

MOBILITY 2045 UPDATE

Executive
Summary

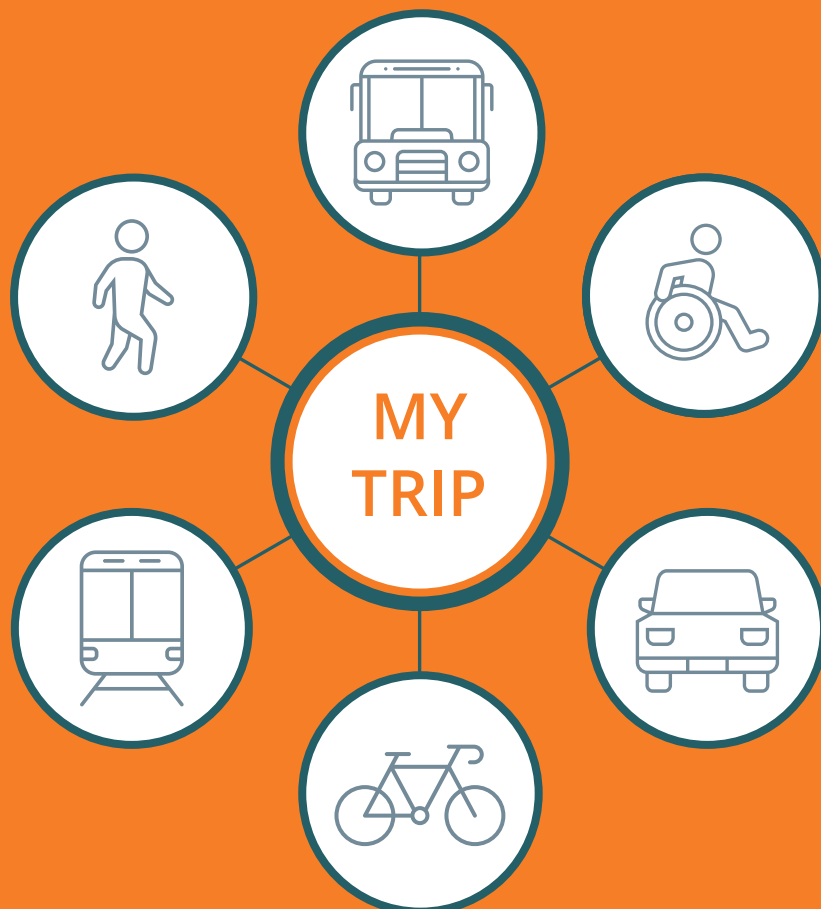
The Metropolitan
Transportation Plan for
North Central Texas



MOBILITY 2045 UPDATE

What is the Mobility 2045 Update?

The Mobility 2045 Update is a blueprint for the region's transportation system that aims to respond to regional mobility goals and guides the expenditure of federal and state transportation funds. The plan includes recommendations for all travel modes through policies to guide transportation infrastructure implementation, programs to improve mobility, and projects to increase transportation system capacity and reliability.



**TRANSPORTATION
SHOULD BE AN
AFTERTHOUGHT**

Transportation should work so well that you get where you need to go without even noticing it.

Whether you wish to travel by walking, bicycling, bus, train, or car, having an option is important for getting where you need to go.

DALLAS-FORT WORTH



8.2 MILLION PEOPLE IN 2023

larger than 37 states in population



11.4 MILLION PEOPLE IN 2045

(FORECAST)

TOP LANGUAGES SPOKEN

hello!

ENGLISH

ihola!

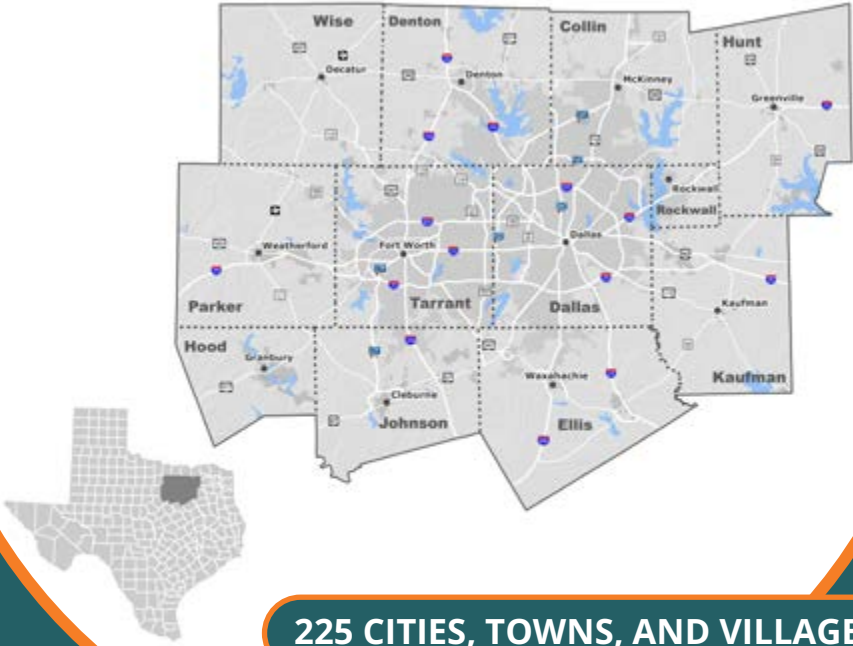
SPANISH

chào!

VIETNAMESE

9,448 SQUARE MILES

12 COUNTIES



225 CITIES, TOWNS, AND VILLAGES

4th largest metropolitan area in US

LARGER THAN **5** STATES IN LAND AREA



5.7 MILLION JOBS IN 2023

DFW makes up over 30% of Texas' economy



8.1 MILLION JOBS IN 2045

(FORECAST)

MAKING PROGRESS IN SOLVING REGIONAL CHALLENGES

Mobility 2045 Adopted

Mobility 2045 Update in Effect

2018

2019

2020

2021

2022

Mobility Goals

1. Improve transportation options
2. Support travel efficiency strategies
3. Ensure community access to system and process

Select Performance Measure

2018

2022

Miles of Existing Regional Veloweb for Each Mobility Plan

455

538 ▲

Quality of Life Goals

4. Enhance environment and life styles
5. Encourage sustainable development

Select Performance Measure

2018

2022

8-Hour Ozone Design Value (parts per billion, 3 year rolling average)

76

77 ▲

System Sustainability Goals

6. Ensure adequate maintenance, safety, and reliability
7. Pursue long-term, sustainable financial resources

Select Performance Measure

2018

2022

Plan Revenue Per Capita Per Year

\$451.01

\$590.68▲

Implementation Goals

8. Provide timely planning and implementation
9. Develop cost effective projects and programs

Select Performance Measure

2018

2022

% of Asset Optimization Recommendations (Major Roadway Recommendations)

25.0%

27.7%▲

A SYSTEMATIC APPROACH TO SOLVING THE REGION'S CHALLENGES

MOBILITY 2045 UPDATE DEVELOPMENT PRINCIPLES: the basis of a strategic plan

Performance measures serve as a vital way to tie specific efforts to improve the transportation system with the broader goals of the plan. Plan recommendations are developed with the following principles in mind. Follow the principles through the next section to see how each is incorporated and funded in the Mobility 2045 Update.

Maximize Existing Transportation Systems Strategies

1

INFRASTRUCTURE MAINTENANCE

Maintain what we have before building new infrastructure

2

MANAGEMENT & OPERATIONS

Ensure existing infrastructure is operating efficiently

3

GROWTH, DEVELOPMENT & LAND USE

Invest in low-cost options for people, solve for inefficient land use, and promote active transportation

4

RAIL & BUS

Maximize air quality, safety, affordability, and equity benefits associated with transit by moving more people at the same time for a lower cost

5

HOV/MANAGED LANES

Make roadway system more efficient, give people choices, improve congestion and air quality

6

FREEWAYS, TOLLWAYS, & ARTERIALS

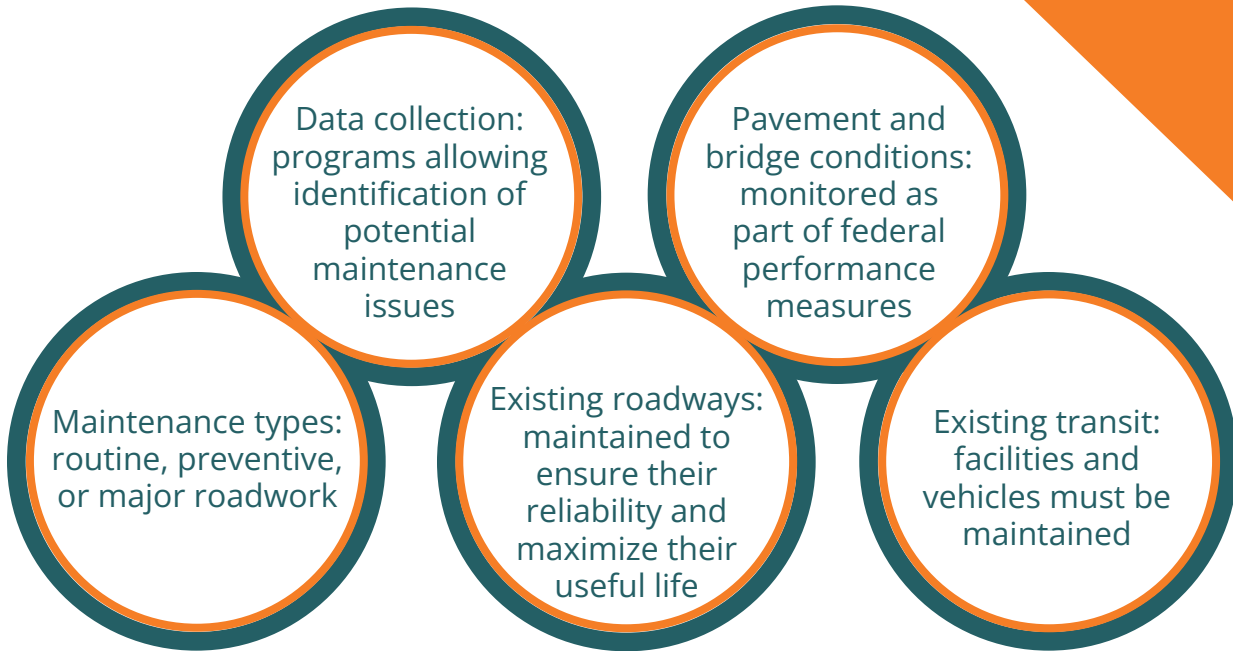
Invest in projects to add capacity, but also to improve reliability and efficiency of the roadway system

Strategic Infrastructure Investment Strategies

INFRASTRUCTURE MAINTENANCE

1

\$42.3 billion



2

MANAGEMENT & OPERATIONS

\$9.6 billion

KEY STRATEGIES



Offer first responder safety education and training

Partner with local businesses to promote alternative travel modes in communities



TRAINING & COORDINATION

CONNECTIONS



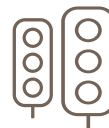
Encourage carpooling and transit use through park-and-ride facilities

Restriping, intersection upgrades, grade separations, and turn lanes



Analyze crashes to find room for safety improvement

Upgrade traffic signals



Conduct pilot programs for automated vehicles



TECHNOLOGY



Main principles: policies, programs, and projects

ECONOMIC DEVELOPMENT	ENVIRONMENTAL PROTECTION	SOCIAL EQUITY
<p>Transportation investments increase North Texans' capacity to engage productively in the economy through improved access and mobility.</p> <p>Coordinating land use with transportation through strategies such as context-sensitive complete streets, mixed-use walkable development, and transit-oriented development is a key component of sustainable economic development.</p>	<p>Implementing infrastructure projects for a growing region is necessary; however, major infrastructure improvements such as highways and transit lines can negatively impact habitat and ecosystems.</p> <p>Creating infrastructure more sensitive to wildlife and ecosystems through integrated planning and interagency cooperation promotes conservation priorities and sustainable uses while exploring a variety of mitigation options.</p>	<p>Social equity is impacted when a variety of transportation systems, such as transit, sidewalks, and bike lanes, allow people to travel without the need for personal vehicles.</p> <p>Social sustainability focuses on creating:</p> <ul style="list-style-type: none"> • affordable housing • environmental justice • fair housing choice • infill housing • revitalization • redevelopment • compliance with ADA • improved health • local food options

<p>LAND USE - TRANSPORTATION CONNECTIONS PROGRAM</p>	<ul style="list-style-type: none"> • Smart zoning ordinances and building codes • Jobs/housing balance through strategic developments • Financial incentives to promote sustainable developments
<p>COMMUNITY SCHOOLS AND TRANSPORTATION PROGRAM</p>	<ul style="list-style-type: none"> • Coordination and communication between school districts, local governments, and transportation agencies • Enable more children to walk and bicycle to school through the Safe Routes to School Funding Program • Sustainable school siting and facility planning
<p>TRANSIT-ORIENTED DEVELOPMENT (TOD) PROGRAM</p>	<ul style="list-style-type: none"> • Technical assistance to plan and implement TOD • Regional coordination and data sharing • Location of higher density, mixed income, and affordable housing options, as well as parking management

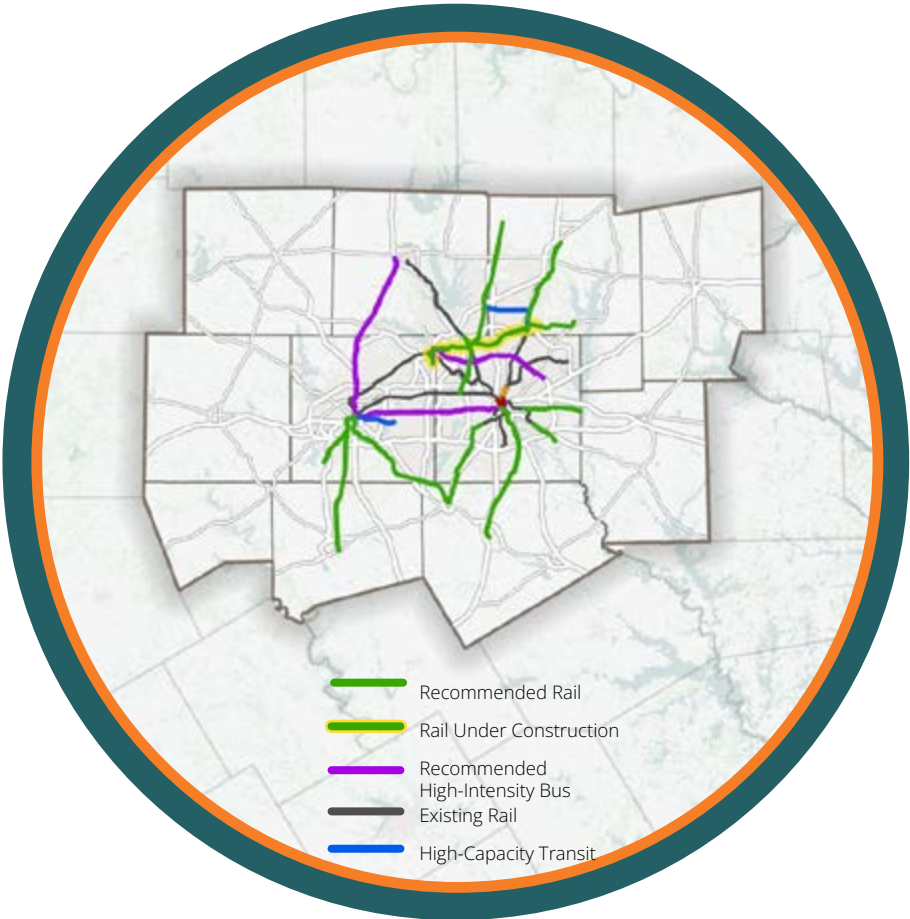


Public transportation provides thousands of people in North Central Texas with daily access to life-essential opportunities, reduces the number of cars on the roads, relieves congestion for people who drive, and improves air quality for all.

EXPANDING TRANSIT FOR ALL

Recent transit studies and plans like Access North Texas have looked for ways to address a lack of transit access in the region over the long-term. Future population growth in many areas of Dallas-Fort Worth will mean other options will be necessary to get around besides single-occupant vehicles. The Mobility 2045 Update includes the following key strategies:

- New service in high-intensity transit corridors
- Extensions of transit lines in emerging transit markets
- Expansions that increase core capacity aimed at improving connections
- Transit lines that connect communities



2045 POPULATION WITH TRANSIT ACCESS

	POPULATION WITH ACCESS	POPULATION WITHOUT ACCESS
TRANSIT AUTHORITIES	40%	60%
TRANSIT AUTHORITIES + DEVELOPING TRANSIT AREAS	52%	48%

 **VIEW ONLINE**

all roadway expenditures \$49.1 billion



CONGESTION REDUCTION

Managed lanes add capacity alongside non-tolled lanes.
HOV lanes encourage carpooling by allowing vehicles with 2+ people to use the lane.



ECONOMIC DEVELOPMENT

Improved corridors create:

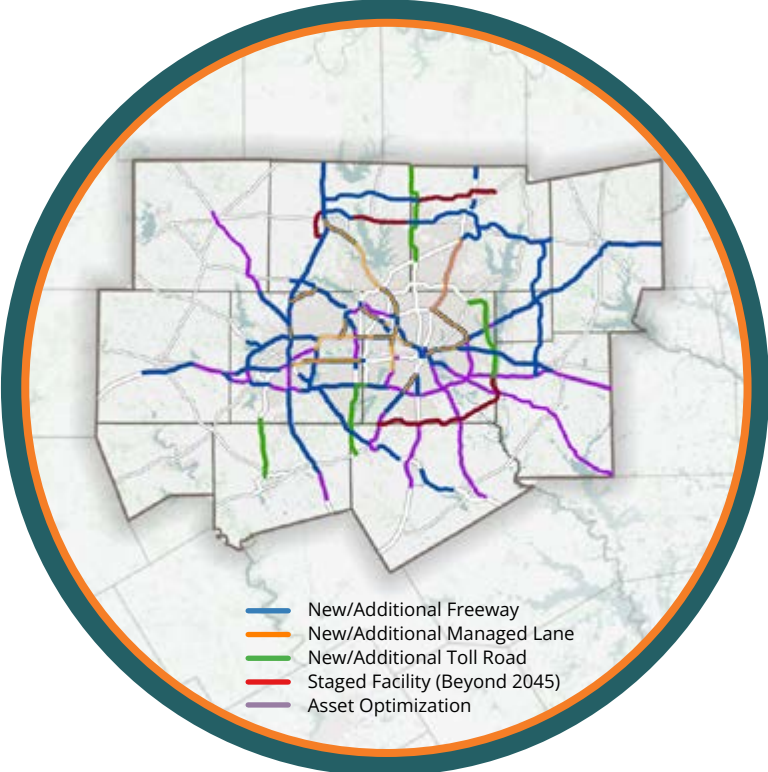
- Economic development
- Increased property values
- Additional tax revenues



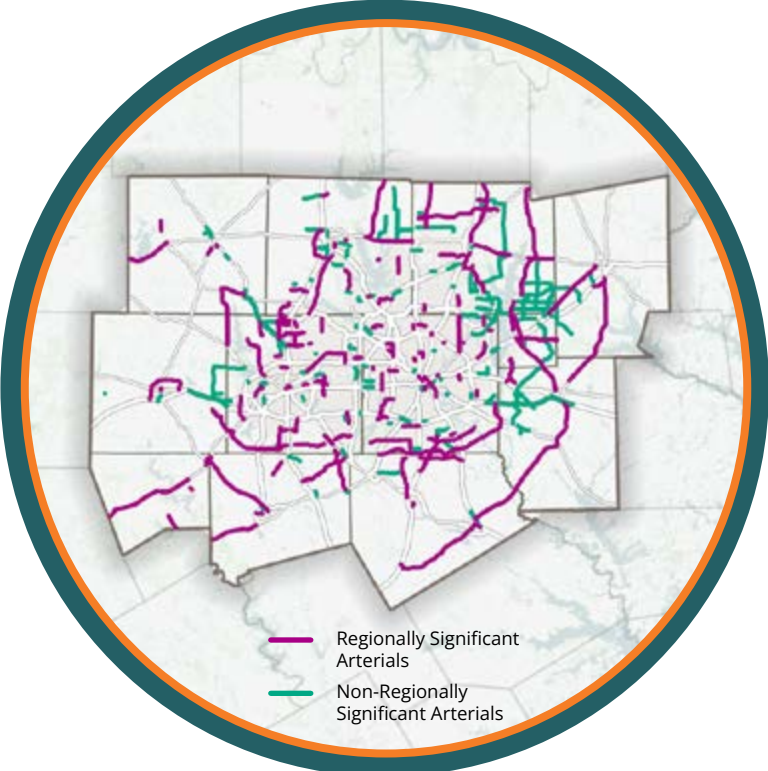
AIR QUALITY

Less stop-and-go traffic conditions
+ reducing vehicle emissions
= improved air quality

Recommended major roadway improvements: asset optimization, NTTA projects, and congestion alleviation.



Recommended arterial improvements: context-sensitive design approach compatible with the community



MOBILITY 2045 CHOICES

transportation challenges + options
= comprehensive solution

98% of drivers use  as needed.
The average TollTag user chooses the TEXpress Lanes occasionally.

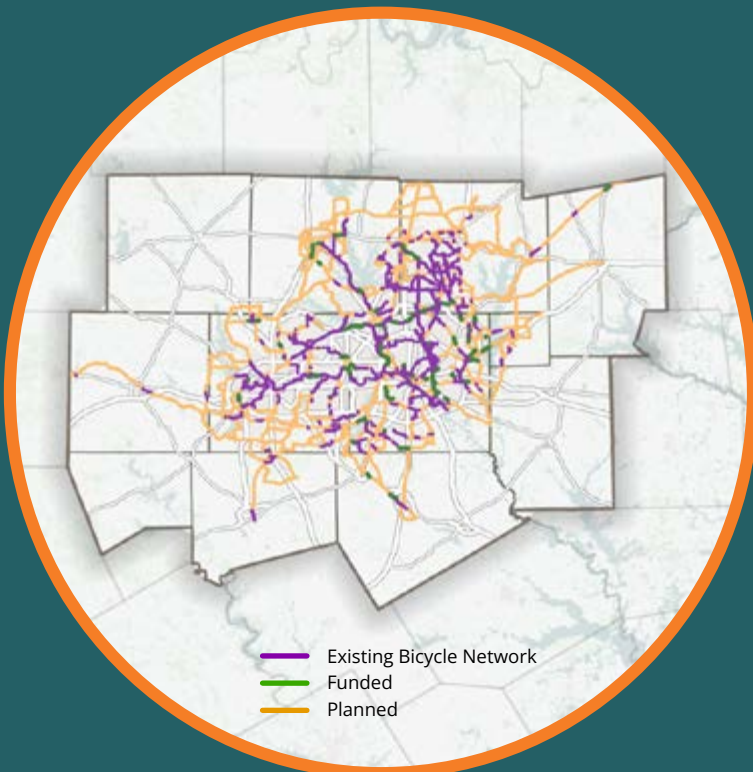
1 in 5 trips are on TEXpress Lanes.
The average TollTag user chooses the TEXpress Lanes for 20% of trips.

WHAT HAPPENS WHEN TRAVEL CHOICES ARE CREATED?

- Everyone has a low-cost option: transit, walk, bicycle
- Less demand on local roads and highways
- Travel times can be more reliable
- Communities are more livable, safe, and cost-efficient
- Lower traffic congestion and better air quality



WHAT SOLUTIONS ARE AVAILABLE?



- Transit and bicycle/pedestrian facilities constructed through available federal, state, and local funding
- Policies in urbanized areas that roadways should be designed and constructed to accommodate at least three modes of transportation
- Context-sensitive complete street design approach compatible with the community
- Tolled managed lanes give drivers the choice to pay a toll for travel time certainty, or travel for free with less certainty



[VIEW MAPS ONLINE](#)

FINANCIAL REALITY

Federal regulations require Metropolitan Transportation Plans be financially constrained to available resources. Projects and programs may only be included in the long-range plan if funding can be identified for their implementation. In other words, this plan only includes projects and programs for which receiving funds is a reasonable expectation.

FINANCIAL PLANNING PROCESS



THE FINANCIAL PLAN BALANCES TO THIS:

Maximize Existing Transportation Systems Strategies	1 Infrastructure Maintenance Maintain and operate existing transit and roadway facilities	\$42.3 B
	2 Management and Operations Improve efficiency and remove trips from system	\$9.6 B
	3 Growth, Development, and Land Use Strategies Improve transportation and land use balance	\$1.5 B
Strategic Infrastructure Investment Strategies	4 Rail and Bus Encourage switch to transit	\$44.9 B
	5 HOV/Managed Lanes Increase auto occupancy	\$49.1 B
	6 Freeways/Tollways and Arterials Add vehicle capacity	
TOTAL		\$148.3 B

Totals may not sum due to independent rounding.

FINANCIAL FORECASTING



The Mobility 2045 Update identifies a variety of funding sources, including traditional fuel taxes, tolls, local revenue, sales taxes, and many others. Some of these sources are assumed revenue enhancements that involve future action by committees, legislators, or voters that may occur in the future. These future sources are estimated as equivalent to amounts projected from increases to revenue sources that exist today, like motor fuel taxes and registration fees.

Each mobility plan adjusts future revenue estimates based on changes in financial conditions as new revenue sources, called revenue enhancements, flow through traditional funding channels over time. The Mobility 2045 Update's revenue enhancements account for approximately 5% of the plan's total revenue, the lowest percentage since Mobility 2030. This is because anticipated revenue enhancements from earlier plans have begun flowing through established channels like the State Highway Fund and the Unified Transportation Program, so this plan relies less on new revenue streams.

RESOURCES AT RISK

Current resources are at risk due to:

- Inflation
- Rising construction costs
- Recent gains in vehicle fuel efficiency
- Electric and hybrid vehicles which pay no gas tax

State and federal gas taxes have not been raised in more than three decades.

Meanwhile, inflation is chipping away at the gas tax's purchasing power.

POTENTIAL SOLUTIONS

Potential solutions include:

- Invest strategically to lower construction costs
- Fight for fair and innovative funding solutions at the regional and state level
- Investigate options:
 - local option registration fees
 - vehicle miles travelled fee
 - indexing motor fuel tax
- Pursue low-cost transportation solutions like bicycle and pedestrian infrastructure

SAFETY

The Transportation System Safety Program focuses on improving traffic safety throughout the region for all users by supporting and coordinating planning efforts to develop safety policies, programs, and projects. The four Es of Transportation Safety—engineering, enforcement, education, and emergency response—continue to be integral components to improving the safety of the regional transportation system.

TRAINING AND EDUCATION

NCTCOG provides regional safety training and education for first responders, officials, and the public through various programs:

- Traffic Incident Management training
- Crash Reconstruction training
- Educational webinars
- Driver safety initiatives
- Work zone safety training
- Active transportation education and outreach campaigns



PROGRAMS

- Regional Traffic Signal Retiming Program
- Bottleneck program
- Intelligent Transportation Systems
- Railroad crossing programs
- Freight and truck lane planning

POLICIES

- Implementation of safety strategies in work zones
- Data sharing between agencies for crashes and incident response
- Implement projects, policies, and programs that assist in reducing or eliminating crashes and fatalities across all modes toward zero deaths

TECHNOLOGY



Technologies such as automated vehicles, connected vehicles, and data are evolving rapidly, and present opportunities to make traveling safer and more equitable.

Technology goals include advancing transportation technologies that support a safe, equitable transportation system for all users, which offers more travel options, is well maintained, environmentally friendly, and provides good job opportunities.

TECHNOLOGY SOLUTIONS

POLICIES

- Develop secure data-sharing practices that serve the public interests
- Utilize new cost-efficient technologies that support consistent and high-quality system maintenance and operations
- Support development of automated vehicles and other emerging transportation technologies.

PROGRAMS

- AV2.0 Program
- Freight Optimization
- North Texas Center for Mobility Technologies
- Connected Vehicle Data for Operations
- Workforce Development
- Emerging Transportation Technology Deployments
- Innovation Grants for Local Partners

BENEFITS

- Improved air quality through vehicle electrification
- Reduced demand on roadways due to shared mobility
- Increased access for people who don't drive through autonomous vehicles
- Improved safety when vehicles, traffic signals, and alert systems communicate with each other

BROADBAND INTERNET AND TRANSPORTATION

Transportation technology encompasses virtual travel, as well as physical travel. The amount of trips on the roadway systems is directly affected by the share of virtual travel taking place. The critical task in coming decades is providing access to reliable broadband available on a wider scale.

- Broadband access delivers air quality, equity, and economic development benefits.
- Broadband access is a new travel mode, in the same way railroads or planes emerged in the past.
- Physical rights-of way are evolving to more than pavement, meaning urban environments will see more varied use of this public infrastructure in the future.

CHALLENGES & SOLUTIONS

AIR QUALITY



The region is in nonattainment of federal air quality standards. Air quality is vital to a community's overall quality of life, but the negative impacts of polluted air can more adversely affect sensitive populations such as children and the elderly.

Failure to meet federal air quality standards could result in additional emission control requirements negatively impacting local businesses, as well as a freeze on all federally funded transportation projects.

AIR QUALITY SOLUTIONS

Despite making significant strides toward improving air quality, the region faces challenges in meeting increasingly stringent air quality standards, especially in consideration of the region's rapid population growth, which is forecasted to grow to 11.4 million residents by 2045.



PROJECTS

- Build transit
- Build active transportation facilities
- Ensure construction of multimodal system
- Improve traffic flows through design
- Eliminate bottlenecks
- Operational improvements
- Build HOV/Managed Lanes
- Build additional capacity

PROGRAMS

- Community Access Transit Program
- Last Mile Transit Connections Program
- Transportation Alternatives Set-Aside Program
- Carpool/vanpool programs
- Park and Ride
- Technology programs for data collection and sharing

POLICIES

- Provide technical assistance to plan and implement transit-oriented development
- Tolloed managed lane policy area
- Evaluate and implement Asset Optimization to improve traffic flows while utilize existing infrastructure
- Truck lane restrictions

CONGESTION

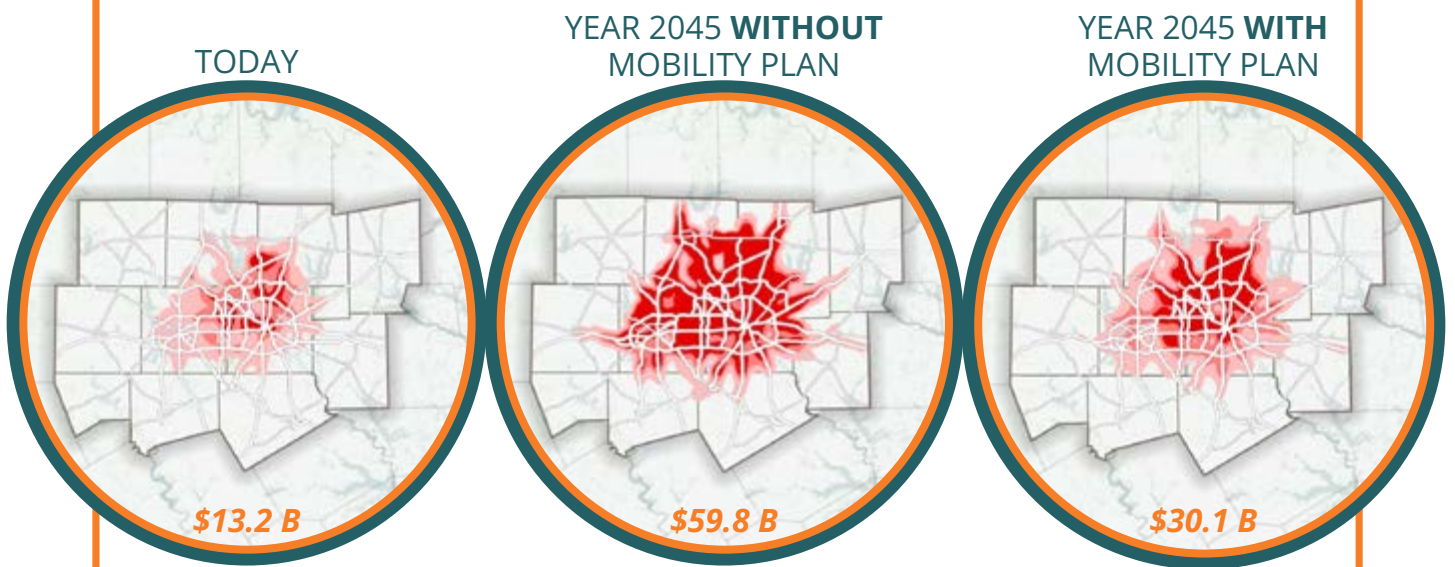


The Dallas-Fort Worth area is required by federal law to develop a Congestion Management Process because it is an urbanized area with a population over 200,000. Traffic congestion increases travel times and causes people to use more fuel. The Mobility 2045 Update addresses both congestion and air quality through various projects, programs, and policies.

GOALS

- 1 Identify quick-to-implement, low-cost strategies and solutions to better operate the transportation system.
- 2 More evenly distribute congestion across the entire transportation corridor.
- 3 Ensure corridors have options and available alternate routes/modes to relieve daily congestion and congestion during incidents and accidents.

ANNUAL COST OF CONGESTION



VIEW ONLINE

TRANSPORTATION IS FOR EVERYONE

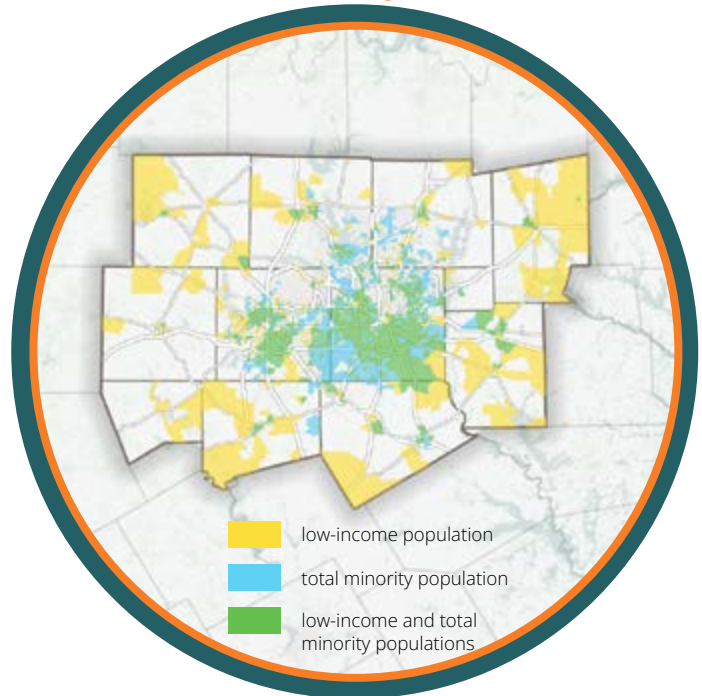
The Mobility 2045 Update includes an analysis of all its recommendations to ensure equitable benefits are provided to residents of North Texas. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with regard to the development and implementation of plans, policies, and programs.

EQUITY IN NORTH TEXAS

Highlights from the Regional Environmental Justice Analysis

- Analyzed:
 - The number of jobs accessible by auto and transit within 30 and 60 minutes, respectively
 - Population within 30 minutes of universities and regional shopping centers
 - Population within 15 minutes of hospitals
- Measured congestion and average travel time
- All groups of people in the analysis were expected to see increases to travel times due to congestion; however, the recommendations in the plan offset the increases compared with a no-build scenario.

ENVIRONMENTAL JUSTICE INDEX



PUBLIC INVOLVEMENT

NCTCOG strives to go beyond requirements to ensure all residents are provided an opportunity to participate in the planning process and are informed. Equity considerations play an integral role in NCTCOG's efforts to continuously improve the outreach methods outlined in its Public Participation Plan and Language Assistance Plan.

Outreach efforts include:

- Hosting public meetings
- Opinion polls
- Participation in community events
- Online advertising
- Press releases to spread the word
- Translating materials into other languages

NCTCOG's online mapping tool, Map Your Experience, was used to find insights into where people have trouble traveling. The most frequently reported issues are related to bicycle and pedestrian modes of travel. NCTCOG is working with partners to develop solutions for issues reported throughout the region.

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Mobility 2045 Update was approved and adopted by the
Regional Transportation Council on June 9, 2022.

The contents of this report reflect the views of the authors who are responsible for the opinions, findings and conclusions presented herein. The contents do not necessarily reflect the views or policies of the Federal Highway Administration, the Federal Transit Administration or the Texas Department of Transportation. This document was prepared in cooperation with the Texas Department of Transportation and the US Department of Transportation, Federal Highway Administration, and Federal Transit Administration.



**North Central Texas
Council of Governments**

616 Six Flags Drive, Arlington, Texas 76011
transinfo@nctcog.org | 817-695-9240

nctcog.org/mobility2045update
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