Mobility 2045 and Freight Planning at NCTCOG

2.02.2021 | ISM Fort Worth
Topics

• Regional Perspective
• Mobility Planning
• Financial Planning
• Mobility 2045 Recommendations
• Freight Perspective
• Discussion
North Central Texas Council of Governments

• Voluntary Association of Local Governments
• Established in 1966
• Assists Local Governments With:
  ‣ Planning for Common Needs
  ‣ Cooperating for Mutual Benefit
  ‣ Recognizing Regional Opportunities
  ‣ Resolving Regional Problems
  ‣ Making Joint Decisions
• One of 25 COGs in Texas
Regional Perspective

Population
- 2019: 7.4 Million
- 2045: 11.2 Million
- 4th Largest Metropolitan Area by Population
- ~1 Million People Added per Decade Since 1960

Area
- 12 Counties
- 3 TxDOT Districts
- 2nd Largest Metropolitan Planning Area by Land Area

Economy
- Home to 22 Fortune 500 Firms
- Projected to be Ranked 11th Globally in Metro GDP
- Represents 32% of State’s Economy

Facility Miles
- Freeway Lane Miles: 4,707 in 2018 / 6,066 by 2045
- Priced Facility Lane Miles: 1,078 in 2018 / 1,826 by 2045
- Passenger Rail Center Line Miles: 148 in 2018 / 449 by 2045
Mobility Planning
What Is The Mobility 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
Mobility 2045 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
Mobility Plan Organization

1. Goals
   Guide the Plan

2. Objectives
   Define the Goals

3. Performance Measures
   Measure the Objectives
Mobility Plan Organization

3

Performance Measures
Inform Project Selection

4

Project Selection
Informs Prioritization

5

Prioritization
Recommendations
Mobility Plan Development Steps

- **Maximize Existing System**
  - Infrastructure Maintenance
    - Maintain & Operate Existing Facilities
    - Bridge Replacements
  - Management, Operations, and Technology
    - Improve Efficiency & Remove Trips from System
    - Traffic Signals and Bicycle & Pedestrian Improvements

- **Growth, Development, and Land Use Strategies**
  - More Efficient Land Use & Transportation Balance
Mobility Plan Development Steps

- **Maximize Existing System**
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- **Strategic Infrastructure Investment**
  - Rail and Bus
    - Induce Switch to Transit
  - HOV/Managed Lanes
    - Increase Auto Occupancy
  - Freeways/Tollways and Arterials
    - Additional Roadway Capacity
Financial Planning
Transportation Funding Basics

- System Revenue
  - Motor Fuel Taxes
  - Vehicle Registration Fees
  - Other Federal Sources
  - Toll System Revenues*
  - Other State Sources

- Facility Revenue
  - Toll Road Bonds
  - Managed Lanes
  - Public/Private Partnerships
  - Public Transportation Fares

- Local Revenue
  - Sales Taxes
  - Special Taxes
  - Bond Programs
  - Impact Fees
  - Property Taxes
  - Value Capture

* Revenue from existing NTTA facilities after bonds are retired.
Financial Plan Requirements

- Use All “Reasonably Expected” Sources
- Year of Expenditure Dollars
- Must be Financially Constrained
- Balance Priorities with Available Resources
Mobility 2045
Recommendations
Infrastructure Maintenance
Maintain & Operate Existing Facilities
Bridge Replacements

- Regular Maintenance
- TxDOT Programmed
- Bridge Replacement Program

$36.8 B
Management, Operations, and Technology
Improve Efficiency & Remove Trips from System
Traffic Signals and Bicycle & Pedestrian Improvements

- Traffic Signal Retiming Program
- Technology Program
- Bike/Ped Program
- Asset Optimization Program

$9.5B
• Incentives for Mixed-Use Development
• Last Mile Connections
• Local Government Coordination

$3.2B
Rail and Bus
Induce Switch to Transit

- Local Transit Agencies
- Trinity Metro
- DART
- DCTA

$33.3 B
Transit Corridor Recommendations

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
• Economic Development Engine
• Transportation System Backbone
• Increased Connectivity
• Strategic Investment
• Accessibility
# Mobility 2045 Expenditures

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Expenditures</th>
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<tr>
<td>Maximize Existing System</td>
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<tr>
<td>Infrastructure Maintenance</td>
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<td>Management, Operations, and Technology</td>
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<tr>
<td>Total Expenditures</td>
<td>$136.4(^1)</td>
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Notes:
1. Actual dollars, in billions. Values may not sum due to independent rounding.
2. Balances to reasonably expected revenue, demonstrating financial constraint.
Congestion and Delay

2018 Levels of Congestion/Delay

Cost of Congestion/Delay: $211.1 billion

Cost is based on a percent increase in travel time.

2045 No-Build Levels of Congestion/Delay

Cost of Congestion/Delay: $447.0 billion

Cost is based on a percent increase in travel time.

2045 Levels of Congestion/Delay

Cost of Congestion/Delay: $377.2 billion

Cost is based on a percent increase in travel time.
Roadway Corridors for Future Evaluation

Roadway corridors for future evaluation indicate an identified transportation need and do not represent recommendations or specific alignments. Recommendations may be developed for future MTPs through feasibility analyses, thoroughfare plans, and environmental studies.
Major Roadway Recommendations

- **Roadway Expenditures**: $54 B
- **Regional Roadway Needs**: $389 B
- **Shortfall**: $335 B
Freight Perspective
NT MOVES Program

North
Texas
Multimodal
Operations
Velocity
Efficiency
Safety
NT MOVES Program

• **NT MOVES** is a long-range plan for increasing freight and passenger mobility in Dallas-Fort Worth through Public and Private strategic investment in rail capacity to improve multimodal transportation.

• **NT MOVES** is a regionwide collaborative effort between NCTCOG, Class 1 Railroads, Short Lines, TxDOT, and Passenger Rail Agencies.

• **NCTCOG was awarded $25 Million in BUILD Grant Funds for the TRE Corridor.** The project total cost is $55 Million and includes:
  
  • Double Track Medical Market Center to Stemmons Freeway and Bridge Improvements
  
  • Double Track Handley Ederville Road to Precinct Line Road and Bridge Improvements
  
  • Implement Regional Rail Information System Technology
NT MOVES Program

Coordination Vision

Regional Project Pool
Leading to Selected Projects

Class 1 Railroad

Transit Agencies

NCTCOG

TxDOT

Leveraging Funds

Grant
Local
Private
State
Federal
NT MOVES Program

Regionally Significant Rail Projects:

• Madill Subdivision (Irving to Carrolton), Irving Wye/Gribble Siding
• Downtown Dallas Canyon Area/CP 217
• IH 35W Corridor
• TRE Double/Triple Tracking Projects
• Regional Rail Information System
Regional Rail Information System

RRIS Corridor Impacts

Legend
- Current and Planned
- Shared Use
- Condors
- Passenger Only
- Freight Only
Objectives of the RRIS are to:

- Address Shared-Use Corridors and Interconnected Network Concerns
- Monitor Ongoing Performance Measures
- Improve Capital Project Selection and Facilitate Public-Private Partnerships
Regional Rail Information System

Implementation of RRIS Technology will:

• Assist with Freight and Passenger Train Interactions and Identify Bottlenecks
• Enhance Long-Term Mobility Plan Projects – Road and Rail Interactions
• Enable Rail Agencies to Exchange Timely, Accurate, and Actionable Information on Regional Train Movements
• Identify Infrastructure Projects to Increase Rail Capacity Throughout the Region

Currently in the RFP Process and is Planned to be Presented to the NCTCOG Executive Board in March
Freight Planning

Freight North Texas Program products

• *The North Central Texas Regional Freight System Inventory, May 2013*
  
  Recommendations to enhance the safety, mobility, efficiency, and air quality associated with freight

• Other regional freight system plans upcoming in 2021
  
  ✦ Freight Land Use Analysis
  ✦ Truck Bottleneck Study
  ✦ Freight Economic Analysis
  ✦ NT MOVES Program
Freight Planning

Freight North Texas Program Goals

• Reduce air quality impacts
• Incorporate freight considerations in transportation projects
• Develop and use a sustainable and reliable funding source
• Develop a regional freight database
• Improve railroad safety and reliability
Discussion
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www.nctcog.org/mobility2045
www.nctcog.org/trans/plan/freight