



The Interstate 85 Corridor travels through the Cabarrus Rowan MPO.

### Highway Element

The Highway map is just one element of the Cabarrus-Rowan Urban Area Transportation Plan. The primary objective of the Highway map is to assure that the street system and highway improvements serve future travel desires and as those needs arise opportunities to make improvements are made available. The Cabarrus-South Rowan Thoroughfare Plan was first mutually adopted in June 1996 with an amendment in December 1998. (The rest of Rowan and Cabarrus Counties were not part of the MPO at this time). The Plan was the culmination of local and state coordination, engineering modeling analysis, and extensive public involvement. NCDOT completed a Comprehensive Transportation Plan (CTP) in 2011 (and updated in 2017) that supplanted the Thoroughfare Plan and MPO Street Appendix.

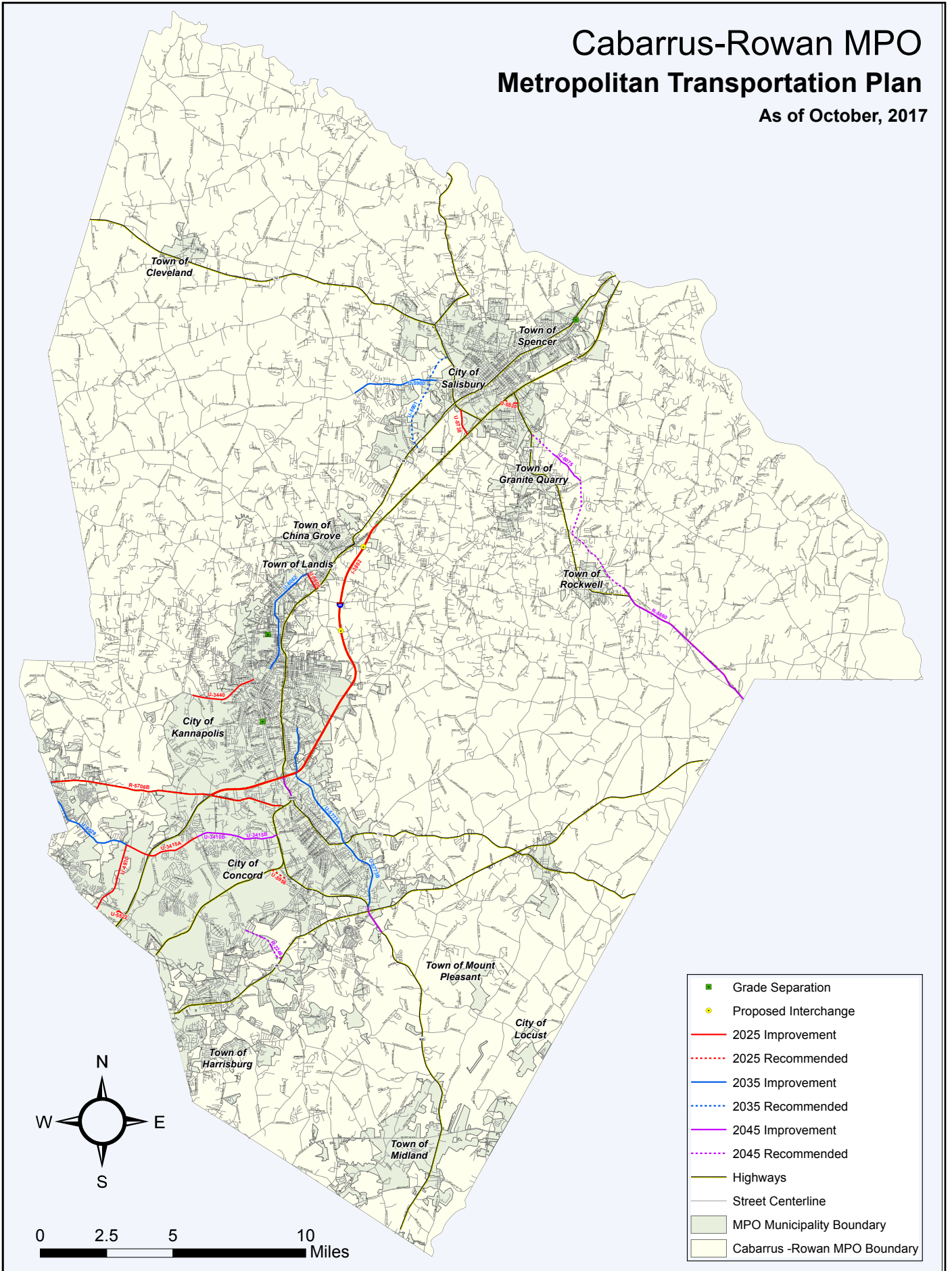
The MPO has developed a fiscally constrained MTP that allocates projects or groups of projects by horizon year. Each table represents a horizon year as stated in NCDOT requirements. The

horizon years are 2016-2025, 2026-2035, and 2036-2045. These horizon years are consistent with the Regional Travel Demand Model and federal regulations in 40 CFR93.106 (A) (1). According to these requirements, the first horizon year may be no more than 10 years from the base year. The projects for each horizon year were selected based on the following sources:

- Current and projected funding levels/cost estimates (see Financial Plan)
- Revenue from the 2018-2026 NCDOT State Transportation Improvement Program (STIP) and the Metropolitan Transportation Improvement Program (TIP);
- Project schedules from the current 2018-2026 NCDOT TIP
- Projects deemed necessary through the Regional Travel Demand Model;
- The Cabarrus-Rowan Urban Area SPOT Priority List; and
- The 2040 Cabarrus/Rowan Metropolitan Transportation Plan.

# Cabarrus-Rowan MPO Metropolitan Transportation Plan

As of October, 2017



The thoroughfares on the recommended map can be divided into five types of roads. They are freeways, expressways, boulevards, major thoroughfares, and minor thoroughfares. All other streets are considered collector or local streets and can be included in small area plans by the CR MPO membership.

### **Freeways and Expressways**

The freeway and expressway system is intended for fast and efficient movement of large volumes of traffic in and around an urban area. Properly located freeways and expressways can help relieve overburdened radials and move traffic from one suburb to another around the central core.

There is only one controlled-access Interstate highway in the area. Interstate 85 runs north and south through the center of the urban area and the State connecting several of its urban areas. I-85 was recently widened to eight lanes through the City of Charlotte and through northern Rowan County. The remaining sections are under construction now including the remaining portion in southern Rowan. The projected traffic on I-85 for the design year warrants widening to at least eight lanes throughout the planning area. I-85 has been the top priority in the MPO for several years.

There are sixteen existing interchanges on I-85 through the planning area. It is recommended that Exit 68 at NC 152 be expanded to a full interchange to accommodate increased traffic flows. A new interchange is also recommended at Old Beatty Ford Road (I-3804) near Landis/China Grove to provide access to southeastern Rowan County. There is a five-mile stretch between the interchange at NC 152 and the one at Lane Street. Industrial land uses are being planned along China Grove Road increasing the potential for truck and other vehicle traffic in the area. The new interchange is currently a funded project as NCDOT is planning a safety project (W-5516) to realign Old Beatty Ford Road including a new bridge over I-85.

A Sub-area Study Report of I-85 released in December 2000 recommended some additional

improvements for the corridor between Charlotte and Concord/Kannapolis. Auxiliary lanes should be added to I-85 between I-485 and Speedway Boulevard. The ramps at the NC 73 interchange should be improved and widened. The Report also suggests possible high occupancy vehicle lanes as far north into Cabarrus County as the US 29-601 interchange (Exit 58) as well as implementation of ITS improvements and an integrated Regional Incident Management Program. The MPO was a funding partner in the Fast Lanes Study to assess managed lanes in the Metrolina Region. I-85 from Mecklenburg County to exit 68 in Rowan County was carried into Phase III for consideration of managed lanes as part of this study.

*For a copy of the I-85 Sub-area Study Final Report or the Fast Lanes Study, contact the MPO office at (704) 795-7528.*

### **Boulevards and Major Thoroughfares**

The boulevards and major thoroughfares are the principle traffic carriers throughout the urban area. Their primary function is to carry traffic, but they also may service abutting property. Too much property access, though, requires too many traffic signals. Too many traffic signals reduce the travel speed, capacity, and efficiency of a thoroughfare.

### **Minor Thoroughfares**

The minor thoroughfare system collects local traffic from the residential neighborhoods, commercial and industrial districts, and collector streets and distributes it to the major thoroughfare system. These streets also access abutting property more frequently than the major thoroughfare system. They cannot carry large volumes of traffic as well as the major thoroughfares can.

**Appendix 5-1 shows the Adopted Cabarrus Rowan MPO Comprehensive Transportation Plan Highway Map and Table**

## Bridge Replacements

A growing portion of the Metropolitan TIP is the bridge replacement projects. The following criteria are used to evaluate bridges when utilizing federal funds:

- Sufficiency Rating must be less than 50
- Bridge must be rated as either Structurally Deficient or Functionally Obsolete
- Structure length must be longer than 20' (clear span)
- The candidate structure must not have been rehabilitated with federal funds within the previous 10 years

The criteria for state funds is much simpler and is more based on need and current level of service compared to desired level of service. There is also an expectation to improve the overall rating of the bridges in the Division. For Division managed projects, both BD (federally funded) and state funded the Division gets a candidate list from the Structures Management Unit that includes bridges that meet the federal guidelines. From this list the Division prioritizes replacement projects based on the needs throughout the Division. The Division coordinates with bridge maintenance staff to determine problem/deficient bridges and then with roadway maintenance engineers to determine any future widening needs. Next, the prioritized list is reviewed and approved by the Structures Management Unit to be programmed as a division-managed project.

For bridges listed as a B project in the STIP, the Division reviews the list of candidate bridges from the Structures Management Unit and prioritizes the list based on the Division's needs/desires. This list is then sent to the Structures Management Unit and Program Development Unit for them to evaluate the list to determine which bridges will be programmed in the next TIP cycle. The Division priorities are a key element to the decision-making process for funding.

### **Appendix 5-2 includes the Division 9 and 10 Bridge Replacement Schedules**

## Bicycle and Pedestrian Elements

Bicycle and pedestrian mobility is of particular importance to the CR MPO. An element of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the subsequent Fixing America's Surface Transportation Act requires that the Bicycle and Pedestrian Plan be fully integrated within an urban area's Transportation Plan. As a result of federal requirements and strong local interest, the first comprehensive bicycle and pedestrian plan for the MPO was completed in February 2002. The Plan known as the Livable Community Blueprint encompassed all of Cabarrus County and the following municipalities within the CR MPO area: Concord, Kannapolis, Landis, Mt. Pleasant, China Grove, and Harrisburg. (The rest of Rowan County was not part of the MPO at the time this Plan was initiated). Cabarrus County pursued an update to this Plan thru a countywide Greenway Master Plan that was completed in the fall of 2009 and Rowan County completed a countywide plan in the summer of 2015.

The purpose of the Livable Community Blueprint (LCB) was to provide the CR MPO with a bicycle and pedestrian facilities inventory and method for implementation of improvements over the next decade. The Plan included a strong public involvement element that produced 4,000 surveys from a random sample. From these surveys, "access to safe Bicycle and Pedestrian Transportation Routes" was identified as a high priority for residents. The study defined close to 200 individual destinations that are desirable to be linked by bicycle or pedestrian routes and over 200 miles of on-road and off-road routes. The Plan was necessary to identify desirable bicycle and pedestrian projects within the urban area, which may be eligible for funding under the Metropolitan Transportation Improvement Program or other State or Federal funding programs. A total of \$5,639,858 of bicycle and pedestrian projects was highlighted by this study. This figure did not include land acquisition or design and engineering costs.

**Appendix 5-3 is the Inventory of the Livable Community Blueprint**

*For additional information and a list of proposed bicycle and pedestrian projects in the Planning Area, please refer to the Livable Community Blueprint, Carolina Thread Trail Master Plan and NCDOT Statewide Bike Route Map.*

The State TIP identifies two types of bicycle projects: independent and incidental. Independent or Enhancement projects are stand-alone bicycle and pedestrian facilities. Incidental projects are improvements tied to specific TIP road projects.

An example of an incidental project would be the NC 49 widening in the Town of Harrisburg where the Town requested that NCDOT build sidewalks as part of the widening project. With the adoption of the Strategic Transportation Initiative, NCDOT will be closely monitoring the state matching provision for non-highway capital projects. With that said, all independent bicycle and pedestrian projects will be scored and ranked locally with other modes under the Division Tier list of projects.

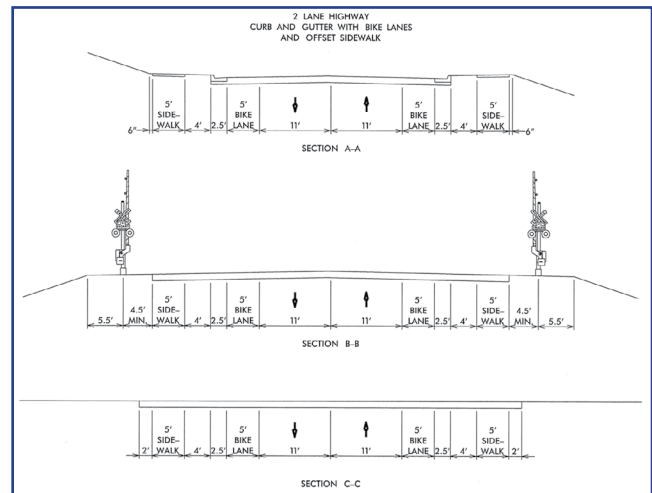
The current 2018-2026 Transportation Improvement Program identifies six independent bicycle and pedestrian projects in the CR MPO. The projects are listed below:

**Table 5-1 Independent Projects**

| TIP Number | Project Description   |
|------------|---|
| EB-5732    | Sidewalk on both sides of Bruton Smith Blvd and Concord Mills Blvd including a portion of Weddington Road |
| EB-5902    | Downtown pedestrian signal upgrades   |
| EB-5903    | Sidewalk on Union Street  |
| EB-5619    | Greenway near Catawba College   |
| EB-5813    | Greenway known as the Landis Spur   |
| EB-5861    | Greenway along US 29 to the Yadkin River  |
| EB-5844    | Sidewalk along Little Texas Road  |
| EB-5821    | Sidewalk along North Main Street in Kannapolis  |

The CR MPO developed and adopted criteria for ranking bicycle and pedestrian projects in 2004. This criteria is based on 8 measures that range from percent of right-of-way owned to amount of project design complete. Each of the 8 measures was given a point total based on level of importance and relative rank. Points could range from 1 to 25 depending on the scored measure. The purpose of this criteria and point totals was to highlight the projects that were most feasible and generated the most utility within the community.

**Figure 5-1 Typical Cross Sections for Bike and Pedestrian Lanes**



With the last STIP, the CR MPO evaluated a total of 6 projects that were submitted to NCDOT for the 2018-2026 STIP. The projects are as follows:

**MPO Bicycle/Pedestrian List**

1. Baker Branch Greenway
2. Irish Buffalo Creek Greenway
3. N. Main Street Sidewalk
4. Bethpage Road Sidewalk
5. Little Texas Road Sidewalk
6. 3rd Street Greenway

**Appendix 5-4 includes the CR MPO Bicycle and Pedestrian Priorities and the criteria used to rank these projects.**

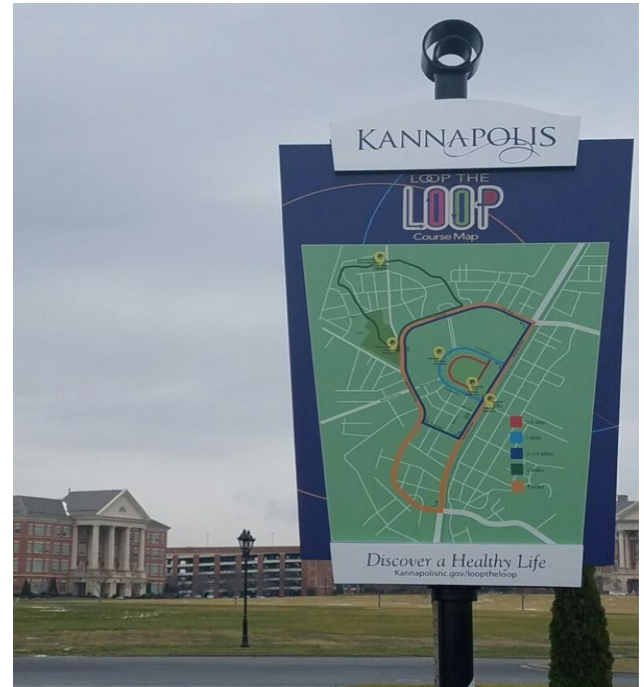
Due to the non-attainment designation for Cabarrus and Rowan Counties, NCDOT has suballocated approximately \$7 million to the MPO for Congestion Mitigation and Air Quality Improvement (CMAQ) projects.

These funds are limited to projects that reduce vehicle emissions and improve air quality, which is consistent with most bicycle and pedestrian projects. The CR MPO identified and endorsed 16 bicycle or pedestrian projects that would be funded through CMAQ program. These projects were included by NCDOT in the 2018-2026 STIP.

**Appendix 5-5 includes the CR MPO CMAQ Bicycle and Pedestrian Project Proposals**

In addition, there are local initiatives to improve bicycle and pedestrian connectivity. The City of Concord maintains a Pedestrian Improvement Program (PIP) that is funded through the 2 cent property tax levied by the City for transportation projects. The PIP serves as a direct way to build and leverage additional public and private funds for pedestrian improvements in new and existing development. Several CR MPO jurisdictions including the City of Concord are also beginning to use their development review authority to promote more pedestrian-friendly development. In Cabarrus County, the Unified Development Ordinance has integrated sidewalk requirements into its local development regulations.

Concrete sidewalks are required along major and minor thoroughfares and frontage streets identified on the Cabarrus-Rowan Transportation Plan. The City of Salisbury and Town of Granite Quarry in Rowan County also require sidewalks in all new development projects within their planning jurisdiction.



The Kannapolis Pedestrian Loop. Photo by Wilmer Melton



Bridge replacement project with new sidewalk - Raging Ridge Road at Stallings Road in Harrisburg.

## Freight and Rail Transportation Element

### Regional Strategic Freight Network

A key element of Freight Planning is the identification of the regional Strategic Freight Network (SFN). By definition, a SFN is a system of infrastructure critical to the successful movement of freight. For the Freight Plan, this SFN serves as the network around which the region currently moves freight and plans to continue to support safe, efficient movement of freight into the forecast plan years. Many recommendations related to infrastructure improvements are limited to the SFN. With consideration of limited resources for infrastructure projects, the Freight Plan focuses on this network identified as critical to the CR MPO and Greater Charlotte Region.

Illustrated in **Figure 5-2** and **Figure 5-3**, the CR MPO SFN encompasses all modes of freight moving transportation. In partnership with the Coordinating Committee, the following criteria were used to finalize the roadway and other modal components of the SFN:

#### Highways

- Those on the National Multimodal Freight System (NMFS) and/or all Interstates
- Those designated as truck routes by NCDOT
- Approved Intermodal Connectors on the National Highway System
- Those identified by planning agencies as critical to local freight movement

#### Railroads

- All active freight railroads
- All active intermodal rail terminals

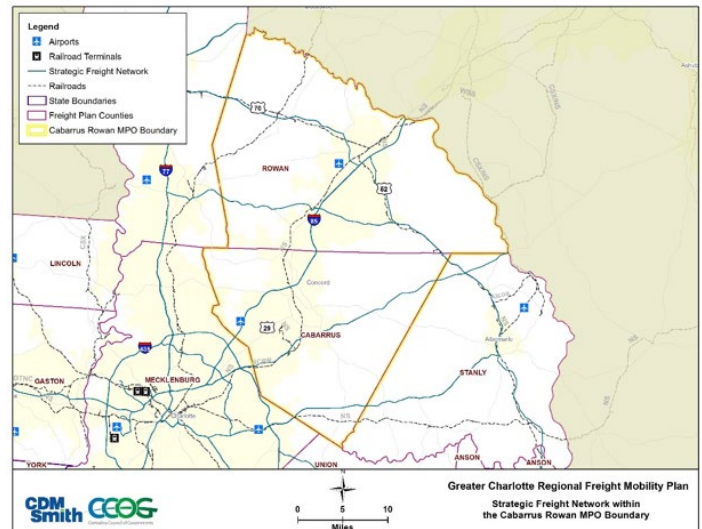
#### Aviation

- All commercial service airports

### Critical Rural and Urban Freight Corridors

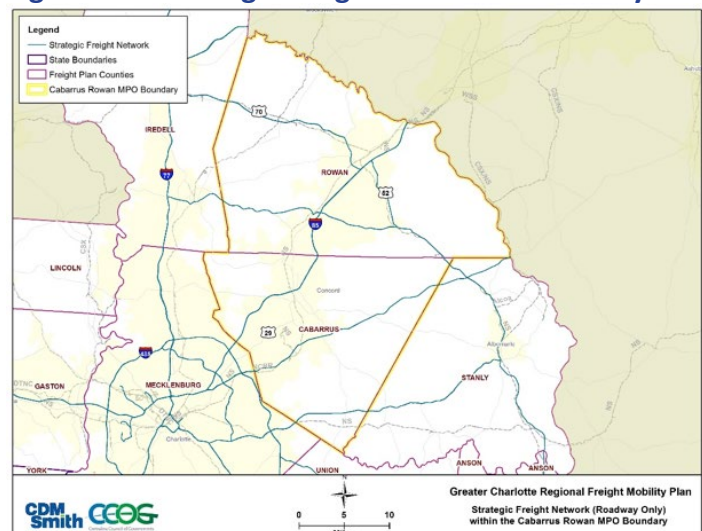
According to the latest available guidance from USDOT, Fast Act Section 1116 [Critical Urban Freight Corridor (CUFC) and Critical Rural Freight Corridor (CRFC) Guidance] and based on coordination with the state DOTs, the Freight Plan presents the

**Figure 5-2 - Strategic Freight Network in CRMPO**



Source: NCDOT and SCDOT

**Figure 5-3 - Strategic Freight Network - Roadways**

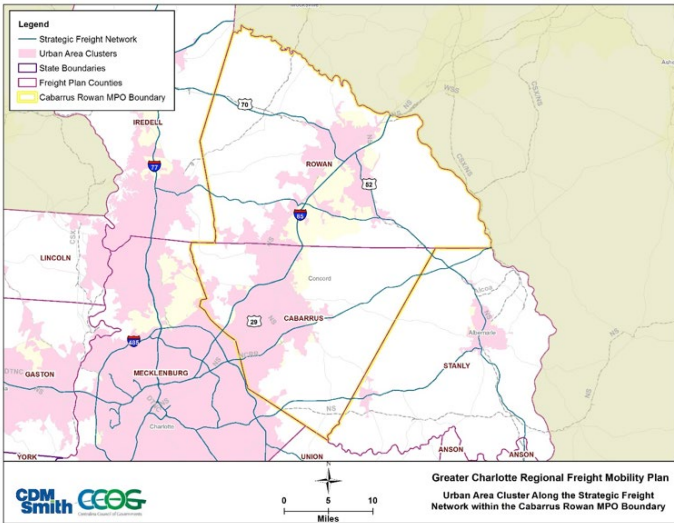


Source: NCDOT and SCDOT

following data on suggested facilities for inclusion in the state level CUFC/CRFC designations. **Figure 5-4** illustrates the SFN within the CRMPO region (roadways only) broken out by urban and rural land use designation, based on 2010 Census Urban and Rural classification data. These roadway segments are provided for consideration in the state designated multimodal critical rural and urban freight corridors yet to be determined.

Further detail on the CUFCs and CRFCs are included in the **Final Plan, Table 5-4**.

**Figure 5-4 - Strategic Freight Network - Roadways and Urban Area Clusters in CR MPO Region**



Source: 2010 Census Urban and Rural classification data, NCDOT and SCDOT

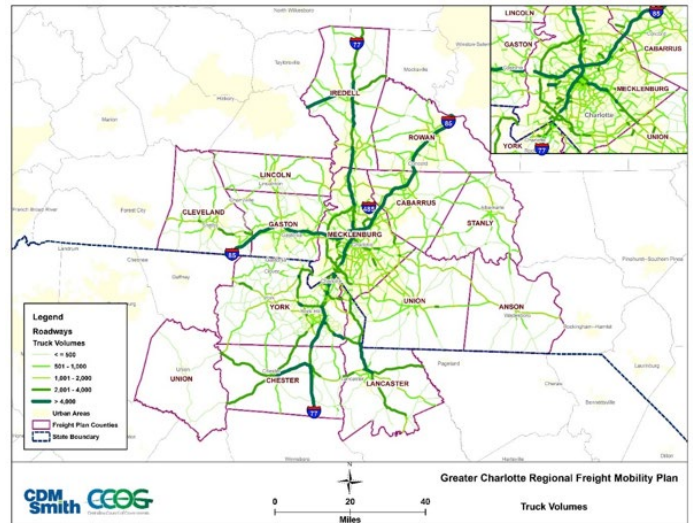
**Existing Conditions in the Cabarrus Rowan MPO**  
 The existing conditions analysis provided a compilation of data on the transportation infrastructure system for the Greater Charlotte Bi-State region. Highlights, by mode, are provided at a regional level with additional detail for the CRMPO region.

**Trucking**

The interstates carry the bulk of the region’s daily truck traffic as shown in **Figure 5-5**. I-85 and I-77 constitute the most critical freight corridors throughout the region. Other roadways that play a critical role in the movement of truck freight are I-485, US 74, US 321, NC 160 (near the Charlotte-Douglas airport), and SC 9 through Chester and Lancaster, SC. Delay, safety, and access issues raise costs for shippers, carriers, manufacturers and consumers alike.

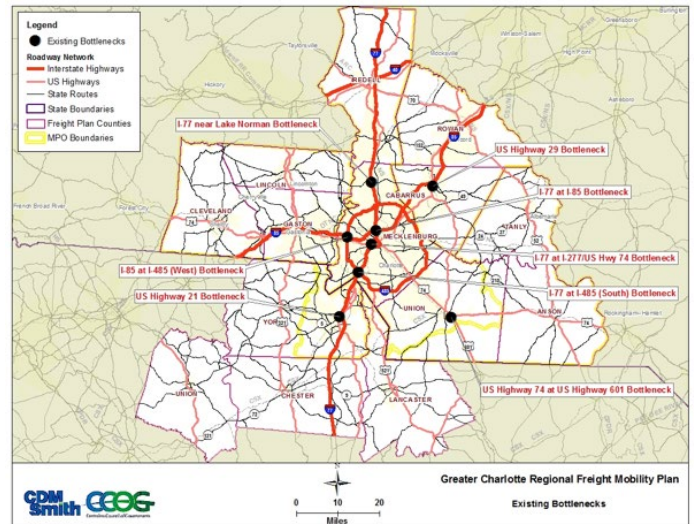
**Figure 5-6** shows the only truck related bottlenecks identified within the freight transportation system in the CRMPO is in the corridor of US 29 near I-85. In addition to this segment of the SFN within the CRMPO currently defined as bottlenecks, some segments also present some challenges for the trucking of goods in terms of bridge conditions and safety. Functionally obsolete bridges are bridges that no longer meet the current standards, such as narrow lanes or low load-carrying capacity. These bridges have not been designed for the current loads/trucks that currently traverse the freight highway system.

**Figure 5-5 - Regional Truck Average Daily Truck Volumes (2012)**



Source: NCDOT and SCDOT

**Figure 5-6 - Regional Truck Bottlenecks in CR MPO**

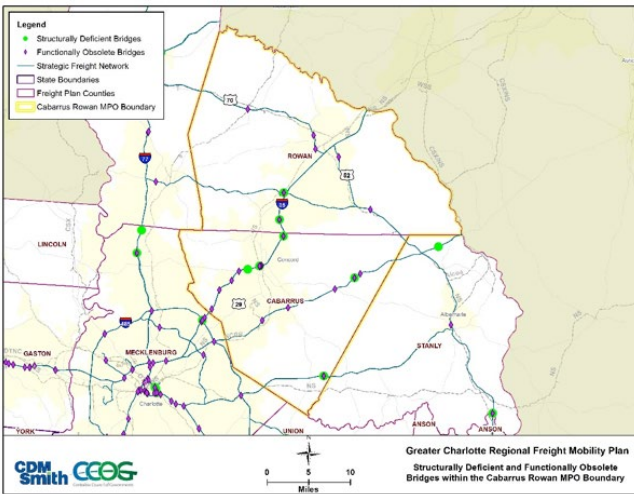


Source: American Transportation Research Institute (ATRI), October 2015

Structurally deficient bridges require significant maintenance, rehabilitation or replacement and are unable to carry certain freight loads. For these reasons, they can serve as constraints to the freight highway network and are therefore important to include in freight network analyses. **Figure 5-7** illustrates the 19 functionally obsolete and seven structurally deficient bridges in the CRMPO Region. These existing conditions of highway performance, safety and bridge conditions are important to identify as they can limit the mobility of freight-carrying vehicles, particularly if they are carrying oversize or overweight cargo.



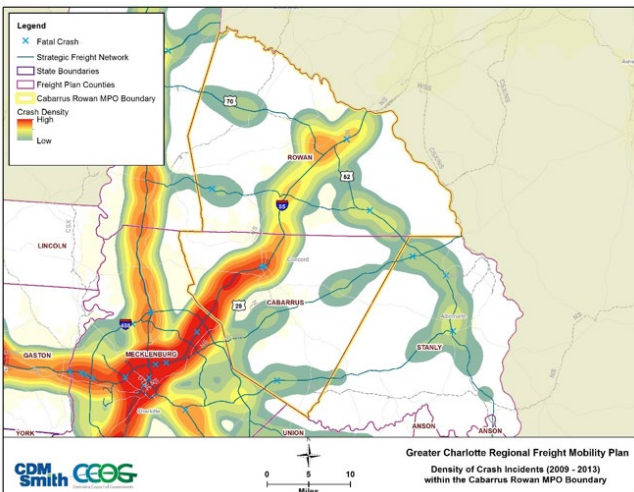
**Figure 5-7 - Structurally Deficient and Functionally Obsolete Bridges in CR MPO**



Source: NCDOT and SCDOT

Figure 5-8 illustrates commercial vehicle crash hotspots from 2009 to 2013. Corridors with slightly higher than medium densities of crashes involving commercial vehicles include I-85, as well near the interchange of I-85 and US 70 and US 52.

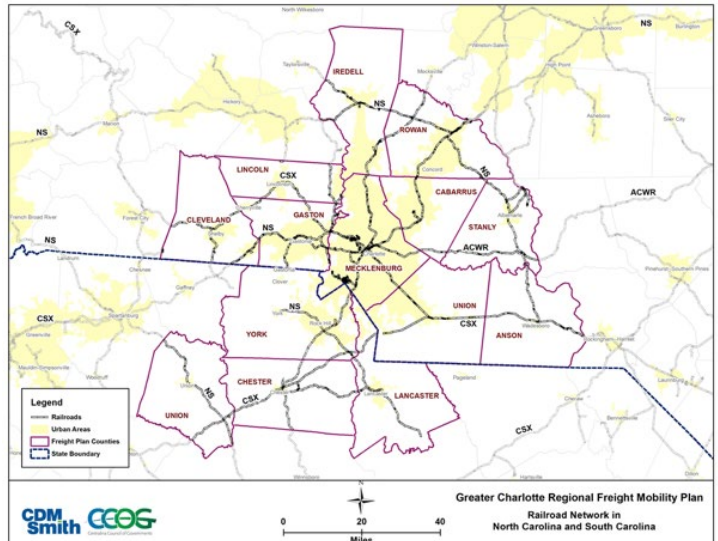
**Figure 5-8 - Commercial Vehicle Crash Hotspots (2009 - 2013)**



## Rail

Within the greater Charlotte Region there are a number of key railroad corridors and facilities. Both NS and CSXT have key rail corridors and intermodal yards. Figure 5-9 illustrates the Greater Charlotte regional rail network which includes the CR MPO area.

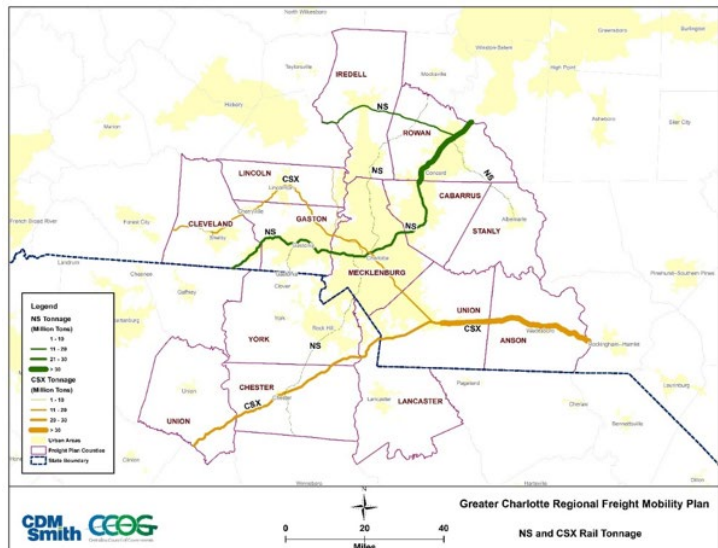
**Figure 5-9 - Greater Charlotte Regional Rail Network**



Source: National Transportation Atlas Database, 2015

For NS, the Main Line operating through Kannapolis, Charlotte and Gastonia serving the Charlotte-Douglas International Airport's Intermodal Yard is one of the busier corridors along the east coast. The CSXT SE Line connects to the Port of Wilmington and Hamlet Yard. Figure 5-10 shows the regional Class I rail annual volumes.

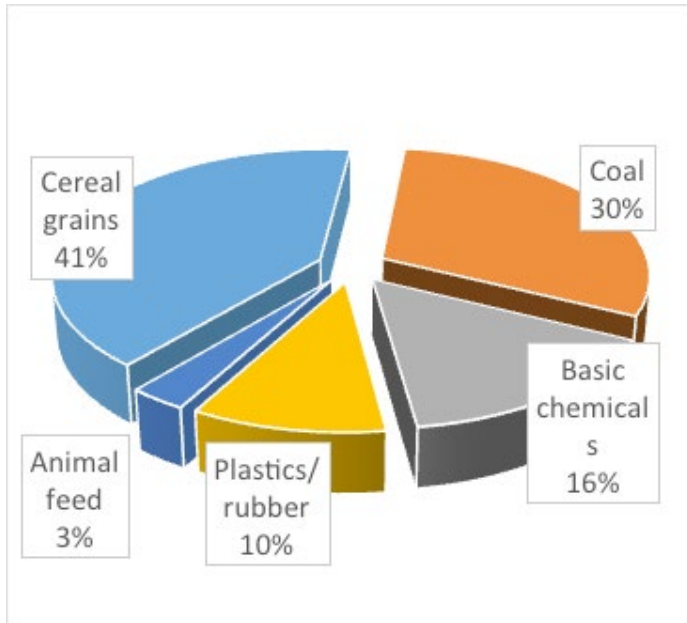
**Figure 5-10 - Regional Class I Annual Rail Freight Volumes (2014)**



Source: NCDOT

Grains, Coal and chemicals make up the bulk of the regional rail tonnage (Figure 5-11). Over 5 percent of all freight moves by rail in the region.

**Figure 5-11 - Regional Rail Freight Top Commodities (By Weight)**



Source: FaF4, NCDOT and WSP|Parsons Brinckerhoff

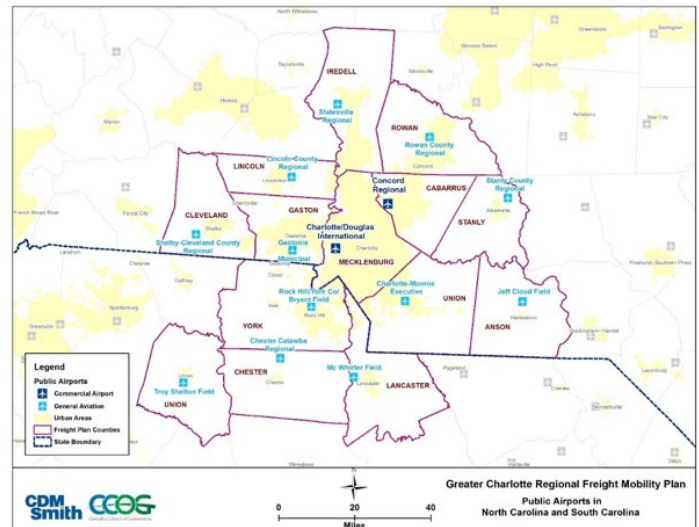
Within the CRMPO, NS and ACWR are the principal rail facilities providing access to the larger network of railroads. Local planners need to consider this for land use planning around the alignment, and transportation planners must consider the access limitations and safety concerns near these rail freight corridors.

**Air Cargo**

There are two commercial service airports and twelve general aviation airports located in the Greater Charlotte Region. The two commercial service airports are Charlotte-Douglas International Airport (CLT) and Concord Regional. CLT handles virtually all air cargo in the Greater Charlotte Region. **Figure 5-12** illustrates the airports in the Greater Charlotte Region.

Though small in volume, airborne freight has by far the highest value per ton of any mode. Typical commodities include goods from the pharmaceutical, automotive, and high-tech manufacturing sectors as well as the consumer parcel delivery services, as illustrated in **Figure 5-13**. Moving goods by air is expensive and the industry responds to the forces of supply and demand. This is not unique to the region but an industry wide trend.

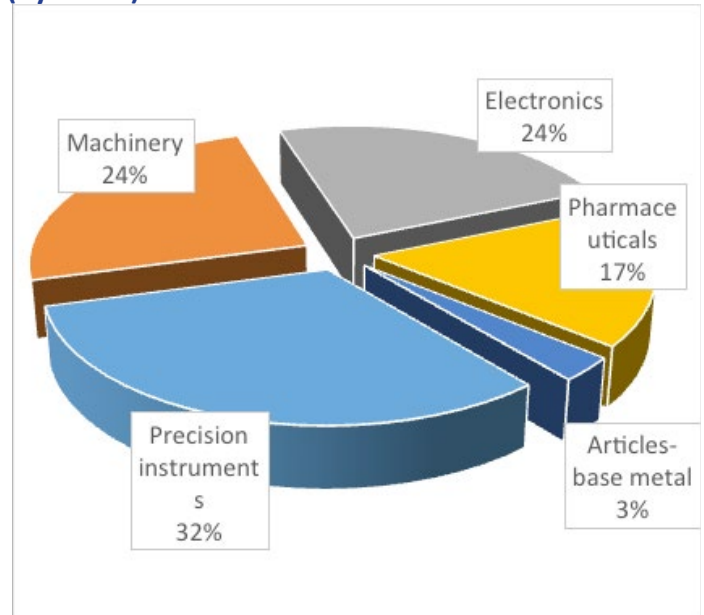
**Figure 5-12 - Greater Charlotte Regional Public Airports**



Source: Federal Aviation Administration

Concord Regional commercial airport and the Rowan County Regional general aviation airport serve CR MPO. Similar to railroads, intermodal connectivity should be maintained and supported, consistent with the recommendations of the Freight Plan.

**Figure 5-13 - Regional Air Cargo Top Commodities (By Value)**



Source: FaF4

## Passenger Rail Element

### Existing Passenger Service

The State of North Carolina, which sponsors two Amtrak-operated passenger trains in the CR MPO area, provides passenger service: The Piedmont and the Carolinian. The Amtrak Silver Crescent line also travels through the CR MPO area with stops at Kannapolis and Salisbury.

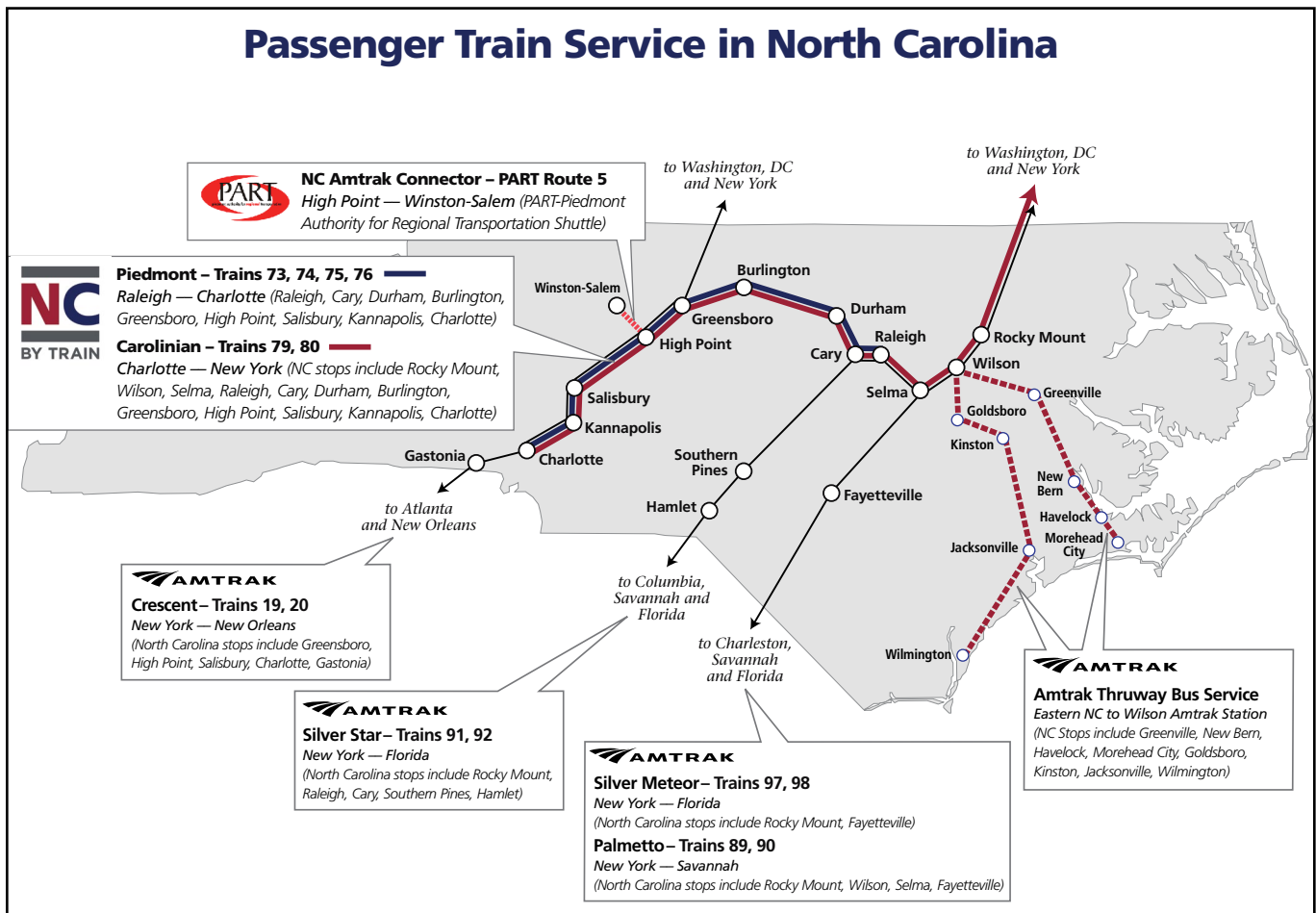
### Map 5-2 shows existing rail lines

The Piedmont makes two daily round trips between Raleigh and Charlotte by way of Kannapolis and Salisbury. The State owns the equipment for the Piedmont and contracts with Amtrak for maintenance and operations of the

train. The Carolinian makes one daily trip each way between Charlotte and New York City by way of Kannapolis and Salisbury. The Carolinian uses Amtrak equipment and is Amtrak-maintained.

Both Depots in Kannapolis and Salisbury serve as focal points of the downtowns and central business districts. The Kannapolis Depot has undergone improvements to become a first class hub for passenger rail. The Rider Transit System also maintains a bus stop at this Depot providing daily bus service Monday thru Sunday. The Salisbury Depot has become a tourist and business attraction as a staple in the redeveloped downtown area. Salisbury Transit also provides local bus service in close proximity to the Depot on a regular schedule Monday thru Saturday.

Map 5-2 - Existing Amtrak Service in North Carolina



## Piedmont High-Speed Corridor

The NCDOT Rail Division, in conjunction with the North Carolina Railroad and Norfolk Southern, has plans to improve the busy (freight and passenger) Raleigh to Charlotte rail corridor to reduce travel time for both freight and passenger trains. The goal was to implement two-hour passenger service between the two major cities by 2010. In September 1997, a detailed evaluation of the Piedmont High-Speed Corridor (PHSC) was presented in the Piedmont High-Speed Corridor Rail Study Status Report.

The PHSC is a 477-mile federally designated high-speed rail corridor running from Washington, D.C. through Richmond, VA; Raleigh; Greensboro; Kannapolis; and on to Charlotte, NC. The report indicated that the potential for ridership and revenue along the PHSC would be greater than any other illustrative high-speed route in the United States.

Because of the studies, this corridor has been designated as one of eight national rail corridors currently identified for improvements to high-speed status under TEA-21. This effort has led to the adoption of a NCDOT resolution to protect the integrity of the PHSC. The approved resolution endorses the concept of providing better separation between vehicle and train movements at existing and proposed crossings of the rail corridor. Additionally, traffic separation studies have been performed by NCDOT within individual jurisdictions in the Urban Area. These studies have identified which crossings need to be closed or improved. The purpose of these closings is to assist in reducing train travel time to two hours between Raleigh and Charlotte. The resolution lists the following directives:

- That any new intersection of the Federally-Designated High-Speed Rail Corridor be grade-separated and supports the closure of redundant and/or unsafe highway/rail at-grade crossings on this route;

- That municipalities be encouraged to implement crossing consolidation projects; and
- The Department (NCDOT) will make every effort to provide grade-separated alternatives to enhanced warning or traffic control devices (four-quadrant gates, median barriers, longer gate arms, and intelligent signal systems) as a part of the widening of existing highway/rail at-grade crossings.

The NCDOT Division 9 TIP Priority List included the following grade separation projects:

- Kimball Road
- Peeler Road
- Klumac Road
- Long Ferry Road

Three of these projects were funded in the STIP: Kimball Road, Peeler Road, and Klumac Road through the American Recovery and Reinvestment Act (ARRA), but the other one remained unfunded at the present time. The City of Kannapolis has also given priority to a grade separation at Rogers Lake Road, scheduled for construction in FY 2020, as well as at 22nd Street, scheduled for construction in FY 2026. A new grade separation was scheduled for construction as part of the I-85 widening project at Winecoff School Road. The City of Kannapolis has long lobbied NCDOT for this project. Replacement of additional at-grade crossings with grade separated structures will be evaluated and considered through the planning and engineering process.



Amtrak stops at Kannapolis and Salisbury Stations in the CR MPO

## Potential NC Commuter Rail Service

The NCDOT Rail Division in January 1999 conducted a study that addressed the need for commuter rail service. The purpose of the study was to identify potential rail commuter corridors throughout the State that would serve a sizeable suburban population with a substantial central city.

Future commuter/passenger rail planning in the Urban Area may include the Northeast Blue Line Extension which would be a part of the Charlotte Transit System. The Blue Line Extension would be a major “spine” of the entire light rail system. Running from northeast to southwest in the CR MPO area, this line and extension begins in downtown Charlotte and continues parallel to US Highway 29 towards Concord and terminates on the campus of UNCC. The extension could cross I-485 one day and continue past the Lowes Motor Speedway and potentially to the Concord Mills Mall. In the interim, Rider Transit has plans for an express bus route to the end of the Blue Line Extension that will begin in March 2018.

*For a copy of the commuter rail study and additional information regarding the Rail Improvement Program, contact the NCDOT Rail Division at (919) 733-4713, or visit their web-site at [www.bytrain.org](http://www.bytrain.org).*

## Public Transportation Element

### Concord/Kannapolis Area Transit

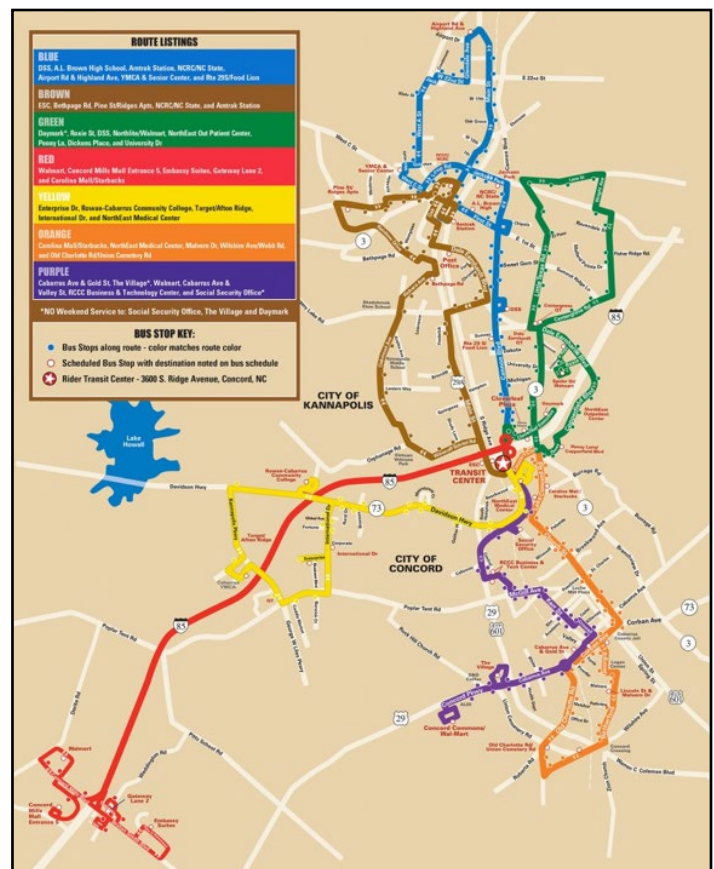
The cities of Concord and Kannapolis began a new fixed route transit service in April of 2004. The RIDER Transit System is a joint partnership between the two cities, FTA and NC DOT. The Concord Kannapolis Transit Commission (CKTC) manages the system. Two elected officials from each municipality serve on the Commission while each Mayor rotates annually as the CKTC Chairman. RIDER operates seven routes each weekday from 5 AM to 8:30 PM, and Saturdays & Sundays (added Fall 2013) from 8:30 AM to 8:30 PM. Ridership data indicates an average 1,323 trips per weekday, 863 on Saturdays, and 614 on Sundays. Total ridership for FY 16 was 412,914. The service is

operated by a private service provider, which includes all maintenance and operations and associated personnel, of RIDER. In 2010 the Rider Transit Center opened, located at 3600 S. Ridge Avenue in Concord. This is the main transfer hub and operations center for RIDER operations.

The seven routes operate on sixty (60) minute headways and meet each hour at the central RIDER hub located in Concord in the AM and late PM, and seventy-five (75) minute headways in the afternoon. The system operates with a \$1.25 fare and also offers a reduce fare of \$.60 to seniors, students, Medicare card holders and disabled citizens. The Charlotte Area Transit System Northeast Blue Line Light Rail Transit System is scheduled for March 2018 and RIDER is planning on connecting to the Blue Line Extension with a new, 7 day a week, all day regional express service as previously mentioned.

### Map 5-3 shows the existing Rider Transit Routes

Map 5-3 - Existing CK Rider Transit Routes



## Salisbury Transit

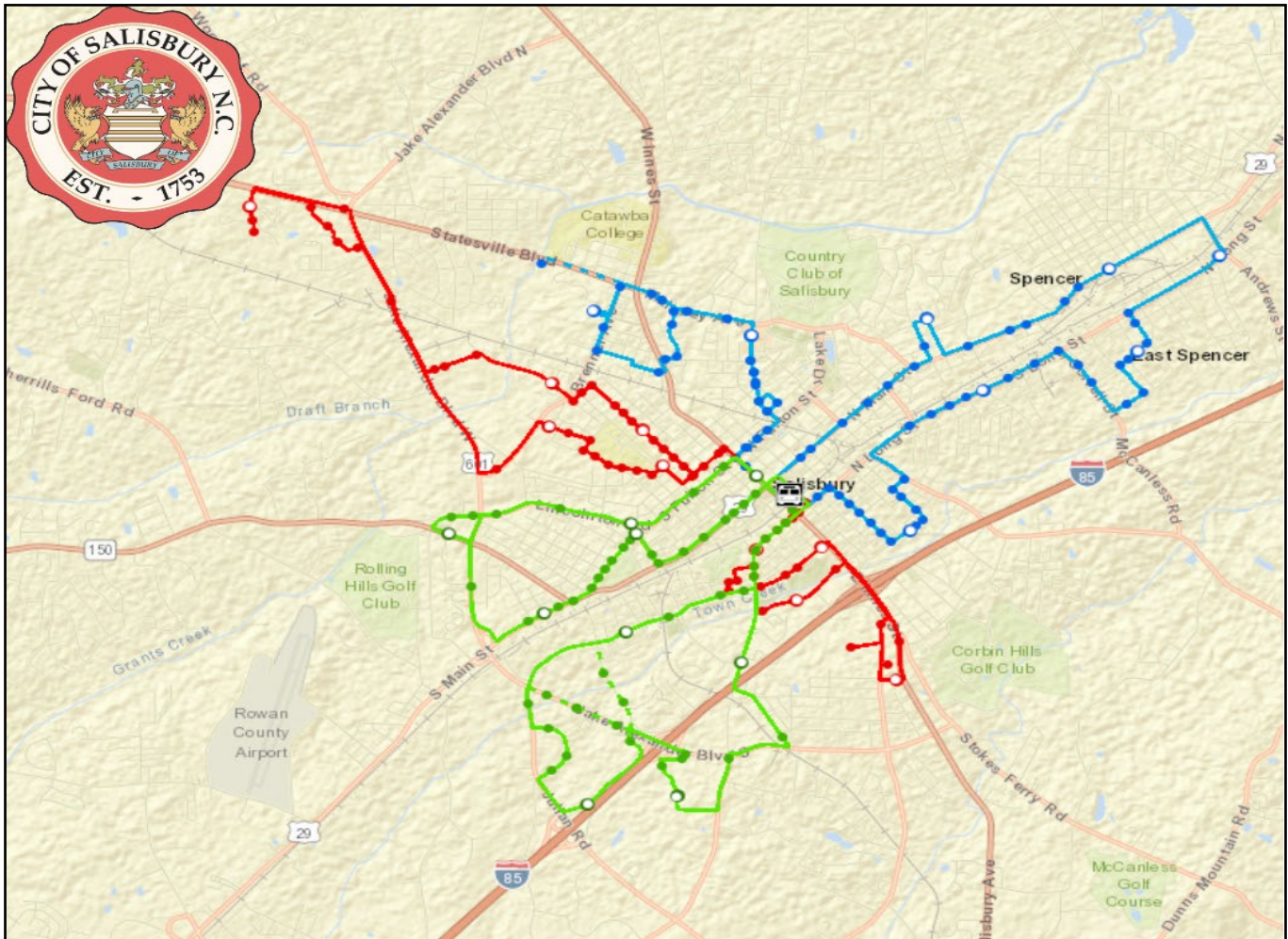
Salisbury City Council governs the Salisbury Transit System. Since the 1970's, the City has provided transit service in the cities of Salisbury, Spencer, and East Spencer. The Salisbury Transit Department is responsible for all transit services in the City. The City provides the fixed-route bus transit service and enters into a contract with Rowan County to provide ADA complementary paratransit service. The ADA complementary paratransit service is operated, and buses are maintained, by MV Transit, a private contractor. The transit service area population is approximately 35,415 persons.

The City's fixed-route bus service has three local routes and two express routes. Each of three local routes departs and arrives at a transfer site in downtown Salisbury. Service is provided 6:00 a.m. to 7:04 p.m. Monday thru Friday; 9:30 a.m. to 3:20

p.m. on Saturdays. From early August through mid-May, two weekend express bus routes provide service from 3:20 p.m. to 11:15 p.m. on Fridays and Saturdays, and from 9:55 a.m. to 7:15 p.m. on Sundays. The base fare is \$1.00, with a half fare of \$0.50 for senior citizens, persons with disabilities, and Medicare card holders.

The City contracts with the Rowan County Transit Service to operate the City's ADA complementary paratransit service on the same days and hours as the City's fixed route service. The fare for this service is \$2.00. The City operates a fleet of six FTA-funded vehicles for its fixed route service. All of these vehicles were obtained with Section 5311 funds thru NCDOT. The ADA complementary paratransit service is operated with county funded vans and cut-a-way vehicles.

Map 5-4 - Existing Salisbury Transit Routes



Map 5-5 - Existing Rowan Express Route

**ROWAN EXPRESS**  
 ANYONE CAN RIDE FOR \$1.00  
 A SERVICE OF ROWAN TRANSIT SYSTEM • 704-216-8899  
 www.rowancountync.gov/rowanexpress

**Catch the ROWAN EXPRESS SOUTH at the following locations:**

City of Kannapolis (MAIN STREET), Landis TOWN HALL, Town of Landis, South Rowan YMCA, China Grove TOWN HALL, Town of China Grove (MAIN STREET - Highway 29A), Employment Security Commission, Starting & Ending Point Salisbury Bus/Transfer Site AMTRAK/DEPOT STREET

- We connect to Amtrak in both Kannapolis & Salisbury
- In Kannapolis, we connect to the CK Rider Bus System
- In Salisbury, we connect to the Salisbury Bus System

The City operates from a single maintenance and administration facility at 300 West Franklin Street. This facility was funded with FTA assistance through NCDOT. The downtown transfer site consists of three bus shelters with amenities that were also funded with Section 5311 funds. The transfer site is used as a connection point for Rowan Express South.

| Annual Operating Statistic | Fixed-Route Service | ADA Complementary Paratransit Service |
|----------------------------|---------------------|---------------------------------------|
| Unlinked Passengers        | 146,418             | 7,066                                 |
| Revenue Hours              | 10,920              | 4,730                                 |

**Rowan Transit**

The Rowan Transit System (RTS) was established in January of 1988 for the purposes of consolidating human services vehicles under one administrative unit that manages the entire fleet. The RTS mission addresses a variety of public transportation services that are targeted to: human service agencies, rural general public passengers, dialysis

centers, out-of-County medical trips, and an agreement with the City of Salisbury to provide ADA Para-transit services.

The rural general public service is called RITA, which stands for Rowan Individual Transportation Assistance. RITA operates in a demand/response mode using grants that subsidizing services for seniors, disabled, and rural general public passengers. The majority of RITA trips are in county with the exception of South Rowan residents who often have medical and personal business in the adjacent towns of Kannapolis and Concord in Cabarrus County. RITA services are rationed to the amount of funding that is available for each fiscal year. Each area of the county has access to RITA one day per week.

RTS also provides out-of-county Medical trips when the need is verified by a physician. Medicaid is the first payer source and for other passengers there is an option to use Elderly & Disabled Transportation Program funding from the NC General Assembly.

RTS has an Advisory Committee appointed by the Board of Commissioners. User agencies include

the Department of Social Service, Health Department, Parks and Recreation, City of Salisbury Transit, The Adult Day Care Center, Mental Health Agency, Vocational Opportunities, County Manager and Finance Director. The County Finance Director serves as the Treasure.

Since the establishment of RTS, Rowan County has conducted an RFP every five years to employ a private transportation management company. The basis of their employment is on a rate per mile charge with a built in adjustment to account for variable prices in wholesale fuel. The current contract is continuing with MV Transportation Inc. effective October 1, 2017. The base rate at the time of this report is \$1.897 per mile. The base wholesale fuel rate is \$3.25 per gallon. [County obtains a rebate of state & federal taxes] For every nickel increment above or below the fuel cost, the rate per mile is adjusted by \$0.05 per gallon.

RTS has an active fleet of 28 vehicles traveling approximately 740,000 miles per year providing approximately 90,514 trips per year.

### **Cabarrus County Transportation**

CCTS has been serving the residents of Cabarrus County since 1988 by interfacing with large number of core agencies to provide both public and human service transportation. Individual agencies work with CCTS to certify clients who require trips to various appointments.

Over the years CCTS has seen a tremendous increase in demand for its services, DSS, Aging, and Cabarrus Vocational Opportunities all just a few of the agencies that partner with CCTS to meet the needs of their clients.

In 2004, Cabarrus County took steps to bring transportation services in-house by becoming a Community Transportation Provider. This was the first step in realizing its goal to provide solutions for the overall transportation system in Cabarrus County. In the years since this transition, Cabarrus County Transportation Services (CCTS) has seen a demand for its services increase in many areas. In

the 2016-2017 Budget year, CCTS provided 91,021 trips.

Even as CCTS experiences increased demand for services from the community, it has developed a service model that effectively and efficiently services the needs of those in Cabarrus County who require point-to-point transportation services. CCTS has now reached a juncture in its growth that necessitates the agency begin looking at more conducive service types to continue to respond to demand and maximize available resources. CCTS was awarded the Federal 5310 Grant through the City of Concord in October 2016. CCTS is now a Large Urban System and will begin receiving Federal Section 5307 Funds.

Cabarrus County Transportation Services is governed by the Cabarrus County Board of Commissioners with a Transportation Advisory Board consisting of representatives of local governments, social service agencies, schools and the general public.

### **Public Transportation Operations/Planning Activities**

With the release of the 2010 Census data, Rider Transit was moved into the status of a Large Urban Transit System and is now a direct recipient of 5307 and 5339 funds from FTA. Up to 80% of bus and bus facility capital projects, FTA capital and transit-planning studies are funded with Section 5307 funds, along with a 10% State match (when available) and a 10%-20% local government match. Up to 75% of 5307 Federal funds can be used to cover the net cost of urban public transportation services for systems operating less than 50 vehicles at peak service (Rider currently operates 7; 8 in 2018). The State provides assistance for the operation of services through the State Maintenance Assistance Program (SMAP), which is allocated on the basis of number of passengers, number of service hours, amount of fares and local government support and an equity share. The City of Concord and the City of Kannapolis are the current funding partners for the necessary local match for each grant.



The City of Concord provides local funds to support the operation of commuter service (Concord Express) during the peak hours, which operates between Concord and Charlotte. This service began on February 1, 1999. Passengers are charged \$4.40 for each trip, which results in a farebox recovery of about 20% of the total cost. The initial service was funded with a grant from the Public Transportation Division of the NCDOT and the cities of Concord and Charlotte. That grant is now expired and the net costs are split between Concord and Charlotte, each paying 50% of the net operating costs. The Concord Express service includes the Big Lots Shopping Center in Concord, and Charlotte Motor Speedway on the northern segment and WT Harris Blvd and downtown Charlotte on the southern terminus. The service is run by Charlotte Area Transit Service, which provides 4 trips in the morning peak period and 4 trips in the afternoon/early evening. The route is primarily along US 29 with a few non-park & ride stops along the Charlotte portion of the route. Ridership peaked in 2008 with 106,688 trips and is currently averaging around 30,000 trips per year. This service will cease operations when the new Rider Express service to the CATS Blue Line Light Rail Extension begins in March of 2018. This new service will run 7 days a week, matching the local service schedule of RIDER's other local bus routes.

## **Public Transportation Funding Programs in the Urban Area**

### **Section 5307 Urbanized Funds City of Concord, City of Salisbury, Rowan County, and Cabarrus County**

The City of Concord is the designated recipient for these funds and apportions to the 4 urban systems in the UZA based on a mutually agreed upon formula/agreement. Based on the approved Interlocal Agreement, Concord and Kannapolis share in the payment of the local match to manage and operate the RIDER Transit System. The Concord Kannapolis Transit Commission (CKTC) is the governing body for RIDER operations. The City of Salisbury is a direct recipient of Section 5307 funds. Rowan County and Cabarrus County also receive Section 5307 funds through an

arrangement with NCDOT. The respective County Commissioners are the governing bodies for these systems.

### **Section 5339 Bus and Bus Facilities Grant City of Concord**

The City of Concord is the designated recipient for these funds and apportions to the 4 urban systems in the UZA based on a mutually agreed upon formula/agreement. The funds address urban capital needs in the UZA for the 4 transit systems. Local matching funds are provided by the respective local government entity.

### **Section 5310 Enhanced Mobility Urban Grant City of Concord**

These funds are targeted for urban senior transportation and individuals with disabilities transportation that exceed the ADA requirements. The City of Concord is the designated recipient for these funds and administers this program through a competitive grant selections process.

### **Section 5303 Transit Planning Grant City of Concord**

These funds are used for transit administration and planning for the RIDER system. The local match is shared between the City of Concord and the City of Kannapolis.

### **Section 5307 Transit Funds City of Salisbury**

In 2015, The City became a direct recipient of FTA Section 5307 funds. Prior to that time, the City received Section 5311 funds through the North Carolina Department of Transportation (NCDOT). Capital items are funded at 80 percent, operation items at 50 percent. The State provides assistance for operations through the State Maintenance Assistance Program (SMAP), which is allocated on the basis of number of passengers, number of service hours, amount of fares and local government match. Salisbury Transit also provides ADA Paratransit service. The service is provided by Rowan Transit System which contracts with MV Contract Transportation, Inc. to operate the service.

## Section 5303 Transit Planning Grant City of Salisbury

These funds are used for transit administration and planning. The local match is provided by Salisbury.

## Congestion Mitigation and Air Quality Improvement Funds Cabarrus-Rowan MPO

The Cabarrus-Rowan MPO is scheduled to receive at least \$1 million per year from NCDOT for projects that improve traffic congestion and air quality. Transit services/expansions qualify for this program. With this allocation, the Cabarrus-Rowan MPO has funded for the following 4 projects since 2004:

- Express peak hour transit service between downtown Kannapolis and downtown Salisbury with stops in south Rowan. Service will be operated by the Rowan Transit System.
- Free transit service during Ozone Action Days in Salisbury
- Saturday and Sunday service for the Rider bus system in Concord and Kannapolis
- Free transit service on the Rider bus system during the Race Weeks at Charlotte Motor Speedway

These projects represented over 14 percent of the total allocation during the initial years of the CMAQ allocation. Each CMAQ Transit project has boosted transit ridership for each of 2 fixed route systems and 2 county providers. The MPO hopes to continue these types of CMAQ initiatives with future allocations to the CR MPO.

## Rowan Transit Funding

Rowan Transit System submits an annual Community Transportation Program (CTP) application to the NC Public Transportation Division. The CTP funding incorporates the Federal Section 5310 and 5311 programs and the State Rural Capital Program into a single application package. The Official applicant agency is the Rowan County Board of Commissioners.

The annual CTP application requests 85%

reimbursement of Administrative costs and 90% reimbursement on Capital, Facility, and Technology budgets. RTS does not receive any CTP operating funds since we employ a private transportation management company to run the system. In FY'18 RTS was awarded \$182,232 in the Administrative Budget and \$295,500 in the Capital Budget by the NC Board of Transportation.

RTS also submits an annual application for Rural Operating Assistance Program funds often referred to as the ROAP application. In FY'18 the NC Board of Transportation awarded the following grants:

|   |           |
|---|-----------|
| Elderly & Disabled Transportation Program (EDTAP) | \$103,830 |
| Employment Transportation Assistance              | \$32,880  |
| Rural General Public Program (RGP)                | \$85,467  |

EDTAP and Work First require no local matching. The RGP funds require a 10% local match which is derived from passenger fares and County match.

Rowan Transit submitted a Demonstration Grant for FY'18 in support of the Rowan Express and was awarded \$130,000. A 50% match is required for this grant which comes from local agreements with municipalities and Employee Transportation Assistance funds. Other operating revenue for RTS is derived from the various human service agencies that budget money to purchase transportation for their clients.

## Cabarrus County Transportation Funding

Cabarrus County Transit System submits an annual Community Transportation Program (CTP) application to the NC Public Transportation Division. The CTP funding incorporates the Federal Section 5310 and 5311 programs and the State Rural Capital Program into a single application package. The Official applicant agency is the Cabarrus County Board of Commissioners. CCTS submits an annual application for Rural Operating Assistance Program funds often referred to as the ROAP application. In FY'18 the NC Board of Transportation awarded the following grants:

|   |          |
|---|----------|
| Elderly & Disabled Transportation Program (EDTAP) | \$98,650 |
| Work First Employment Transportation Assistance   | \$41,683 |
| Rural General Public Program (RGP)                | \$68,524 |

EDTAP and Work First require no local matching. The RGP funds require a 10% local match which is derived from passenger fares and County match.

### Future Urban Service Studies

The Charlotte Regional Alliance for Transportation (CRAFT) has been formed by the regional MPO agencies. CRAFT was created by resolution by all four TAC bodies and includes the four MPOs in the Metrolina region: Cabarrus/Rowan, Gaston/Lincoln/Cleveland, Charlotte (Mecklenburg/Union/Iredell), and the Rock Hill-Ft. Mill (SC) Urban Area. CRAFT’s role is to enhance communication among local and regional entities, promote awareness of regional concerns, and to provide an educational forum in the Charlotte metropolitan bi-state region that addresses significant common issues.

One goal of CRAFT is to evaluate mobility options throughout the metro region and into South Carolina. The initiative may also consider expanding upon the existing Charlotte Area Transit System (CATS). The City of Concord and CATS currently provide express AM/PM peak bus service between uptown Charlotte and the Concord/Kannapolis area. In addition, the Cabarrus-Rowan MPO was a partner in a regional study to evaluate HOV/HOT lanes on I-85, which would make express bus service more competitive from a time standpoint with the single occupant vehicle. This study known as the Fast Lanes Study was completed in 2009 and the City of Charlotte has progressed into 2 additional phases of the study that includes federal funding through the FHWA Value Pricing Program. In addition to bus service, the extension of the CATS Northeast Rail Line will shape cross commuting behavior in Cabarrus and Mecklenburg Counties. The City of Concord has completed discussions with CATS to tie the Blue Line Extension at UNCC to the CK Rider

Transit Center with an express bus that will run throughout the day rather than just peak hour service. Ultimately, future transportation plans must be multimodal in this corridor to address the growing demand for commuter travel between the CR MPO and the rest of the Metrolina Region including the Charlotte-Douglas Airport.

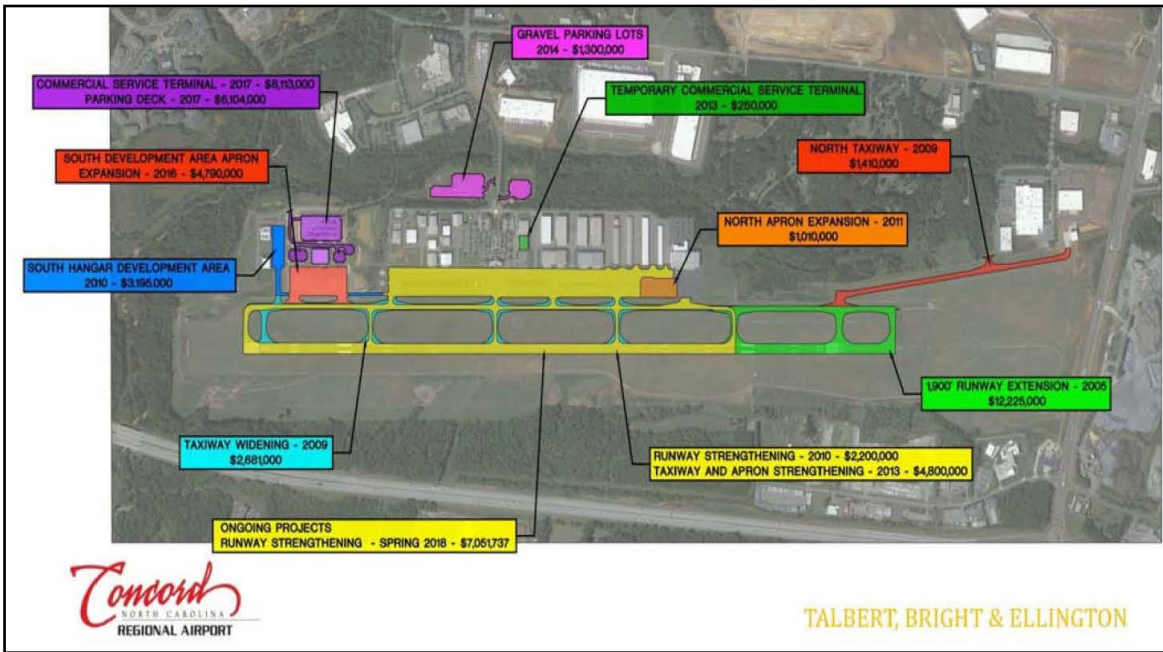
### Aviation Element

The Concord Regional Airport (CRA), owned by the City of Concord, is ranked as the 5th busiest airport in North Carolina. In 2016 the operations at the airport totaled 62,038 of which 2,039 were air carrier operations and 6,704 were air taxi operations and 42,034 were classified as transient aircraft operations. Concord Regional is a FAA certified Part 139 Class I airport with Index C firefighting and rescue capability. The Concord Regional Airport is an important local development tool for economic expansion and has an estimated annualized economic impact on the Cabarrus County economy of over \$160 million.

#### Map 5-7 shows the Concord Regional Airport

The CRA is home to several corporations, NASCAR racing teams and 170 privately owned aircraft. The main entrance is located on Derita Road. The CRA is primarily accessed from Exit 49 and 52 off I-85 at Poplar Tent Road or Concord Mills Blvd. Land development and economic growth around the CRA consists of industrial, commercial, and motorsports related organizations. Airport revenue is generated by the renting of hangar space, office space, ramp space, ground services, pilot supplies, the sale of aviation fuel, and by fees and from landings, services, and parking.





**Map 5-6 - Concord Regional Airport Master Plan**

In 2013 CRA received an FAA Part 139 Class I Airport Operating Certificate and was reclassified from a general aviation airport to a Non-Hub Primary Commercial Airport that allows scheduled airlines to service the airport. In December 2013, Allegiant Airlines began scheduled passenger service with twice weekly service to the Orlando Sanford International Airport with 166 passenger MD-80 aircraft. That service proved to be sustainable and in 2015-2016 the City of Concord, NCDOT, and FAA made infrastructure investments in airline passenger facilities that included a large aircraft parking apron, 32,000 square foot two gate terminal building, entrance roadway, and a 700 space parking garage. Allegiant has utilized these new facilities and expanded their service at CRA to around 20 weekly flights to five non-stop destinations with 177 passenger Airbus A-320 aircraft. These flights continue to average over 85% of capacity.

The airport is still utilized by many general aviation users including private aircraft owners, corporations, and flight schools. NASCAR race teams continue to be important airport users. Many teams now regularly use commercial charter services out of CRA to shuttle their crews to race and testing events around the country.

CRA has made numerous airfield improvements, including lengthening and strengthening the runway to accommodate larger aircraft and in facilities that expand the airport’s capacity. In 2018, the airport will update its Master Plan and begin a new round of airfield improvements including a runway and taxiway overlay and fuel storage tank area expansion.

Because of its close proximity to I-85, I-485, Charlotte Motor Speedway at Concord, Charlotte Metro area, and the North Carolina Research Campus, CRA remains attractive to corporations in the area. The MPO Transportation Plan includes the widening of Derita Road to accommodate the current and future growth of the CR MPO area. Upon the completion of the widening of Derita Road (TIP# U-4910), the street network should improve access and mobility around the CRA facility.

The Mid-Carolina Regional Airport (MCRA) is a general aviation airport that has served Piedmont North Carolina since November 1930. The Airport, located near Salisbury on Airport Loop Road is conveniently located adjacent to U.S. Highway 29 South and just 2 miles from Interstate 85 (Peach Orchard Road, Exit 72).

The Airport lies just 25 miles north of the Concord Regional Airport and just 15 miles south of the Davidson County Airport (driving distance).

**Map 5-7 shows the Mid-Carolina Regional Airport**

The MCRA is home to over 100 based aircraft, including the corporate flight operations for Food Lion and Shoe Show. There are more than 16,000 General Aviation local aircraft operations per year, 4,000 Military operations per year, and 3,000 Transient operations per year. The North Carolina Highway Patrol Flight Operations as well as the North Carolina Army National Guard’s Army Aviation Support Facility are based at the Airport. The Airport is in close proximity to the NC Research Campus in Kannapolis.

The Airport provides a primary paved runway of 5,500 feet x 100 feet with lighted parallel taxiway as well as a complete Instrumental Landing System (ILS) to runway 20. The runway and taxiway have

been recently resurfaced with new markings painted and center line reflectors installed.

Rowan County operates the Airport with revenues generated from leasing hangars, tie-down spaces, ground services, sale of fuel, and other airport related services.

The current widening project of Interstate 85 in Rowan County to eight lanes will provide easier accessibility from surrounding communities to the MCRA, including the Greensboro/Winston-Salem/High Point and Charlotte Metro regions.

**Private Transport**

There are approximately sixteen (16) taxicab companies operating in the MPO planning area. These privately owned companies provide on-demand and client based transportation services. Various fares are charged on a per mile basis. Local governing boards oversee and regulate certain fees and service areas on a license basis.

**Map 5-7 - Mid-Carolina Regional Airport Master Plan**

