



A Look Back at **CONNECT Our Future:**

Charting a Path Forward
to Build on a Lasting Legacy

January 5, 2022
Final Report



CENTRALINA
REGIONAL COUNCIL

What & Why

Six years have passed since the Regional Growth Framework for CONNECT Our Future was unanimously accepted by the ninety-five-member CONNECT Consortium in 2015. Implementation of the landmark achievement started immediately for different partners and different areas of the region. This document summarizes the work of the Centralina Regional Council and their “look back” on accomplishments in the region that tie back to CONNECT Our Future, which serves as the backdrop for a new General Framework presented in the document that will guide future actions or partnerships being considered by Centralina staff to build an even stronger legacy for CONNECT Our Future in the decades to come.

Specific data and stories collected from the region are also presented in the document to conveniently summarize the information presented in five articles for The Central Lines newsletter (published in 2021).

Centralina and their partners for this effort would like to thank those in the region that shared their data and time for interviews to support this work. Their stories and insights into the region, and the experiences they shared from “in the trenches” or “at the decision table” to address various land use, transportation or community health needs, now and in the future, was truly invaluable.

We look forward to learning more about your experiences in the region that tie back to CONNECT Our Future. Please feel free to reach out any time to share a story or ask about the experiences of others in the region that may be facing similar challenges or being presented with similar opportunities.

We look forward to incorporating the General Framework topics into upcoming plans and programs, such as the Centralina Strategic Plan and the Centralina Economic Development Strategy (CEDS) update and partnering with others to implement the policies, programs or actions outlined herein.

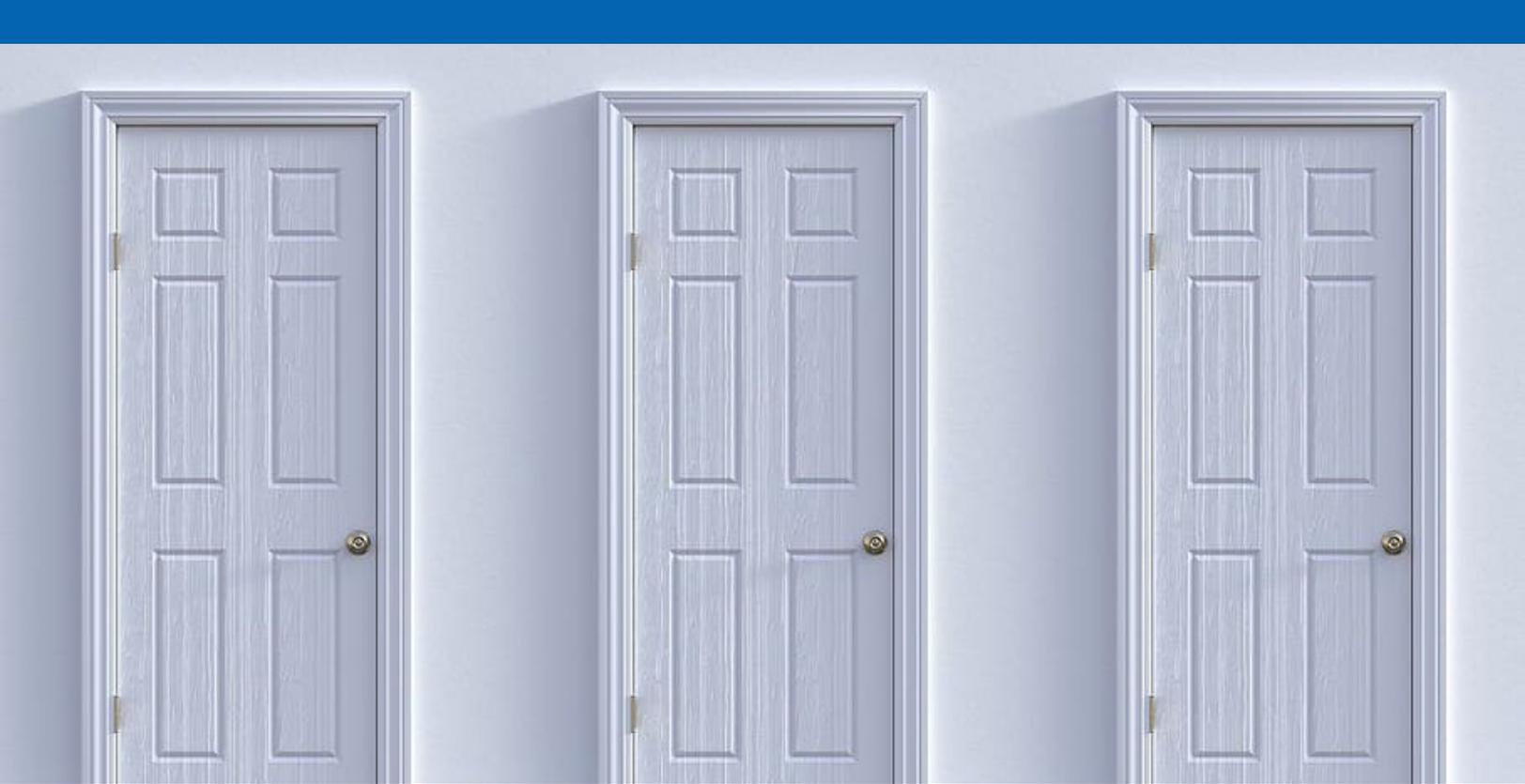
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The Centralina Regional Council (Centralina) started an initiative in February 2021 to inventory and evaluate accomplishments in the region that tie back to CONNECT Our Future and highlight specific data and stories that might inform new actions or priorities for Centralina staff as they continue to support implementation of the region's priorities. Five articles in The Central Lines newsletter were published with focus on three general topic areas — land use, transportation and community health — and specific challenges and opportunities with each being experienced in different parts of the region. Some of the information collected for the initiative demonstrated a direct connection to the regional effort, while other information demonstrated how the actions of local governments, advocacy groups, private businesses or others combined to positively influence one or more broad goals from CONNECT Our Future.

This document presents a General Framework for moving forward with actions or partnerships that should be considered to build a stronger legacy for CONNECT Our Future (Part A). The five articles published for the research initiative follow the General Framework to conveniently summarize the actions completed, priorities implemented, partnerships formed, or funding secured in the region that helped inform or substantiate recommendations in the General Framework (Part B).

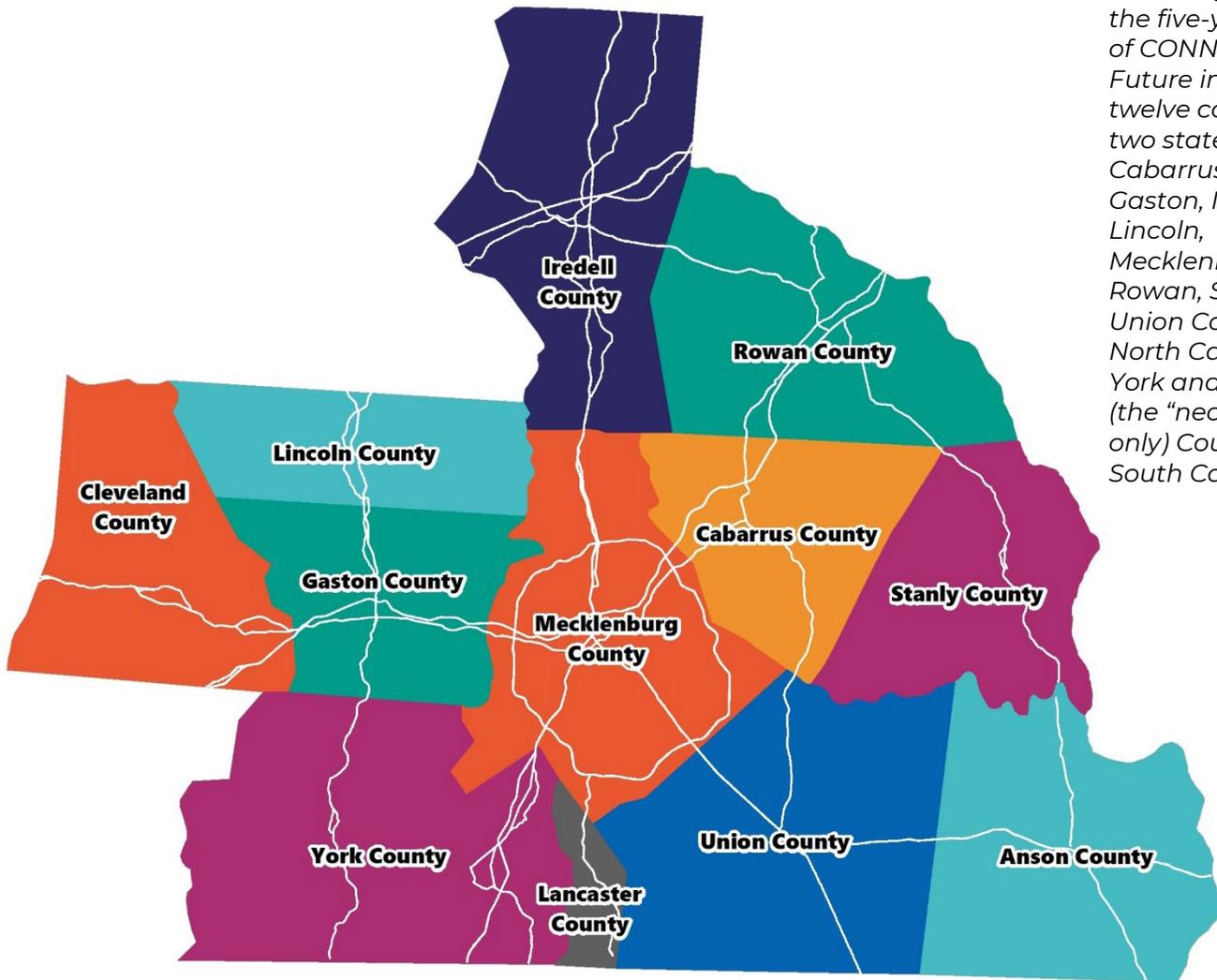
Centralina and their partner governments or organizations should consider the General Framework in the context of their own projects, programs, or investment areas. And, more importantly, different stakeholders in the region should identify opportunities to work together and share resources for achieving common goals.



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The study area assumed for the five articles — depicted on the map to the right — does not represent either the CONNECT Our Future planning area (fourteen counties) or the footprint for the Centralina Regional Council (nine counties). The twelve-county study area used for the articles does match the planning area for the Metrolina Regional (Travel Demand) Model, which provided data reported for the region and the counties within it for several of the articles. References to York or Lancaster Counties in some of the articles were used to demonstrate successful collaborations in the region (especially for transportation projects). The General Framework presented in the document is intended to guide the work of Centralina for the benefit of its members in the nine-county planning area.

The study area for the five-year review of CONNECT Our Future included twelve counties in two states: Anson, Cabarrus, Cleveland, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly and Union Counties in North Carolina, and York and Lancaster (the “neck” portion only) Counties in South Carolina.



Project Spotlight: CONNECT Our Future

CONNECT Our Future was a three-year program (2012 – 2015) aimed at bringing together communities, counties, states, businesses, educators, non-profit organizations and the general public across fourteen counties in North and South Carolina to develop a shared, long-term vision for the future. It continued the region's focus on 1) sustainable, well-managed growth, 2) a safe and healthy environment, 3) strong and diverse economy, 4) high-quality education opportunities, 5) enhanced social equity, and 6) increased collaboration among jurisdictions (i.e., the region's six core values). The program was supported by a \$4.9 million HUD Sustainable Communities Grant and \$3.0 million in local public and private resources. Two councils of government, four metropolitan planning organizations, a ninety-five-member project consortium, and 119 local governments participated in the planning process.

Outcomes from the effort encouraged us to address issues together, recognizing each community must focus on local issues while providing a regional context for topics best addressed on a regional or multi-jurisdictional basis. The three-year process created genuine relationships and partnerships between groups that will be relied upon for decades.

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General Framework

Centralina staff reviewed the information presented in the five articles published for the research initiative, and developed a General Framework to organize new actions or priorities that are needed to build on the legacy of CONNECT Our Future and implement the region's current land use, transportation and community health priorities.

Eleven priorities are presented in the General Framework. Each includes a theme, observation, big ideas, partners, and implementation timeframe to organize collective efforts in the region.

The General Framework will inform the Centralina Strategic Plan update, the Centralina Economic Development Strategy (CEDS) update, and annual Centralina workplans. This Framework should also be shared with advisory boards and member jurisdictions in the region and refined, as needed to represent consensus for moving forward together with "one vision and one voice".

Centralina also hopes planning professionals in the region will share this information with their elected officials, board members or advocacy groups to build new partnerships and continue the region's positive momentum for growth and prosperity in the future.

The data, findings and conclusions associated with the five articles for the research initiative were considered by Centralina staff as they developed the General Framework presented here, which is generally aimed at building on the legacy of CONNECT Our Future and implementing the region's current land use, transportation and community health priorities.



Coordinate Transportation and Land Use Decisions

Theme

Land Use – Transportation

Observation

Interests are growing to coordinate land use and transportation decision-making processes more frequently, which should improve overall efficiency of the transportation system while promoting more livable and context sensitive transportation solutions important to communities. Greater focus on land use, development density and community design principles in traditional transportation planning processes has the potential to lower the number of vehicle trips on roads, shorten travel distances between destinations or increase the viability of multiple modes of transportation in the system.

Big Ideas Moving Forward

- For MPOs, emphasize the need to study land use-transportation connections when prioritizing funding for local match projects.
- Closely coordinate with local governments specific to land use issues that should be considered when planning for an effective and efficient regional transportation system.
- Formalize a process and funding source for the Metrolina CommunityViz Model program, which occurs every four years to support the MPOs Metropolitan Transportation Plans and links transportation and land use in the region's primary travel demand modeling tool.

Partners

Centralina Regional Council, MPOs and Local Governments

Implementation Timeframe

Short-Term (0 to 5 years)

Implement a Region-Wide Transportation Demand Management Program

Theme

Transportation

Observation

The merits of a regional transportation demand management (TDM) program continue to be a popular discussion topic in the region recognizing its potential to improve the overall efficiency of the regional transportation system by influencing the type and timing of trips made by travelers (the demand side of a balanced system). Large agencies and organizations — and their associated business organizations — advocating for TDM already are forming effective partnerships in the region.

Big Ideas Moving Forward

Establish a formal structure for regional coordination — including funds, workplans and other resources — on a shared TDM program that aims to (1) leverage resources from organizations with shared interests, (2) eliminate barriers to coordinate on similar efforts and (3) scale or replicate successful programs in other parts of the region.

Partners

North Carolina Department of Transportation, MPOs, Centralina Regional Council, transit providers, local governments, large businesses, and special interest groups

Implementation Timeframe

Short-Term (0 to 5 years)

Communicate and Coordinate on Regional Impact Projects

Theme

Land Use – Transportation – Community Health

Observation

A prime tenant of effective growth management is communication and coordination for projects that could have substantial impact on more than one jurisdiction. Officials recognize interdependences in the region with respect to where people live, work and shop and their daily commuting patterns or travel mode choices between destinations that often blur lines between political or agency boundaries. For these reasons, Centralina Regional Council is often asked to lead regional transportation planning efforts that cross geographic, political and organizational boundaries. The Charlotte Regional Alliance for Transportation (CRAFT) serves as a coordinating committee for such issues. Similar opportunities exist to coordinate developments with regional impact related to housing availability and mix, economic clusters and supply chains, transportation and logistics, resiliency factors or other significant issues.

Several of the most recent collaborative transportation planning success stories in the region were influenced by the data, tools and recommendations generated for CONNECT Our Future in 2014, including: the Greater Charlotte Regional Freight Mobility Study, Metrolina CommunityViz Initiative, CONNECT Beyond: A Regional Mobility Initiative, Greater Charlotte Region Intelligent Transportation Systems (ITS) Plan, Beyond 77 Strategic Plan and Catawba Crossings.

Big Ideas Moving Forward

- Implement near-term recommendations from the CONNECT Beyond and coordinate efforts and investments toward the long-term vision and recommendations for the region.
- Create a group of professionals focused on the communication and coordination of multi-jurisdictional developments of regional impact throughout the region. Establish criteria for projects that qualify and implement procedures, criteria and best practices to guide the group and their work.
- Create pathways for formalized communication between regional transportation, land use, community health and economic sectors.

Partners

Centralina Regional Council, MPOs, local governments, NCDOT and other infrastructure support groups or organizations.

Implementation Timeframe

Short-Term (0 to 5 years)

Need to Reconsider and Test New Transportation Funding Sources

Theme

Transportation

Observation

Revenue sources and their funding levels for implementing transportation projects in the region generally do not keep up with growing demands and trends are pointing to an uncertain future as traditional revenue streams like the gas tax are being negatively impacted by fuel economy improvements. In some instances, available funding for transportation projects in the region prioritize specific travel modes over others in the system. For example, NCDOT appropriated 78.4% of all funds in 2020-21 for highway construction and maintenance. Administrative costs for the Department accounted for 7.2% of all funds, and non-highway projects supporting walk, bike or transit projects accounted for 6.2% of all funds (less than the amount spent for administration for the year). Better balance between funds allocated by travel mode are needed in this region to move people (vs. automobiles) efficiently between destinations.

Big Ideas Moving Forward

- Determine yield of potential revenue streams by county, keep data up-to-date and communicate findings to local decision-makers.
- Build a regional coalition to discuss actions around transportation funding sources and partnership models.
- Position the region for discretionary transportation funding with coalitions and systems in place to request and receive funds, plans and data that are up-to-date and several projects ready for implementation.

Partners

North Carolina Department of Transportation, MPOs, Centralina Regional Council, local governments and special interest groups

Implementation Timeframe

Mid-Term (6 to 10 years)

Build on Growing Interest and Momentum to Walk and Bike During the COVID-19 Pandemic

Theme

Community Health – Transportation

Observation

Increasing numbers of people are walking and biking for recreation during the pandemic, crowding into outdoor areas or replacing their normal commute to work by automobile with a walk or bicycle ride around the block or through the neighborhood.

Big Ideas Moving Forward

Capture this momentum and demand increased funding for new or expanded park, bicycle and walk infrastructure to meet growing demands. Improvements to bicycle and walk infrastructure will also benefit transit service because all transit trips begin or end with a bicycle or walk trip.

Partners

Centralina Regional Council, MPOs, regional transit providers, local governments and special interest groups

Implementation Timeframe

Short-Term (0 to 5 years)

Study the Merits for a Regional Transportation Authority

Theme

Transportation

Observation

Thinking more “regionally” about the area’s future, some planning officials talked about the need for a regional transportation authority or a similar construct, which might partner with the four metropolitan planning organizations and their transit partners to coordinate major investments in a multi-jurisdictional regional highway network and a multi-jurisdictional regional transit network.

Big Ideas Moving Forward

- Expand and relaunch the CONNECT Beyond Funding and Partnerships Work Group to plan and coordinate for an uncertain transportation future.
- Use the Work Group to study and implement recommendations from the Beyond CONNECT Regional Mobility Initiative.
- Use the Authority to launch CAV and telecommuting work groups, which study and implement trip reduction strategies to improve the regional transportation system.

Partners

North Carolina Legislature, Centralina Regional Council, MPOs, and local transit providers

Implementation Timeframe

Mid-Term (6 to 10 years)

Build an Equity Framework for the Region and Identify Partnerships to Spotlight Key Issues in the Region

Theme

Land Use–Transportation–Community Health

Observation

Where people live and work may have a significant impact on their health, income, education, economic mobility or overall well-being. Different conditions in these locations have the potential to create one or more inequities for people that present challenges for an individuals' health, quality-of-life or access to basic resources. A regional equity assessment and associated mapping tools offer new opportunities to track existing conditions or report trends that may influence 1) local land use, transportation, community health or other topic area decisions, 2) the formation of certain regional partnerships to address needs, or 3) the information needed to secure grants or other funding to address issues.

Big Ideas Moving Forward

- Build an equity framework for the region that reports existing conditions and emerging trends for a variety of equity indicators. Consult past projects in Denver, Los Angeles and Atlanta for best practices to consider in this region.
- Identify permanent funds in the region to regularly update information for the equity framework.
- Use information from the equity assessment to bring additional resources to the region.
- Identify opportunities to infuse concerns for equity and inequality in different decision-making processes for the region.
- Find partners in the region with shared interests for equity and equality topics and consider opportunities to work together in the future.
- Develop model tools and best practices for equity and equality topics voiced in the region and share the resources with local governments for their short- and long-term planning or design needs.

Partners

Centralina Regional Council, MPOs, local governments, state agencies and special interest or stakeholder groups

Implementation Timeframe

Short-Term (0 to 5 years)

Identify New Training Opportunities and Resources for Elected Officials, Local Government Staff and Community Leaders that Build Stronger Ties Between Land Use, Transportation and Community Health in City and Regional Planning

Theme

Land Use – Transportation – Community Health

Observation

The toolbox for CONNECT Our Future is recognized as an important resource for elected officials and local government staff interested in big ideas, built examples and model policies or ordinances that might help implement new or different ideas in communities. The research initiative identified several interests to expand or update the toolbox to address new or emerging topics or trends in the region.

Community interests in development, infrastructure and community health topics are expanding as the region grows, infrastructure capacity is stressed, or the environment changes. Public participation in meetings (virtual or in-person) and surveys for different projects confirm the need for more information (and input) in decisions about city and regional planning.

Big Ideas Moving Forward

- Develop a curriculum for elected officials in the region that addresses shared interests for growth, development, infrastructure and community health and city and regional planning topics while highlighting different decision-making processes and their connections with other statewide or regional colleges or institutions that provide elected official education credits. Include in the new curriculum best practices from other regions in the United States as case studies to better plan for sustainability, resiliency or healthy communities and build confidence with elected officials to implement similar programs in this region.
- Build a suite of data, indicators and model applications based on the curriculum for local government staff to support the new curriculum for elected officials and provide the technical information and resources needed to coordinate decisions and investments for land use, transportation and healthy community topics. Focus early efforts of the initiative on resources that help staff measure and evaluate existing conditions, write plans or policies focused on connections between land use, transportation and community health and the built environment, or track performance after implementation.
- If interest grows, consider a new professional certification (or local recognition) for elected and appointed officials or staff that want to focus on community health and the built environment. Leverage resources from the American Planning Association — and their Planners4Health initiative — to maximize the expertise and resources needed to implement a new certification or recognition program.
- Create a suite of public education material — documents, videos, social media and print media — aimed at educating residents and community leaders about 1) the relationship between development and quality-of-life, 2) community cohesiveness, 3) aspects of economic vibrancy and competitive advantage or 4) the physical, social and psychological barriers to physical activity and the process by which policy changes or infrastructure investments are implemented and influenced by public opinion.

Partners

Centralina Regional Council, local governments, MPOs colleges and universities in the region, and different special interests or stakeholder groups

Implementation Timeframe

Short-Term (0 to 5 years)

Build a Regional Resiliency Framework and Identify Partnerships to Achieve Shared-Outcomes

Theme

Land Use–Transportation–Community Health

Observation

Natural or human disasters threaten our communities, our economy and peoples' lives. As the region grows and its dependencies increase, improving pre-disaster planning and post-disaster recovery systems could save resources and time and build resiliency aimed at preventing, protecting against, mitigating, responding to or recovering from the threats and hazards that pose the great risk.

Big Ideas Moving Forward

- Build on the resilience work of the Centralina Economic Development Commission and incorporate their findings into a regional economic strategy.
- Develop regional resilience indicators with a focus on environment, economy, infrastructure and social well-being topics and their relationships to natural or human disaster vulnerabilities. Advance key resiliency or sustainability projects with regional interest or impact, such as developing a regional electric vehicle charging network, assistance with modernizing local government fleets, or establishing best practices for tree removal and replanting.
- Implement innovative nature-based infrastructure design solutions versus man-made alternatives (e.g., stormwater systems).
- Develop cross-agency or cross-jurisdictional peer networks to exchange ideas or best practices.
- Develop data sets, performance metrics and best practices to share among agencies or organizations in the region.
- Create training opportunities and share resources to build on state-of-the-art resilience practices.

Partners

Centralina Regional Council, local governments, state agencies and special interest or stakeholder groups

Implementation Timeframe

Short-Term (0 to 5 years)

Rely on Data-Driven Methods and Procedures for Prioritizing Needs

Theme

Land Use–Transportation–Community Health

Observation

The region is relying on data to make more-informed decisions about its future, and new opportunities are being presented to coordinate data collection efforts or realize economies-of-scale in shared modeling and analysis tools.

Big Ideas Moving Forward

- Develop a framework of important data, performance measures, protocols and partnerships that will help identify and prioritize future year needs in the built environment.
- Coordinate identified improvements with considerations for land use, transportation, community health and well-being as primary components of the framework.
- Enlist the expertise and resources of a sponsoring agency for the framework that serves the region to coordinate the efforts across different jurisdictions.
- Collect, inventory, analyze and report conditions in a consistent and timely manner.
- Identify secure and reliable funding for the sponsoring agency to ensure the viability of the project.

Partners

Centralina Regional Council, MPOs, local governments and special interest groups

Implementation Timeframe

Short-Term (0 to 5 years)

Expand the Mission and Membership for Centralina Health Solutions

Theme

Community Health

Observation

Interests are wide-spread and growing in the region to plan for healthy communities. Centralina Health Solutions is an asset for coordinating the efforts of various government agencies, organizations and interest groups.

Big Ideas Moving Forward

Membership for Centralina Health Solutions should be expanded to include health care officials, non-profit organizations, businesses, philanthropists and community leaders with shared interests for breaking down the silos between community health, social equity and the built environment. An expanded coalition would provide opportunities to organize and coordinate individual efforts under a broad vision to consider public health topics in city and regional planning, and common goals to 1) leverage resources from organizations or agencies with shared interests, 2) eliminate barriers to coordinate on similar efforts and 3) scale or replicate successful public-private-non-profit programs in the region.

Partners

Centralina Health Solutions, health care professionals, non-profit organizations, businesses, philanthropists and community leaders

Implementation Timeframe

Short-Term (0 to 5 years)

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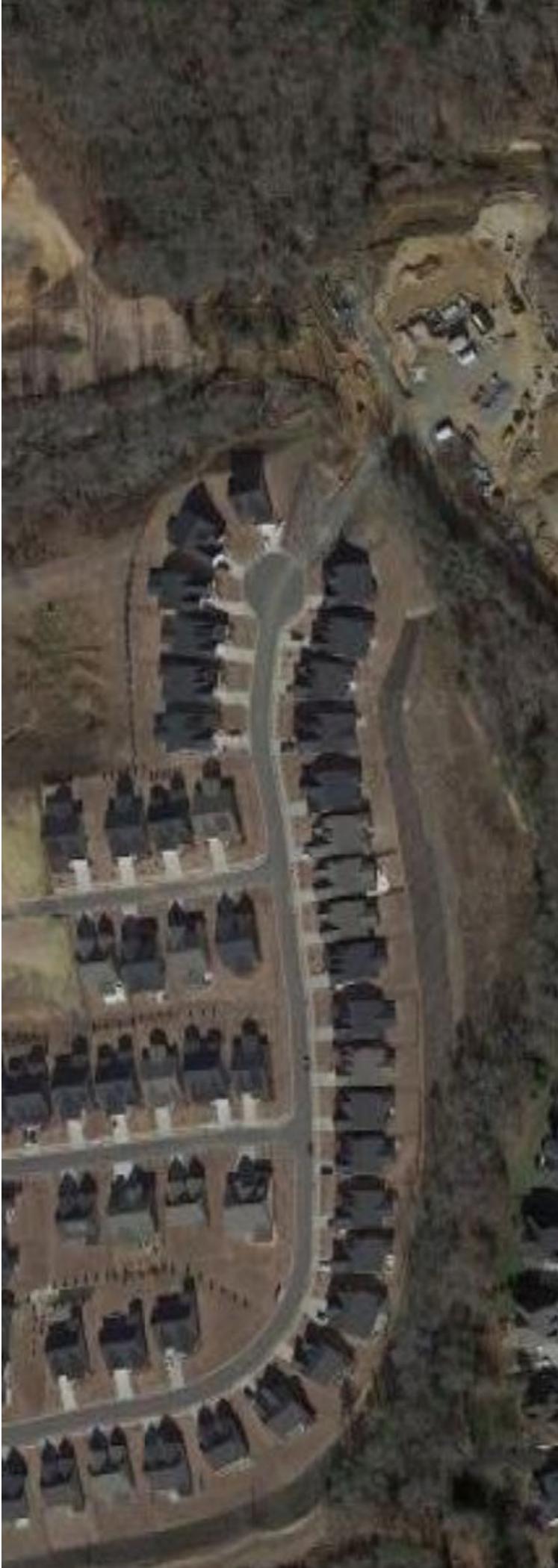
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Did We **CONNECT** Our Future: A Look Back at Land Use

CONNECT Our Future is one of the most comprehensive regional efforts to date, aimed at building relationships across our region, reaching consensus on shared values and goals and developing strategies to achieve those goals. The results included a regional growth framework, a vision for how our region should grow to align resources and efforts across the 14 counties. The following is a five-year review of that plan, with the goal of highlighting data and local and regional successes for the purpose of informing our future priorities.

Conditions were evaluated based on empirical data collected from secondary sources and stakeholder interviews with local planning officials held throughout the region for the period between 2010 and 2018. Some of the information collected demonstrated a direct connection to the regional effort, while other information determined if the actions of local governments, advocacy groups, private businesses, etc. combined to positively influence one or more broad goals from CONNECT Our Future.

Population and Employment Growth, 2010 to 2018

The study area for CONNECT Our Future grew in population every decade for the last 100 years, nearly doubling or tripling U.S. growth rates during the housing boom between 2000 and 2008. Following the Great Recession, population and employment growth slowed to ten-year lows in 2010 and 2011. However, a continued economic recovery and increased migration to the Sun Belt in the decade that followed influenced a new population and employment boom in the region, pushing Charlotte to the 15th most populous city in the U.S. for 2019.

Both Concord and Huntersville grew in total population by more than 20% in the last decade and officials for other cities, towns and counties throughout the region reported significant population and employment growth. A building frenzy to provide new homes, schools, offices, restaurants, shopping centers, etc. occurred in new or expanding population and employment centers to keep up with demand. Competition for housing in some areas increased sales prices or rents to the point that some portions of the region are faced a significant shortage of affordable homes.

Base year population and employment data (socioeconomic data) for the region represented in the Metrolina Regional Travel Demand Model (MRM) was reviewed to document trends between 2010 and 2018. Data for Anson County, the only county outside of the MRM study area, was collected from the North Carolina Statewide Travel Demand Model for the period between 2011 and 2020. Other demographic information for the

article was summarized from the *CONNECT Our Future Regional Scan Document (2013)* or *Annual Estimates of Resident Population for Incorporated Places of 50,000 or More Ranked (2019)* from the U.S. Census Bureau. Both are available from Centralina Regional Council and provide detailed demographic data and rankings for the region.

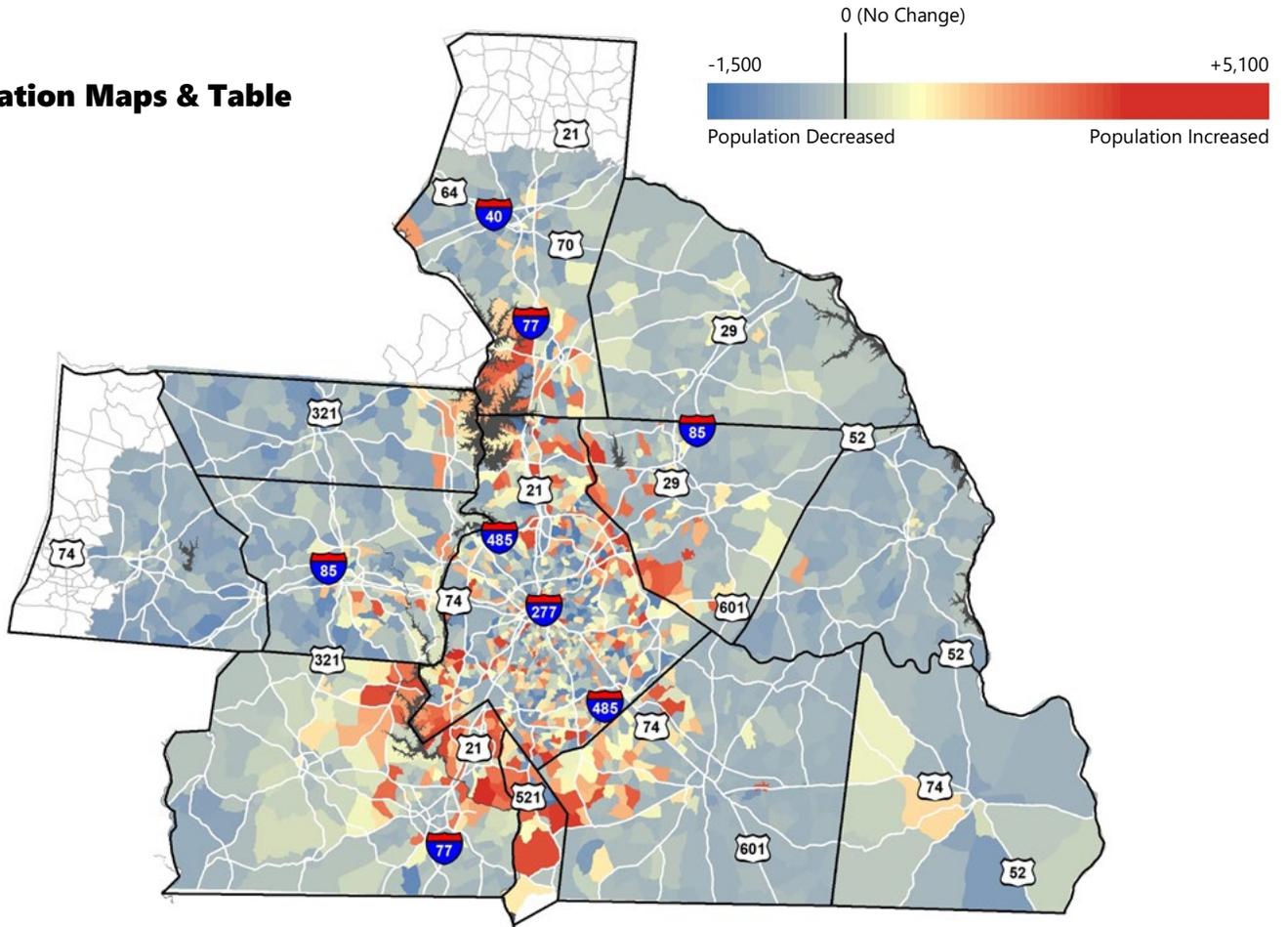
Population

Speaking regionally, total population grew by 394,057 between 2010 and 2018. The distribution of new population in the region was generally focused on Mecklenburg County and the areas immediately adjacent to it in the nearby counties. Uptown Charlotte, the CATS Blue Line Corridor, the North Carolina-South Carolina State Line, Lake Norman, Lake Wylie, larger cities and suburbanizing areas of unincorporated counties all grew over the last decade. The map below displays the change in population between 2010 and 2018 for the region. An inset map of Central Charlotte displays population changes in Uptown Charlotte and the CATS Blue Line Corridor for the same period.

The two maps on the right illustrate gains and losses in population for the region during the nine-year period between 2010 and 2018 using data from the Metrolina Regional Travel Demand Model or the North Carolina Statewide Travel Demand Model.

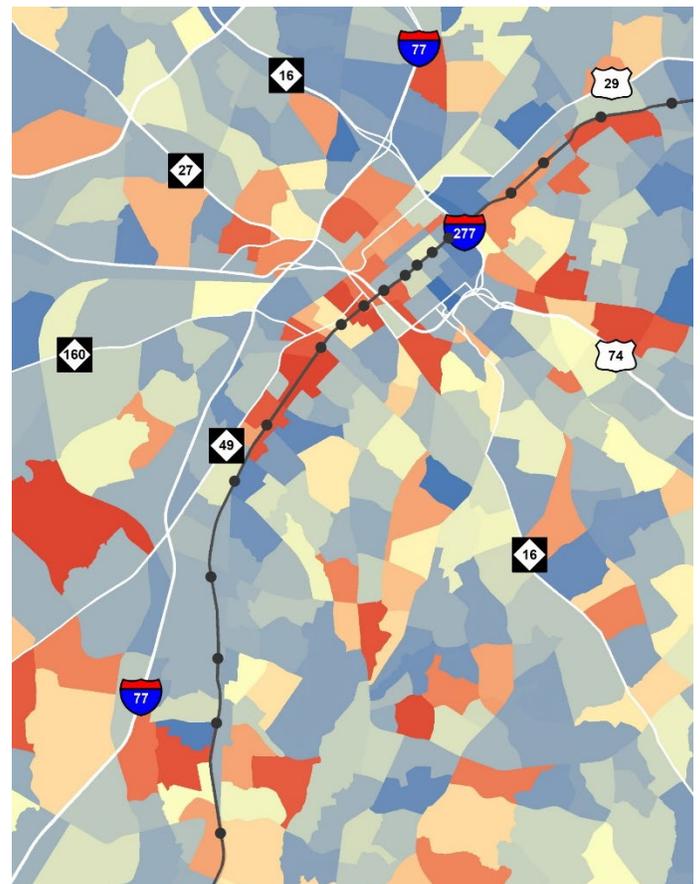
(Note: Data for Anson County represents conditions reported for 2011 and 2020 because of data limitations).

Population Maps & Table



Percent Change in Households, Population, and Employment Observed Throughout the Region

County in the Region	 Household Change	 Population Change	 Employee Change
Anson County	6%	4%	7%
Cabarrus County	17%	18%	18%
Cleveland County	35%	31%	53%
Gaston County	7%	6%	32%
Iredell County	17%	17%	46%
Lancaster County	61%	52%	262%
Lincoln County	9%	4%	24%
Mecklenburg County	28%	22%	33%
Rowan County	5%	5%	7%
Stanly County	4%	4%	8%
Union County	15%	15%	36%
York County	23%	22%	18%



Source: Metrolina Regional Model Socioeconomic Data, 2010 and 2018 (All Counties Except Anson) and North Carolina Statewide Travel Demand Model Socioeconomic Data, 2011 and 2020 (Anson County)

Land Consumption for New Development, 2012 to 2018

One indicator for where growth is going in the region relies on development status surveys that were completed in 2012, 2015 and 2018. For each survey effort, regional organizations and their local government partners assigned development status categories — open space, agriculture, developed, undeveloped, infill development opportunity or redevelopment opportunity — to parcels in the study area using aerial photography, property appraiser data and topic-specific GIS data available for the different jurisdictions (e.g., farmland or conservation land inventories). Data was reviewed with cities, towns and counties in the region and adjustments made to more accurately reflect development conditions for the snapshots in time. The effort and coordination to code development status in the region were massive. Nearly 1,000,000 parcels were coded each time for the different development status surveys based on the study area assumed for the individual time periods. More information about development status and the methodology used to record it in the region is summarized in the Metrolina Region CommunityViz Initiative Data Summary Document, v. 2.0 prepared by Centralina Regional Council and their partners.

Speaking regionally, approximately 2% of the study area (68.01 square miles) was consumed for new development between 2012 and 2018, which equates to a total footprint equal to the size of Concord, North Carolina. The most significant change to development status for the time period — the reassignment of a parcel's development status to one different than the previous category — occurred in Mecklenburg County, whereby approximately 11% of the total land area (60.50 square miles) was recoded developed (from something else) over the period of the three surveys.

Approximately one-half of the land consumed for new development in Mecklenburg County was previously identified as either an infill development or redevelopment opportunity — meaning new buildings were placed next to existing building on the same lot (infill development) or existing buildings were removed and replaced with new buildings that were typically taller or occupied a larger portion of the lot (redevelopment). The other half of land consumed in Mecklenburg County to accommodate new development was previously vacant.

Counties adjacent to Mecklenburg also observed an increase in the amount of land developed over the same time period. In these areas, the majority of new developed land occurred as greenfield development, which means the land was previously vacant before the change was recorded. Approximately 1% to 7% of the total land area in the adjacent counties changed from undeveloped to developed status between 2012 and 2018. Far less of the development in the adjacent counties was an infill development or redevelopment opportunity compared to Mecklenburg County. Much of the change for the adjacent counties occurred in areas that expanded the development footprint outward from existing town or city limits.



The total land area consumed to accommodate the footprint of new development in the region between 2012 and 2018 reached the size of Concord, NC.

Recent Trends for Home Choices

A summary of occupied dwelling units by structure type from the U.S. Census Bureau's American Community Survey (ACS) provided a snapshot of home choices for residents living in the region. Five-year estimates for two periods — 2006/10 and 2015/19 — were used to capture conditions similar to those presented for population and employment estimates in the region. Five-year data (as opposed to one-year data) was used to evaluate conditions for the full 12-county region — Iredell, Mecklenburg, Union, Gaston, Cleveland, Lincoln, Cabarrus, Rowan, Anson, Stanly, York and Lancaster — and minimize potential data sampling errors from the ACS that could skew some of the findings and trends reported.

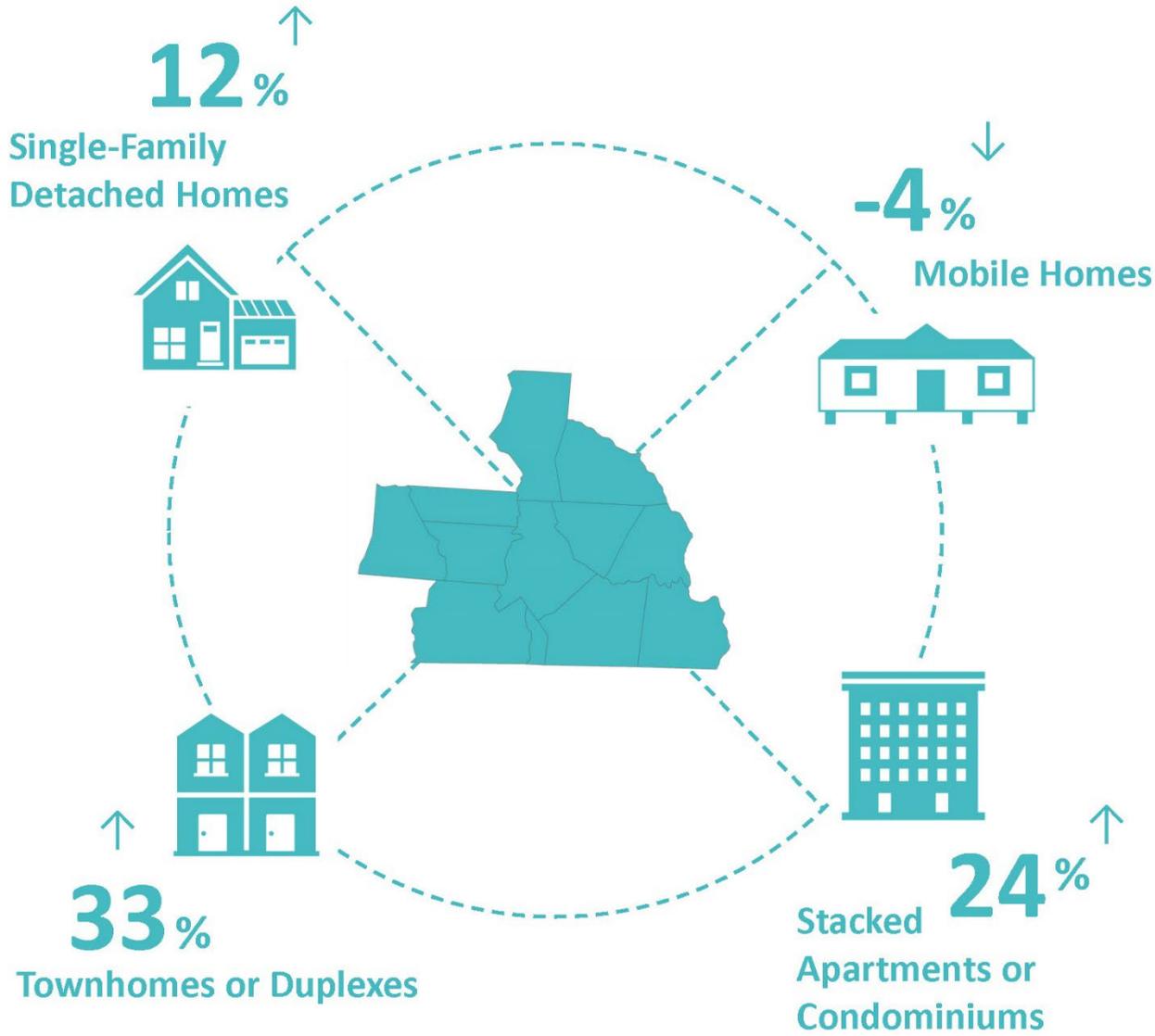
Speaking regionally, most residents lived in single-family detached homes between 2006/10 and 2015/19, followed by stacked apartments or condominiums, mobile homes and townhomes or duplexes. The rank order of occupied home categories for the region did not change over the time period. However, trends observed between the two time periods demonstrate changing home preferences for some residents. The percent change in total number of occupied units by housing type for the decade (compared internally within each housing type category) for both townhomes or duplexes (33% increase) and stacked apartments or condominiums (24% increase) grew faster than single-family detached homes (13% increase). The number of mobile homes in the region decreased by 4% for the same time period.

County-level reporting for the ACS occupied homes data shows “hotspots” in the region for changing home preferences. Mecklenburg County observed nearly an equal amount of new single-family detached homes (28,314) and new stacked apartments or condominiums (27,503) over the decade. Counties adjacent to Mecklenburg observed significant increases in the number of single-family detached homes for the same time period; however, townhomes or duplexes generally registered the largest increase in percent change of all the home categories reported between 2006/10 and 2015/19. York and Lancaster Counties in South Carolina observed tremendous growth over the decade in three home categories: single-family detached, stacked apartment or condominium and townhome or duplex. Edge counties in North Carolina — Cleveland, Rowan, Stanly and Anson — reported modest increases in the number of occupied housing units for the time period. Most were categorized as single-family detached homes.

Changing Development Preferences in Adopted Land Use Plans, 2012 to 2018

Another indicator for how the region is growing relied on different future land use (place type) surveys completed in 2012, 2015 and 2018. For each effort, regional organizations and their local government partners assigned future land use categories — thirty-one different categories representing preferred development types, locations, patterns and intensities in the region — to parcels in the study area using adopted comprehensive plans or zoning

Percent Change in Home Types Observed Throughout the Region, Five-Year Estimates Reported for 2006/10 to 2015/19



Source: U.S. Census Bureau, American Community Survey, Five-Year Estimates, 2006/10 to 2015/19 (Table B25033)

ordinances for the different jurisdictions. Data was reviewed and updated using the same process described for development status.

The 31 future land use (place type) categories used for the three surveys of

the region were simplified into eight-character areas for this

article: open space, rural living, suburban neighborhoods, suburban centers, walkable neighborhoods, walkable activity centers, special places and a category for areas where

data was not available. Speaking regionally, land categorized as rural living in the region increased by 6% between 2012 and 2018. In

some communities, the change to rural living recognized an overabundance of the suburban neighborhood character area in previous plans, which could encourage low-density, decentralized growth patterns (sprawl) that is more expensive and less efficient to serve in the future while land remained available to build suburban neighborhoods closer to existing centers and inside existing service areas.

In other communities, there was a decrease in the amount of rural living areas over the three surveys as communities struggled with solutions to accommodate future growth and development. Some jurisdictions in the region implemented a development vision and policies that supported new walkable, mixed-use activity centers and neighborhoods. Others advocated for more suburban development patterns and intensities as citizens pushed back against development density because of concerns for traffic congestion or school overcrowding.



Number of different comprehensive plans, land use plans or small area plans that were created or updated in the region since CONNECT Our Future was completed in 2015.

Key Takeaways from Looking Back on Growth and Development in the Region

The data collected for our look back on growth and development in the CONNECT region confirmed a lot of the stories told by elected leaders and local planning officials. Both population and employment increased throughout the region — and dramatically in Mecklenburg County and the adjacent counties — to levels where some rural areas quickly become suburban, and some suburban areas quickly become urban. The building frenzy to meet increased population and employment demands led to conversations in the community about highest and best land uses for specific areas, acceptable minimum or maximum building densities, losses or gains to community character influenced by new development, affordable housing needs, development potential around transit stations and available infrastructure capacity to meet increased demands.

Land consumed for new development between 2012 and 2018 increased in area to a size matching the footprint of Concord, North Carolina. Some communities expanded their footprint to accommodate new single-use, low-density suburban development patterns at or near the edges of town or city limits. Other communities directed new development to existing or emerging walkable, mixed-use activity centers and transit corridors. Rising land values in some areas of the region reached levels that made infill development and redevelopment activities more realistic. And, while single-family detached homes still dominate the region, the percent

change in townhomes or duplexes and stacked apartments or condominiums increased faster than single-family detached homes through the decade. Communities are also updating their land development plans and in many cases reversing a common trend of the past by limiting the land identified for low-density, single-family residential development and instead categorizing it as rural living to force a more intentional conversation about growth in a previously underdeveloped area.

A Place for Notes:





Did We CONNECT Our Future? How Development Trends, Pressures, Changing Preferences and Community Reactions to Change are Impacting Our Future

The Centralina Regional Council started an initiative in February 2021 to inventory and evaluate accomplishments in the region that tie back to CONNECT Our Future and highlight specific data and stories that may inform new actions or priorities for Centralina staff as they continue to support local initiatives that implement the region's priorities. Articles shared with the region in the Centralina newsletter summarize information collected to evaluate general topics for three focus areas: land use, transportation and community health. Some of the information collected demonstrates a direct connection to the regional effort, while other information determines if the actions of local governments, advocacy groups, private businesses etc. positively influenced one or more broad goals from CONNECT Our Future.

Previous articles focus on growth and development patterns in the region.

Specifically, where did growth occur in the region? what forms did it take? how quick did change occur? and what has been the reaction to change in local communities? Conditions were evaluated based on empirical data collected from secondary sources and stakeholder interviews with local planning officials held throughout the region. Part one of the growth and development assessment looked back at metrics and changing conditions for the period between 2010 and 2019. Part two looked forward to opportunities and challenges facing the region either now or in the future — especially as communities struggle with hard choices around growth, density, land use mix, community character and available infrastructure capacity.

Voices Heard Around the Region

Stories and observations from around the region were collected from fifteen planning official interviews completed via conference call between February and March 2021. Participants were asked to comment on the type, location, pattern and intensity of development currently favored in their communities; changing market trends or development preferences being noticed; emerging issues in the region that may require multi-jurisdictional partnerships to solve; community reactions to change occurring in their areas; or the impact of CONNECT Our Future and its project deliverables on their communities. The interviews lasted between 30 and 60 minutes. Generally speaking, planning officials' individual comments were combined and summarized to represent overall themes or trends identified for the region. The only exception to this format

was the description of market trends and development pressures observed in the region in 2020-21, which benefited from some location specifications to describe current conditions.

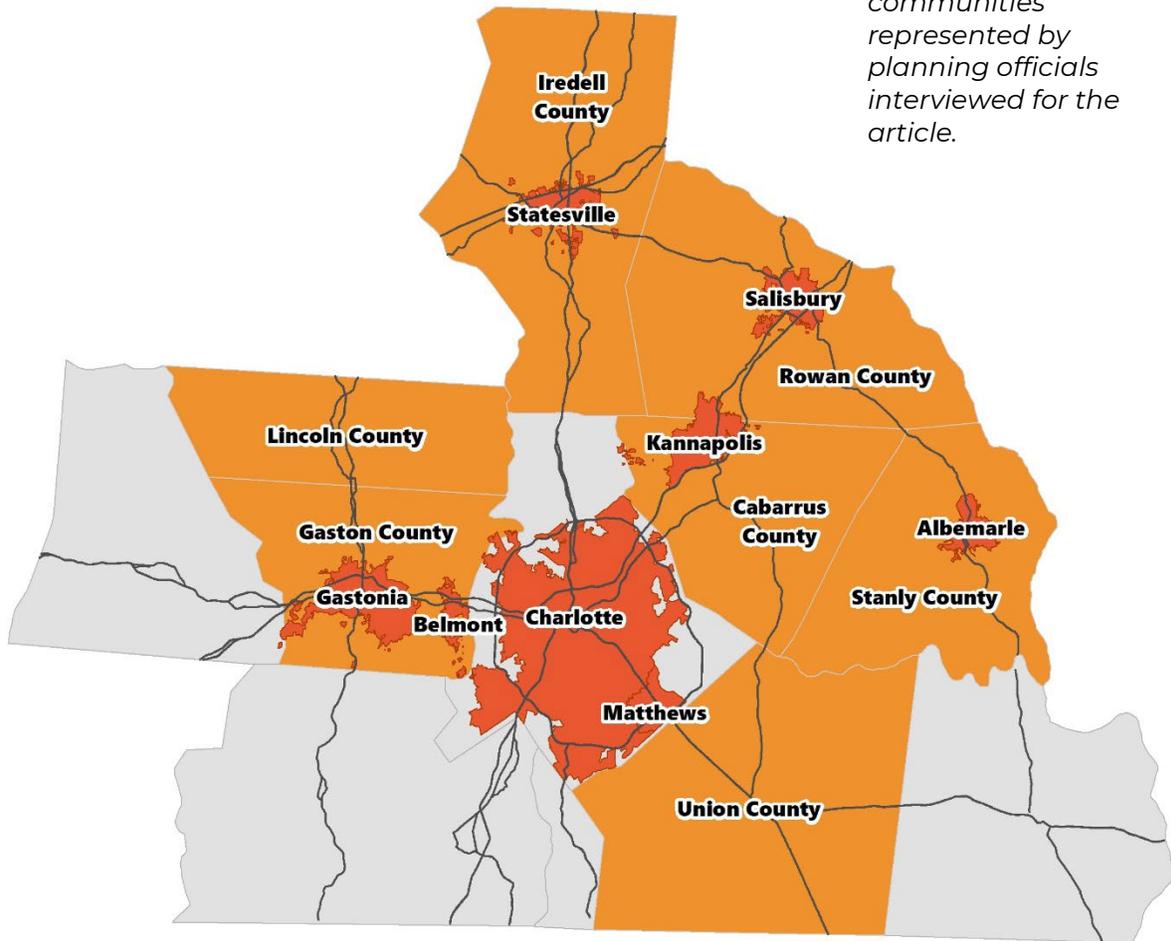
A few planning officials, who interviewed in the region, arrived after CONNECT Our Future was completed in 2014.

Market Trends and Development Pressures

The growth and development trends summarized in the March article were confirmed by the interviews with local planning officials. In some cases, the data for the last decade (2010-2019) seems to be under-representing the most recent development boom hitting parts of the Metrolina Region. Cities, towns and counties in several areas reported record levels for building permits issued in 2020 and the type and intensity of new development or rezoning applications filed in 2021 point to strong growth potential for many areas. The planning officials interviewed for the article did not feel that the COVID-19 pandemic negatively impacted development interests in their community and more often, we heard about an uptick in development interests and activity during the pandemic period.

Some officials also reported anecdotal information from conversations with developers, real estate agents or new residents in their communities that confirm national interests in moving to the region, including several people coming from Texas, Florida, New York, New Jersey and California. Many were attracted to new industries and jobs available, but several others reported personal reasons — family, retirement,

The map depicts communities represented by planning officials interviewed for the article.



weather or higher quality of life — as the primary reasons for coming to the area.

Planning officials' stories and observations about specific development categories confirmed the data and trends reported in the March article.

Residential

Regionally, planning officials confirmed rapid and wide-spread residential development throughout the area. The preferences, however, for single-family detached homes, townhomes, apartments or condominiums varies by location. The City of Charlotte and the largest surrounding cities in its sphere of

influence — Gastonia, Concord and Kannapolis — reported tremendous growth pressures for new apartments and condominiums. In some cases, the number of recent multifamily permits filed in the jurisdictions exceeded the number of single-family permits filed for the same period. Interests in apartments or condominiums also increased for locations like Matthews and Belmont because of their proximity to the proposed CATS Silver (Light Rail) Line or renewed interests in their walkable downtowns and other emerging activity centers. The City of Albemarle is also seeing interest in building new duplexes,

townhomes and low-rise apartments after revising its policies and ordinances to encourage more “missing middle” home choices.

Other cities and towns in the region — Statesville, Harrisburg, Salisbury, Granite Quarry, Rockwell and China Grove — are seeing significant interest in building new single-family detached neighborhoods. Rural and suburbanizing areas of the region’s unincorporated counties are also receiving interest in building new single-family detached neighborhoods. However, rising land costs and limited sewer treatment capacity in several of the interviewed counties are pushing growth back to nearby cities and towns, because others can provide the services needed, especially sewer treatment capacity, to support increased densities that are needed to justify project proformas including higher land costs.

Industrial

The industrial market is currently experiencing “red hot” interest according to recent publications and planning official interviews. The Charlotte Business Journal celebrated new industrial announcements regularly in 2020 and 2021. The Charlotte Regional Business Alliance identified six important target sectors and industries for the region: advanced manufacturing, automotive, financial services, international business, company headquarters and logistics/distribution.

A distribution framework, focused on the Charlotte Douglas International Airport, the Charlotte Inland Port, Interstates 77 and 85, networks of railroads and US/NC/SC highways and numerous warehouse and distribution centers across the region, connect and improve conditions for business recruitment and

economic development. Areas around Charlotte Douglas Airport and Westinghouse Boulevard in Mecklenburg County are still “hots spots” for industrial development. However, decreasing land inventory in Mecklenburg County as-a-whole is also quickly opening new markets and opportunities in Gaston, Cabarrus and Stanly Counties. Amazon is building a new 1.1-million square foot distribution center in Kannapolis. North Point Development is building between 3.0- and 4.0-million square feet for new industrial uses at Gateway 85 in Gaston County. A new lithium mine is also being considered in Gaston County. Charlotte Pipe Foundry is relocating 400 jobs from Mecklenburg to Stanly County.

Areas adjacent to Interstates 77 and 85 extending throughout the region — especially in Cabarrus, Rowan and Iredell Counties — reported increasing interest for industrial development. However, some of these areas are now under-served by transportation, water and sewer systems and will need expensive improvements before wide-spread industrial development might occur.

Commercial

Recently reported experiences for commercial development in the region varied by location: bright futures for downtowns in Kannapolis, Gastonia, Albemarle, Belmont and Statesville; small booms for large and small commercial centers in the suburban areas of Rowan, Gaston and Union Counties; neglected and aging commercial centers in other suburban areas throughout the region and stagnating markets in some rural areas of unincorporated counties, especially those that do not provide sanitary sewer service.

Office

Recent reports for office development in the region reflect a slowing investment period for most communities, which is likely driven by short-term and long-term considerations associated with the COVID-19 pandemic. Several developers are simply in a “holding phase” with their plans and portfolios as they wait and see where the market heads next.

Changing Development

Preferences

Limited and undeveloped land, rising land costs, increased traffic congestion levels, new focus on infill development and redevelopment and limited infrastructure capacity in some areas of the region are driving changing development preferences for certain communities. Planning officials interviewed for the article were asked to comment on new development ideas, concepts, or trends being discussed in their communities. New preferences being discussed were proposed by national builders working outside the region, existing residents or business owners wanting change or elected officials reacting to existing development intensities and trends. Ten trends summarize the observed changes in development preferences, as follows:

Managing the Multifamily Boom Years

Multifamily development interests are accelerating for many cities and towns in the region, and pressures are growing to manage the type, location and timing of new apartment or condominium projects in some of the communities, especially those that are more suburban in character. In some cases, planning officials are being asked to eliminate, or at least restrict, new multifamily development in the community altogether as a response to growing concerns from residents or elected officials over traffic congestion and crowded schools. In other cases, policies and ordinances are being reviewed and revised to make apartments or condominiums a “conditional use” in the local zoning ordinance, which means they may be permitted in specific areas of the community if certain conditions are met (e.g., project size, site design, amenities, vehicle access or building height).

Multifamily Development with On-Street Parking, Location and Photographer Unknown



New Rent-by-Choice Residents

Some segments of the population — young professionals, families and retirees — are choosing to rent instead of purchasing a home at this time. They cite high student loan debt, transient work opportunities, flexible lease options, access to complex amenities, on-site property maintenance and options to retire to live in multiple cities during the year as reasons to choose renting over home ownership. The types of homes available for rent in the region are also increasing, including apartments, condominiums, townhomes, single-family homes, live-work units and accessory dwelling units.

Some rent-by-choice trends are being tested, especially by Millennials that delayed home purchases during the COVID-19 pandemic, while interest rates for home purchase are historically low and rents are high (and rising) in some areas of the region.



39% of people contacted in the Freddie Mac 2019 Housing Survey reported that they are likely to never own a home.

— www.freddiemac.com, 2021

Reimagined Downtowns

Communities throughout the region are reimagining their downtowns as new (and improved) economic, civic and entertainment activity centers with full-time residents living near popular destinations and amenities. New baseball stadiums, satellite university buildings and redeveloped mill areas anchor other investments being made on walkable streets, public spaces, restaurants and residential living options that are transforming small to medium downtowns in the region. Some communities are changing their policies and ordinances to support unique and creative development concepts, while others are investing millions of dollars in their downtowns alongside millions more being invested in private development projects.

Emphasis on Walkable Activity Centers

Reinvestments in downtowns, their nearby activity centers and suburban development nodes throughout the region are increasingly adopting mixed-use, walkable design principles that emphasize a discernable activity center with popular destinations, public space and multiple residential home choices integrated together. The mix of land uses, development intensity, building scale, block and street connectivity or parking strategy applied to one or more new (or renewed) activity centers in a community (or when comparing communities) does seem to change based on project size, general location, rural-suburban-urban development context or access to premium transit service.



and its renewed energy and economic vibrancy is fueling excitement about the possibilities for

Summary Document |

Franklin Urban Sports and Entertainment (FUSE) District – Gastonia, NC

Affordable Home Options

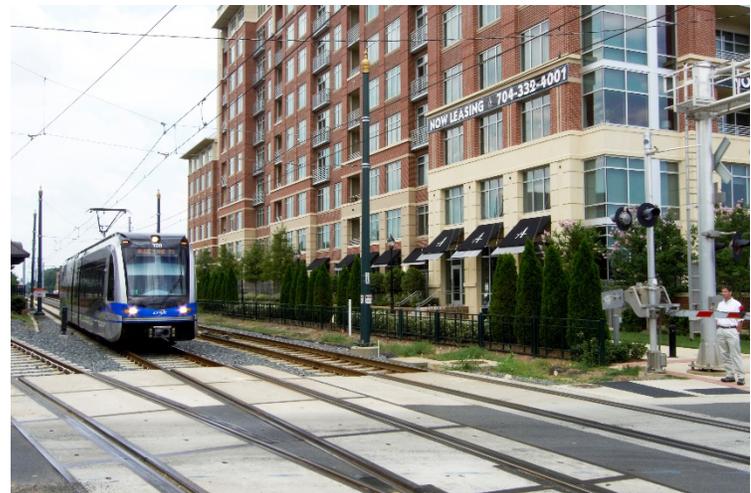
Some planning officials in the region report home purchase and home rent price increases reaching levels that put significant pressure on local residents looking for affordable housing options. Limited land to develop in some areas and new residents arriving daily are increasing demands for more and different home choices. Outside investors purchasing multiple low-cost homes in some communities (compared to where they live) are driving up prices for local residents. Within the region, residents moving from more-urban to more-rural communities also drive-up home costs for local residents. New developments in some communities that are now targeting affordable housing solutions are facing challenges associated with the balance between design expectations and intended price points.

Transit-Oriented Development

Transformation of the CATS Blue (Light Rail) Line corridor in South End Charlotte



CONNECT Our Future Place Type Summary Document, 2014, Small-Lot Residential Place Type Category (Baxter Village, Fort Mill, SC)



CONNECT Our Future Place Type Summary Document, 2014, TOD-LRT Place Type Category (CATS Blue Line, Charlotte, NC)

the proposed CATS Silver (Light Rail) Line connecting Belmont, Charlotte and Matthews (and potentially Stallings, Indian Trail and Gastonia in the future). Station area planning is now underway in anticipation of the new service, and communities along the line are considering the right mix of land uses, densities, building heights, public spaces and parking requirements to create livable communities and complement future investments in premium transit service.

More Density, More Design

New development densities proposed for some cities and towns in the region are significantly increasing, especially as land available for development decreases and the costs of land acquisition or land preparation increases. The number of locations proposed for increased density in communities is also increasing beyond downtown to include proposed light rail transit corridors, new suburban activity centers or teardown and infill development projects in existing neighborhoods that provide different home choices. Some communities are responding to increased density pressures by enacting new policies, ordinances or rules that lower maximum allowable density for a project or sometimes, by trying to outright prohibit specific land uses associated with higher densities as a by-right action under the zoning ordinance (moving it to a conditional use category). Other communities are embracing increased densities in the area and using it as an opportunity to implement certain design or development performance criteria that ensures new development is high-quality and compatible with surrounding areas.

Growing Patience for the “Right Development”

Historically speaking, some communities in the Region would accept new development at all costs to grow in population or employment and to increase or balance their local tax base. More recently, several communities have become more discerning about the types, locations, patterns and intensities of development they prefer for their area. They are becoming more vocal with development applications and are willing to wait for the right development project in a specific location. One planning official who was interviewed for the article noted their land resources are decreasing quickly and pressures from the public and elected officials are growing to get each development application exactly right to safeguard (and really improve) the community’s future.

Coordinated Decision-Making

Some fast-growing communities in the region are recognizing the problems associated with their rules and procedures that approve development applications in isolation — namely that the individual parts do not add up to a well-coordinated whole. High-level concepts for building a comprehensive and coordinated transportation system, drinking water system, sanitary sewer collection system, storm water collection strategy or internet network are being interrupted by individual development applications that do not always respect the value of connected infrastructure.

More recent regional planning efforts for transportation, water and sewer systems are actively coordinating local land use plans with regional service area plans and investment strategies. A few county-level



CONNECT Our Future Place Type Summary Document, 2014, Mixed-Use Neighborhood Place Type Category (Charlotte, NC)

comprehensive plans are also coordinating future growth management policies and investment strategies with the cities and towns in their jurisdiction.

COVID-19 Accelerators

Opinions are mixed about the short-term and long-term implications of the COVID-19 pandemic, and whether social distancing, online shopping, work-from-home policies or increased personal time for some people in the community will generate long-lasting behavior changes or if people will simply

return to normal experiences before the pandemic over some period.

The Charlotte Business Journal recently reported the experience of realtors in the region, who are seeing record interest from Millennials in home buying (See Millennial Market Madness, April 2021). They cite work-from-home policies associated with the pandemic, need for more space in the residence, high rent and low interest rates as motivators to purchase (vs. rent) from their interactions with some young homebuyers.

Planning officials in the region agree, more clarity on the different topics is needed, and it will come over the next few years as personal and business decisions are made and more data becomes available. Some communities may need to act quickly to reassess their vision for growth and development in the future, by revising their plans, policies or ordinances accordingly, once long-term impacts from the pandemic are known and accepted.

Big Issues Facing the Region in the Future

Planning officials were asked to identify big issues facing the region that might ultimately endanger the area's recent successes, if not addressed. Two items were identified: regional transportation coordination and sanitary sewer system capacity and service areas.

Regional Transportation Coordination

Research for the CONNECT Our Future Regional Scan Document confirmed over half of the region's workforce lived in one county and worked in another, which reinforces the need for more coordinated decision-making processes in transportation that are focused on a shared, equitable and sustainable future. Planning officials agreed traffic congestion is a major "growth inhibitor" for realizing the region's full growth potential, unless addressed soon. One official said it bluntly: "our economic development strategy is all about efficiency, but how do we sell businesses on our region if we are all clogged up like Atlanta." Some planning officials talked about the need for a regional transportation authority or a similar

construct, which might partner with the four metropolitan planning organizations and their transit partners to coordinate major investments in a multi-jurisdictional regional highway network and a multi-jurisdictional regional transit network. The authority would help organize efforts in the region and identify local, state and federal funds available for planning, design, permitting and construction. A governing board would legitimize the regional transportation authority and organize its efforts in the area.

Sanitary Sewer System Capacity and Service Areas

Planning officials identified sanitary sewer system capacity and service areas as one of the most important factors for influencing preferred development types, patterns and intensities in the region. It was also identified as a significant tool for managing the timing and location of development throughout the region. Cities, towns and some counties in the area that provide sanitary sewer service are assumed to have bright futures. Other counties in the area that do not provide sanitary sewer service have less certain futures.

Recent system consolidation, expensive plant upgrades and extended pipe networks in under-served areas will continue to influence when, where and how development occurs in the future. Certain service areas are expected to effectively pause development from time-to-time as utility providers make costly investments in their systems. Rising costs to expand, operate, maintain and rebuild sewer systems may overwhelm some service providers in the future. It is critical that plans, policies and ordinances for local governments are well-coordinated

with the system plans and construction schedules for utility providers. New customers in locations where capacity is available are needed to address large debt service requirements for the utility providers

Community Reactions to Change

Planning officials were asked to comment on recent experiences with residents, developers, advocacy groups, or nearby jurisdictions in the context of growth and development topics facing their communities. Elected officials in one county reported regular criticism from local cities and towns in their area that think their plans and ordinances are too aggressive, especially when targeting growth in new activity centers located near municipal boundaries. Some cities and towns are seeing new groups being formed to oppose all types of growth and development in their community. They focus on negative impacts to existing infrastructure or a general loss of community character associated with infill development or redevelopment projects that change land uses or increase densities compared to surrounding areas. Some of the new groups are becoming very political. Split votes for most development applications at the planning board and governing board levels are presently normal.

Ties Back to CONNECT Our Future

CONNECT Our Future was an initiative that united residents, businesses, educators, elected officials, non-profit organizations and other interest groups

around a common desire for more cooperation in the region and the need to work together to fulfill shared goals. A general framework for future growth and development was created under the initiative, which was unanimously endorsed by the CONNECT Consortium Program and Policy Forums in 2014. Many assumed the wave of optimism from this event would build strong momentum to fulfill various CONNECT goals and recommendations and to use the data and tools shared with state, regional and local governments for their implementation.

Planning officials were asked to comment on the impact of the partnerships and project deliverables created for CONNECT Our Future and highlight local initiatives that may tie back to the regional effort. Some officials were in the region between 2012 and 2014 and participated directly in the project, while others arrived after its completion and only know of it to varying levels.

Those that fully-embraced the data and principles in the recommended framework for CONNECT Our Future implemented its ideas and concepts in their local plans, policies and ordinances. The preferred growth framework presented in the CONNECT Magazine and the concept of place types used to describe intended character and land uses for the region in the Place Type Summary Document for CONNECT Our Future were refined and implemented in several local comprehensive plans and zoning ordinances throughout the region. One official called their comprehensive plan “a cousin” to the region’s general framework that was endorsed in 2014.

Others used the tool kit to implement recommendations from CONNECT Our Future. It influenced their different plans,

What did our community partners have to say about CONNECT Our Future?

“I think CONNECT did a good job capturing sound planning principles and putting them into a concise document with the data needed to prove their value.”



“I really appreciate the time the Centralina Regional Council and its partners put into CONNECT Our Future and the activities that have followed. The data created for these efforts is invaluable. We use it all the time.”

“Being new to the region, I do not know enough about CONNECT Our Future. I really need to learn more about it.”



“There was great hope right after CONNECT, but the frequency and quality of cross-jurisdiction coordination for some topic areas is fading over time.”



“CONNECT Our Future and its legacy did not become engrained in the day-to-day thinking or activities of our community. I think this is true of other local governments too.”

“The data created for CONNECT Our Future is great, and we use it often to justify needs (now and in the future) for schools, roads, water service and sewer service.”



“The benefits of CONNECT Our Future lie in the new data it provided for having growth-related conversations in the region. It provided a common reference point to have discussions about how much growth (and what kind) was coming and provided common ground to start deliberations about the future. The data was everything for us when considering the success of CONNECT Our Future.”

processes and thinking about important qualities to emphasize in their communities. Analytical models and multi-jurisdictional data sets first developed in 2012 have been updated in 2016 and 2020 and used widely in the region to study and evaluate the needs for various transportation, water and

sewer infrastructure projects. The data is also being used by communities for various funding requests and grant applications. One local official said the models, data and processes instilled during CONNECT Our Future to measure and evaluate different growth and development alternatives — where, how

much and when — has helped leaders in various communities and agencies across the region work together to identify the right projects or solutions to meet future demands.

Centralina Regional Council supported use of the CONNECT Our Future place types by incorporating the concepts into local comprehensive plans, spearheading capacity Future toolkit and leading multiple projects to

advance CONNECT Our Future priorities, especially related to creating healthy communities, strong downtowns, community engagement and advancing regional transportation collaboration. Centralina also led several regional planning projects directly attributable to the recommendations and outcomes from CONNECT Our Future, including: the Metrolina Regional CommunityViz Initiatives (2016 and 2020) aimed at updating CONNECT Our Future land use and transportation data sets for use in regional transportation planning, the Greater Charlotte Regional Freight Mobility Study (2016), the Regional Transit Engagement Series (2019) and the CONNECT Beyond Regional Mobility Initiative (2021). Each of these transportation projects included land use elements, such as the placement of employment centers that depend on freight logistics or the creation of transit supportive walkable centers.

In all these ways, the preferred development principles and patterns from CONNECT Our Future are taking root in some parts of the region seven years later.

Some planning officials felt the legacy of CONNECT Our Future did not become fully engrained in the local thinking or planning activities of enough

communities in the region to support wide-spread land use or development change. They observed several communities that simply went right back to thinking locally and sometimes, but usually not, coordinating-regionally once the CONNECT Our Future project ended. Some officials interviewed for the article reported that the CONNECT Our Future project is not mentioned at all in their communities in 2020-21.

Several planning officials think it would be great to create a new working group to rekindle the momentum from CONNECT Our Future. Transit, environment and land use coordination were identified as three targets to improve cross-jurisdiction coordination immediately. It could re-energize interests and actions for new residents, local planning officials or elected officials that arrived in the region after CONNECT Our Future was finished in 2014. Officials advocating for a new working group expressed interests in a formal structure and regular meeting schedule to collaborate across jurisdictions as essential elements to ensure the initiative's continued success.

Key Takeaways While Looking Forward on Growth and Development Opportunities in the Region

The growth and development trends summarized in the March article were confirmed by the interviews with local planning officials. In some cases, the data for the last decade (2010-2019) seems to be under-representing the most recent development boom hitting parts of the Metrolina Region. Speaking regionally, planning officials confirmed rapid and wide-spread residential development throughout the area; however, the

preferences for single-family detached homes, townhomes, apartments or condominiums varies by location. The industrial market is also experiencing “red hot” interest at this time. Local officials’ experiences reported for commercial development in the region varied by location but nearly all reported a slowing investment period for office development, which is likely driven by short-term and long-term considerations associated with the COVID-19 pandemic.

Limited undeveloped land, rising land costs, increased traffic congestion levels, new focus on infill development and redevelopment and limited infrastructure capacity in some areas of the region are driving changing development preferences. New preferences being discussed were proposed by national builders working outside the region, existing residents or business owners wanting change or elected officials reacting to existing development intensities and trends. The top ten trends observed by planning officials include:

- Multifamily development interests are accelerating for many cities and towns in the region, and pressures are growing to manage the type, location and timing of new apartment or condominium projects in some of the communities, especially those that are more suburban in character.
- Growing segments of the population, young professionals, families, and retirees, are currently choosing to rent versus purchase a home.
- Communities throughout the region are reimagining their downtowns as new (and improved) economic, civic and entertainment activity centers

with full-time residents living near popular destinations and amenities.

- Reinvestments in downtowns, their nearby activity centers and suburban development nodes throughout the region are increasingly adopting mixed-use, walkable design principles that emphasize a discernable activity center with popular destinations, public space and multiple residential home choices integrated together.
- Limited land to develop in some areas and new residents arriving daily are increasing demands for more and different home choices. Outside investors purchasing multiple low-cost homes in some communities (compared to where they live) are driving up prices for local residents.
- Transformation of the CATS Blue (Light Rail) Line corridor in South End Charlotte and its renewed energy and economic vibrancy is fueling excitement about the possibilities for the proposed CATS Silver (Light Rail) Line connecting Belmont, Charlotte and Matthews (and potentially Stallings, Indian Trail and Gastonia in the future).
- The number of locations proposed for increased density in communities is increasing beyond downtown to include proposed light rail transit corridors, new suburban activity centers or teardown and infill development projects in existing neighborhoods that provide different home choices.
- Several communities have become more discerning about the types, locations, patterns and intensities of development they prefer for their

area. They are becoming more vocal with development applications and are willing to wait for the right development project in a specific location.

- Some fast-growing communities in the region are recognizing the problems associated with their rules and procedures that approve development applications in isolation, namely that the individual parts do not add up to a well-coordinated whole.
- Some communities may need to act quickly to reassess their vision for growth and development in the future, by revising their plans, policies or ordinances accordingly, once long-term impacts from the pandemic are known and accepted.

Thinking more “regionally” about the area’s future, some planning officials talked about the need for a regional transportation authority, which might partner with the transportation planning organizations and transit partners to coordinate major investments in a multi-jurisdictional highway and regional transit network.

In reference to the CONNECT Our Future initiative, the communities that fully-embraced the data and principles in the recommended framework implemented its ideas and concepts in their local plans, policies and ordinances. Others used the tool kit to implement recommendations from CONNECT Our Future, and it influenced their different plans, processes and thinking about important qualities to emphasize in their communities. Analytical models and multi-jurisdictional data sets first developed in 2012 have been updated in 2016 and 2020, and used widely in the region to study and evaluate the needs for various transportation,

water, and sewer infrastructure projects. The data is also being used by communities for various funding requests and grant applications.

The Centralina Regional Council also supported CONNECT Our Future by incorporating “place types” into local comprehensive plans, spearheading capacity building and training for the CONNECT Our Future toolkit and leading multiple projects to advance CONNECT Our Future priorities. The Council also led several regional planning projects directly attributable to the recommendations and outcomes from CONNECT Our Future, including: the Metrolina Regional CommunityViz Initiatives (2016 and 2020), the Greater Charlotte Regional Freight Mobility Study (2016), the Regional Transit Engagement Series (2019) and the CONNECT Beyond Regional Mobility Initiative (2021). Each of these transportation projects included land use elements, such as the placement of employment centers that depend on freight logistics or the creation of transit supportive walkable centers.

In all these ways, the preferred development principles and patterns from CONNECT Our Future are taking root in some parts of the region seven years later.

Other planning officials felt the legacy of CONNECT Our Future did not become fully engrained in the planning activities of enough communities in the region to support wide-spread land use change. They observed several communities that simply went right back to thinking locally and sometimes, but usually not, coordinating regionally once the CONNECT Our Future project ended. These planning officials think it would be great to create a new working group to rekindle the momentum from CONNECT Our Future.





CONNECT
Reflections:
Continued Growth,
Changing Travel
Behavior and the
Future of the
Regional
Transportation
System

State of the Regional Transportation System

The transportation system in the Metrolina Region includes highway, transit, rail, air, bicycle and pedestrian elements. Streets in the highway network range from two-lane, rural roads to eight-lane interstates, including more than 2,600 miles of interstates and federal/state highways running throughout the twelve-county region. Transit service in the region includes the Blue Line in Charlotte (light rail), the Gold Line in Charlotte (streetcar) and bus service operated by agencies in Charlotte, Gastonia, Concord, Kannapolis, Salisbury and Rock Hill. Railroads move freight in the region to points throughout the country with lines operated by Norfolk Southern, CSX and several short-line providers. Charlotte/Douglas International Airport is ranked among the top ten busiest airports in the world — averaging 1,600 daily aircraft operations — and serves over fifty million passengers each year who travel to one of 178 nonstop destinations (www.charlotteairport.com).

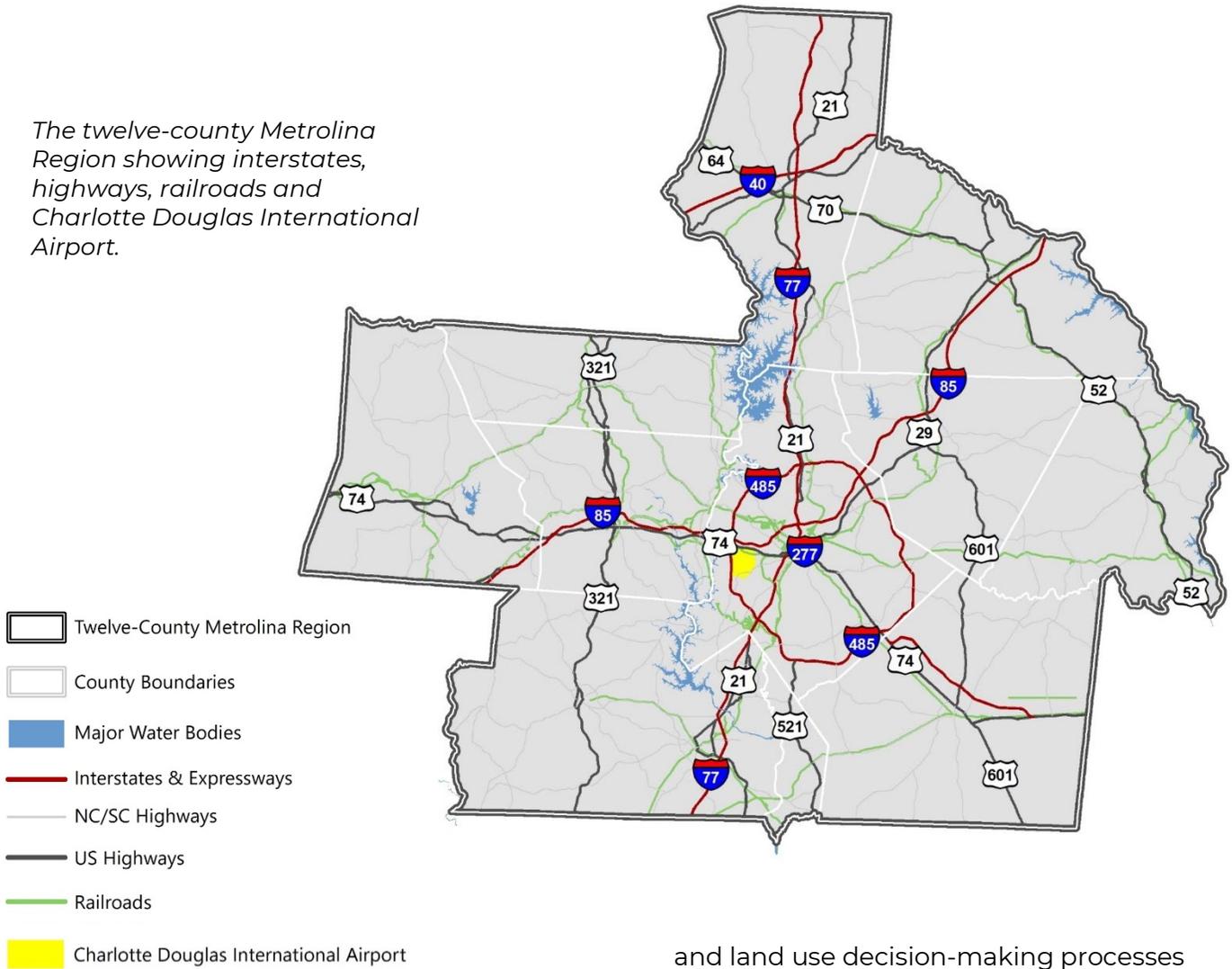
Several cities and towns in the region are also leading the way for more bicycle- and pedestrian-friendly communities. Charlotte, Davidson and Rock Hill are designated as bronze-level national bicycle-friendly community award winners and Charlotte and Davidson are designated as silver- and bronze-level national walk-friendly community award winners. Other initiatives in the region — such as the Carolina Thread Trail and the Cross Charlotte Trail — are linking local greenways into a ‘super-highway’ for bicycling and walking in the region.

The physical distance between complementary land uses in the region —

between home and work; home and school; or home and shopping — and over-reliance on automobiles for meeting daily travel needs in most parts of the region is leading to several unintended consequences: rapidly increasing vehicle miles traveled and energy consumption, longer commute times, increased air pollution and heightened infrastructure and public service costs. Inadequate long-term transportation funding and shifts in department priorities from new construction to maintenance for some areas worsens the problem — referred to as the growing funding gap — as little can be done to keep up with existing and emerging region-wide decentralized growth patterns.

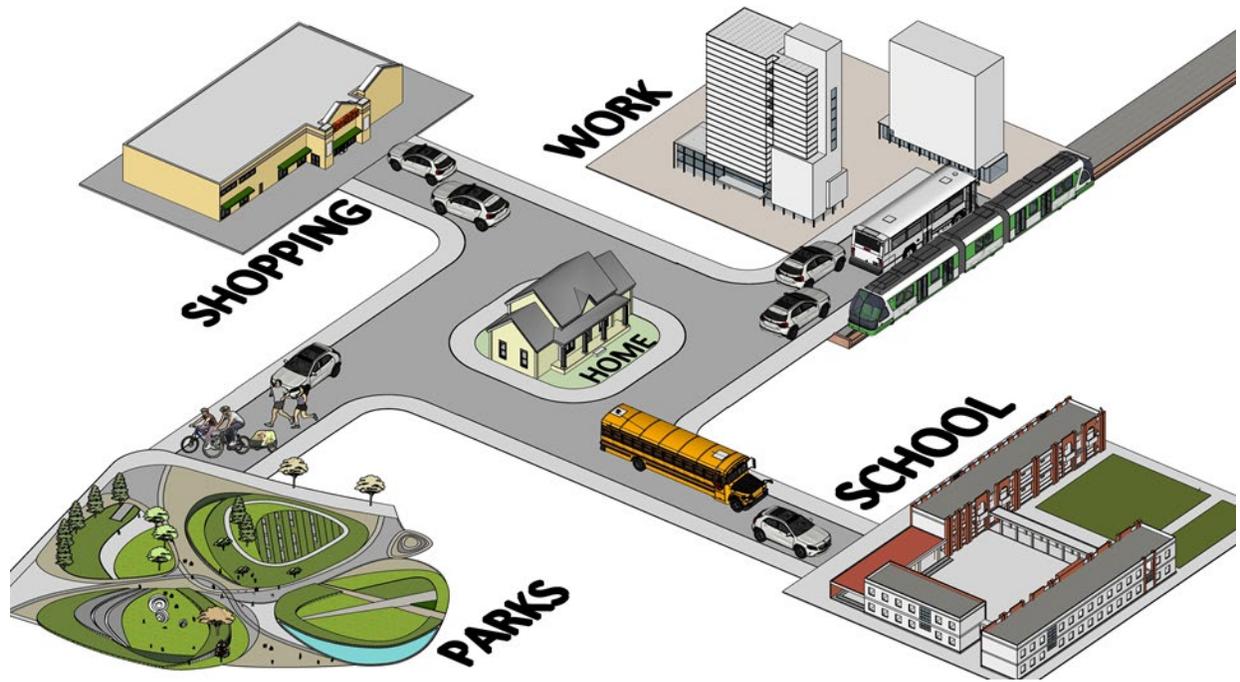


The twelve-county Metrolina Region showing interstates, highways, railroads and Charlotte Douglas International Airport.



Local, regional and state transportation officials are working toward building and safeguarding a more sustainable transportation system as growth and development are assumed to increase and expand significantly in future decades. Policy statements in adopted plans or projects in adopted work programs are implementing “complete streets” concepts and “context-sensitive design” solutions, which provide transportation choices — vehicle, transit, bicycle or pedestrian — in the same corridor consistent with surrounding land uses and densities. Transportation officials are also working very closely with local governments to better link transportation

and land use decision-making processes and study the opportunities and impacts associated with moving freight through the region. Aging infrastructure is also a major concern for transportation officials in the region, and maintenance needs for roads and bridges may stress already scarce transportation resources for new construction. Big ideas for addressing the situation are now in discussion, including jurisdictional responsibility for streets in the system — state, county, city or town — and alternative funding sources to the gas tax for keeping up with growing demands.



The type, location, pattern and intensity of development in the region influences “demands” for the transportation system — including system needs (capacity and routes) that connect complementary destinations and the viability of different travel mode choices available between them.

Transportation Decision-Making in the Region

The responsibilities for transportation planning and decision-making in the Metrolina Region are shared by the North Carolina Department of Transportation (NCDOT), South Carolina Department of Transportation (SCDOT), four metropolitan planning organizations, two rural planning organizations, local governments and their partners. Plans and studies are created by these agencies to represent the collective interests of the region — metropolitan transportation plans, comprehensive transportation plans or state transportation improvement project lists — or a plan or study for more specific needs in a single community, corridor or intersection. All travel modes are considered by the agencies and organizations — air, automobile, bus, light rail, commuter rail, streetcar, bicycle and pedestrian — for moving people and freight in the region.

Some transportation policies and rules are outside the influence of leaders in the region — many are created and funded by the federal government and implemented by state and regional transportation organizations — but they have significant impacts in terms of the type and quantity of projects that can be implemented by travel mode category.

Consensus-building for transportation interests in the region is reached using representatives on policy committees, technical coordinating committees and project-specific steering committees. NCDOT, SCDOT and local governments interact with the four metropolitan planning organizations and two rural planning organizations to coordinate planning, funding, permitting and constructing transportation projects.

Other's Influence on the Transportation System

Distinctly different groups in the Metrolina Region are responsible for making decisions that directly or indirectly impact the transportation system. Some plans, processes or procedures require groups to work together, while many others do not.

Land Use Decisions

Land use planning and decision-making processes in the Metrolina Region are the responsibility of local governments — cities, towns and counties — that maintain a comprehensive plan, zoning ordinance or small area plan to guide future growth and development decisions. Plans and ordinances are created independent of state or regional transportation organizations. There are no statutory requirements for minimum content, document format, coordination procedures or review cycles between land use and transportation interests in the region.

A community's vision for land use is conveyed to transportation organizations by local government representation on various transportation policy committees, technical coordinating committees or project-specific steering committees created throughout the years.

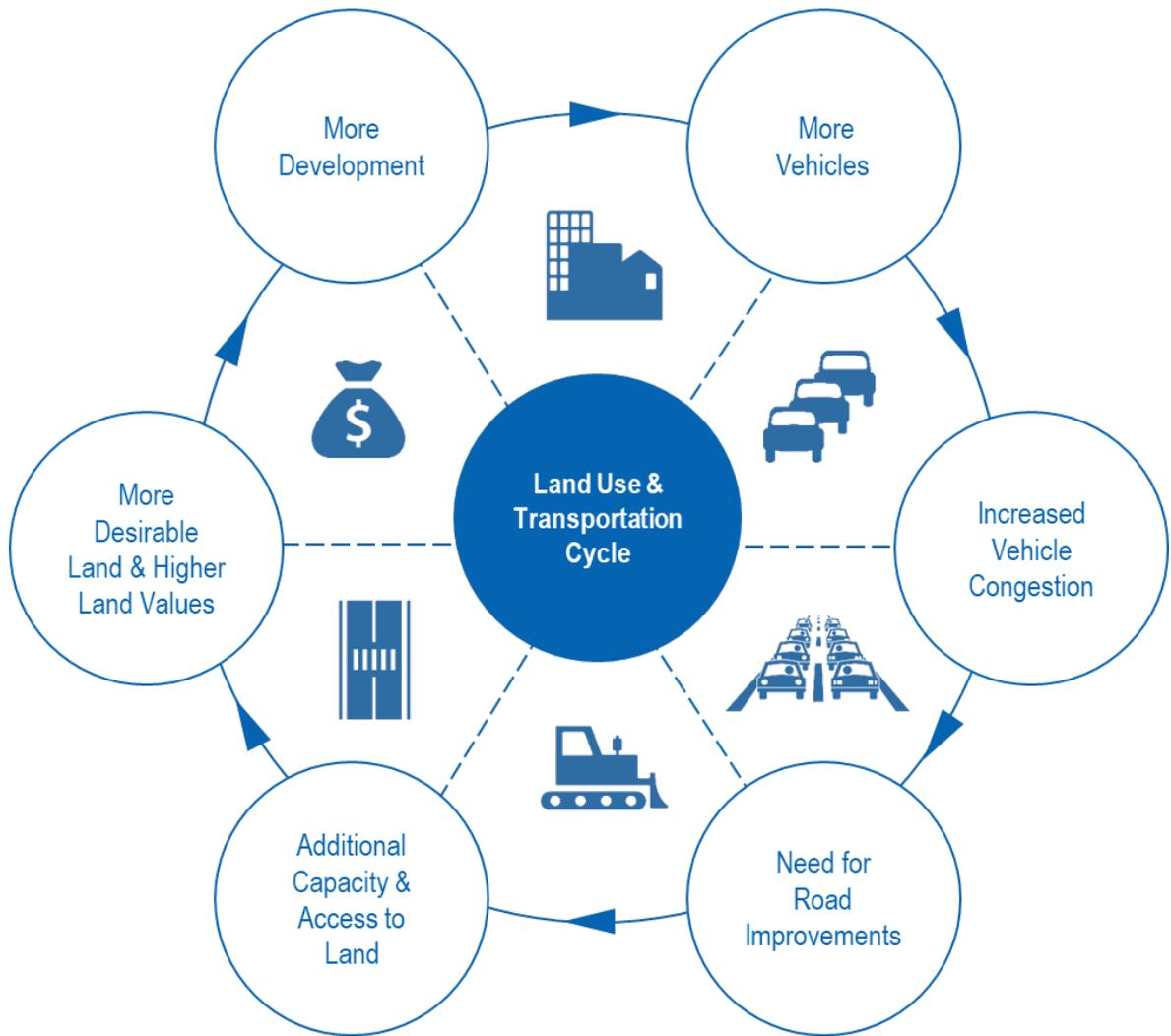
Transportation officials also collect land use and development data from local governments in the region once every four years to create socioeconomic data for the Metrolina Regional Travel Demand Model. The Model is used to forecast future year demand on existing and planned transportation facilities using anticipated land use, demographic information and travel patterns unique to

the region. Approximating future year conditions on the transportation system helps transportation officials assess the implications of growth, compare alternative transportation solutions and provide a framework for measuring the impact of different transportation policy decisions.

Employer Decisions

Employers in the region influence travel behavior since the trip between home and work (and back again) represents significant and repeated demand on the transportation system — especially during morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak periods of the five-day work week. Employers' decisions about office locations and their "normal" work schedules directly impact travel behavior and needed improvements for the transportation system. The relationship between home and work locations for an employee influences the length of their trip, the times they travel and the mode (automobile, transit, bicycle or walking) of travel they use.

Opinions are mixed about the short-term and long-term implications of the COVID-19 pandemic and whether work-from-home policies in place now will generate long-lasting behavior changes or if employees will simply return to experiences before the pandemic. Employers are testing different rules and policies around telecommuting, hybrid in-person/at-home work schedules or compressed workdays for their employees. Programs that keep employees at home for some portion of the work week could help reduce traffic volumes and congestion levels during peak periods of the day. Short- and long-term trends in flexible work schedules will have significant impacts on the efficiency of the regional transportation system.



The land use-transportation cycle described above is typical of most cities, towns and counties in the Metrolina Region. Starting at 11 o'clock on the diagram, more development in the community generates more demands on the transportation system, which leads to more congestion on existing roads until such time when a road is widened to provide additional capacity. Additional capacity in the system or improved access to new areas in the community, makes the city, town or county more desirable to develop in the future. At which time, the cycle repeats itself.

General Public Decisions

The general public also has tremendous power in changing the trajectory of transportation planning in future years. Their timing and willingness to make personal investments in new transportation technologies — connected and autonomous vehicles, shared micro-mobility solutions (scooters and electric bicycles), ride or vehicle share programs and web scheduling applications – will

influence the success of private- and public-sector investments in the transportation system and their abilities to influence safer, more efficient and more reliable travel behavior. Employees also have some influence on the type and magnitude of work-from-home policies available in the

future with their preferences for work location, flexibility and timing. Whether at their current employer or in seeking new

employment with a business that offers different options and general preferences for online shopping in the future will dramatically redefine the purpose and needs for home to shopping trips in the region.

Connecting the Dots with Data

Data from the U.S. Census Bureau for the twelve-county Metrolina Region was reviewed to document conditions and trends for the transportation system between 2010 and 2019 and specifically changes observed in travel behavior over the decade using three “travel-to-work” data categories: mode of transportation to work, travel time to work and a proxy for jobs-housing proximity. The three data categories combine to describe general increases or decreases in the decade for 1) preferences for different travel modes, 2) changing travel times between home and work and 3) the relative distance and direction employees travel between home and work.

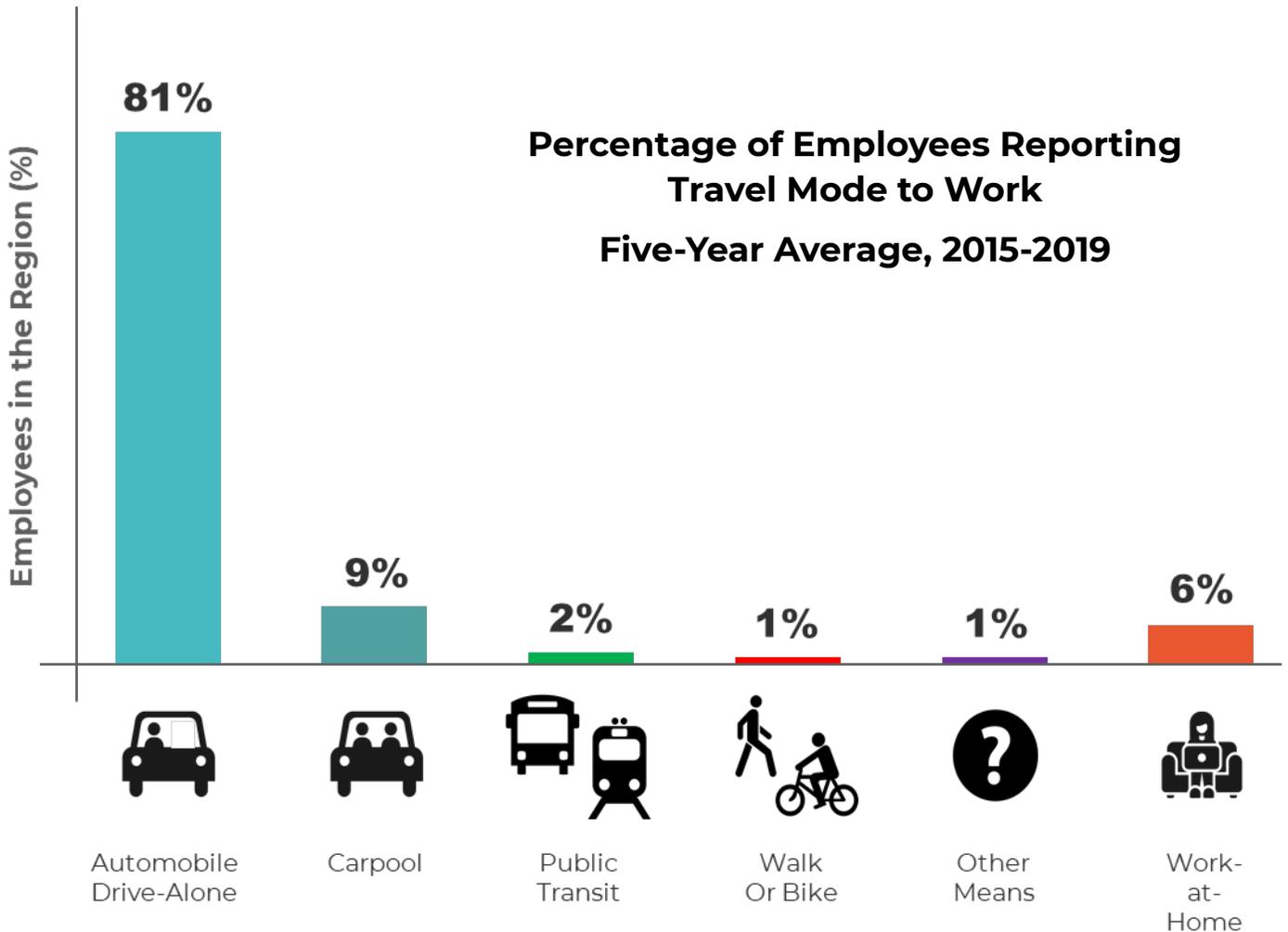
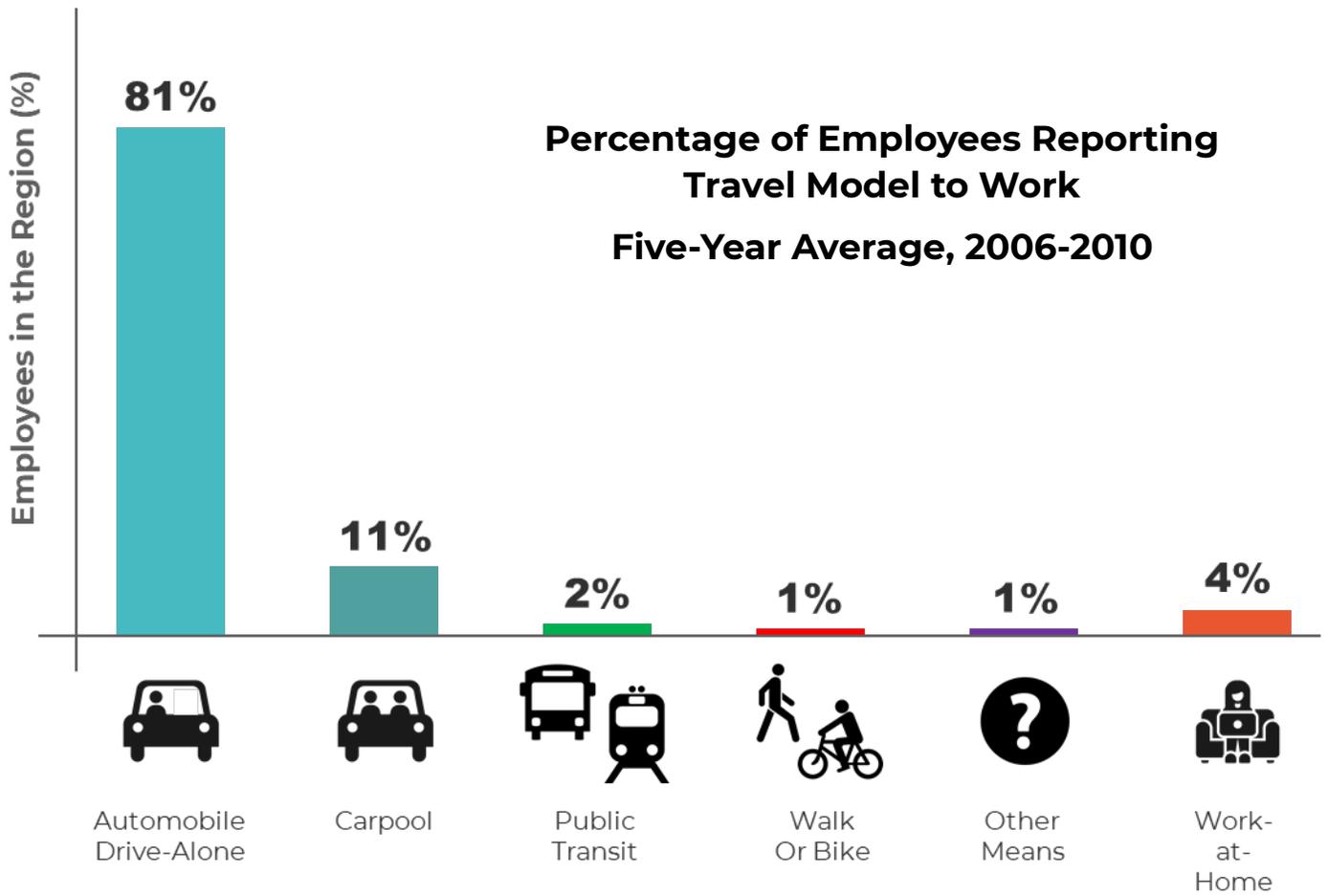
Mode of Transportation to Work. A summary of “mode of transportation to work” data from the U.S. Census Bureau’s American Community Survey (ACS) provides a snapshot of preferences for different travel modes available in the region for the regular commutes between home and work. Five-year estimates for two periods, 2006-2010 and 2015-2019, were used to capture conditions for the region across six travel mode choices: automobile, drive alone; van or automobile, carpool; public transit; walk or bike; other means; and work-from-home. Five-year data (as opposed to one-year data) was used to evaluate conditions, which minimizes potential data sampling errors from the ACS that

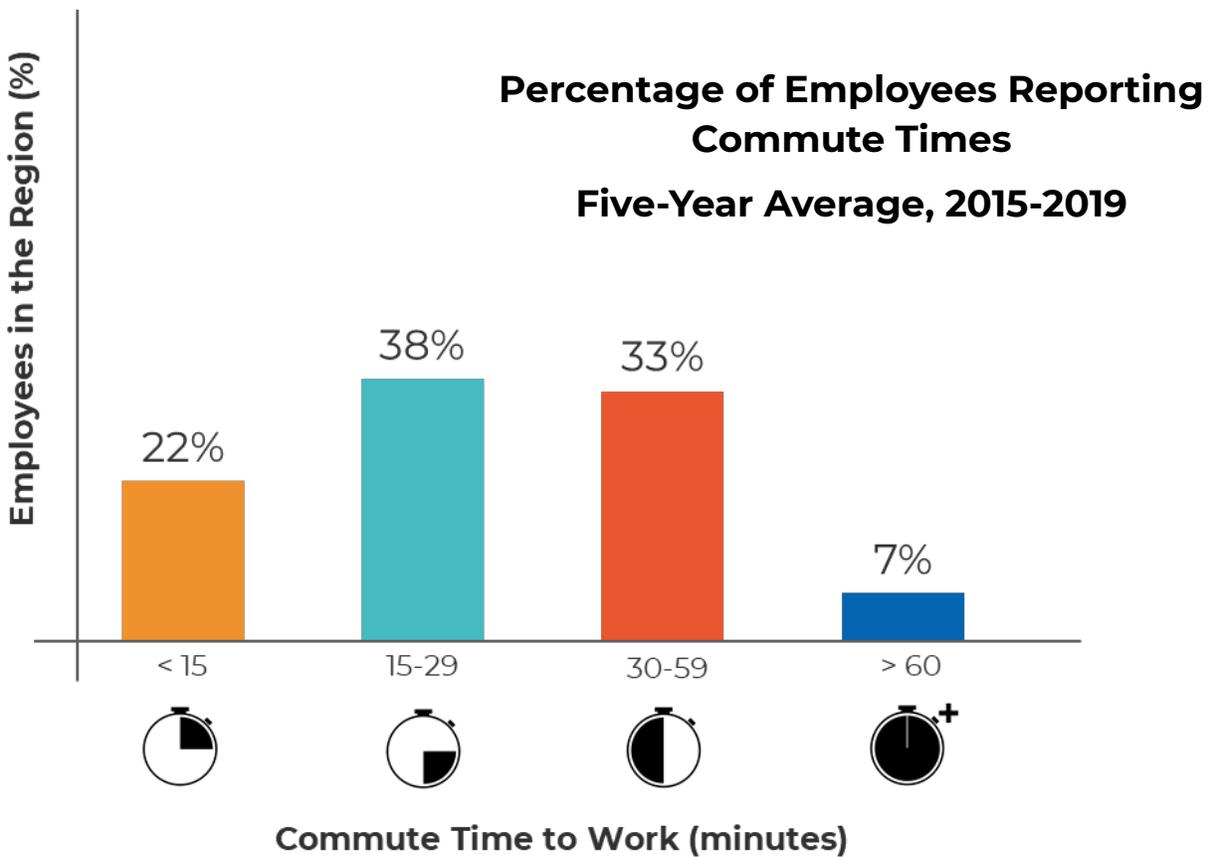
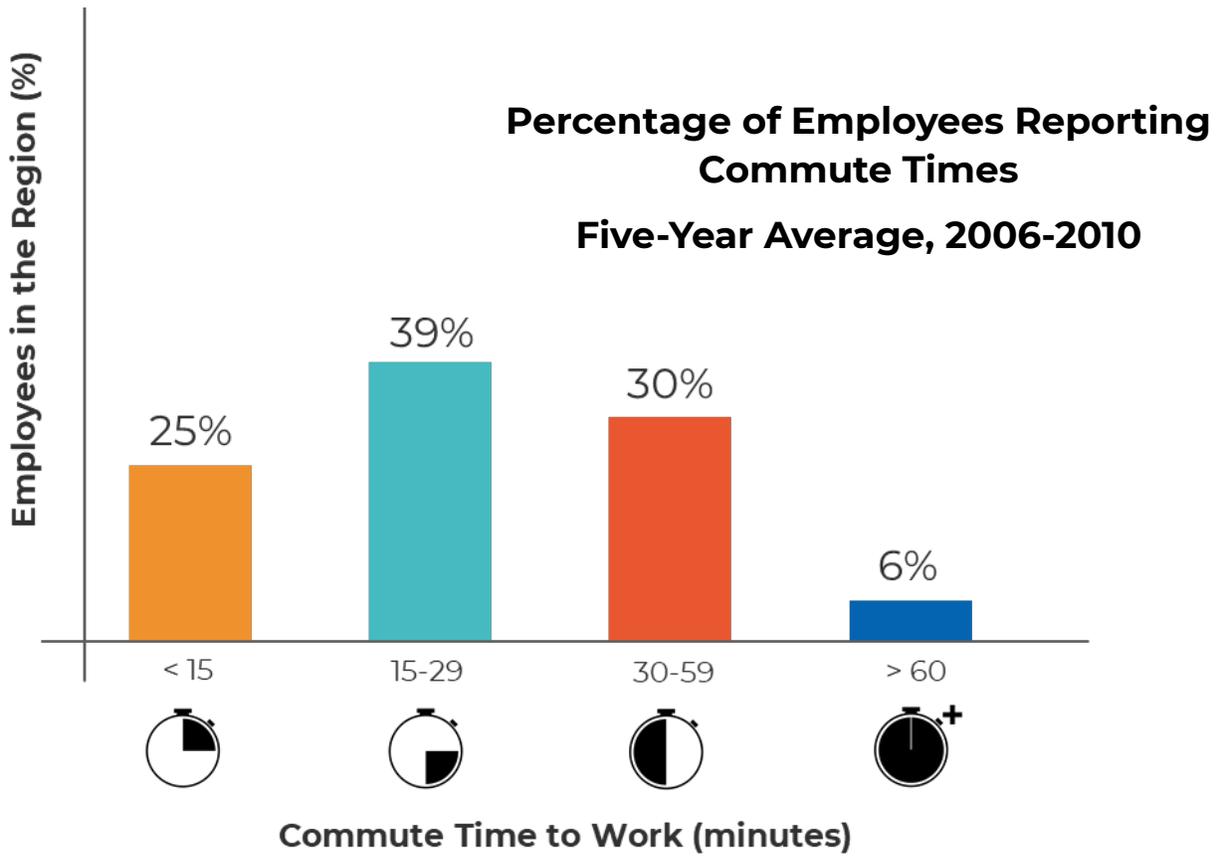
could skew some of the findings and trends reported.

Regionally speaking, the overwhelming majority of employees travel to work outside the home by driving alone in an automobile, followed by carpooling by automobile, public transit, walking or biking and other means. The rank order of transportation mode used for work outside the home did not change over the ten-year time period. However, the share of employees working from home over the decade did increase from 4% to 6% as a region — an absolute change of 38,864 new work-from-home employees.

County-level reporting for the ACS transportation mode to work data shows general increases in the share of employees working from home in Iredell, Mecklenburg, Union, Gaston, Lincoln, Cabarrus, Rowan, York, Lancaster and Stanly Counties. Only Cleveland and Anson Counties reported decreases in the share of work-from-home employees over the decade. Both Mecklenburg and Union Counties reported the highest capture of work-from-home employees, which compared favorably to carpooling as the second most popular choice for travel mode to work in both counties. Work-from-home employees in both counties far exceeded the number of transit trips recorded for work.

Travel Time to Work. A summary of average travel time to work from the U.S. Census Bureau’s American Community Survey (ACS) provides a snapshot of commute times for employees that work outside the home. Five-year estimates for two periods, 2006-2010 and 2015-2019, were used to capture conditions for the region across four travel time categories: less than 15 minutes, 16 to 30 minutes, 31 to 60 minutes and over 60





minutes. Five-year data (as opposed to one-year data) was used to evaluate conditions, which minimizes potential data sampling errors from the ACS that could skew some of the findings and trends reported.

Regionally speaking, the number of employees reporting a commute time to work less than 30 minutes — either less than 15 minutes or 16 to 30 minutes — decreased over the decade. The number of employees reporting a commute time to work more than 30 minutes — 31 to 60 minutes or over 60 minutes — increased over the same time period. Specific reasons for the change in commute time to work are not provided with the data, but may include 1) increased congestion on the transportation system that creates travel time delays, 2) increased travel distance between home and work if/when employees seek affordable housing further away from their place of employment or 3) a change in preferred travel model to work that produces slower travel speeds in exchange for some other travel incentive (e.g. a shift from automobile to public transit that results in slower travel times but zero parking costs once the employee arrives at work).

Jobs-Housing Proximity. A count of jobs by county where workers are employed from the U.S. Census Bureau's On-the-Map web application provides a snapshot of the relative distance and direction employees travel between home and work. The most current data available for the Metrolina Region — 2018 data released in December 2020 — was used to quantify the number of employees that live and work in the same county and the relationships between multiple counties where employees live in one and travel to another for work.

Regionally speaking, the number of employees that live in one county and work in another reached 51% in 2018. Eighteen percent of employees in the same year left the twelve-county Metrolina Region for work. These levels of inter-county travel in the region (and beyond) reinforces the need for more coordinated investments and decision-making to safeguard the regional transportation system.

Six locations in the region report their highest number of employees live and work in the same county: Iredell, Mecklenburg, Cleveland, Rowan, York and Stanly. Six other locations report their highest number of employees commute outside the county where they live for work: Union (to Mecklenburg), Gaston (to Mecklenburg), Lincoln (to Mecklenburg), Cabarrus (to Mecklenburg), Lancaster (to areas outside the region) and Anson (to areas outside the region).

Future Transportation Trend-Benders

Eight new and exciting trends were identified for the region as potential game-changers, which may “shock the transportation system” in the future and significantly change today's assumptions about travel behavior, transportation project priorities or agency decision-making processes. These trends include:

Changing Preferences for Mobility Options

Mobility options for evolving transportation systems are increasing rapidly in response to consumer demand. More traditional modes of travel — private automobile, bus, light rail, bicycle or walking — are now supplemented with several other choices: driver/passenger

ride-share vehicles, automobile share/rent collaboratives and micro-mobility solutions (e-scooters and e-bikes). Changes to travel mode preference, travel mode ownership, membership routines or travel mode storage needs will have significant impact on future travel behavior and specific needs to maintain a safe and reliable transportation system.

Connected and Autonomous Vehicles (CAVs)

Connected vehicles use technology to communicate with the driver, other vehicles or with transportation infrastructure such as traffic signals, signs or other items via a cloud-based network. Autonomous vehicles use sensor and software technology to steer, accelerate and brake with no human interaction (driverless cars). The timeframe for full implementation of a connected and autonomous transportation system varies by travel mode — primarily bus or vehicle — and location in the world. However, most transportation professionals agree when it happens it could create substantial gains in volume capacity, travel speeds and system reliability that “change the game” for transportation planning in the future.

The general partnership for comprehensive CAV solutions includes a diverse set of interests focused on technology, manufacturing, construction and regulation. Private sector partners generally include automobile and bus manufacturers, vehicle-development partnerships, software and technology firms, broadband internet providers and insurance companies. Public sector partners include federal, state, regional and local transportation agencies responsible for different infrastructure categories: roads, interstates, bridges,

traffic signals, transit and broadband internet. Public-private partnerships are also forming to move CAV concepts and technologies forward.

Transit Rider Online Apps

Transit agencies throughout the United States are using online applications to manage ticket purchases, vehicle tracking, transfers and incident reports and to improve the users’ overall experience with the transit system. Sharing information with transit riders using web applications may increase ridership for some areas of the region if transit service becomes more reliable, more predictable and more convenient for future riders.

Intelligent Transportation Systems (ITS)

ITS concepts broadly implement products and strategies that help optimize a regional transportation system, integrating advanced communication technologies into existing or planned facilities that improve transportation safety, mobility and system accessibility. ITS improvements are often a cost-effective approach to increasing system capacity and reliability in the region and can be implemented faster and cheaper than most traditional road-widening improvements.

Some investments in ITS are implementing concepts for a “next level” transportation coordination platform that centralizes data for transportation officials and lets them better manage movements of people and freight in real-time. In San Diego, their concept for a “Next OS” system will help create a mobility marketplace, which influences travelers’ behaviors and creates better real-time balance between supply and demand in

the system. The digital platform will compile information from sources like passenger vehicles, delivery trucks, buses, e-bikes and scooters and improve how transportation is planned, operated and experienced in the future — sometimes varying solutions throughout the day based on information collected from the system (Source: San Diego Forward 2021 Regional Plan).

Telecommuting

Telecommuting is an employment arrangement in which employees work outside the office one or more days of the week. Often, this means working from home or a central location — coffee shop, restaurant, library or somewhere else — close to home using various technologies to keep in touch with co-workers.

Telecommuting reduces traffic volume and congestion on the regional transportation system during peak time periods — morning and evening rush hours — by removing commuters from the road (Source: Mobility Investment Priorities, Travel Option Strategies, Texas A&M Transportation Institute, 2020).

Online Shopping

Online shopping generally requires less time and effort than shopping in-person and switches the point of sale from a store to some other location (usually home) — exchanging the customer trip for a product or service delivery trip on the transportation system that occurs several days after the purchase. Online spending represented 21.3% of total retail sales in 2020 with one company, Amazon, accounting for nearly one-third of all e-commerce in the United States (Source: Digital Commerce 360, 2021).

Online shopping is assumed to decrease the number of total trips or length of trips

on the transportation system by eliminating “trip chains”, which represent one trip made by a customer that includes multiple stops on the route — home to shop, one to shop, two to shop, three to home. Consolidating the trip to a single delivery vehicle often reduces the total number of trip destinations for a customer’s purchases — especially if the customer is shopping at a large online store (like Amazon) that sells many different products.

COVID-19 Accelerators

Opinions are mixed about the short-term and long-term implications of the COVID-19 pandemic and whether social distancing, online shopping, work-from-home policies or increased personal time for some community members will generate long-lasting behavioral changes or if people will simply return to pre-pandemic travel within some period of time.

Transportation planning officials in the region agree more clarity on the different topics is needed, and it will come over the next few years as personal and business decisions are made and more data becomes available. Some organizations and their partners may need to act quickly to reassess their vision for transportation in the future — and revise their plans, policies or work programs accordingly — once long-term impacts from the pandemic are known and accepted.

Regional Transportation Authority

Some planning officials, who were interviewed for article two in the series, talked about the need for a regional transportation authority or a similar construct, which might partner with the four metropolitan planning organizations and their transit partners and coordinate major

investments in a multi-jurisdictional regional highway network and a multi-jurisdictional regional transit network. The authority would help organize efforts in the region and identify local, state and federal funds available for planning, design, permitting and construction. A governing board would legitimize the regional transportation authority and organize its efforts in the area.

Current Plans, Policies and Initiatives in the Region

Transportation agencies and organizations in the region complete plans, policies and initiatives each year that contemplate new investments for the regional transportation system and aim to keep pace with future demands. The documents focus on improvements of all types, sizes and locations, including intersections, blocks, corridors, local street networks, interstates, premium transit routes, short- and long-distance bicycle or pedestrian routes, rail lines and airport facilities. Many documents cross jurisdictional boundaries and acknowledge the collaboration and support needed to implement projects of regional significance.

Some important transportation plans, policies and initiatives now underway in the region are highlighted below. It is not an exhaustive list but a good example of transportation coordination across metropolitan planning organizations in the region.

Metropolitan Transportation Plans

A metropolitan transportation plan (MTP) captures locally-adopted, financially-constrained and long-range visions for the regional transportation system and a list of projects, partnerships and priorities

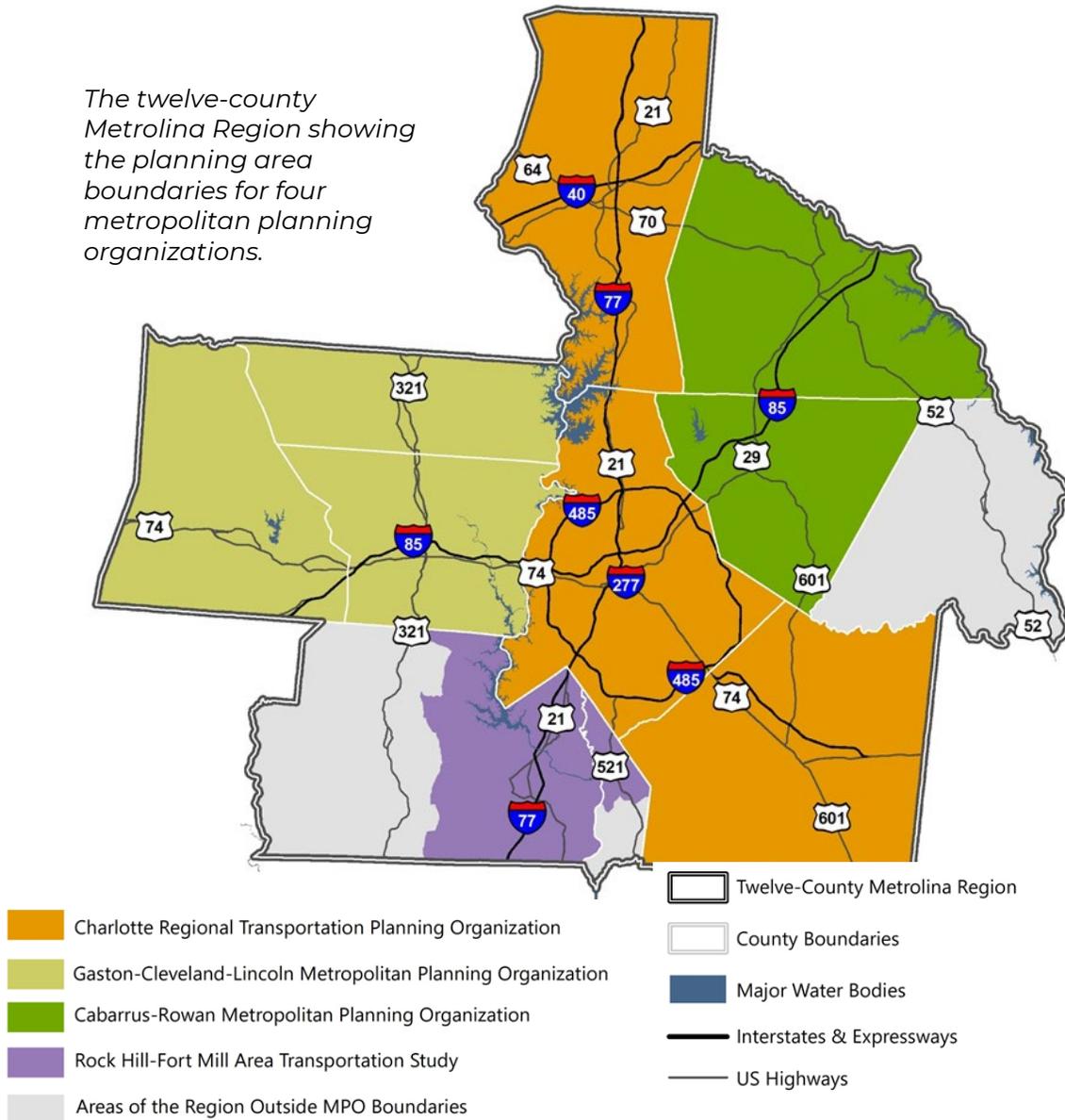
needed to implement the vision. Existing conditions are observed and future needs anticipated, for all travel modes served in the transportation system, including automobile, bus, light rail, streetcar, commuter rail, bicycle, pedestrian, freight and aviation. The MTP is also a data source for air quality modeling and the NCDOT or SCDOT statewide transportation improvement programs that helps fund major transportation improvements in the region.

Four separate MTPs are maintained in the Metrolina Region. There is one for each metropolitan planning organization: Cabarrus-Rowan Metropolitan Planning Organization, Rock Hill-Fort Mill Area Transportation Study, Gaston-Cleveland-Lincoln Metropolitan Planning Organization and Charlotte Regional Transportation Planning Organization. Collectively, the four currently-adopted MTPs recommend 721 transportation projects (some big and some small) over the next 30 years for the region that are programmed across all the different travel modes. Shared goals across all MTPs generally address needs for enhanced transportation network connectivity, improved access to the network for different groups, increased capacity for all travel modes and reliable travel times for people and freight.

CONNECT Beyond: A Regional Mobility Initiative

CONNECT Beyond is an initiative started in 2020 to coordinate the efforts of two states and 12 counties in the region and define a bold, shared transit vision, which might help guide and coordinate individual planning efforts and capital investment projects that collectively implement the vision. A map of high-capacity transit corridors connecting

The twelve-county Metrolina Region showing the planning area boundaries for four metropolitan planning organizations.



existing and emerging growth centers in the region is a centerpiece of the study and provides a framework for future investment and decision-making. Forthcoming recommendations in the study will provide more detail on transit solutions and their potential to increase transportation choices, improve transportation equity or economic competitiveness in the region

The study is divided into four phases: evaluate the existing system, identify high-capacity transit corridors, envision a total mobility

network and develop implementation strategies. The current phase — total mobility. network — identifies a wide range of transportation solutions, including bus connectors, demand response van networks, bicycle and pedestrian amenities, integrated ride-share companies, electric scooters or other emerging technologies to advance high-capacity bus or rail transit initiatives. More information on the initiative is available from the project website, www.connect-beyond.com.

Beyond 77 Strategic Plan

Beyond 77 focuses on a 68-mile stretch of Interstate 77 between Statesville, NC and Rock Hill, SC. It hopes to strengthen the multimodal network near the interstate and guide future mobility investments with new strategies, policies and programs. The study does not focus on changing the interstate itself and does not recommend changes to transportation projects or investments already underway.

The study is divided into four phases: data collection, data analysis, project solutions and funding options and recommendations. The current phase — project solutions and funding options — is focused on identifying multimodal transportation solutions within areas three- to five-miles of the interstate. A solution dashboard on the Beyond 77 project website summarizes 177 ideas for comment, which are categorized into four general initiatives: emerging mobility technology, programming strategy, project implementation/infrastructure solution and strategic policy. Comments on the solution dashboard may be submitted via the project website, www.beyond77.com.

Catawba Crossing

The Catawba Crossings study evaluates the needs (and feasibility) for building a new multi-lane road from southeastern Gaston County to western Mecklenburg County. The proposed project assumes two new bridges over the Catawba River (at Lake Wylie) and the South Fork Catawba River and a new interchange with Interstate 485 south of West Boulevard. The new road will become an important component of the regional transportation system and improve east-

west mobility near the congested Interstate 85 and US 29-74 corridors.

Recommendations from the study will be used for future requests to include the new road project in the NCDOT State Transportation Improvement Program. (Source: Catawba Crossings Fact Sheet).

Key Takeaways for Planning the Region's Transportation Future

The physical distance between complementary land uses in the region — between home and work, home and school or home and shopping — and over-reliance on automobiles for meeting daily travel needs in most parts of the region is leading to several unintended consequences: rapidly increasing vehicle miles traveled and energy consumption, longer commute times, increased air pollution and heightened infrastructure and public service costs. Inadequate long-term transportation funding and shifts in department priorities from new construction to maintenance for some areas worsens the problem — referred to as the growing funding gap — as little can be done to keep up with existing and emerging region-wide decentralized growth patterns.

Transportation agencies and organizations in the region complete plans, policies and initiatives each year that contemplate new investments for the regional transportation system and aim to keep pace with future demands. The documents focus on improvements of all types, sizes and locations, including intersections, blocks, corridors, local street networks, interstates, premium transit routes, short- and long-distance bicycle or pedestrian routes, rail lines and airport

Quick Facts About the Region:



The overwhelming majority of employees in the region travel to work outside the home by driving alone in an automobile.



General increases in the share of employees working from home in Iredell, Mecklenburg, Union, Gaston, Lincoln, Cabarrus, Rowan, York, Lancaster and Stanly Counties were observed between 2010 and 2019.



The number of employees reporting a commute time to work less than 30 minutes decreased over the decade. The number of employees reporting a commute time to work more than 30 minutes increased over the same time period. Specific drivers for the change in commute time to work are not provided with the data, but may include 1) increased congestion on the transportation system that creates travel time delays, 2) increased travel distance between home and work if/when employees seek affordable housing further away from their place of employment or 3) a change in preferred travel mode to work that produces slower travel speeds in exchange for some other travel incentive (e.g. a shift from automobile to public transit that results in slower travel times but zero parking costs once the employee arrives at work).

facilities. Many documents cross jurisdictional boundaries and acknowledge the collaboration and support needed to implement projects of regional significance.

Other groups in the region are responsible for making decisions that directly or indirectly

impact the transportation system. Land use planning and decision-making processes are the responsibility of local governments — cities, towns and counties — that maintain a comprehensive plan, zoning ordinance or small area plan to guide future growth and development decisions. Their plans and ordinances generate demands for new capacity or technology in the regional transportation system. Employers' decisions about office locations and their "normal" work schedules also directly impact travel behavior and needed improvements for the transportation system. The relationship between home and work locations for an employee influences the length of their trip, times they travel and mode of travel they use (automobile, transit, bicycle or walking). The general public also has tremendous power in changing the trajectory of transportation planning in future years. Their timing and willingness to make personal investments in new transportation technologies — connected and autonomous vehicles, shared micro-mobility solutions (scooters and electric bicycles), ride or vehicle share programs and web scheduling applications — will influence the success of private- and public-sector investments in the transportation system and their abilities to influence safer, more efficient and more reliable travel behavior.

Looking forward, eight new and exciting trends were identified for the region as

potential game-changers, which may "shock the transportation system" in the future and significantly change today's assumptions about travel behavior, transportation project priorities or agency decision-making processes:

- Mobility options for evolving transportation systems are increasing rapidly in response to consumer demand. More traditional modes of travel — private automobile, bus, light rail, bicycle or walking — are now supplemented with several other choices: driver/passenger ride-share vehicles, automobile share/rent collaboratives and micro-mobility solutions (e-scooters and e-bikes).
- Most transportation professionals agree when connected and autonomous vehicles become more mainstream, it could create substantial gains in volume capacity, travel speeds and system reliability that "change the game" for transportation planning in the future.
- Sharing information with transit riders using web applications may increase ridership for some areas of the region if transit service becomes more reliable, more predictable and more convenient for future riders.
- ITS improvements are often a cost-effective approach to increasing system capacity and reliability in the region and can be implemented faster and cheaper than most traditional road-widening improvements.
- Telecommuting reduces traffic volume and congestion on the regional transportation system during peak time periods —

morning and evening rush hours — by removing commuters from the road (Source: Mobility Investment Priorities, Travel Option Strategies, Texas A&M Transportation Institute, 2020).

- Online shopping is assumed to lower the number of total trips or length of trips on the transportation system by eliminating “trip chains”, which represent one trip made by a customer that includes multiple stops on the route — home to shop, one to shop, two to shop, three to home. Consolidating the trip to a single delivery vehicle often reduces the total number of trip destinations for a customer’s purchases — especially if the customer is shopping at a large online store (like Amazon) that sells many different products.
- Opinions are mixed about the short-term and long-term implications of the COVID-19 pandemic and whether social distancing, online shopping, work-from-home policies or increased personal time for some people in the community will generate long-lasting behavior changes, or if people will simply return to pre-pandemic travel behavior over some period of time.
- Some planning officials, interviewed for article two in the series, talked about the need for a regional transportation authority or a similar construct, which might partner with the four metropolitan planning organizations and their transit partners and coordinate major investments in a multi-jurisdictional regional highway network and a multi-jurisdictional regional transit network.

It will be exciting to complete research and interview transportation thought leaders in the U.S. for Part 2 of the transportation assessment in July. The information collected and the experiences shared, will help transportation officials in the region look forward to opportunities and challenges facing the area now or in the future — especially as communities come together with increasing interests to implement a shared vision for the regional transportation system.

A Place for Notes:





CONNECT

Reflections: Opportunities and Challenges for Implementing a Shared Regional Transportation Vision

Shared Visions for the Regional Transportation System

The regional transportation system is complex and requires comprehensive solutions that are well coordinated between several transportation planning organizations and their partners to meet future year needs. Progress is complicated in a region that encompasses two states and several operation/funding silos that have formed over time. Rapid growth and development throughout the region and the fact large transportation projects are often slow to implement — sometimes taking up to 20 years to plan, design, permit, fund and build — exacerbates the region's issues and highlights the urgency to formulate a shared vision for the regional transportation system soon.

The Metrolina Region generally includes two states, four metropolitan planning organizations (MPOs), two rural planning organizations (RPOs), 12 counties, and 17 transit agencies. Officials recognize interdependences with respect to where people live, work and shop and their daily commuting patterns or travel mode choices between destinations that often blur lines between political boundaries. However, coordination between entities becomes critical to our ability to attract and retain jobs, move people and goods and retain and improve quality of life. The region has approached shared visions for transportation in several ways.

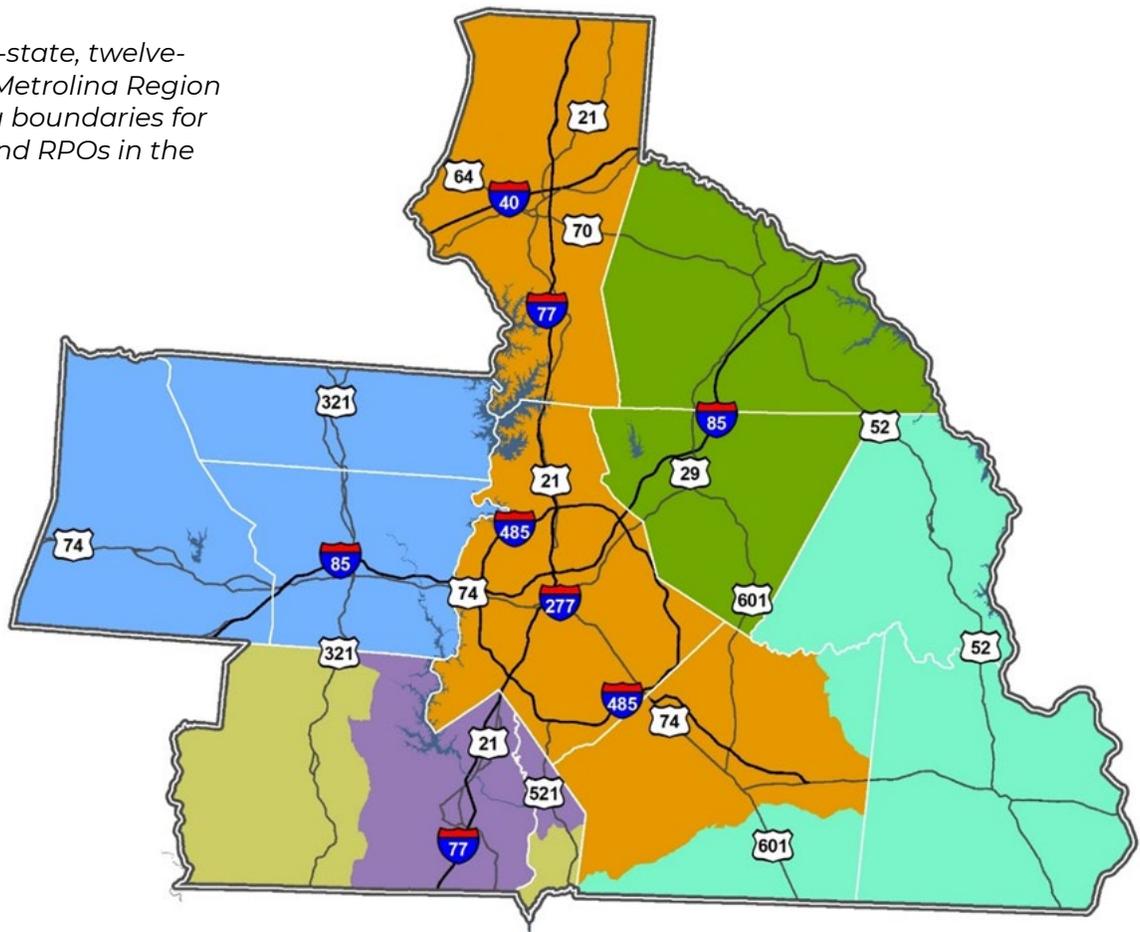
They have pooled their resources for larger transportation projects, sought greater coordination between transportation and land use, worked to reduce demands on the current and future transportation system and sought greater collaboration through funding

and partnership groups. A sampling of efforts towards a shared regional transportation vision are presented below.

Coordinate Investments for the Regional Transportation System

The Charlotte Regional Alliance for Transportation (CRAFT) was created in 1999 to coordinate transportation planning in the region. Membership in the CRAFT includes the four MPOs and two RPOs and representatives for the Metropolitan Transit Commission, NC Board of Transportation, SC Transportation Commission and the Federal Highway Administration. An executive committee meets once a year to discuss policy issues. A technical committee meets bi-monthly to exchange data, coordinate plans and projects and identify transportation issues

The two-state, twelve-county Metrolina Region showing boundaries for MPOs and RPOs in the area.



- | | |
|---|---|
| Twelve-County Metrolina Region | Gaston-Cleveland-Lincoln Metropolitan Planning Organization |
| County Boundaries | Cabarrus-Rowan Metropolitan Planning Organization |
| Major Water Bodies | Rock Hill-Fort Mill Area Transportation Study |
| Interstates & Expressways | Rocky River Rural Planning Organization |
| US Highways | Catawba COG Rural Planning Organization |
| Charlotte Regional Transportation Planning Organization | |

or opportunities of mutual concern. This group does not have dedicated staffing or funding and has not historically managed projects, grants or initiatives as a joint body.

Due to the geographic limitations of existing transportation organizations, Centralina Regional Council is routinely asked to lead regional transportation planning efforts that cross typical geographic, political and

organizational boundaries, leading efforts such as scope development, funding agreements, project management, partner engagement, regional data creation, facilitation and consultant management. Centralina is the key coordinator for cross-agency regional transportation investments on transportation planning activities, however, no formal structure is in place to cement these relationships or to solidify long-term working agreements between

the agencies, leading to each project being a one-off effort, with impacts on time and efficiency. In addition, while there are a few examples of cross-agency agreements for post transportation planning project development and/or transit operations, no formalized structure is in place to coordinate and manage the funding and partnerships across all agencies in the region.

CONNECT Our Future recommended further coordination on moving goods and people in the region. Since 2014, several regional planning initiatives have occurred that demonstrate the need and value for coordinated investments in the transportation system:



Greater Charlotte Regional Freight Mobility Study

Led by the Centralina Regional Council and funded by four MPOs, the regional freight study identified challenges and provided recommendations for moving goods and products through and within the region and produced chapters for each MPO's Metropolitan Transportation Plan, ensuring a coordinated approach to transportation planning funding.



Metrolina CommunityViz Initiative

Led by Centralina Regional Council and funded by participating transportation planning organizations (varied by year), this project creates a consistent, replicable and documented approach to determining the location of projected growth across the region, which is critical to understanding future transportation needs. This work provides inputs to the region's travel demand model that develops scenarios for transportation projects and ultimately funding needs.



CONNECT Beyond

A Regional Mobility Initiative: Led by Centralina Regional Council and the Metropolitan Transit Commission and funded by four MPOs and two state DOTs, CONNECT Beyond is an initiative to define a bold, shared transit vision across two states and 12 counties, which will guide and coordinate individual planning efforts and capital investment projects that collectively implement the vision.



Greater Charlotte Region Intelligent Transportation System (ITS) Plan

A top recommendation from the regional freight study, Centralina Regional Council coordinated development of a project scope of services and has sought project funding through multiple sources, including NCDOT, US DOT and others.



Beyond 77 Strategic Plan

Led by CRTPO with participation from FHWA, NCDOT, RFATS, CATS and numerous cities and towns adjacent to Interstate 77, the Beyond 77 Strategic Plan focuses on a 68-mile stretch of the corridor between Statesville, NC and Rock Hill, SC with a goal of strengthening the multimodal network near the interstate and guiding future mobility investments. Centralina meets regularly with project partners and serves on the Steering Committee as a conduit for coordination with other regional transportation initiatives.



Catawba Crossing

The Catawba Crossings study evaluates the needs (and feasibility) for building a new multi-lane road from southeastern Gaston County to western Mecklenburg County. The new road will become an important component of the regional

transportation system and improve east-west mobility near the congested Interstate 85 and US 29-74 corridors. Centralina serves on the Steering Committee as a conduit for coordination with other regional transportation initiatives.

Greater Land-Use Transportation Coordination

From article three in the series, we learned land use planning and decision-making processes in the Metrolina Region are the responsibility of local governments — cities, towns and counties — that maintain a comprehensive plan, zoning ordinance or small area plan to guide future growth and development decisions. Plans and ordinances are created independent of state or regional transportation organizations and there are no statutory requirements for minimum content, document format, coordination procedures or review cycles between land use and transportation interests in the region.

A community's vision for land use is currently conveyed to transportation organizations by local government representation on various transportation policy committees, technical coordinating committees or project-specific steering committees created throughout the years.

One of the most impactful and far-reaching projects stemming from CONNECT Our Future has been the introduction of scenario planning to better coordinate and understand the relationship between transportation and land use. The Metrolina CommunityViz Initiative (noted in the section above)

builds on CONNECT Our Future data and methodologies to play a key role in linking transportation and land use across the region. High-profile transportation projects can be delayed based on questions about the growth projections used to identify project need, creating significant long-term delays and project cost overruns. When examined in a court of law, inconsistent data across a project geography, lack of transparency, inconsistent processes or lack of documentation can be problematic. MPOs in the region see value in using a consistent, replicable and documented process for producing socio-economic projections for the Metrolina Regional Travel Demand Model to forestall future issues and maintain a fair process using reasonable data and accepted professional practice.

Every four years, transportation officials collect land use and development data from local governments in the region to create socioeconomic data for the Metrolina Regional Travel Demand Model. The model is used to forecast future year demand on existing and planned transportation facilities using anticipated land use, demographic information and travel patterns unique to the region. Approximating future year conditions on the transportation system helps transportation officials assess the implications of growth, compare alternative transportation solutions and provide a framework for measuring the impact of different transportation policy decisions.

Interests are growing to coordinate land use and transportation decision-making processes more frequently, which should improve overall efficiency of the transportation system while promoting more livable and context sensitive

transportation solutions important to several communities. Greater focus on land use, development density and community design principles in traditional transportation planning processes has the potential to lower the number of vehicle trips on roads, shorten travel distances between destinations or increase the viability of alternative travel modes in the system. Momentum to coordinate is picking up in some areas of the region and demonstrate different means and methods available to strengthen the relationship between land use and transportation.

CONNECT Our Future also introduced the concept of place types through the scenario planning work, as the region created a consistent land use palate across multiple planning jurisdictions. Place types are important to land use and transportation integration initiatives because they consider more than the traditional “land use” — addressing topics like block length, bike and pedestrian connections, transit service or typical roadway frontage as part of the overall place type category. Place types are now being used in land use planning efforts across the region to integrate land use and transportation locally. Examples include the City of Charlotte’s 2040 plan, the Lincoln County Land Use Plan and many other communities such as Stallings, Belmont and China Grove. As communities update their land use plans as part of the NCGS Chapter 160D requirements, many more plan to use place types as their defining categories for planning future growth, supporting efforts to link land use and transportation.

Representatives for the CATS LYNX Silver Line are partnering with city and town planning staff along the corridor to integrate land use and development

visions for each of the communities into the transit planning process. In the first phase of the study, station area planning efforts used land use, community character, multimodal connectivity and opportunities for redevelopment to inform station locations and alignment refinements (CATS, 2021). Subsequent phases of the study will emphasize land use, community design, equitable transit-oriented development (TOD) and affordable housing topics important to planning station areas while advancing engineering and design plans. Station area planning between the partners supports greater mobility options and maximizes access to the benefits of transit proximity for the communities.

The Charlotte Regional Transportation Planning Organization (CRTPO) completed a Staffing and Resources Study in 2019 that identified more land use coordination in the transportation planning process as an unmet need for improving the department and its impacts in the region. Since that time, the MPO expanded its scenario planning initiative for the 2050 Metropolitan Transportation Plan (MTP) to consider the impacts of different growth and development patterns on the transportation system.

Recommendations from the scenario planning summary document for the MTP include:

- Emphasize the need to study transportation and land use connections together when prioritizing funding for future local match projects; and
- Closely coordinate with local governments specific to land use issues that should be considered when planning for an effective and

efficient regional transportation system.

Some communities in the CRTPO planning area also include scenario planning in their traditional land use planning processes for testing alternatives, measuring their impacts and evaluating trade-offs for the future. A portion of the communities also include transportation performance indicators in their scenario evaluation, which offers new opportunities for land use-transportation coordination between agencies and organizations in the region.

Transportation Demand Management

Transportation demand management (TDM) aims to improve the overall efficiency of the regional transportation system by influencing the type and timing of trips made by travelers – the demand side of a balanced system. Different TDM programs provide information, encouragement, incentives or support to help reduce an overreliance on single-occupant automobile trips to meet residents' travel needs during peak periods of the day. This may include promoting transit, ridesharing, walking, biking, or telecommuting as viable alternatives to single-occupant automobile trips or encouraging travel during off peak periods of the day — outside of the traditional morning and evening rush hours — that experience much lower levels of vehicle congestion compared to peak periods.

Ultimately, successful TDM programs help reduce the type and number of expensive transportation projects needed to increase capacity (or supply) in the system to meet new demands in the future.

There is not a comprehensive and coordinated TDM program in the region at this time. The Charlotte Area Transit System (CATS) runs the largest TDM program, which encourages public transit, vanpool, carpool, biking, walking and telecommuting as alternatives to driving alone. The program is described in Appendix N of the CRTPO 2045 MTP:

“Their program uses multiple methods and events to educate the public on the benefits alternative travel modes have on the environment and quality-of-life for the Charlotte Region, including reduced vehicle miles traveled for single-occupant automobiles. CATS also works with the business community to market TDM services in the workplace. One example is the Employee Transportation Coordinator program, a network of businesses that partner with CATS to promote alternative transportation within their organizations.”



With the largest population in North Carolina and the most significant congestion issues, the Charlotte metropolitan region could benefit the most from TDM strategies that manage congestion without the need for additional infrastructure investment.

— *NCDOT Statewide TDM Strategic Plan, 2018, Page 7*

Other large TDM programs in the region are supported by Charlotte City Center Partners, Charlotte Regional Transportation Planning Organization, Centralina Regional Council and Sustain Charlotte. Some of the organizations completed TDM pilot projects using funds from the North Carolina Department of Transportation, which were identified to implement the Statewide Transportation Demand Management (TDM) Strategic Plan. The pilot projects were used to (1) improve walking and biking conditions in and around Uptown Charlotte and (2) to track and incentivize the use of alternative travel modes that replace single-occupant automobile trips. Other organizations prioritize TDM measures in their adopted plans and policies to effectively and efficiently meet future transportation demands. While others are leading the charge to coordinate and connect the efforts of multiple transportation-minded organizations in the region to implement shared TDM goals.

The large agencies and organizations — and their associated business organizations — advocating for TDM are

Image Credit: Michigan State University Extension, 2016



Image Credit: Hot Spot Rentals, Real Estate Blog, 2018



TDM Programs for the region may include incentives for walking or biking to work or telecommuting from home.



Image Credit: UC Davis, Science & Climate, 2018

forming effective partnerships in the region. However, the absence of a formal structure for regional coordination — including funds, workplans and other resources — is limiting opportunities to (1) leverage resources from organizations with shared interests, (2) eliminate barriers to coordinate on similar efforts and (3) scale or replicate successful programs in other parts of the region. A lead agency formed to create and implement a long-range TDM plan for the region could address these barriers and potentially expand the TDM umbrella to include other agencies,

organizations and service providers interested in improving mobility, accessibility, connectivity, economic growth, environmental stewardship or public health in the region.

Speaking regionally, the number of employees that live in one county and work in another reached 51% in 2018, which implies TDM benefits are likely maximized in the Metrolina Region if programs have a regional — versus city or county — focus (CRTPO, 2018). The 14-county CONNECT Our Future project completed in 2015 recommended TDM measures to help achieve shared goals for safeguarding an effective and efficient

regional transportation system, which included a region-wide group convened to set goals, establish methods, coordinate initiatives, identify funds and resources and develop education materials aimed at implementing a successful region-wide TDM program. Efforts of the region-wide TDM group may also help secure funding and technical support from the NCDOT to establish dedicated staff at relevant regional agencies who can focus on actively pursuing TDM development and implementation in concert with regional

planning and infrastructure development initiatives (CRTPO, 2018).

Funding and Partnership Groups

Revenue sources and their funding levels for implementing transportation projects in the region generally do not keep up with growing demands, and trends are pointing to an uncertain future as traditional revenue streams like the gas tax are being negatively impacted by fuel economy improvements and growing shifts to electric vehicles. In addition, specific rules and requirements tied to different revenue sources may preclude leaders from implementing preferred travel mode or technology improvements for the regional transportation system. For example, portions of the region may want to emphasize transit investments in the transportation system, but leaders continue making large investments in the road network because available revenue sources — like the gas tax, DMV fees or highway use tax in North Carolina — must be used largely for highway-related improvements. In this context, available funding for transportation projects in the region prioritize specific travel modes over others in the system and sometimes places the goals or actions of different transportation-focused agencies into silos — or worse, direct conflict — that eliminate opportunities to collaborate and build the most efficient transportation system for moving people (vs. automobiles) efficiently between destinations.

The North Carolina Transportation Secretary created the NC FIRST Commission in 2019 to study national and international trends for implementing sustainable long-range transportation investment strategies that might provide

the critical and necessary resources to build and maintain North Carolina's future transportation system and ensure the state's economic vitality and competitiveness in the future (NCDOT, 2021). The Commission's final report was released in January 2021. Their recommendations were divided into four general categories that will require different levels of effort and coordination to change current conditions:

- Short-term revenue options to address immediate state concerns;
- Long-term solutions to modernize state revenue generators;
- Long-term revenue options for local governments; and
- Policy decisions or project enhancements to maximize efficiencies.

Transportation officials in the region should monitor state and federal actions in the next decade to maximize funds available for future projects. A copy of the NC FIRST Commission final report is available on the NCDOT website.

Findings, recommendations and emerging consensus from the NC FIRST Commission, Beyond 77 Strategic Plan and a formed CONNECT Beyond Funding and Partnerships work group demonstrate the urgency to rethink how we work together as a region and sometimes reprioritize transportation funding to safeguard the future transportation system. Officials in the region should continue to explore future funding options, including: local sales tax options, fees for hybrid/electric vehicle registrations, property tax for locally-maintained roads, impact fees, etc. and the methods by which these funding options can be leveraged across jurisdictions for the benefit of all.

National Examples and Best Practices

A literature review was completed to highlight the success of others in the United States that were motivated to implement some of the components identified for a more sustainable transportation system earlier in the article. It is not an exhaustive list of examples, but the following demonstrates potential outcomes that might be achievable in the region if stakeholders organize their efforts to implement the vision.

Livable Centers Initiative, Atlanta Regional Commission

The Atlanta Regional Commission's Livable Centers Initiative (LCI) is a grant program created to help local communities, local governments and organizations better link transportation improvements with land use development strategies. Planning-focused grants are awarded on a competitive basis using funds provided by the Federal Transit Administration and the Federal Highway Administration (Federal Transit Administration, 2015). The LCI program is focused on reducing vehicle miles traveled and increasing bicycle, pedestrian and transit use throughout the Atlanta region. Studies funded by the LCI focus on both long-term master plans (or vision plans) for specific areas within the region and detailed land use-transportation implementation studies (Atlanta Regional Commission, 2021).

Goals for the LCI program focus on land use mix and diversity around transit stations; reasonable access to transit, bicycle and pedestrian infrastructure that



A LCI Study for the City of Woodstock, GA helped build a new segment of the Green Print Trail.

provides viable alternatives to automobile travel; equitable access to resources for people of different ages, abilities and income levels; comprehensive and continued outreach to community stakeholders; and mixed-income neighborhoods and activity centers.

In addition to the four goals, the LCI program prioritizes affordable housing, creative design and place-making, green infrastructure and smart city technology when awarding grants. Grants awarded through the Commission cover 80% of the study or project costs. Local funds or other grant sources cover 20% of the study or project costs. Since 2000, the Commission has awarded \$253 million to 120 different communities for LCI studies. The Commission also allocated \$343 million over the next 29 years for transportation projects identified in completed LCI studies (Atlanta Regional Commission, 2021). More information on the LCI program is available on the Atlanta Regional Commission website.

Transportation-Land Use Connections Program, Metropolitan Washington COG

The Transportation Planning Board at the Metropolitan Washington Council of Governments hosts a Transportation-

Land Use Connections Program, which provides short-term technical assistance to local jurisdictions interested in studies or projects that fulfill stated goals for more integrated transportation-land use planning. General topics addressed by the Program include mixed-use and walkable development, home affordability, viable transit service, safety and travel options for pedestrians and bicyclists, economic development, public health, environmental-stewardship and multi-jurisdictional coordination.

Since 2007, the Program has been used to complete 145 different planning studies and preliminary engineering projects (Metropolitan Washington Council of Governments, 2021). Approximately eight to 12 projects are awarded each year. Each project includes varying levels of consultant resources. Projects must be completed within one year of the start date. In 2011, the MWCOG created a Regional Peer Exchange Network to complement the grant program. It provides a platform for local jurisdictions to communicate about lessons learned from their funded studies and share ideas that may be transferrable to other communities.

More information on the Transportation-Land Use Connections Program is

available on the Metropolitan Washington Council of Governments website.

Transportation Demand Management Program, Arlington County, VA

In 1989, Arlington County launched its County Commuter Service (CCS) to help reduce traffic congestion, decrease parking demand, promote High Occupancy Vehicle (HOV) use, improve air quality and increase mobility options in and around Arlington County (Arlington County, 2012). A review of the program published by Ethan Goffman at Mobility Lab in 2021 highlights many of its accomplishments:

“Over the years, Arlington’s transportation demand management (TDM) program has helped remove 50,000 solo car trips from each workday, eliminate 40% of vehicle trips from residential buildings and reduce weekday daily vehicle trip rates between 39% and 79% for office buildings compared to regions without TDM programs. In terms of parking, the County has reduced its parking requirements from one space per two employees to one space per four or five employees. Weekday parking occupancy at office buildings is only 50% to 85% of the parking lot supply. Driving alone rates in the County have dropped from 71% to 28% — freeing up more roads and leading to less congestion. These facts prove the opportunities for TDM.”

A comprehensive partner network in Arlington County directly influences the success of the program. Websites and social media are used extensively to communicate information, match interested stakeholders and coordinate resources from multiple agencies and organizations. Specific programs target

TDM users based on area of interest or location of need, including: ride-match programs, bike-share programs, vanpool assistance, car-share programs, telework resources and transit promotions. Public agencies, non-profit advocacy groups, business organizations and special interest groups serve various roles in program operations to make it successful.

Performance data is collected throughout the program to measure outcomes and refine services to maximize TDM impacts. Data is generally organized to report level of activity or use of different services and changes in travel behavior influenced by use or services. Information collected over the last 20 years was recently used to calculate a TDM return-on-investment calculator that helps stakeholders understand the value of investing in TDM programs. A copy of the calculator and user manual can be downloaded from the Mobility Lab website.

The CCS is funded by several sources including federal Congestion Mitigation and Air Quality (CMAQ) grants, different state and local programs and commissions generated by transit fare media sales. Pending legislation in Virginia may expand the scope and funding for the Arlington County CCS and provide the means and methods to help start similar programs in other areas of the state.

Nashville Connector Transportation Demand Management Program, TN

In 1989, Arlington County launched its County The City of Nashville launched the Nashville Connector program in 2019, which is a one-stop shop for commuters looking to learn more about available transportation options (primarily between home and work). The framework was



*Lyft scooters were introduced in Arlington County in 2018.
Image Credit: WTOP News, 2018*

developed by the Association of Commuter Transportation (ACT) during a half-day charrette held in the city. Public education, outdated or missing infrastructure and institutional resistance to travel options other than by single-occupant automobile were cited as major obstacles to a successful transportation demand management program. In response, the Connector program focused on opportunities for more cost-effective, quick-impact activities that could start building momentum for more significant investments in the future. Strategies that required less infrastructure to implement — teleworking, carpooling and vanpooling — were also favored for similar reasons. Partners for the Connector program include government agencies and organizations, large and small employers and media outlets.

More information on the Nashville Connector program is available on the Nashville Area MPO website.

Key Takeaways Summary: Coordinating the Region's Transportation Future

The regional transportation system is complex and requires comprehensive

solutions that are well coordinated between several transportation planning organizations and their partners to meet future year needs. Progress is complicated in a region that encompasses two states and several operation/funding silos that have formed over time. Rapid growth and development throughout the region and the fact large transportation projects are often slow to implement — sometimes taking up to 20 years to plan, design, permit, fund and build — exacerbates the region's issues and highlights the urgency to formulate a shared vision for the regional transportation system soon.

Need to Coordinate Investments in the Region

Officials recognize interdependences in the region with respect to where people live, work and shop in the region and their daily commuting patterns or travel mode choices between destinations that often blur lines between political or agency boundaries. For these reasons, Centralina Regional Council is often asked to lead regional transportation planning efforts in the region that cross geographic, political and organizational boundaries — leading efforts like scope of work development, funding agreements, project management, partner engagement, regional data creation, facilitation or consultant management. In addition, several of the most recent collaborative transportation planning success stories in the region were influenced by the data, tools and recommendations generated for CONNECT Our Future in 2014 including the Greater Charlotte Regional Freight Mobility Study, Metrolina CommunityViz Initiative, CONNECT Beyond: A Regional Mobility Initiative, Greater Charlotte Region Intelligent

Transportation Systems (ITS) Plan, Beyond 77 Strategic Plan and Catawba Crossings.

Need to Coordinate Transportation and Land Use Decisions

Interests are also growing to coordinate land use and transportation decision-making processes more frequently, which should improve overall efficiency of the transportation system while promoting more livable and context sensitive transportation solutions important to several communities. Greater focus on land use, development density and community design principles in traditional transportation planning processes has the potential to lower the number of vehicle trips on roads, shorten travel distances between destinations or increase the viability of alternative travel modes in the system.

Need to Implement a Region-Wide Transportation Demand Management Program

The merits of a regional transportation demand management (TDM) program continue to be a popular discussion topic in the region recognizing its potential to improve the overall efficiency of the regional transportation system by influencing the type and timing of trips made by travelers (the demand side of a balanced system). Large agencies and organizations — and their associated business organizations — advocating for TDM already are forming effective partnerships in the region. However, the absence of a formal structure for regional coordination — including funds, workplans and other resources — is limiting opportunities to (1) leverage resources from organizations with shared interests, (2) eliminate barriers to coordinate on similar efforts and (3) scale

or replicate successful programs in other parts of the region.

Need to Reconsider and Test New Funding Sources

Revenue sources and their funding levels for implementing transportation projects in the region generally do not keep up with growing demands and trends are pointing to an uncertain future as traditional revenue streams like the gas tax are being negatively impacted by fuel economy improvements and growing shifts to electric vehicles. And, in some instances, available funding for transportation projects in the region prioritize specific travel modes over others in the system and sometimes places the goals or actions of different transportation-focused agencies into silos — or worse, direct conflict — that eliminate opportunities to collaborate and build the most efficient transportation system for moving people (vs. automobiles) efficiently between destinations.

Officials in the region should monitor state and federal actions related to funding for transportation projects in the next decade to maximize funds available for future projects and coordinate their efforts to influence funding source or formula methodologies and criteria in groups like the CONNECT Beyond Funding and Partnerships work group.

Build Confidence to Collaborate and Move Forward

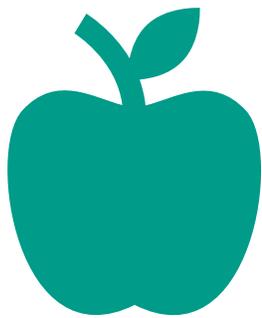
Transportation officials can look to their peers in the United States that were motivated to implement some of the components identified for a more sustainable transportation system in the Metrolina Region — coordinated investments, greater transportation-land

use coordination, transportation demand management and funding and partnership groups — for inspiration and lessons learned. Although it was not an exhaustive list of examples presented in this article, the highlighted organizations and programs demonstrate potential outcomes that might be achievable in this region if stakeholders organize their efforts to implement a shared vision.





CONNECT
Reflections:
Be Intentional About
the Region's Future,
Partnerships in
Planning for Healthy
Communities



“It’s difficult to be healthy personally if your community is unhealthy.”

— Thomas G. Bognanno, President and CEO, Community Health Charities included in “What is Community Health and Why Is It Important?” by Ashley Brooks, 2019

Definition of Community Health for the Article

The broad definition of community health includes several topics that are important to both individual and community well-being — socioeconomic conditions, clinical care, health behaviors and the built environment¹. The article focuses on the relationship between community health and the built environment, and highlights different conditions, trends or actions observed in the region and their potential influence on new initiatives that better integrate community health concerns with city and regional planning. It also highlights the impacts of the COVID-19 pandemic as an “accelerator” for growing interests and

enthusiasm in the region to improve personal health, support local farms, increase access to parks and recreation facilities, increase non-automobile travel options and rethink the principles of more complete neighborhoods.

Equally important, the article acknowledges one or more actions focused on the built environment may also produce positive benefits for some of the other topic areas included in the broad definition of community health.

Priorities from CONNECT Our Future

The CONNECT Our Future consortium in 2014 selected ten growth priorities that represent what residents would like to protect, enhance, improve or maximize as the region continues to grow. Each priority is summarized in the CONNECT Our Future magazine — including a simple definition, path forward and action items for residents to follow for their role in implementation.

A toolbox with specific ideas and resources for implementing the ten priorities is available on the CONNECT Our Future website: www.connectourfuture.org/tools.

Fourteen of the tools presented on the website directly, or sometimes indirectly, influence outcomes that may benefit ideas, actions or initiatives important to individual or community well-being. A brief summary of the highlighted tool topics and potential connections between community health concerns and city and regional planning are provided on the following

pages. The matrix presented at the end of the article identifies where the 14 tools have been used broadly in the region since 2015. Information for the matrix was collected from online research, published documents or stories shared between city and regional planners in the area. Please let us know if you have an accomplishment to share and we will update the matrix to celebrate.

#1: Parks and Greenway Access

The benefits of parks, greenways, recreational facilities and open spaces are well known — encouraging physical activity, connecting with nature and supporting mental health, among other topics. However, not all community members have convenient or equitable access to parks. Residents may be physically close to a park measured by distance but disconnected from it for a variety of reasons: insufficient or unclear park entrances, lack of contiguous and safe walking or bicycle routes, inconvenient locations or frequency of transit systems, insufficient parking, lack of accommodations for those with physical disabilities or general safety concerns associated with traveling to parks. Communities need to ensure parks are accessible for a variety of users and located in areas that may be accessed safely and efficiently by visitors.

#2: Tree Canopy Preservation

Trees in the region provide several benefits to communities and overall community health, including:

Our Region's Ten Priorities:

1. Support Our Communities
2. Maximize Return on Investment
3. Support Local Farms
4. Improve Access to Parks and Open Space
5. Increase Transportation Choices
6. Improve Water Quality
7. Improve Air Quality
8. Grow Jobs Closer to Home
9. Increase Housing Choices
10. Reduce Commuting Costs

1. environmental stewardship (air quality, water quality and soil stabilization),
2. excessive heat mitigation and climate resiliency and
3. visual contributions to the character, identity or vibe of the region.

Preserving existing trees and planting new trees where opportunities exist will help maintain (or increase) the region's overall tree canopy and the benefits it provides.

#3: Preserve Open Space and Build Parks

Open spaces and parks not only provide direct recreation benefits to a community, but they also provide a range of indirect economic, environmental and social benefits. Parks attract new residents, increase property values and spur new investments in the surrounding area.

And, as many communities have turned their attention to planning for healthy communities, parks provide opportunities for social interaction and fresh, clean air. In addition, open spaces provide indirect benefits for stormwater, water quality, wildlife habitat and tree cover.

#4: Housing Diversity Initiative

Three different tools for CONNECT Our Future — housing diversity initiatives, workforce housing incentives and housing accessibility — focus on the needs for different land use, planning, zoning or home design modifications that encourage a greater variety in home choices throughout the region. The three tools also acknowledge collectively the need to provide more housing options at different price points to better serve low- and moderate-income workers, families, seniors and those with special needs.

#5: Active Living Initiative

Rising obesity in the region is alarming and its associated health problems — diabetes, heart disease, high blood pressure, cancer, etc. — can be mitigated, in part, by increasing daily physical activity for people of all ages. Communities need to consider programs, policies and infrastructure investments that focus on physical activity and healthier lifestyles, which become an engrained component of how cities, towns and counties are organized and develop in the future.

#6: Safe Routes to School

Safe Routes to School (SRTS) is a national program that encourages children to walk or bike to school on a



regular basis to help establish healthy habits and encourage physical activity. SRTS audits highlight barriers to walking or bicycling near schools and identify a list of projects or policies needed to remove barriers that will let students move safely and efficiently between home and school.

#7: Complete Streets

An initiative to increase walk, bike or transit trips in a community should include considerations for complete street design, which prioritizes infrastructure within a public right-of-way for non-automobile trips between nearby, walkable destinations. Sidewalks, crosswalks, bicycle lanes and transit stops are equally important to the travel lanes needed for automobiles. In some locations like downtown, planning for non-automobile travel options becomes even more important since space is limited.

#8: Improved Transit Service

Using public transit reduces congestion and carbon emissions, increases economic opportunities and job access for residents and expands access to essential health services. Improving

public transit for workers in the region (access and routes) will connect low- to moderate-income residents, seniors and youth to their jobs and other needs. Public transit service can also help reduce air pollution and improve traffic congestion.

#9: Transit-Oriented Development

Transit-oriented development (TOD) provides a range of community and individual benefits including reduced work commute times, improved walkability and access to amenities (and necessities) and lowered transportation costs. TOD continues to gain momentum around the country as demographics shift and many American households are showing a preference for compact, walkable, mixed-use communities.

TOD that includes housing at a mix of price points, accessible to persons of a wide range of income levels, also helps to reduce high combined housing and transportation costs that can impact a family's ability to spend for other necessities such as medical care, food, education, etc. while providing job access for persons who may not own a



car. This means that building and preserving housing in “efficient” locations can create opportunities for families to have more affordable lifestyles.

#10: Farm-to-School Initiatives

Farm-to-school is broadly defined as any program that connects schools and local farms with the objective of serving healthy meals in school cafeterias, improving student nutrition, educating students about health and wellness and supporting local and regional farmers. Programs offer students the opportunity to 1) participate in planting and harvesting activities, 2) learn to cook with seasonal ingredients, 3) learn about the cycles of agriculture and the seasonality of crops, 4) meet farmers growing food in their communities and 5) try new fruits and vegetables. These experiences may influence the formation of food preferences and eating habits and, in the long-term, create healthier individuals and communities.



#12: Local Food Councils

A local food council is an organization with members from various sectors within the food system — health officials, farmers, local food processors,

local food distributors, retail outlets and local governments — that meet to facilitate partnerships, provide learning and growth opportunities and promote policy recommendations that improve access to local, fresh and healthy foods.



#11: Farm-to-School Initiatives

A community garden is a plot of land collectively gardened and cultivated by a group of people or an organization. The land may be an individual plot or shared plots under public or private ownership. Community gardens are often used to produce fruit, vegetables or ornamentals and can be found in neighborhoods, schools and residential complexes, or connected to institutions such as hospitals. Successful and well-managed community gardens will increase access, visibility and affordability of fresh foods in an effort to provide better options for healthy foods, as well as to help lower rates of obesity and reduce the prevalence of chronic diseases.

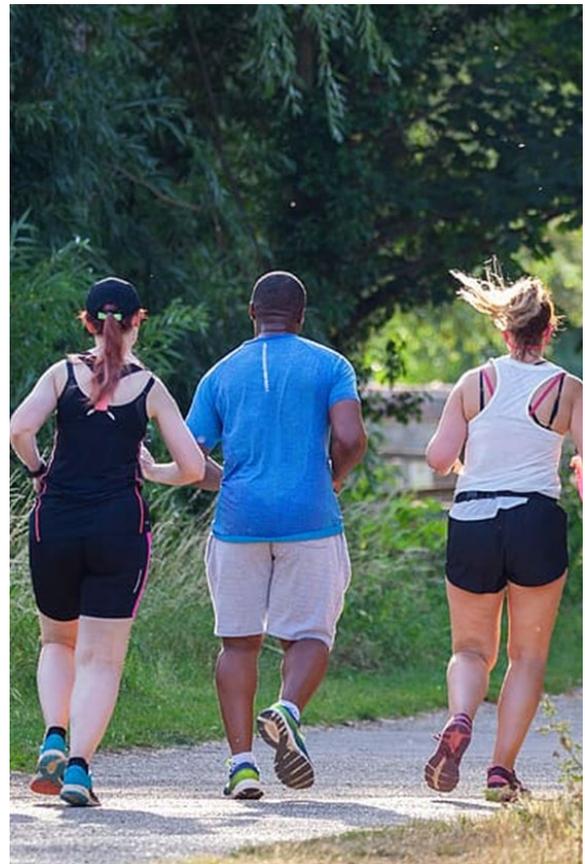
#13: Health Impact Assessments

A health impact assessment (HIA) is a tool that provides guidance on how to improve health and wellness by involving public health experts in the community planning process. Through an HIA process, the community is able to evaluate potential health impacts of a plan, project or policy before it is built or implemented. The HIA process not only enhances communication between policy makers and public health professionals, but it also can reduce unintended consequences of public investments, expenditures and policies that may inadvertently produce negative impacts on public health or missed opportunities to improve public health through design enhancements.



#14: Public Health Database

A public health database includes information accessible to planners and decision-makers used to inform policies, programming and services that encourage “healthy communities” — measured by improved health outcomes for individuals and the community. Health data is collected and maintained at a level of geography and demographic specificity to remain actionable, have meaningful impact and allow progress to be tracked through health and quality of life indicators.



Regional Partnerships for Study and Implementation

Centralia Health Solutions, a partnership between Centralina Regional Council and Centralina Area Agency on Aging (AAA), is focused on creating healthy, lifelong communities consistent with the stated priorities for CONNECT Our Future. This Centralina team, in partnership with local stakeholders, work together to address a variety of “healthy community” topics, including but not limited to, bicycle and pedestrian plans, complete street design initiatives, health impact assessments, healthy food audits, park and recreation policy, issues important to seniors and persons with disabilities and communities designed to support active-lifelong livability principles. Centralina Health Solutions hosts aging sensitivity classes and evidence-based health and wellness workshops to reduce public health issues such as the high rate of diabetes, dealing with chronic conditions and falls prevention. These proven educational programs share best practices with professionals and help communities to provide resources and tools for residents dealing with these concerns on a daily basis.

In 2016, Centralia Health Solutions was provided funding from the American Planning Association’s Planners4Health initiative to partner with the North Carolina Chapter of the American Planning Association and replicate the process (and successes) of the healthy communities program statewide. From 2018 to 2019, the Centralina team worked with the statewide task force to assess the status of health and planning in North Carolina, host key stakeholder

roundtables and summarize needs for the future.

Shared interests with Centralina, health care officials, non-profit organizations, businesses, government officials, philanthropists and community members provide new or expanded opportunities to organize and coordinate individual efforts under a common goal to improve community health and well-being. A truly multi-disciplinary coalition of professionals in the region focused on public health and city and regional planning issues — and, more importantly, the interactions between them — could provide new opportunities to 1) leverage resources from organizations or agencies with shared interests, 2) eliminate barriers to coordinate on similar efforts and 3) scale or replicate successful public-private-non-profit programs in other parts of the region.

Relevant Studies or Initiatives in the Region

Some important data, initiatives or tools for city and regional planning that intersect with community health interests are highlighted below. It is not an exhaustive list, but a good example of best practices and partner coordination across the region that are needed to improve community health and well-being.

Public Health Priority Areas

A coalition of local governments and service providers in Mecklenburg County is working together with funding from the American Planning Association’s Planners4Health initiative to increase physical activity in at-risk neighborhoods designated “public health priority areas.”

The areas are selected based on socioeconomic conditions using the Charlotte-Mecklenburg Quality-of-Life Explorer. The coalition's efforts are focused on parks and recreation facilities, sidewalk and bicycle infrastructure and access to bus transit service. Opportunities to share resources and coordinate investments between service providers are also priorities in these areas as a means to promote and potentially accelerate positive outcomes for healthy living.

Similar efforts in the region have focused on their own needs for creating or promoting key principles for healthy communities, including audits completed in Kings Mountain, Kannapolis, Waxhaw, Stallings, Albemarle and Cabarrus County.

The coalition uses six strategies to evaluate neighborhood needs, identify improvements and organize short- and long-term actions or investments: community needs assessment, walking and biking audits, shared-use agreements, park access audits, a communications campaign and a toolkit summarizing key findings and recommendations that may be applied in other areas of the region.

Quality-of-Life Dashboards

Several communities in the region have created quality-of-life dashboards for their communities to track and report conditions important to residents' happiness and well-being. Charlotte-Mecklenburg County maintains a Quality-of-Life Explorer, which is available online and provides information on 80 different variables associated with social, housing, economic, environmental and safety conditions for different neighborhood profile areas. The information is available in map or data table formats, and trends

may be studied over time using historical data available in the tool. A summary report for a specific address in the study area is also available for download using a search function in the tool.

Similar efforts to start up dashboards in Statesville, Cabarrus County and Rowan County are underway that focus on variables important to quality-of-life and community health.

Cabarrus County Plan, Policy and Built Environment Scan

The Cabarrus Wellness Coalition partnered with Centralina Regional Council in 2020 to inventory and evaluate plans, policies and characteristics of the built environment against 20 indicators focused on physical activity and access to healthy foods. Findings and conclusions from the study will be used by county and municipal officials to program future activities focused healthy community design.

Indicators for the physical activity category evaluated conditions for parks, greenways, sidewalks, bus transit and bicycle lanes — including system size and connectedness, and convenient access to residents living in the county and cities. Plans, policies and ordinances were also evaluated for the study to determine their influence for creating health communities. Next steps in the report start to build momentum for creating change and the shared responsibilities for implementation.

Centralina Area Agency on Aging COVID Project

In 2020, Centralina Area Agency on Aging (AAA) was empowered with federal funding to help implement several new or expanded programs focused on support

for older adults and individuals with disabilities during the COVID-19 pandemic. Funds from the Coronavirus Aid Relief and Economic Security (CARES) legislation are used to increase overall resources for meals, in-home aids, transportation, senior centers and adult daycare. Funds from the Supplemental 5-HDC5 Nutrition legislation are used to expand senior nutrition programs. And, funds from the American Rescue Plan Act (ARPA) are used to address social isolation and build or expand the infrastructure, technology and solutions needed to effectively provide needed services.

The Centers for Disease Control and Prevention and the Administration for Community Living also provided Centralina AAA with federal vaccination funds to increase vaccine awareness and decrease vaccination hesitancy in the region and to provide accessibility and support to communities that could close the vaccination gap for vulnerable and at-risk older adults in the region. Working with their partners at Centralina Regional Council, Centralina AAA helps disseminate information about vaccines in local communities — especially in historically-marginalized communities — and arranges transportation to vaccination sites for specific segments of the population.

Diversity, Equity and Inclusion Examples

The CONNECT Beyond regional mobility initiative, started in 2020, includes a transportation equity index, which was completed to present a comprehensive understanding of the region's population: vehicle accessibility, income, age, poverty status, disabilities and employment status. The Charlotte Future 2040 Comprehensive Plan adopted in 2021 also

includes an equity atlas, which evaluated the built environment for equity or inclusion concerns that were considered while writing policy statements for the Plan. From the Plan:

“An equitable growth framework methodology was developed to measure access, environmental justice and equity to help identify areas where residents and businesses may not have access to daily needs, choices for housing, a diversity of employment or safe and healthy environments. The Equity Metrics described and mapped in Appendix A were used to 1) inform the development of Goals and supporting Policies, Projects and Programs in the Comprehensive Plan; 2) to identify priorities for Community Planning Areas for subsequent mapping and planning efforts within sub-geographies throughout the community; and 3) to assess and track progress towards becoming a more equitable, fair and just city over the next 20 years.”³

Many of the indicators used for the transit equity index and the equitable growth framework are also important for other city and regional planning topics in the region, including several focused on the interactions between community health and the built environment.

National Examples and Best Practices

A literature review was completed to highlight the success of others in the United States that were motivated to act upon, and implement, some of the initiatives identified earlier in this article to improve conditions for community

health and well-being. It is not an exhaustive list of examples, but demonstrates potential outcomes that might be achievable in the region if stakeholders organize their efforts and work together to improve individual and community well-being in the future.

Metrics for Planning Healthy Communities

The American Planning Association (APA) published a guidebook in 2017 to help integrate public health topics into various city and regional planning projects and routines. Their work identified five target areas for consideration: active living, healthy food systems, environmental exposure, emergency preparedness and social cohesion. The five target areas were further defined by 14 sub-targets to measure or monitor conditions in the built environment. From the executive summary in the guidebook:

“The built environment is a key determinant of community health. Planning professionals are in a unique position to improve community health by shaping the environments where people live, work and play. Therefore, it is critical that planners document, measure, track and design the built environment understanding key determinants of community health. Assessing the built environment becomes especially significant because it can modify, exacerbate or reduce health inequities.”⁴

“With the aim to strengthen multi-discipline coalitions and integrate health into planning practices and decisions, the American Planning Association developed a set of Healthy Planning Metrics that can be used to assess, measure, monitor and report progress toward healthy planning goals. The tool leverages existing indicator systems, indexes, interactive maps and literature about social determinants of health.”⁵

Key Metrics for Planning Health Communities

- 1 Active Living**
 - Active Transportation
 - Recreation
 - Traffic Safety
- 2 Healthy Food Systems**
 - Access
 - Production
- 3 Environmental Exposure**
 - Air Quality
 - Water Quality
 - Soil Contamination
- 4 Emergency Preparedness**
 - Natural Hazards
 - Climate Change
 - Infectious Disease
- 5 Social Cohesion**
 - Green Infrastructure
 - Housing & Community Development
 - Public Safety

— Summarized from Metrics for Planning Healthy Communities, 2017

NYC Parks: Framework for an Equitable Future

In 2014, the New York City Department of Parks and Recreation implemented a new data-driven needs analysis for prioritizing park improvements throughout the community, which replaced the more traditional system of discretionary funding assigned to new projects after review of submitted proposals by city council members and borough presidents. The new system was focused on more equitable distribution of funds in the areas of greatest need — sometimes in areas of the city that had not received park investments in 20 years or more.

The Department of Parks and Recreation evaluated demographic data and historic capital investment spending in 55 neighborhood tabulation areas used by the Department of City Planning. Demographic data for the analysis included population density, population growth and poverty status as leading indicators for park priority investment areas. More than 200 parks with a combined capital need greater than \$1 billion were identified from the data-driven analysis, which were prioritized for funding based on qualitative research for each of the parks in the form of site visits and public listening sessions ⁶.

Addressing Obesity with Changes to the Built Environment

The Roundtable on Obesity Solutions, which is part of the Health and Medicine Division of the National Academies of Sciences, Engineering and Medicine, held an event in 2017 focused on the relationships and interdependences between human behavior, human health, social equity and the built environment. Speakers at the event represented different disciplines and topic areas in

part to demonstrate the multi-disciplinary approach and partnerships needed to implement effective change for the future.

Rodrigo Reis, professor of public health at Washington University in Saint Louis, Missouri, presented a framework of system policies, city design principles, associated demands, risk exposures, intermediary outcomes and chronic injury-disease outcomes, and demonstrated how silo-decisions that shape the built environment create one or more unintended outcomes as they move through the framework ⁷. Successful integration between health planning and city and regional planning, according to Reis, begins when officials think holistically about intended outcomes and when they have the time, money, energy and political will to ensure commitment to stated goals from vision to planning to design to construction ⁸. Project experiences from Charlotte, NC; Nashville, TN; and Bozeman, MT were shared at the roundtable event to demonstrate some of the concepts and relationships presented in the framework.

Janet Fulton, epidemiologist and team lead in the Division of Nutrition, Physical Activity, and Obesity at the Centers for Disease Control and Prevention, highlighted the importance of data and evidence to demonstrate the impacts of targeted investments in the built environment — especially as officials advocate for more resources to improve the connections between community health and city and regional planning ⁹. Steve Lavrenz, technical programs specialist for the Institute of Transportation Engineers, identified the need to share data and performance measures with key stakeholders and the value of collecting data that ties to health

and the built environment to persuade others to become invested in the campaign ¹⁰.

Be Intentional About the Region's Future

Throughout history, the way people lived, worked or moved in their communities was directly influenced by the built environment — first walking between nearby destinations in the city, then taking the streetcar between work in the city and home in the suburbs, and then driving long distances between home, work, school and shops spread throughout the suburbs. Community health and well-being was also influenced by changes to the built environment over time, which generally declined as people became less active and more reliant on technology to meet their daily needs.

The article focuses on the relationships between community health and the built environment and highlights different conditions, trends or actions observed in the region and their potential influence on new initiatives that better integrate community health concerns with city and regional planning. Existing partnerships, past project success, best practices in the United States and reflections on changing behaviors accelerated by the COVID-19 pandemic presented in the article directly influenced next steps considered for the region. No one action or strategy is going to change decades of federal, state or local policies that have worked to create our current (inefficient) development patterns. However, several new initiatives taken together and organized to maximize their impacts may help shape the built environment and promote healthier lifestyles.

Five important ideas for the region to consider moving forward include:

Expand the Mission and Membership for Centralina Health Solutions

Centralina Health Solutions is an asset for the region and its membership should be expanded to include health care officials, non-profit organizations, businesses, philanthropists and community leaders with shared interests for breaking down the silos between community health, social equity and the built environment. An expanded coalition would provide opportunities to organize and coordinate individual efforts under a broad vision to consider public health topics in city and regional planning, and common goals to 1) leverage resources from organizations or agencies with shared interests, 2) eliminate barriers to coordinate on similar efforts and 3) scale or replicate successful public-private-non-profit programs in the region.

Rely on Data-Driven Methods and Procedures for Prioritizing Needs

Develop a framework of important data, performance measures, protocols and partnerships that will help identify and prioritize future year needs in the built environment and coordinate those improvements with considerations for community health and well-being as a primary component of the framework. Enlist the expertise and resources of a sponsoring agency for the framework that serves the region to coordinate the efforts across different jurisdictions and collect, inventory, analyze and report conditions in a consistent and timely manner. Identify secure and reliable funding for the sponsoring agency to ensure the viability of the project.

Empower Residents and Community Leaders with New Resources

Create a suite of public education material — documents, videos, social media and print media — aimed at educating residents and community leaders about physical, social and psychological barriers to physical activity and the process by which policy changes or infrastructure investments are implemented and may be influenced by public opinion.

Build on Growing Interest and Momentum to Walk and Bike During the COVID-19 Pandemic

Increasing numbers of people are walking and biking for recreation during the pandemic, crowding into outdoor areas or replacing their normal commute to work by automobile with a walk or bicycle ride around the block or through the neighborhood. The time is right to capture this momentum and demand increased funding for new or expanded park, bicycle and walk infrastructure to meet growing demands. Improvements to bicycle and walk infrastructure will also benefit transit service because all transit trips begin or end with a bicycle or walk trip.

Identify New Training Opportunities and Resources for Elected Officials and Local Government Staff that Build Stronger Ties Between Community Health and City and Regional Planning

Develop a curriculum for elected officials in the region that addresses shared interests for community health and city and regional planning topics while

highlighting different decision-making processes and their connections to community health and well-being. Include in the new curriculum best practices from other regions in the United States as case studies to better plan for healthy communities and build confidence with elected officials to implement similar programs in this region.

Build a suite of data, indicators and model applications for local government staff to support the new curriculum for elected officials and provide the technical information and resources needed to plan for healthy communities. Focus early efforts of the initiative on resources that help staff measure and evaluate existing conditions, write plans or policies focused on the connection between community health and the built environment or track performance after implementation.

If interest grows, consider a new professional certification (or local recognition) for city and regional planners that want to focus on community health and the built environment. Leverage resources from the American Planning Association — and their Planners4Health initiative — to maximize the expertise and resources needed to implement a new certification or recognition program.

TOOLS TO IMPLEMENT THE TEN PRIORITIES FOR CONNECT OUR FUTURE WITH A CONNECTION TO COMMUNITY HEALTH INTERESTS

COUNTY-LEVEL IMPLEMENTATION TRACKER, INCLUDING CITIES OR TOWNS WITHIN COUNTIES

	Meck.	Union	Iredell	Gaston	Cleveland	Lincoln
1 Parks and Greenway Access	■	■	■	■	■	■
2 Preserve Open Space & Build Parks	■	■	■	■	■	■
3 Tree Canopy Preservation	■	■	■	■	■	
4 Housing Diversity Initiative	■	■	■	■		■
5 Safe Routes to School	■	■	■	■	■	■
6 Active Living Initiative	■	■	■	■		
7 Complete Streets	■	■	■	■	■	■
8 Improved Transit Service	■	■	■	■	■	■
9 Transit-Oriented Development	■	■		■		
10 Community Gardens	■	■	■	■	■	■
11 Farm-to-School Initiative	■	■		■		■
12 Local Food Councils	■			■	■	
13 Healthy Impact Analysis	■					
14 Public Health Database	■					

	Cabarrus	Rowan	Stanly	Anson	York	Lancaster
1 Parks and Greenway Access	■	■	■	■	■	■
2 Preserve Open Space & Build Parks	■	■	■	■	■	■
3 Tree Canopy Preservation	■	■	■		■	■
4 Housing Diversity Initiative	■	■	■		■	■
5 Safe Routes to School	■	■	■	■	■	■
6 Active Living Initiative	■	■	■		■	■
7 Complete Streets	■	■			■	■
8 Improved Transit Service	■	■	■	■	■	■
9 Transit-Oriented Development						
10 Community Gardens		■			■	■
11 Farm-to-School Initiative	■	■	■	■	■	■
12 Local Food Councils	■	■				
13 Healthy Impact Analysis						
14 Public Health Database	■	■				

= Information for the matrix was collected from online research, published documents or stories shared between city and regional planners in the area

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A Place for Notes:

Centralina and their partners for this effort would like to thank folks in the region that shared their data and time for interviews to support the work. Their stories and insights into the region, and the experiences they shared from “in the trenches” or “at the decision table” to address various land use, transportation or community health needs now and in the future was truly invaluable.

We look forward to learning more about your experiences in the region that tie back to CONNECT Our Future. Please feel free to reach out anytime to share a story or ask about the experiences of others in the region that may be facing similar challenges or being presented with similar opportunities.

Otherwise, we look forward as staff to jumping into the General Framework topics immediately and partnering with others to implement the policies, programs or actions recommended for the various topics.



Vibrant Communities – Robust Region

Prepared by:



City
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