

Johnson City Metropolitan Transportation Planning Organization

2050 Metropolitan Transportation Plan Update

Executive Board Meeting #2 | April 28, 2022



Moving You Into the Future

Agenda

- **MTP Process and Schedule**
- **Progress To-Date**
 - Existing Conditions Assessment
 - Public Input
- **Ongoing Efforts**
 - Fiscal Analysis
 - Project Needs
- **Next Steps**

MTP Process

Inventory Existing
Conditions and Needs



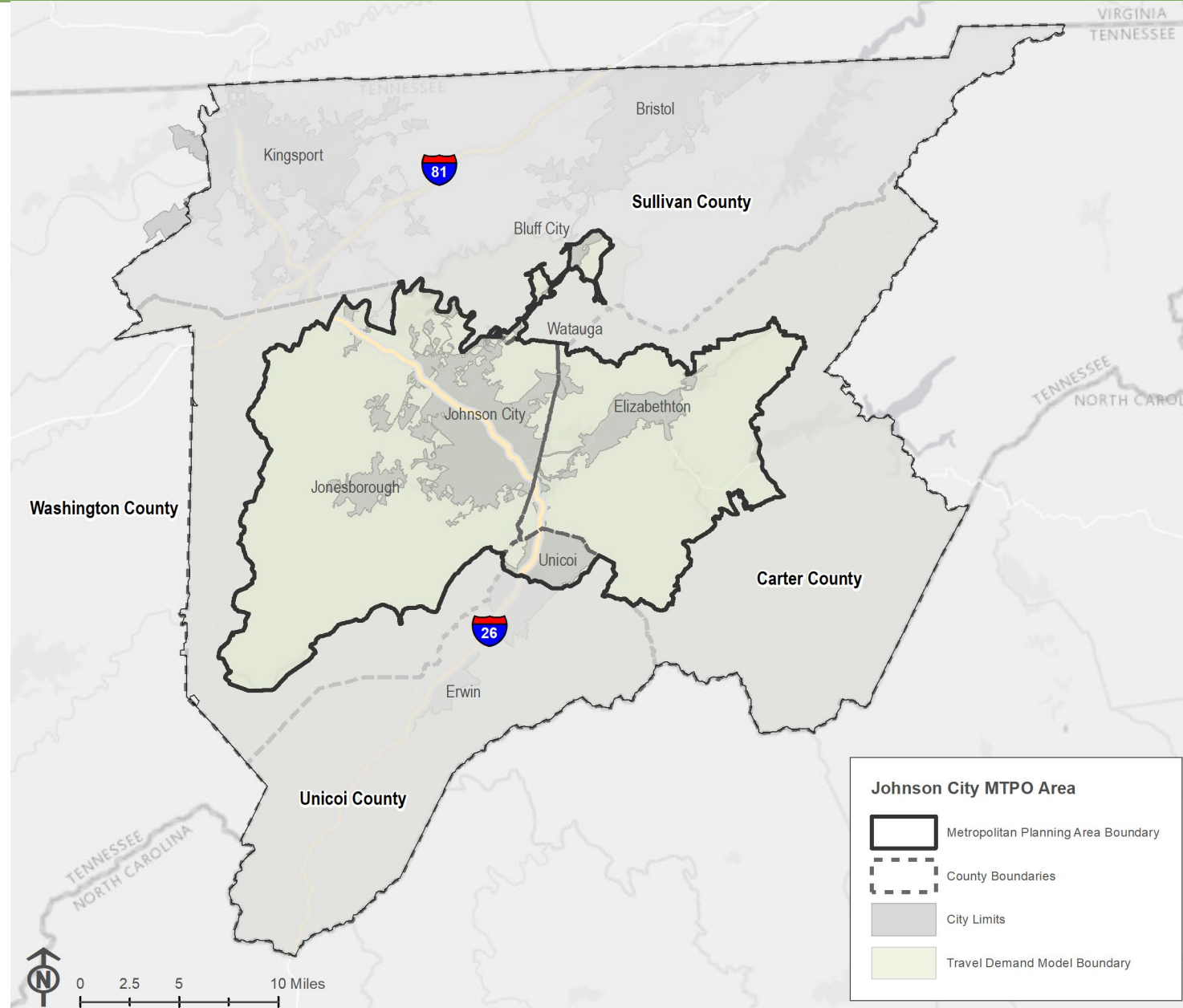
Determine Quality of
Current Conditions



Forecast Growth in
Residents and Jobs



Assess Infrastructure Needs
to Meet Future Demand



MTP Schedule

		2021	2022												2023	
		Dec	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb
Phase 1	Task 1 - Project Management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Phase 2	Task 2 - MTP Goals and Objectives	■	■													
	Task 3 - Data Collection															
	Task 4 - Initial List of Projects			■												
	Task 5 - Bicycle and Pedestrian Facilities			■												
	Task 6 - Travel Demand Model Update									■						
	Task 7 - Performance Framework/Deficiencies and Needs					■	■			■						
Phase 3	Task 8 - Financial Model				■											
	Task 9 - Project Cost Estimates					■										
	Task 10 - Operations and Maintenance Costs					■										
Phase 4	Task 11 - Title VI and Environmental Justice Analysis									■						
	Task 12 - Public Participation		■ EB ■ Public				■ EB ■ Public	■ EB							■ Public ■ EB	
Phase 5	Task 13 - Draft Plan and Executive Summary									■						
	Task 14 - Deliverables								■ MTPO		■ TDOT		■ FHWA/FTA			■

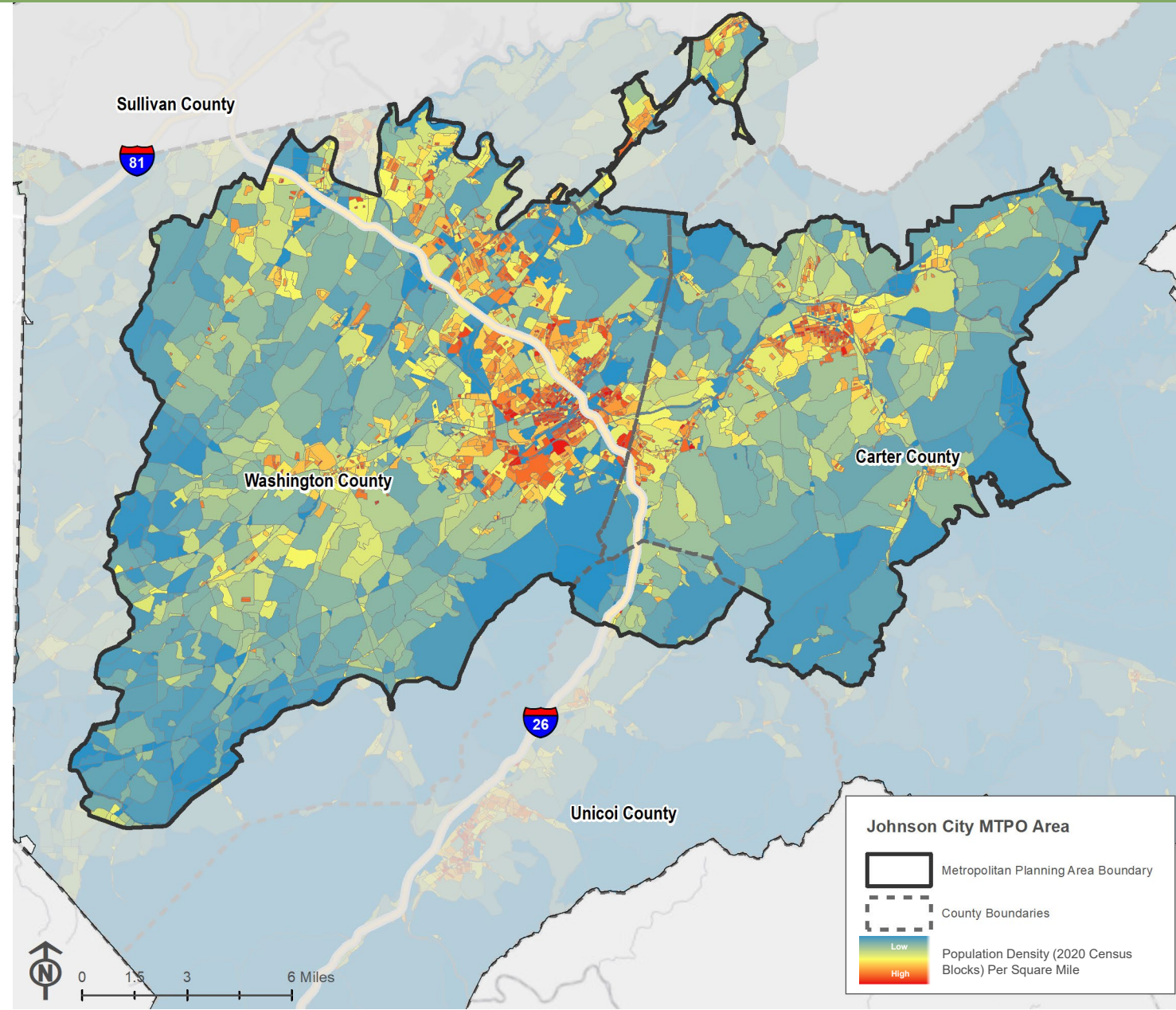
- MTPO Meeting
- Public/Executive Board Meeting
- Agency Review Milestones
- Deliverable/Milestones

We are here!

Existing Conditions – Population

According to the 2020 Census, approximately 171,000 people currently reside in the Johnson City MTPO Area with the most densely populated areas clustered in Washington and Carter Counties.

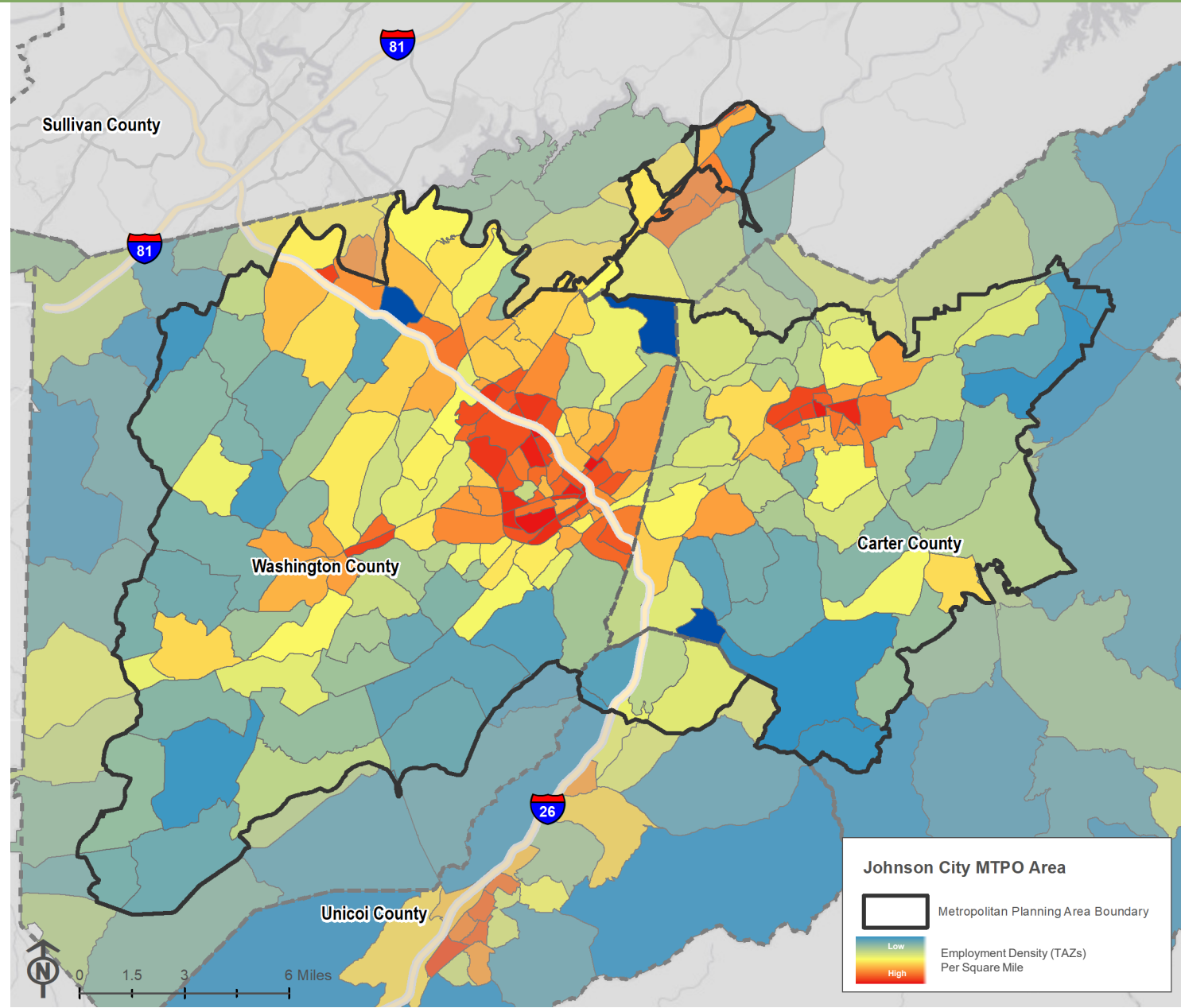
By 2050, the MTPO Area is expected to attract 61,000 more residents for a total population of approximately 232,000.



Existing Conditions – Employment

Current data tells us that there are approximately 71,000 jobs in the Johnson City MTPO Area with nearly 80% of those jobs residing in Washington County.

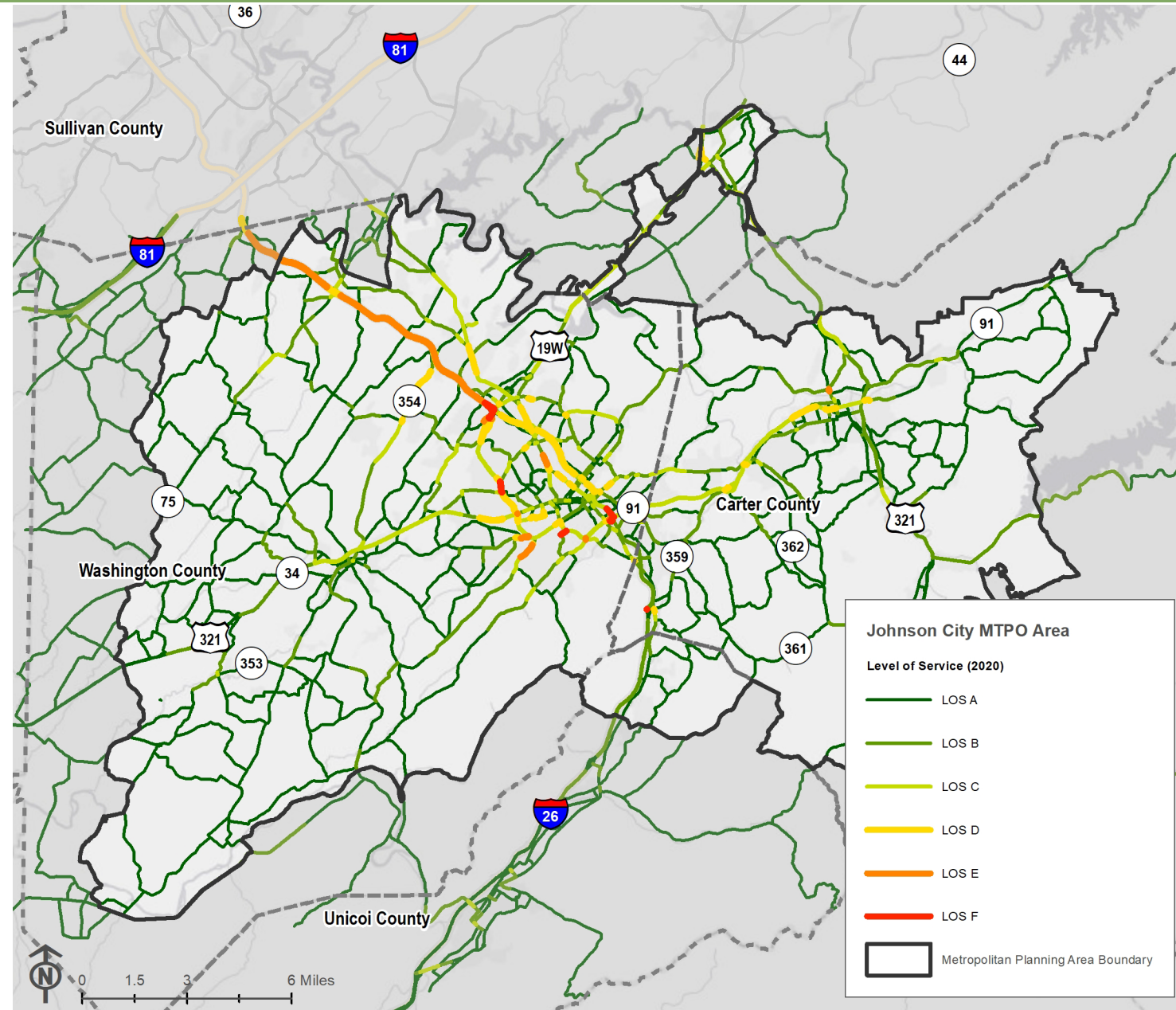
As the region grows, we expect an additional 18,000 jobs in the MTPO Area by 2050.



Existing Conditions – Roadway Operations

Approximately 17 miles (2.4%) within the Johnson City MTPo Area currently operate at a Level of Service E or F.

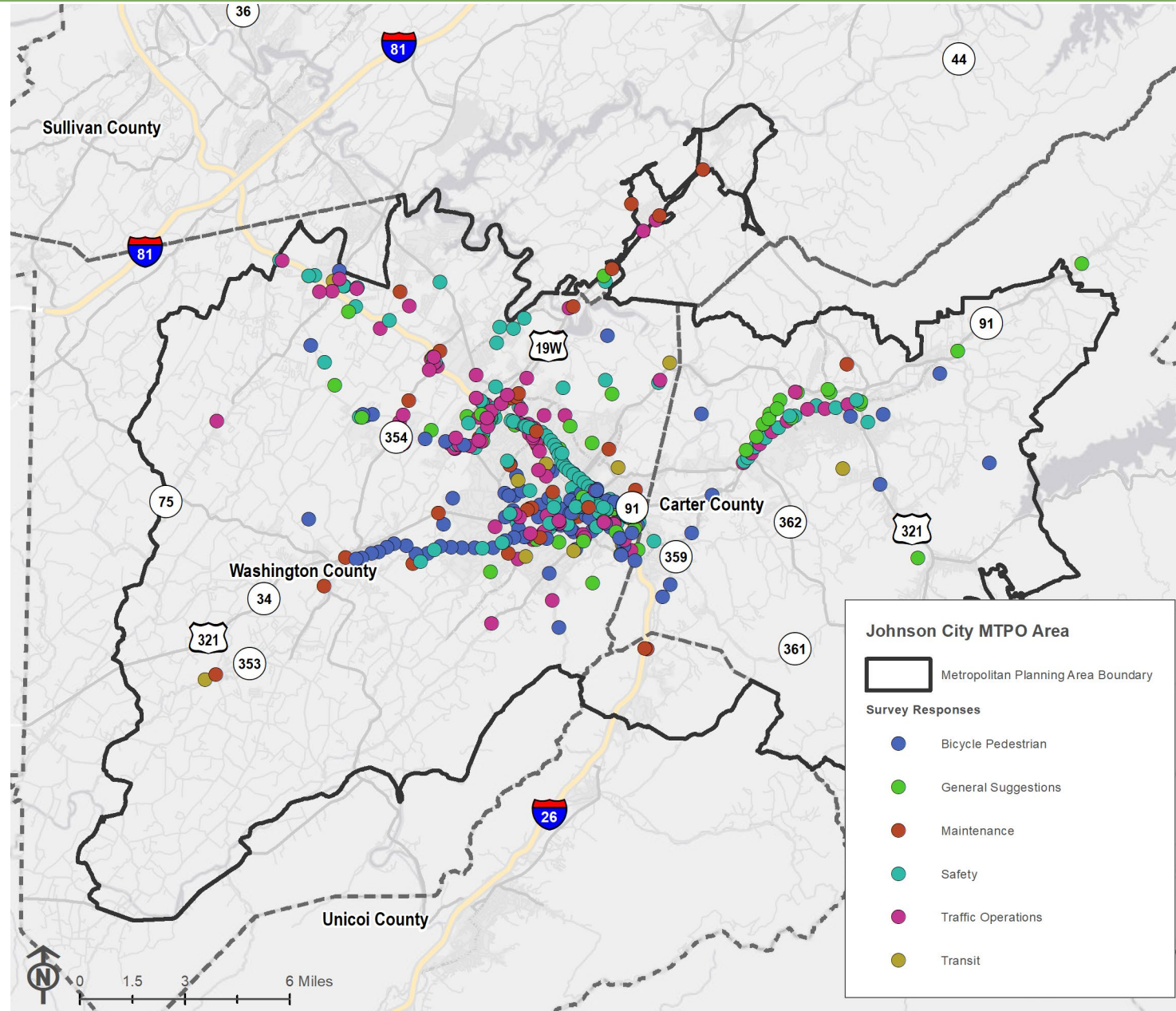
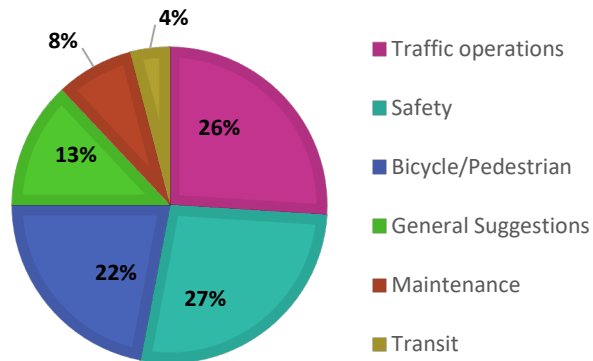
The worst congestion is concentrated along I-26 between Kingsport and Johnson City.



Public Input

456 comments were received on the interactive map. Key themes included:

- Complaints about sidewalk and bikeway gaps – support for expanded facilities
- Support for roundabouts; preference for maintenance over widespread roadway system expansion
- Requests to address perceived safety issues, particularly along I-26



Fiscal Analysis – Historic Revenues

Process for developing roadway and transit revenue projections:

- Reviewed historic funding levels from 2016-2020 from the following sources:
 - MTPO TIPs for Federal and State Obligations
 - Municipal Budgets for Capital and O&M
- Used these sources to establish an average annual amount for the following programs:
 - Surface Transportation Block Grant Program –Local Allocation to MPO (STBG-L) and State (STBG-S)
 - National Highway Performance Program (NHPP)
 - Highway Safety Improvement Program (HSIP)
 - Transportation Alternatives (TA)
 - Local (includes Municipalities and Counties)
 - 5307 - Urbanized Area Formula Grant
 - 5310 - Enhanced Mobility of Seniors & Individuals with Disabilities Program
 - 5339 - Buses and Bus Facilities)

Fiscal Analysis – Historic Capital Revenues

Type	Revenue Source	Historic Annual Average		
		Federal Share	Non-Federal Share	Total
Roadway	HSIP	\$1,931,604	\$214,623	\$2,146,227
	NHPP	\$7,484,792	\$1,871,198	\$9,355,990
	STBG-L (Local Allocation to MPO)	\$1,315,271	\$328,818	\$1,644,089
	STBG-S	\$2,957,742	\$739,436	\$3,697,178
	Discretionary Funds (TA, etc.)	\$252,041	\$63,010	\$315,051
	Local Funding	\$--	\$2,172,708	\$2,172,708
	Roadway Sub-Total	\$13,941,451	\$5,389,793	\$19,331,243
Transit	5307 Urbanized Area	\$410,321	\$86,418	\$496,739
	5310 Enhanced Mobility	\$327,863	\$79,378	\$407,241
	5339 Bus and Bus Facilities	\$170,000	\$30,000	\$200,000
	Transit Sub-Total	\$908,184	\$195,796	\$1,103,980

Fiscal Analysis – Historic Operating Revenues

Jurisdiction	Average Cost Per Mile	Miles Maintained Within MTPO	Annual Average Cost
City of Bluff City	\$25,396	11.5	\$291,567
City of Elizabethton	\$26,366	90.3	\$2,380,660
City of Johnson City	\$44,452	368.1	\$16,360,818
Town of Jonesborough	\$23,844	37.7	\$898,837
Town of Unicoi	\$5,223	27.0	\$140,967
City of Watauga	\$2,906	4.2	\$12,334
Carter County	\$6,419	317.6	\$2,038,314
Sullivan County	\$9,759	25.3	\$246,783
Unicoi County	\$8,499	2.9	\$24,671
Washington County	\$35,543	527.8	\$18,758,377
TDOT	\$13,977	192.7	\$2,567,758
Total	\$16,401	2,893.9	\$43,721,086

Revenue Source	Historic Annual Average		
	Federal Share	Non-Federal Share	Total
5307 Urbanized Area	\$1,884,709	\$1,673,108	\$3,557,817

Fiscal Analysis – Projected Revenues

Process for developing roadway and transit revenue projections:

- Reviewed historic and projected funding levels from the FAST Act and IIJA apportionments for Tennessee
- Established a 2% projected annual increase in revenues in consultation with TDOT and FHWA

Process for developing roadway and transit expenditures:

- Developed annual inflation rate for roadways (5% for first five years, then 3.4% thereafter) in consultation with TDOT and FHWA
- Consultation with Johnson City Transit and NET Trans TAM Plans for future needs and costs

Fiscal Analysis – Projected Revenues

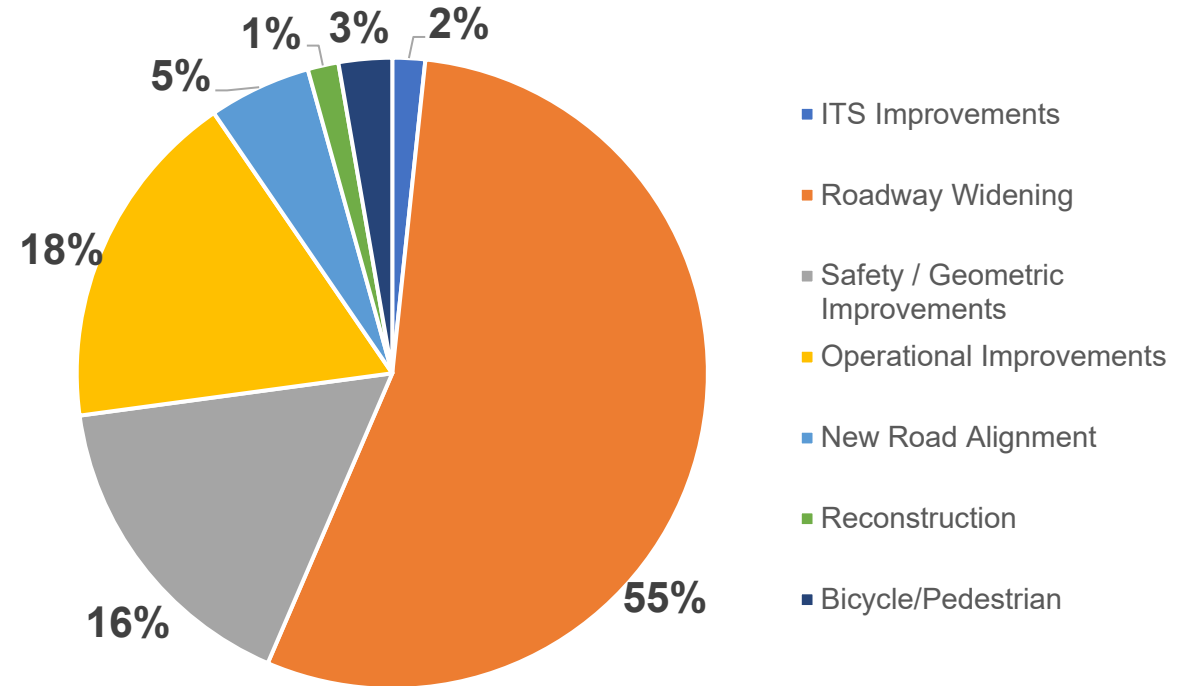
Type	Revenue Source	Projected Revenues		
		FY 2023-2030	FY 2031-2050	Total
Roadway	HSIP	\$18,789,416	\$62,321,000	\$81,110,416
	NHPP	\$81,908,220	\$271,676,000	\$353,584,220
	STBG-L (Local Allocation to MPO)	\$14,393,388	\$47,740,000	\$62,133,388
	STBG-S	\$32,367,420	\$107,357,000	\$139,724,420
	Discretionary Funds (TA, etc.)	\$2,758,154	\$9,148,000	\$11,906,154
	Local Funding	\$19,021,251	\$63,090,000	\$82,111,251
	Roadway Sub-Total	\$149,519,982	\$561,333,000	\$710,852,982
Transit	5307 Urbanized Area (Capital)	\$4,348,765	\$14,424,111	\$18,772,877
	5307 Urbanized Area (Operating)	\$31,147,366	\$103,310,489	\$134,457,854
	5310 Enhanced Mobility	\$3,565,244	\$11,825,304	\$15,390,547
	5339 Bus and Bus Facilities	\$1,750,926	\$5,807,521	\$7,558,447
	Transit Sub-Total	\$40,812,301	\$135,367,425	\$176,179,725

Project Needs - Roadway

Candidate projects were developed through discussions with member jurisdictions and technical analyses.

Types of projects include safety, ITS, operational improvements, widenings, bicycle/pedestrian, and new roadways.

Project costs in 2022 dollars
\$541,275,000



Project Needs - Transit

JCT and Net Trans TAM Plans provide projected timeline for vehicle replacement and anticipated replacement costs. Initial analysis indicates the need for \$37 million in vehicle replacements over the planning horizon.

	2023-2030		2031-2050		Total	
	Vehicles	YOE Costs	Vehicles	YOE Costs	Vehicles	YOE Costs
Fixed Route	17	\$5,852,358	38	\$21,690,759	55	\$27,543,117
Demand Response	33	\$1,843,069	82	\$7,772,914	115	\$9,615,983
Total	50	\$7,695,427	120	\$29,463,672	170	\$37,159,099

Next Steps

April

- Completed project cost estimates
- Completed financial model, including operations and maintenance cost estimates

May

- Public meeting #2
- Website updates
- Media releases
- Score and prioritize projects
- Draft fiscally constrained list

June

- MTPO EB Meeting #3
- Complete Title VI and Environmental Justice Analysis
- Draft plan and executive summary