

The image features a teal background with a dark teal triangle pointing downwards from the top-left corner. The text 'REGIONAL PERFORMANCE' is centered in the lower half of the image, with 'REGIONAL' on the top line and 'PERFORMANCE' on the bottom line.

**REGIONAL  
PERFORMANCE**

# 2. REGIONAL PERFORMANCE

## INTRODUCTION

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North Central Texas stands at a pivotal moment in shaping its transportation future. As our region grows, the North Central Texas Council of Governments (NCTCOG) recognizes that mobility, safety, and reliability are essential to keeping people and goods moving. People want options—whether that means driving, taking transit, or safely walking and biking—and they need a system that supports those choices without excessive delays or barriers.

Mobility 2050 is built on data-driven decision-making and performance-based planning to ensure the transportation system functions efficiently. Public input has underscored the need to balance expanding transit options, improving walking and biking conditions, and reducing congestion to make travel more reliable. By integrating federal performance measures with local priorities, Mobility 2050 sets a course for a more connected and adaptable transportation system.

As the region faces rapid growth and technological advancements, Mobility 2050 provides a strategic blueprint to enhance travel choices, improve efficiency, and support long-term economic success.

### How We Measure Success

At NCTCOG, we believe in measuring what matters. This chapter explains how we track our region's progress and plan for its future.

Our performance measurement framework rests on three pillars:

**Goal-Based Performance:** We evaluate our transportation system against nine strategic goals outlined in Mobility 2050. These goals represent our vision for the region's future and guide our decision-making process.

**Federal Requirements:** We track specific metrics required by the Federal Highway Administration and Federal Transit Administration, as mandated by recent transportation legislation (Moving Ahead for Progress in the 21st Century Act, Fixing America's Surface Transportation Act, Bipartisan Infrastructure Law, etc.).

**Additional Metrics:** We maintain supplementary performance measures that provide a more complete picture of our transportation system's health. These are included in various other chapters and sections as appropriate.

## IN THIS CHAPTER

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- Regional Performance
- Federal Performance Measures

## DID YOU KNOW?

**MORE TIME IN TRAFFIC:** The average North Texas commute time is **27.1 minutes in 2023**, up from **26.8 minutes** in 2015, reflecting growing congestion and longer trips due to outward expansion in the Dallas-Fort Worth region. Enhancing roadway efficiency and expanding travel options can help manage travel times and improve reliability.

**TRANSIT ACCESS:** By 2050, the percentage of residents living inside a public transit service area is projected to decline from **47 percent in 2026** to **38 percent**, despite rapid regional growth. Both expanding transit coverage and supporting land uses for transit are key to providing viable travel options in the future.

**SAFETY CONCERNS:** From 2019 to 2023, there were over **9,400 pedestrian and cyclist crashes** on North Texas roadways. Enhancing roadway safety, as well as walking and biking infrastructure, can help make these modes safer and more viable.



*Images: Getty*

# 2-1. REGIONAL GOALS: PERFORMANCE AND PROGRESS

## OVERVIEW

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### Aligning Performance with Our Goals

Mobility 2050 is built around nine goals, organized into four themes. These goals are more than aspirations—they form the backbone of our planning process. By measuring how our transportation system performs against these goals, we can identify the policies, programs, and projects that will best drive progress.

Public involvement, air quality improvement, economic vitality, and providing people with travel options are cross-cutting priorities in our performance framework. While some measures address these areas directly, we continue to enhance our data and analysis to support more informed decision-making across the system. Technology, similarly, is not a goal in itself but a tool that enables us to work more efficiently, effectively, and to achieve outcomes that may have previously been unattainable.

### Evolution of Our Approach

While the North Central Texas Council of Governments (NCTCOG) has long embraced performance-based planning, measuring performance against plan goals is a relatively recent innovation, introduced with the Mobility 2045 Update. We expect this approach to grow more sophisticated with each planning cycle, potentially incorporating specific targets and playing a more direct role in project selection.

### How We Structure Our Measurements

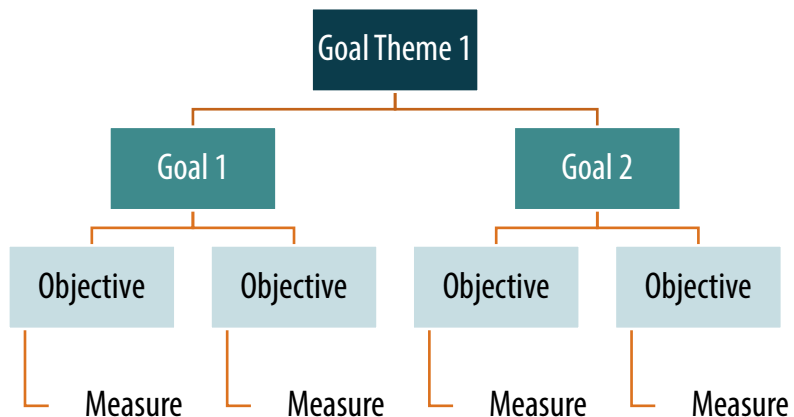
Our framework creates a clear line from broad goals to specific metrics:

- Goals define our desired outcomes
- Objectives specify the activities needed to achieve these goals
- Performance measures quantify our progress toward these objectives

Each goal encompasses one or more objectives, and each objective is tracked through specific performance measures. We report on these metrics annually to maintain transparency and accountability in implementing the plan.

The following sections detail our performance measures, organized by goal theme. These metrics serve as our compass, helping ensure we're moving in the right direction as we build the region's transportation future.

Figure 2-1: Performance Measurement Structure for Plan Goals



## Policy Bundle

In addition to a performance measurement structure, NCTCOG leads initiatives to support regional goals. The Policy Bundle encourages the adoption and/or implementation of transportation policies by recognizing and incentivizing participating local governments, transit authorities, and other transportation partners. Details can be found in the **Regional Performance** appendix.



## MOBILITY

Improve the availability of transportation options for people and goods.

Support travel efficiency measures and system enhancements targeted at congestion reduction and management.

Ensure all communities are provided access to the regional transportation system and planning process.



## QUALITY OF LIFE

Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.

Encourage livable communities which support sustainability and economic vitality.



## SYSTEM SUSTAINABILITY

Ensure adequate maintenance and enhance the safety and reliability of the existing transportation system.

Pursue long-term sustainable revenue sources to address regional transportation system needs.



## IMPLEMENTATION

Provide for timely project planning and implementation.

Develop cost-effective projects and programs aimed at reducing the costs associated with constructing, operating, and maintaining the regional transportation system.

# MOBILITY 2050 POLICIES AND PROGRAMS

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Mobility 2050 includes policies and programs that address regional priorities and public needs. Policies guide decision-making and set the framework for long-term goals, while programs provide the funding and resources to turn plans into action across the transportation system.

## Policies

**PB3-001:** To encourage and incentivize local governments to carry out policies identified in the Metropolitan Transportation Plan, the Regional Transportation Council has established a Policy Bundle Program to advance the plan's goals such as safety, air quality, mobility options, and quality of life for North Central Texans.

## Programs

For more details, see the **Regional Performance** appendix.

**PB2-001:** The Regional Transportation Council will utilize mechanisms to support the adoption and implementation of a selection of policies identified in the Metropolitan Transportation Plan and aligned with Regional Transportation Council direction. Periodically, the North Central Texas Council of Governments will solicit invitations to participate to local governments, transit authorities, and other transportation partners.



# GOAL THEME 1: MOBILITY

## Goal 1: Improve the availability of transportation options for people and goods

Mobility 2050 strives to enhance the availability of transportation options for both people and goods, recognizing this as a cornerstone of a thriving, connected region. By advancing a suite of innovative policies, programs, and projects, the plan addresses the diverse and evolving mobility needs of the Dallas-Fort Worth area.

*Objective: Expand the region's network of active transportation facilities*

- 🕒 **Measure:** Number of Miles of Existing Regional Veloweb
- 🕒 **Measure:** Number of Miles of Existing Community Shared-Use Paths
- 🕒 **Measure:** Number of Miles of Existing On-Street Bikeways

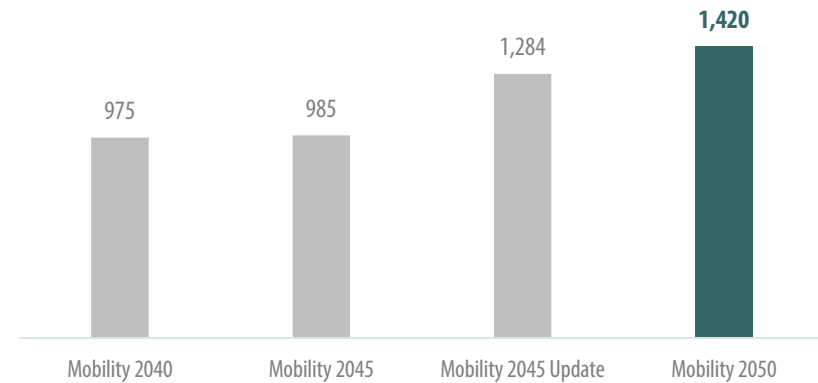
### Data

Table 2-1: Existing Active Transportation Facilities

Measure	Mobility 2040 (2016)	Mobility 2045 (2018)	Mobility 2045 Update (2022)	Mobility 2050 (2025)
Number of miles of existing Regional Veloweb	442	455	538	576
Number of miles of existing community shared-use paths	333	318	470	520
Number of miles of existing on-street bikeways (urbanized areas)	200	212	276	328
<b>Total</b>	<b>975</b>	<b>985</b>	<b>1,284</b>	<b>1,424</b>

Source: NCTCOG

Figure 2-2: Existing Active Transportation Facilities: Total Existing Mileage



Source: NCTCOG

### Objective Summary

#### Why This Objective Matters

Expanding the region's active transportation network is essential for providing travel options for residents. Public input highlights strong support for facilities that cater to pedestrians and cyclists. Active transportation facilities improve quality of life, support air quality goals, and encourage healthier, more sustainable travel choices.

#### Progress Toward the Goal



**Desired Trend:** The active transportation network should increase in mileage over time.



**Observed Data:** The active transportation network is increasing in mileage over time.

Learn More



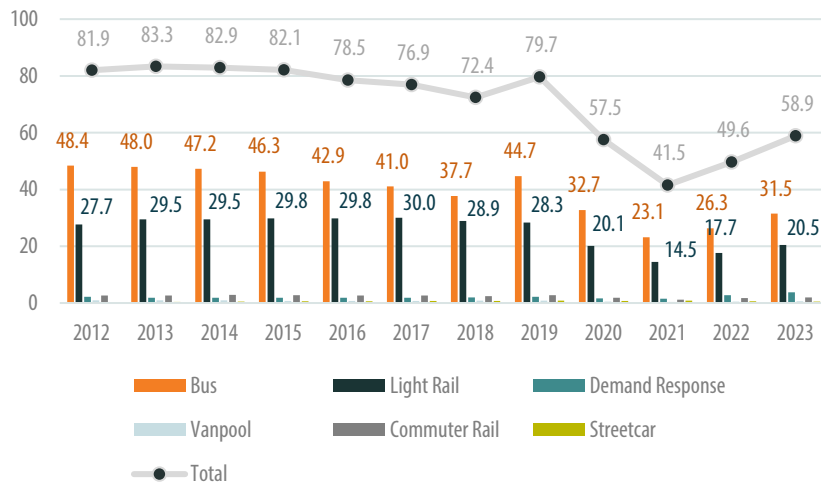
**Mobility Options: Active Transportation**

*Objective: Expand the region's transit system to provide more transportation options while improving its effectiveness*

- 📈 Measure: Annual Unlinked Passenger Trips by Mode
- 📈 Measure: Annual Unlinked Passenger Trips per Vehicle Revenue Hour by Mode
- 📈 Measure: Rail Track Mileage and Number of Stations

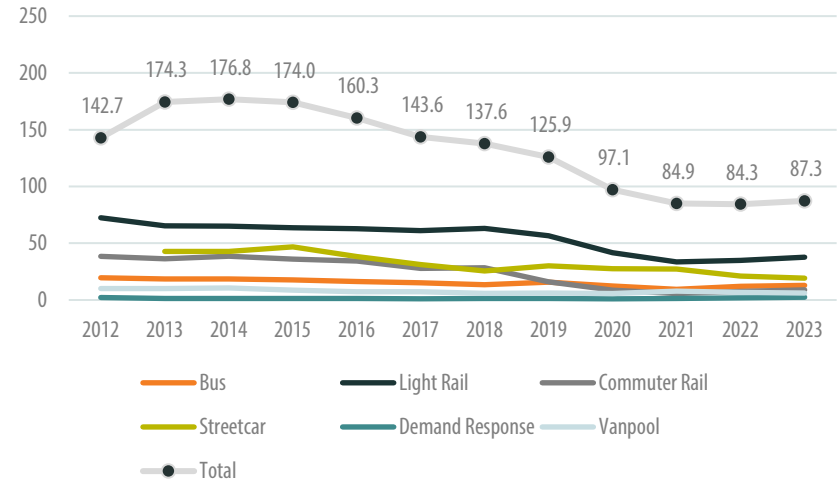
Data

Figure 2-3: Annual Passenger Trips by Mode, in Millions



Source: National Transit Database, 2023

Figure 2-4: Annual Passenger Trips per Vehicle Revenue Hour



Source: National Transit Database, 2023

Table 2-2: Transit System Mileage and Stations

Mode	Metric	2020	2026
Commuter Rail	Mileage	82	108
	Stations	25	31
Light Rail	Mileage	93	93
	Stations	65	65
Streetcar	Mileage	7	7
	Stations	6	41

Source: NCTCOG

Objective Summary

Why This Objective Matters

Expanding the region's transit system and ensuring its efficiency is a top priority, driven by public demand for reliable and accessible options. Matching transit modes to the diverse and evolving needs of communities addresses current gaps while preparing for future growth. A well-designed system enhances mobility, reduces congestion, and supports sustainability by offering a viable alternative

to single-occupant vehicle travel. Additional transit data tables are available in the **Regional Performance** appendix.

*Progress Toward the Goal*



**Desired Trend:** Transit ridership and network mileage should increase over time.



**Observed Data:** Ridership sharply decreased in 2020 due to the pandemic, but is slowly beginning to increase again.

*Learn More*



**Mobility Options: Public Transportation**

*Objective: Increase the share of non-traditional transportation modes*

**Measure:** Percent Non-Single-Occupant Vehicle Travel

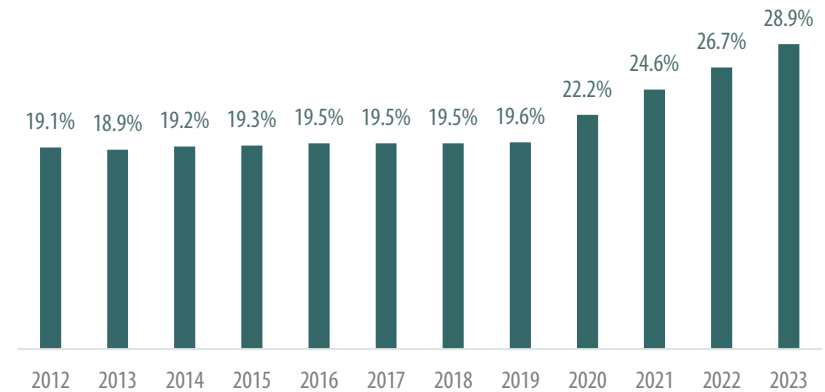
Data

Table 2-3: Percent Non-Single Occupant Vehicle Travel

Year	Percentage
2012	19.1
2013	18.9
2014	19.2
2015	19.3
2016	19.5
2017	19.5
2018	19.5
2019	19.6
2020	22.2
2021	24.6
2022	26.7
2023	28.9

*Source: US Census Bureau American Community Survey 5-Year Estimates*

Figure 2-5: Percent Non-Single-Occupant Vehicle Travel



*Source: US Census Bureau American Community Survey 5-Year Estimates*

Objective Summary

*Why This Objective Matters*

This outcome-based measure tracks the proportion of commute trips in the Dallas-Fort Worth-Arlington Urbanized Area that are taken using modes other than driving alone such as transit, carpooling, telecommuting, bicycling, and walking. By indicating the level of reliance on driving alone and use of alternatives, this measure highlights opportunities to enhance system efficiency and sustainability. Policies, programs, and projects in Mobility 2050 that encourage alternative modes of travel play a critical role in improving this measure and advancing regional goals.

## Progress Toward the Goal



**Desired Trend:** Travel via non-single-occupant vehicles should increase over time.



**Observed Data:** Non-single-occupant vehicle travel is increasing over time.

## Learn More



**Operational Efficiency:** Travel Demand Management



**Regional Performance:** Federal Performance Measures

## Goal 2: Support travel efficiency measures and system enhancements targeted at congestion reduction and management

Many of the policies, programs, and projects recommended by Mobility 2050 seek to directly address current and future congestion while ensuring the region's transportation system operates more efficiently. Measures related to this goal seek to quantify both absolute congestion and the impacts of policies and programs related to operational efficiency.

*Objective: Reduce congestion on the region's roadway network*

 **Measure:** PM Peak Period Travel Time Index on Freeways

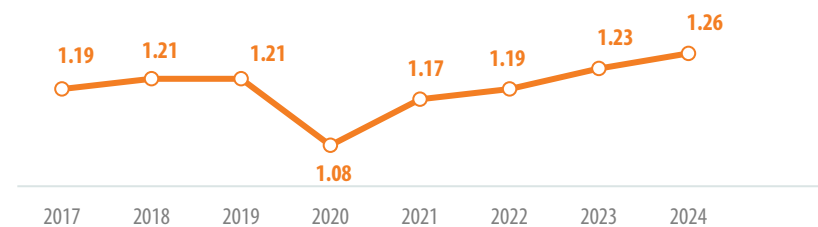
## Data

Table 2-4: PM Peak Period Travel Time Index on Freeways

Measure	2017	2018	2019	2020	2021	2022	2023	2024
PM Peak Period Travel Time Index on Freeways	1.19	1.21	1.21	1.08	1.17	1.19	1.23	1.26

Source: National Performance Management Research Data Set

Figure 2-6: PM Peak Period Travel Time Index on Freeways



Source: National Performance Management Research Data Set

## Objective Summary

### Why This Objective Matters

Congestion on the region's freeways impacts both quality of life and economic productivity. This measure uses a travel time index to quantify peak-period congestion, comparing peak travel times to free-flow conditions. Data from the National Performance Management Research Data Set informs these analyses, helping guide policies and projects in Mobility 2050 to effectively address congestion challenges.

## Progress Toward the Goal



**Desired Trend:** Travel times should decrease or remain steady over time.



**Observed Data:** Travel times are increasing over time.

Learn More



**Operational Efficiency:** Congestion Management



**Mobility Options:** Roadway

## Objective: Improve congestion issues that disproportionately impact freight movement

**Measure:** Percentage Difference Between Truck Congestion and Passenger Vehicle Congestion

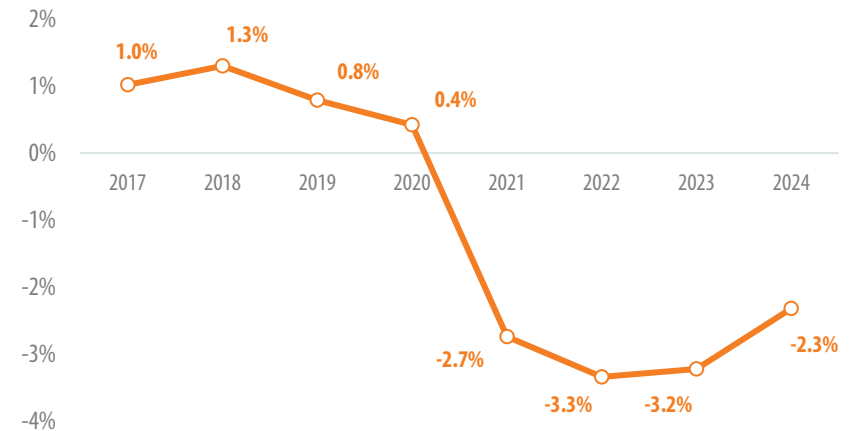
Data

Table 2-5: Percentage Difference Between Truck Congestion and Passenger Vehicle Congestion

Measure	2017	2018	2019	2020	2021	2022	2023	2024
Percentage Difference Between Truck Travel Time Index and Passenger Vehicle Travel Time Index	1.0%	1.3%	0.8%	0.4%	-2.7%	-3.3%	-3.2%	-2.3%

Source: National Performance Management Research Data Set

Figure 2-7: Percentage Difference Between Truck Congestion and Passenger Vehicle Congestion



Source: National Performance Management Research Data Set

## Objective Summary

### Why This Objective Matters

Efficient freight movement is vital to the region's economic success, but congestion often disproportionately impacts trucks, hindering their ability to navigate efficiently. Factors like roadway geometry, limited merging space, and stop-and-go traffic exacerbate delays for freight vehicles compared to passenger cars. Addressing these challenges through targeted policies, programs, and projects—such as reducing overall congestion, implementing managed lanes, optimizing roadway design, and improving network reliability—can help mitigate these disparities. This measure tracks the percentage difference in peak-period travel time indices between trucks and passenger vehicles to evaluate progress in improving freight mobility.

Progress Toward the Goal



**Desired Trend:** Truck congestion levels that are not disproportionately higher than passenger vehicle congestion is desirable.



**Observed Data:** Truck congestion levels are decreasing in proportion to passenger vehicle congestion over time.

Learn More



**Mobility Options:** Freight



**Operational Efficiency:** Congestion Management

**Objective:** Provide training for first responders to manage crash incidents quickly and effectively

**Measure:** Number of Personnel Sent to Freeway Incident Management Training

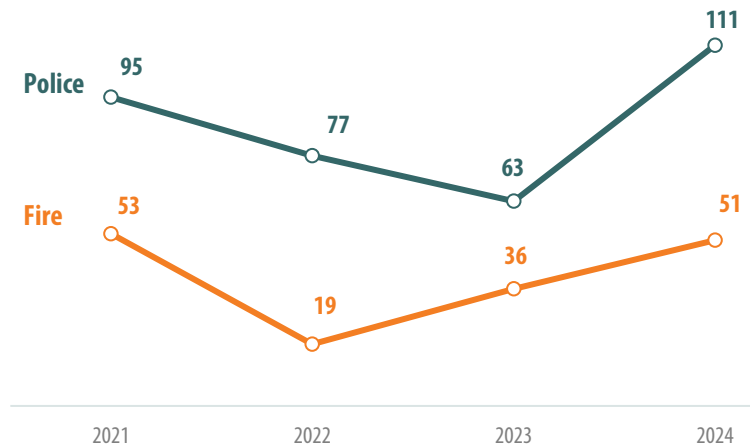
Data

Table 2-6: Number of Personnel Sent to Freeway Incident Management Training

Measure	2021	2022	2023	2024
Number of personnel sent to Freeway Incident Management training (Police Departments)	95	77	63	111
Number of personnel sent to Freeway Incident Management training (Fire Departments)	53	19	36	51

Source: NCTCOG

Figure 2-8: Number of Personnel Sent to Freeway Incident Management Training



Source: NCTCOG

Objective Summary

Why This Objective Matters

Crashes on the region’s freeways are a major cause of nonrecurring congestion, impacting both traffic flow and reliability. First responders prioritize safety but must also clear incidents quickly to minimize disruptions. Freeway Incident Management training equips responders with best practices to safely and efficiently manage crash sites, reducing delays. This measure tracks the number of personnel participating in the training, with plans to adopt a clearance time measure as data improves.

## Progress Toward the Goal



**Desired Trend:** The number of personnel sent to Freeway Incident Management training should increase over time.



**Observed Data:** The number of personnel sent to Freeway Incident Management training is increasing in recent years.

Learn More



**Operational Efficiency: Safety**

## Goal 3: Ensure all communities are provided access to the regional transportation system and planning process

Building a transportation system that meets the needs of the region’s varied needs—now and in the future—is a key objective. Equally important is fostering public involvement from all communities to ensure every voice is heard. Measures tied to this goal track progress in advancing fair access to the transportation system and throughout the planning process.

*Objective: Improve transit access for the region’s population across multiple transit modes*

- 🔍 **Measure:** Percentage of the Region’s **Population** with Access to Frequent Fixed-Route Service
- 🔍 **Measure:** Percentage of the Region’s **Employment** with Access to Frequent Fixed-Route Service
- 🔍 **Measure:** Percentage of the Region’s **Population** with Access to Microtransit
- 🔍 **Measure:** Percentage of the Region’s **Employment** with Access to Microtransit

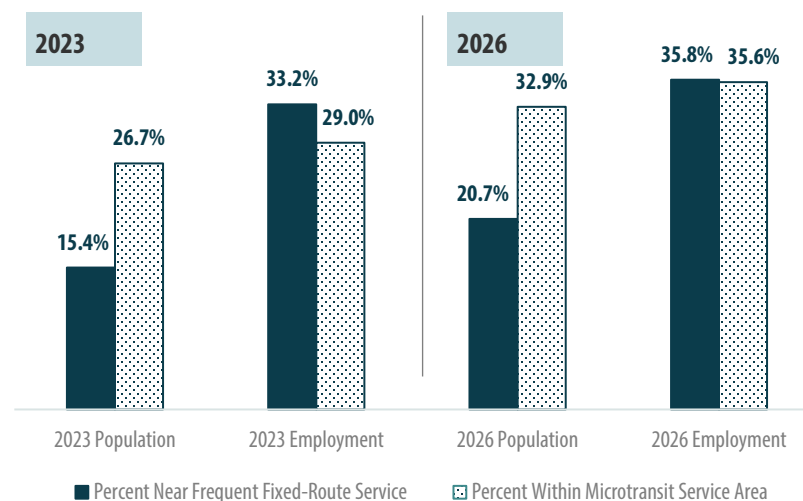
## Data

Table 2-7: Population and Employment with Access to Frequent Transit

Measure	2023 Population	2023 Employment	2026 Population	2026 Employment
Percent of Population and Employment Opportunities Near Frequent Fixed-Route Service	15.4%	33.2%	20.7%	35.8%
Percent of Population and Employment Opportunities within Microtransit Service Areas	26.7%	29.0%	32.9%	35.6%

Source: NCTCOG

Figure 2-9: Population and Employment with Access to Frequent Transit



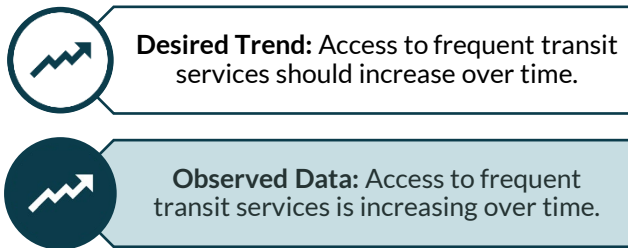
Source: NCTCOG

## Objective Summary

### Why This Objective Matters

Access to reliable transit plays a vital role in connecting people to jobs, education, healthcare, and other essential services, particularly for transportation-disadvantaged communities who often face disproportionate transportation costs. Public involvement efforts for Mobility 2050 have consistently shown strong demand for expanded and improved transit options across the region, highlighting the public's desire for affordable, efficient mobility choices.

### Progress Toward the Goal



### Learn More

 **Mobility Options:** Public Transportation

 **Social Considerations:** Public Involvement

## Objective: Maintain an open dialog with the public through public comment processes

 **Measure:** Number of Public Comments Received through Multiple Channels

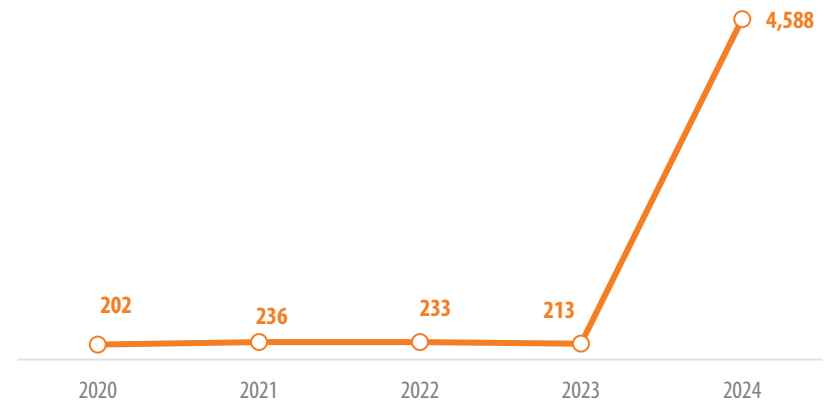
### Data

Table 2-8: Public Comments Received Relevant to Mobility Plans

Comment Source	2020	2021	2022	2023	2024
Metropolitan Transportation Plan Comments	2	1	16	10	534
Map Your Experience	200	235	217	190	497
Limited-Time Survey (Mobility 2050 only)	n/a	n/a	n/a	13	3,557
<b>Totals</b>	<b>202</b>	<b>236</b>	<b>233</b>	<b>213</b>	<b>4,588</b>

Source: NCTCOG; Mobility 2045 Update adopted in June 2022.

Figure 2-10: Public Comments Received Relevant to Mobility Plans



Source: NCTCOG

## Objective Summary

### Why This Objective Matters

Public involvement is essential to creating transportation plans that reflect the diverse needs of North Central Texas. For Mobility 2050, over 3,500 survey responses revealed strong support for multimodal solutions and improved transit access, while around 680 comments from the Map Your Experience tool provided detailed, location-specific feedback. Traditional methods like public meetings and outreach events remain important, but innovative tools have broadened engagement, ensuring diverse voices are heard. Continued investment in accessible, comprehensive public involvement processes will strengthen future planning efforts and help address the region's evolving transportation needs.

### Progress Toward the Goal



**Desired Trend:** Public input should increase over time across more diverse communication channels.



**Observed Data:** Public input has increased sharply across more diverse communications channels over time.

Learn More



**Social Considerations: Public Involvement**

## Objective: Improve access to the internet for all populations across the region

**Measure:** Access to the Internet

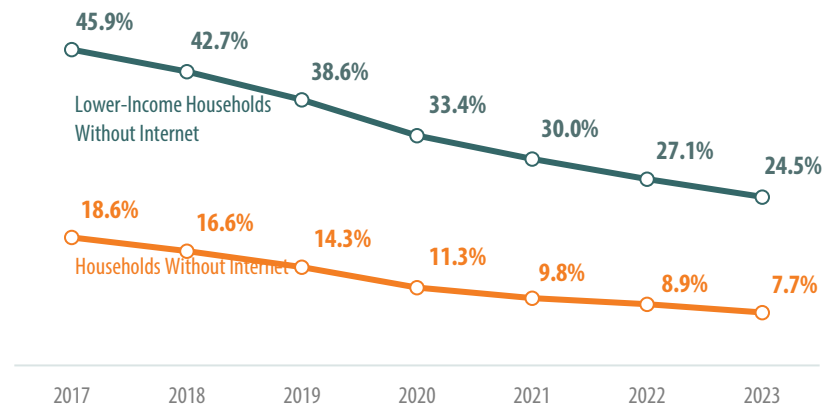
### Data

Table 2-9: Internet Access

	2017	2018	2019	2020	2021	2022	2023
Households Without Internet	18.6%	16.6%	14.3%	11.3%	9.8%	8.9%	7.7%
Lower-Income Households Without Internet (Household Income Below \$20,000/Year)	45.9%	42.7%	38.6%	33.4%	30.0%	27.1%	24.5%

Source: US Census Bureau, American Community Survey 5-Year Estimates

Figure 2-11: Internet Access



Source: US Census Bureau, American Community Survey 5-Year Estimates

## Objective Summary

### *Why This Objective Matters*

Access to reliable internet is increasingly essential for public involvement, virtual services, and telecommuting, which can reduce strain on the transportation system during peak times. Addressing these gaps through policies and programs can expand access, ensuring equitable participation and supporting regional connectivity.

### *Progress Toward the Goal*



**Desired Trend:** The number of households without internet access should decrease over time.



**Observed Data:** The number of households without internet access, including lower-income households, is decreasing over time.

### *Learn More*



**Social Considerations:** Regional Population and Employment



## GOAL THEME 2: QUALITY OF LIFE

### Goal 4: Preserve and enhance the natural environment, improve air quality, and promote active lifestyles

Transportation can have significant impacts on the natural environment and public health, and the policies, programs, and projects recommended by Mobility 2050 seek to quantify and manage these impacts. Measures related to this goal quantify environmental impacts of the transportation system and related economic development. Additional years of National Land Cover Dataset (NLCD) data are included in **Appendix A**.

#### *Objective: Preserve the region's open and natural areas*

##### **Measure:** Percentage of Regional Land Developed

##### Data

Table 2-10: Percentage of Regional Land Developed

Measure	1985	1990	1995	2000	2005	2010	2015	2020	2023
Percent Developed	17.2	18.2	19.5	21.1	23.5	25.4	26.6	28.5	30.0

Source: National Land Cover Dataset

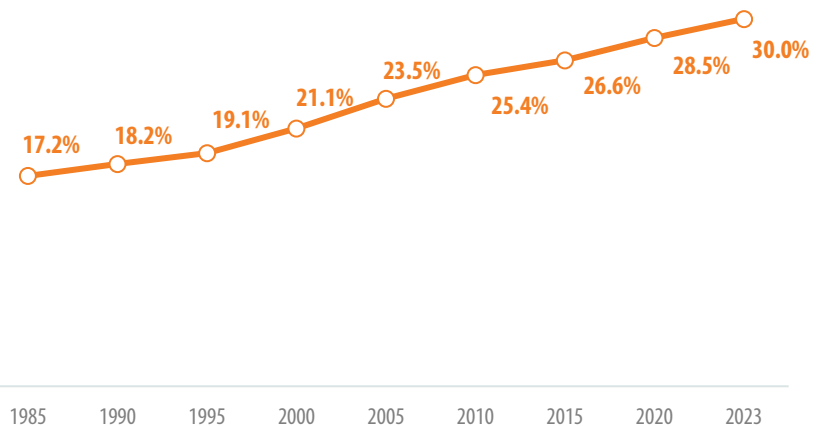
##### Objective Summary

##### *Why This Objective Matters*

Preserving the region's open and natural areas is vital for environmental health, ecosystem balance, and overall quality of life. As one of the fastest-growing regions in the country, some expansion of developed land is inevitable. However, the pace and pattern of that growth matter. Transportation infrastructure and development decisions—though largely outside the purview of transportation

planning agencies—can significantly influence land use trends and resulting transportation plans. Policies that support mixed-use development and density around existing rail transit can help slow the rate at which natural areas are consumed. While NCTCOG does not set land use policy, this measure helps illustrate how regional growth patterns intersect with long-term transportation and environmental preservation goals. It tracks the share of land classified as “Developed” using the National Land Cover Database, offering insight into how the landscape is changing over time.

Figure 2-12: Percentage of Regional Land Developed



Source: National Land Cover Dataset

Progress Toward The Goal



**Desired Trend:** The percentage of regional land classified as “Developed” should grow more slowly over time.



**Observed Data:** The percentage of regional land classified as “developed” is steadily increasing.

Learn More



**Social Considerations:** Regional Population and Employment



**Environmental Considerations:** Environment Effects, Mitigation, and Stewardship

*Objective: Implement resilient roadway and transit projects that are protected from floods and minimize impact on the natural environment*

**Measure:** National Highway System Lane Miles in Flood Zones

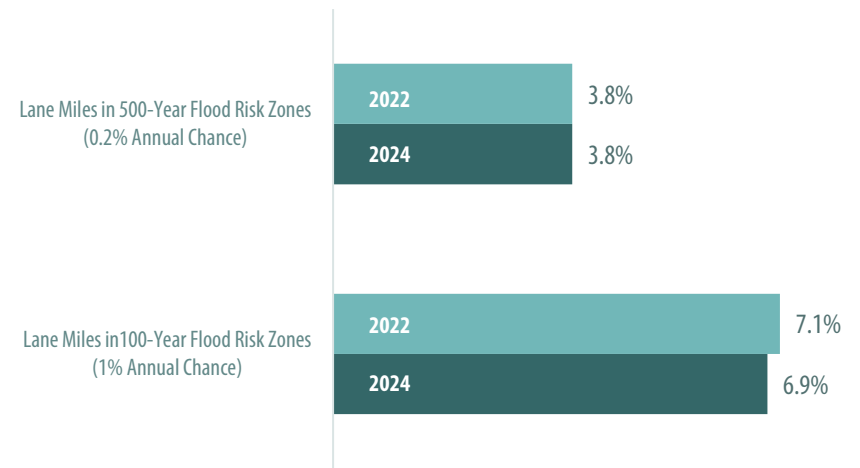
Data

Table 2-11: National Highway System Lane Miles in Flood Zones

	Percent of Total Lane Miles 2022	Percent of Total Lane Miles 2024
National Highway System Lane Miles in 12-County Region	20,993	21,156
Lane Miles in 500-Year Flood Risk Area (0.2% Annual Chance)	3.8%	3.8%
Lane Miles in 100-Year Flood Risk Area (1% Annual Chance)	7.1%	6.9%

Source: Texas Department of Transportation Geospatial Roadway Inventory Database; Federal Emergency Management Agency

Figure 2-13: National Highway System Lane Miles in Flood Zones



Source: Texas Department of Transportation Geospatial Roadway Inventory Database; Federal Emergency Management Agency

Objective Summary

Why This Objective Matters

Floodplains are critical natural areas that help manage stormwater, reduce flood risks, and support ecosystem health. Development within floodplains, including transportation infrastructure, can disrupt these functions, exacerbate flooding, and harm environmentally sensitive areas. This measure tracks the extent to which major roadways intersect floodplains, providing insight into the region’s exposure to flood risk and the potential impact of infrastructure on floodplain integrity. Monitoring this measure over time supports efforts to balance infrastructure development with the need to protect floodplains and enhance regional resilience to flooding.

Progress Toward The Goal



**Desired Trend:** The percentage of regional lane miles in flood zones should decrease over time.



**Observed Data:** The percentage of regional lane miles in flood zones is steady to slightly decreasing over time.

Learn More



**Environmental Considerations:** Natural Hazards



**Environmental Considerations:** Environment Effects, Mitigation, and Stewardship

**Objective: Work to reduce transportation-related emissions of air pollutants, including ozone precursors**

**Measure:** 8-Hour Ozone National Ambient Air Quality Standards Design Value (ppb)

Data

Table 2-12: 8-Hour Ozone National Ambient Air Quality Standards Design Value (ppb)

Year	Regional Design Value
1999-2001	101
2000-2002	99
2001-2003	100
2002-2004	98
2003-2005	95
2004-2006	96
2005-2007	95
2006-2008	91
2007-2009	86
2008-2010	86

Year	Regional Design Value
2009-2011	90
2010-2012	87
2011-2013	87
2012-2014	81
2013-2015	83
2014-2016	80
2015-2017	79
2016-2018	76
2017-2019	77
2018-2020	76
2019-2021	76
2020-2022	77
2021-2023	81
2022-2024	83

Source: NCTCOG

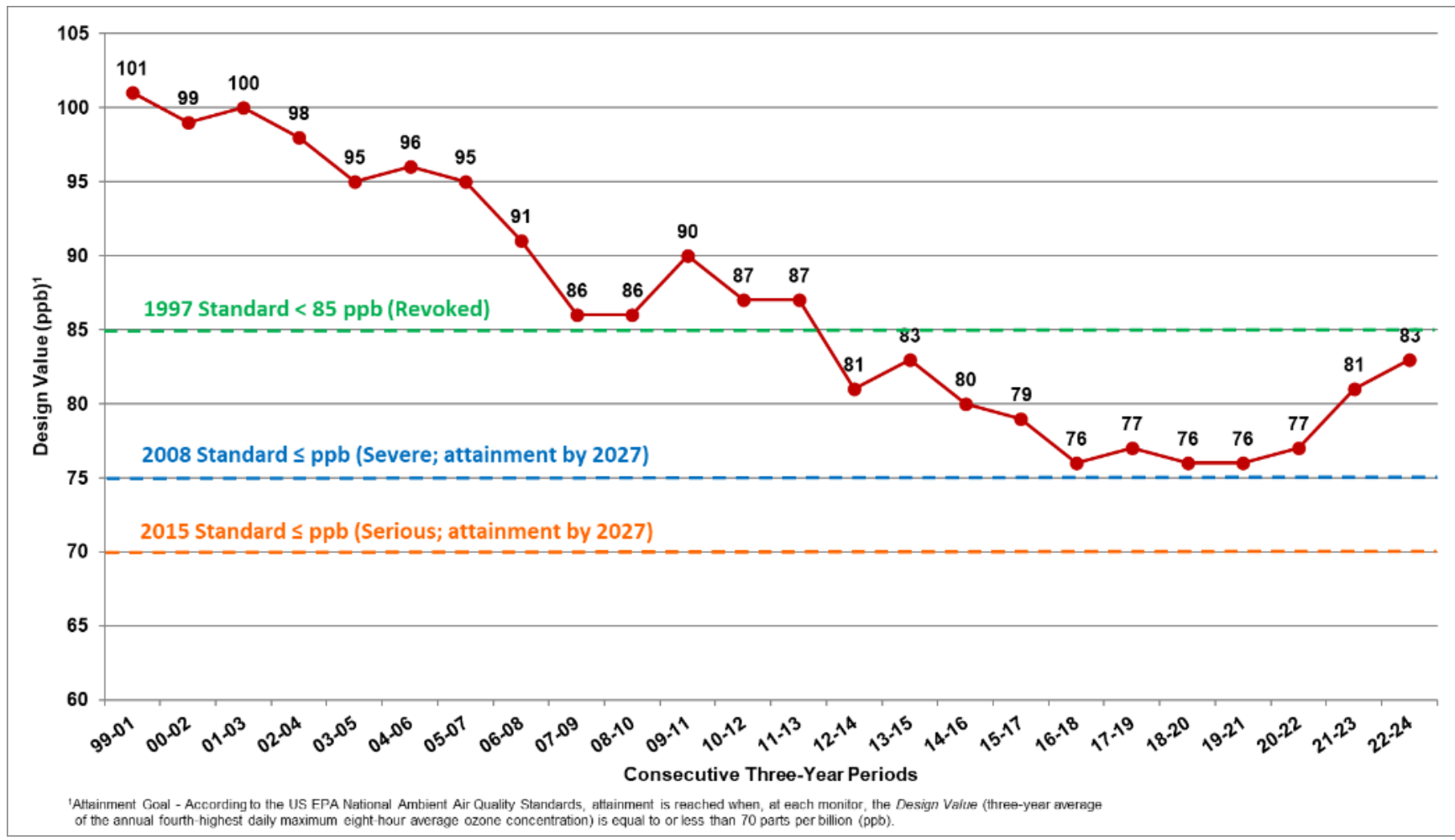
Objective Summary

Why This Objective Matters

Poor air quality, particularly from ground-level ozone, poses significant risks to health and quality of life. Ozone, a pollutant formed by chemical reactions between nitrogen oxides and volatile organic compounds in sunlight, is closely linked to emissions from the transportation system. Recognizing these impacts, federal, state, and regional agencies actively work to reduce emissions of ozone precursors.

Ozone levels are monitored against the National Ambient Air Quality Standards (NAAQS) to safeguard public health. North Central Texas currently has 9 counties in nonattainment of the 2015 8-Hour Standard (70 ppb) and 10 counties under the earlier 2008 Standard (75 ppb). Nonattainment triggers regulatory actions that shape transportation planning and investment decisions.

Figure 2-14: 8-Hour Ozone National Ambient Air Quality Standards Design Value (ppb)



Source: NCTCOG

Progress Toward The Goal



**Desired Trend:** Regional ozone design value should decrease over time.



**Observed Data:** The Regional ozone design value is increasing in recent years.

Learn More



**Environmental Considerations: Air Quality**

**Objective: Encourage a transition to more sustainable fuel sources for the region's vehicles**

- 📈 Measure: Regional Electric Vehicle Registrations
- 📈 Measure: Electric Vehicle Charging Plugs
- 📈 Measure: Public Agency Fleet Gasoline Gallon Equivalents Reduced (Dallas-Fort Worth Clean Cities)

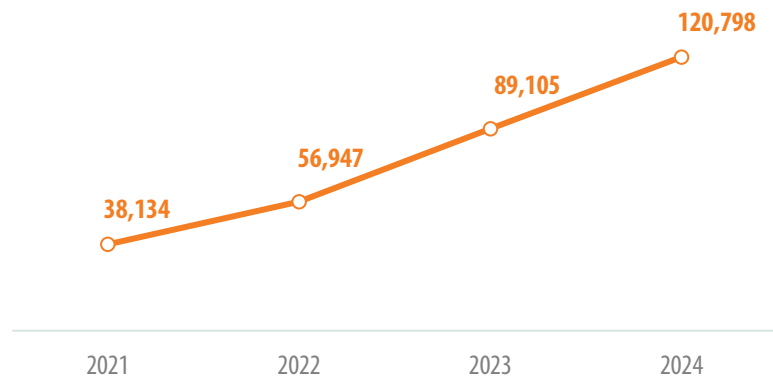
Data

Table 2-13: Electric Vehicle Registrations

Measure	2021	2022	2023	2024
Dallas-Fort Worth Electric Vehicle Registrations	38,134	56,947	89,105	120,798
Percent Change Year Over Year	--	+49%	+56%	+36%

Source: NCTCOG

Figure 2-15: Electric Vehicle Registrations



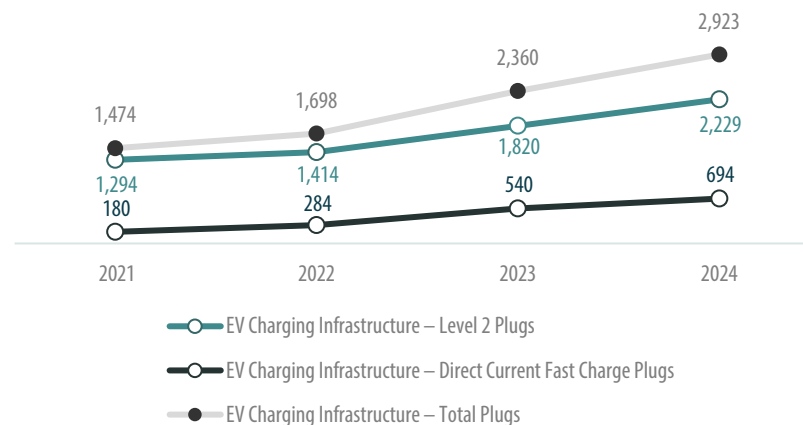
Source: NCTCOG

Table 2-14: Electric Vehicle Charging Infrastructure

Measure	2021	2022	2023	2024
EV Charging Infrastructure – Level 2 Plugs	1,294	1,414	1,820	2,229
EV Charging Infrastructure – Direct Current Fast Charge Plugs	180	284	540	694
EV Charging Infrastructure – Total Plugs	1,474	1,698	2,360	2,923

Source: Alternative Fuels Data Center

Figure 2-16: Electric Vehicle Charging Infrastructure (Number of Plugs)



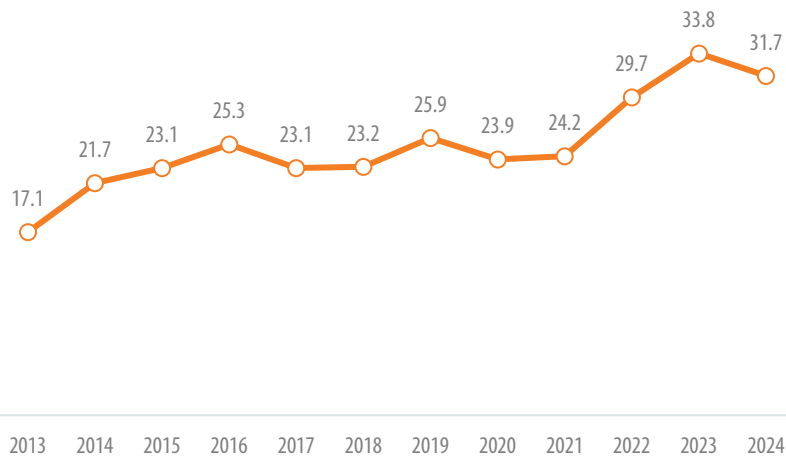
Source: Alternative Fuels Data Center

Table 2-15: Reported Gasoline Gallon Equivalents Reduced, in Millions

Year	Gasoline Gallon Equivalents Reduced, in Millions
2013	17.1
2014	21.7
2015	23.1
2016	25.3
2017	23.1
2018	23.2
2019	25.9
2020	23.9
2021	24.2
2022	29.7
2023	33.8
2024	31.7

Source: Dallas-Fort Worth Clean Cities Annual Fleet Survey

Figure 2-17: Reported Gasoline Gallon Equivalents Reduced, in Millions



Source: Dallas-Fort Worth Clean Cities Annual Fleet Survey

### Objective Summary

#### Why This Objective Matters

The growing adoption of alternative fuels and electric vehicles (EVs) in North Texas plays a critical role in improving air quality and reducing transportation-related emissions. Continued investments in charging infrastructure, fleet transitions, and public education are essential to accommodate the region’s growing EV market and achieve cleaner air.

#### Progress Toward The Goal



**Desired Trend:** The number of EV registrations, plugs, and gasoline gallon equivalents reduced should increase over time.



**Observed Data:** EV registrations, plugs, and gasoline gallon equivalents reduced are increasing over time.

[Learn More](#)



### Environmental Considerations: Air Quality

## Goal 5: Encourage livable communities which support sustainability and economic vitality

Transportation is a key component of livable communities. The policies, programs, and projects recommended by Mobility 2050 seek to maintain and improve the overall livability of the region through improvements that lead to efficient, timely travel. Measures related to this goal measure the ability of the transportation system to move travelers more quickly and sustainably.

### Objective: Encourage shorter, more sustainable trips across the region and across modes



**Measure:** Percentage of Commute Trips Less than 3 Miles in Length

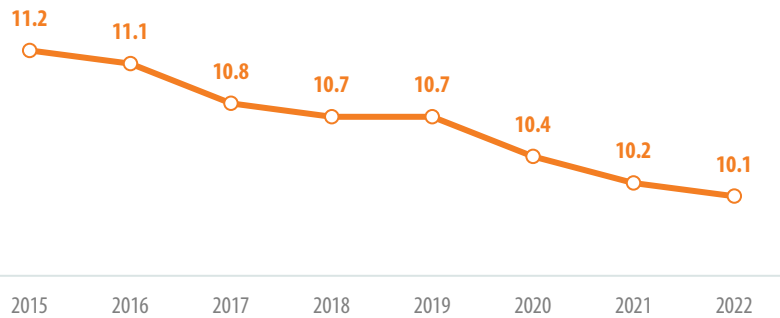
#### Data

Table 2-16: Percentage of Commute Trips Less than 3 Miles in Length

Measure	2015	2016	2017	2018	2019	2020	2021	2022
Percent Commute Trips <= 3.0 miles in length	11.2	11.1	10.8	10.7	10.7	10.4	10.2	10.1

Source: US Census Bureau Longitudinal Employer-Household Dynamics Origin-Destination Statistics

Figure 2-18: Percentage of Commute Trips Less than 3 Miles in Length



Source: US Census Bureau Longitudinal Employer-Household Dynamics Origin-Destination Statistics

### Objective Summary

#### Why This Objective Matters

Shorter trips reduce the strain on the transportation system and are more likely to be completed using transit or nonmotorized modes, promoting greater choice in travel options. Policies that encourage denser, mixed-use development can bring residents closer to their destinations, while projects such as off-street bicycle-pedestrian facilities improve safety and convenience for shorter trips. Monitoring this measure provides insight into regional travel patterns and opportunities to enhance connectivity and accessibility.

#### Progress Toward The Goal

**Desired Trend:** The percentage of commute trips less than 3 miles in length should increase over time.

**Observed Data:** The percentage of commute trips less than 3 miles in length is decreasing over time.

Learn More

**Operational Efficiency:** Sustainable Development

**Mobility Options:** Active Transportation

*Objective: Provide for and maintain timely job commutes across modes*

**Measure:** Mean Regional Commute Time (Minutes)

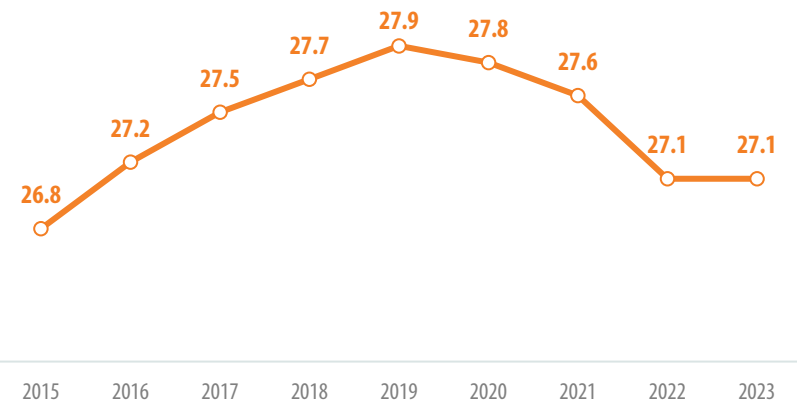
Data

Table 2-17: Mean Regional Commute Time

Measure	2015	2016	2017	2018	2019	2020	2021	2022	2023
Mean Regional Commute Time, in minutes	26.8	27.2	27.5	27.7	27.9	27.8	27.6	27.1	27.1

Source: US Census Bureau, American Community Survey 5-Year Estimates

Figure 2-19: Mean Regional Commute Time



Source: US Census Bureau, American Community Survey 5-Year Estimates

## Objective Summary

### Why This Objective Matters

Shorter commute times contribute to livable communities and enhance the region's quality of life. Strategies to achieve this include reducing congestion, encouraging telecommuting, and promoting housing options closer to workplaces. These approaches aim to improve commute times across all modes of transportation and income levels. While commute times have slightly increased in recent years, the ongoing impacts of the COVID-19 pandemic are expected to influence future trends. Workers in lower-income households have historically experienced commute times below the regional average, highlighting opportunities to further address disparities and improve access for all residents.

### Progress Toward The Goal



**Desired Trend:** The mean regional commute time should decrease over time, reflecting more efficient travel options and improved accessibility.



**Observed Data:** After gradually increasing through 2019, the mean commute time has leveled off and slightly declined in recent years.

### Learn More



**Mobility Options:** Roadway



**Mobility Options:** Public transportation

## Objective: Maintain transportation affordability for all populations and income levels



**Measure:** Housing and Transportation Costs as a Percentage of Household Income

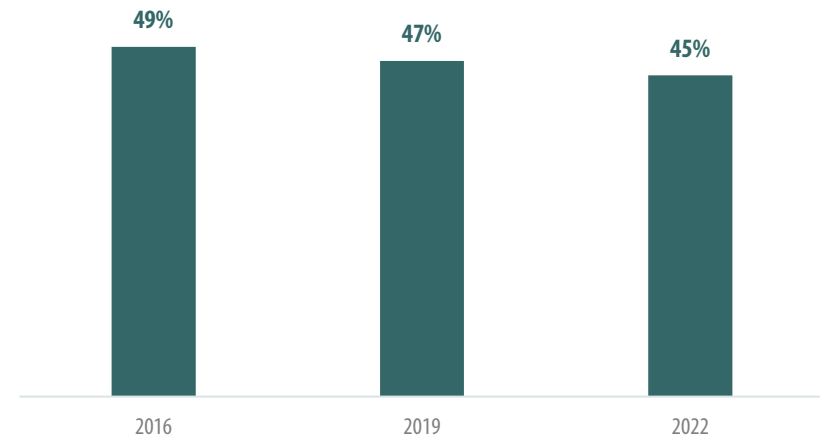
### Data

Table 2-18: Housing and Transportation Costs as a Percentage of Household Income

	2016	2019	2022
Housing Costs as a Percentage of Household Income	28%	27%	27%
Transportation Costs as a Percentage of Household Income	22%	20%	18%
Housing and Transportation Costs as a Percentage of Household Income	49%	47%	45%

Source: Center for Neighborhood Technology Housing and Transportation Affordability Index

Figure 2-20: Housing and Transportation Costs as a Percentage of Household Income




Source: Center for Neighborhood Technology Housing and Transportation Affordability Index

## Objective Summary


### *Why This Objective Matters*

Housing and transportation are the largest expenditures for American households. The Housing and Transportation Affordability Index, developed by the Center for Neighborhood Technology, sets an affordability threshold at 45 percent of household income. To ensure affordability for all populations and income levels, combined housing and transportation costs should not exceed this threshold.

### *Progress Toward The Goal*



**Desired Trend:** Housing and transportation costs as a percentage of household income should decrease over time.



**Observed Data:** Housing and transportation costs as a percentage of household income are decreasing over time.

### *Learn More*



**Social Considerations:** Nondiscrimination Efforts



# GOAL THEME 3: SYSTEM SUSTAINABILITY

## Goal 6: Ensure adequate maintenance and enhance the safety and reliability of the existing transportation system

Maintaining a safe, reliable transportation system is a key goal for Mobility 2050. While new infrastructure is needed to accommodate the region’s growth, maintenance and optimization of existing infrastructure is also needed to maintain the system’s overall capacity. Measures related to this goal quantify the reliability, physical condition, and safety of the existing system.

*Objective: Improve the reliability of travel on the region's roadway network*

- 📍 **Measure:** Percentage of Person Miles of Travel that is Reliable on Interstates
- 📍 **Measure:** Percentage of Person Miles of Travel that is Reliable on the Non-Interstate National Highway System

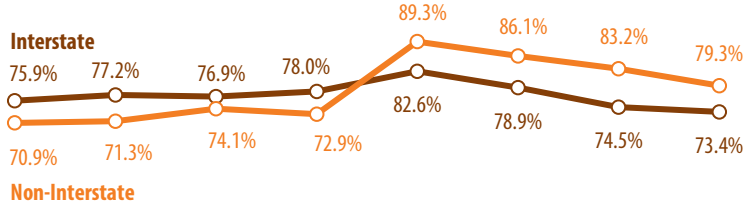
Data

Table 2-19: Percentage of Travel Meeting Threshold for Reliability

Measure	2016	2017	2018	2019	2020	2021	2022	2023
Interstate Reliability	75.9%	77.2%	76.9%	78.0%	82.6%	78.9%	74.5%	73.4%
Non-Interstate Reliability	70.9%	71.3%	74.1%	72.9%	89.3%	86.1%	83.2%	79.3%

Source: National Performance Measurement Research Data Set

Figure 2-21: Percentage of Travel Meeting Threshold for Reliability



2016 2017 2018 2019 2020 2021 2022 2023

Source: National Performance Measurement Research Data Set

### Objective Summary

*Why This Objective Matters*

In transportation planning, reliability refers to the predictability of travel times. A freeway commute consistently taking 30 minutes is considered reliable, whereas a similar commute varying between 30 and 60 minutes is unreliable, regardless of congestion levels. Reliability is an increasingly critical metric for assessing roadway performance, as unpredictable travel often has greater economic impacts than congestion. Federal rulemaking requires this measure as part of performance monitoring, with higher percentages indicating more predictable travel.

Progress Toward The Goal



**Desired Trend:** The percentage of interstate and non-interstate reliability should increase over time.



**Observed Data:** Interstate and non-interstate reliability have been slowly decreasing since 2020.

Learn More



**Mobility Options:** Roadway



**Operational Efficiency:** Congestion Management

*Objective: Improve the safety of travel on the region's roadway network*

**Measure:** Annual Regional Crash Rate per 100 Million Vehicle Miles of Travel

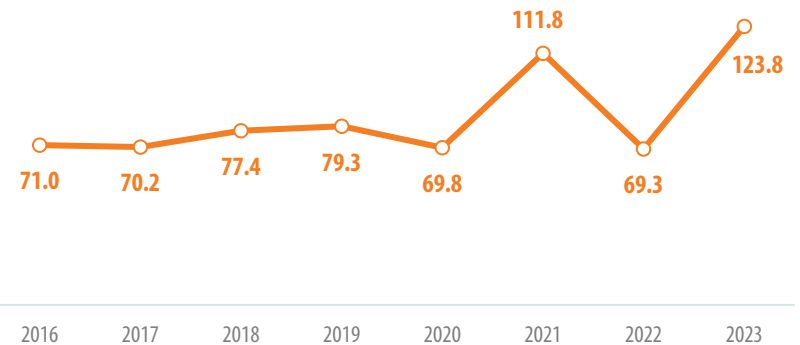
Data

Table 2-20: Annual Regional Crash Rates per 100 Million Vehicle Miles of Travel

Measure	2016	2017	2018	2019	2020	2021	2022	2023
Regional Average Crash Rate per 100 Million Vehicle Miles of Travel	71.0	70.2	77.4	79.3	69.8	111.8	69.3	123.8

Source: Texas Department of Transportation Crash Records Information System

Figure 2-22: Annual Regional Crash Rates per 100 Million Vehicle Miles of Travel



Source: Texas Department of Transportation Crash Records Information System

Objective Summary

Why This Objective Matters

Public input has highlighted safety as a top concern for families and communities, reinforcing the need for proactive measures. Several policies, programs, and projects recommended by the plan aim to reduce the rate of roadway crashes, measured by the number of crashes per 100 million vehicle miles traveled in the Metropolitan Planning Area annually. These efforts reflect a shared commitment to creating a safer transportation system for everyone.

Progress Toward The Goal



**Desired Trend:** Annual crash rates per 100 million vehicle miles of travel should decrease over time.



**Observed Data:** There is an overall increasing trend in annual regional crash rates.

Learn More



**Operational Efficiency:** Roadway Safety

## Objective: Improve safety for nonmotorized users of the region's transportation system

**Measure:** Bicycle and Pedestrian Crashes Involving a Motor Vehicle by Race/Ethnicity

### Data

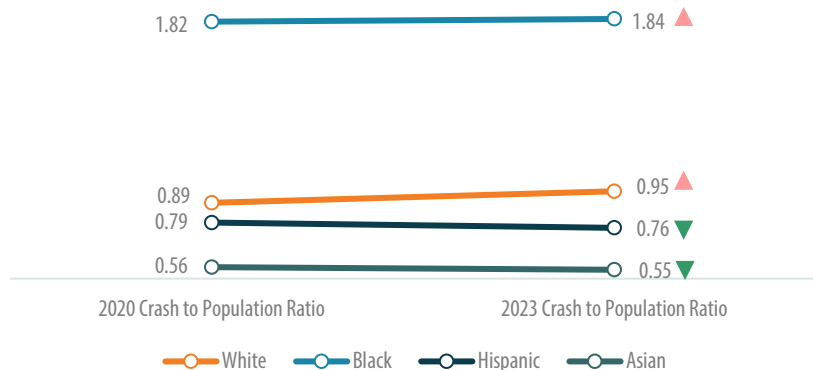
Table 2-21: Bicycle and Pedestrian Crashes Involving a Motor Vehicle by Race/Ethnicity

	2020 Totals	2020 % Regional Pop.*	Ratio Crashes to Pop.	2023 Totals	2023 % Regional Pop.*	Ratio Crashes to Pop.
Average Annual Incidents	2,735	--	--	1,881	--	--
White	41.2%	46.3%	0.89	41.1%	43.3%	0.95
Black	28.6%	15.7%	1.82	29.0%	15.8%	1.84
Hispanic	22.7%	28.8%	0.79	22.3%	29.3%	0.76
Asian	3.8%	6.8%	0.56	4.2%	7.7%	0.55
Other/Unknown	3.8%	--	--	1.2%	--	--

\* Region population defined using 2016-2020 and 2019-2023 American Community Survey 5-Year Estimates

Source: TxDOT Crash Records Information System, American Community Survey 5-Year Estimates

Figure 2-23: Bicycle and Pedestrian Crash Ratios Involving a Motor Vehicle by Race/Ethnicity



Source: TxDOT Crash Records Information System, American Community Survey 5-Year Estimates

## Objective Summary

### Why This Objective Matters

Bicycle and pedestrian safety is essential for promoting active transportation options and improving quality of life in the region. In public input, safety concerns remain a frequently mentioned barrier preventing people from choosing to walk or bicycle, underscoring the importance of addressing this issue. By prioritizing safety-focused programs, policies, and infrastructure projects, the region can create a more comprehensive and accessible transportation network that encourages walking and bicycling as viable, everyday options for all residents. This approach not only supports health and sustainability goals but also enhances connectivity and mobility across communities.

### Progress Toward The Goal



**Desired Trend:** The number of average annual incidents should decrease over time for all groups.



**Observed Data:** While the total number of crashes has decreased since 2020, the distribution by demographic group has remained largely consistent.

### Learn More



**Operational Efficiency: Roadway Safety**



**Mobility Options: Active Transportation**

**Objective: Increase the percentage of grade-separated railroad crossings in the region**

**Measure: Percent of Total Rail Crossings that are Grade-Separated**

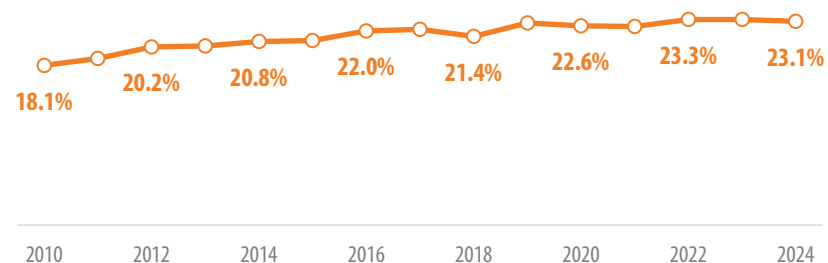
Data

Table 2-22: Percent of Total Rail Crossings that are Grade-Separated

Year	Percent Grade Separated
2010	18.1%
2011	18.9%
2012	20.2%
2013	20.3%
2014	20.8%
2015	20.9%
2016	22.0%
2017	22.2%
2018	21.4%
2019	22.9%
2020	22.6%
2021	22.5%
2022	23.3%
2023	23.3%
2024	23.1%

Source: Federal Railroad Administration's Grade Crossing Information System

Figure 2-24: Percent of Total Rail Crossings that are Grade-Separated



Source: Federal Railroad Administration's Grade Crossing Information System

**Objective Summary**

*Why This Objective Matters*

Active passenger and freight rail corridors can pose significant safety and mobility challenges where they intersect roads and sidewalks at-grade, creating delays for daily trips and impacting community connectivity. Addressing these conflicts is essential to improving the reliability of the region's roadway network and ensuring safe, efficient travel for all users. Strategies such as grade separations or closing low-volume crossings can help mitigate these issues, supporting the goals of Mobility 2050 to enhance operational efficiency and mobility across the region.

Progress Toward The Goal

**Desired Trend:** The percentage of grade-separated rail crossings should increase over time.

**Observed Data:** The percentage of grade-separated rail crossings is increasing over time.

Learn More

- Mobility Options:** Freight
- Operational Efficiency:** Roadway Safety

**Objective:** Adequately maintain and improve the condition of the region's pavements and bridges

- Measure:** National Highway System Interstate Pavement Condition
- Measure:** National Highway System Bridge Condition

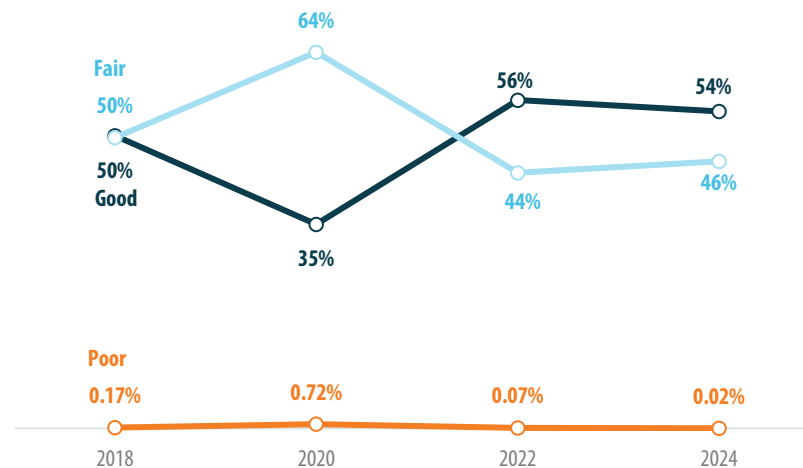
Data

Table 2-23: National Highway System Interstate Pavement Condition

	2018	2020	2022	2024
Percent in "Good" Condition	50.1%	34.9%	56.2%	54.3%
Percent in "Fair" Condition	49.8%	64.4%	43.8%	45.7%
Percent in "Poor" Condition	0.17%	0.72%	0.07%	0.02%

Source: Texas Department of Transportation Pavement and Bridge Divisions

Figure 2-25: National Highway System Interstate Pavement Condition



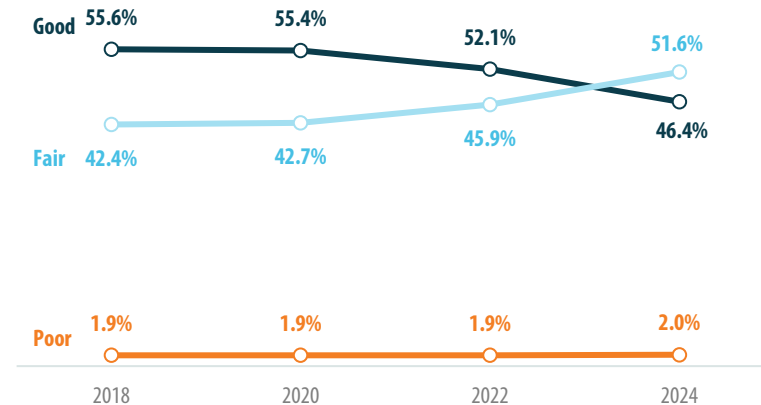
Source: Texas Department of Transportation Pavement and Bridge Divisions

Table 2-24: National Highway System Bridge Condition

	2018	2020	2022	2024
Percent in "Good" Condition	55.6%	55.4%	52.1%	46.4%
Percent in "Fair" Condition	42.4%	42.7%	45.9%	51.6%
Percent in "Poor" Condition	1.9%	1.9%	1.9%	2.0%

Source: Texas Department of Transportation Pavement and Bridge Divisions

Figure 2-26: National Highway System Bridge Condition



Source: Texas Department of Transportation Pavement and Bridge Divisions

## Objective Summary

### Why This Objective Matters

Maintaining and improving the region's pavements and bridges is crucial for ensuring access to the transportation system. High-quality infrastructure supports the overall condition of the roadway network, enhancing connectivity and mobility for all communities. While new construction adds "good" pavement, maintaining and restoring older pavements is essential. Many of the region's "poor" pavements are found in core areas maintained by municipalities. By assisting these municipalities with maintenance, we can ensure all communities benefit from safe and reliable transportation.

### Progress Toward The Goal



**Desired Trend:** The percent of pavement and bridges in good condition should increase over time, while the percent in fair or poor condition should decrease.



**Observed Data:** Interstate pavement conditions have improved since 2020, while non-Interstate National Highway System roads have seen a decline in "good" ratings.

### Learn More



**Regional Performance:** Federal Performance Measures



**Mobility Options:** Roadway

## Goal 7: Pursue long-term sustainable revenue sources to address regional transportation system needs

Mobility 2050 is a fiscally constrained plan that identifies realistic funding for recommended policies, programs, and projects. The

financial forecasting process used in the planning process represents the latest step in a long line of financial forecasts from previous mobility plans that vary based on the financial reality in which they were created. Measures related to this goal show both increasing sophistication in the forecasting process and a greater variety of innovative means to fund transportation projects.

### *Objective: Maintain a level of anticipated funding sufficient to meet the region's population growth*



**Measure:** Plan Revenue per Capita per Year

### Data

Table 2-25: Plan Revenue per Capita per Year

Metropolitan Transportation Plan	Adoption Year	Plan Revenue per Capita per Year	Horizon Year Population Estimate
Mobility 2030	2007	\$689.26	8.5 million
Mobility 2030 - 2009 Amendment	2009	\$814.82	8.5 million
Mobility 2035	2011	\$447.01	9.8 million
Mobility 2035 - 2013 Update	2013	\$456.24	9.8 million
Mobility 2035 - 2014 Amendment	2014	\$436.82	9.8 million
Mobility 2040	2016	\$484.18	10.7 million
Mobility 2045	2018	\$451.01	11.2 million
Mobility 2045 Update	2022	\$590.68	11.4 million
Mobility 2050	2025	\$733.52	12.3 million

Source: NCTCOG

Figure 2-27: Plan Revenue per Capita per Year



Source: NCTCOG

### Objective Summary

#### Why This Objective Matters

Demographic forecasts call for continued significant growth in the region's population through 2050. Keeping up with this growth by implementing new policies, programs, and projects means the plan's revenue sources also have to keep up with this growth over the duration of the plan since regulations require Metropolitan Transportation Plans maintain fiscal constraint. This measure can show whether forecasted revenue is likely to meet the region's needs.

### Progress Toward The Goal



**Desired Trend:** Plan revenue per capita should remain steady or increase over time to support transportation needs.



**Observed Data:** Plan revenue per capita has generally increased in recent plans, after declining in the early 2010s.

Learn More



### Financial Reality

**Objective:** Maintain flexible and sustainable funding sources



**Measure:** Percentage of Plan Costs Funded by Revenue Enhancements

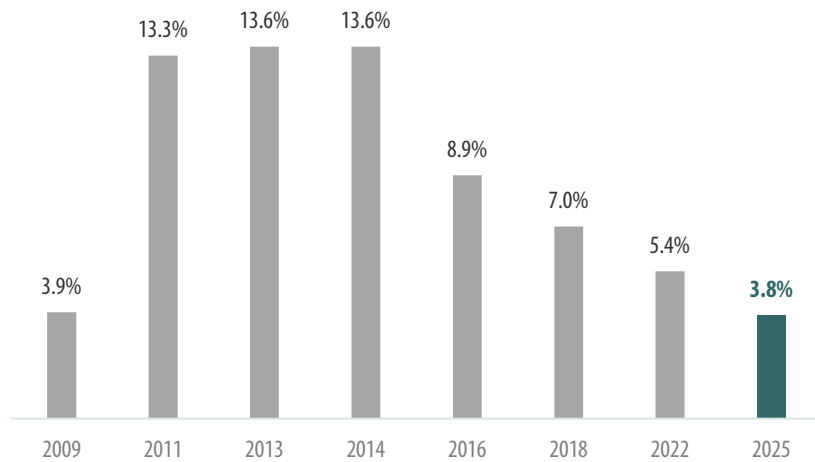
### Data

Table 2-26: Percentage of Plan Costs Funded by Revenue Enhancements

Metropolitan Transportation Plan	Adoption Year	Percentage of Revenue Derived from Enhancements
Mobility 2030 - 2009 Amendment	2009	3.9%
Mobility 2035	2011	13.3%
Mobility 2035 - 2013 Update	2013	13.6%
Mobility 2035 - 2014 Amendment	2014	13.6%
Mobility 2040	2016	8.9%
Mobility 2045	2018	7.0%
Mobility 2045 Update	2022	5.4%
Mobility 2050	2025	3.8%

Source: NCTCOG

Figure 2-28: Percentage of Plan Costs Funded by Revenue Enhancements



Source: NCTCOG

## Objective Summary

### Why This Objective Matters

Metropolitan Transportation Plans must be fiscally constrained, ensuring that the policies, programs, and projects recommended have reasonably expected funding over the plan's duration. Some of these funding sources are anticipated revenue enhancements that may

require future actions by committees, legislators, or voters. While these enhancements can be reasonably expected, they may not currently exist. The extent of these revenue enhancements reflects the policy efforts necessary to develop, implement, or leverage innovative future funding mechanisms.

### Progress Toward The Goal



**Desired Trend:** Revenue enhancements as part of Mobility Plan costs should decrease over time to ensure more funding is based on existing, committed sources.



**Observed Data:** The share of revenue enhancements has steadily declined over the years, indicating an increased reliance on actual, committed funding sources.

### Learn More



**Financial Reality**




# GOAL THEME 4: IMPLEMENTATION

## Goal 8: Provide for timely project planning and implementation

Providing means for transportation projects to move expediently from planning to implementation stages is an important priority for Mobility 2050. Timely implementation ensures progress towards the plan’s overall vision for the regional transportation system. The measure for this goal tracks how quickly projects progress through short-range planning processes like the Transportation Improvement Program.

*Objective: Ensure that funded projects are moving to construction expediently*

 **Measure:** Number of Projects on Current Milestone Policy List

Data

Table 2-27: Number of Projects on Milestone Policy List

Update Presented to Regional Transportation Council	Number of Remaining Projects on Milestone Policy List
2021 February	30
July	23
October	20
2022 February	18
August	14
December	14
2023 May	12
November	12
2024 May	8
December	7
2025 May	7

Source: NCTCOG Transportation Improvement Program

### Objective Summary

#### Why This Objective Matters

If projects funded by the Transportation Improvement Program spend excessive amounts of time in project development processes, due to issues related to project design, coordination, environmental issues, or more, this can lock up funding that could be used for other projects and slows down the overall project development process. For more information, see NCTCOG’s [Transportation Improvement Program](#).

#### Progress Toward The Goal



**Desired Trend:** The projects on the milestone policy list should decline during the round.



**Observed Data:** The number of projects on the milestone policy list are declining over time.

#### Learn More



**Financial Reality**




**Transportation Improvement Program**

## Goal 9: Develop cost-effective projects and programs aimed at reducing the costs associated with constructing, operating, and maintaining the regional transportation system

New infrastructure projects can be expensive and, in many cases, more value can be derived from investments in strategic operational improvements and smaller optimization projects that aim to utilize existing infrastructure. Measures related to this goal measure the extent to which these kinds of projects are recommended by the plan.

*Objective: Focus on cost-efficient projects that optimize the existing transportation system*

 **Measure:** Proportion of Major Roadway Recommendations that are Asset Optimization

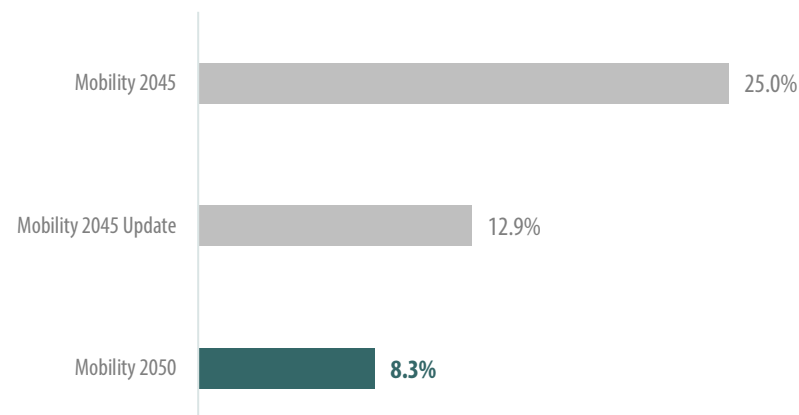
### Data

Table 2-28: Proportion of Major Roadway Recommendations that are Asset Optimization

Mobility Plan	Adoption Year	Percent of Asset Optimization
Mobility 2045	2018	25.0%
Mobility 2045 Update	2022	12.9%
Mobility 2050	2025	8.3%

Source: NCTCOG

Figure 2-29: Proportion of Major Roadway Recommendations that are Asset Optimization



Source: NCTCOG

### Objective Summary

#### Why This Objective Matters

The share of roadway recommendations focused on asset optimization may vary by plan, depending on system needs and project types. As roadway improvements in urban areas increasingly focus on asset optimization due to build-out conditions, widening projects will occur more frequently in rural and perimeter areas. Asset Optimization seeks to more efficiently use both existing roadway infrastructure and funding for expansion by recommending lower cost optimizations of existing limited-access roadway infrastructure, including, but not limited to, frontage roads, peak-use lanes, restriping, auxiliary lanes, parallel capacity, and others. This measure quantifies the proportion of Mobility 2050 projects that are Asset Optimization by centerline mileage.

## Progress Toward The Goal



**Desired Trend:** The share of recommendations focused on asset optimization may vary by plan, depending on system needs and project types.



**Observed Data:** The proportion of recommendations categorized as asset optimization has declined across the last three plans.

## Learn More



**Mobility Options: Roadway**



**Financial Reality**

## CONCLUSION

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Tracking the performance of the region's transportation system relative to the goals of Mobility 2050 is a key component of the plan development process and will continue to be more strongly integrated into the performance-based planning processes in subsequent plans. During the period Mobility 2050 is in effect, these measures will continue to be tracked and updated as new data is available, generally on an annual basis. These updates will be a key component of staff's efforts to update stakeholders on progress toward implementing the plan, and will be made available through presentations, dashboards, and other means as appropriate.

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# 2-2. FEDERAL PERFORMANCE MEASURES

## OVERVIEW

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Metropolitan Planning Organizations (MPOs) like the North Central Texas Council of Governments (NCTCOG) are required by the Moving Ahead for Progress in the 21st Century Act to incorporate a performance-based approach into the transportation planning process. This includes monitoring and setting targets for a specific set of federal performance measures covering various aspects of the transportation system. These requirements were continued by subsequent legislation, including the Fixing America's Surface Transportation Act and the Infrastructure Investment and Jobs Act. A series of rulemakings by the Federal Highway Administration and Federal Transit Administration specifically define the measures, calculation procedures, target-setting processes, and reporting requirements.

For these measures, local, regional, and state partners are committed to cooperatively developing and sharing information, including raw transportation performance data, performance targets, and performance reporting.

As appropriate, the Regional Transportation Council (RTC) continues to take target-setting actions for these measures. These measures are a key component of NCTCOG's broader push into performance measurement and performance-based planning and are being incorporated into planning documents like this Metropolitan Transportation Plan (MTP) and the Transportation Improvement

Program, as required. Given the differing schedules and cadences of MTP updates and federal performance target setting and reporting cycles, the MTP captures a snapshot of performance measures and targets at the time of plan development. For the most current targets, observed values, and progress toward federal performance targets, visit [nctcog.org/PM/fed](https://nctcog.org/PM/fed).

## FEDERAL PERFORMANCE MEASURES

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This component of NCTCOG's performance-based planning process has grown over time as federal rulemaking processes established five final performance measurement-related rules relevant to MPOs like NCTCOG. Each final rule lists required measures, data sources, calculation procedures, and target-setting requirements. The final rules include:

- Highway Safety Improvement Program, known as PM1<sup>1</sup>
- Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program, known as PM2<sup>2</sup>
- Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program, known as PM3<sup>3</sup>

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<sup>1</sup> 81 FR 13881, 23 CFR 490

<sup>2</sup> 82 FR 5886, 23 CFR 490

<sup>3</sup> 82 FR 5970, 82 FR 22879, 23 CFR 490

- Transit Asset Management<sup>4</sup>
- Public Transit Agency Safety Plans<sup>5</sup>

Each of these rules establishes deadlines for target setting and reporting processes. For the measures identified in each rule, MPOs are required to report adopted targets, baseline performance measures, and progress toward the targets in Metropolitan Transportation Plans and Transportation Improvement Program projects adopted two years after the effective date of the final rule. Each of the performance measure final rules were established at different times and, therefore, have different target-setting and

implementation deadlines, as seen in **Table 2-29**. A more detailed summary table of the currently required measures is provided in the **Regional Performance** appendix.

NCTCOG has adopted targets and established update processes for all five performance measure rules as required. Many of these measures have been incorporated directly into project selection processes and all are used as part of Mobility 2050's performance-based planning process. Updates on these measures, including assessments of progress towards achieving adopted targets, are reported regularly to the RTC and Surface Transportation Technical Committee.

Table 2-29: Implementation and Target-Setting Schedules for Federal Performance Measures

Final Rule	Rule Effective Date	Required to be Included in Metropolitan Transportation Plans Adopted After <sup>6</sup>	Last Target-Setting Action	Next Target-Setting Action (Anticipated)	Target-Setting Schedule
PM1 (Highway Safety)	4/14/2016	4/14/2018	2/09/2023	Early 2028	Annually (targets established as reductions over a five-year period)
PM2 (Pavement and Bridge Condition)	5/20/2017	5/20/2019	3/13/2025	Late 2026	Biennially (four-year performance periods)
PM3 (System Performance, Freight, and Congestion Mitigation and Air Quality Improvement Program)	5/20/2017	5/20/2019	9/12/2024, 3/13/2025	Late 2026	Biennially (four-year performance periods)
Transit Asset Management	10/01/2016	10/01/2018	7/13/2023	Late 2026	Every four years
Public Transportation Agency Safety Plans	07/19/2018	7/20/2021	<i>Expected mid-2025</i>	Early 2029	Every four years

<sup>4</sup> 81 FR 48889, 49 CFR 625, 49 CFR 630

<sup>5</sup> 83 FR 34418, 49 CFR 673

<sup>6</sup> 23 CFR 450.340(f)

## PM1 (HIGHWAY SAFETY)

The safety performance measure rule includes five measures related to the safety of the transportation system, including:

- ➔ The number of traffic fatalities
- ➔ The rate of fatalities per 100 million vehicle miles traveled
- ➔ The number of serious injuries
- ➔ The rate of serious injuries per 100 million vehicle miles traveled
- ➔ The number of nonmotorized fatalities and nonmotorized serious injuries

This rule establishes an annual reporting and target-setting schedule. The RTC initially adopted targets for these measures in December 2017. While the RTC has adopted quantitative targets for this measure as required, this has been accompanied by a policy that even one death on the transportation system is unacceptable. Subsequently, the RTC directed NCTCOG staff to work with regional and state partners to develop projects, programs, and policies that assist in eliminating serious injuries and fatalities across all modes of travel. The Transportation Improvement Program has incorporated these measures in project selection processes and includes many projects that may directly lead to improvements in these measures.

In 2019, the Texas Transportation Commission directed the Texas Department of Transportation (TxDOT) to work toward a similar goal of reducing traffic fatalities by 50 percent by 2035 and zero fatalities by 2050. Due to this goal, TxDOT has updated its fatality performance measures to be in line with this vision zero goal. This more

aspirational target may be difficult to achieve, but the best way to achieve aspirational goals is to first set them. NCTCOG will support TxDOT's targets for 2023-2027 by adopting the same 50 percent reduction in the number of fatalities by 2035 and to zero for fatalities by 2050. For serious injuries, both TxDOT and NCTCOG adopted a 2 percent reduction from the trendline each year. The serious injury target is less aggressive than the fatality targets due to the assumption that if a fatal injury is prevented, that same crash may instead produce a serious injury. For the bike and pedestrian combined fatal and serious injury target, fatalities are calculated using the 50 percent reduction by 2035 methodology, and serious injuries are calculated using the 2 percent reduction from the trendline each year methodology. Reduction schedules are listed in **Table 2-30**.

Table 2-30: Growth Reduction Percentages for PM1 Measures

Year	Fatality Rate	Serious Injury Rate
2023	3.40%	2.00%
2024	3.60%	2.00%
2025	3.70%	2.00%
2026	3.80%	2.00%
2027	4.00%	2.00%

## Number of Traffic Fatalities

The 2024 target seeks to reduce the number of fatalities through 2027. This target expressed as a five-year rolling average would reduce the projected number of fatalities in the region to 653.3 as shown in **Table 2-31**.

Table 2-31: Number of Fatalities

Year	Source	Number of Fatalities
2020	FARS	631
2021	FARS	726
2022	FARS	644
2023	Target	640
2024	Target	646.5*
**2024 Target expressed as 5-year average		653.3

\* Based on a 50% reduction in fatalities by 2035. 2020-2022 data is observed, and 2023-2024 data is projected.

\*\* Calculated by applying a 50% reduction trendline from 2020 to 2035 for projected data for 2023 and 2024.

FARS: National Highway Traffic Safety Administration Fatality Analysis Reporting System

## Rate of Fatalities per 100 Million Vehicle Miles Traveled

The 2024 target seeks to reduce the expected increase in deaths per 100 million vehicles miles traveled (MVMT) in 2024 to not more than 0.840 per 100 MVMT regionwide, expressed as a five-year rolling average. The regional target is less than one death per 100 MVMT. The 2024 target expressed as a five-year rolling average is shown in **Table 2-32**.

Table 2-32: Five-Year Rolling Average for the Rate of Fatalities

Year	Source	Fatality Rate
2020	FARS	0.825
2021	FARS	0.9088
2022	FARS	0.769
2023	Target	0.863*
2024	Target	0.835*
**2024 Target expressed as 5-year average		0.840

\* Based on a 50% reduction in fatalities by 2035. 2020-2022 data is observed and 2023-2024 data is projected.

\*\* Calculated by applying a 50% reduction trendline from 2020 to 2035 for projected data for 2023 and 2024.

FARS: National Highway Traffic Safety Administration Fatality Analysis Reporting System

## Number of Serious Injuries

The 2024 target seeks to reduce the expected increase in serious injuries to not more than 3,959.1 at the regional level expressed as a five-year rolling average. The 2024 target expressed as a five-year rolling average is shown in **Table 2-33**.

Table 2-33: Five-Year Rolling Average for the Number of Serious Injuries

Year	Source	Number of Serious Injuries
2020	CRIS	3,104
2021	CRIS	4,356
2022	CRIS	4,037
2023	Target	3,916*
2024	Target	4,382.5*
**2024 Target expressed as 5-year average		3,959.1

\* Based upon linear trend analysis from 2020-2022 CRIS data. 2020-2022 data is observed and 2023-2024 data is projected.

\*\* Calculated by applying a 2% reduction to regional projection or actual data 5-year average. CRIS: TxDOT Crash Records Information System

## Rate of Serious Injuries per 100 Million Vehicle Miles Traveled

The 2024 target seeks to reduce the expected increase in the rate of serious injuries per 100 MVMT in 2024 regionwide to 4.970 expressed as a five-year rolling average. The 2024 target expressed as a five-year rolling average is shown in **Table 2-34**.

Table 2-34 Five-Year Rolling Average for the Rate of Serious Injuries

Year	Source	Regional Actual or Target Data
2020	CRIS	4.110
2021	CRIS	5.449
2022	CRIS	4.818
2023	Target	5.189*
2024	Target	5.2824*
**2024 Target expressed as 5-year average		4.970

\* Based upon linear trend analysis from 2020-2022 CRIS data. 2020-2022 data is observed and 2023-2024 data is projected.

\*\* Calculated by applying a 2% reduction to regional projection or actual data 5-year average. CRIS: TxDOT Crash Records Information System

## Number of Nonmotorized Fatalities and Nonmotorized Serious Injuries

The 2024 target seeks to reduce the expected increase in nonmotorized fatalities and serious injuries in 2024. The target expressed as a five-year rolling average would reduce the regionwide nonmotorized fatalities and serious injuries to 674.4. The 2024 targets expressed as a five-year rolling average are shown in **Table 2-35**.

Table 2.35: Five-Year Rolling Average for the Number of Nonmotorized Fatalities and Serious Injuries

Year	Source	Regional Actual or Target Data		
		Fatalities	Serious Injuries	Combined Fatalities and Serious Injuries
2020	FARS-CRIS	191	379	570
2021	FARS-CRIS	190	453	643
2022	CRIS	208	480	688
2023	Target	208	498	706
2024	Target	216.5	548.5	765
**2024 Target expressed as 5-year average		202.7	471.7	674.4

\* Based upon linear trend analysis from 2020-2022 CRIS data. 2020-2022 data is observed and 2023-2024 data is projected.

\*\* Calculated by applying a 2% reduction to regional projection or actual data 5-year average.  
FARS: National Highway Traffic Safety Administration Fatality Analysis Reporting System  
CRIS: TxDOT Crash Records Information System

### Addressing Highway Safety in Mobility 2050

Mobility 2050 directly addresses many of the measures in the PM1 rulemaking and has recommended policies, programs, and projects using criteria that improve the safety of the region’s transportation system for many years. When conducting project evaluation and selection, safety is one of the major considerations. Safety criteria (total crash rate and fatal/incapacitating crash rate) are part of quantitative project selection components in Mobility 2050 and the region’s 10-Year Plan (and eventually the Transportation Improvement

Program). Additionally, Mobility 2050 includes a number of safety-related policies, notably including policies in support of the state’s Toward Zero Deaths initiative.

## PM2 (PAVEMENT AND BRIDGE CONDITION)

The Pavement and Bridge Condition measures (commonly collectively known as PM2) are six measures related to roadway infrastructure condition. As with PM3 (System Performance, Freight, and Congestion Mitigation and Air Quality Improvement Program) measures discussed below, the final rule for these measures establishes a cycle of four-year performance periods, the first of which began on January 1, 2018. Most measures require a target for both the midpoint and end of the performance period. In the case of the current 2022-2026 performance period, the relevant target years are 2024 and 2026. Mobility 2050 incorporates these measures into project selection processes and includes many projects that may directly lead to improvements in these measures.

Measures in this rulemaking include:

- ➔ Percentage of Pavements on the Interstate System in “Good” Condition
- ➔ Percentage of Pavements on the Interstate System in “Poor” Condition
- ➔ Percentage of Pavements on the Non-Interstate National Highway System in “Good” Condition
- ➔ Percentage of Pavements on the Non-Interstate National Highway System in “Poor” Condition
- ➔ Percentage of Bridge Deck Area on the National Highway System in “Good” Condition

## ➡ Percentage of Bridge Deck Area on the National Highway System in “Poor” Condition

“Good” and “Poor” condition are defined using specific infrastructure condition metrics in the rulemaking. With these and most other measures, MPOs have the option to either support the state Departments of Transportation targets or to adopt their own quantitative targets. In 2022, NCTCOG chose to support the state’s initial targets for these measures for the current performance period, with policy statements related to certain pavements and bridges in poor condition. In 2024, TxDOT exercised its option to make minor adjustments to its statewide 2026 targets for these measures, after which NCTCOG reaffirmed its support for the state’s adjusted targets.

The National Highway System (NHS) network within the 12-county North Central Texas region is the largest among the 25 metropolitan areas in Texas with over 12,000 lane miles of pavement. Approximately 70 percent of the NHS network in this region are state highways under the jurisdiction of TxDOT (i.e., “on-system” roadways) and about 30 percent are county roads, city streets, and non-TxDOT toll roads managed by other agencies (i.e., “off-system” roadways). The NHS network in the region also includes more than 3,600 bridges with about 90 percent maintained by TxDOT and the remainder maintained by other agencies. Managing the condition of these assets is a priority for NCTCOG, TxDOT, local governments, and other agencies that fund and/or maintain the region’s transportation system.

Related rulemaking requires each state Department of Transportation (including TxDOT) to develop a risk-based Transportation Asset Management Plan that includes an assessment of existing infrastructure conditions; identification of asset management objectives, measures, and performance gaps; and a lifecycle cost and risk management analysis, financial plan, and identification of investment strategies. In recognition of the importance of holistic asset

management planning to the region’s transportation system, NCTCOG supports and is working with TxDOT on its asset management process.

## **Pavement Condition**

NCTCOG has chosen to support the pavement performance targets set by TxDOT. To specifically address off-system arterials in Poor condition, NCTCOG also approved a policy statement to work with local governments to focus on the improvement of these facilities. NCTCOG initially adopted this policy statement in 2018 and reaffirmed it in 2020. Changes in the reporting methodology for this measure have since reduced the mileage of off-system arterials that are identified as being in Poor condition significantly, but NCTCOG continues to work with all partners to improve the condition of pavements across the region.

## **Bridge Condition**

NCTCOG has chosen to support the bridge performance targets set by TxDOT. In addition, NCTCOG approved a policy statement to expedite the programming of funding to improve NHS bridges in “poor” condition.

## *Addressing Pavement and Bridge Condition in Mobility 2050*

Many of the roadway projects recommended by Mobility 2050 will improve the condition of the region’s roadway infrastructure, reflecting NCTCOG’s response to these measures and commitment to holistically managing transportation assets. As previously discussed, most NHS facilities in the region are TxDOT facilities. Staff is seeking to reduce the number of deficient pavement lane miles and bridges on these facilities by incorporating pavement and bridge condition as a criterion in the technical project selection processes for Mobility 2050 and the regional 10-Year Plan. Corridors that have poorer pavement

conditions and/or a lower Bridge Sufficiency Rating are given more priority during project selection. Pavement and bridge conditions are also improved when roadway capacity is increased, and the project includes the reconstruction of existing pavement.

Staff also has pursued other sources of funding to improve pavement and bridge conditions in the region. A specific example is NCTCOG's partnership with Dallas County on the submittal of a Fiscal Year 2024 Rebuilding American Infrastructure with Sustainability and Equity grant application for the Dallas County Inland Port Multimodal Connectivity Project, which involves the reconstruction of pavement and bridges along Belt Line Road, a National Highway System arterial segment within the cities of Lancaster and Wilmer. As a result of this effort, an awarded total of \$25 million will be utilized on an \$87 million overall project which, in part, will address more than six lane-miles of NHS pavement and two bridges more than 60 years old and recently rated in poor condition.

## **PM3 (SYSTEM PERFORMANCE, FREIGHT, AND CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM)**

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The System Performance, Freight, and Congestion Mitigation and Air Quality Improvement Program measures (commonly collectively known as PM3) cover a broad variety of observed measures across multiple modes of the transportation system. As with PM2 (Pavement and Bridge Condition) measures, the final rule for these measures establishes a cycle of four-year performance periods, the second of which began on January 1, 2022. Most measures require a target for both the midpoint and end of the performance period. In the case of the current performance period, the relevant target years are 2024 and

2026. NCTCOG has been monitoring these measures continuously since initial target adoption and exercised its option to revisit 2026 targets for most of these measures in late 2024 and early 2025. With these and most other measures, MPOs have the option to either support the targets adopted by the state Departments of Transportation or adopt their own quantitative targets.

For most PM3 measures, NCTCOG has chosen to adopt its own targets. The Transportation Improvement Program has incorporated these measures in project selection processes and includes many projects that may directly lead to improvements in these measures.

Measures in this rulemaking include:

- ➔ Percent of Person Miles of Travel on the Interstate System that is Reliable (Interstate Reliability)
- ➔ Percent of Person Miles of Travel on the Non-Interstate National Highway System that is Reliable (Non-Interstate Reliability)
- ➔ Truck Travel Time Reliability
- ➔ Percent Non-Single-Occupant Vehicle Travel
- ➔ Peak-Hour Excessive Delay
- ➔ Total Emissions Reductions (nitrogen oxides and volatile organic compounds)

### **Interstate and Non-Interstate Reliability**

These measures quantify the proportion of travel occurring on Interstate segments and Non-Interstate NHS segments where travel times are reliable throughout the day. Reliable travel is predictable, though it may be consistently congested or consistently free flowing. Unreliable travel is unpredictable; on some days it may be congested, while on others it may be free flowing. Reliability can be influenced by operational inefficiencies, bottlenecks, crashes, weather, and other factors.

As seen in **Figures 2-30** and **2-31**, recent changes to travel behavior due to the COVID-19 pandemic had a substantial impact on these measures. While these measures have, for the most part, returned to pre-pandemic levels, additional monitoring is needed to establish a post-pandemic trend. The latest observed values for these measures and adopted targets are listed in **Table 2-36**.

Figure 2-30: Observed Data, Trends, and Targets for Interstate Reliability

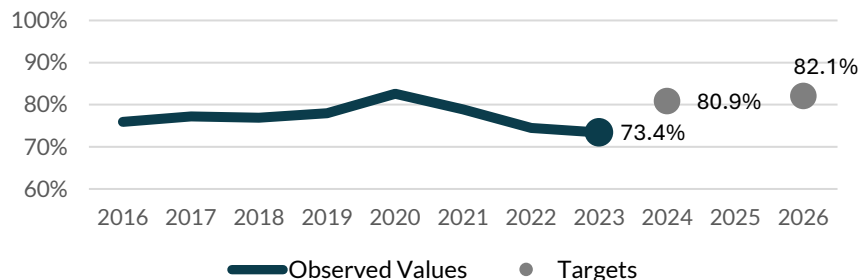


Figure 2-31: Observed Data, Trends, and Targets for Non-Interstate Reliability

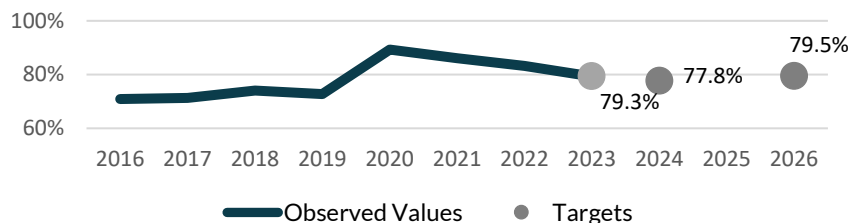


Table 2-36: Latest Observations and Targets for Interstate and Non-Interstate Reliability

	Latest Observed Value (2023)	2024 Target	2026 Target
Interstate Reliability	73.4%	80.9%	82.1%
Non-Interstate Reliability	79.3%	77.8%	79.5%

While a majority of person miles of travel on both the Interstate System and Non-Interstate NHS are reliable in the region, reliability can be increased by implementing programs and projects that reduce nonrecurring congestion and boost the overall reliability of the system. Improvements in these measures because of changes to traveler behavior in response to the COVID-19 pandemic reflect the strong influence that traveler behavior has on these measures as well. NCTCOG is actively using these performance measures to select programs and projects in Mobility 2050. See *Addressing System Performance, Freight, and CMAQ Measures in Mobility 2050* below for more information.

## Truck Travel Time Reliability

Efficient and predictable freight movement in the region is key to the region’s economic health. This measure quantifies the reliability of the region’s Interstate system for freight movement. It is calculated as an index representing the amount of extra travel time drivers and logistics planners need to factor into trips in the region to consistently arrive on time. Higher values indicate worsening reliability and less predictable travel times. As with the preceding Interstate and Non-Interstate Reliability measures, Truck Travel Time Reliability is influenced by operational inefficiencies, bottlenecks, crashes, and weather, but operational issues for trucks near freight hubs and other freight-specific issues can contribute to this measure.

As seen in **Figure 2-32** and **Table 2-37**, this measure has been worsening in the Metropolitan Planning Area for the time period for which reliable data is available. Recent changes in travel behavior due to the COVID-19 pandemic caused a significant improvement during 2020 and 2021, but this measure has since returned, for the most part, to its pre-pandemic trend.

Figure 2-32: Latest Observations and Targets for Truck Travel Time Reliability

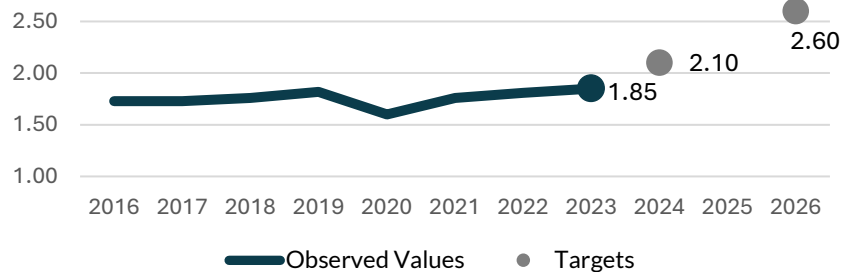


Table 2-37: Latest Observations and Targets for Truck Travel Time Reliability

Measure	Latest Observed Value (2023)	2024 Target	2026 Target
Truck Travel Time Reliability	1.85	2.10	2.60

This measure will continue to be closely monitored. As one of the few required federal performance measures that show a worsening trend for the region, the Metropolitan Transportation Plan, Transportation Improvement Program, 10-Year Plan, and other planning processes will need to continue to develop, recommend, and program projects and programs that prioritize freight reliability. Freight considerations have been incorporated into Mobility 2050’s project selection processes, and the plan’s recommendations include many projects that will directly address freight movement on the region’s transportation system. See *Addressing System Performance, Freight, and CMAQ Measures in Mobility 2050* below for more information.

## Percent Non-Single-Occupancy Vehicle Travel

Driving alone is an inefficient use of resources and the transportation system when compared to other modes. This measure quantifies the proportion of commute travel that uses modes other than driving alone in the Dallas-Fort Worth-Arlington, Denton-Lewisville, and McKinney-

Frisco Urban Areas. This includes transit, carpooling, telecommuting, bicycling, walking, and other modes.

Before the COVID-19 pandemic, this measure was either steady or slightly improving, as seen in **Figures 2-33, 2-34, and 2-35**. However, the changes to traveler behavior due to the COVID-19 pandemic have significantly increased the share of non-single-occupancy vehicle commutes, and some non-single-occupancy vehicle modes like telecommuting are likely to remain higher for many years, due to both lasting impacts of the pandemic and multi-year aggregation of the Census Bureau’s American Community Survey data used for this measure. The long-term impacts are still unknown at this time, which is why NCTCOG has chosen to reaffirm its existing 2026 target for now. This measure will be reevaluated in the next performance period. The latest observed value and adopted targets are listed in **Table 2-38**.

Figure 2-33: Latest Observed Data and Targets for Non-Single-Occupancy Vehicle Travel (Dallas-Fort Worth-Arlington)

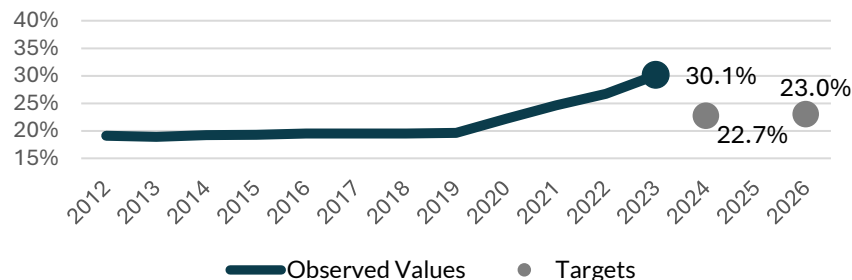


Figure 2-34: Latest Observed Data and Targets for Non-Single-Occupancy Vehicle Travel (Denton-Lewisville)

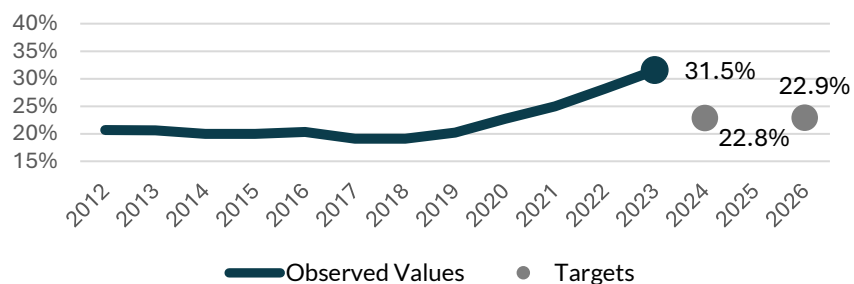


Figure 2-35: Latest Observed Data and Targets for Non-Single-Occupancy Vehicle Travel (McKinney-Frisco)

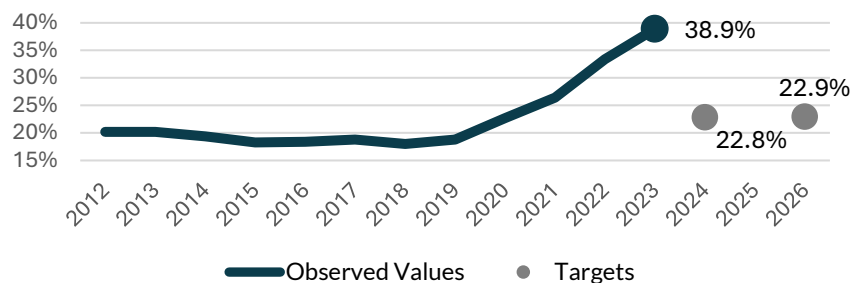


Table 2-38: Latest Observation and Targets for Non-Single-Occupancy Vehicle Travel

Urban Area	Latest Observed Value (2023)	2024 Target	2026 Target
Dallas-Fort Worth-Arlington	30.1%	22.7%	23.0%
Denton-Lewisville	31.5%	22.8%	22.9%
McKinney-Frisco	38.9%	22.8%	22.9%

The improvements seen for this measure during the COVID-19 pandemic can be retained and improved upon by implementing programs and projects that shift mode share to alternative modes. NCTCOG is actively using this performance measure to select programs and projects for Mobility 2050. See *Addressing System*

*Performance, Freight, and CMAQ Measures in Mobility 2050* below for more information.

## Peak Hour Excessive Delay

Excessive congestion delay impacts both roadway users and the region’s air quality. This measure quantifies excessive delay by calculating the number of hours of delay above an established threshold the average resident of the region experiences in a year during peak travel times on NHS facilities in the Dallas-Fort Worth-Arlington Urbanized Area. This is an absolute measure of congestion that quantifies overall congestion rather than its variability. Variability in congestion, or “non-recurring congestion,” is addressed by the reliability measures discussed above.

As seen in **Figures 2-36, 2-37, and 2-38**, this measure improved slightly from 2016 to 2019 and improved dramatically in 2020 and 2021 due to significant changes in traveler behavior due to the COVID-19 pandemic. It has since mostly returned to pre-pandemic levels for all urban areas. Currently adopted targets seen in **Table 2-39** were reaffirmed for this measure to allow more time to assess post-pandemic trends.

Figure 2-36: Observed Data, Trends, and Targets for Peak Hour Excessive Delay (Dallas-Fort Worth-Arlington)

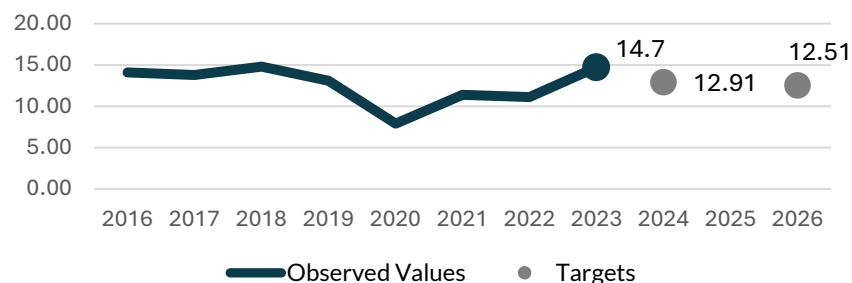


Figure 2-37: Observed Data, Trends, and Targets for Peak Hour Excessive Delay (Denton-Lewisville)

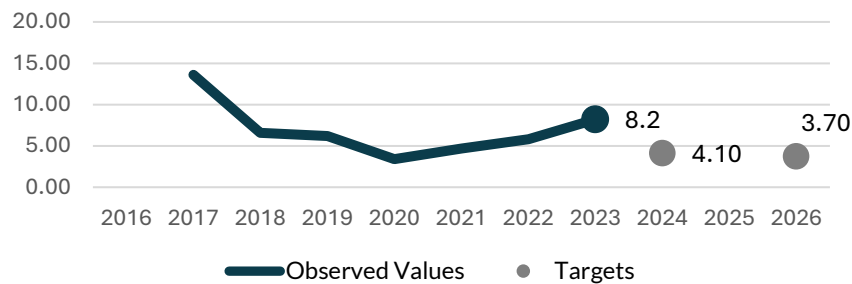


Figure 2-38: Observed Data, Trends, and Targets for Peak Hour Excessive Delay (McKinney-Frisco)

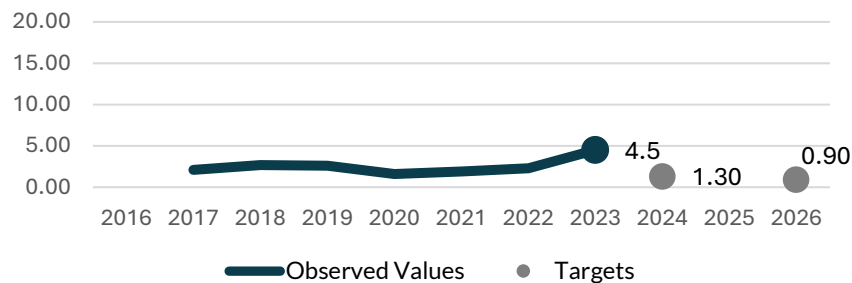


Table 2-39: Latest Observations and Targets for Peak Hour Excessive Delay

Urban Area	Latest Observed Value (2023)	2024 Target	2026 Target
Dallas-Fort Worth-Arlington	14.70 hours	12.91 hours	12.51 hours
Denton-Lewisville	8.20 hours	4.10 hours	3.70 hours
McKinney-Frisco	4.50 hours	1.30 hours	0.90 hours

This measure can be improved by implementing programs and projects that reduce recurring congestion and retain the improvements seen during the pandemic. NCTCOG is actively using this performance measure to select programs and projects for Mobility 2050. See *Addressing System Performance, Freight, and CMAQ Measures in Mobility 2050* below for more information.

## Total Emissions Reductions

The on-road mobile source emissions performance measure is the total emissions reduction (two- and four-year cumulative estimated emissions reductions) for all Congestion Mitigation and Air Quality Improvement Program (CMAQ), or air quality funded projects of each applicable criteria pollutant and precursor. For the Dallas-Fort Worth nonattainment area, the pollutants measured are nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC).

NCTCOG staff developed a new baseline and targets for the second performance measure reporting period by comparing existing local Transportation Improvement Program projects from 2021 to 2024 with projects included in the Federal Highway Administration’s Public Access System for that same time period. Based on the results, the percentage of the emissions benefits reported in the Transportation Improvement Program for NO<sub>x</sub> and VOC were applied to determine the new baseline and future targets.

NCTCOG coordinates with local stakeholders and TxDOT in the selection of CMAQ projects for deployment in the Dallas-Fort Worth ozone nonattainment area. These projects were selected to meet the program goals of reducing congestion and/or reducing emissions of ozone precursor pollutants. Emissions estimates for these projects are calculated by NCTCOG using methodologies developed as part of the Texas Guide to Accepted Mobile Source Emission Reduction Strategies (MOSERS). In cases where no practical MOSERS methodology exists, verified past emission reduction performance is used to create an emissions reduction estimate.

To establish targets for these measures, staff analyzed the behavior of emission factors over time and applied percentage reductions to the baseline to better correlate with potential future reductions. This measure remains unaffected by the pandemic, and the cumulative values, reported in the 2022 and 2023 CMAQ annual reports for NO<sub>x</sub>, have met the 2026 target and VOC is on track. The latest values observed and adopted targets are shown in **Table 2-40**.

Table 2-40: Emissions Reductions Measures and Targets

Pollutant	Latest Observed Value (2022 and 2023 Combined)	2024 Target	2026 Target
Nitrogen Oxide (kg/day)	4,929.94	2,330.64	4,195.15
Volatile Organic Compound (kg/day)	865.80	599.90	1,035.83

### *Addressing PM3 (System Performance, Freight, and Congestion Mitigation and Air Quality Improvement Program) Measures in Mobility 2050*

Mobility 2050 directly addresses many of the measures in the PM3 rulemaking and has selected policies, programs, and projects using similar criteria for many years. Many of the measures in this rulemaking have been incorporated as appropriate into the plan’s project selection processes (see *Project Selection/Prioritization Processes* below), and all measures are considered when developing the plan’s suite of recommendations. Upon implementation, these recommendations will directly address congestion, reliability, freight movement, and therefore lead to improvements in these measures and achievement of targets.

Some examples of specific programs and projects included in Mobility 2050 that are anticipated to address the PM3 measures are listed in **Table 2-41**.

Table 2-41: PM3 Performance Impacts of Selected Programs and Projects

Program/Project Name	PM3 Measures Addressed	Potential Impact
Signal Retiming Program	Interstate Reliability, Non-Interstate Reliability, Peak-Hour Excessive Delay, Total Emission Reductions	Retiming signals on the region’s arterials leads to more efficient utilization of the system and higher Interstate and Non-Interstate Reliability with resulting air quality benefits as well.
SH 360 from IH 30 to SH 183 Asset Optimization Project	Interstate Reliability, Truck Travel Time Reliability, Peak-Hour Excessive Delay	Strategically adding capacity and operational improvements to this corridor are anticipated to improve Interstate Reliability and Truck Travel Time Reliability.
Southeast Connector Corridor Project on US 287/IH 820/IH 20 in Tarrant County	Interstate Reliability, Truck Travel Time Reliability, Peak-Hour Excessive Delay	Adding capacity to this key transportation corridor is anticipated to alleviate recurring congestion and improve the reliability of the system.
Regional Veloweb Trail in Grand Prairie, Cotton Belt Trail, South Clark Road Trail	Non-Single-Occupancy Vehicle Travel, Total Emission Reductions	Completing these portions of the Regional Veloweb enables more of the region’s population to switch to nonmotorized commutes.

# TRANSIT ASSET MANAGEMENT

Public transportation provides thousands of people in North Central Texas with daily access to essential life opportunities. It is critical to have well-maintained, reliable transit assets to help ensure safe, dependable, and accessible transit services. The North Central Texas region has a variety of transit assets. The three major transit authorities—Dallas Area Rapid Transit (DART), Trinity Metro, the Denton County Transportation Authority (DCTA)—and smaller transit providers have transit assets, including nearly 2,000 buses and vans, and over 250 commuter, light rail, and trolley vehicles covering almost 300 miles of track. Transit agency assets also include support vehicles like service trucks and police cars, and infrastructure such as rail stations, park-and-ride locations, and maintenance facilities. Transit asset management (TAM) is a business model that prioritizes funding based on the condition of transit assets to achieve or maintain transit networks in a state of good repair. TAM supports a series of practices to achieve a transit state of good repair, including, but not limited to:

- Regular maintenance
- Inspections
- Tracking asset condition over time
- Planning for maintenance and replacement costs
- Replacing each asset at the appropriate time

The TAM final rule establishes four performance measures related to the condition of transit assets. MPOs are required to coordinate with transit providers to report on these measures, establish regional targets, and integrate individual transit providers’ performance targets and TAM plans into planning documents. NCTCOG coordinated with all transit providers in the region, requesting transit asset data and agency-level metrics and targets. Based on the data received, the RTC established initial regional targets for the four transit asset categories

in December 2017. These targets have been reaffirmed regularly since that time, and updated targets were developed and adopted by the RTC in September 2022. These targets cover Fiscal Years 2023 to 2026.

In addition to adopting updated targets, NCTCOG has shifted its approach to the regional targets by setting distinct targets for the three large transit authorities (DART, Trinity Metro, and DCTA) and the rest of the region’s transit providers. This new approach was adopted to ensure that differences in operating environments, asset procurement options, and other impacts from the COVID-19 pandemic are considered in the target-setting and performance measurement process, while still providing an aspirational goal to guide regional coordination and assistance in keeping critical transit assets and infrastructure in a state of good repair. **Tables 2-42 and 2-43** list the measures and targets adopted for the large agencies and small providers, respectively.

Table 2-42: Large Agency Transit Asset Management Targets for Fiscal Year 2023-2026

Asset Category	Target	Metric
Rolling Stock (transit vehicles)	0%	Vehicles that meet or exceed the industry standard, defined as the Federal Transit Administration’s Default Useful Life Benchmark*
Infrastructure (rail track)	0%	Rail track segments with performance restrictions
Equipment (transit support vehicles)	25%	Vehicles that meet or exceed the industry standard, defined as the Federal Transit Administration’s Default Useful Life Benchmark*
Facilities (buildings, stations, park-and-rides)	0%	Transit facilities rated below “Adequate” (3.0) on the industry standard Transit Economic Requirements Model scale

\* These vehicles are as old as or older than the industry standard.

Table 2-43: Small Provider Transit Asset Management Targets for Fiscal Year 2023-2026

Asset Category	Target	Metric
Rolling Stock (transit vehicles)	5%	Vehicles that meet or exceed the industry standard, defined as the Federal Transit Administration’s Default Useful Life Benchmark*
Infrastructure (rail track)	0%	Rail track segments with performance restrictions
Equipment (transit support vehicles)	25%	Vehicles that meet or exceed the industry standard, defined as the Federal Transit Administration’s Default Useful Life Benchmark*
Facilities (buildings, stations, park-and-rides)	0%	Transit facilities rated below “Adequate” (3.0) on the industry standard Transit Economic Requirements Model scale

\* These vehicles are as old as or older than the industry standard.

## Rolling Stock: Percentage of Revenue Vehicles Met or Exceeded Useful Life Benchmark

This measure assesses the percentage of rolling stock revenue vehicles, such as buses and paratransit vehicles, a transit provider operates that have met or exceeded the Useful Life Benchmark (ULB). The ULB is the expected lifecycle of a capital asset for a particular transit provider’s operating environment, based on recommended mileage or the acceptable period of use in service. NCTCOG has set the regional target for this measure with the goal that the percentage of revenue vehicles that have met or exceeded their ULB does not exceed the target percentage. **Table 2-44** summarizes the targets and comparative performance in Fiscal Years 2021 to 2023 for rolling stock revenue vehicles in the region.

Table 2-44: Rolling Stock Performance Compared to Targets

Asset Type <sup>1</sup>	Percent of revenue vehicles that have met or exceeded their useful life benchmark				
	FY2021	FY2022	FY2023	Large Agency Target	Small Provider Target
Bus	2%	4%	1%	0%	5%
Small Bus	24%	24%	16%	0%	5%
Light Rail Vehicle	0%	0%	0%	0%	5%
Commuter Rail Locomotive	0%	44%	0%	0%	5%
Commuter Rail Passenger Car	0%	0%	0%	0%	5%
Articulated Bus	0%	0%	0%	0%	5%
Commuter Rail Passenger Coach <sup>2</sup>	0%	48%	0%	0%	5%

<sup>1</sup>Rolling stock assets include a small number of vehicles reported to the National Transit Database as “inactive.”

<sup>2</sup>Includes assets rebuilt near the end of their useful life with the assumption of a minimum useful life extension of 10 years, which may be too conservative (i.e., vehicles may be in better condition than expected based on completed rebuild activities).

NCTCOG is actively using this performance measure to select programs and projects for Mobility 2050. See *Addressing Transit Asset Management in Mobility 2050* below for more information.

## Infrastructure: Percentage of Track Segments with Performance Restrictions

This measure assesses the performance of rail infrastructure operated by transit providers in the region by measuring the percentage of track segment with performance restrictions. A performance restriction exists on a segment of rail fixed guideway when the maximum permissible speed of transit vehicles is set to a value that is below the guideway’s full-service speed. These restrictions are often referred to as “slow zones.” NCTCOG has set the regional target for this measure with the goal that the percentage of track segments with performance restrictions does not exceed the target percentage. **Table 2-45** summarizes the targets and comparative performance in Fiscal Years 2021 to 2023 for rail infrastructure.

Table 2-45: Infrastructure Performance Compared to Targets

Rail Mode	FY2021 Performance	FY2022 Performance	FY2023 Performance	Large Agency/ Small Provider Target
Light Rail	0.20%	0%	0%	0%
Commuter Rail	12.55%	0%	0%	0%
Streetcar Rail	0%	0%	0%	0%
Hybrid Rail	0%	0%	0%	0%

## Equipment: Percentage of Non-Revenue Vehicles Met or Exceeded Useful Life Benchmark

This measure assesses the percentage of non-revenue vehicles, including transit service and maintenance vehicles, which have met or exceeded their ULB. NCTCOG has set the regional target for this measure with the goal that the percentage of revenue vehicles that have met or exceeded their ULB does not exceed the target percentage. **Table 2-46** below summarizes the target and comparative performance in Fiscal Years 2021 to 2023 for non-revenue equipment.

Table 2-46: Equipment Performance Compared to Targets

Asset Type	FY2021 Performance	FY2022 Performance	FY2023 Performance	Large Agency/ Small Provider Target
Automobiles	57%	57%	76%	25%
Steel Wheel Vehicles	33%	33%	50%	25%
Trucks & Other Rubber Tire Vehicles	69%	69%	64%	25%

## Facilities: Percentage of Facilities Assets with Condition Rating below 3.0 on Federal Transit Administration Transit Economic Requirements Model

This measure tracks the percentage of facility assets, such as maintenance, administrative, passenger, and parking facilities, with a condition rating below 3.0 on the Federal Transit Administration Transit Economic Requirements Model scale. NCTCOG set the regional target for this measure with the goal that the percentage of facilities with a condition rating below 3.0 on the Transit Economic Requirements Model scale does not exceed the target percentage., **Table 2-47** below summarizes the target and comparative performance in Fiscal Years 2021 to 2023 for this measure.

Table 2-47: Facilities Performance Compared to Targets

Asset Type	Fiscal Year 2021 Performance	Fiscal Year 2022 Performance	Fiscal Year 2023 Performance	Large Agency/ Small Provider Target
Administrative/ Maintenance	13%	13%	21%	0%
Passenger/Parking	2%	0%	1%	0%

## Addressing Transit Asset Management in Mobility 2050

Mobility 2050 directly addresses many of the measures in the TAM rulemaking and projects are selected with TAM principles in mind. Given the goal of TAM to achieve and maintain transit fleets, non-revenue vehicles, rail infrastructure, and facilities in a state of good repair, NCTCOG has advanced several policies and programs that center on planning, procurement, and implementation of projects that would further the maintenance or replacement of transit assets. Beginning in Fiscal Year 2021, TAM has been addressed in the

Transportation Improvement Program through regular maintenance of transit assets and the purchasing of new vehicles in cooperation with the region’s transit agencies and NCTCOG’s subrecipients using the Federal Transit Administration 5307 (Urbanized Area Formula) and 5339 (Bus and Bus Facilities) funds.

Staff are undertaking a Cooperative Vehicle Procurement (CVP) on behalf of small transit providers, nonprofits, and health and human service agencies. Through this CVP, NCTCOG will ensure compliance with federal procurement requirements, deliver savings and efficiencies to regional partners, and continue efforts to implement regional transit vehicle standards. The CVP will help meet the regional targets for the rolling stock performance measure.

A summary of specific programs and projects included in the Transportation Improvement Program that will help address the TAM measures are listed in **Table 2-48**. The current transit listings will be updated each cycle as the Federal Transit Administration releases additional funds for each fiscal year.

Table 2-48: Summary of Transportation Improvement Program Projects that Address TAM Performance Measures

Project Description	Performance Measures
Purchase Replacement Vehicles	Rolling Stock, Equipment
Bus Preventive Maintenance	Rolling Stock
Preventive Maintenance	All
System Preventive Maintenance	All
Rail Preventive Maintenance	Infrastructure
Purchase Replacement Vehicles – Trinity Railway Express Service	Equipment
Acquisition of Security Equipment	Equipment

## PUBLIC TRANSPORTATION AGENCY SAFETY PLANS

Public Transit Agency Safety Plans are a means for transit providers and MPOs to monitor and improve the agency of transit systems under their jurisdiction. A core component of the process is monitoring and establishing targets for four required performance measures:

- Fatalities (total number of reportable fatalities and rate per total vehicle revenue miles by mode)
- Injuries (total number of reportable injuries and rate per total vehicle revenue miles by mode)
- Safety Events (total number of reportable events and rate per total vehicle revenue miles by mode)
- System Reliability (mean distance between major mechanical failures by mode)

Transit provider targets are established annually. Regional targets will be updated every four years. Regional transit providers establish and publish their safety targets for each of the required performance measures in their agency safety plans. NCTCOG assesses each of these agency safety plans and coordinates with the transit providers, TxDOT, and the Federal Transit Administration Public Transit Agency Safety Plans Technical Assistance Center to determine the method and overall goal for the regional safety targets. **Table 2-49** below summarizes NCTCOG’s regional safety targets for each of the seven performance measures and provides the most recent regional performance data. While individual providers create targets for each mode they operate, the regional safety performance data is aggregated for the regional baseline average performance and safety targets to ensure consistency and applicability across the region. The overall goal of the targets is to achieve a 5 percent improvement over the regional baseline average performance by Fiscal Year 2025. However, fatality

targets are set to zero, in line with the regional safety position that, “Even one death in the transportation system is unacceptable.” These targets were approved by the RTC in 2021 and will be updated again by the end of Fiscal Year 2025. The update will include additional performance measures that the Federal Transit Administration added to the regulations in April 2024.

Table 2-49: Public Transit Agency Safety Plans Baseline Average Performance and Regional Safety Targets

Performance Measure	Baseline Average	FY2023 Performance	Regional Safety Target
Fatalities – Total Number	6.00	5.00	0.00
Fatalities – Rate per 100k Miles	0.01	0.007	0.00
Injuries – Total Number	150.50	396	142.98
Injuries – Rate per 100k Miles	0.23	0.52	0.22
Safety Events – Total Number	516.00	303	490.20
Safety Events – Rate per 100k Miles	0.81	0.40	0.77
System Reliability – Average Miles Between Major Mechanical Failures	18,896	26,544	19,841

### *Addressing Public Transportation Agency Safety Plans in Mobility 2050*

The safety of the transit system is of important regional value and many policies, programs, and projects that are included in Mobility 2050 directly or indirectly address the safety of the transit systems. An example project is the construction of safety walls along the Silver Line/Cotton Belt rail corridor near schools in Dallas and Plano. Double

projects, such as ongoing efforts on the Trinity Railway Express corridor, represent added capacity to the rail system, but they also provide important safety functions. The rail will be reconstructed, allowing for higher speeds, on a previously speed-restricted corridor. In addition, by allowing the trains to pass one another on separate tracks, potential conflicts are reduced, thereby increasing safety across the system. Many more safety-related projects will be implemented through programs like the Transit Enhancements and Mobility Improvements Program.

## **CONCLUSION**

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Tracking the performance of the region’s transportation system relative to the goals of previous and current federal legislation is a required component of the plan development process. However, data and insights gleaned from the federal performance measures can be applied in useful ways as there is overlap between Mobility 2050 goals and federal emphasis areas. During the period Mobility 2050 is in effect, these measures will continue to be tracked and updated as new data is available, generally on an annual basis.