

REGIONAL INITIATIVES IN MANAGED LANES AND VALUE PRICING

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North Central Texas Council of Governments



WHAT IS VALUE PRICING AND WHAT ARE MANAGED LANES?

Managed facilities mean more people in fewer vehicles, especially during the peak periods:

Through travel behavior changes and design/operational improvements that can be adjusted as needed

Can include incentives/restrictions

Value Pricing is a technique to encourage travel behavior by setting the price of travel to different levels depending on desired outcome.



WHY CONSIDER MANAGED FACILITIES?

Increasing Peak Period Congestion

**Time Spent in Delay
Rising in Intensity**

Financial Constraints

\$3 Billion Shortfall

Credit for Building Tollroads

Keep Revenue in North Texas

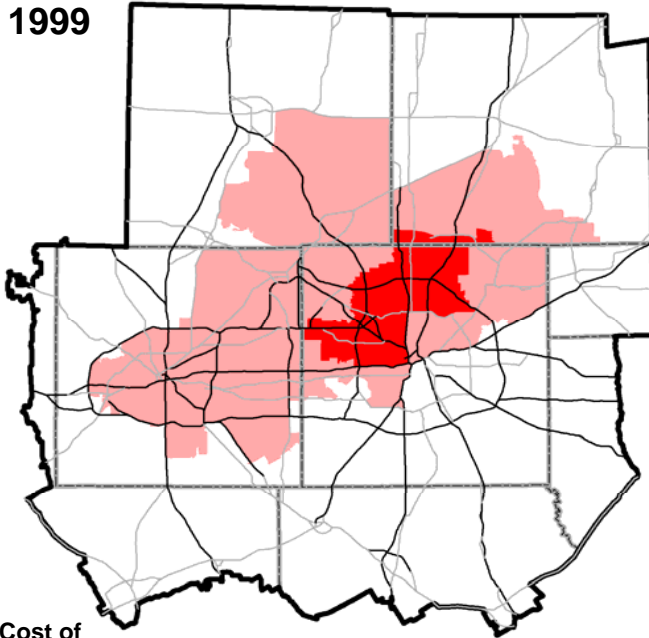
Air Quality Issues



MOBILITY 2025: THE METROPOLITAN TRANSPORTATION PLAN, AMENDED APRIL 2005

REGIONAL CONGESTION LEVELS

1999



Areas of Moderate Peak-Period Congestion

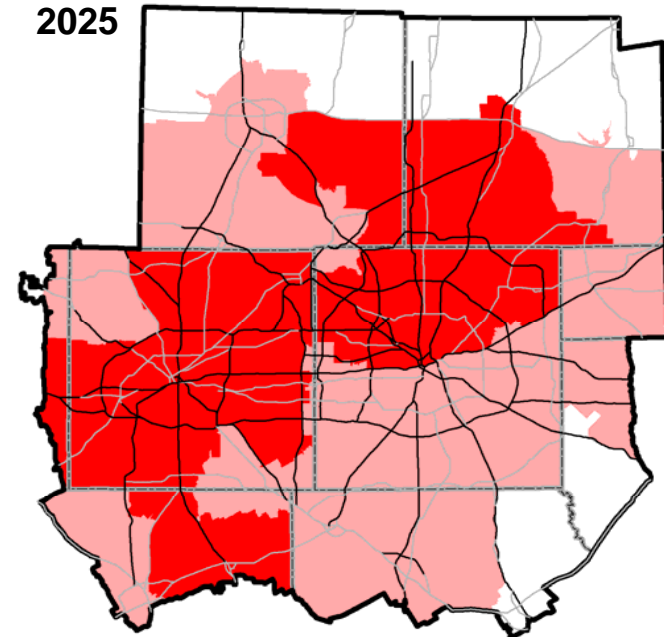
Areas of Severe Peak-Period Congestion

	1999	2025	% Change
Population	4.5 M	8.0 M	75%
Employment	2.7 M	4.9 M	84%
VMT/Person	29.05	29.31	1%

Annual Cost of Congestion = \$5.3 Billion

	1999	2025	% Change
Vehicle Miles Traveled	125 M	233 M	86%
Roadway Capacity	23.2 M	34.8 M	50 %
Total Delay (Vehicle Hours)	1.3 M	2.8 M	115%
% Roadways Congested	38%	53%	39%

2025



Annual Cost of Congestion = \$11.5 Billion

As Amended: April 14, 2005

TEXAS METROPOLITAN MOBILITY PLAN

IDENTIFIED FUNDING NEEDS

Metropolitan Transportation System Components	Funded Needs (Billions/2004 \$)	Unfunded Needs (Billions/2004 \$)
Operation & Maintenance	\$14.1	
Congestion Mitigation Strategies	\$1.9	
Bicycle & Pedestrian Facilities and Transportation Enhancements	\$1.0	
Rail and Bus Transit System	\$8.9 ¹	
HOV and Managed Facilities	\$1.4	
Freeway and Toll Road System	\$11.9 ²	\$16.2 ³
Regional Arterial and Local Thoroughfare System	\$5.8	\$3.3
Additional Cost to Purchase Right-of-Way		\$2.3
Rehabilitation Costs		\$31.4
Goods Movement/Rail Freight Costs		\$2.6
TOTAL	\$45.0	\$55.8
	\$100.8 Billion	

¹ \$3.0 billion obtained through Regional Transit Initiative

² \$2.0 billion obtained through Partnership Program #1

³ Includes Freeway-to-Freeway Interchanges



POTENTIAL BENEFITS OF VALUE PRICING IN THE DALLAS-FORT WORTH REGION

- Demand management strategy to minimize the need to add unconstrained capacity
- Raise revenue for additional capacity
- A combination of both
- Improve and expand the Express Bus System
- Encourage HOV and carpool usage



MANAGED LANE AND VALUE PRICING HISTORY

Total Transportation Plan for 1990 (1974)

Mobility 2000 Plan (1986)

Mobility 2010 Plan (1991)

**Traditional Tollroads
Traditional HOV**

Mobility 2010 Plan Update (1995)

Off-Peak Express Lanes

Mobility 2020 Plan (1997)

**Integrated Tollroads
Integrated HOV**

Mobility 2025 (2000, 2001, 2004)

Managed Facilities

**Regional Value Pricing Corridor Evaluation and Feasibility Study
(2002)**



REGIONAL TRANSPORTATION COUNCIL

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 Rights-of-Way 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)



MANAGED LANE AND VALUE PRICING APPLICATION

Immediate Action HOV

Traditional HOV

Traditional Tollroads

Managed Tollroads

**Implement in Mature Tollroads (in Lieu of Widening)
HOV Free or Reduced Toll
Ensure Revenue Neutral**

Managed HOV

**HOV Free or Reduced Toll
Sell Excess Capacity**

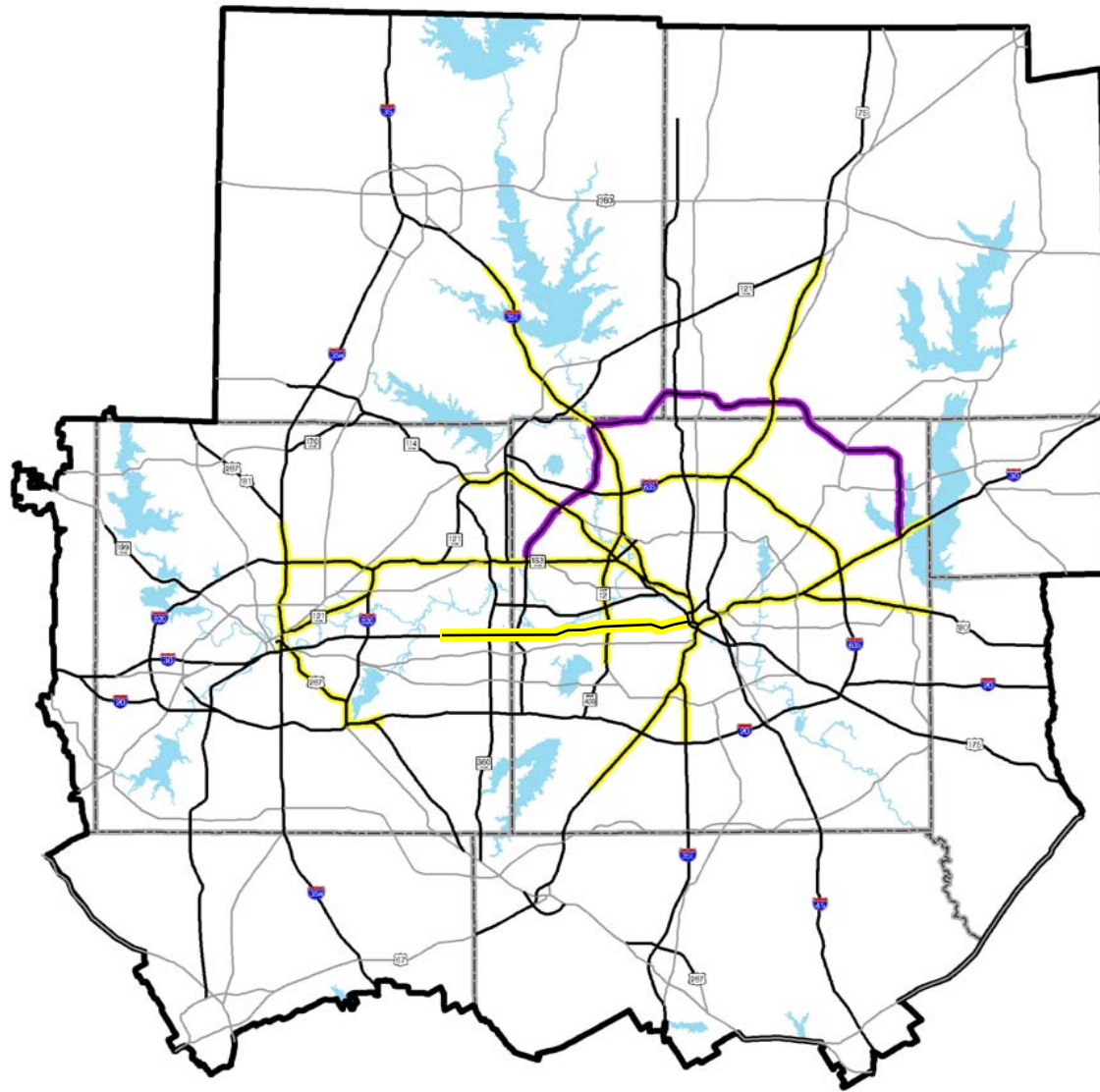
Managed Express Lanes

**In Lieu of Widening Freeway
Does Not Warrant Separate HOV or Tollroad**



MOBILITY 2025 – AMENDED APRIL 2005

MANAGED LANE SYSTEM



2025 HOV Facilities

2025 Managed HOV/Integrated Tollway










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Mobility 2025: The Metropolitan Transportation Plan, Amended April 2005

Freeway / Tollway System

Legend

-  Improve Existing Freeway/Tollway
-  New Staged Freeway
-  New Staged Tollway
-  New Staged Parkway
-  Upgrade to Parkway
-  Preserve Right-of-Way
-  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.



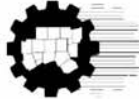
Corridor specific design and operational characteristics for the Freeway/Tollway system will be determined through ongoing project development.

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.

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.

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



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MANAGED LANE AND VALUE PRICING PLANNING ISSUES

HOV versus Tollway Demand

**HOV Priority?
Accommodate SOV Toll?**

Air Quality Implications

**Consistent Speed
SOV Restrictions (Air Quality Non-Attainment Area)
HOV Included in SIP**

Cost versus Revenue

**Cost Effectiveness (Equivalent Cost/Person)
Expedite Implementation**

Public Acceptance

**Available Multimodal Options
Environmental Justice Implications**



MANAGED LANE AND VALUE PRICING

OPERATIONAL ISSUES

Time of Day

Peak Period vs. Off Peak
Encourage Time Shift

Vehicle Class

Occupancy
Trucks

Toll Collection Technology

Cash
Toll Tag
Subscription

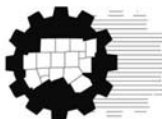
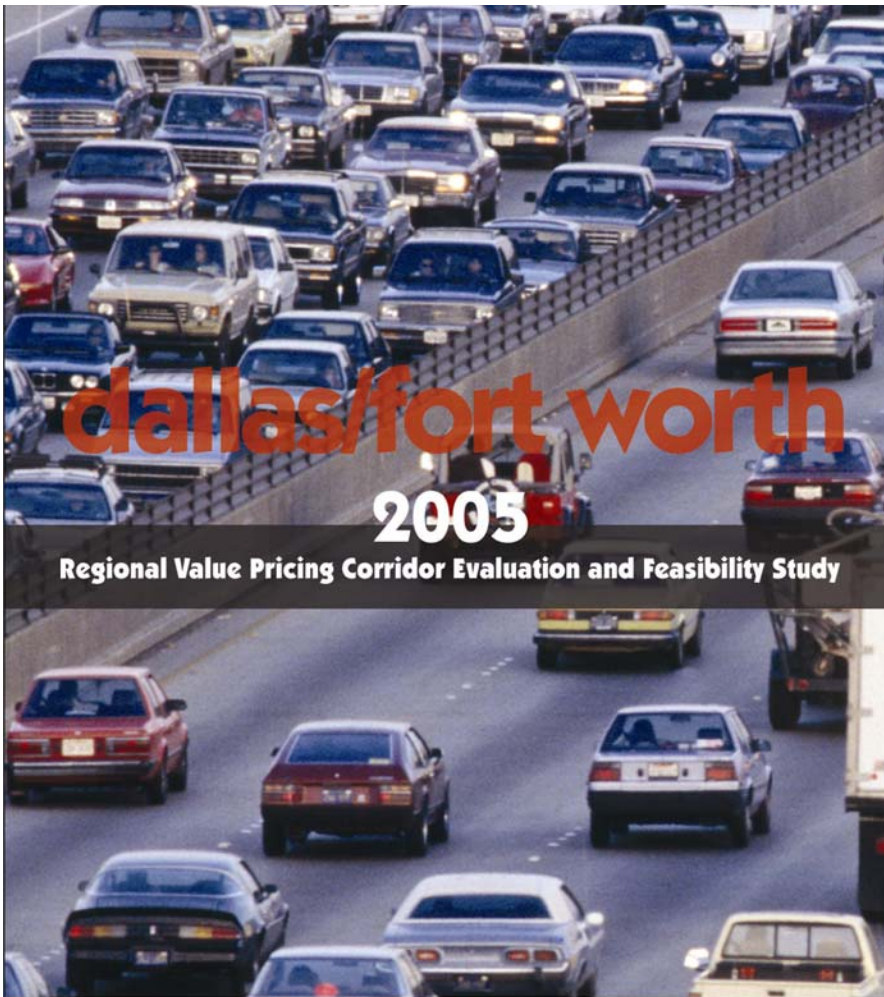
System Consistency

Design
Vehicle Occupancy
Toll Rate



REGIONAL VALUE PRICING CORRIDOR EVALUATION AND FEASIBILITY STUDY

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URS

MANAGED LANE AND VALUE PRICING

LESSONS LEARNED

- **Travelers are willing to pay for improvements in transportation service**
- **Road users highly value time savings and are willing to pay to avoid congestion and delay**
- **Half the customers are non-regular drivers who use the lanes once a week or less**
- **Value pricing is a fair and equitable means of providing travel choices**
- **Value pricing can reduce congestion by shifting demand to off-peak travel periods**
- **A strong public involvement and a comprehensive public participation program helps system users understand the program and its benefits**



MANAGED LANE AND VALUE PRICING

LESSONS LEARNED

- **Nurturing of supporting constituencies are critical factors in acceptance**
- **The success of value pricing on any of the corridors in the region could open doors for widespread implementation of pricing on a system of corridors in the future**
- **Mainstream pricing applications in project development process**
- **Limiting factors in legislation or covenants must be considered early in the planning phase**
- **Identify key decision points for pricing decisions within the project development process in the Dallas-Fort Worth Region**



VALUE PRICING APPLICATIONS IN THE DALLAS-FORT WORTH REGION

- **Paradigm shift in the way the region incorporates value pricing in its planning process**
- **Value pricing could become a significant tool for relieving traffic congestion, while also generating revenue**
- **Value pricing has the potential to significantly impact HOV and carpool usage with managed lanes Any existing or planned facility could be considered for value pricing in the future**
- **Utilize incentive-based applications to provide equity and environmental justice benefits**



VALUE PRICING APPLICATIONS IN THE DALLAS-FORT WORTH REGION

- **Continue project development efforts for managed facility recommendations in the current Metropolitan Transportation Plan (MTP)**
- **NCTCOG and its partners will continue to use the guidelines established for this Regional Value Pricing study to make recommendations for future Metropolitan Transportation Plans**
- **IH 30 between Arlington and Dallas CBD selected as the first value pricing demonstration project**





FUTURE POLICY ISSUES TO RESOLVE REGARDING VALUE PRICING

- **Various transportation provider agencies role, participation, and coordination**
- **Vehicle types (e.g., buses; “green” vehicles)**
- **Truck-Lane Demonstration Project (potential overlap)**
- **Operational Characteristics (e.g., auto-occupancy; toll rate; variable vs. fixed pricing structure; reversible vs. concurrent)**
- **Funding options**
- **Design considerations (e.g., access/egress issues; free exits; slip ramps vs. wishbone ramps)**
- **Marketing**
- **Enforcement**
- **Toll collection philosophy (electronic vs. manual)**

**FOR MORE INFORMATION ON
VALUE PRICING
IN THE DALLAS-FORT WORTH REGION**

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<http://www.nctcog.org/trans/mtp/valuepricing/>

