MOBILITY 2045 UPDATE
DRAFT RECOMMENDATIONS

NCTCOG Public Meeting
April 2022
WHAT IS THE METROPOLITAN TRANSPORTATION PLAN?

- Represents a Blueprint for the Region’s Multimodal Transportation System
- Covers at Least a 20-year Timeframe
- Responds to Goals
- Identifies Policies, Programs, and Projects for Continued Development
- Guides the Expenditure of Federal and State Funds
WHY UPDATE THE PLAN?

4-Year Federal Requirement

Mobility 2045 Adopted

Air Quality Conformity Determination

ADOPTION Mobility 2045 Update

DEADLINE Air Quality Conformity

June 2018

November 2018

May/June 2022

November 2022
MAJOR MOBILITY PLAN COMPONENTS

PLAN CONTENT
- PROGRAMS
- POLICIES
- PROJECTS

FINANCIAL PLAN
- FINANCIAL CONSTRAINT

NONDISCRIMINATION ANALYSIS
- NO DISPARATE IMPACTS

AIR QUALITY CONFORMITY
- CONSISTENCY WITH FEDERAL/STATE AIR QUALITY GOALS
MOBILITY PLAN DEVELOPMENT

- Vision
- Goals
- Objectives
- Performance Measures
- Project Selection
- Prioritization
- Adoption

- Policies
- Programs
- Projects
MOBILITY PLAN GOALS

Four goal themes

Nine goals

Mobility
- Improve Transportation Options
- Support Travel Efficiency Strategies
- Ensure Community Access to System and Process

Quality of Life
- Enhance Environment and Lifestyles
- Encourage Sustainable Development

System Sustainability
- Ensure Adequate Maintenance, Safety, and Reliability
- Pursue Long Term, Sustainable Financial Resources

Implementation
- Provide Timely Planning and Implementation
- Develop Cost Effective Projects and Programs
REGIONAL PERSPECTIVE

Population Forecast by County

- **WISE**: 68K to 104K (1.72%)
- **DENTON**: 897K to 1.5M (1.21%)
- **COLLIN**: 1.1M to 1.8M (2.12%)
- **HUNT**: 97K to 144K (1.58%)
- **DENTON**: 97K to 144K (1.58%)
- **PARKER**: 146K to 235K (1.89%)
- **TARRANT**: 2.1M to 3.1M (1.53%)
- **DALLAS**: 2.6M to 3.5M (1.26%)
- **KAUFMAN**: 144K to 209K (1.52%)
- **ROCKWALL**: 107K to 162K (1.66%)
- **HOOD**: 61K to 95K (1.81%)
- **JOHNSON**: 177K to 258K (1.53%)
- **ELLIS**: 191K to 318K (2.07%)

4th Largest metro area in US

30% of Texas’ GDP

40% Increase in population forecasted

45% Increase in employment forecasted

**LEGEND**

XXX 2020 Census Population
XXX 2045 Population Forecast
X.X% Annual Growth Rate
## POPULATION FORECAST BY COUNTY: FASTEST GROWING

<table>
<thead>
<tr>
<th>County</th>
<th>2020 Census</th>
<th>2045</th>
<th>Change</th>
<th>Compound Annual Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collin</td>
<td>1.1 million</td>
<td>1.8 million</td>
<td>+0.73 million</td>
<td>2.1%</td>
</tr>
<tr>
<td>Denton</td>
<td>0.9</td>
<td>1.5</td>
<td>+0.62</td>
<td>2.1</td>
</tr>
<tr>
<td>Ellis</td>
<td>0.2</td>
<td>0.3</td>
<td>+0.13</td>
<td>2.1</td>
</tr>
<tr>
<td>Parker</td>
<td>0.1</td>
<td>0.2</td>
<td>+0.09</td>
<td>1.9</td>
</tr>
<tr>
<td>Hood</td>
<td>0.1</td>
<td>0.1</td>
<td>+0.03</td>
<td>1.8</td>
</tr>
<tr>
<td>Wise</td>
<td>0.1</td>
<td>0.1</td>
<td>+0.04</td>
<td>1.7</td>
</tr>
<tr>
<td>Rockwall</td>
<td>0.1</td>
<td>0.2</td>
<td>+0.05</td>
<td>1.7</td>
</tr>
<tr>
<td>Hunt</td>
<td>0.1</td>
<td>0.1</td>
<td>+0.05</td>
<td>1.6</td>
</tr>
<tr>
<td>Johnson</td>
<td>0.2</td>
<td>0.3</td>
<td>+0.08</td>
<td>1.5</td>
</tr>
<tr>
<td>Tarrant</td>
<td>2.1</td>
<td>3.0</td>
<td>+0.96</td>
<td>1.5</td>
</tr>
<tr>
<td>Kaufman</td>
<td>0.1</td>
<td>0.2</td>
<td>+0.07</td>
<td>1.5</td>
</tr>
<tr>
<td>Dallas</td>
<td>2.6</td>
<td>3.5</td>
<td>+0.95</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>7.6 million</strong></td>
<td><strong>11.4 million</strong></td>
<td><strong>+3.80 million</strong></td>
<td><strong>1.6%</strong></td>
</tr>
</tbody>
</table>

Source: The Perryman Group. (March 2020). A Long-Term Employment and Population Forecast for the North Central Texas Council of Governments Region; numbers may not sum due to rounding
REGIONAL GROWTH

Annual Cost of Congestion

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENT conditions</td>
<td>$12.3 Billion</td>
</tr>
<tr>
<td>2045 BUILD conditions</td>
<td>$32.1 Billion</td>
</tr>
<tr>
<td>2045 NO-BUILD conditions</td>
<td>$60.8 Billion</td>
</tr>
</tbody>
</table>
# PLANNING APPROACH AND FINANCIAL PLAN

## MAXIMIZE EXISTING SYSTEM

| Infrastructure Maintenance | Maintain and operate existing transit and roadway facilities | $39 B |
| Management and Operations | Improve efficiency and remove trips from system | $10 B |
| Growth, Development, and Land Use Strategies | Improve transportation and land use balance | $1 B |

## STRATEGIC INFRASTRUCTURE INVESTMENT

| Rail and Bus | Encourage switch to transit | $42 B |
| HOV/Managed Lanes | Increase auto occupancy | $56 B |
| Freeways/Tollways and Arterials | Add vehicle capacity | |

**TOTAL** $148 B

---

**Financial Requirements**

- Financial Constraint
  - Reasonably expected sources of revenue
  - Year-of-expenditure dollars
  - Balance priorities with available revenues
Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics for the Regional Veloweb system will be determined through ongoing project development.

<table>
<thead>
<tr>
<th>Status</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>538 Miles</td>
</tr>
<tr>
<td>Funded</td>
<td>131 Miles</td>
</tr>
<tr>
<td>Planned</td>
<td>1,496 Miles</td>
</tr>
<tr>
<td>Total</td>
<td>2,165 Miles</td>
</tr>
</tbody>
</table>
**Safety**
References new Pedestrian Safety Action Plan endorsed by the Regional Transportation Council on June 10, 2021

**Health Accessibility Program**
Identify and support transportation solutions to address health disparities in underserved communities, including solutions that improve access to healthy food and medical care

**Environmental Considerations**
Build on air quality, resiliency, and environmental programs and incorporate new strategies

**TDM Strategies**
RTC Resolution R21-04 supports the establishment of a regional SOV trip reduction target of 20% annually
**Advance High-Speed Transportation recommendations**

Consider high-speed rail between Dallas-Arlington-Fort Worth, as well as connectivity with the proposed Houston-Dallas high-speed rail and Fort Worth-Laredo high-speed rail/hyperloop.

**Safe Integration of Vertical Mobility Technology in the NCTCOG region**

New policy to safely and efficiently integrate Vertical Mobility Technology, Advanced Air Mobility, Urban Air Mobility, Unmanned Traffic Management, and Unmanned Aircraft Systems into the NCTCOG region.

**Advance Automated Transportation Systems (ATS)**

Apply ATS technology in passenger and freight applications for local circulation and first/last mile access to regional rail.

**Automated Vehicles**

Incorporate the new Automated Vehicle 2.0 initiative launched since the adoption of the last Mobility Plan.

**Internet and Broadband**

Incorporates a new topic of broadband internet through discussion of access, infrastructure, the intersection of communications and transportation, and potential uses.
DRAFT MATERIALS AVAILABLE ONLINE

www.nctcog.org/PlanInProgress
REGIONAL NONDISCRIMINATION ANALYSIS

Required by Civil Rights Act and Executive Order 12898

RTC Policy to evaluate nondiscrimination for Protected Groups to ensure no disparate impacts

• Access to Jobs
• Access to Hospitals and Universities
• Proximity to Congested Transportation Facilities
• Average Travel Time
• Tolled Facility Recommendations
## ACCESS TO JOBS

<table>
<thead>
<tr>
<th>Access to Jobs by</th>
<th>Protected Groups</th>
<th>Non-Protected Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transit</strong> (within 60 minutes)</td>
<td>+39% ▲</td>
<td>+21% ▲</td>
</tr>
<tr>
<td><strong>Auto</strong> (within 30 Minutes)</td>
<td>-7% ▼</td>
<td>-18% ▼</td>
</tr>
</tbody>
</table>

### PERCENT CHANGE

**CURRENT CONDITIONS**

**TO**

**2045 BUILD CONDITIONS**

- **No Disparate Impacts**
  - Increase in transit supply and employment in urban areas by 2045 affects all groups positively.
- **No Disparate Impacts**
  - Increase in roadway congestion affects all groups negatively.
Public Involvement Activities Include:

- Public Meetings
- Speaking Engagements
- Outreach Events
- Publications
- Press Releases
- Social Media
- Development Activities
## PLAN SCHEDULE

<table>
<thead>
<tr>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
</tbody>
</table>

### Plan Development

- **Draft**
- **Recommendations for Review**
- **Official Comment Period**

### Agency and Public Coordination

- **Draft Plan Published**
  As of February 2022
- **Official Public Comment Period**
  April 1, 2022 – May 31, 2022

### Air Quality Conformity

**Notes:**
- Public meetings held during highlighted months.
- Regional Transportation Council action on Mobility 2045 Update scheduled for June 9, 2022.
Comments on the draft plan accepted online, by mail, phone, or email during the 60-day public comment period. Visit the website for full details.

Comments also accepted as part of this NCTCOG public input opportunity.
Safety of merging, poor visibility, and blind spots are often mentioned.

Transit options in areas without existing service, and increasing frequency in areas with it, are top concerns.

Safety of merging, poor visibility, and blind spots are often mentioned.

Dashboard Available at: www.nctcog.org/MapYourExperience
YOU CAN STILL PROVIDE INPUT

- MYE is available online, anytime, in English and Spanish
- Mapping your travel experience helps us understand regional travel issues people are facing
- Comment on roadway, transit, bicycle and pedestrian topics, and more at:

  www.nctcog.org/MapYourExperience
## PLAN SCHEDULE

<table>
<thead>
<tr>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
</tbody>
</table>

### Agency and Public Coordination

### Plan Development

- **Draft Plan Published**
  - As of February 2022
  - **Official Public Comment Period**
  - April 1, 2022 – May 31, 2022

### Notes:
- Public meetings held during highlighted months.
- Regional Transportation Council action on Mobility 2045 Update scheduled for June 9, 2022.
CONTACTS

<table>
<thead>
<tr>
<th>Mobility Plan</th>
<th>Environmental Coordination</th>
<th>Environmental Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amy Johnson</td>
<td>Kate Zielke</td>
<td>Vivek Thimmavajjhala</td>
</tr>
<tr>
<td>Senior Transportation Planner</td>
<td>Principal Transportation Planner</td>
<td>Transportation System Modeler II</td>
</tr>
<tr>
<td><a href="mailto:ajohnson@nctcog.org">ajohnson@nctcog.org</a></td>
<td><a href="mailto:kzielke@nctcog.org">kzielke@nctcog.org</a></td>
<td><a href="mailto:vthimmavajjhala@nctcog.org">vthimmavajjhala@nctcog.org</a></td>
</tr>
<tr>
<td>817-704-5608</td>
<td>817-608-2395</td>
<td>817-704-2504</td>
</tr>
<tr>
<td>Brendon Wheeler, PE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="mailto:bwheeler@nctcog.org">bwheeler@nctcog.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>682-433-0478</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TRANSPORTATION CONFORMITY
PURPOSE

*Required* by Federal Legislation

*Demonstrates* that projected emissions from transportation projects are within emission limits (Motor Vehicle Emissions Budgets) established by the State Implementation Plan (SIP)

*Ensures* federal funding and approval is applied to transportation projects that are consistent with air quality planning goals
2022 TRANSPORTATION AIR QUALITY CONFORMITY ANALYSIS

Nonattainment Areas Under the 8-Hour Ozone Standards
Reason and Highlights
Mobility 2045 (previous plan)
  Adopted by RTC on June 14, 2018
  Achieved USDOT Transportation Conformity Determination on November 21, 2018
Updated plan, with conformity determination, required within four years

Scenarios
Conformity Demonstration Against Current Motor Vehicle Emissions Budgets
(Analysis year 2017, Meteorological Data 2012), OR
Conformity Demonstration Against Anticipated Motor Vehicle Emissions Budgets
(Analysis year 2020, Meteorological Data 2011)

Analysis Years
2023, 2026, 2036, and 2045
2023 TRANSPORTATION CONFORMITY RESULTS (SCENARIO 1) DRAFT

NITROGEN OXIDES ($\text{NO}_x$) (TONS/DAY)

VOLATILE ORGANIC COMPOUNDS (VOC) (TONS/DAY)

Includes Reductions from RTC Initiatives of 0.23 tons/day

Includes Reductions from RTC Initiatives of 1.16 tons/day

1 Adequacy Status of the Dallas-Fort Worth, Texas Attainment Demonstration 8-Hour Ozone Motor Vehicle Emission Budgets for Transportation Conformity Purposes, 81 FR 78591
## 2023 TRANSPORTATION CONFORMITY RESULTS

### (SCENARIO 2) DRAFT

### 2023 TRANSPORTATION CONFORMITY RESULTS

#### ROCKWALL COUNTY EMISSIONS

<table>
<thead>
<tr>
<th>Year</th>
<th>NOx (tons/day)</th>
<th>VOC (tons/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>75.22</td>
<td>41.31</td>
</tr>
<tr>
<td>2026</td>
<td>66.05</td>
<td>36.62</td>
</tr>
<tr>
<td>2036</td>
<td>0.75</td>
<td>0.43</td>
</tr>
<tr>
<td>2045</td>
<td>0.99</td>
<td>0.43</td>
</tr>
</tbody>
</table>

*Includes Reductions from RTC Initiatives of 1.16 tons/day*

### 2020 MVEB

- **NOx**: 107.25 tons/day
- **VOC**: 62.41 tons/day

*Includes Reductions from RTC Initiatives of 1.16 tons/day*