

CHAPTER 5

EXISTING & PROJECTED CONDITIONS





A PRODUCT OF THE
Western Piedmont
Council of Governments

Greater Hickory Metropolitan
Planning Organization

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LOCATION AND HISTORY

The Greater Hickory MPO is located in the foothills of western North Carolina about 45 miles north of Gastonia, 50 miles northwest of Charlotte, 70 miles west of Winston-Salem, and 75 miles east of Asheville. The MPO planning area, which is defined as the entire Hickory-Lenoir- Morganton Metropolitan Statistical Area (MSA), is approximately 1,637 square miles (about the area of Rhode Island) covering all of Alexander, Burke, Caldwell, and Catawba counties (Map 3-1, page 3-2). There are 24 municipalities in the MPO planning area. Brookford, Catawba, Claremont, Conover, Hickory, Long View, Newton, Maiden, Connelly Springs, Drexel, Glen Alpine, Hildebran, Morganton, Rutherford College, Valdese, Cajah's Mountain, Cedar Rock, Gamewell, Granite Falls, Hudson, Lenoir, Rhodhiss, Sawmills and Taylorsville.

For an area to qualify as a "Metropolitan Planning Organization," an area must be "urbanized." To be urbanized an area must have at least 50,000 people residing in an urban environment. The MPO achieved "urbanized status" following the 1980 Census. To meet federal requirements, a comprehensive transportation plan was adopted for the area in 1986. The plan was then updated and approved in 1996. As a result of the 2000 Census, the MPO area grew tremendously from about 65,000 to 180,000 people. This size of the MPO also increased from 11 to 27 local governments. The MPO's name was changed after the 2000 Census to the Greater Hickory MPO from the Hickory-Newton-Conover MPO. After the 2010 Census, the MPO's urbanized area population increased to over 200,000 people. After merging with the Unifour Rural Planning Organization (RPO), the MPO's population grew to over 360,000 persons and 28 local governments. Census 2020 results show that MPO's population exceeded 365,000 persons.

TECHNICAL COMPARISON STRATEGY FOR THE PLAN UPDATE

The strategy used for the Plan update takes advantage of the most recent planning within the region in order to evaluate past trends and draw conclusions for the future. The horizon year for transportation planning in the region is currently 2045. For this plan update, the horizon year was extended to 2050. This data was used in the new travel demand model for the region.

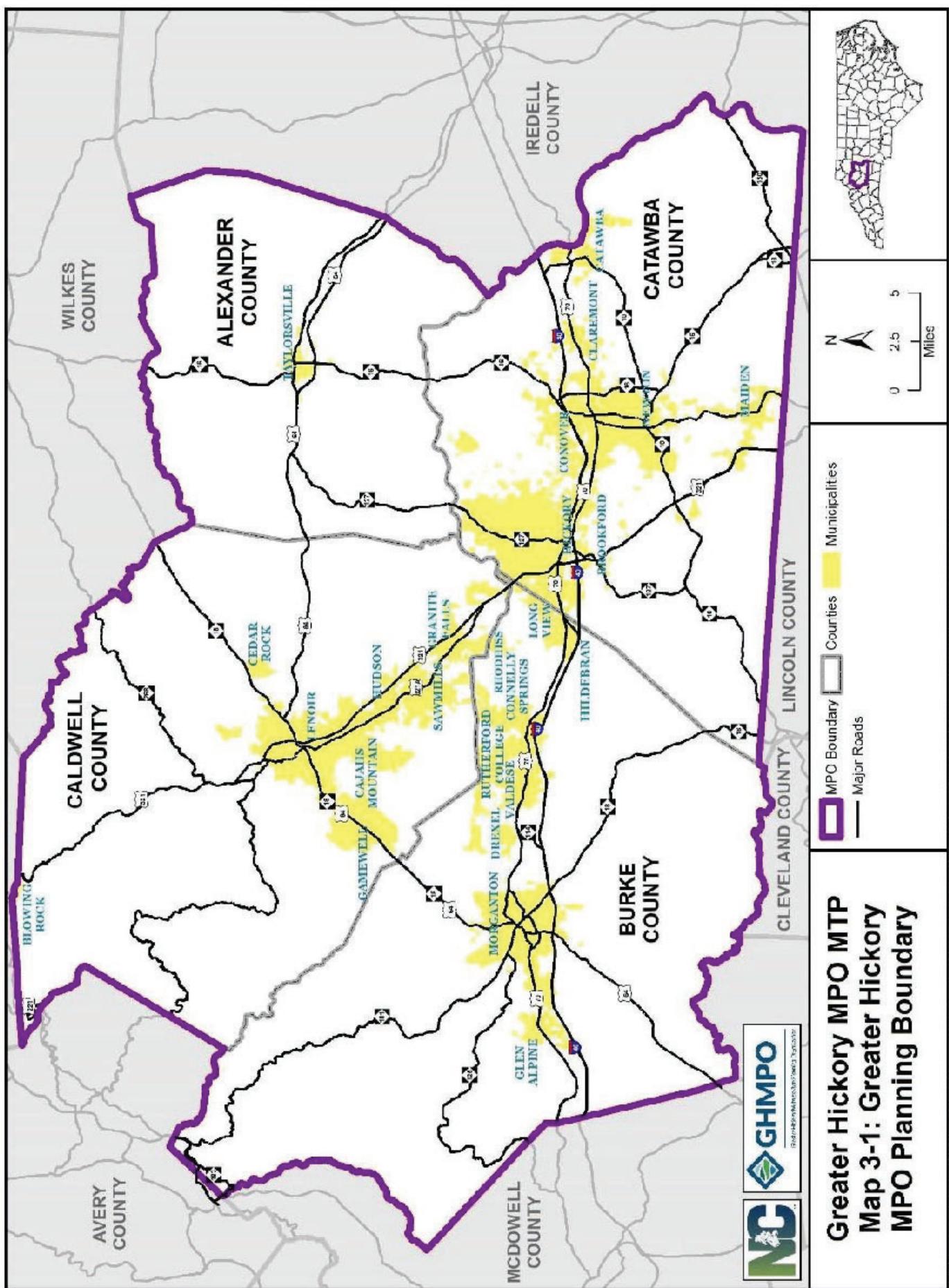
THE NEW TRAVEL DEMAND MODEL

To develop the best traffic projections for the expanded MPO area for the next Plan update, NCDOT undertook the development of a new four-county travel demand model using the Traffic Analysis Zones (TAZ) structure established for this update.

DATA COLLECTION FOR THE NEW MODEL

The goal of transportation planning is to develop and integrate a transportation network, which enables people and goods to travel safely and efficiently. To verify the adequacy of transportation planning for the Greater Hickory MPO area, the new model was developed with a Plan horizon year of 2050. The base year for the new model is 2019.

To achieve the goal, it is necessary to collect and then project social economic data for the MPO planning area. The new transportation model analyzes several socio-economic inputs including housing units, households, and the population in households, the population in group quarters, total population, and employment data broken down by type of employment (manufacturing, retail trade, highway retail, service, and office sectors). These factors are used to determine traffic flows on various thoroughfares throughout the Greater Hickory MPO planning area.



To better inventory traffic and transportation facilities, and effectively gather and project socio-economic data used by the model, the MPO planning area is broken down into roughly homogenous Traffic Analysis Zones or TAZs. In 2015, the Greater Hickory MPO area was broken down into 1,141 Traffic Analysis Zones. The Traffic Analysis Zones of each County comprising the Greater Hickory MPO are shown in Maps 3-2 (Alexander County), 3-3 (Burke County), 3-4 (Caldwell County) and 3-5 (Catawba County) on pages 3-6 to 3-9. TAZs are made up of 2020 Census Blocks so that demographic information could be collected more easily. Data from each Census Block within each TAZ were tabulated to determine the number of housing units, households, population in households, and group quarters population in each TAZ as of 2019 using data from the 2020 Census. Census 2020 data was used for the 2019 estimates, since it is assumed that little change occurred between December 2019 and April 2020 when 2020 Census data was collected.

Employment data for 2019 for each TAZ was provided by INFOUSA. Employment was broken down into five different types based on trip generation and North American Industry Classification System (NAICS) Code. The INFOUSA data was then crosschecked with employment data from the North Carolina Labor and Economic Analysis Division (NCLEAD), NC Department of Commerce and with selected employers for improved data accuracy.

Housing unit projections for 2050 were based on input from planners and economic developers from the 28-member local governments of the Greater Hickory MPO. Their input was then compared with the most recent population projections available from the North Carolina Office of Management and Budget (NCOMB) to ensure that the planners' projections were reasonable.

Group quarters population remained the same unless the planners provided information on additional group quarters construction in a TAZ. The 2050 number of persons per household for each TAZ equaled the number of persons per household in 2019.

Employment projections for 2050 were based on input from the region's planners and economic developers. The 2050 employment projections were then crosschecked with 2050 population projections for reasonableness.

POPULATION RESULTS

TAZ 2019 population totals for each individual TAZ (Greater Hickory MPO and Unifour RPO) can be found in Appendix A, Table A-1. The population totals are also shown visually by County in Maps 3-6, 3-7, 3-8, and 3-9 on pages 3-10 to 3-13. Darker browns on the maps represent higher population TAZs while lighter colors represent lower TAZ population totals. In the Alexander County portion of the Greater Hickory MPO, the 2019 resident population was concentrated along NC Highway 127 and along Lake Hickory (Map 3-6). In the Burke County portion of the Greater Hickory MPO, 2015 resident population was concentrated around Morganton and in the George Hildebran area (Map 3-7). The southern end of Caldwell County is more densely populated than the rest of the county (Map 3-8). High population counts in Catawba County included northeast Hickory along Springs Road and the Mountain View area (Map 3-9).

The projected population growth for the Greater Hickory MPO area and the projected growth of the four-county area between 2019 and 2050 is shown in Table 3-1 on page 3-4. The MPO Planning Area's population is expected to grow from 366,023 in 2015 to 389,189 in 2045. The 0.20% annual growth rate is slightly less than the growth rate predicted by the North Carolina Office of Management and Budget for Catawba County but is more than the growth rates predicted for Alexander, Burke, and Caldwell Counties.

Table 1 - Greater Hickory MPO Population Projections, 2019-2050

Location	2019	2050	Population Change 2019	Percentage Change 2019-2050	Annual Percentage Change 2019-2050
Greater Hickory MPO Planning Area	365,272	461,647	96,375	26.4%	0.76%
Alexander County	36,444	39,406	2,962	8.1%	0.25%
Burke County	87,570	111,928	24,358	27.8%	0.79%
Caldwell County	80,648	100,690	20,042	24.9%	0.71%
Catawba County	160,610	209,623	49,013	30.5%	0.86%

Maps 3-10, 3-11 3-12 and 3-13 on pages 3-14 to 3-17 show 2050 TAZ population projections for the four-county area. Individual TAZ population projections for 2050 can also be found in Appendix A, Table A-2. Map 3-10 shows that population growth will continue in the Bethlehem area along Lake Hickory. Burke County's growth pattern is predicted to shift to areas near Lake James and Morganton through 2050 (Map 3-11). The southern end of Caldwell County will continue to be a focus of population growth (Map 3-12). Population growth is also predicted near the City of Hickory and Lake Norman areas (Map 3-13).

EMPLOYMENT RESULTS

Current and projected employment numbers for the Hickory MPO Planning Area TAZs can be found in Appendix B, Tables B-1 and B-2. Data within Maps 3-14, 3-15, 3-16 and 3-17 on pages 3- 18 to 3-21 show general employment patterns across the four-county region. Little employment activity is currently occurring in the Alexander County portion of the MPO area except near the intersection of Rink Dam Road and NC Highway 127 (Map 3-14). The highest employment concentration in Burke County is located at the intersection of Interstate 40, Enola Road, and NC Highway 18 in Morganton (Map 3-15). In Caldwell County, the highest employment totals can be found along the US Highway 321 corridor (Map 3-16). The largest 2015 Catawba County portion employment areas are located along US Highway 70, Catawba Valley Boulevard, Fairgrove Church Road, and Tate Boulevard in Hickory (Map 3-17).

Results in Table 3-2 on pages 3-5 show that employment in the Greater Hickory MPO Planning Area is expected to grow from 153,847 in 2019 to 180,136 in 2050. The number of industrial jobs is anticipated to grow 31.6% between 2019 and 2050 as growth in new high-tech manufacturing will continue to replace traditional manufacturing industries such as apparel,

Furniture, and textiles. Retail employment (for example, department and grocery stores) is expected to grow 13.5% due to new commercial development in Hickory, Lenoir, and Morganton. The number of jobs in highway retail (for example, gas stations and restaurants) is predicted to increase by 4.1% between 2019 and 2050. Service employment (for example, health care and business support services) is anticipated to grow 15.4% through 2050 with a 5.1% increase anticipated for office employment. Since service sector employment has different vehicle trip characteristics than manufacturing employment, this factor was calculated into the new travel demand model.

Table 2 - Greater Hickory MPO Planning Area Employment by Sector, 2019-2050

Location	2019	2050	Employment Growth	Percentage Employment Growth
Industrial Employment	43,523	57,272	13,749	31.6%
Retail Employment	19,420	22,049	2,629	13.5%
Highway Retail Employment	12,851	13,377	526	4.1%
Service Employment	52,454	60,535	8,081	15.4%
Office Employment	14,253	14,975	722	5.1%
Special Generator Employment	11,346	11,931	585	5.2%
Total Employment	153,847	180,139	26,292	17.1%

County level employment trends through 2050 are displayed in Maps 3-18, 3-19, 3-20, and 3-21 on pages 3-22 to 3-25. The MPO portion in Alexander County will have little employment growth with the possible exception of the area near NC Highway 127 and Rink Dam Road (Map 3-18). Employment growth in Burke County is expected to occur along the I-40 corridor in Morganton as well as along the I-40 corridor near Lake James (Map 3-19). Employment growth in Caldwell County will likely occur in TAZs along the US Highway 321 corridor between Hickory and Lenoir (Map 3-20). Catawba County should see medical employment growth near Catawba Valley and Frye Regional Medical Centers as well as retail and industrial growth along the I-40 corridor between Hickory and Claremont (Map 3)

MAPS BEGIN ON NEXT PAGE

