



# Western Piedmont Council of Governments

Greater Hickory Metropolitan Planning Organization

## Transportation Advisory Committee (TAC)

Wednesday, January 18, 2023, 2:30 PM

WPCOG Offices—1880 2nd Ave NW

[wpcog.org/metropolitan-planning-org](http://wpcog.org/metropolitan-planning-org)

Agenda Item	Presenter	Attachment	Action
Call to Order / Ethics Awareness/ Introductions	Bruce Eckard		
Minutes of December 14, 2022 Meeting	Bruce Eckard	<a href="#">Attachment I</a>	Approve Minutes
Appoint New TAC Vice Chair	Bruce Eckard		Committee Approval
Transportation Improvement Program Revisions for Release	Averi Ritchie	<a href="#">Attachment II</a>	Release for Public Comment
Fiscal Year 2024 Local Assessments	Averi Ritchie	<a href="#">Attachment III</a>	Recommend for Approval
Draft FY 2024 Unified Planning Work Program (UPWP)	Averi Ritchie	<a href="#">Attachment IV</a>	Recommend for Approval
Transportation Improvement Plan Revisions for 5303 Funding	Averi Ritchie	<a href="#">Attachment V</a>	Recommend for Public Release
Approve 5310 State Transportation Improvement Program Revision	Averi Ritchie	<a href="#">Attachment VI</a>	Approve by Resolution
NCDOT Paved Trails and Sidewalk Feasibility Study Grant Application Resolution	Averi Ritchie	<a href="#">Attachment VII</a>	Approve by Resolution
Draft Congestion Management Plan of the 2050 MTP	Daniel Odom & Averi Ritchie	<a href="#">Attachment VIII</a>	Discussion Item
Traffic Count Data for the Hickory MPO Area	Taylor Dellinger	<a href="#">Attachment IX</a>	Discussion Item
NCDOT Updates			
Division 11	Sean Sizemore		
Division 12	Anil Panicker		
Division 13	Hannah Cook		
Transportation Planning Division	James Upchurch		
Integrated Mobility Division	Alexius Farris		
Movability Advisory Committee Update	Averi Ritchie		
Public Comment / Announcements	Bruce Eckard		
Adjournment			
Next Meeting: February 22, 2023	Bruce Eckard		



**GREATER HICKORY  
METROPOLITAN PLANNING ORGANIZATION (MPO)**  
1880 2<sup>nd</sup> Avenue NW, PO Box 9026  
Hickory, NC 28603



**MINUTES**  
**GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION (GHMPO)**  
**METROPOLITAN TRANSPORTATION ADVISORY COMMITTEE (TAC)**  
Wednesday, December 14, 2022, 2:30 pm, In-person meeting and via Zoom

Present			Absent		
First Name	Last Name	Representing	First Name	Last Name	Representing
Robert	Abernethy	Catawba County	Ralph	Prestwood	City of Lenoir
Barry	Mitchell	Town of Hudson	Rexanna	Lowman	Town of Valdese
Bruce	Eckard	City of Conover	Donald	Robinson	Town of Catawba
Hank	Guess	City of Hickory (1 of 2)	Bob	Sigmon	Town of Maiden
Richard	Andrews	<b>Town of Cahaj's Mtn</b>	Les	Morrow	City of Claremont
Wendy	Cato	City of Morganton	Jerry	Hodge	City of Newton
Randall	Mays	Town of Long View	VACANT		Brookford
Jody	York	Town of Hildebran	VACANT		Caldwell County
Jill	Patton	City of Hickory (2 of 2)	VACANT		Cedar Rock
Martin	Townsend	Town of Granite Falls	VACANT		Connelly Springs
			VACANT		Drexel
			VACANT		Gamewell
			VACANT		Glen Alpine
			VACANT		Rutherford College
			VACANT		Sawmills
<u>WPCOG, FHWA, NC Board of Transportation, &amp; Guests</u>			<u>NCDOT Staff</u>		
		Anthony Starr – WPCOG			Michael Poe – Div. 11
		Alison Adams – WPCOG			Travis Jordan – Div. 12
		Averi Ritchie – WPCOG			Mark Stafford – Div. 12
		Daniel Odum – WPCOG			Chris Guffey – Div. 13
		Jess Odette -- WPCOG			Tim Anderson – Div. 13
		Michael Bowman – WPRTA			Stephen Sparks – Div. 13
		Mary Furtado – Catawba County			James Upchurch -- TPD
		Brad Lail – NCDOT Board			Hannah Cook – Div.13

**Call to Order and Introductions** – Chair Eckard called the meeting to order and welcomed all present at 2:32 PM. The meeting proceeded with introductions around the room. Robert Abernethy and Loretta Barren, attending the meeting remotely via Zoom were introduced. Upon a motion by Chair Eckard and a second by Mr. Andrews, the TAC unanimously approved remote participation of the listed remote viewers.

**Action Items:**

- I. **Approval of Minutes** – Chair Eckard asked the members if they had an opportunity to review the minutes. Upon a motion from Ms. Patton and a second from Mr. Townsend, the TAC unanimously approved the minutes of their November 16, 2022 meeting.
  
- II. **Transportation Improvement Program Revisions for Approval** – Ms. Ritchie presented TIP Revisions for adoption by resolution. Ms. Ritchie outlined that they were all modifications, and would not need a public comment period. Mr. Guess noted that the Bookwalk had been renamed to Historic Ridgeview Walk. Upon a motion by Mr. Hodge and a second by Ms. Beatty, the board voted unanimously to adopt the TIP Revisions. Upon a motion by Ms. Patton and a second from Mr. Townsend.

- III. **MPO Meeting Calendar for 2023**– Ms. Ritchie presented the proposed meeting schedule for 2023. Meetings in January, April, November, and December are all moved forward one week. Upon a motion from Ms. Patton and a second from Mr. Eckard, the calendar was approved.
- IV. **Urban 5310 Project Addition**– Ms. Ritchie presented the project application from Catawba Department Social Services for a senior citizen mobility project. WPRTA is awarded these funds, and the MPO holds the call for projects. Catawba County DSS requested \$240,000 with a local match for this project. Upon a motion from Ms. Patton and a second from Mr. Townsend, the project was approved and released for public comment.
- V. **Unified Planning Work Program (UPWP) Initiatives** -- Ms. Ritchie presented the UPWP initiatives for the next fiscal year. Ms. Ritchie presented federal requirements for the UPWP, and required planning considerations. These planning considerations are: Tackling the Climate Crisis, Equity and Justice in Transportation Planning, Complete Streets, Public Involvement, Federal Land Management, Planning and Environment Linkages, and Data in Transportation Planning. Each consideration is accompanied by an initiative for the MPO.
- VI. **Safety Performance Measures Adoption**– Mr. Odom presented the 2023 safety performance targets for the next year. Mr. Odom noted that the TCC had seen these targets in October, prior to the opening of a public comment period. Mr. Odom noted that these targets are established by NCDOT. Upon a motion by Mr. Eckard and a second by Ms. Patton, the performance targets were adopted.
- VII. **Draft MTP Highway Chapter Project Changes**-- Mr. Odom presented the changes to the 2050 MTP Highway Plan. MPO staff introduced the Highway Plan in November and requested feedback from planning staff. Throughout the month of November and early December, MPO staff met with local planning staff to solidify the Highway Plan. Ms. Ritchie noted that MPO staff broke down some of the projects into shorter segments for prioritization. Upon a motion by Ms. Patton and a second by Mr. Andrews, the edits were approved.
- VIII. **Draft Safety and Security Chapter** -- Mr. Odom presented the draft Safety and Security chapter of the 2050 MTP Update. Mr. Odom shared the comprehensive nature of transportation safety and security in the region, as it is an effort including the NCDOT, local agencies, federal agencies, National Guard, Safe Streets and Roads for All and Duke Energy. In discussion, Mr. Odom also noted that more information regarding the Unifour Hazard Mitigation Plan and other plans would be included in an appendix within the final MTP document. In discussion, Ms. Patton noted the use of cell phones while driving as a factor increasing crash rates. Mr. Lail pointed out the increase of crashes in 2021 for Catawba County. Mr. Odom noted that in previous years, population increase had been a justification, but no data analysis was available to explain 2021's increase. Mr. Eckard noted the volume of information included in the Safety and Security Chapter.
- IX. **Draft System Resilience Chapter** -- Mr. Cavanaugh presented the Draft 2050 System Resilience Chapter. Mr. Cavanaugh touched on legislative requirements for system resilience as a chapter. Mr. Cavanaugh discussed vulnerabilities within the transportation system, and recent extreme weather events. Flooding and Flash Flooding events present the greatest threat to system resilience in the region. Mr. Cavanaugh touched on the meaning of the 100-year and 500-year flood plain, which illustrate probability of flooding events. Mr. Cavanaugh also provided insightful mapped analysis of projected growth in floodplain areas for the region. Mr. Cavanaugh thanked division engineers for their input in

identifying areas vulnerable to extreme weather events. Mr. Andrews asked how councils could better assess situations that would include floodplain. Mr. Cavanaugh stated that he would be happy to assist elected officials in working through these issues. Mr. Starr suggested that they should consider the transportation system around developments to allow for multiple routes of egress should an emergency arise.

#### **NCDOT Update –**

- **Division 11**– Mr. Poe provided an outline of the printed update for Division 11.
- **Division 12** – Mr. Stafford provided an outline of the printed update for Division 12. He stated that resurfaces would be winding down.
- **Division 13**– Mr. Sparks provided an update for Division 13. He also noted a maintenance contract for bridge maintenance within Division 13.
- **NCDOT-TPD** – No update. Mr. Upchurch is in the hiring process for the MPO coordinator position.
- **NCDOT-IMD** – Ms. Farris provided an update for the Integrated Mobility Division. Ms. Farris outlined the IMD call for projects that is currently open. She also provided TGI Grant information, and information regarding a forthcoming survey for IMD.
- **NCDOT Board** – Mr. Lail provided information on the January 18-19 transportation summit. Mr. Lail also noted that NCDOT train tickets were buy one-get one free. He stated that the Charlotte to Raleigh train had positive ridership numbers. NCDOT was also recognized by militaryfriendly.com for their friendliness towards the military.

**Public Comments or Announcements:** Mr. Starr shared that Ms. Ritchie had been named permanent Transportation Planning Manager for the GHMPO.

**Adjournment** – Chair Eckard adjourned the meeting at 3:29. The next meeting is scheduled for January 18, 2023 at 2:30 PM.

Respectfully Submitted,

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Bruce Eckard, MPO/TAC Chair

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Averi Ritchie, TAC Secretary

REVISIONS TO THE 2020-2029 STIP  
HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP ADDITIONS

HB-0056 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1514, REPLACE BRIDGE 130130 OVER YADKIN RIVER.	RIGHT-OF-WAY	FY 2026 -	\$28,000	(DP)
				FY 2026 -	\$112,000	(HFB)
		<b><u>ADD NEW PROJECT AS A RESULT OF RECEIVING</u></b>	CONSTRUCTION	FY 2027 -	\$160,000	(DP)
		<b><u>FEDERAL RAISE GRANT. DP REPRESENTS RAISE</u></b>		FY 2027 -	\$640,000	(HFB)
		<b><u>GRANT FUNDS.</u></b>				\$940,000
* HB-0057 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130185 OVER JOHNS RIVER.	RIGHT-OF-WAY	FY 2023 -	\$28,000	(DP)
				FY 2023 -	\$112,000	(HFB)
		<b><u>ADD NEW PROJECT AS A RESULT OF RECEIVING</u></b>	CONSTRUCTION	FY 2024 -	\$160,000	(DP)
		<b><u>FEDERAL RAISE GRANT. DP REPRESENTS RAISE</u></b>		FY 2024 -	\$640,000	(HFB)
		<b><u>GRANT FUNDS.</u></b>				\$940,000
* HB-0058 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130186 OVER JOHNS RIVER.	RIGHT-OF-WAY	FY 2023 -	\$28,000	(DP)
				FY 2023 -	\$112,000	(HFB)
		<b><u>ADD NEW PROJECT AS A RESULT OF RECEIVING</u></b>	CONSTRUCTION	FY 2024 -	\$160,000	(DP)
		<b><u>FEDERAL RAISE GRANT. DP REPRESENTS RAISE</u></b>		FY 2024 -	\$640,000	(HFB)
		<b><u>GRANT FUNDS.</u></b>				\$940,000
* HB-0059 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130275 OVER JOHNS RIVER.	RIGHT-OF-WAY	FY 2023 -	\$28,000	(DP)
				FY 2023 -	\$112,000	(HFB)
		<b><u>ADD NEW PROJECT AS A RESULT OF RECEIVING</u></b>	CONSTRUCTION	FY 2024 -	\$160,000	(DP)
		<b><u>FEDERAL RAISE GRANT. DP REPRESENTS RAISE</u></b>		FY 2024 -	\$640,000	(HFB)
		<b><u>GRANT FUNDS.</u></b>				\$940,000

\* INDICATES FEDERAL AMENDMENT

REVISIONS TO THE 2020-2029 STIP  
HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP ADDITIONS

* HB-0060 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130317 OVER JOHNS RIVER. RIGHT-OF-WAY <b><u>ADD NEW PROJECT AS A RESULT OF RECEIVING FEDERAL RAISE GRANT. DP REPRESENTS RAISE GRANT FUNDS.</u></b>	CONSTRUCTION	FY 2023 - \$36,000 (DP) FY 2023 - \$146,000 (HFB) FY 2024 - \$208,000 (DP) FY 2024 - <u>\$832,000</u> (HFB) \$1,222,000
HB-0061 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1574, REPLACE BRIDGE 130349 OVER JONES CREEK. <b><u>ADD NEW PROJECT AS A RESULT OF RECEIVING FEDERAL RAISE GRANT. DP REPRESENTS RAISE GRANT FUNDS.</u></b>	RIGHT-OF-WAY CONSTRUCTION	FY 2026 - \$22,000 (DP) FY 2026 - \$90,000 (HFB) FY 2027 - \$128,000 (DP) FY 2027 - <u>\$512,000</u> (HFB) \$752,000

STIP MODIFICATIONS

* B-5869 BURKE <b>PROJ.CATEGORY</b> REGIONAL	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 64/70, REPLACE BRIDGE 110099 OVER SOUTHERN RAILROAD. <b><u>COST INCREASE EXCEEDING \$2 MILLION AND 25% THRESHOLDS.</u></b>	CONSTRUCTION	FY 2023 - \$5,912,000 (BFP) FY 2024 - \$8,243,000 (BFP) FY 2025 - <u>\$5,045,000</u> (BFP) \$19,200,000
R-3430B BURKE <b>PROJ.CATEGORY</b> HWY FUNDS	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1001 (CONNELLY SPRINGS ROAD), REPLACE BRIDGE 110010 OVER CATAWBA RIVER. <b><u>TO ALLOW ADDITIONAL TIME FOR PRELIMINARY ENGINEERING. DELAY CONSTRUCTION FROM FY 24 TO FY 25.</u></b>	CONSTRUCTION	FY 2025 - \$2,761,000 (HFB) FY 2026 - \$8,378,000 (HFB) FY 2027 - \$6,170,000 (HFB) FY 2028 - <u>\$1,693,000</u> (HFB) \$19,002,000

\* INDICATES FEDERAL AMENDMENT

REVISIONS TO THE 2020-2029 STIP  
HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

U-6035 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1002 (DUDLEY SHOALS ROAD) AND SR 1751 (GRACE CHAPEL ROAD/CAMPGROUND ROAD)/SR 1752 (PEACH ORCHARD ROAD). CONSTRUCT ROUNDBOUT.	CONSTRUCTION	FY 2024 - \$136,000 (T) FY 2025 - <u>\$789,000</u> (T) \$925,000
		<u><b>TO ALLOW ADDITIONAL TIME FOR UTILITY RELOCATION, DELAY CONSTRUCTION FROM FY 23 TO FY 24.</b></u>		
U-6036 CALDWELL <b>PROJ.CATEGORY</b> DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1109 (PINWOOD ROAD), US 321 TO SR 1931 (BERT HUFFMAN ROAD). UPGRADE ROADWAY.	CONSTRUCTION	FY 2024 - \$88,000 (T) FY 2025 - \$4,005,000 (T) FY 2026 - \$3,576,000 (T) FY 2027 - <u>\$1,131,000</u> (T) \$8,800,000
		<u><b>TO ALLOW ADDITIONAL TIME FOR RIGHT-OF-WAY ACQUISITION, DELAY CONSTRUCTION FROM FY 23 TO FY 24.</b></u>		

\* INDICATES FEDERAL AMENDMENT

**REQUEST FOR ACTION  
TRANSPORTATION ADVISORY COMMITTEE**

**MEETING DATE:** January 18, 2023

**SUBJECT:** FY 2024 Transportation Assessments for MPO Work Program

**PRESENTER:** Averil Ritchie

**ATTACHMENTS:**

1. NCDOT Transportation Planning Division Letter
2. NCDOT Integrated Mobility Division Letter
3. MPO Assessments Table by Area Local Government

**SUMMARY OF REQUEST:**

WPCOG serves as the lead planning agency for the Greater Hickory MPO. Each year, the WPCOG assesses dues to its local governments. The Policy Board of the WPCOG approves the overall dues, but the Transportation Advisory Committee has purview over the portion used to fulfill the required local match for Federal transportation funding.

Per the attached NCDOT-TPD letter, PL funding is increasing from \$351,800 to \$408,800. The Infrastructure Investment and Jobs Act has added a new PL set aside for Increasing Safe & Accessible Transportation Options. The Act requires each MPO to use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. This amounts to \$15,200 in federal funds. Other Highway program funding will remain at the same levels, including \$80,000 in Statewide Planning Research (SPR) and \$100,000 in Surface Transportation Block Grant – Direct Attributable (STBG-DA) funding.

Staff proposes to adjust projects and work programs to reflect new federal planning initiatives. These initiatives include goals relating to transitioning to a clean energy and resilient future, equity and justice in transportation planning, supporting complete streets, increased public involvement, coordination with Federal Land Management Agency (FLMA), planning involving environmental linkages, and incorporating data sharing.

Per the attached NCDOT-IMD letter, 5303 funding is decreasing from \$109,942 to \$59,889. Other 5307 funding administered by WPRTA would [REDACTED]. The overall decrease in transit planning was anticipated due to last fiscal year's increase being a one year increase.

Based on the direction of the TCC and TAC in recent years, staff also proposes to utilize the annually estimated population to apportion the assessments. The attached table shows a comparison of last year and this year to show how the collective transportation assessments are increasing by local government.

**BOARD ACTION REQUESTED:** Staff requests TAC to review and approve the FY 2024 MPO assessments.



**Suggested Motion:** *I move that the TAC approve the assessments as presented.*



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

November 9, 2022

Mr. Averi Ritchie, AICP, Transportation Planning Manager  
Western Piedmont Council of Governments  
P.O. Box 9026  
Hickory, North Carolina 28603-9026

Subject: Greater Hickory MPO, FY 2024 PL Work Program Allocation

Dear Ms. Ritchie:

The IJA has provided \$7,256,890 in PL funds for FY 2024 (after accounting for SAP system charges). There is also \$1,689,136 available from closure of previous years' accounts. These funds have been allocated using the current PL fund allocation formula and are available for programming for your FY 2024 PL program that begins July 1, 2023.

For FY24, the MPO is estimated to receive a yearly allocation of \$408,800 in Federal PL funds.

Program name	80% Federal funds	20% local match	Total work plan Federal PL + local match for PL funds *
Metropolitan Planning	\$393,600	\$98,400	\$492,000
Safe & Acc Transp. Options – Metro Planning set aside	\$15,200	\$3,800	\$19,000
<b>Total PL FY24</b>	<b>\$ 408,800</b>	<b>\$102,200</b>	<b>\$511,000</b>

(\*Total does not include other sources of Federal, State, or local funding such as STBG-DA funds.).

In 2022, the Infrastructure Investment and Jobs Act has added a new Metro Planning set-aside for Increasing Safe & Accessible Transportation Options. The Act requires each MPO to use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. [§ 11206(b)]. The 2.5% set aside is provided by a separate allocation of PL funds (federal program code Y410). The MPO's share of this amount is distributed using the same allocation formula. A full list of eligible activities can be found in [§ 11206(c)] <https://www.congress.gov/bill/117th-congress/house-bill/3684/text> and [FHWA's fact sheet can be found at this link](#). These set-aside funds will have a separate WBS number and therefore any expenditures must be noted separately on an invoice and have a separate description of work. Please program these funds in your UPWP by adding a new row (so that the funding amount is separately noted) below task code 2-B-II (Regional Planning) or Bike/Ped element of MTP.

If the MPO plans to program any STBG-DA funds for planning, you should coordinate with your appropriate TIP regional contact to have it added to the STIP, add it to your work plan and

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NC DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION PLANNING DIVISION  
1554 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1554

Telephone: (919) 707-0900  
Fax: (919) 733-9794  
Customer Service: 1-877-368-4968

Location:  
1 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601

Website: [www.ncdot.gov](http://www.ncdot.gov)



STATE OF NORTH CAROLINA  
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ROY COOPER  
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J. ERIC BOYETTE  
SECRETARY

coordinate with your TPD Coordinator to develop a STBG-DA funding agreement. Please copy myself and Daryl Vreeland ([dvreeland@ncdot.gov](mailto:dvreeland@ncdot.gov)) with this amount.

For auditing purposes, you should include the program name (Metropolitan Planning / PL 104(f) funds) and the CFDA Number (20.205-5) on your Schedule of Expenditures for Federal and State Awards. FY24 WBS and PO numbers will be transmitted in the future.

Your Draft (U)PWP for FY 2024 will be due on February 28, 2023 and your approved PWP should be submitted by March 31, 2023 online in .pdf format and include the cover letter, adoption resolution, summary budget table, and an item by item task description. The MPO is also required to complete an annual certification prior to the Department approving your FY 2024 PL program. The annual certification resolution (as well as the yearend report) should be uploaded as separate .pdf documents. If you have any questions, please do not hesitate to call or email me: (919) 707-0901, [jalavi@ncdot.gov](mailto:jalavi@ncdot.gov).

Your work plan also includes \$80,000 in Federal SPR funds to cover planning activities in the former RPO areas that have been incorporated into the MPO. These funds should be billed separately from your normal PL invoice.

Sincerely,

*Jamal Alavi*

Jamal Alavi, P.E.

Director, Transportation Planning Division

*Mailing Address:*  
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TRANSPORTATION PLANNING DIVISION  
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*Telephone:* (919) 707-0900  
*Fax:* (919) 733-9794  
*Customer Service:* 1-877-368-4968

*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
1 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601

# Unified Planning Work Program (UPWP) – Draft FY 2023-2024 Plan Summary

For the full draft plan, visit: <http://www.wpcog.org/transportation-documents>

## Purpose

The Unified Planning Work Program (UPWP) outlines transportation planning tasks to be conducted during the fiscal year. The UPWP sets the budget for these items and identifies the funding sources. MPO staff is responsible for ensuring completion of the planning tasks identified in the UPWP.

## Federal Requirements

The new Infrastructure Investment and Jobs Act (IIJA) continues many planning factors previously in the FAST Act, including added new emphasis on equity and resiliency. This is achieved through a Continuing, Cooperative, and Comprehensive (3-C) transportation planning process that results in a long-range plan and short-range program of projects.

## Federal Planning Initiatives

Major components that feed into the FY 2023-2024 UPWP include:

- Goals relating to transitioning to a clean energy and resilient future
- Equity and justice in transportation planning
- Supporting complete streets
- Increased public involvement
- Coordination with Federal Land Management Agency (FLMA) as needed
- Transportation planning involving environmental linkages
- Incorporating data sharing in transportation planning

## Main Work Tasks for FY 2023-2024

- 2023-2024 will be a work-intensive year for collecting data for Prioritization 7.0, assigning local input points, and submitting new transportation projects to NCDOT for the region. Staff will meet with NCDOT and all municipalities to ensure the best projects are selected and effectively entered into NCDOT's prioritization system.
- Our recent Federal Certification Review recommended expanding resiliency considerations and environmental justice analysis. To expand on GHMPO's 2050 MTP, staff will collect data for new mapping tools to support Title VI, Environmental Justice, Resiliency, Bike/Pedestrian/Transit projects, and Highway initiatives.
- The region's bicycle and pedestrian needs have not been assessed in ten years. Staff will update the GIS inventory of existing data from local, state, and federal partners related to bicycle and pedestrian transportation facilities. Data will be assessed and used to make project recommendations for the regional bike and pedestrian plan.
- The Movability Advisory Committee will continue to meet quarterly. This group conducts and assists with walk audits and reports that help investigate mobility barriers. This group, along with walk audits, help promote equity and justice in transportation planning.
- The TCC and TAC will continue to meet monthly with virtual attendance options.
- GHMPO's Locally Administered Project Program (LAPP) will hold a call for projects. New funding sources (Carbon Reduction Program) will be incorporated into the call and the scoring process.

- GHMPO staff continue to conduct annual Vehicle Occupancy Rate (VOR) counts throughout the region. All collected data is analyzed and shared with NCDOT partners.
- New public involvement strategies are ongoing with an Outreach Coordinator. Informational items and activities will be available at attended public events. Public meetings will be held in accessible locations to impacted populations. Virtual options are available for meetings.
- GHMPO will continue to coordinate meetings with MPO staff, municipal staff, and NCDOT to assess transportation needs and promote shared initiatives.
- GHMPO will continue to coordinate STIP and MTIP changes as necessary.
- GHMPO will continue planning for the Western Piedmont Regional Transit Authority.
- GHMPO will continue working with WPRTA to expand microtransit services.
- GHMPO will continue data sharing and updating maps necessary for WPRTA operations.
- GHMPO will continue staffing Board meetings and providing minutes for WPRTA.
- GHMPO will continue STIP and MTIP changes as necessary for WPRTA.

### **Key Changes from FY 2022-2023 to FY 2023-2024**

- PL funding is increasing from \$351,800 to \$408,800
- Each MPO must use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. This amounts to \$15,200 in federal funds.
- 5303 funding is decreasing from \$109,942 to \$59,889.
- To follow the federal planning initiatives listed above, GHMPO increased funding for the following elements:
  - Targeted Planning
  - Safe & Accessible Transportation Options (new account)
  - Prioritization
  - Title VI Compliance
  - Environmental Justice
  - Planning for Elderly
  - State and Extra Regional Planning



**GREATER HICKORY  
METROPOLITAN PLANNING ORGANIZATION (MPO)**  
1880 2<sup>nd</sup> Avenue NW, PO Box 9026  
Hickory, NC 28603



**RESOLUTION ADOPTING MODIFICATIONS TO THE  
TRANSPORTATION IMPROVEMENT PROGRAM (TIP) FY 2020-2029**

A motion was made by \_\_\_\_\_ and seconded by \_\_\_\_\_ for the adoption of the following resolution, and upon being put to a vote was duly adopted.

**WHEREAS**, the following modifications have been proposed for FY 2020-2029 Transportation Improvement Program (TIP):

See page 2 of this Attachment

**WHEREAS**, the MPO certifies that these TIP modifications are consistent with the intent of the adopted 2045 Metropolitan Transportation Plan (MTP);

**NOW THEREFORE be it resolved**, by the Greater Hickory MPO Transportation Advisory Committee (TAC) that the TIP FYs 2020-2029 be modified as listed above on this, the 18<sup>th</sup> day of January, 2023.

\_\_\_\_\_  
Bruce Eckard  
Greater Hickory MPO TAC Chair

\_\_\_\_\_  
Averi Ritchie  
Greater Hickory MPO TAC Secretary

## Fiscal Years 2023 and 2024 – Section 5310 (Urban) Grant Application

### Background

The Moving Ahead for Progress in the 21st Century (MAP-21) Act established the Federal Transit Administration (FTA) human service transportation program: Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310). This latest round of Section 5310 grant applications fall under the provision of the Fixing America’s Surface Transportation (FAST) Act.

### Call for Projects

The Greater Hickory Metropolitan Planning Organization (GHMPO) hosted a Virtual 5310 Grant Application Workshop on September 30, 2022. Representatives from Catawba County Department of Social Services and other area surface transportation providers attended. Catawba DSS submitted an application, which were due to GHMPO by December 2, 2022. Catawba County held a public hearing at their County Board of Commissioners room at the Catawba County Justice Center on November 7, 2022.

### Project Application (Over Fiscal Years 2023 and 2024)

Recipient	Description	Sub-recipient	Federal (80%)	Local	Total Amount
WPRTA	3rd party contracting (80%)	Catawba County Social Services	\$240,000	\$60,000	\$300,000

### Project Description

This project is designed to provide transportation for individuals age 65 or older and for individuals with disabilities who live in urbanized areas of Catawba County. The project will primarily provide transportation to congregate meal programs within Catawba County and will also provide older and disabled adults the opportunity to access essential shopping, medical care, pharmacies, banking and other essential services, including government/non-profit agencies/services, Veteran’s services, and senior activities such as the Senior Nutrition Farmers’ Market Program. In addition, as funds allow, transportation will be provided for individuals to access educational and employment opportunities, senior centers, volunteer activities and Adult Day Care/Day Health programs when no other transportation is available.

### Transportation Improvement Program

TIP #	Transit Partner	Description	Match	Fund	FY 23	FY 24
TQ - 9039	Western Piedmont Regional Transit Authority	Capital Purchase of Service		FEDP	\$120,000	\$120,000
			Local	L	\$30,000	\$30,000

**TAC Action**

GHMPO staff recommend that the Transportation Advisory Committee approve the Transportation Improvement Program revisions to reflect the new project.





**GREATER HICKORY  
METROPOLITAN PLANNING ORGANIZATION (MPO)**  
1880 2<sup>nd</sup> Avenue NW, PO Box 9026  
Hickory, NC 28603



**RESOLUTION OF SUPPORT FOR THE NCDOT  
PAVED TRAILS AND SIDEWALK FEASIBILITY STUDY GRANT APPLICATION**

**SUBMITTED BY THE GREATER HICKORY MPO ON BEHALF OF THE TOWN OF  
HILDEBRAN AND THE TOWN OF LONG VIEW FOR A PAVED TRAILS AND  
SIDEWALK FEASIBILITY STUDY GRANT**

**WHEREAS**, the North Carolina Department of Transportation has established a Paved Trails and Sidewalk Feasibility Study Grant Program which provides funding to projects that will improve the pipeline of bicycle and pedestrian projects accessing state and federal funding, resulting in successful implementation of projects led by communities prioritizing multimodal infrastructure for North Carolina municipalities and counties; and

**WHEREAS**, the Greater Hickory Metropolitan Planning Organization will apply for funding from the Department of Transportation for a feasibility study program grant on behalf of the towns of Hildebran and Long View; and

**WHEREAS**, the application for these funds requires endorsement of the Greater Hickory Metropolitan Planning Organization; and

**WHEREAS**, the Transportation Advisory Committee of the Greater Hickory Metropolitan Planning Organization feels it to be in the best interest of the region to endorse the application for these funds and the completion of a feasibility study for the towns;

**NOW, BE IT THEREFORE RESOLVED** that the Greater Hickory Metropolitan Planning Organization Transportation Advisory Committee hereby endorses the application for the Paved Trails and Sidewalk Feasibility Study Grant Program by the towns of Hildebran and Long View; and if the project is selected, will provide applicable technical assistance as requested for the duration of the project.

Adopted this 18th day of January, 2023.

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Bruce Eckard, MTAC Chair

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Averi Ritchie, MPO Secretary

### NCDOT Paved Trails and Sidewalk Feasibility Study Grant Application

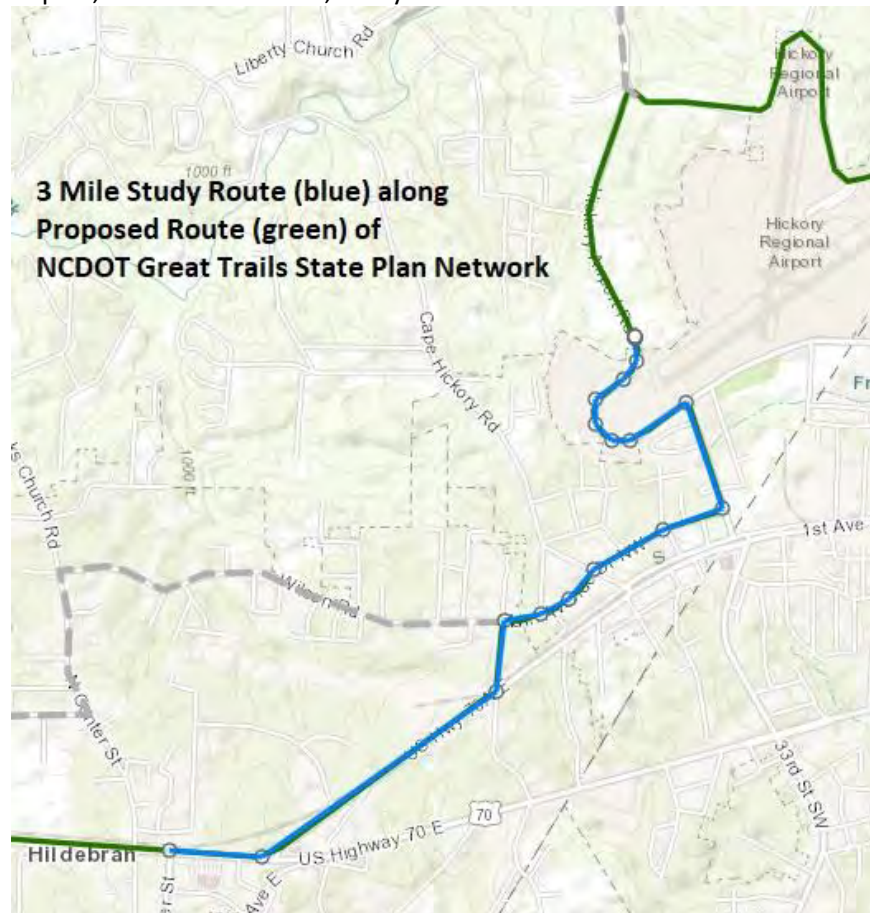
The purpose of this study is to determine the best sidepath route for bicycle and pedestrian traffic as a practical alternative to motorized travel along the 3-mile corridor between Town of Long View (pop. 5125) and Town of Hildebran (pop. 1674) located in the Tier 1 County of Burke. This route is important for several reasons:

- 1) A segment of the NCDOT Great Trails State Plan Network
- 2) Vital need for Title VI, underserved residents to reach shopping and work
- 3) Terminus of a planned 20-mile regional trail

Upon completion of the study showing the best route in terms of transportation, safety, enjoyment, and cost, efforts will commence to acquiring the funding needed to build the sidepath. One funding option will be Complete the Trails Fund for connecting communities less than 6 miles from a state trail (Wilderness Gateway State Trail).

Located in the eastern most section of Burke County, the study area begins on the west side of the Hickory Regional Airport, reaching Long View Recreation Center and on to Hildebran. The corridor is approximately 3 miles and includes Long View and Hildebran. An alternative route could include an alternative section of the NCDOT Great Trails State Plan – Wilson Road to N Center Street.

The connection between the Town of Long View and the Town of Hildebran is complicated due to the airport, active rail corridor, many short town streets and narrow 2-lane roads.



Greater Hickory Metropolitan  
Planning Organization

Congestion Management Process

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Procedures and Responsibilities Report

## Introduction

The Congestion Management Process (CMP) is a systematic approach to congestion management, required in metropolitan transportation planning by federal law. Through a federally prescribed process, CMP in the region manages new and existing transportation systems for relieving congestion and maximizing the safety and mobility of people and goods. This procedures and responsibilities report describes how the CMP will be implemented and used on a continuing basis to comply with federal requirements. It includes congestion management objectives, a description of the coverage area and networks, performance measurement matrix, performance monitoring plan, identification and evaluation strategies, and implementation and management.

In updating the Congestion Management Process, MPO staff seek to create a process that more accurately identifies, classifies, and mitigates congestion in the region. The 2023 CMP update achieves this goal by introducing performance measures that allow both broad and targeted assessment of congestion, and instituting an improved monitoring system that ensures progressive evaluation and mitigation of congested areas within the region.

## CMP History

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA), established initial congestion management requirements. The Congestion Management System (CMS) was the planning document outcome. Introduced in 2016, current congestion management legislation requires Transportation Management areas conduct congestion management through a process of safe, reliable, effective, and integrated operation of the multimodal transportation system.

## Requirements

**Congestion is federally defined as “the level at which transportation system performance is no longer acceptable due to traffic interference.”** The level of system performance deemed acceptable by state and local officials may vary by type of transportation facility, and geographic location. For many of the performance metrics referenced within this report, a road segment is considered congested if the reported speed falls below 60% of the reference (or free-flow) speed.

Federal regulation requires that an MPO address congestion management through a process that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities.

Further federal guidance establishes the CMP as an eight step process, with eight key elements included within the process aligning with each step of the process, as illustrated by Table 1.

MPO staff considered four (4) main objectives in developing an updated CMP:

1. Satisfy Federal Requirements
2. Create a structured and data driven process that is conducive to continuous evaluation and improvement of congestion management.
3. Remain flexible to meet the changing needs of the region
4. Avoid being overly complex or cumbersome

Table 1: Congestion Management Process Steps

Congestion Management Process Steps and Aligning Elements	
Process Step	Resulting Element
1. Develop Congestion Management Objectives	Congestion Management Objectives
2. Identify area of Application	Identified Area of Application
3. Define System/Network of Study	Transportation System Network Definition
4. Develop Performance Measures	Defined Performance Measures
5. Institute System Performance Monitoring Plan	Defined Performance Monitoring Plan
6. Identify/Evaluate Strategies	Identification and evaluation of strategies
7. Implement Selected Strategies	Implementation of Selected Strategies
8. Monitor Strategy Effectiveness	Defined plan for Strategy Performance Measurement

Why is a CMP Helpful?

A successful CMP works to benefit and increase efficiency of the regional multimodal transportation system as a whole. The Congestion Management Process provides the GHMPO a structured, data-driven approach to monitoring and evaluating congestion in the region. This approach ensures that the GHMPO method for managing congestion is continuous and consistent. The CMP also provides a tool

that can be used to make targeted investment decisions to improve congestion in the region.

The continuous nature of the CMP **also allows MPO's to progressively update and** improve their congestion management process, to better serve the MPO and the region. Through ongoing evaluation and implementation, the plan ensures an improving transportation system.

### CMP Element 1: Developing Congestion Management Objectives

CMP Objectives are to be consistent with regional goals and plans. The existing Greater Hickory MPO Congestion Management Process featured objectives that aligned with the 2045 Metropolitan Transportation Plan. **To develop updated CMP objectives, MPO staff will review the 2050 MTP goals, objectives, and policies, following the adoption of the 2050 MTP.**

### CMP Element 2: Identifying the Area of Application

#### Introduction

A congestion management process should be applied to a specific geographic area and network of surface transportation facilities. As a Transportation Management Area, the GHMPO must include, at minimum, the TMA within the CMP boundary.

#### Geographic Coverage

MPO staff identified the Greater Hickory Metropolitan Planning Organization (GHMPO) boundary as the CMP coverage area. The GHMPO is located in the foothills of Western North Carolina about 30 miles north of Gastonia, 50 miles northwest of Charlotte, 70 miles west of Winston-Salem, and 75 miles east of Asheville. The GHMPO is responsible for transportation planning in the municipalities of Brookford, **Cajah's Mountain, Catawba, Cedar Rock, Claremont, Connelly Springs, Conover, Drexel, Glen Alpine, Granite Falls, Hickory, Hildebran, Hudson, Lenoir, Long View, Maiden, Morganton, Newton, Rhodhiss, Rutherford College, Sawmills, Taylorsville, and Valdese;** and the counties of Alexander, Burke, Caldwell, and Catawba. Again, **the geographic coverage of the CMP is the same as the GHMPO's planning boundary.**

### CMP Element 3: Defining a Network/System of Study

#### Background

Once the area of application has been established, the network that is subject to consideration can be identified. The network of study is a subset of the area of application.

While the CMP should be multimodal, and GHMPO staff reviewed several modes of transportation including automobile, public transportation, bicycle, pedestrian, rail transportation, and for-hire passenger transportation (microtransit/taxi/uber), GHMPO staff concluded that automobile transportation was the only mode of transportation exhibiting need for the analysis through the CMP. This conclusion was made based on ACS data, and qualitative observations made by planning staff. The 2021 ACS five-year estimates found that 90.9% of the Greater Hickory area commuted to work in a private vehicle. The GHMPO will continue to monitor multimodal transportation in the area, and will update the CMP to include other modes when quantitatively justified.

#### Method for Selecting Corridors of Study

The GHMPO seeks to maintain a CMP that is data-driven. To do so, the identification of the CMP network itself must be data driven. GHMPO used a combination of performance measures, tools, and data provided by the Regional Integrated Transportation Information System’s (RITIS) Probe Data Analytics Suite (PDA Suite). More information on RITIS and PDA Suite is available under CMP Element 4 “Developing Performance Measures”. Through the PDA Suite, GHMPO staff were able to use the tools noted in Table 2 to identify and select corridors of study.

Table 2: Identification Tools

Tool	Purpose
PDA Suite Trend Map	<b>PDA Suite’s</b> trend map allows MPO staff to create animated maps showing changes in congestion over the course of time at various intervals and date-ranges. Within the mapping tool, different congestion performance measures can be used. The MPO uses Travel Time Index, and Planning Time Index, to identify congestion within the animated map. Corridors showing a Planning Time Index above 2 or Travel Time Index above 1.6 were selected.
Bottleneck Identification and Ranking (ranked by total delay)	<b>PDA Suite’s Bottleneck Identification and Ranking</b> tool allows MPO staff to easily select a congestion performance measure, and rank all intersections within the region based upon the selected measure. The top 25 intersections were selected to be included in the network of study.

About PDA Suite

The Probe Data Analytics Suite provides historical data analysis within the Regional Integrated Transportation Information System. Data is sourced from INRIX and HERE. Both data providers utilize vehicle probe data. Vehicle probe data is information generated from vehicles based on the position of vehicles over space and time. Simply put, modern vehicles report their location and duration of time spent at that location. For the purpose of Congestion Management, this data allows MPO staff to know when, where, and how intensely vehicles are experiencing congestion. PDA Suite is operated by the University of Maryland CATT (Center for Advanced Transportation Technology) Lab.

Using both tools, MPO Staff identified 6 corridors of study, broken down into 28 intersections.

#### Corridors of Study

- I-40 from Exit 138/Oxford School Road to Exit 98 Causby Road
- US-70 from Sanford Drive to NC-16
- US-70 BR from Huffman Street to US-70
- US-321 from US-64/NC-90/NC-18/Wilkesboro BLVD to NC-10
- NC-127 from 29th Avenue to NC-10
- NC-16 from US-64 to NC-10

Table 3: Intersections of Study

Intersections of Study	
1. McDonald PKWY S @ I-40	2. I-40W @ US-321/Exit 123
3. I-40W @ Jamestown Road/Exit 100	4. I-40E @ Carolina Street/Exit 111
5. US-70W @ US-70-BR/E Union Street	6. US-70E @ Drexel Rd/S Main Street
7. I-40E @ Old NC 10/Exit 118	8. US-70W @ US-70/E Union Street
9. US-321S @ US-64/NC-90/NC-18	10. NC-18N @ Bush Dr/I-40
11. US-321S @ 2nd Ave	12. I-40W @ Center St/Exit 119
13. US-64W @ I-40 (Morganton)	14. US-70BR-W @ Huffman St/Center St
15. US-321N @ US-64/NC-90/NC-18	16. I-40E @ Oxford School Road/Exit 138



17. I-40E @ Exit 126	18. I-40E @ Exit 125
19. NC-18S @ Bush Dr / I-40	20. I-40W @ N Oxford Street/Exit 135
21. I-40E @ US-70A/Exit 130	22. I-40W @ Mineral Springs Mtn Road/Exit 112
23. I-40W @ Malcolm BLVD/Exit 113	24. US-321N @ Maizel Rd/New Farm Road
25. NC-16N @ NC-16 Bus	26. S Center Street @ US-70
27. NC-127 @ 2nd Ave	28. NC-16 @ US-64

CMP Element 4: Developing Performance Measures

Background

Performance measures are used within the CMP to evaluate the effectiveness, or ineffectiveness, of the transportation system. Specifically, performance measures are used to identify and classify congestion. Performance measures should align with the vision, goals, and objectives of the region. The MPO sought to implement performance measures that assessed the region as a whole, as well as performance measures capable of assessing individual intersections.

Federal Performance Measures and Goals

The Greater Hickory MPO supports all performance measures, goals, and requirements as outlined in federal performance management initiatives. These **performance measures and goals can be found in the "Performance Measures"** Chapter of the 2050 Metropolitan Transportation Plan.

Considerations

Prior to developing performance measures, MPO staff established several considerations to be taken into account.

- Data: Costs of Data Collection, Availability, Timeliness of Data, and Extraneous influences upon data.
- Tools: Availability of software tools to MPO staff to perform the analysis.
- Applicability: Ability for selected measures to be quantified for system performance evaluation.
- Ability: Ability of selected performance measures to measure and identify system deficiencies.

Development

Using the considerations listed above, MPO staff evaluated and refined the compiled list of performance measures to reach the final performance measures selected for the CMP. The selected performance measures provide MPO staff with data, and tools that are readily available and applicable to MPO congestion goals.

Regional Performance Measures

To assess congestion across the region, MPO staff selected two performance measures. These performance measures are implemented to allow MPO staff to quickly evaluate the state of congestion in the region.

Regional Performance Measure – User Delay Cost Analysis

User Delay Cost Analysis allows MPO staff to quickly and accurately evaluate the state of congestion regionally. User Delay Cost is calculated by multiplying the total time of delay by a specified cost per hour. PDA Suite utilizes default values provided by the Texas Transportation Institute for cost per hour, based on the passenger value of time and commercial operating cost.

Time Delay is the amount of extra time spent traveling due to congestion, represented as total vehicle hours of delay. PDA Suite calculates time delay using the "User Delay Cost Analysis" tool. For this tool, the GHMPO volume provider is NCDOT.

$$\text{User Delay Cost} = \text{Regional Total Delay Time} \times \text{Cost Hour}$$

Table 4: User Delay Cost

Measure	Measurement	Data Source	Desired Trend
User Delay Cost Analysis	Congestion Intensity	PDA Suite (RITIS)	Downward

Regional Performance Measure – Total Crash Rate Per 100 MVMT (Motor Vehicle Miles Traveled)

The GHMPO is committed to identifying and mitigating non-recurring congestion in the region. Non-recurring congestion is commonly caused by vehicle accidents, vehicle breakdowns, construction, and inclement weather. Total Crash Rate allows MPO staff to quickly and accurately assess the regional performance of the transportation system. These rates will be examined for each county in the biennial report.

Table 5: Total Crash Rate

Measure	Measurement	Data Source	Desired Trend
Total Crash Rate	Reliability	NCDOT	Downward

### Intersectional Performance Measures

The goal of the CMP is targeted and accurate congestion management. MPO staff selected the following performance measures based on their applicability to individual corridors and intersections. These performance measures enable MPO staff to comprehensively evaluate and monitor the performance of individual intersections.

### Intersectional Performance Measures – Recurring Congestion

Recurring congestion is congestion that can be expected to occur on the same weekday at the same time as a result of high volumes of commuter traffic. The **FHWA concisely states “This is the type of congestion where there are simply more vehicles than roadway”**. MPO staff selected the following measures to assess recurring congestion at the individual intersection or corridor.

MPO staff use performance measures to identify when congestion is occurring, where congestion is occurring, how intense congestion is, and how reliable travel time is. Table 4 illustrates the questions answered by each of the performance measures selected

Table 6: Information Provided by Performance Measures

Measure	How Intense is Congestion?	How reliable is Travel Time?	When Is Congestion Occurring?	Where is Congestion Occurring?
Travel Time Index (TTI)	x		x	x
Planning Time Index (PTI)		x	x	x
Bottleneck Identification and Ranking	x			x

### Travel Time Index

Travel Time Index represents actual travel time as a percentage of the ideal (free flow) travel time. Travel Time Index is sourced from PDA Suite. For scoring purposes, peak Travel Time Index will be used.

$$\text{Travel Time Index} = \text{Travel Time} / \text{Free-Flow Travel Time}$$

### Planning Time Index

Planning Time represents the total time a traveler should plan to ensure on-time arrival. The 95th percentile travel time is used for the calculation, meaning that if a traveler leaves the duration of planning time before they need to arrive, the traveler will arrive at or before the necessary time 95% of the time. Therefore, planning time is the near worst case travel time. A PTI of 1.60 means that, for a 15 minute trip in light traffic, the total time that should be planned for the trip is 24 minutes. Planning Time Index is sourced from PDA Suite. For scoring purposes, peak planning time index will be used.

$$\text{Planning Time Index (PTI)} = 95\text{th Percentile Travel Time} / \text{Free Flow Travel Time}$$

### Bottleneck Identification and Ranking

Bottlenecks consist of congestion occurring on consecutive road segments and/or time. A road segment is considered congested if the reported speed falls below 60% of the free flow speed. PDA Suite identifies bottlenecks in a dynamic manner, allowing the bottleneck to grow, shrink, change locations, merge, and split apart. For the purpose of performance measurement, MPO staff will score intersections based on their bottleneck ranking, as ranked by total delay. Previously, base impact score had been the ranking criteria. However, base impact does not account for volume, thus allowing for a disproportionate bias towards low volume intersections.

### Intersectional Performance Measures – Non-recurring congestion

Non-recurring congestion is commonly caused by vehicle accidents, vehicle breakdowns, construction, and inclement weather. The selected performance measures assess individual corridors and intersections vehicle accident data. Identification and classification of non-recurring congestion will allow MPO staff to monitor individual intersections.

Table 7: Non-recurring Performance Measures

Measure	Measurement	Data Source	Desired Trend
Total Crashes/ Intersection	Number of Crashes	NCDOT TEAAS	Downward
Severity Index	Severity of Crashes	NCDOT TEAAS	Downward

**Crash Frequency –**

NCDOT TEAAS provides the MPO with access to data for individual intersections within the region. Using this data, MPO staff can rank intersections across the region based upon the number of accidents across a set timeframe, and identify particularly hazardous intersections.

**Severity Index –**

NCDOT TEAAS also provides MPO staff with a severity index, representing the severity of accidents at a specified intersection. Severity index is equal to equivalent property damage only (EPDO) divided by the number of crashes. EPDO uses assigned values to quantify the severity of injuries sustained in car crashes.

**Equity and Accessibility**

The GHMPO, in efforts to improve equity and accessibility within the region, will also seek to analyze and measure congestion in Title VI concentration areas. Title VI demographics include race, age 65+, vehicle availability, disability status, english proficiency, and single parent households. MPO staff will analyze and score each intersection based upon the demographic concentrations it falls within. Intersections with a disproportionate impact on Title VI groups will receive a higher scoring than intersections that do not.

**CMP Element 5: Instituting a System Performance Monitoring Plan**

**Background**

**The Final Rule on Metropolitan Transportation Planning calls for “a coordinated program for data collection and system performance monitoring to assess the extent of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions”. To meet this requirement, the GHMPO has developed a defined, three step plan to monitor and evaluate congestion in the region. This plan consists of data collection, data analysis, and data reporting guidance.**

## Data Collection

MPO Staff will collect a range of data and use a number of tools to compile necessary performance measure input for CMP reporting. The grid below illustrates each performance measure and the source for the necessary data. Where applicable, the appropriate tool is also listed. Each data point will be collected for the intersections identified in CMP element 2.

Table 8: Data Sources

Performance Measure	Source	Tool
Bottleneck Rankings	PDA Suite	Bottleneck Rankings Tool
User Delay Cost	PDA Suite	User Delay Cost Analysis
Peak Travel Time Index	PDA Suite	Trend Map
Peak Planning Time Index	PDA Suite	Trend Map
Total Crashes/Intersection	NCDOT TEAAS	High Accident Intersections
Severity Index	NCDOT TEAAS	Severity at High Accident Intersections
Title VI Analysis	ACS/Census Data	N/A

## Data Analysis

In alignment with the processual nature of the CMP as prescribed by federal regulation, the GHMPO will implement a performance measurement matrix that will allow for both comprehensive and continuous analysis. Following data collection, MPO staff will create a CMP scorecard for each intersection. This scorecard will assign each intersection a score which will be drawn from a scoring matrix established within the data report. A higher score represents a greater overall level of congestion and need for congestion management.

Table 9: Example Scorecard

Intersection: NC-16 @ US-64		Alexander County
Performance Measure	Base value	Score
Bottleneck Ranking	39	0/10
Travel Time Index	1.6	10/10
Planning Time Index	2.3	7/10
Total Crashes (1/1/20-12/30/21)	14	3/10
Severity Index	2.06	1/10
		Total: 21

Table 10: Example Matrix

Bottleneck Intersection Ranking	Ranks 1-5 = 10 points Ranks 5-10 = 7 points Ranks 10-15 = 5 points Ranks 15-20 = 3 points Ranks 20-25 = 1 point
Number of Crashes / 2 Year Monitoring Period	45+ Crashes = 10 points 30-45 Crashes = 7 points 15-30 Crashes = 5 points 0-15 Crashes = 3 points
Crash Severity Index	SI of 15+ = 10 points SI of 12-15 = 8 points SI of 10-12 = 6 points SI of 7-10 = 4 points SI of 4-7 = 2 points SI of 0-4 = 0 points
Planning Time Index	PTI of 3.0+ = 10 points PTI of 2.0-3.0= 7 points PTI of 1.0-2.0= 3 points PTI of 0.0-1.0= 0 points
Travel Time Index	TTI of 1.5+ = 10 points TTI of 1.2-1.4=5 points TTi of 0-1.1= 0 points

## Data Reporting

Biennially, MPO staff will prepare a Congestion Management Data Analysis report. This report will be the main product of the Congestion Management Process. The initial GHMPO congestion analysis report will be the baseline performance report. This report will include a scorecard for each intersection identified as the CMP network within this report. The initial MPO Congestion Management Data Analysis Report will present the baseline data, with successive reports providing actual measurements of improvement.

## CMP Element 6: Identification of Strategies

Following the collection and analysis of data, intersections will be further analyzed by MPO staff to identify potential causes of congestion. Once possible causes of congestion are identified, strategies will be assigned to each intersection. The selected strategies will be included on the intersection scorecard. This creates a direct linkage between the strategies selected and the performance measures for evaluation within the CMP.

In preparation for the initial Congestion Management Data Analysis Report, MPO staff have compiled possible strategies to be evaluated for implementation. The updated strategies bank is considerably more concise. There are three classes of congestion management strategies: Demand Management, Operational Management, and Capital Intensive Improvement.

### Operational Management Strategies:

- Optimizing the timing of traffic signals;
- Faster and anticipatory responses to traffic incidents;
- Reserved travel lanes or rights-of-way for transit operation;
- Realigned transit service schedules and stop locations;
- Providing travelers with information on travel conditions as well as alternative routes and modes;
- Improved management of work zones;
- Identifying weather and road surface problems and rapidly targeting responses;
- Providing real-time information on transit schedules and arrivals;
- Monitoring the security of transit patrons, stations, and vehicles;
- Anticipating and addressing special events, including emergency evacuations, that cause surges in traffic;
- Better freight management, especially reducing delays at border crossings;
- Reversible commuter lanes;
- Congestion pricing strategies, including high occupancy toll (HOT) lanes;



- Movable median barriers to add capacity during peak periods;
- Restricting turns at key intersections;
- Geometric improvements to roads and intersections;
- Converting streets to one-way operations; and
- Access management.

#### Demand Management Strategies:

- Programs that encourage transit use and ridesharing;
- Curbside and parking management;
- Flexible work hours;
- Telecommuting programs;
- Bikeways and other strategies that promote non-motorized travel;
- Pricing fees for the use of travel lanes by the number of persons in the vehicle and the time of day;
- Pricing fees for parking spaces by the number of persons in the vehicle, the time of day or location;
- Land use controls or zoning;
- Growth management restrictions such as urban growth boundaries;
- Development policies that support transit-oriented designs for corridors and communities involving homes, jobsites, and shops; and
- Incentives for high-density development, such as tax incentives.

#### Capital Intensive Improvements:

- Adding travel lanes on major freeways and streets (including truck climbing lanes on grades);
- Adding capacity to the transit system (buses, urban rail or commuter rail systems);
- Closing gaps in the street network;
- Removing bottlenecks;
- Overpasses or underpasses at congested intersections;
- High-occupancy vehicle (HOV) lanes; and
- Increasing intercity freight rail capacity to reduce truck use of highways.

#### CMP Element 7: Implementation and Management

CMP Element 7, implementation and management, involves taking the analysis from the previous steps, and using it as a tool to prioritize investments. On the MPO level, this would take the form of using CMP scores as a tool for prioritization. FHWA guidance uses the ranking and weighting of projects using CMP data as they enter the Transportation Improvement Program as an example. Federal code does not regulate the level of formality required in the linkage between the CMP and

funding decisions. The MPO will establish the level of formal CMP influence when the local prioritization methodology is developed. MPO staff will actively document the strategies implemented for each identified corridor on the intersection scorecards

Table 10: How CMP recommendations are incorporated

1. Metropolitan Transportation Plan	MTP - Linkage should be clear between the MTP and CMP, through project description and prioritization where applicable.
2. Prioritization	Prioritization - Projects submitted for prioritization should be consistent with the CMP.
3. Transportation Improvement Program	TIP - Projects added to the TIP should be consistent with the CMP.

CMP Element 8: Evaluation of Strategies.

The final step of the Congestion Management process is the evaluation of strategies implemented. Biennially, MPO staff will evaluate the effectiveness of congestion management strategies implemented.

FHWA recommends that CMP analysts use the performance measures developed through the CMP to assess the effectiveness of strategies. The GHMPO Congestion Management Data Analysis will follow this recommendation, as identified strategies will be linked to the respective performance measures they are targeted to improve. Subsequent GHMPO Congestion Management Data Analysis reports will include scoring reports for implemented congestion management strategies.

# Traffic Count Data for the Hickory MPO Area



January 18, 2023

# What are ADT Counts

- ADT stands for Average Daily Traffic at a location over a 24 hour period
- ADT information is collected for some locations in the region each year, however, data for most traffic count locations are collected only once every two years (odd numbered year)

# 2019 ADT Counts

- **Catawba County-** I-40 near LR Blvd (67,500), US 321 near US 70 (43,000), NC 127 near 16th Ave NE in Viewmont (37,500), L-R Blvd just north of I-40 (30,500) and Springs Rd just east of 29<sup>th</sup> Ave Dr NE (30,000)
- **Burke County-** I-40 between Old NC 10 (Exit 118) and Hildebran (Exit 119) exits (49,000), US 64 just north of I-40 (26,000), NC 181 (N Green St) just north of NC 126 (Independence Blvd) (24,500) and US 64-70 (W Fleming Dr) just east of US 70B (W Union St) (18,000)

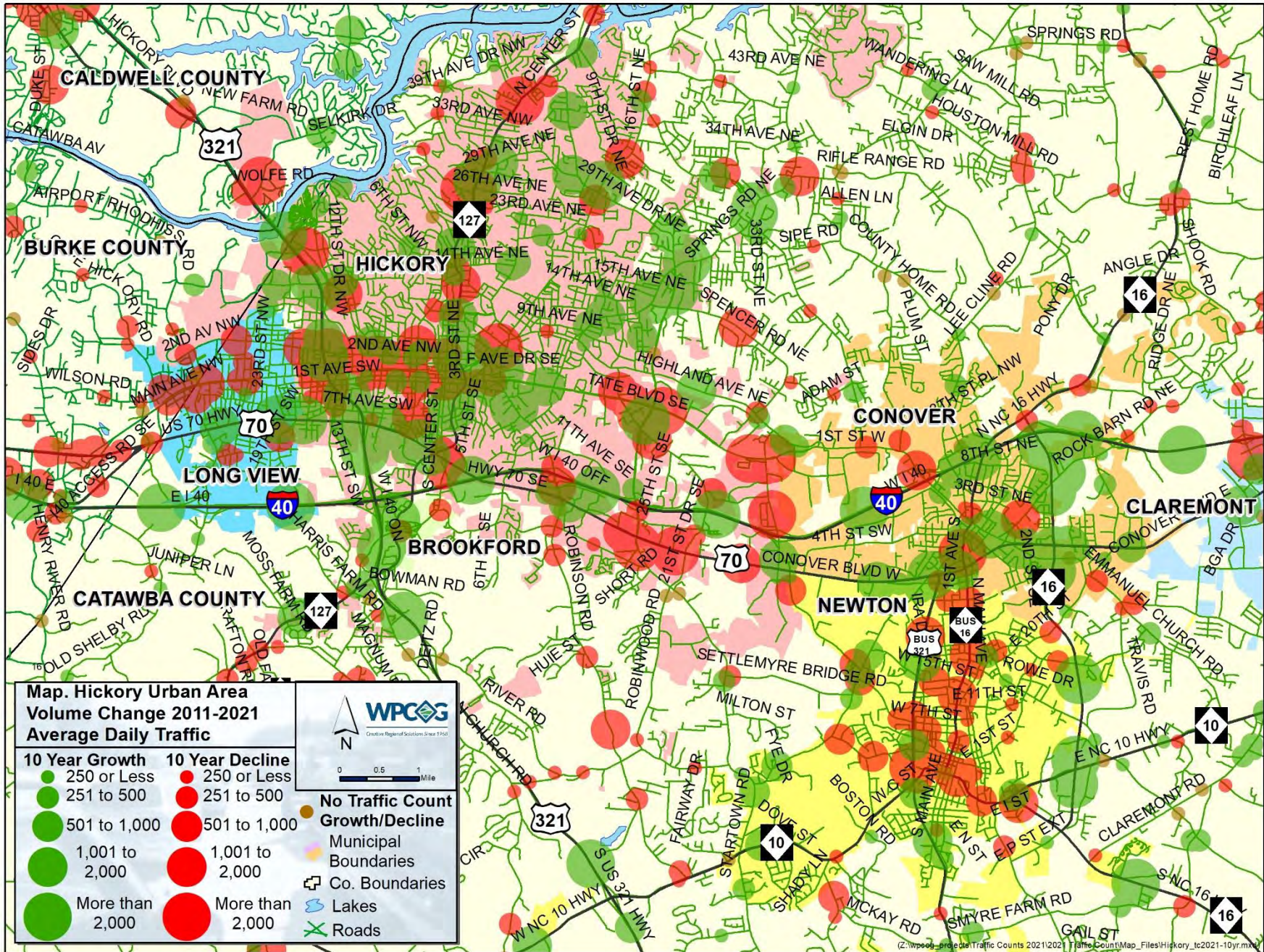
# 2019 ADT Counts

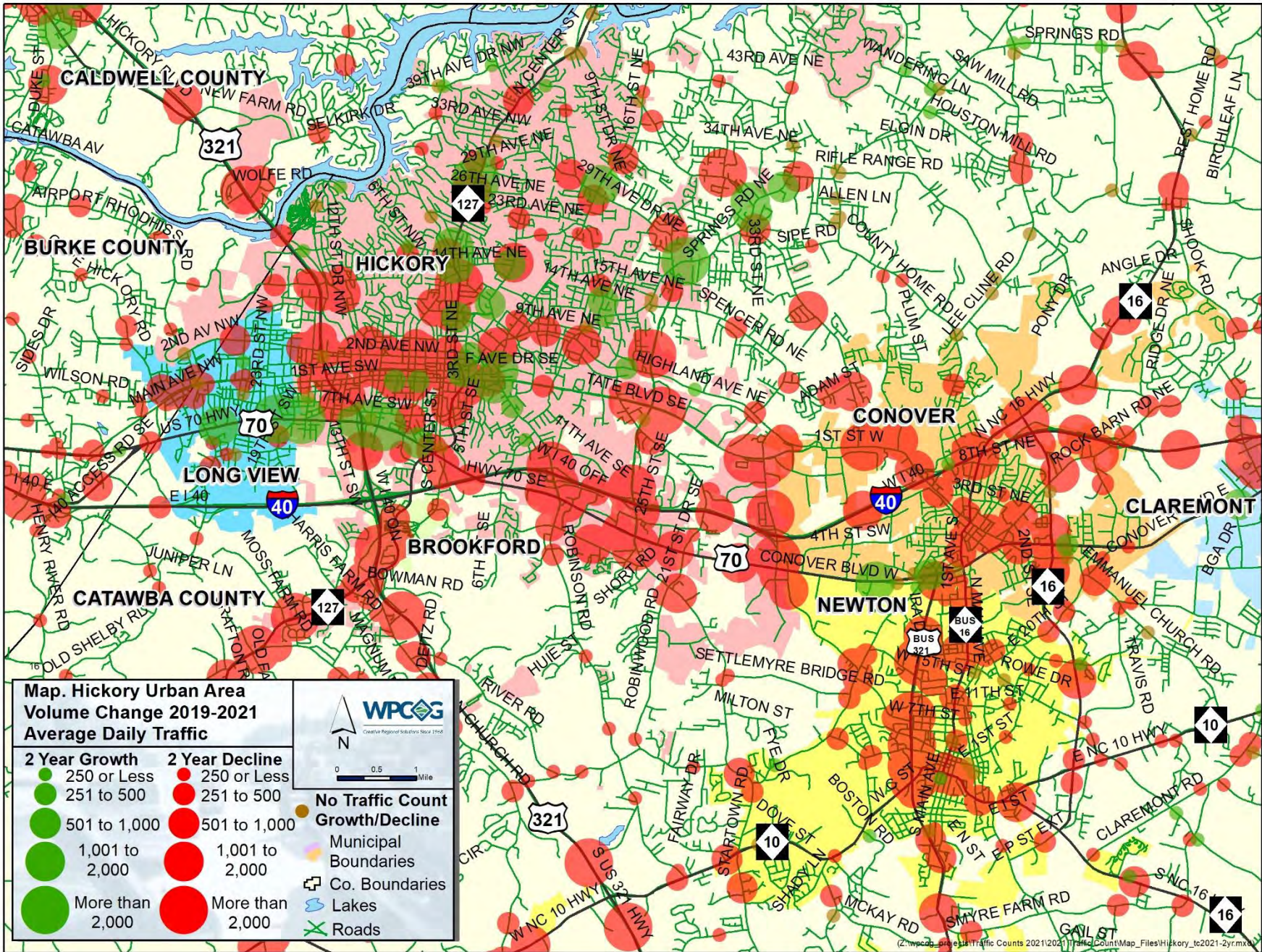
- **Caldwell County**-US 321-NC 90 just south of Hospital Ave in Lenoir (45,000), US 321 near Catawba River Bridge (44,500), US 321 just north of Grace Chapel Rd (41,500), US 321-NC 90 just north of Smith Crossroads (38,000), and US 64 NC 18/90 (Harper Ave) just west of Smith Crossroads (23,000)
- **Alexander County**-NC 16 near US 64-Taylorsville (15,500), and NC 127 just south of Gazebo Rd (15,500), West Main Ave [NC 16-90] just west of NC 16-Taylorsville (12,000)

**Change in ADT  
Counts  
2011-2021  
&  
2019-2021**

# **Hickory-Newton-Conover Area Change in ADT Counts**







## Hickory–Newton-Conover Area Notable 2-Year Declines

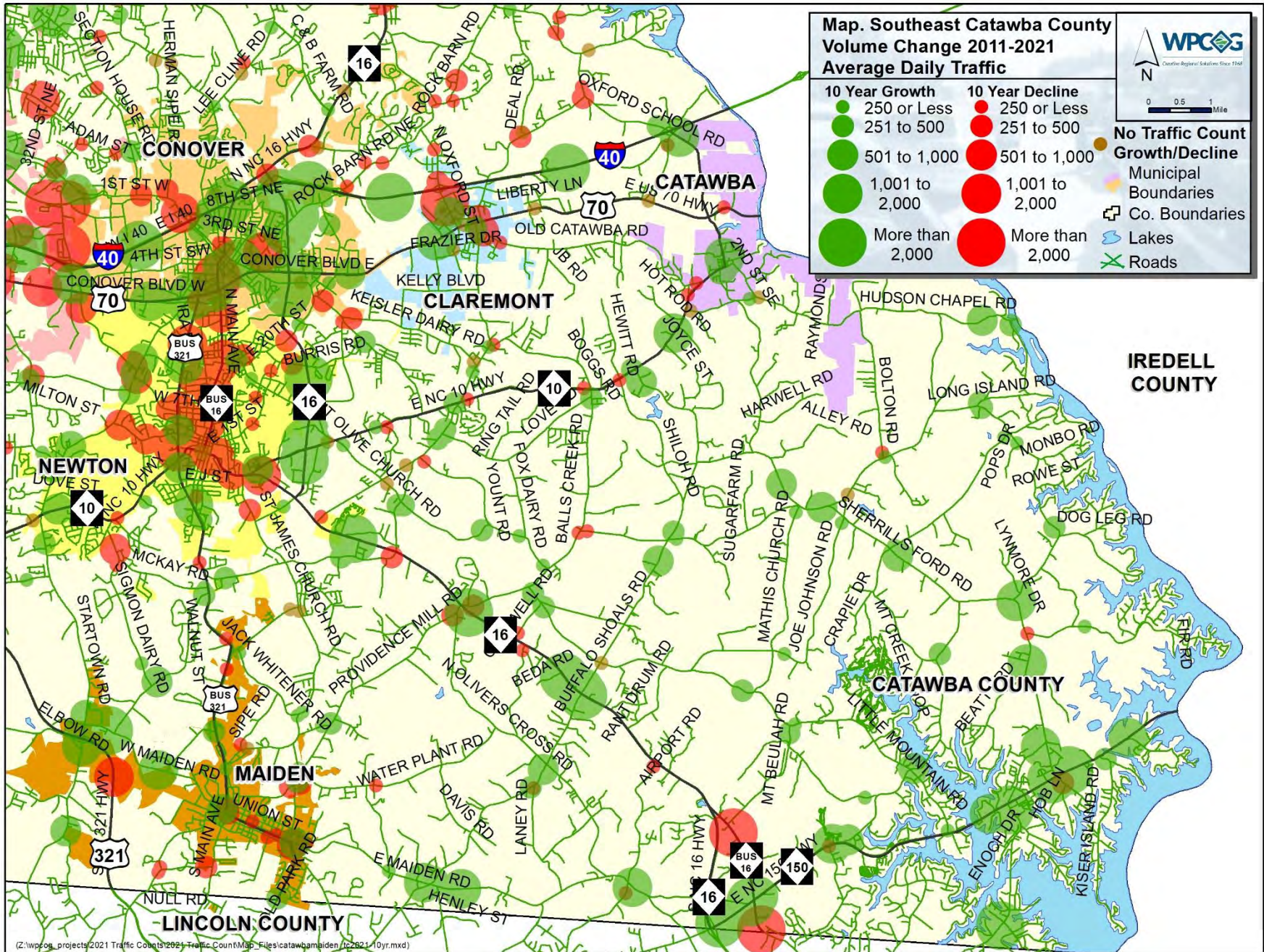
Road	Location	2019 TC	2021 TC	Change
US 321 Bus (Northwest Blvd)	North of W 7th St	26,000	18,000	-8,000
McDonald Pkwy	South of I-40	33,500	26,500	-7,000
US 321	South of NC 10 Exit	34,000	27,000	-7,000
US 321 Bus (Southwest Blvd)	North of NC 10	25,000	18,500	-6,500
1st St W	East of Fairgrove Church Rd	14,500	8,600	-5,900
Lenoir-Rhyne Blvd	North of I-40	36,000	30,500	-5,500

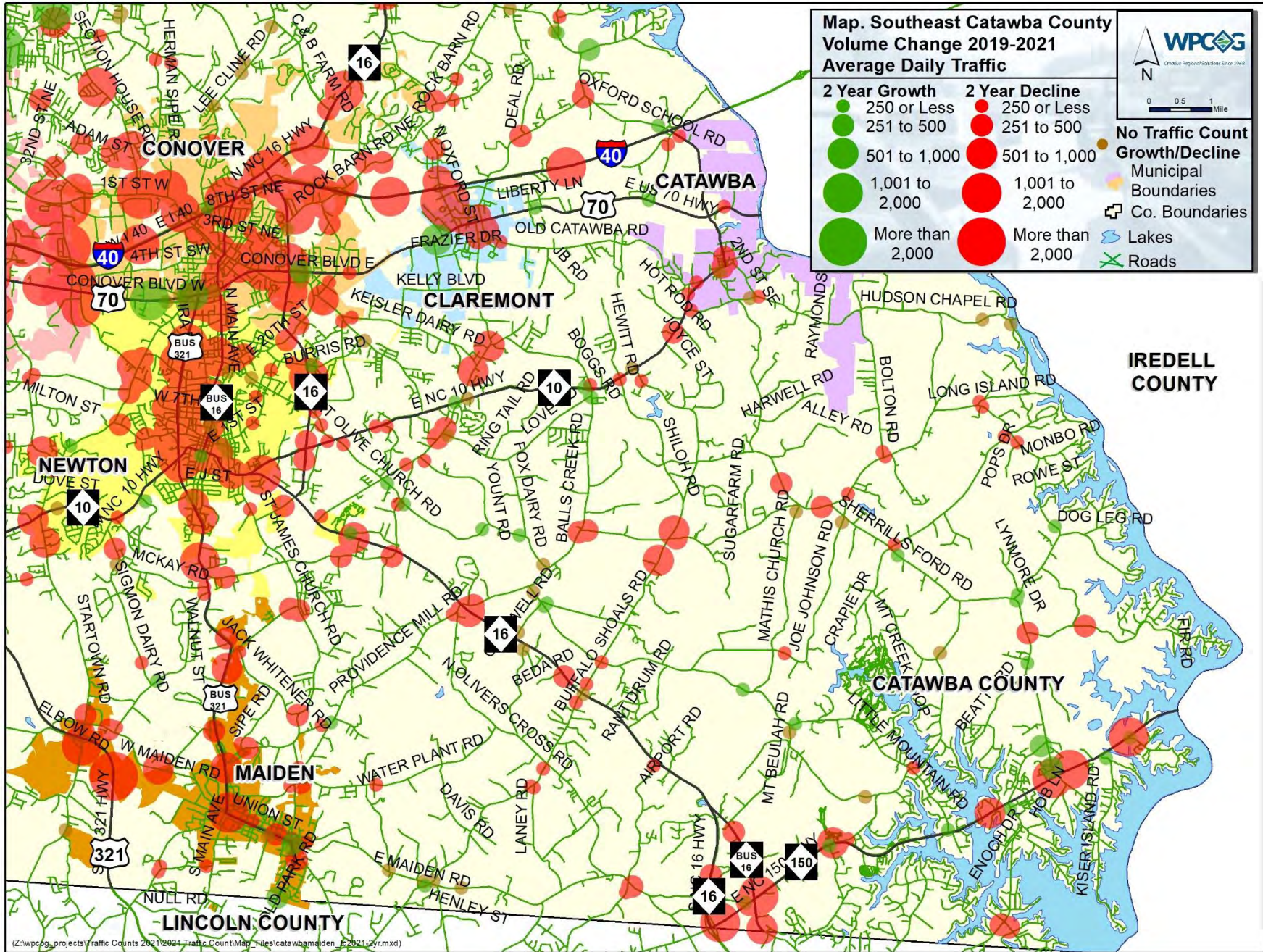
## Hickory–Newton-Conover Area Notable 2-Year Increases

Road	Location	2019 TC	2021 TC	Change
NC 127 (N Center St)	East of L-R Blvd	29,500	37,000	7,500
Springs Rd	East of 29th Ave Dr NE	25,000	30,000	5,000
US 70	East of 8th St SW	19,500	24,000	4,500
US 70	West of 22nd St SW	12,000	15,500	3,500
US 70	East of US 321	22,500	25,500	3,000
US 70	East of 19th St SW	29,000	34,000	3,000
Lenoir-Rhyne Blvd	South of E Ave SE	17,000	19,000	2,000



# **Southeast Catawba County Change in ADT Counts**





## **Southeast Catawba County Notable 2-Year Declines**

<b>Road</b>	<b>Location</b>	<b>2019 TC</b>	<b>2021 TC</b>	<b>Change</b>
<b>US 321</b>	<b>South of Startown Rd</b>	<b>36,000</b>	<b>27,000</b>	<b>-9,000</b>
<b>N Oxford St</b>	<b>South of I-40</b>	<b>14,000</b>	<b>9,900</b>	<b>-4,100</b>
<b>NC 150</b>	<b>East of NC 16 Bus</b>	<b>13,500</b>	<b>11,500</b>	<b>-2,000</b>
<b>US 321 Business</b>	<b>West of S Main Ave (Maiden)</b>	<b>12,500</b>	<b>10,500</b>	<b>-2,000</b>
<b>NC 150</b>	<b>East of Sherrills Ford Rd</b>	<b>19,000</b>	<b>17,500</b>	<b>-1,500</b>

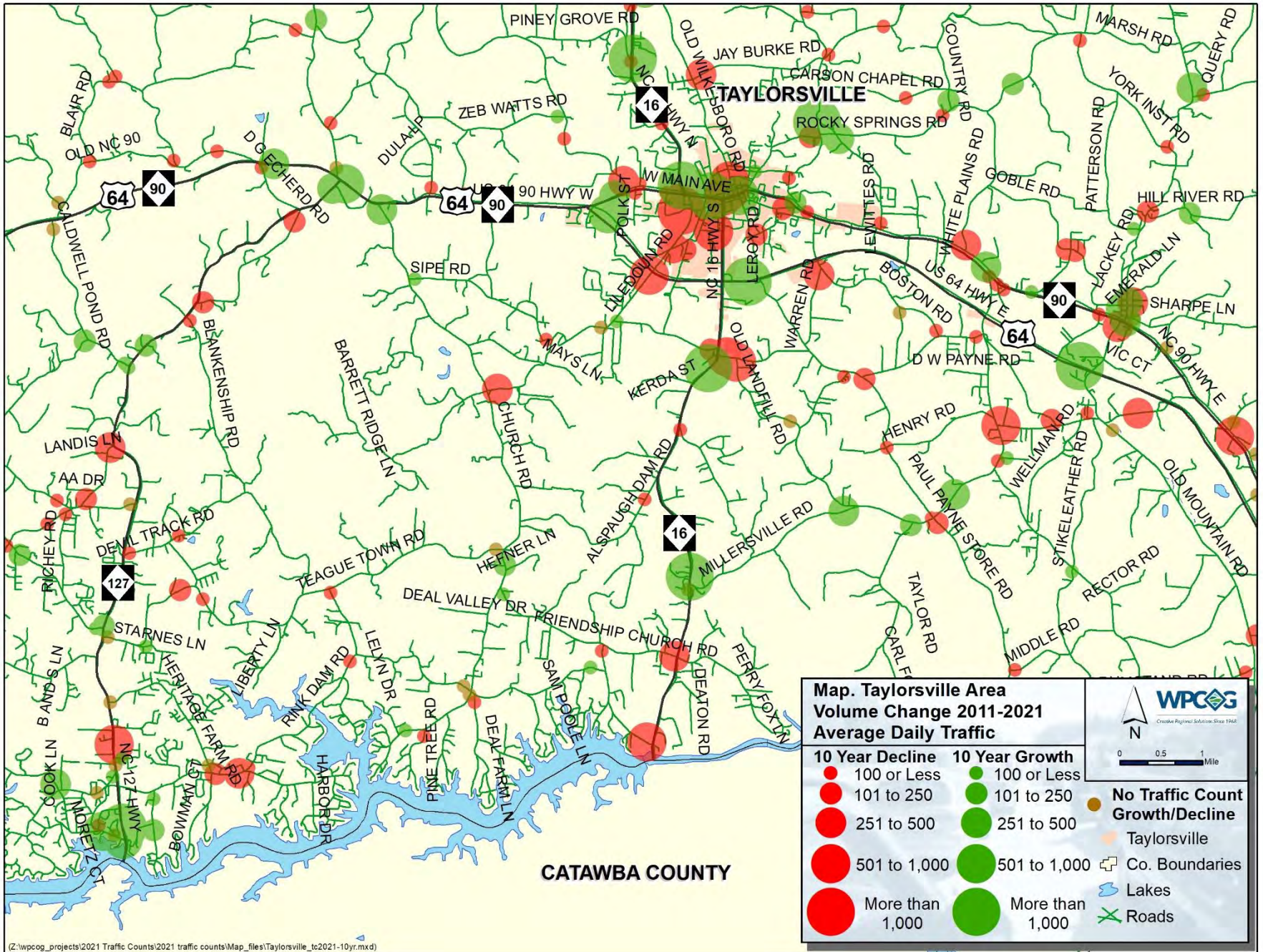


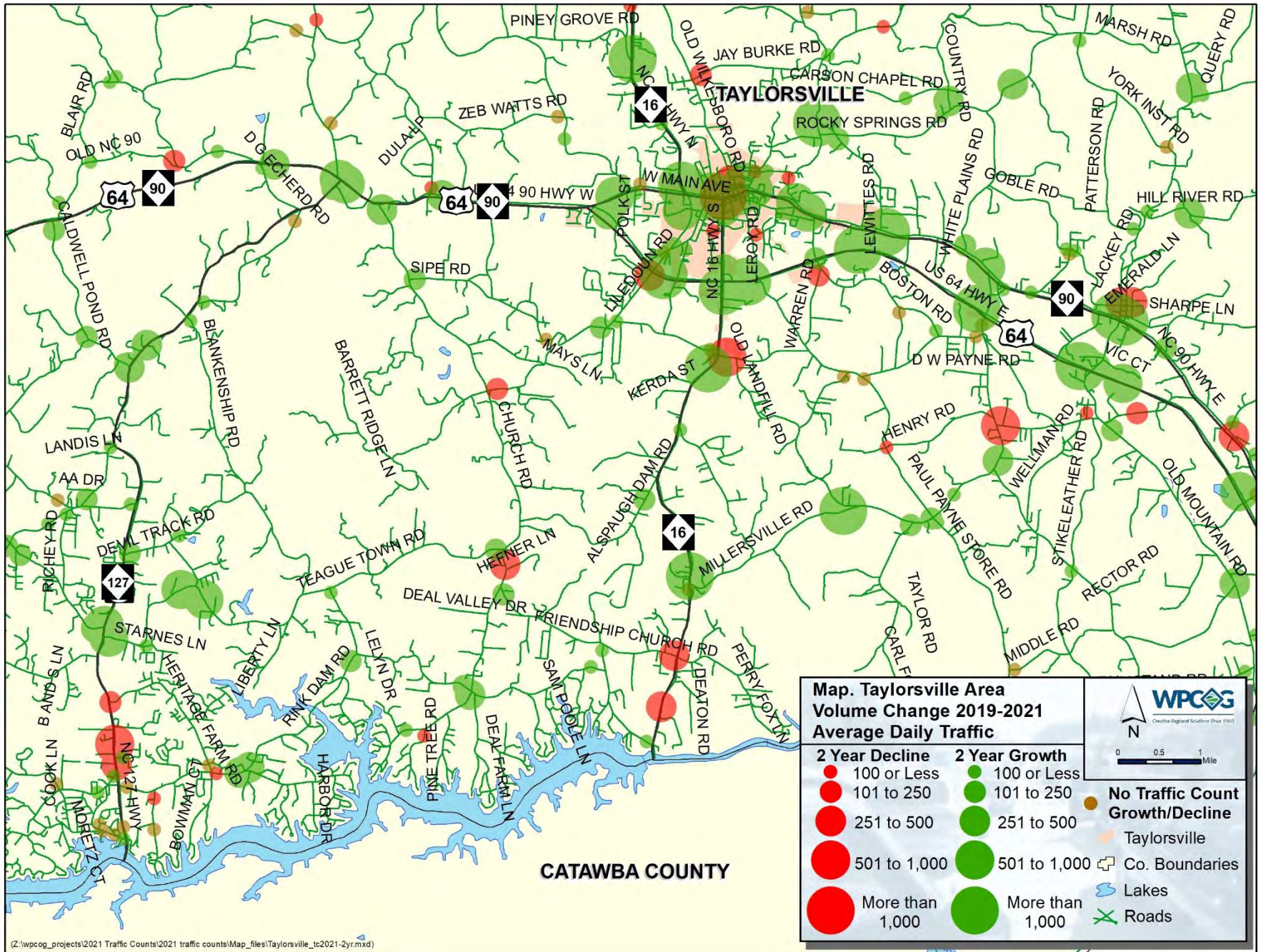
## **Southeast Catawba County Notable 2-Year Increases**

<b>Road</b>	<b>Location</b>	<b>2019 TC</b>	<b>2021 TC</b>	<b>Change</b>
<b>US 321</b>	<b>Just South of Startown Rd Exit</b>	<b>32,000</b>	<b>36,000</b>	<b>4,000</b>
<b>Startown Rd</b>	<b>Just North of US 321</b>	<b>6,400</b>	<b>8,600</b>	<b>2,200</b>
<b>NC 150</b>	<b>Just West of NC 16 Bus and Just East of East Maiden Rd</b>	<b>14,000</b>	<b>15,500</b>	<b>1,500</b>
<b>NC 150</b>	<b>Just East of NC 16</b>	<b>13,000</b>	<b>14,000</b>	<b>1,000</b>
<b>NC 150</b>	<b>Just West of Sherrills Ford Rd</b>	<b>14,000</b>	<b>15,000</b>	<b>1,000</b>



# **Alexander County Change in ADT Counts**





## Alexander County Notable 2-Year Declines

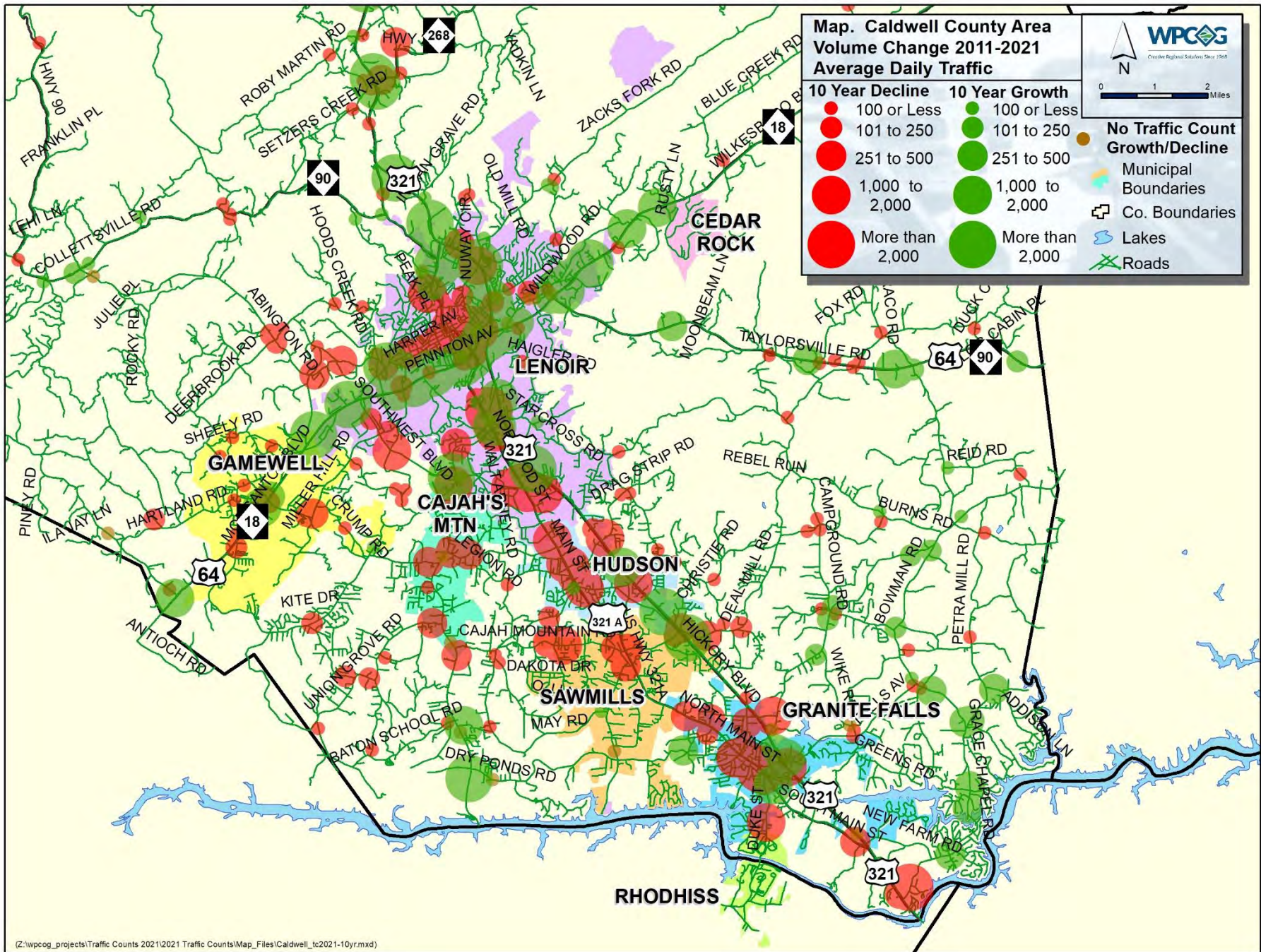
Road	Location	2019 TC	2021 TC	Change
NC 16	South of NC 90	6,000	4,200	-1,800
NC 127	South of Swayngsims Ln (Bethlehem)	11,500	10,500	-1,000
Liberty Church Rd	East of Millersville Rd	2,200	1,400	-800
Macedonia Church Rd	East of NC 16	3,100	2,400	-700
NC 90	East of Cheatham Ford Rd	3,300	2,800	-500

## Alexander County Notable 2-Year Increases

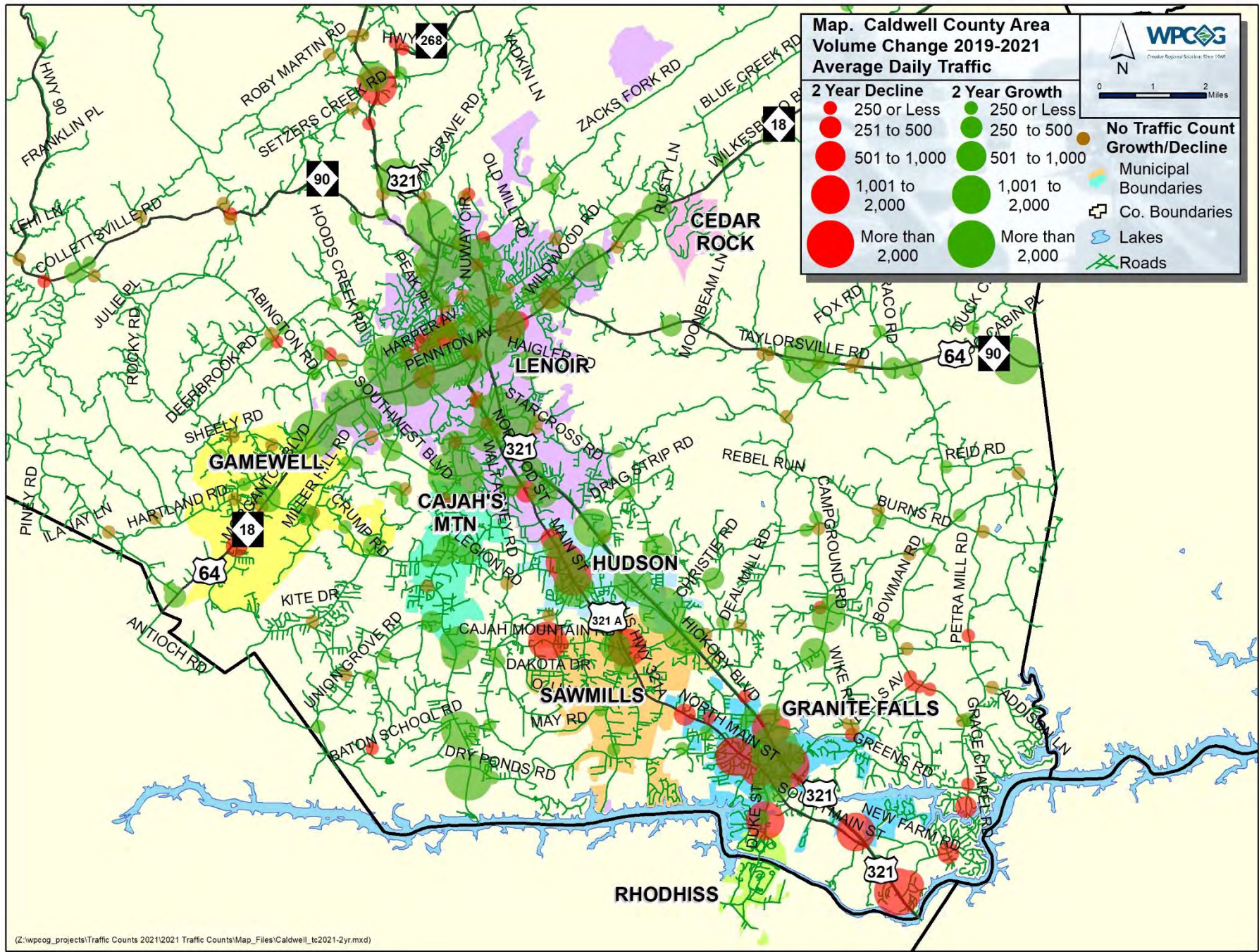
Road	Location	2019 TC	2021 TC	Change
NC 16	North of Fairgrounds Rd	11,000	14,500	3,500
NC 16	North of Hines Farm Rd	9,200	12,000	2,800
US 64	East of Boston Rd	8,100	10,500	2,400
US 64	East of NC 16	8,600	11,000	2,400
NC 16-90 (W Main Ave.)	West of NC 16	9,700	12,000	2,300



# **Caldwell County Change in ADT Counts**







**Map. Caldwell County Area  
Volume Change 2019-2021  
Average Daily Traffic**

**WPCOG**  
Creeks Regional Solutions Since 1968

0 1 2 Miles

2 Year Decline		2 Year Growth	
● 250 or Less	● 250 or Less	● 250 or Less	● 250 or Less
● 251 to 500	● 251 to 500	● 251 to 500	● 251 to 500
● 501 to 1,000	● 501 to 1,000	● 501 to 1,000	● 501 to 1,000
● 1,001 to 2,000	● 1,001 to 2,000	● 1,001 to 2,000	● 1,001 to 2,000
● More than 2,000	● More than 2,000	● More than 2,000	● More than 2,000

- No Traffic Count Growth/Decline**
- Municipal Boundaries
  - Co. Boundaries
  - ☒ Lakes
  - ⚡ Roads

## Caldwell County Notable 2-Year Declines

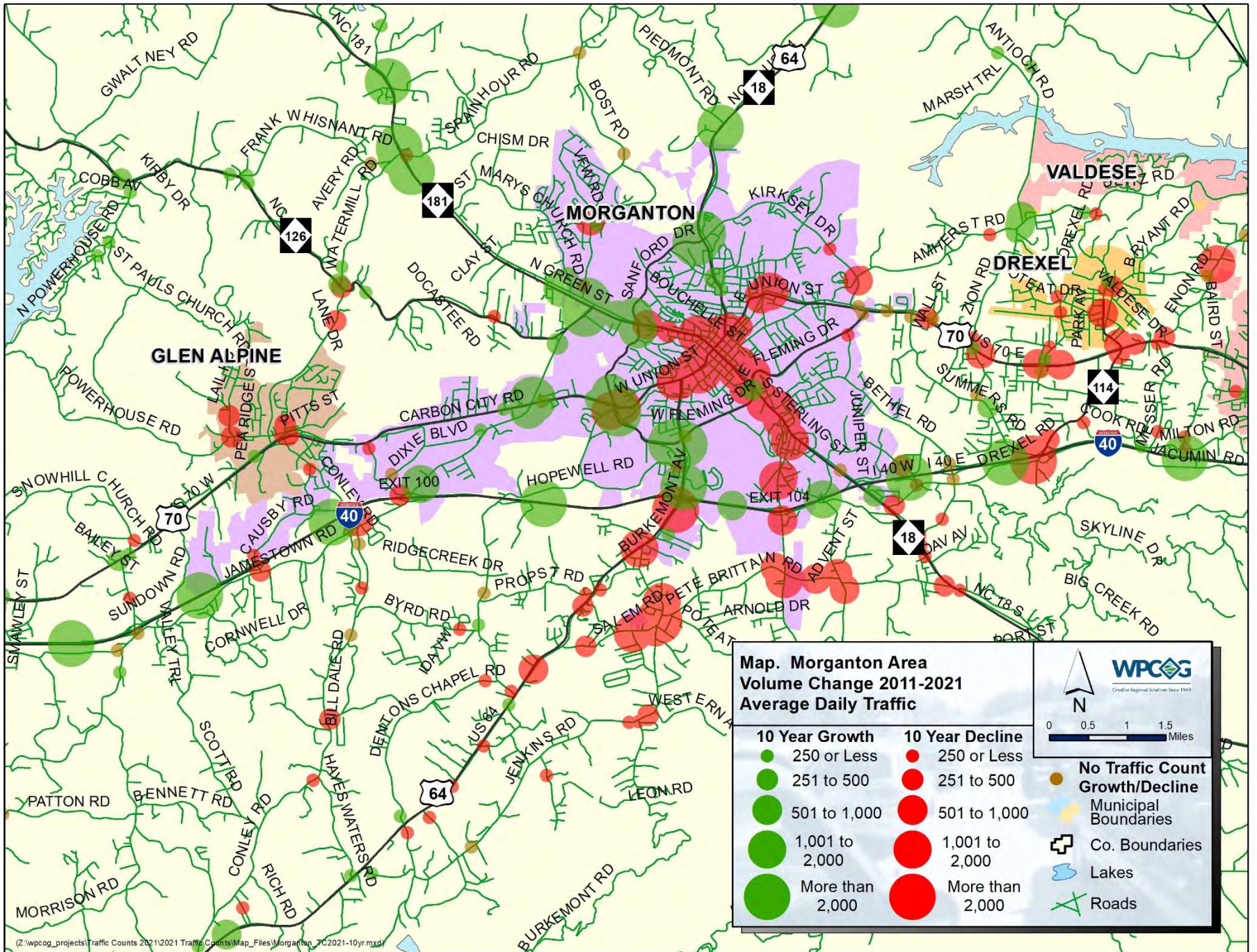
<b>Road</b>	<b>Location</b>	<b>2019 TC</b>	<b>2021 TC</b>	<b>Change</b>
<b>US 321 (Hickory Blvd)</b>	<b>South of Falls Ave</b>	<b>36,000</b>	<b>32,000</b>	<b>-4,000</b>
<b>US 321 (Hickory Blvd)</b>	<b>North of Grace Chapel Rd</b>	<b>41,500</b>	<b>38,000</b>	<b>-3,500</b>
<b>US 321 (Hickory Blvd)</b>	<b>North of US 321 A</b>	<b>36,000</b>	<b>34,000</b>	<b>-2,000</b>
<b>US 321 (Blowing Rock Blvd)</b>	<b>North NC 268</b>	<b>18,500</b>	<b>16,500</b>	<b>-2,000</b>
<b>Cajah Mtn Rd</b>	<b>West of Horseshoe Bend Rd</b>	<b>6,800</b>	<b>4,900</b>	<b>-1,900</b>
<b>US 321 A (South Main St)</b>	<b>South of Falls Ave</b>	<b>8,700</b>	<b>6,900</b>	<b>-1,800</b>

## Caldwell County Notable 2-Year Increases

Road	Location	2019 TC	2021 TC	Change
US 321 (Blowing Rock Blvd)	South of Hospital Ave	29,000	45,000	16,000
US 321-NC 90 (Blowing Rock Blvd)	South of NC 268	29,500	39,500	10,000
US 321 (Blowing Rock Blvd)	North of Hospital Ave	27,500	36,000	8,500
Southwest Blvd	West of Connelly Springs Rd	10,500	18,500	8,000
US 321-NC 90 (Blowing Rock Blvd)	North of Nuway Cir	20,500	28,000	7,500



# **Morganton Area Change in ADT Counts**



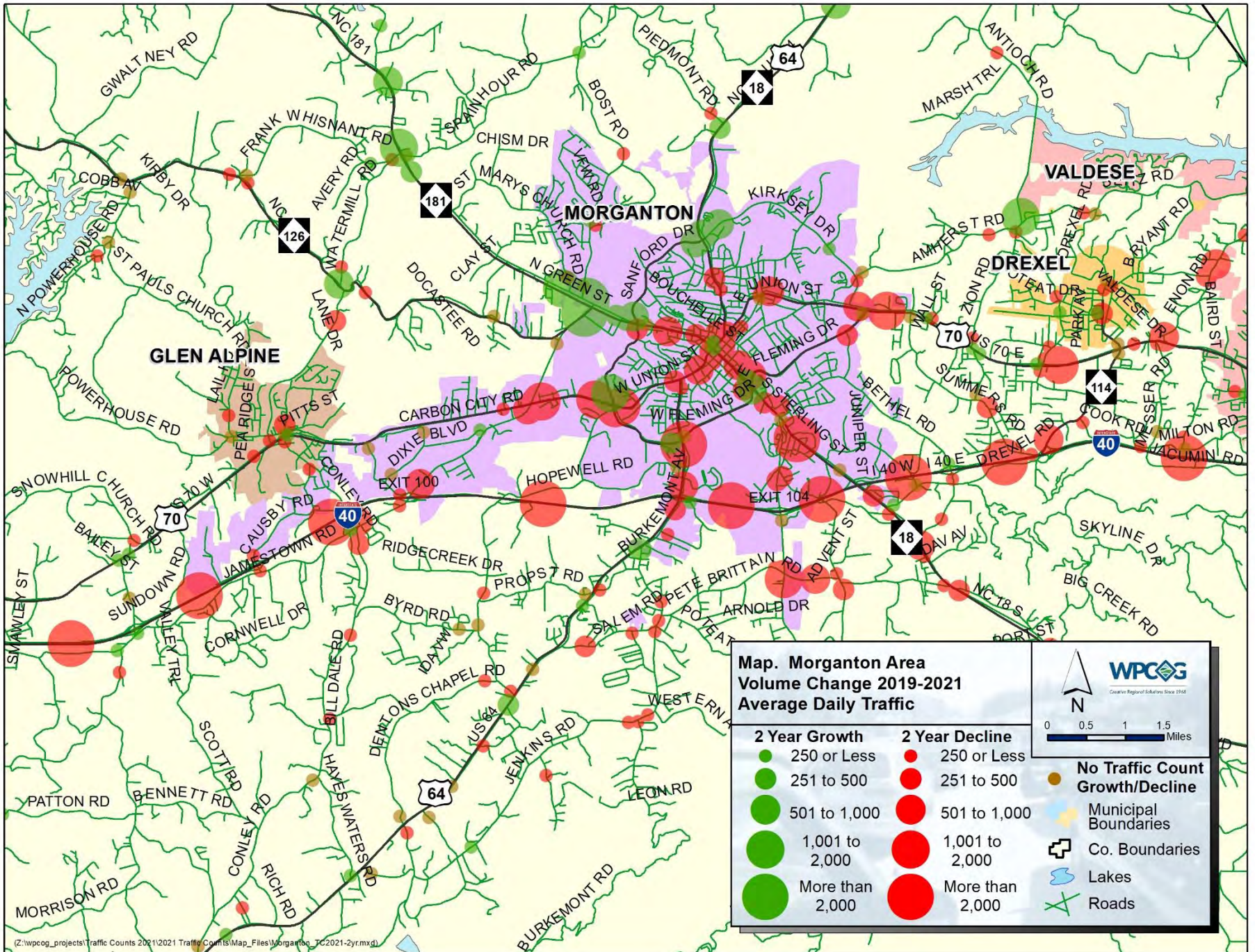
**Map. Morganton Area  
Volume Change 2011-2021  
Average Daily Traffic**

**WPCOG**  
Western Piedmont Council of Governments  
Credit: Regional Solutions Since 1960

0 0.5 1 1.5 Miles

10 Year Growth	10 Year Decline
<span style="color: green;">●</span> 250 or Less	<span style="color: red;">●</span> 250 or Less
<span style="color: green;">●</span> 251 to 500	<span style="color: red;">●</span> 251 to 500
<span style="color: green;">●</span> 501 to 1,000	<span style="color: red;">●</span> 501 to 1,000
<span style="color: green;">●</span> 1,001 to 2,000	<span style="color: red;">●</span> 1,001 to 2,000
<span style="color: green;">●</span> More than 2,000	<span style="color: red;">●</span> More than 2,000

- **No Traffic Count**
- **Growth/Decline**
- Municipal Boundaries
- Co. Boundaries
- Lakes
- Roads



**Map. Morganton Area  
Volume Change 2019-2021  
Average Daily Traffic**

2 Year Growth		2 Year Decline		No Traffic Count Growth/Decline
	250 or Less		250 or Less	
	251 to 500		251 to 500	
	501 to 1,000		501 to 1,000	
	1,001 to 2,000		1,001 to 2,000	
	More than 2,000		More than 2,000	

## Morganton Area Notable 2-Year Declines

<b>Road</b>	<b>Location</b>	<b>2019 TC</b>	<b>2021 TC</b>	<b>Change</b>
I-40	Between Exit 103 (US 64-Burkemont Ave) and Exit 104 (Enola Rd)	52,000	47,000	-5,000
I-40	Between Exit 104 (Enola Rd) and Exit 105 (NC 18-S Sterling St)	50,000	45,500	-4,500
I-40	Between Exit 105 (NC 18-S Sterling St) and Exit 106 (Bethel Rd)	51,000	46,500	-4,500
I-40	Between Exit 100 (Jamestown Rd) and Exit 103 (US 64-Burkemont Ave)	41,000	37,000	-4,000
I-40	Between Exit 98 (Causby Rd) and Exit 100 (Jamestown Rd)	41,000	37,000	-4,000

## Morganton Area Notable 2-Year Increases

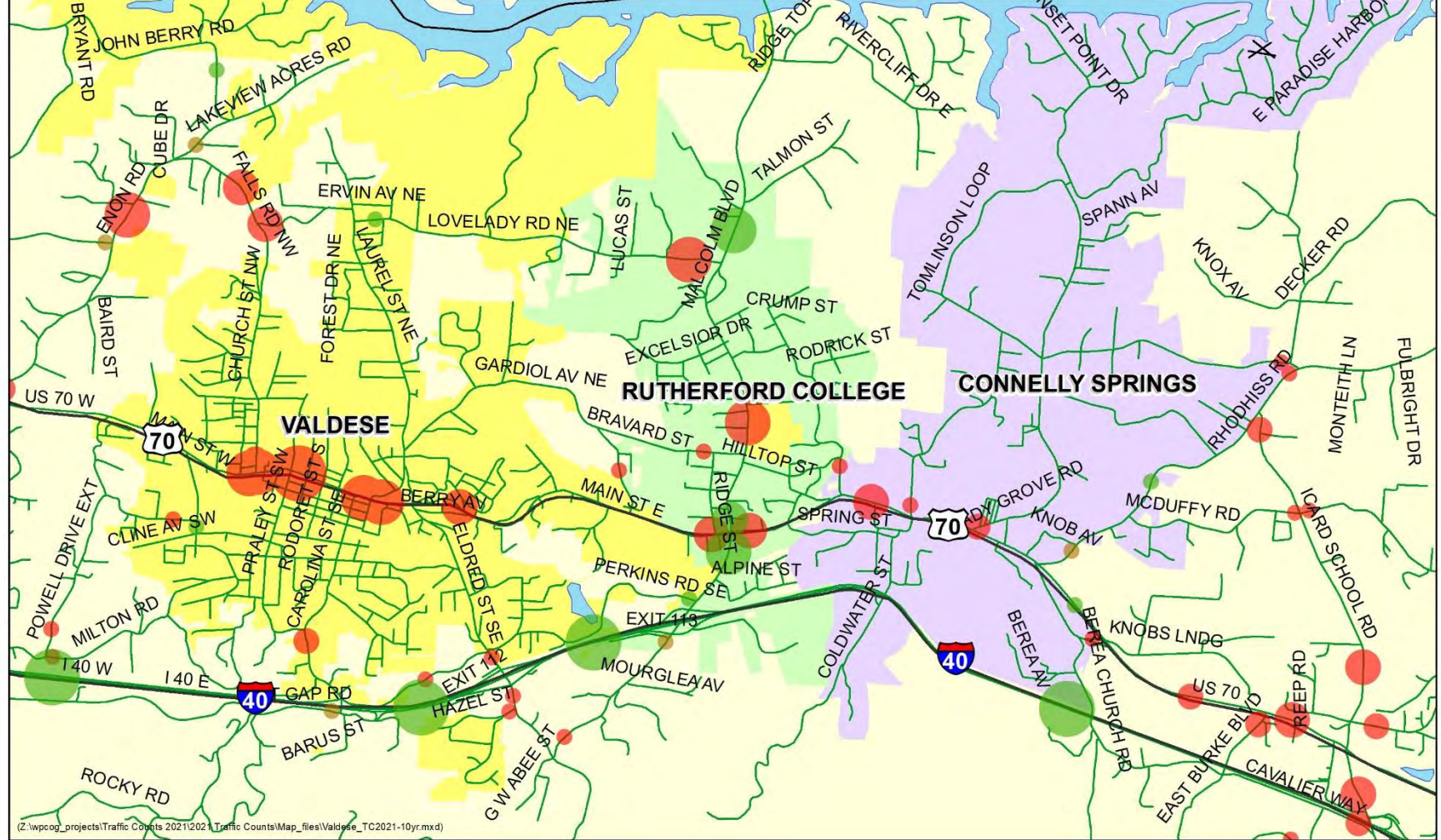
Road	Location	2019 TC	2021 TC	Change
NC 181 (N Green St)	North of NC 126	20,000	24,000	4,000
NC 126 (Independence Blvd)	North of NC 126	13,500	16,500	3,000
NC 181 (N Green St)	North of St Mary's Church Rd	13,000	15,000	2,000
US 64 (Sanford Dr)	North of US 64-70 (W Union St)	9,400	10,500	1,100
NC 64/NC 18 (Lenoir Rd)	North of Kirksey Rd	11,500	12,500	1,000



**Connelly Springs, Rutherford College  
and Valdese Area  
Change in ADT Counts**

**Map. Valdese, Rutherford College and Connelly Springs Volume Change 2011-2021 Average Daily Traffic**

Valdese	Roads	<b>10 Year Growth</b>	<b>10 Year Decline</b>
Rutherford College	Lakes	250 or Less	250 or Less
Connelly Springs	No Traffic Count Growth/Decline	251 to 500	251 to 500
		501 to 1,000	501 to 1,000
		1,001 to 2,000	1,001 to 2,000
		More than 2,000	More than 2,000



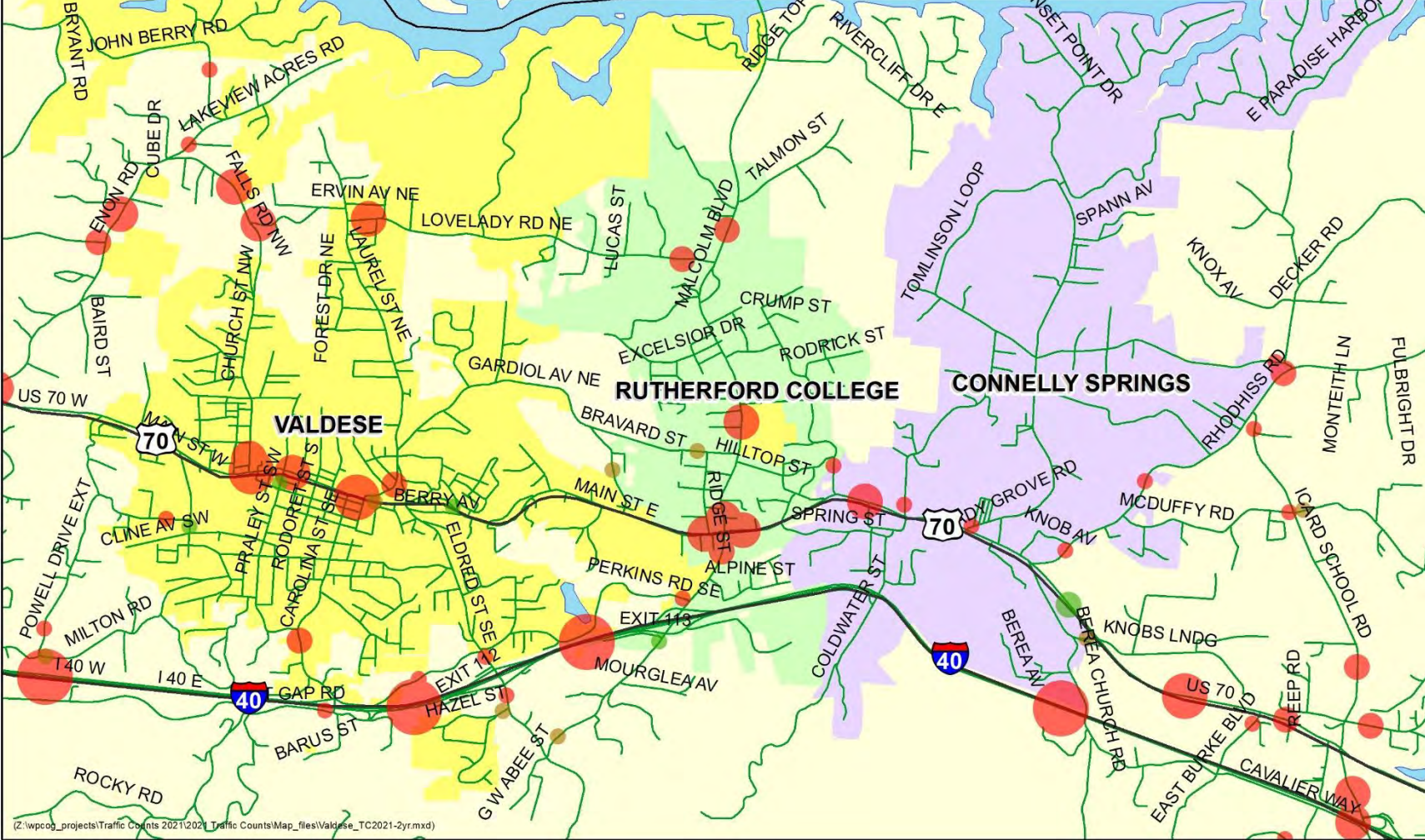
(Z:\wpcog\_projects\Traffic Counts 2021\2021\_Traffic Counts\Map\_files\Valdese\_TC2021-10yr.mxd)

**Map. Valdese, Rutherford College and Connelly Springs Volume Change 2019-2021 Average Daily Traffic**

Valdese	Roads	<b>2 Year Growth</b>	<b>2 Year Decline</b>
Rutherford College	Lakes	● 250 or Less	● 250 or Less
Connelly Springs	No Traffic Count Growth/Decline	● 251 to 500	● 251 to 500
		● 501 to 1,000	● 501 to 1,000
		● 1,001 to 2,000	● 1,001 to 2,000
		● More than 2,000	● More than 2,000

0 0.25 0.5 Miles

**WPCOG**  
Creative Regional Solutions Since 1968



## Connelly Springs, Rutherford College and Valdese Area Notable 2-Year Declines

Road	Location	2019 TC	2021 TC	Change
I-40	Between Mineral Springs Mtn Rd (Exit 112) and Malcolm Blvd (Exit 113)	52,500	48,500	-4,000
I-40	Between Valdese (Exit 111) and Mineral Springs Mtn Rd (Exit 112) exits	51,500	47,500	-4,000
I-40	Between Malcom Blvd (Exit 113) and Icard (Exit 116) exits	49,500	46,500	-3,000
Malcolm Blvd	North of US 70	15,000	14,000	-1,000
Malcolm Blvd	North of Bravard St	12,500	11,500	-1,000

# Connelly Springs, Rutherford College and Valdese Area Notable 2-Year Increases

Road	Location	2019 TC	2021 TC	Change
Rutherford College Rd	Just South of I-40	1,500	1,700	200
US 70 (Main St E)	East of Eldred Rd SE	5,400	5,500	100
Hoyle St SW	Just North of I-40	1,500	1,600	100
Prawley St SW	Just South of US 70	1,000	1,100	100

