MOBILITY 2025: 
THE METROPOLITAN TRANSPORTATION PLAN 
2004 UPDATE

Summary Presentation
January 2004

North Central Texas Council of Governments
Transportation Department
www.nctcog.org/trans
WHAT IS THE METROPOLITAN TRANSPORTATION PLAN?

Represents Blueprint for Multimodal Transportation System

Responds to Adopted Goals
  Mobility
  Quality of Life
  Financial/Air Quality

Identifies Policies, Programs, and Projects for Continued Development

Guides Expenditures of Federal and State Funds
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Adopted January 2004

Identifies $45 Billion of Policies, Programs, and Projects

Multimodal System
Light Rail/Commuter Rail
HOV/Managed Facilities
Freeways/Tollways

Management and Operations
Transportation System Management
Intelligent Transportation System
Travel Demand Management
Bike/Pedestrian Facilities

Major Programs/Policies
Sustainable Development
Transportation Enhancements
Air Quality Initiatives
Elderly and Persons with Disabilities Public Transportation
Intermodal/Freight
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Goal Summary

Transportation
- Accommodate Expected Demographic Growth
- Reduce Traffic Congestion
- Provide Multimodal Options
- Improve Travel Efficiency

Quality of Life
- Provide for Continued Economic Development
- Provide Increased Transportation Accessibility
- Reduce Environmental and Community Impacts

Financial
- Pursue Stable, Long-Term Revenue Options
- Reduce Transportation System Costs

Mobility 2025 Identifies Projects and Programs Which Balance These Goals
### Cost Summary

<table>
<thead>
<tr>
<th>Metropolitan Transportation System Components</th>
<th>Cost (Millions/2004$)</th>
<th>% TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation &amp; Maintenance</td>
<td>$14,097</td>
<td>31%</td>
</tr>
<tr>
<td>Congestion Mitigation Strategies</td>
<td>$1,925</td>
<td>4%</td>
</tr>
<tr>
<td>Bicycle &amp; Pedestrian Facilities and Transportation Enhancements</td>
<td>$966</td>
<td>2%</td>
</tr>
<tr>
<td>Rail and Bus Transit System</td>
<td>$8,875</td>
<td>20%</td>
</tr>
<tr>
<td>HOV and Managed Facilities</td>
<td>$1,448</td>
<td>3%</td>
</tr>
<tr>
<td>Freeway and Toll Road System</td>
<td>$11,925</td>
<td>27%</td>
</tr>
<tr>
<td>Regional Arterial and Local Thoroughfare System</td>
<td>$5,811</td>
<td>13%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$45,047</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
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The Metropolitan Transportation Plan, 
2004 Update

Bicycle and Pedestrian System

Legend

- **Bicycle-Pedestrian Transportation Districts**
  - Within all rail corridors all existing and planned stations are bicycle and pedestrian districts
- **Recommended Veloweb Routes**
- **Candidate Veloweb Routes**
- **Area Roads**

New facility locations indicate transportation needs and do not represent specific alignments.
All Veloweb routes should be targeted for right of way preservation.
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Intelligent Transportation System

Freeway System Components
- Mobility Assistance Patrols
- Communication Systems
- Advanced Traffic Management
- TxDOT Transportation Management Center (TMC)
- Freeways/Parkways
- City Transportation Management Centers
- Transit Management Centers

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Rail System
Legend

Future Light Rail
Existing Light Rail
Future Regional Rail
Existing Regional Rail
Future Rail
Special Events
Future Intercity Rail
Existing Intercity Rail
North Crosstown Corridor Study *
Possible Eastern Terminus
Roadway
Existing Rail Corridors

Corridor specific design and operational characteristics for the Rail System will be determined through ongoing project development.

New facility locations indicate transportation needs and do not represent specific alignments.

All existing railroad rights-of-way should be monitored for potential future transportation corridors.

Refined rail forecasts are necessary to determine technology and alignment in Future Rail corridors.

Institutional structure being reviewed for the region.

The need for additional rail capacity within the Dallas CBD, Fort Worth CBD, DFW International Airport, and other intermodal centers will be monitored.

*NORTH CROSSTOWN CORRIDOR STUDY AREA

At a minimum, evaluate the engineering feasibility and environmental implications of:
- rail along the KCS line and the Burlington Northern line, including the feasibility of an alternative connection along S.H.190;
- rail along the full Cotton Belt Corridor, from Parker Road to DFW Airport; and
- rail along the Cotton Belt Corridor from DFW Airport with an eastern transition to light rail along LBJ Freeway at an Addison Intermodal Center.
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HOV and Managed Facility System

Legend
- Orange: Reversible
- Purple: Managed HOV/Integrated Tollway
- Green: Two-Way
- Black: Roadways

Corridor specific design and operational characteristics for the HOV and managed lane recommendations, such as occupancy requirements and reversibility, will be determined through ongoing project development.

Arrows represent the direction of travel demand during the morning peak period but do not represent specific design recommendations. Direction of travel demand is reversed during the afternoon peak period.

All HOV and tollway facilities will be managed for mobility efficiency. Operational strategies to manage the flow of traffic should be considered in corridors where additional freeway or tollway lanes are being proposed.

Right-of-Way preservation should be encouraged in all freeway/tollway corridors to accommodate potential future HOV facilities.

New facility locations indicate transportation needs and do not represent specific alignments.
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Freeway / Tollway System

Legend
- Improve Existing Freeway/Tollway
- New Staged Freeway
- New Staged Tollway
- New Staged Parkway
- Upgrade to Parkway
- Preserve ROW
- Truck Lane Demonstration Corridor *
- Roadways

Corridor specific design and operational characteristics for the Freeway/Tollway system will be determined through ongoing project development.

Additional and improved freeway/tollway interchanges and service roads should be considered on all freeway/tollway facilities in order to accommodate a balance between mobility and access needs.

Operational strategies to manage the flow of traffic should be considered in corridors where additional freeway or tollway lanes are being proposed.

All freeway/tollway corridors require additional study for capacity, geometric, and safety improvements related to truck operations.

New facility locations indicate transportation needs and do not represent specific alignments.

* Truck Lane Demonstration Corridor

The Truck Lane Demonstration Corridor is a pilot program to determine and compare the feasibility, impacts, and effectiveness of:
1) providing exclusive dedicated truck lanes through the corridor and on adjoining access/egress lanes and ramps, and
2) restricting trucks to operating only in certain lanes in the corridor.
RTC Toll Road Policy

Summary

Adopted Policy - All New Freeways on New Rights-of-Way Should be Studied as Potential Toll Roads (February 1993 Policy Position)

Adopted Short List of New Freeways on New ROW and Express Lanes for Toll Road Consideration (March 1994, R94-03)

Agreement with NTTA to Consider Value Pricing (May 1994) and Adopted Managed HOV/Integrated Toll Road Concept as Contained in Mobility 2020 (January 1998)

RTC Does Not Support Converting Existing Free Non-HOV/Managed Lanes to Toll Roads (October 2003)
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Corridors Requiring Further Evaluation

Legend
- Orange: Corridor Requiring Further Evaluation Before Placeholder Included in the Plan
- Year 2025 Freeway Network
- Other Highways
- County Boundary
- Metropolitan Planning Area Boundary

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Regional Arterial System

Legend
- Regional Arterials
- Existing Freeways and Tollways
- Proposed Freeways and Tollways
- Preserve Right of Way
- Local government thoroughfare plans vary in these corridors

New facility locations indicate transportation needs and do not represent specific alignments.

Based on NCTCOG’s Regional Thoroughfare Plan

Dallas CBD

Fort Worth CBD
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Goods Movement Corridors
Technology Deployment

System Components

- **Orange Line**: Speed Detection/ITS
- **Black Circles**: Dynamic Message Signs (Potential/Existing Sites)
- **Green Circles**: Truck Stop/NAFTA Kiosk (Potential Sites)

All freeway/tollway corridors require additional study for capacity, geometric and safety improvements related to truck operations.

I.H. 35 E/W routes extend to Hillsboro with additional dynamic message signs and truck stops/NAFTA kiosks.

ITS coordinated through TxDOT Transportation Management Centers.
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1999 Congestion Levels

Legend
- Areas of Moderate Peak-Period Congestion
- Areas of Severe Peak-Period Congestion

Annual Cost of Congestion = $5.3 Billion

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2025</th>
<th>% Change</th>
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<tbody>
<tr>
<td>Population</td>
<td>4.5 M</td>
<td>8.0 M</td>
<td>75%</td>
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<tr>
<td>Employment</td>
<td>2.7 M</td>
<td>4.9 M</td>
<td>84%</td>
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2025 Congestion Levels

Legend
- Areas of Moderate Peak-Period Congestion
- Areas of Severe Peak-Period Congestion

Annual Cost of Congestion = $11.8 Billion

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2025</th>
<th>% Change</th>
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</thead>
<tbody>
<tr>
<td>Vehicle Miles Traveled</td>
<td>125 M</td>
<td>235 M</td>
<td>87%</td>
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<tr>
<td>Roadway Capacity (Lane Miles)</td>
<td>23.2 M</td>
<td>34.8 M</td>
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<tr>
<td>Total Delay (Veh Hrs)</td>
<td>1.3 M</td>
<td>2.9 M</td>
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<tr>
<td>% Roadways Congested</td>
<td>38%</td>
<td>54%</td>
<td>42%</td>
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## MOBILITY 2025 – 2004 UPDATE

### Financial Constraint Summary

(Millions, 2004 $)

<table>
<thead>
<tr>
<th>Metropolitan Transportation System Components</th>
<th>System Cost</th>
<th>Traditional Revenue</th>
<th>Revenue Initiative Program</th>
<th>Mobility Needs Not Met</th>
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<tbody>
<tr>
<td>Roadway Infrastructure</td>
<td>$5,699</td>
<td>$5,699</td>
<td>$0</td>
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<td>Transit Operations</td>
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<td>Congestion Mitigation Strategies</td>
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<td>$966</td>
<td>$966</td>
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<td>Rail and Bus Transit System</td>
<td>$8,875</td>
<td>$5,888</td>
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<td>HOV and Managed Facilities</td>
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<td>$40,070</td>
<td>$4,977</td>
<td>$20,546</td>
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Revenue Initiative Program

Continue Regional Transportation Council (RTC)/Transportation Commission Partnership Program to Leverage Available Funding

Pursue Innovative Project Financing Using Tools Made Available by State Legislature, Including the Texas Mobility Fund and Bonding Authority

Pursue Value Pricing Opportunities Through Managed Facilities in Specific Corridors Identified Through Feasibility Studies

Decrease Project Costs Through Streamlining the Project Development Process and Value Engineering Initiatives

Continue to Pursue Legislative Actions Aimed at Increasing Revenue Through Additional Initiatives Identified by the RTC Mobility Plan Finance Subcommittee
# MOBILITY 2025 – 2004 UPDATE
## Title VI Environmental Justice Analysis

<table>
<thead>
<tr>
<th>Populations</th>
<th>Census Year</th>
<th>Job Accessability</th>
<th>Roadway Level of Service</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>By Auto</td>
<td>By Transit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1999 2025</td>
<td>1999 2025</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>2000</td>
<td>+ + +</td>
<td>+ +</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2000</td>
<td>+ + +</td>
<td>+ +</td>
</tr>
<tr>
<td>Asian American</td>
<td>2000</td>
<td>+ + -</td>
<td>- O</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>2000</td>
<td>O O +</td>
<td>O +</td>
</tr>
<tr>
<td>Under Poverty Line (Low Income)</td>
<td>2000</td>
<td>+ + +</td>
<td>+ +</td>
</tr>
<tr>
<td>Over 65 Years Old</td>
<td>2000</td>
<td>+ + +</td>
<td>+ +</td>
</tr>
<tr>
<td>Under 14 Years Old</td>
<td>2000</td>
<td>- - -</td>
<td>O -</td>
</tr>
<tr>
<td>Persons with Disabilities</td>
<td>2000</td>
<td>+ + +</td>
<td>+ +</td>
</tr>
<tr>
<td>Females (Head of Household)</td>
<td>2000</td>
<td>+ + +</td>
<td>+ +</td>
</tr>
</tbody>
</table>

- = Protected Population is Five Percent Less Relative To Unprotected Population
O = Protected Population is Within Five Percent of Unprotected Population
+ = Protected Population is Five Percent Greater Relative To Unprotected Population
Black Population Distribution

Percent Black Population by Blocks Compared to Regional Average

Regional Average = 14.3% Black

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent Black population greater than the regional average.
Hispanic Population Distribution

Percent Hispanic Population by Blocks Compared to Regional Average

Regional Average = 22.4% Hispanic

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent Hispanic population greater than the regional average.
Asian American Population Distribution

Percent Asian American Population by Blocks Compared to Regional Average

Regional Average = 4% Asian American

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent Asian American population greater than the regional average
American Indian / Alaska Native Populations Distribution

Percent American Indian / Alaskan Native Populations by Blocks Compared to Regional Average

Regional Average = 0.6% American Indian / Alaska Native

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent American Indian / Alaska Native populations greater than the regional average.
Age 65 and Over Population Distribution*

Percent Age 65 and Over Population by Blocks Compared to Regional Average

Regional Average = 7.7% Age 65 and Over

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent age 65 and over population greater than the regional average

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November 2011
Age 14 and Under Population Distribution *

Percent Age 14 and Under Population by Blocks Compared to Regional Average

Regional Average = 23.8% Age 14 and Under

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent age 14 and under population greater than the regional average.
Disabled Population Distribution *

Percent Disabled Population by Block Groups Compared to Regional Average

Regional Average = 6.9% Disabled

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are block groups with percent disabled population greater than the regional average
Female Head of Household Population Distribution

Percent Female Head of Household Population by Blocks Compared to Regional Average

Regional Average = 12.1% Female Head of Household

Legend
- Above Regional Average
- Below Regional Average

Based on 2000 Census

*Protected population areas are blocks with percent female head of household population greater than the regional average.
TRANSPORTATION CONFORMITY

2004 CONFORMITY ANALYSIS
Vehicle Emission Charts

Volatile Organic Compound (VOC) Emissions

Analysis Year


VOC Emissions (tons/day)

306.60 222.63 132.04 81.68 77.00 67.60

Attainment Demonstration SIP
VOC Emission Budget = 107.60 tons/day

Regional Transportation Council Initiatives $\approx$ 14.1 tons/day

revised 12/18/03
2004 CONFORMITY ANALYSIS
Vehicle Emission Charts

Nitrogen Oxide (NOx) Emissions

Analysis Year


NOx Emissions (tons/day)

293.03 318.00 250.96 163.35 112.31 49.10

Attainment Demonstration SIP NOx Emission Budget = 164.30 tons/day

Regional Transportation Council Initiatives \approx 16.6 tons/day

revised 12/18/03