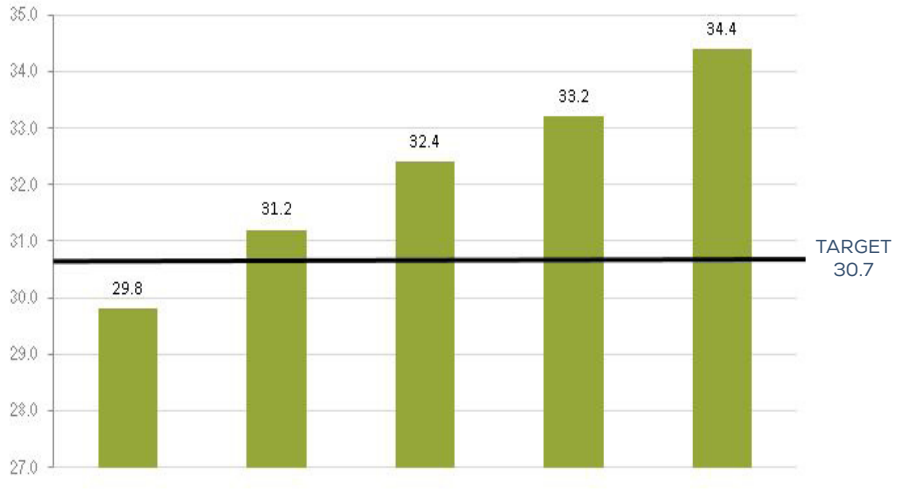
The DCHC MPO is dedicated to reducing crashes and fatalities throughout the region. Setting targets for reducing fatalities, and comparing them against fatalities each year, helps the MPO visualize its progress towards its goals for a safer regional transportation network for all residents.

WHAT'S HAPPENING

The motorized fatalities target set by the DCHC MPO is a five-year average of 30.7 fatalities. Average motorized fatalities from 2008 to 2012 were below the target at 29.8. Since 2012, the number has increased steadily, surpassing the target every year. The average number of motorized fatalities from 2009 to 2016 was 34.4, which is 12% above the DCHC target.

The non-motorized fatalities and serious injuries target is a five-year average of 18.4 fatalities. The target was set using the 2008 to 2012 average. In 2013, the number of non-motorized fatalities and serious injuries fell below the target to 17.6. However, the number has steadily increased each year, surpassing the target. The average number of non-motorized fatalities and serious injuries from 2009 to 2016 was 20.8, which is 13% above the DCHC target.

MOTORIZED FATALITIES



NON-MOTORIZED FATALITIES AND SERIOUS INJURIES

Source: NCDOT TEAAS Crash Data, 2008-2016

FINDINGS

Despite a small decline in the average number of non-motorized fatalities and injuries from 2009 to 2013, the overall average number of motorized and non-motorized fatalities has increased steadily each year beyond the DCHC safety targets. According to this indicator, the region is not meeting its standards for safety, and interventions will be required to reduce fatalities for drivers, pedestrians and cyclists.

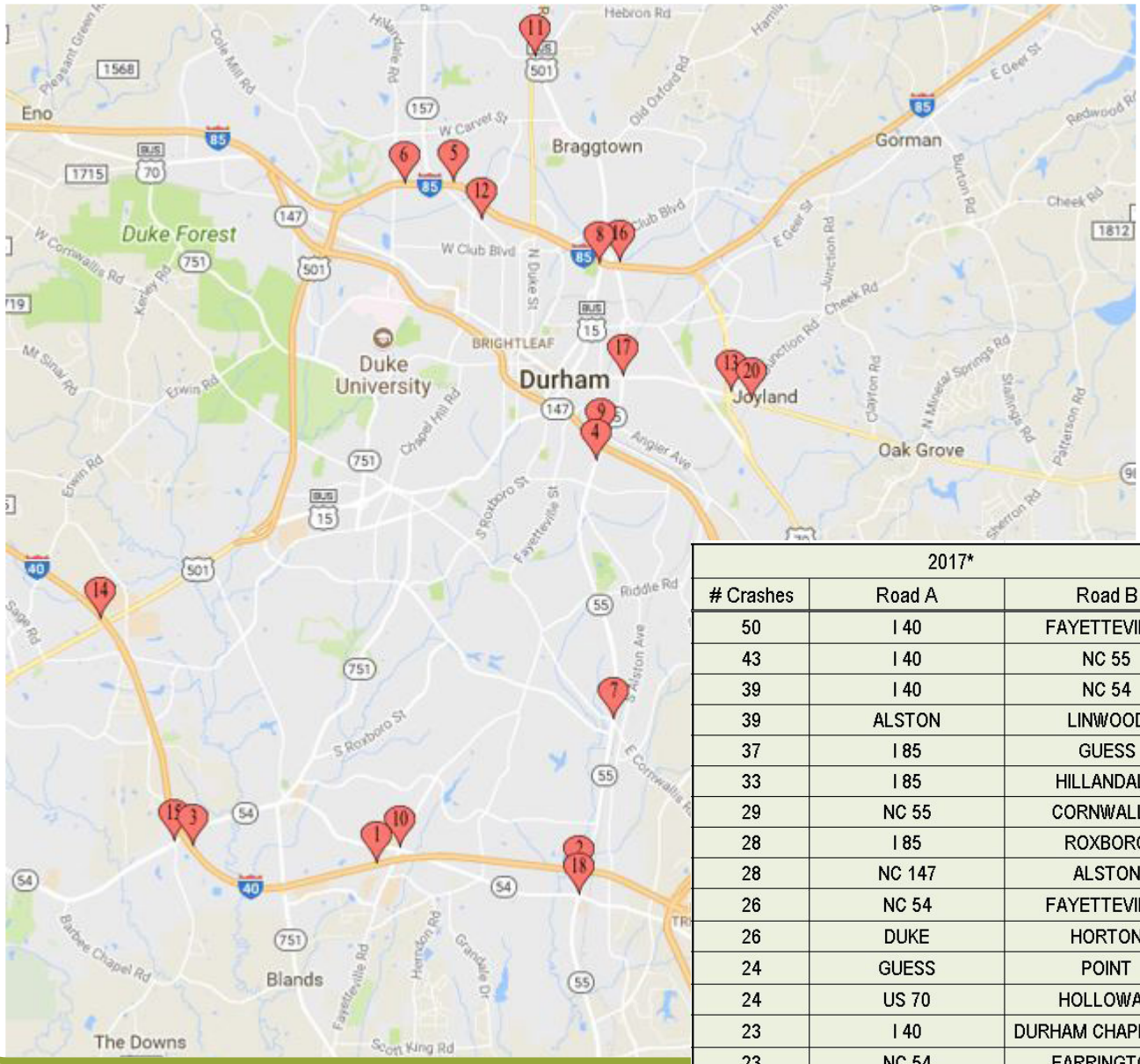
DURHAM COUNTY INTERSECTION ACCIDENT RANK-

This indicator shows the geographic distribution of the 20 highest-crash intersections in Durham County, ranked by number of crashes. Data is estimated for January - October 2017.

WHY THIS INDICATOR MATTERS

Understanding the geographic distribution of high crash intersections, as well as the number of crashes at each, can help guide targeted infrastructure and policy interventions to improve safety in Durham County.

WHAT'S HAPPENING



2017*		
# Crashes	Road A	Road B
50	I 40	FAYETTEVILLE
43	I 40	NC 55
39	I 40	NC 54
39	ALSTON	LINWOOD
37	I 85	GUESS
33	I 85	HILLANDALE
29	NC 55	CORNWALLIS
28	I 85	ROXBORO
28	NC 147	ALSTON
26	NC 54	FAYETTEVILLE
26	DUKE	HORTON
24	GUESS	POINT
24	US 70	HOLLOWAY
23	I 40	DURHAM CHAPEL HILL
23	NC 54	FARRINGTON
23	I 85	AVONDALE
22	ALSTON	HOLLOWAY
22	NC 54	NC 55
21	I 40	I 540
21	HOLLOWAY	JUNCTION

*Estimated data from Jan to Oct for 2017

Source: NCDOT TEAAS Crash Data, 2017

FINDINGS

Crashes in 2017 were concentrated along major highways, including I-40, I-85, and NC 147. The three intersections with the highest number of crashes are all located along I-40 with 132 crashes combined and represent 23% of all crashes in the top 20 list.

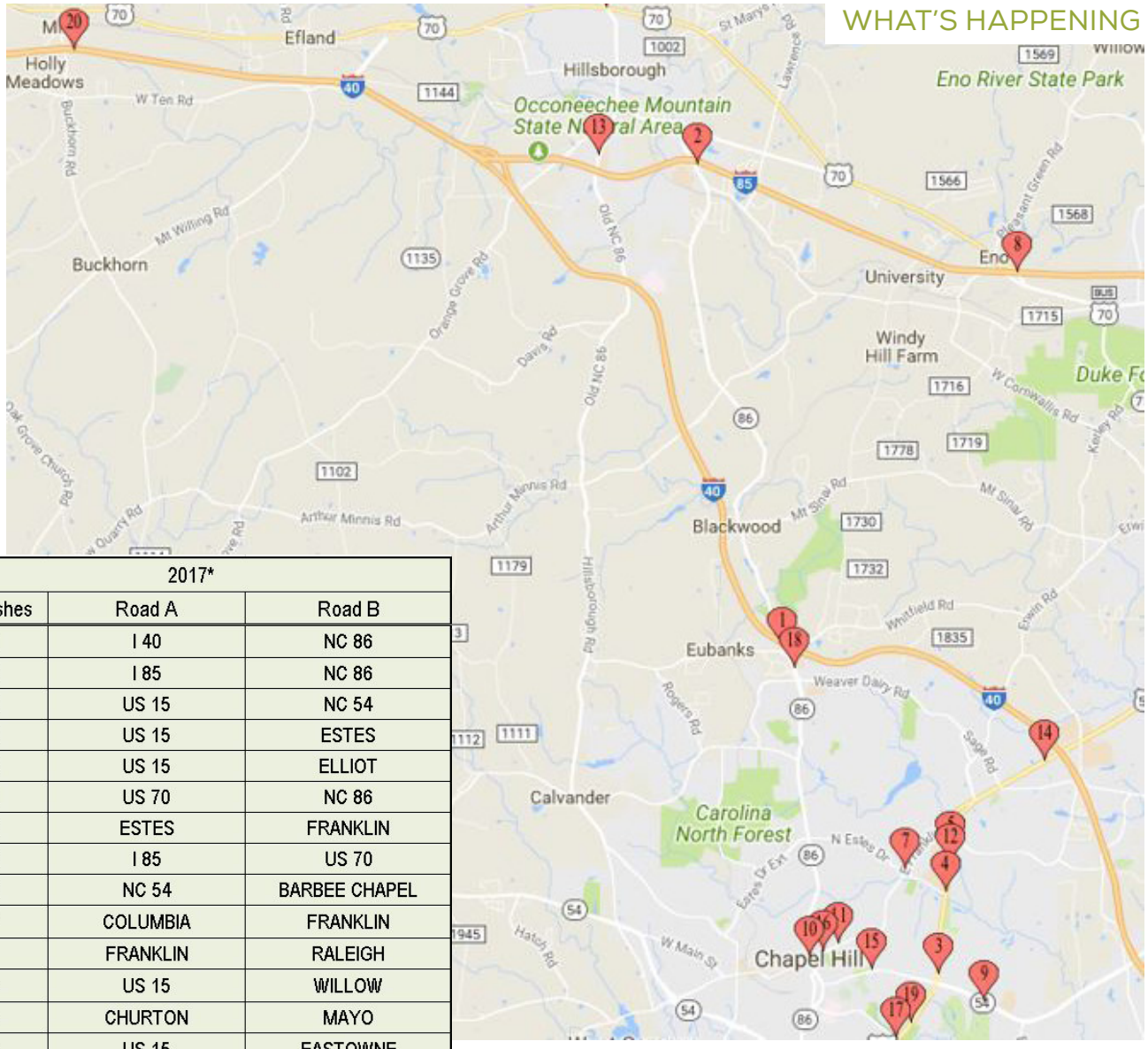
ORANGE COUNTY INTERSECTION ACCIDENT RANK-

This indicator shows the geographic distribution of the 20 highest-crash intersections in Orange County, ranked by number of crashes. Data is estimated for January - October 2017.

WHY THIS INDICATOR MATTERS

Understanding the geographic distribution of high crash intersections, as well as the number of crashes at each can help guide targeted infrastructure and policy interventions to improve safety in Orange County.

WHAT'S HAPPENING



2017*		
# Crashes	Road A	Road B
21	I 40	NC 86
13	I 85	NC 86
13	US 15	NC 54
13	US 15	ESTES
12	US 15	ELLIOT
11	US 70	NC 86
10	ESTES	FRANKLIN
10	I 85	US 70
10	NC 54	BARBEE CHAPEL
9	COLUMBIA	FRANKLIN
9	FRANKLIN	RALEIGH
8	US 15	WILLOW
8	CHURTON	MAYO
7	US 15	EASTOWNE
7	COUNTRY CLUB	RALEIGH
7	FRANKLIN	HENDERSON
7	US 15	MANNING
7	NC 86	PERKINS
7	US 15	OLD MASON FARM
7	I 40	SR 1114

Source: NCDOT TEAAS Crash Data, 2017

FINDINGS

Crashes in 2017 were concentrated along I-85 and I-40, as well as in central Chapel Hill. Crashes in and around downtown Chapel Hill made up 67% of the total 196 crashes of the top 20-highest crash intersections in the county.

CHATHAM COUNTY INTERSECTION ACCIDENT

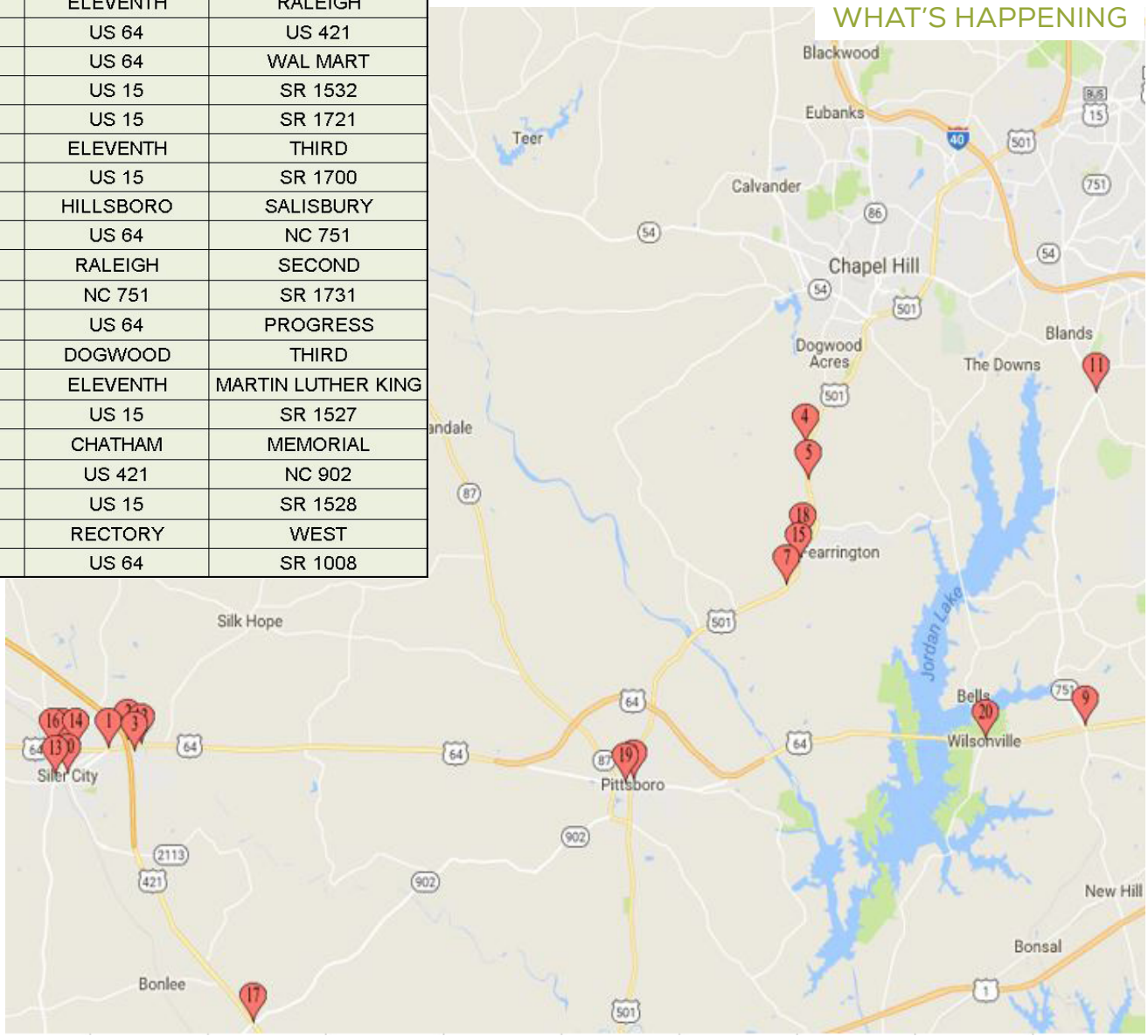
This indicator shows the geographic distribution of the 20 highest-crash intersections in Chatham County, ranked by number of crashes. Data is estimated for January - October 2017.

WHY THIS INDICATOR MATTERS

Understanding the geographic distribution of high crash intersections, as well as the number of crashes at each can help guide targeted infrastructure and policy interventions to improve safety in Chatham County.

2017*		
# Crashes	Road A	Road B
11	ELEVENTH	RALEIGH
10	US 64	US 421
9	US 64	WAL MART
8	US 15	SR 1532
8	US 15	SR 1721
8	ELEVENTH	THIRD
7	US 15	SR 1700
7	HILLSBORO	SALISBURY
7	US 64	NC 751
7	RALEIGH	SECOND
7	NC 751	SR 1731
6	US 64	PROGRESS
6	DOGWOOD	THIRD
5	ELEVENTH	MARTIN LUTHER KING
5	US 15	SR 1527
5	CHATHAM	MEMORIAL
5	US 421	NC 902
5	US 15	SR 1528
4	RECTORY	WEST
4	US 64	SR 1008

WHAT'S HAPPENING



Source: NCDOT TEAAS Crash Data, 2017

FINDINGS

Crashes in 2017 were concentrated along US 15-501 between Chapel Hill and Pittsboro; in the Town of Pittsboro; and in Siler City along US 64. Eleven of the top 20 intersections for crashes in the county are located in Siler City - making up 49% of the total 134 crashes. This site specific information, and disproportionate rate of crashes in one place, can be used to make targeted interventions in Siler City.

ECONOMIC DEVELOPMENT

What Is It?

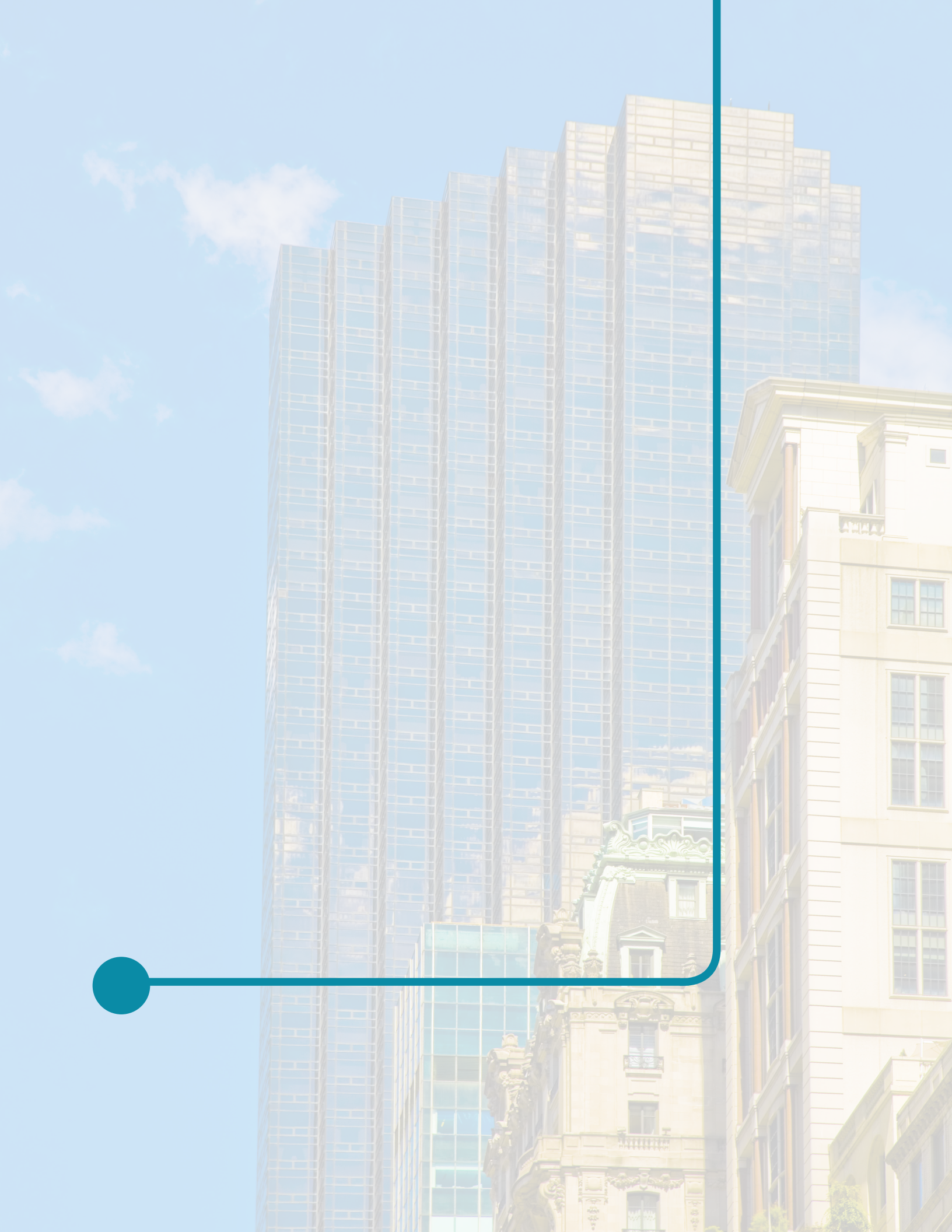
Economic development indicators are meant to inform the MPO about the economic trends and conditions that may influence transportation needs in the coming years. Relevant indicators include construction and private development trends (both residential and non-residential), which help to identify the scale, location, and pattern of growth. Other indicators such as quality of life, which is harder to estimate but depends on multimodal transportation networks, will also be considered.

Why Does It Matter?

Economic development is a driver of transportation. A good economy is dependent upon its transportation network to move workers, visitors, goods, and services. And as an economy grows, the transportation network is increasingly expected to deliver quality of life benefits. Understanding economic development trends can help identify smart transportation policy and investment.

Key Findings

The Research Triangle and the DCHC region are consistently ranked high on 'quality of life' scales compared to other regions in the United States. To continue this success, the region will need to provide competitive work, travel, and housing opportunities to residents. The continued dominance of knowledge sector employment in the region has a direct impact on travel and development patterns. Jobs such as professional, scientific and technical services generate "peak hour traffic": employees arriving in the morning, and leaving in the afternoon. 80% of all jobs in the region generate peak hour traffic. These kinds of jobs gravitate to denser urban environments, close to multimodal infrastructure for biking, walking, and transit. Residential development patterns have followed; in the last five years, Durham and Chapel Hill have seen a boom in multifamily buildings, as well as multi-use, higher intensity developments downtown. Firms and their employees are increasingly opting for dense, multimodal locations. These economic shifts will strongly influence the region's transportation priorities and investment in the coming years.



REGIONAL JOB TRENDS

This indicator looks at the types of jobs located in the region and the changing trends in the region's job market over the past five years.

WHY THIS INDICATOR MATTERS

Job trends can help identify transportation solutions. Different types of jobs use transportation networks differently. For instance, industrial jobs (i.e. warehousing, manufacturing) can generate round-the-clock truck traffic, and these sectors often need ample space and lower density locations which requires their employees to drive to get to work. In contrast, knowledge sector jobs (i.e.education, finance) generate mostly commuting trips and are often situated in higher density, heavily populated locations which allows employees a wider set of transportation options for their commute. Knowing more about how jobs in the region are changing can provide insight into the best transportation investments to support the region's economy.

WHAT'S HAPPENING

For years, the DCHC region has been a national leader in the health care and education sectors. The job data confirms this. Moreover, these occupations are growing and may comprise an even larger portion of the job market in the future. But the economy is certainly more diverse than just these two job types, as the table to the right shows.

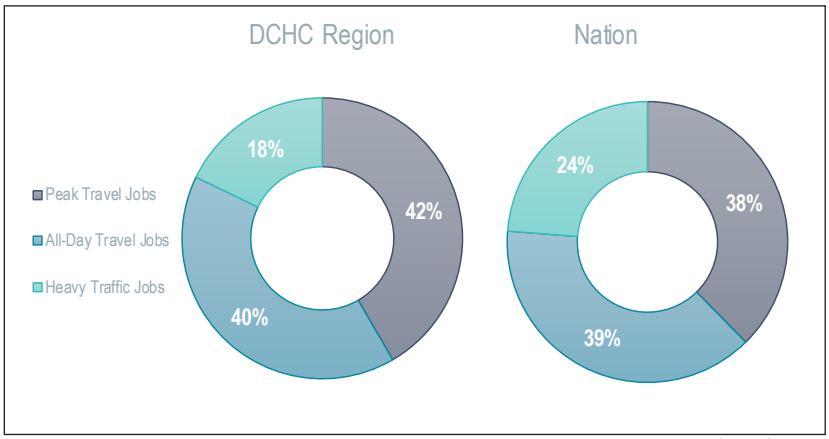
As stated earlier, different jobs use transportation differently. Jobs have been sorted by the type of traffic they generate: jobs that generate primarily worker arrival and departure trips and have few, if any, visitors or customers are considered 'Peak Hour Travel' jobs; jobs that rely on customers coming to them are considered 'All Day Travel' jobs; and jobs that send out additional trips by truck or other heavy vehicles are considered 'Heavy Traffic' jobs. For the DCHC region, more than 80% of all jobs are in the Peak Hour or All Day categories, and these industries have grown considerably in the last 5 years, while the Heavy Traffic jobs have decreased. These patterns are markedly different than those of the nation as a whole.

5 Largest Industry Sectors in the DCHC Region

Industry	Job Trends		
	Share of Total Jobs	Change 2010 -2015	Percent Change
Health Care and Social Assistance	21%	6,966	13%
Educational Services	16%	7,664	20%
Manufacturing	11%	-2,529	-8%
Professional, Scientific and Technical Services	9%	4,632	20%
Retail Trade	9%	2,701	11%

Source: Longitiudiinal Employer-Household Dynamics (LEHD), 2010-2015

Share of Total Jobs



Source: Longitiudiinal Employer-Household Dynamics (LEHD), 2016

FINDINGS

Higher-than-average proportion of peak hour trips can lead to major congestion problems in a more suburban landscape like the DCHC region. The types of jobs that are thriving in this region generally locate in denser, urban areas. These development patterns allow for more multimodal transportation options such as transit, biking, and walking. Finally, a decrease in truck-oriented jobs may lead to lower demand for inter-regional travel and the major highways and interstates those trips require.

BUILDING PERMITS

This indicator looks at the rate of approved new residential development being built in the region over the last five years.

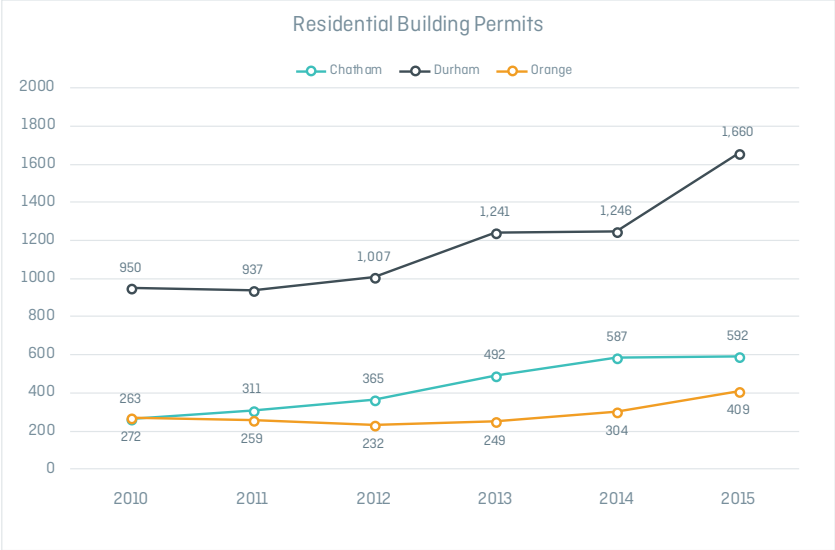
WHY THIS INDICATOR MATTERS

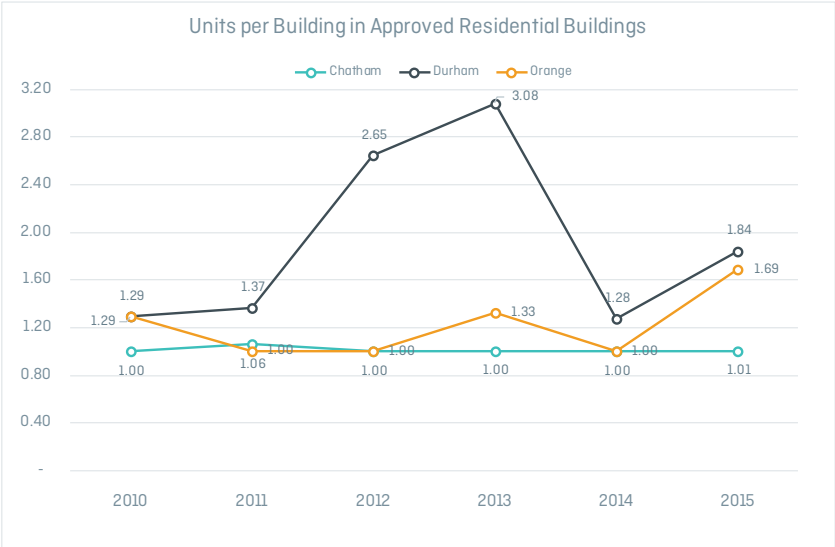
Building permit data can provide insight on both the amount and spatial pattern of residential growth, both of which can inform future transportation demand.

WHAT'S HAPPENING

The Census Bureau provides residential building permit data at the county level. The data shows a steady increase in residential building permits since 2010, with all three DCHC counties seeing their highest rate of approved permits in 2015. Permit rates are still below mid 2000s rates, though.

Notably, the type of residential permits is different in each county. Chatham County permits have been almost exclusively single-family buildings - the 2,610 buildings that have been issued have included 2,633 units. Orange County has recently begun to see a higher proportion of multi-family units, particularly in 2015. Durham County has had the highest ratio of units per building of the three counties each year of this analysis, including 2013 where more than 50 multi-family buildings were approved, constituting more than two-thirds of all approved units in the county. While the rate of multi-family approvals has dropped since then, there still appears to be a general upward trend in a more diverse set of residential uses.





Source: US Census Building Permit Survey

FINDINGS

The general increase in issued permits confirms that residential growth continues in the region, and there is nothing in this data to suggest that this will change in the near term (though permitting rates do drop during periods of national or regional economic recession). The units per building data suggests, however, that the spatial pattern of development may be shifting. New multi-family units are more likely than single-family units to be located in denser areas where multimodal transportation infrastructure exists, such as sidewalks, bike lanes, and transit. This shift to more multimodal locations could have major impacts on the region's transportation priorities.

DEVELOPMENT PATTERNS

This indicator looks at spatial development patterns in downtown Durham and Chapel Hill.

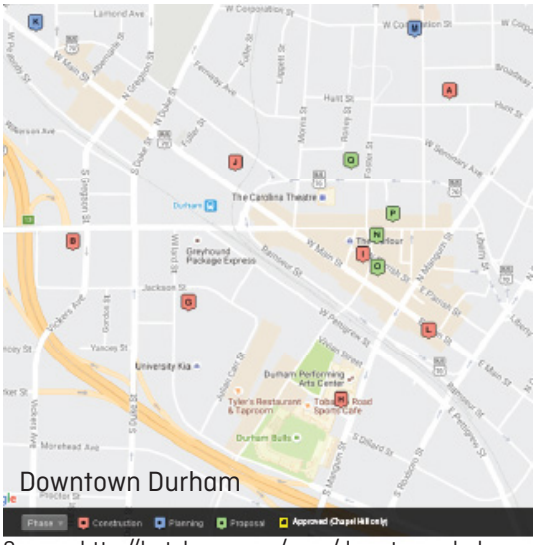
WHY THIS INDICATOR MATTERS

Similar to building permit data, development patterns can provide insight on both the amount and spatial pattern of growth, providing clues about future transportation demand. Unlike residential development data from building permits, this measure includes all development types, but does not have a unified data source that allows for long-term trend analysis.

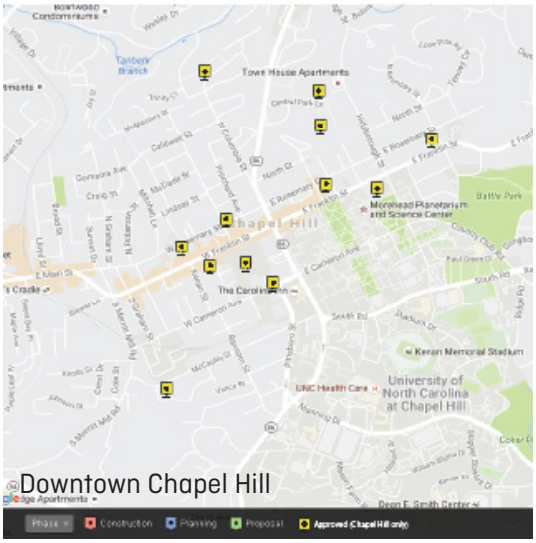
WHAT'S HAPPENING

The four urban areas of the DCHC region - Durham, Chapel Hill, Carrboro, and Hillsborough - have all experienced significant development pressures over the last half decade. Development has been particularly notable in their respective downtowns, where large multi-use projects have sprung up in each city. Durham and Chapel Hill local governments keep track of the location of development applications, and recent downtown development applications and approvals are shown in the maps to the right. Both downtowns have seen a mix of residential, commercial, office, and hotel development, and in many instances at higher densities than the surrounding buildings.

Unfortunately, no detailed data was found to quantify the intensity of development relative to previous years, though there is no question that downtown development is occurring at a faster pace than has been seen in years, particularly in downtown Durham.



Source: http://batchgeo.com/map/downtown-durham-development



Source: Town of Chapel Hill and Renaissance Planning

FINDINGS

Increased development pressure is occurring throughout the DCHC region, in rural, suburban, and urban places. But in the region's downtowns, there is a clear increase in activity and density. These areas often have space constraints, with traffic congestion and parking needs that need to be addressed. But these areas also provide opportunities for transit and non-motorized travel, particularly as the rate of downtown residential development increases.

QUALITY OF LIFE

This indicator looks at independent rankings of the region as a desirable place to live.

WHY THIS INDICATOR MATTERS

The perceived quality of life in a region is a major influencer of how a region grows over time. Knowing more about how the region is viewed relative to the rest of the country can provide clues about possible growth trends, and can also identify transportation investments that can improve quality of life and economic outcomes.

WHAT'S HAPPENING

Five organizations were identified as having released a 'best places to live' index for the country. Each organization used different criteria to evaluate a community's quality of life. In all five, either Durham, Chapel Hill, or the Triangle appeared in their list.

2016 Best PLACES NICHE

Durham (#48)

WalletHub

Best cities for families

Durham (#42)

BEST PLACES U.S.News & WORLD REPORT RANKINGS

Raleigh-Durham (#4)

LIVABILITY TOP 100 BEST PLACES TO LIVE 2015

Chapel Hill (#36)

BUSINESS INSIDER

Raleigh-Durham (#4)

FINDINGS

The public consensus that the Triangle and the DCHC region is one of the best places to live in America is a strong indication of the high quality of life that is achieved here. Notably, many of the communities that routinely appear on these lists with the Triangle are either: (1) slightly bigger and provide high-end transit amenities (such as Madison, WI, or Austin, TX); or (2) they are slightly smaller and offer small-town walkable amenities with lower costs of living and/or good access to nearby metro areas. This suggests that transportation investments may be needed to continue to compete with other high-end quality of life communities for jobs and residents.

LAND USE & DEMOGRAPHICS

What Is It?

Land use and demographics are the driving force behind many transportation patterns. This section explores the transportation implications of land use, including the spatial distribution of population, jobs, and overall activity. It also looks at the transportation implications of certain demographic patterns in the region.

Why Does It Matter?

Transportation networks including roads, bus routes, bicycle paths, and sidewalks are designed to get people from one place to another. The location of a traveler's origin (for example, their home) and their destination (such as their workplace) strongly influences how people travel. The more we know about these locations, the better we can make decisions about what transportation network solutions will work best for all travelers. It is also vital to know who uses the transportation network in order to provide appropriate services for all.

Key Findings

In the DCHC region, activity (including households, population and jobs) is concentrated in the urban centers and along major highways. Duke University, UNC Chapel Hill and Research Triangle Park continue to serve as key destinations, while suburban residential neighborhoods act as key points of origin for trip generation. Most of the people living in the region are working-age adults, ensuring continued demand for home-to-work trips. Land use and demographic patterns continue to produce inter-city and inter-county movement.

POPULATION DISTRIBUTION

This indicator provides a snapshot of the spatial distribution of population in 2015. The map shows the 5-year estimates for population density per block group.

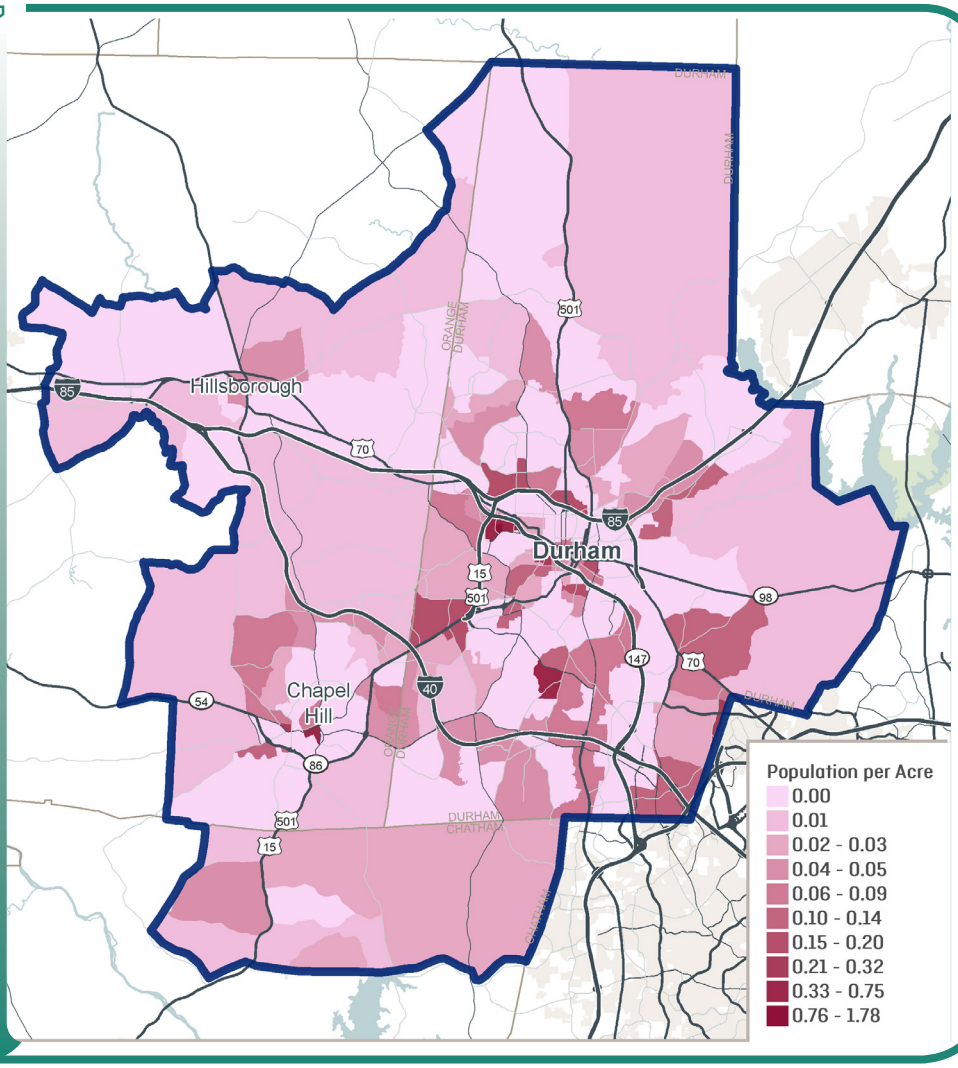
WHY THIS INDICATOR MATTERS

Demographic distribution across the region strongly influences travel behavior. Population centers in particular are the primary origin for travel. Understanding existing population distribution provides context for other key indicators, including population change over time, and employment and activity distribution. The geographic distribution of population should be considered in relation to other demographic trends, such as age distribution across the region.

WHAT'S HAPPENING

The US Census American Community Survey (ACS) provides population estimates at the block group level. Note that the 2015 ACS is combined with the previous four years to provide a large enough sample for statistical analysis, thus this 2015 estimate reflects what is actually a 2011-2015 average estimate. This is still a useful gauge for current population estimates, and is updated every year.

In this map, the darker pink areas contain higher population density than lighter pink areas. Pockets of high population density are found in downtown Chapel Hill, and downtown Durham, but also on the outskirts of both cities and along major highway routes.



FINDINGS

Population in the DCHC region is spread throughout the three counties. Some of the larger population centers are adjacent to major highways, including US 70, I-85 and I-40. Pockets of population density in downtown Chapel Hill and northwest of downtown Durham could represent student housing for UNC Chapel Hill and Duke University respectively. Travel patterns can be expected to reflect highway oriented trends, as people move to and from the suburban and exurban population centers.

POPULATION CHANGE

This indicator reflects population change in the region over five years, from 2010 to 2015.

WHY THIS INDICATOR MATTERS

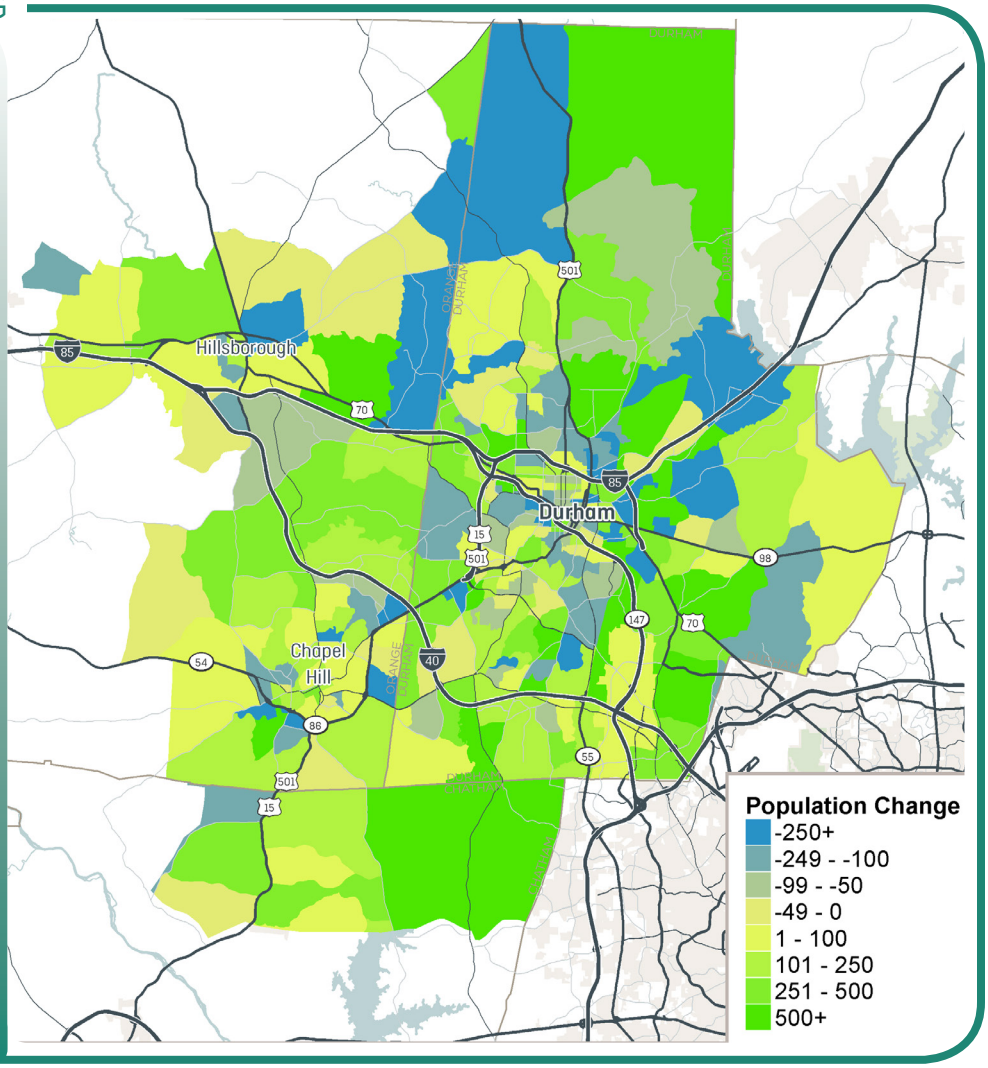
Population growth and contraction have strong impacts on the region's transportation network. Recent trends can provide insight into how the region may evolve in the future. However, transportation planners must take care when considering recent trends for investment decisions. Some population changes are cyclical, rather than long-lasting. This distinction needs to be considered when evaluating the extent to which recent change is an indicator of future growth patterns.

WHAT'S HAPPENING

The US Census American Community Survey provides population estimates at the block group level. Comparing their 2006-2010 population estimate to their 2011-2015 population estimate (the most up to date estimate available) shows where population has been rising and falling.

Areas in blue and light yellow lost population from 2010 to 2015, while areas in darker yellow and green gained population. The region is estimated to have increased by slightly more than 20,000 people during this time, though not all block groups have experienced population increases as a result.

Pockets of population increase can be seen in downtown Chapel Hill, but more significant population increases have occurred in the suburban and exurban periphery of the region's major cities.



FINDINGS

The pattern of change shows that, in general, the periphery of the DCHC region continues to grow, further spreading out the population and potentially increasing distance between home and other activities. However, the residential areas in and around downtowns also seemed to thrive, particularly downtown Chapel Hill, and the neighborhoods to the east and west of Downtown Durham. This suggests that the national "back to the city" phenomenon is also present in the DCHC region. Overall, the combination of increased suburban development and downtown development means that DCHC may be tasked with solving different kinds of transportation problems for different communities - some interested in faster speeds from the suburbs to job centers, others looking for more non-auto based travel in their shorter commutes to nearby downtowns. Additionally, secondary roads may start experiencing congestion as some areas with increasing population do not have immediate access to major roads.

POPULATION AGE

This indicator shows the distribution of population across all age groups in 2016.

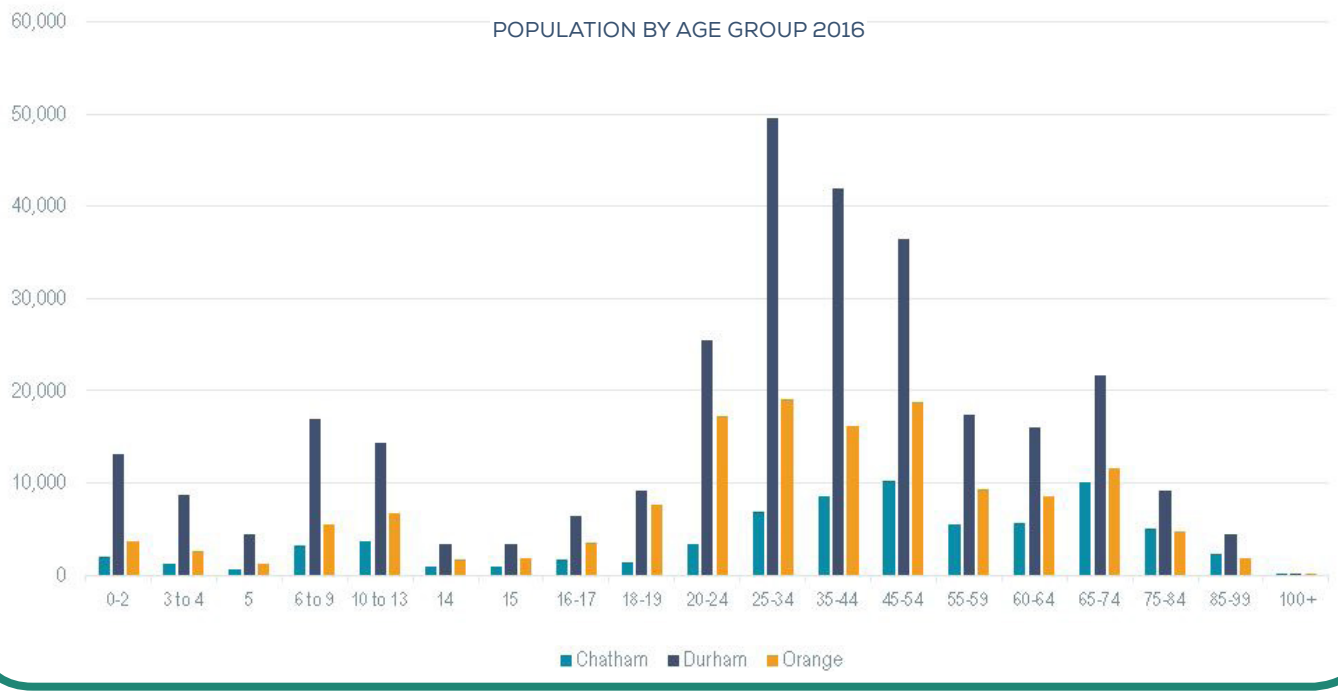
WHY THIS INDICATOR MATTERS

Demographic trends provide insight into who lives in the region and therefore who uses the transportation network. Population age is a vital indicator to understand which age group - each with its own lifestyle preferences - will most heavily influence travel demand and transportation trends in the coming years. Concentration of certain age groups, such as seniors , or young families with children, require targeted interventions.

WHAT'S HAPPENING

The DCHC MPO collects demographic data for the three counties in the DCHC region. This graph shows the age breakdown of the population for Chatham, Durham, and Orange Counties in 2016. Overall, Durham County has the largest population, followed by Orange and then Chatham Counties.

Durham has the most young people aged 25 - 34 (approx. 50,000) relative to other age groups. Durham's population also clusters in the young age groups - babies (0 - 2 years old) and school-age children (6 - 13 years). In contrast, the Chatham population is predominantly older age groups, with most of the population falling in the 45-54 and 65-74 age groups. Orange County has a more even distribution across the adult age groups from 20 to 64 years old.



FINDINGS

Population trends in the region reflect land use trends. The presence of two major universities, as well as key employment centers such as Research Triangle Park (RTP) explains the high concentration of college-age students (20-24 years) in Durham and Orange Counties, as well as working-age adults (25 - 54 years). Travel patterns are likely to reflect this population distribution in the form of home-to-work trips along major highways, connecting employment hubs across the region.

POPULATION CHANGE - AGE

This indicator shows the distribution of population across four major age groups, and how the distribution changed between 2010 and 2016 for each of the three counties.

WHY THIS INDICATOR MATTERS

Population age is a vital indicator to understand which age group will most heavily influence travel demand and transportation trends in the coming years. How certain age groups, such as seniors , or young families with children, are growing or shrinking relative to overall population can inform targeted interventions.

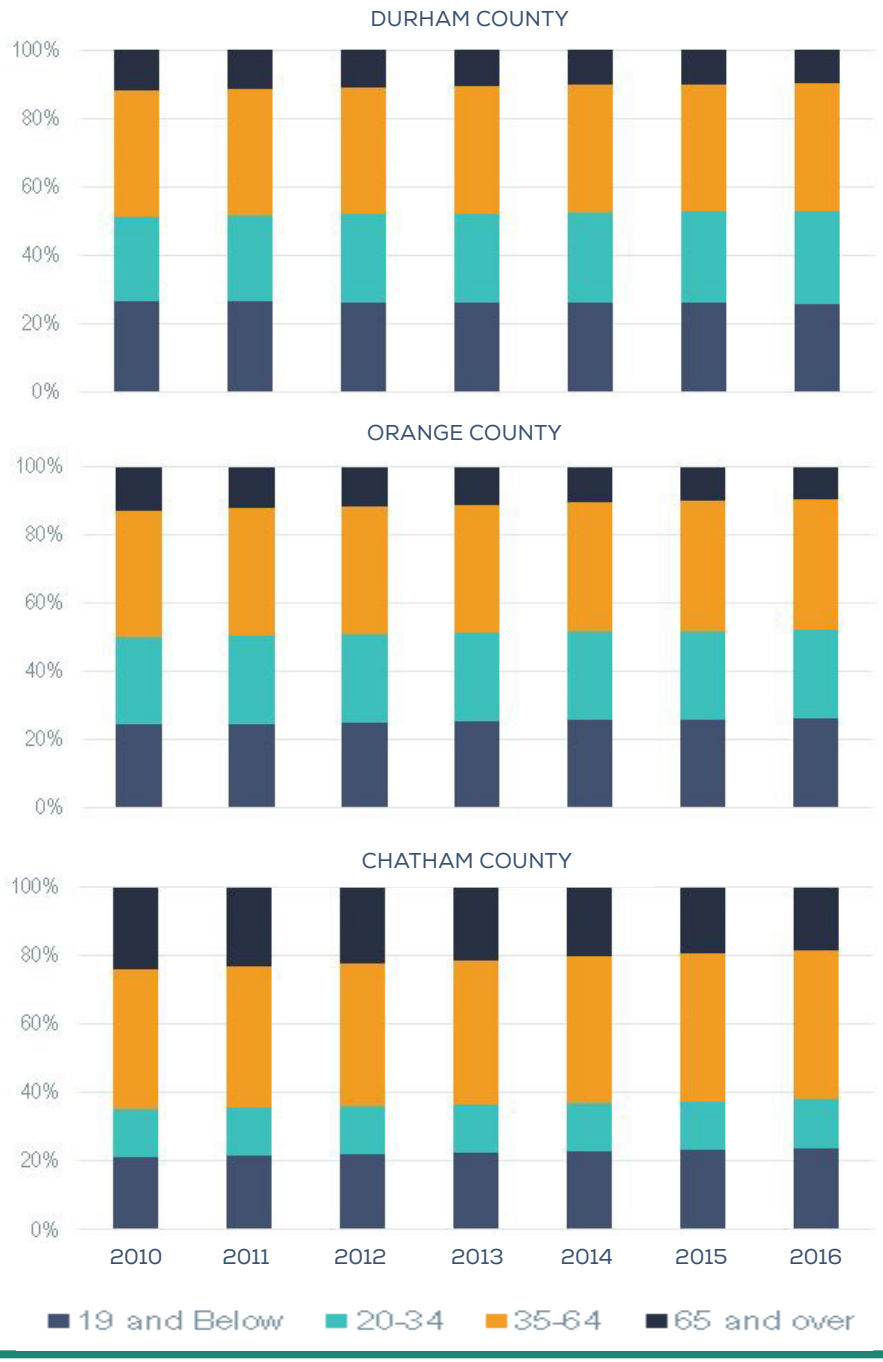
WHAT'S HAPPENING

The DCHC MPO collects demographic data for the three counties in the DCHC region. These three graphs show what proportion of each county's population is made up by each of four major age groups (19 and below, 20 - 34 years, 35 - 64 years, and 65 and over) from 2010 to 2016.

Proportional trends across all three counties are similar, with a few notable differences. Chatham has a higher proportion (roughly 20%) of seniors (65+), but this percent is shrinking along with the region overall.

Durham and Orange Counties show very similar trends: the proportion of seniors declined slightly since 2010, while the proportion of younger age groups increased slightly.

All three counties experienced an increase in the number of people aged 35 - 64, relative to all other age groups.



FINDINGS

Population across all three counties is aging slightly, but overall is dominated by working-age adults (35 - 64 years old) that make up roughly 40% of the population. Transportation demand will likely reflect this trend with trip generation focused on home origins and work destinations.

EMPLOYMENT DENSITY

This indicator provides a snapshot of the spatial distribution of employment in 2015. The map shows the 5-year estimates for employment density per block group.

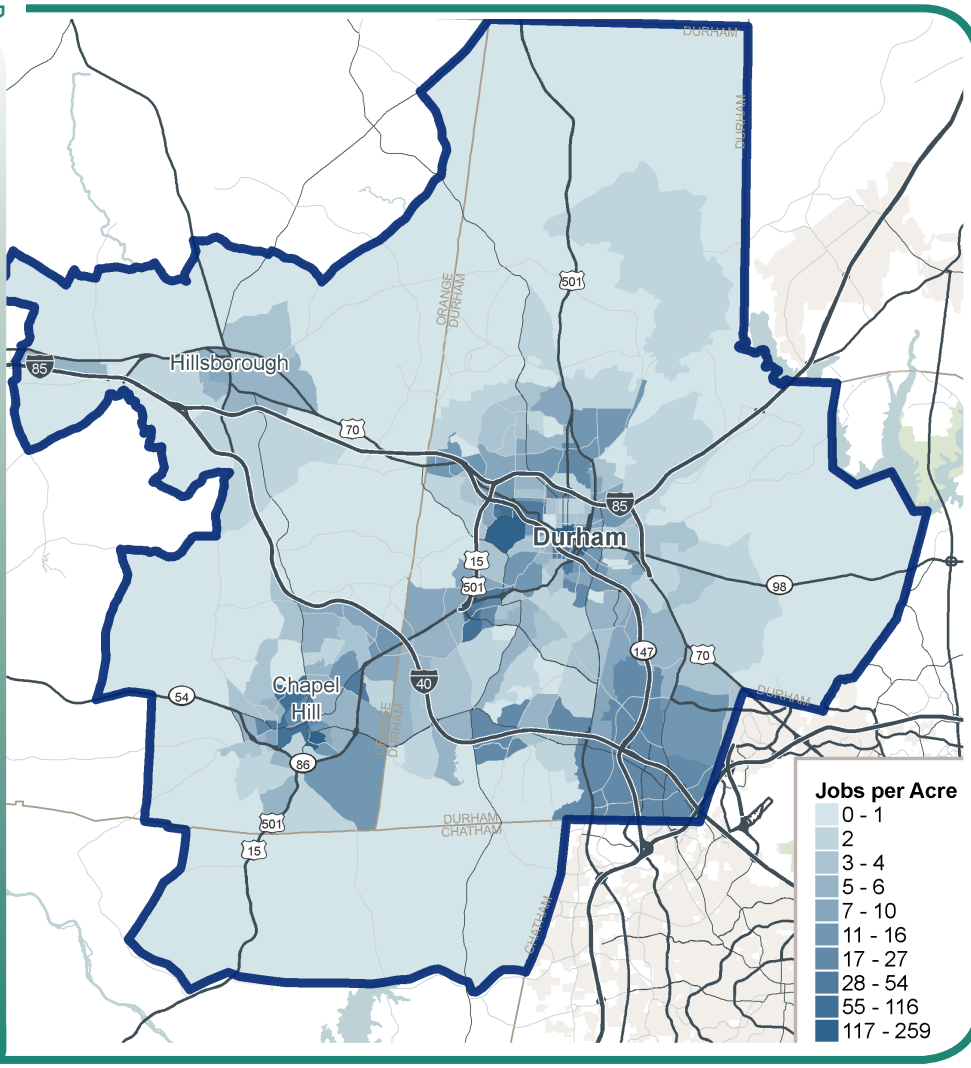
WHY THIS INDICATOR MATTERS

Demographic distribution across the region strongly influences travel behavior. Employment centers are the primary destination for travel in the region. Understanding existing employment distribution provides context for other key indicators, including activity density.

WHAT'S HAPPENING

The US Census American Community Survey provides population estimates at the block group level. Note that the 2015 ACS is combined with the previous four years to provide a large enough sample for statistical analysis, thus this 2015 estimate reflects what is actually a 2011-2015 average estimate. This is still a useful gauge for current employment estimates, and is updated every year.

In this map, the darker blue areas contain higher employment density than lighter blue areas. Pockets of high employment density are found in downtown Durham and Chapel Hill, but also along the major highway routes and southeast towards neighboring Raleigh.



FINDINGS

Employment in the DCHC region is concentrated in Orange and Durham Counties. Employment tends to be concentrated adjacent to major highways, including US 70, I-85 and I-40. Particular hubs of employment density exist in downtown Chapel Hill (including the UNC campus) and Durham, but also at the sites of Duke University and Research Triangle Park (RTP) along Highway 147. Employment-driven transportation patterns can be expected to reflect this distribution, with commuters traveling from their suburban and exurban homes to job centers at Duke, UNC, and RTP, among others.

ACTIVITY DENSITY

This indicator provides a snapshot of the spatial distribution of activity (households and jobs) in 2015. The map shows the 5-year estimates for activity density per block group.

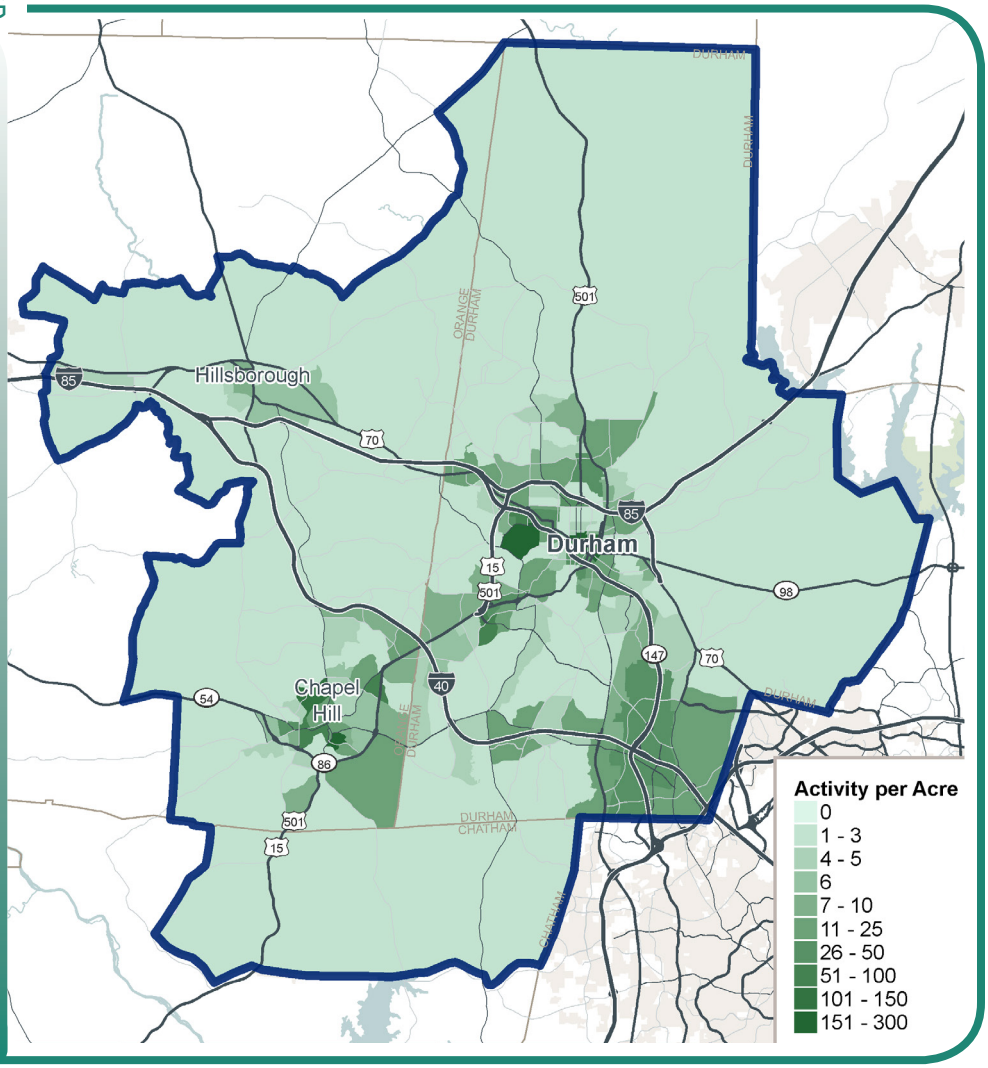
WHY THIS INDICATOR MATTERS

Activity distribution across the region strongly influences travel behavior. Households and job centers are the primary origins and destinations for travel in the region. Understanding existing activity distribution provides context for other key indicators, and helps inform transportation infrastructure investment decisions.

WHAT'S HAPPENING

The US Census American Community Survey provides household and job estimates at the block group level. Note that the 2015 ACS is combined with the previous four years to provide a large enough sample for statistical analysis, thus this 2015 estimate reflects what is actually a 2011-2015 average estimate. This is still a useful gauge for current employment estimates, and is updated every year.

In this map, the darker green areas contain higher activity density than lighter green areas. Pockets of high activity density are concentrated in and around Durham and Chapel Hill, but also along the major highway routes and southeast towards neighboring Raleigh.



FINDINGS

Activity (households and jobs) in the DCHC region is concentrated in downtown Chapel Hill, downtown Durham, and Hillsborough, as well as Research Triangle Park and the major transportation corridors that offer access to RTP. Transportation patterns and travel demand will likely continue to reflect this cross-region distribution in the form of inter-city commutes and increased development along the major corridors of I-40, I-85, NC 147, NC 70, and US 15-501 between Durham and Chapel Hill.

MULTIMODAL ACCESSIBILITY

What Is It?

Multimodal accessibility is the measurement of how many destinations can be reached from any origin in a given amount of time using a particular mode of transportation. As such, it is an excellent way to measure the true impact of a transportation network.

Why Does It Matter?

Multimodal accessibility has emerged as an innovative new way to analyze how people and goods move through a region. Because it is based on both land uses (utilizing information on both origins and destinations) and transportation (utilizing information both on transportation speeds and modes), multimodal accessibility can help determine the efficacy of our region's transportation network for all travelers across all modes.

Key Findings

Residents who live in the Triangle – Durham, Chapel Hill, and neighboring Raleigh - have strong access to jobs in the region, but depend heavily on cars. Each day, employees are driving across city and county lines to reach their places of work. Roads like I-40 are congested, and transit investment is needed to relieve the pressure of induced demand. Those who live in Chapel Hill have higher access to jobs via transit than Durham residents. Access to jobs is an essential piece of the long term success of the region, and multimodal accessibility is particularly attractive to young professionals and families considering moving to the area.

REGIONAL JOB ACCESS BY CAR

This indicator summarizes the relative number of jobs accessible by car within 45 minutes from every block group in the region.

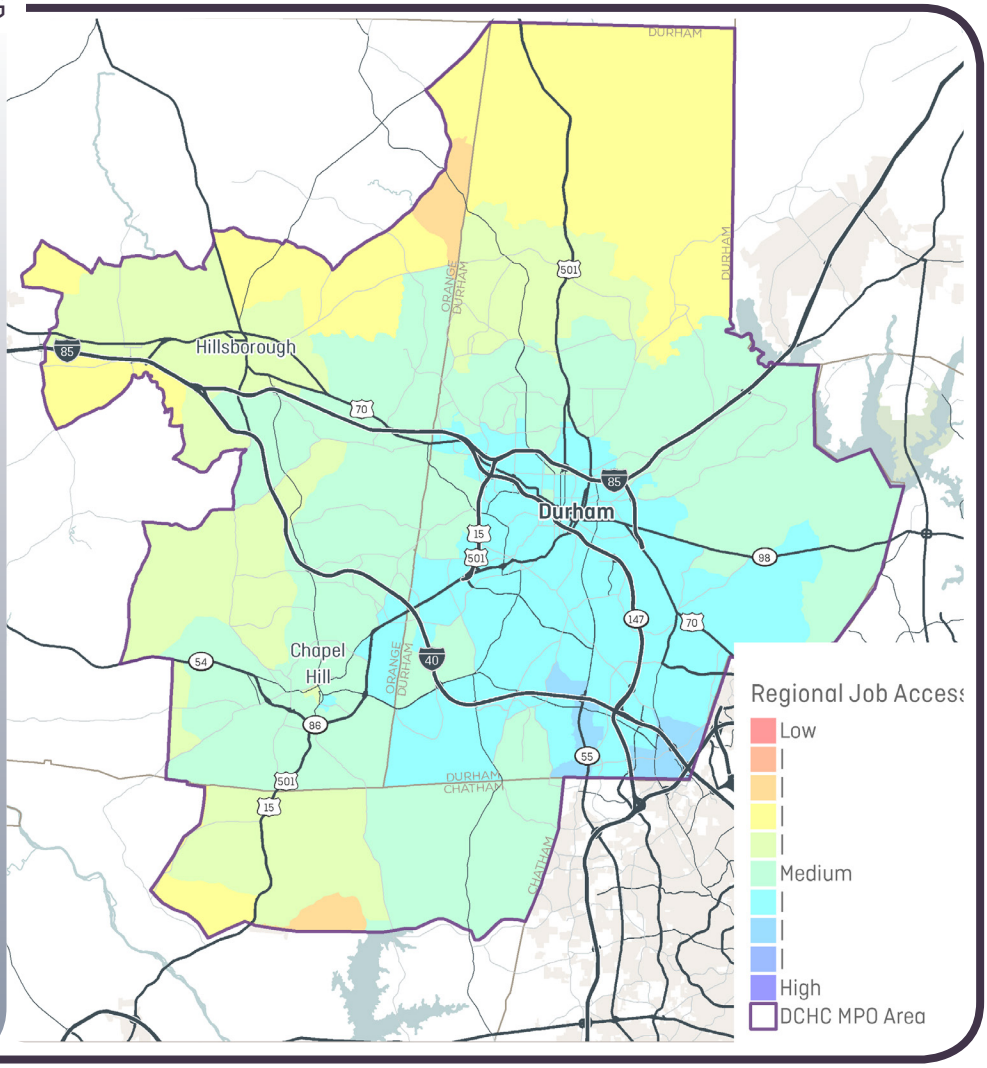
WHY THIS INDICATOR MATTERS

Only about one-sixth of all trips are commuting trips, but nearly all trips involve a work-related destination. Measuring regional job access within a 45-minute drive is a powerful indicator for identifying the likely destinations for any given origin. These accessibility indicators weigh the "value" of each job by the time it takes to reach it, which also helps to make predictions about travel behavior.

WHAT'S HAPPENING

The EPA Smart Location Database provides regional job accessibility data from 2010. This is the first nationwide accessibility dataset available.

Job accessibility is provided as a "score" that sums the total jobs reachable in 45 minutes. Areas with low to medium auto-based job accessibility are illustrated in reds and yellows, and areas with medium to high auto-based job accessibility are indicated in greens and blues. The scale is based on a national dataset, so areas with high auto-based job accessibility are in larger major metropolitan areas and therefore do not appear on this map.



FINDINGS

In general, accessibility in the DCHC region is highest in those places that can easily reach Durham, Chapel Hill, and Raleigh (the latter of which has much higher accessibility than the DCHC region). Additionally, downtown Durham and Chapel Hill see small but important benefits in regional job access, meaning that access to jobs within just a few minutes is very valuable.

REGIONAL JOB ACCESS BY TRANSIT

This indicator summarizes the relative number of jobs accessible by transit within 45 minutes from every block group in the region.

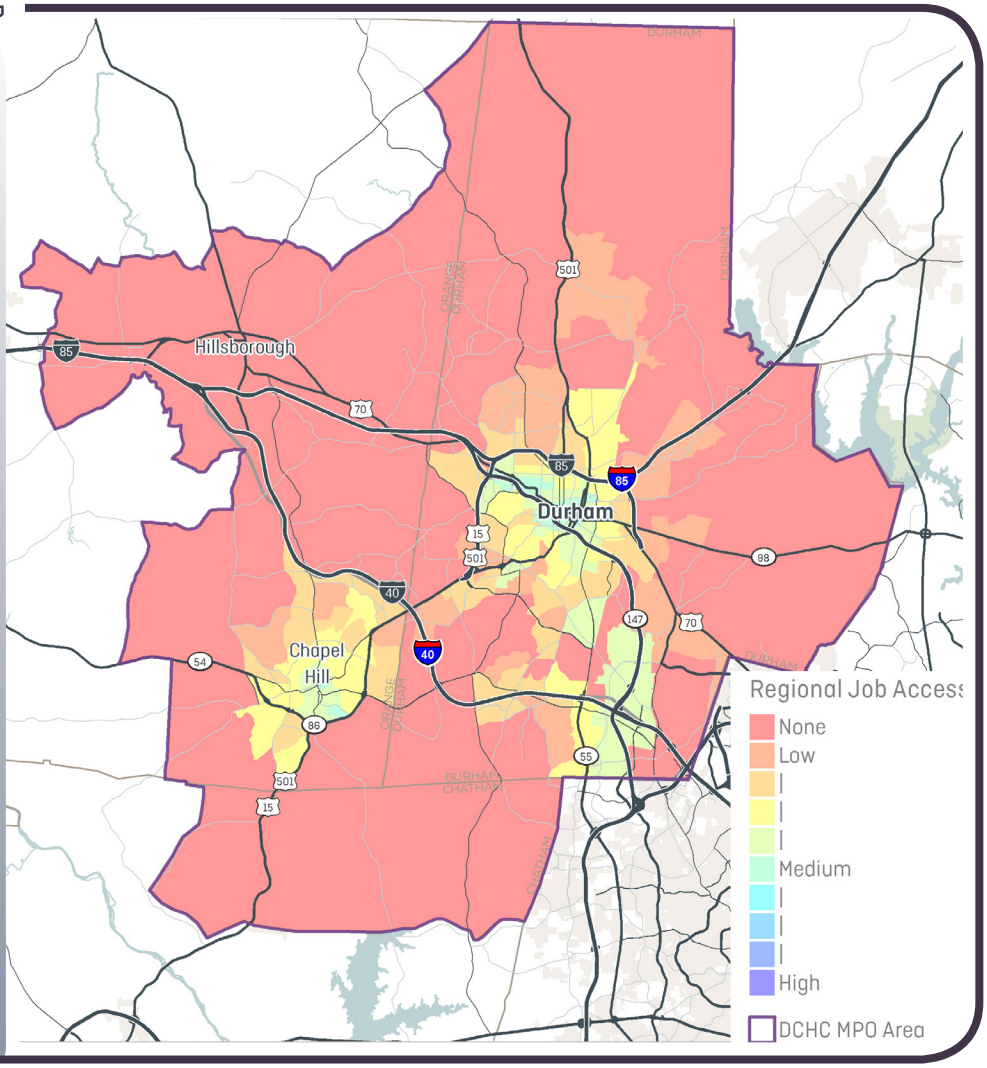
WHY THIS INDICATOR MATTERS

Public transportation in many places around the country is an important part of regional travel, particularly for trips to work. This is true in the DCHC region as well, but there are many places where public transportation - at least fixed route public transportation - is totally unavailable. Measuring regional job access by transit demonstrates what parts of the region are benefiting most from transit provision.

WHAT'S HAPPENING

The EPA Smart Location Database provides regional job accessibility data from 2010. This is the first nationwide accessibility dataset available.

Job accessibility is provided as a "score" that sums the total jobs reachable in 45 minutes. Areas with low to medium transit-based job accessibility are illustrated in reds and yellows, and areas with medium to high transit-based job accessibility are indicated in greens and blues. The scale is based on a national dataset, so areas with high transit-based job accessibility are in larger major metropolitan areas and therefore do not appear on this map.



FINDINGS

Job access by transit looks very different than job access by car. First, much of the region has no fixed route transit access (though this map does not account for demand-response transit). Next, Chapel Hill is much more prominent here, as their robust system and clustered job centers allow for very good transit-based access relative to the region. Finally, several of the places with highest transit accessibility had very low populations in 2010. These places include Research Triangle Park and the hospitals at Duke and UNC, indicating that while people may not live in these areas they are utilizing transit to access work from surrounding suburban and exurban locations.

LINK GRAVITY

This indicator collects all of the best paths between origins and destinations created during an accessibility analysis and aggregates them. This creates a network desirability map for travel.

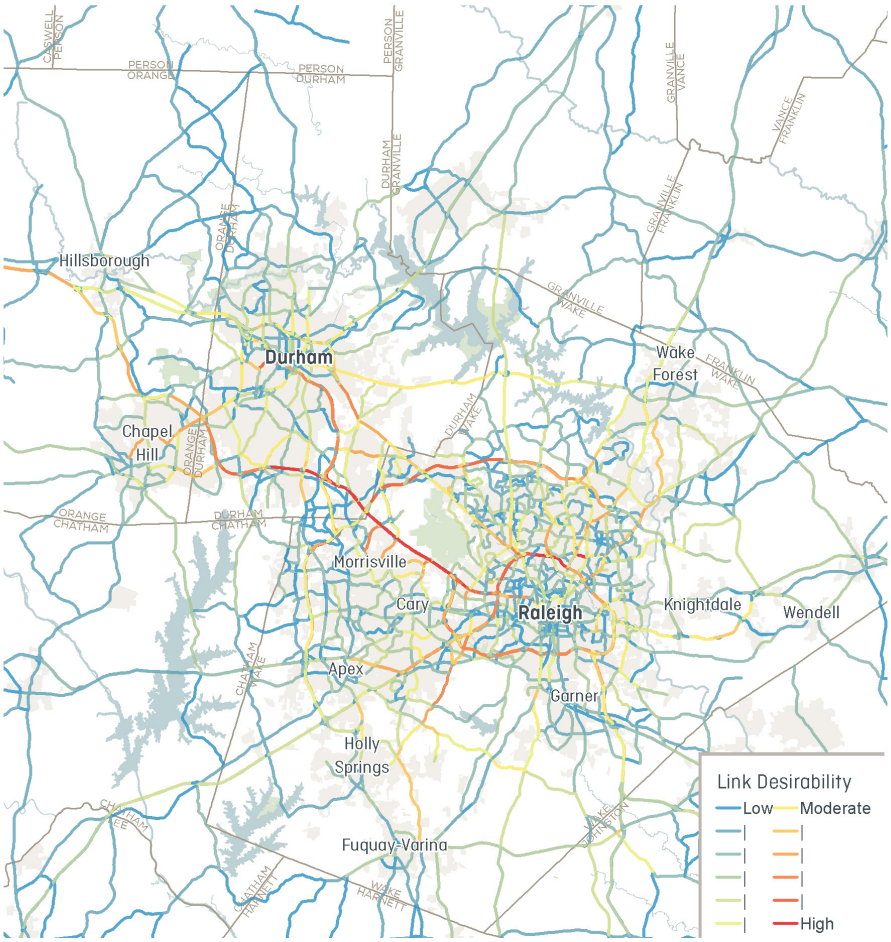
WHY THIS INDICATOR MATTERS

Using the assumption that people will take the most direct route from home to work, link gravity analysis highlights the roadways under most pressure to serve travelers. This particular version of link gravity analysis is focused on commute trips.

WHAT'S HAPPENING

The link gravity map on the right shows the critical role of I-40 in people's desired commute routes. Additionally, the other major roadways - I-85, I-440, I-540, US 15-501, US 70, and NC 147 - are heavily utilized for commute trips.

This map of desirability looks very similar to regional levels of service and emphasizes how commute travel relies on an inter-city and inter-county transportation network.



FINDINGS

An important finding from link gravity analysis is that it can identify the likelihood of induced demand resulting from transportation improvements. For instance, desirability for I-40 is high enough to suggest that it will be nearly impossible to build our way out of congestion on that roadway. Thus, other options must be considered to relieve I-40 congestion.

Transportation Policy Priorities
FOR THE TRIANGLE METRO REGION

KEYS TO A MOBILE FUTURE

Transportation is big. But it is always part of something bigger: economic development opportunities or healthy, active neighborhoods or greater access to jobs and education. The Triangle Metro Region – urban, suburban and rural – was home to 37% of the state's growth from 2010-17, and is expected to add another million people over the next generation. A transportation policy that enables North Carolina to continue to compete effectively must focus on 3 key areas:

- Economic Development & the Attraction of Diverse Talent
- Healthy, Complete Communities Accessible to All Residents
- Safety for All Travelers, From Youth to Seniors

REGIONAL POLICY PRIORITIES

Seven key priorities can result in fast-growing regions staying ahead of the growth curve, rural areas and small towns taking advantage of economic opportunities and every community providing complete streets and safe solutions tailored to local conditions.

INVEST FOR SUCCESS

- Enable critical transportation infrastructure across all modes to be addressed sooner with a statewide transportation bond.
- Create a new funding source for multi-modal mobility investments tied to economic development projects in small towns, rural areas, and along major corridors in metro regions.

The BuildNC bond is a good start, but it needs to support major multi-modal investments, not just highways. While the bond would let us invest faster, it does not increase total investment; it lets us spend tomorrow's revenue today.The state needs an economic development-focused revenue source for investments that are not well suited to the long and constrained process of the Strategic Transportation Investments (STI) program.

- Minnesota's Transportation Economic Development Program could be a model for a nimble, economic-based effort -

MAKE INVESTMENTS RELIABLE AND PREDICTABLE

- Remove caps and constraints on rail transit funding

The STI program distributes state and federal transportation dollars in a reasonable way with one exception: the caps and constraints on rail transit. Rail transit should be held to the same standards as other investments. Caps on state allocations and handcuffs on receiving state funding should be removed so that projects can compete on a level playing field and be funded on their merits. Businesses tell us that risks, uncertainties and changing rules stifle success - transportation investment is a key business for the state and its communities.

- $1 million invested in transit generates 4,200 job-hours; $1 million in roadway investment generates 2,400 job-hours -

TRIANGLE METRO REGION Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Moore, Orange, Wake

ENABLE CRITICAL CORRIDOR INVESTMENTS TO BE MORE COST EFFECTIVE

Relax the cap on statewide tier funding within a corridor.

While the reasoning behind a cap is sound, its application can lead to inefficient, piece-meal spending which costs more in the long run and affects travelers throughout the state.The cap can also prevent investments on parallel reliever roadways that could be cost-effective and complimentary investments.

- 31% of vehicles on the Triangle's busiest stretch of I-40 - which is hampered by the corridor cap - are from areas outside Wake and Durham counties -

REMOVE FUNDING BARRIERS FOR SMALL TOWNS AND RURAL AREAS IN DIVISIONS WITH LARGE MPOS

Exempt Surface Transportation Block Grant-Direct Allocation Funding from the STI Allocation.

These funds are allocated from the federal government to MPOs to address additional mobility challenges of congested urban areas. Exempting these funds from the STI formula at the Division Tier would allow funding to be more evenly distributed and let small towns and rural counties better compete for funds.

- STI already exempts 8 other categories of transportation revenues -

MAKE NC A LEADER IN ACTIVE TRANSPORTATION INVESTMENTS

Reinstate funds for economically beneficial and safety-focused bicycle and pedestrian projects.

Whether its a critical link to attract tourism on the East Coast Greenway, an important sidewalk connection to make travel to school safer, or a Main Street bike and pedestrian project to serve businesses, state funding provides crucial leverage for federal funds and local contributions.

- 16% of crash fatalities are pedestrian or cyclists; the state is a necessary partner in solutions -

STRENGTHEN SUPPORT FOR DEMAND-MANAGEMENT AND TECHNOLOGY

Grow the state's investment in Transportation Demand Management (TDM) and technology applications such as ramp-metering and managed motorways.

The most cost-effective dollar spent is on efficiently managing the demand for the supply of roads we already have. Working with employers on ways to offer workers alternatives to peak-hour, drive-alone commuting and deploying technologies to maximize the roadway supply are key elements of the smart city movement.

- The Triangle TDM program has reduced vehicle miles traveled by nearly 280 million miles over the past 5 years -

RECOGNIZE STATEWIDE PROJECTS IN OTHER MODES, NOT SOLELY ROADWAYS AND FREIGHT RAIL

Establish standards and scoring criteria for designated statewide passenger rail and trail investments.

Just as major highways serve statewide interests, so do other modes. Passenger rail from Charlotte to Raleigh serves 5 NCDOT divisions and 3 NCDOT regions. Great trails also traverse the state - the East Coast Greenway stretches from VA to SC and the Mountains-to-Sea Trail runs 1,175 miles from the Great Smokey Mountains to the Outer Banks.

- Passenger rail between Charlotte and Raleigh contributes $60 million to business output and $30 million to GSP annually-

This policy document was produced by Triangle J Council of Governments.
Visit www.tjcog.org/transportpriorities.aspx for additional information.

DCHC Metropolitan Planning Organization
Planning Tomorrow Today

CAMPO NC Capital Area Metropolitan Planning Organization

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