

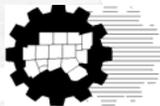
REGIONAL INFLUENCES OF LONG-RANGE TRANSPORTATION PLANNING

**METROPLEX BREAKFAST DIALOGUE GROUP
RICHARDSON, TEXAS
SEPTEMBER 12, 2008**

Chad Edwards

Program Manager

**Transit System Planning, Thoroughfare Planning and
Coordination of Transportation and Environmental Planning**



**North Central Texas Council of Governments
Transportation Department**

Regional Statistics

Who is NCTCOG?

What is a Metropolitan Planning Organization?

Regional Influences

Mobility 2030 Recommendations

Fourth Largest Metropolitan Area in the United States

Ranked 3rd in Population Growth Between 1990-2000 Adding Over 1 Million Persons

- **Current Growth Trend: Added Nearly 850,000 Persons Between 2000 and 2007 (highest growth rate in last 50 years)**

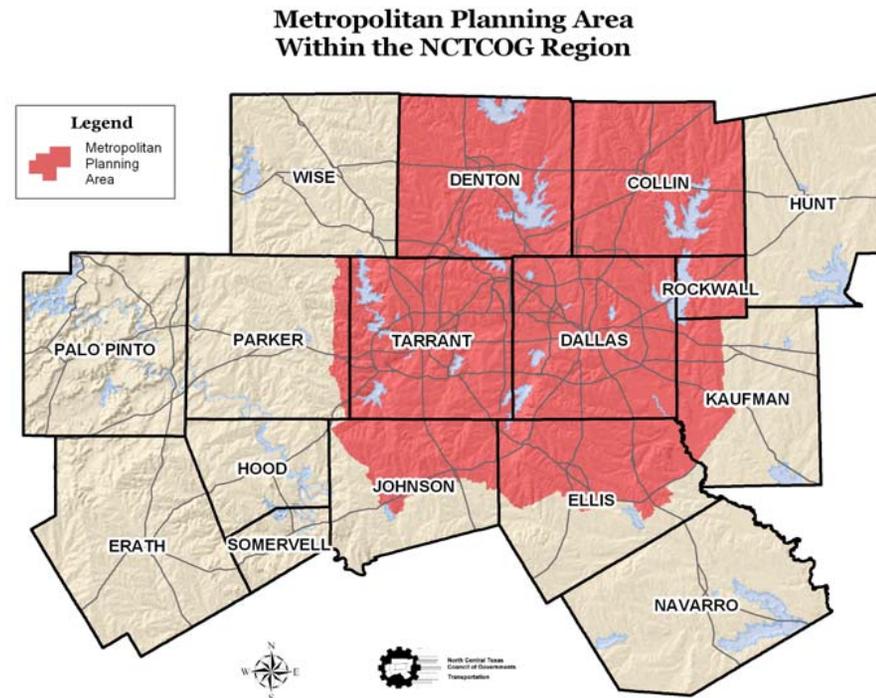
6 Million Persons in Year 2006

- **Growing to Nearly 9 Million Persons by the Year 2030**

Larger than 34 States in Population

Larger than 9 States in Land Area

Represent Over 34 Percent of the State's Economy



NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

WHO ARE WE?

NCTCOG Established to Assist in...

- **Planning for Common Needs;**
- **Cooperating for Mutual Benefit; and**
- **Coordinating for Sound Regional Development**

NCTCOG's Purpose is to...

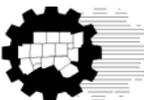
- **Strengthen Both the Individual and Collective Power of Local Governments and to Help Them Recognize Regional Opportunities;**
- **Eliminate Unnecessary Duplication; and**
- **Make Joint Decisions**

Administratively...

- **Executive Board and Executive Director**
- **Eight Departments**

NCTCOG Serves...

- **16 Counties**
- **224 Cities**
- **132 School Districts**
- **29 Special Districts**



THE METROPOLITAN PLANNING ORGANIZATION

WHAT IS AN MPO?

NCTCOG, through its Transportation Department, is the federally designated Metropolitan Planning Organization (MPO) that conducts regional transportation planning in North Central Texas.

MPO Activities are Lead by:

- **NCTCOG Executive Board (Fiscal Administration)**
- **Regional Transportation Council (Policy Administration)**
- **Several Technical Committees**

Major Responsibilities Include:

- **Metropolitan Transportation Plan**
- **Transportation Improvement Program**
- **Congestion Management Process**
- **Air Quality Conformity**
- **Unified Planning Work Program**

THE METROPOLITAN PLANNING ORGANIZATION

DALLAS-FORT WORTH-ARLINGTON, MCKINNEY AND DENTON-LEWISVILLE

Transportation Decisions:

Regional Transportation Council (created 1974)

- City Elected Officials (25): “One Person – One Vote” (Each member represents 200,000 persons)
- County Elected Officials (8)
- Transportation Providers (7): Voting Rights
 - Dallas Area Rapid Transit
 - Dallas-Fort Worth International Airport
 - Denton County Transportation Authority
 - Fort Worth Transportation Authority (The T)
 - North Texas Tollway Authority
 - Texas Department of Transportation

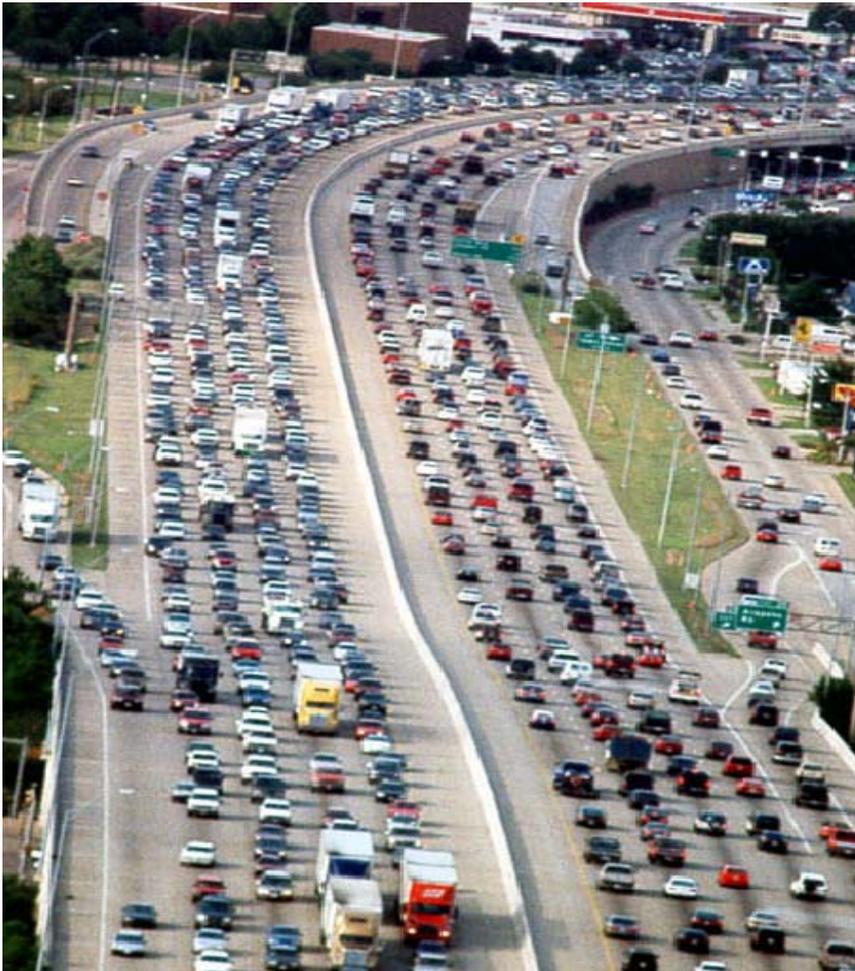


Fiduciary Agent:

NCTCOG Executive Board (created 1966)

THE METROPOLITAN PLANNING PROCESS

CHALLENGES



Dramatic Growth

Suburban Sprawl

Funding

Air Quality

Environmental Concerns

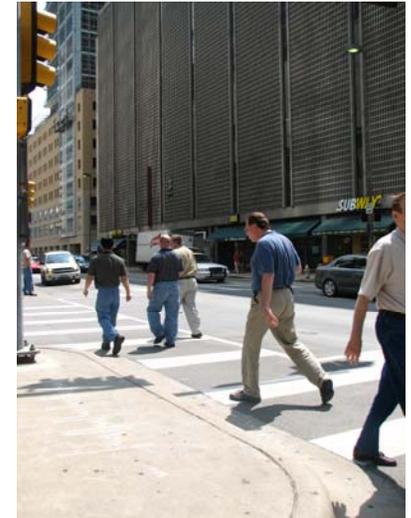
THE METROPOLITAN PLANNING PROCESS

OPPORTUNITIES

Continued Economic Growth



Sustainable Development Strategies



Innovative Funding



Energy Savings Initiatives



Improved Quality of Life



THE METROPOLITAN PLANNING PROCESS

IMPROVEMENT PRIORITIZATION

Maintenance and Operation of Existing Facilities

Improve Efficiency of Existing Facilities

Trans. System Management
Intelligent Trans. Systems

Remove Trips From System

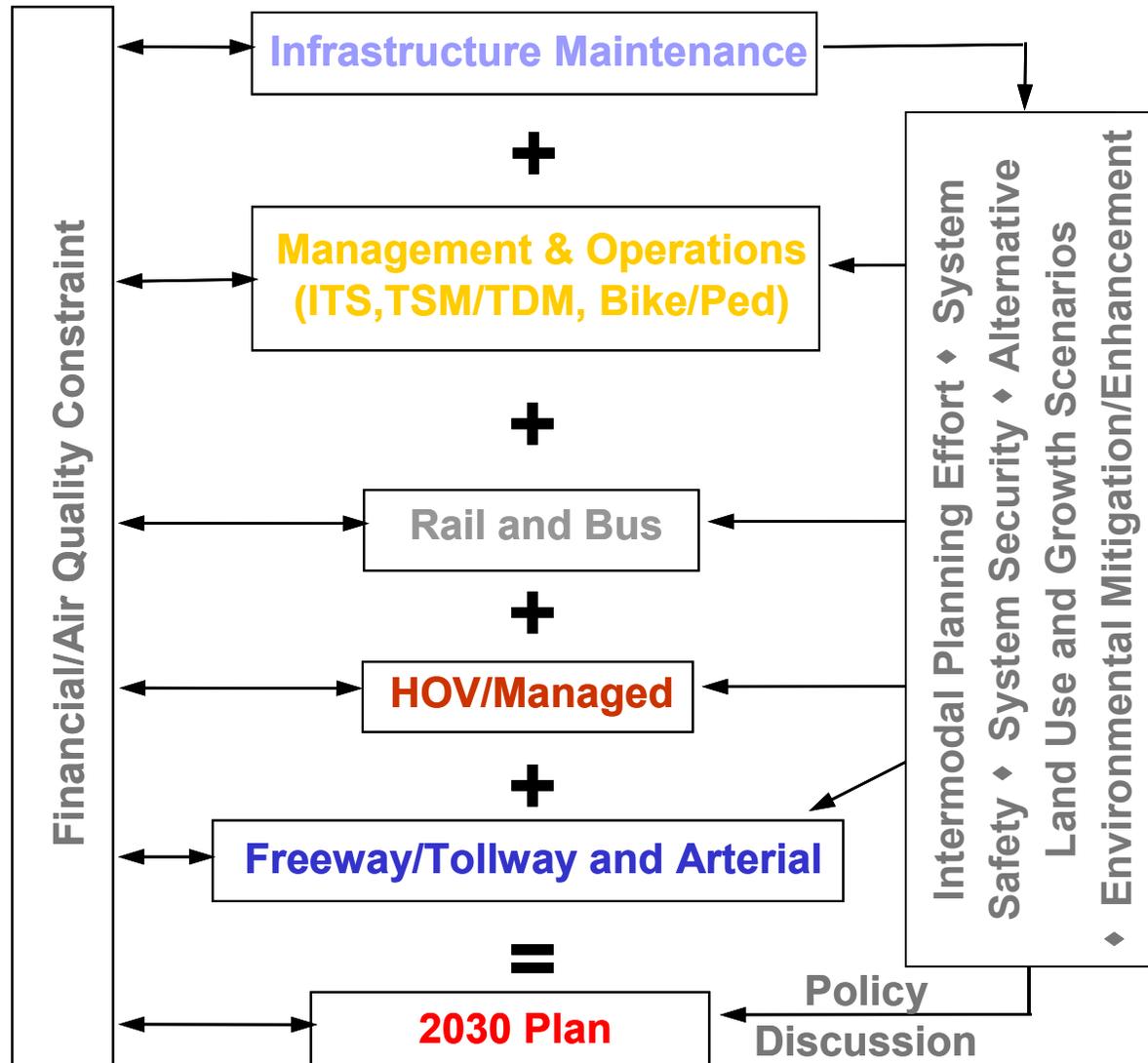
Carpool/Vanpool Program
Pedestrian/Bicycle Facilities

Induce Switch to Transit
Bus/Commuter Rail/Light Rail

Increase Auto Occupancy
HOV System

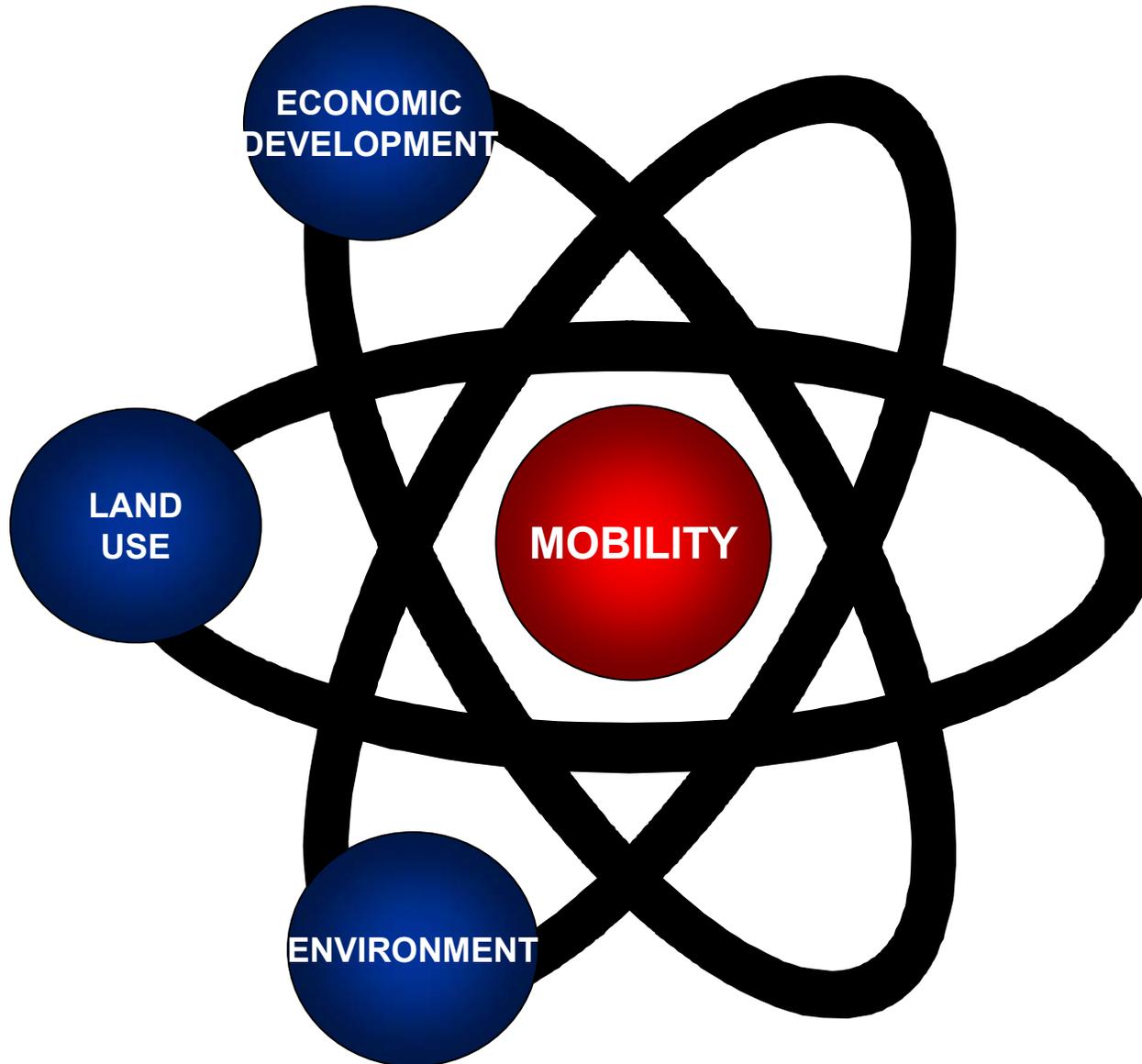
Additional Single Occupant Vehicle Capacity

Freeway/Tollway
Regional Arterial



THE METROPOLITAN PLANNING PROCESS

THE NUCLEUS OF COMMUNITY INTERACTION



REGIONAL INFLUENCES

HISTORICAL DEVELOPMENTAL PATTERNS



Dallas Area Rapid Transit¹

- **25% greater increase in commercial valuations around DART Stations than control areas.**
- 2002 66% greater increase in multi-family residential valuations around DART Stations than control areas.**
- 2002 115% greater increase in office valuations around DART Stations than control areas.**
- 2005 \$3.3 billion in new investment has been announced, broken ground or been planned near DART Stations since 1999.**



¹Data reported by the University of North Texas

LOCAL TRANSIT SUCCESS

RESTORATION OF SERVICE PROVIDES BRANDING FOR AREA

McKinney Avenue Trolley

- Pre WWII** Part of Dallas' original trolley car system.
- 1950's** Service abandoned.
- 1980's** Public and private partnerships develop to restore service in 1989.
- 1990's** Trolley service helps to define and brand the surging Uptown District.
- 2000's** Service extensions increase functionality and use.
- Future** Planned connections with DART Light Rail and Modern Streetcar.

Connects two TIF Districts that generated a total of \$8.9 million in 2003 to support infrastructure, maintenance, and redevelopment.



LOCAL TRANSIT SUCCESS

ADOPT DENSITY, BUILDING USE AND DESIGN CRITERIA CONSISTENT WITH HISTORIC DOWNTOWN DEVELOPMENTS

Central Fort Worth

Wide range of housing and employment options are available within or a short distance from the city center.

Combination of land uses are arranged for pedestrians.

Building fronts and sidewalks are regulated to a pedestrian friendly form.

22 new major residential developments in 15 years.

\$60 million in TIF revenue leveraged \$417 million in private development.

Refurbished Intermodal Transit Center to promote transit access through Trinity Railway Express and Fort Worth Transportation Authority.



LOCAL TRANSIT SUCCESS

DEVELOP THE LAND USE BEFORE RAIL ARRIVES

City of Addison

The City of Addison has invested \$10.7 million in the Addison Circle project.

\$23.7 million initial land value.

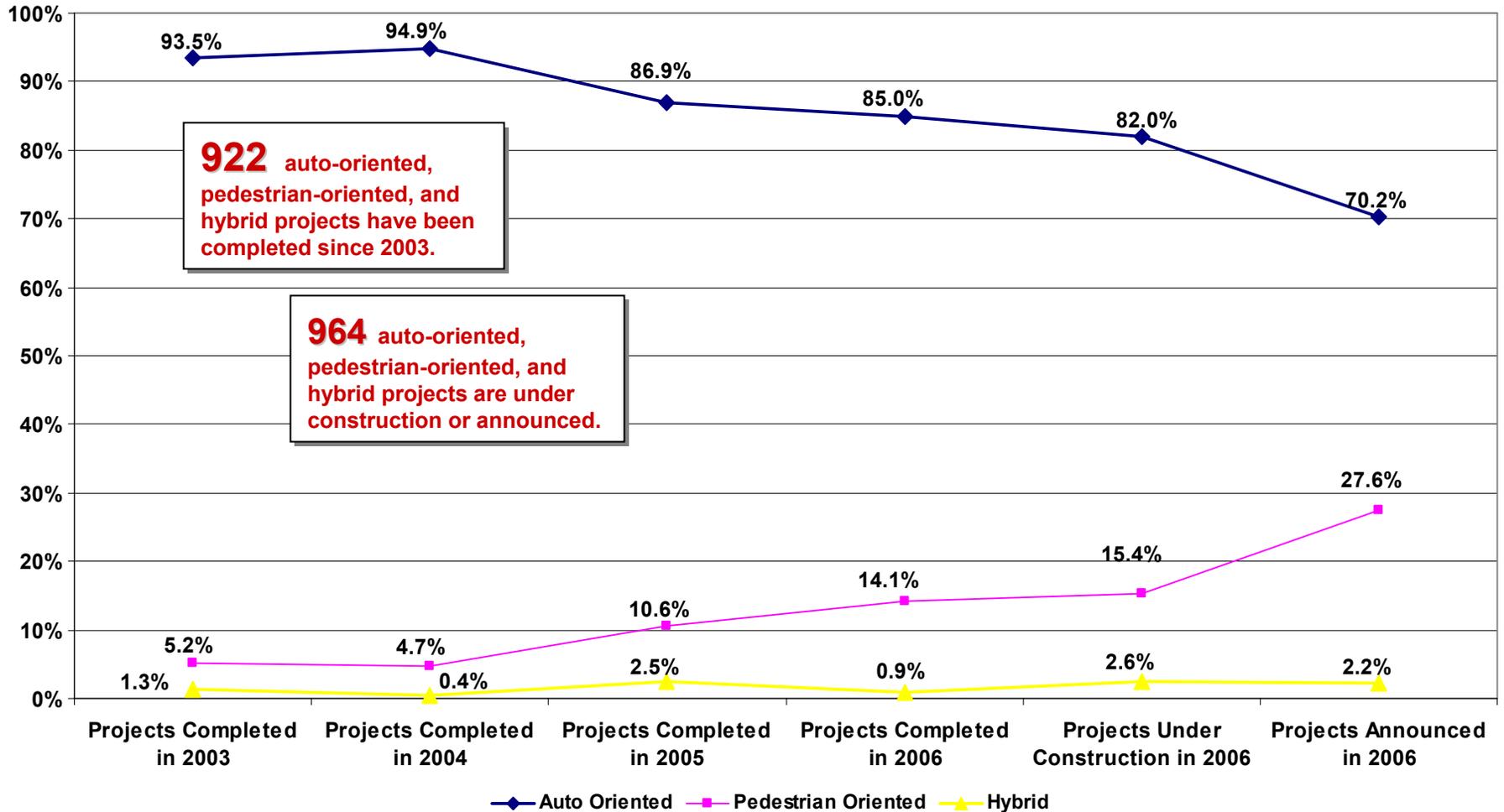
\$213.2 million in current property values in the Addison Circle District, a 20:1 investment ratio.

Annual property tax revenue from the assessed values, at the current tax rate, would provide over \$1 million in revenue.



LOCAL INVESTMENT SUCCESS

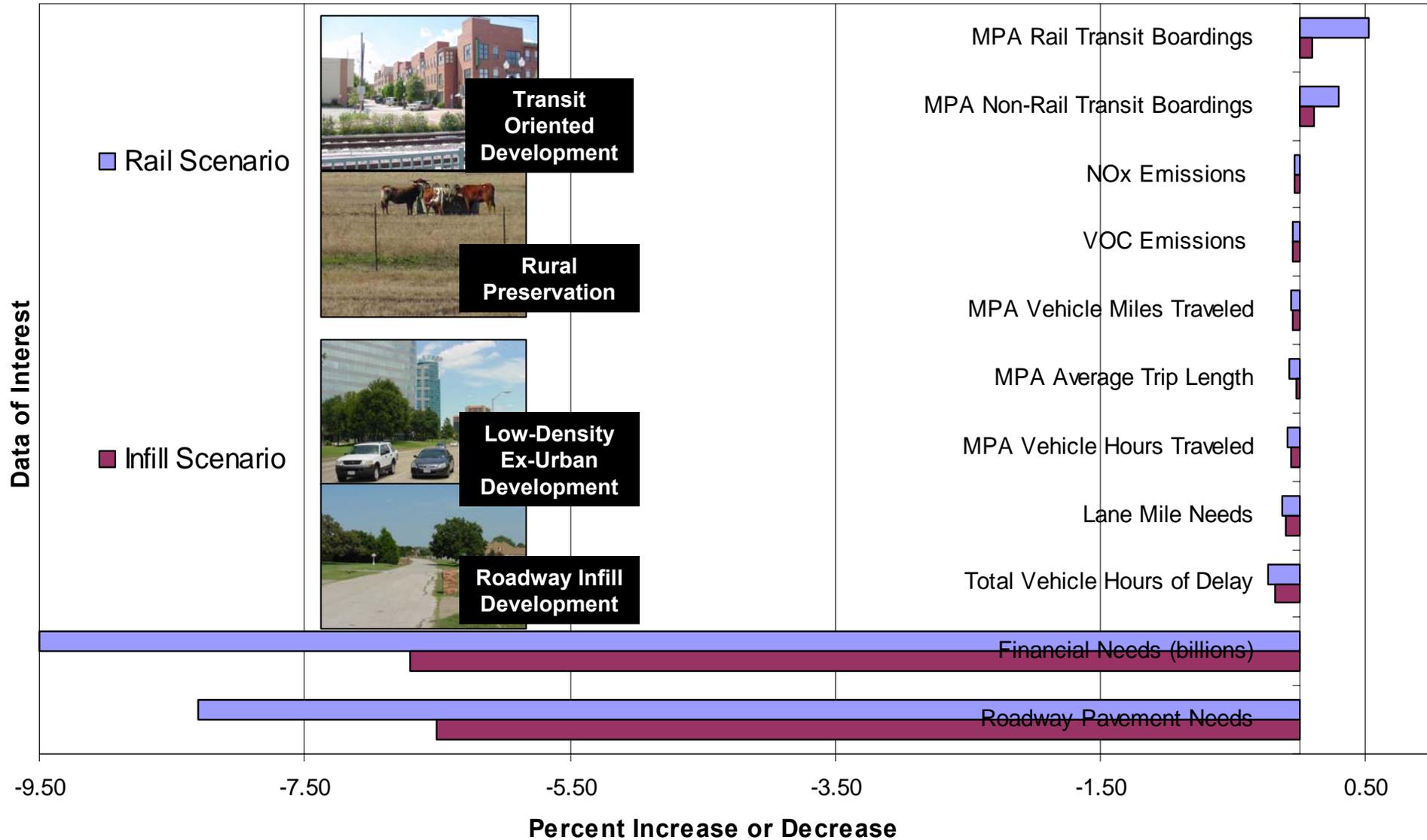
MAJOR DEVELOPMENTS BY TYPE*



* Development Monitoring data is collected for the 16-county NCTCOG region. Project types are defined as follows. *Auto-Oriented Projects* are projects built to primarily serve vehicular traffic through their design, layout, parking requirements, and access management. *Pedestrian-Oriented Projects* are projects with the design, configuration, and mix of uses that emphasize pedestrian and/or transit oriented environments. *Hybrid Projects* are projects with a mix of pedestrian/transit, and auto-oriented development.

DEMOGRAPHIC SENSITIVITY ANALYSIS

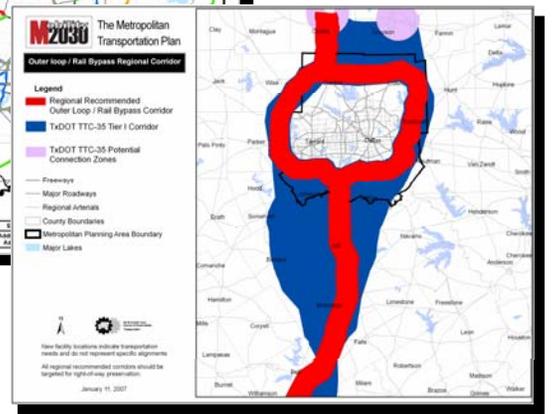
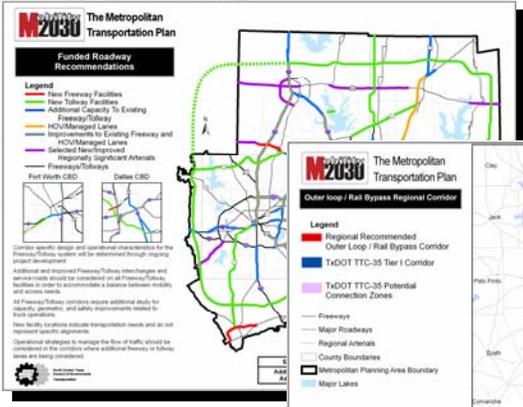
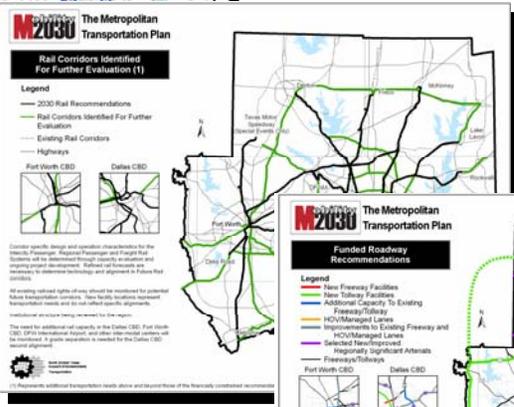
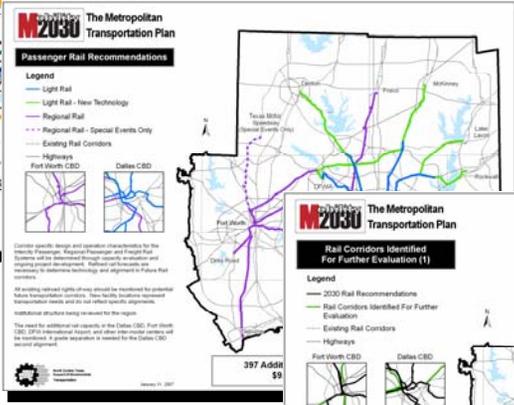
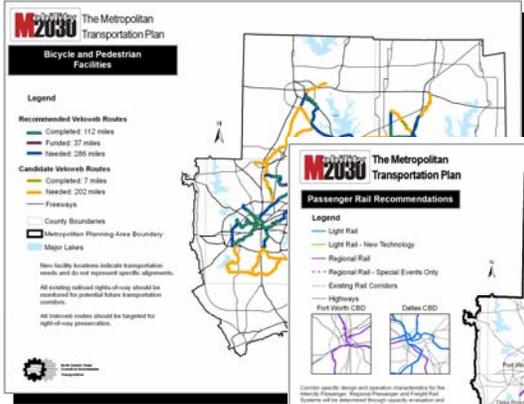
SAMPLE NCTCOG ALTERNATIVE FUTURE TESTS



LAND USE - TRANSPORTATION BASICS

Land Use Feature	Mobility Response
Mixing of uses	Shorter driving trips Transit-friendly Feasible bike/walk trip distances
Walkable grid pattern	Pedestrians have an efficient transportation system
Residential units for on-site employees	Peak period trips shortened Transportation modes shifted
Pedestrian-oriented buildings and storefronts	Pedestrians welcomed to walk

TRANSPORTATION RECOMMENDATIONS

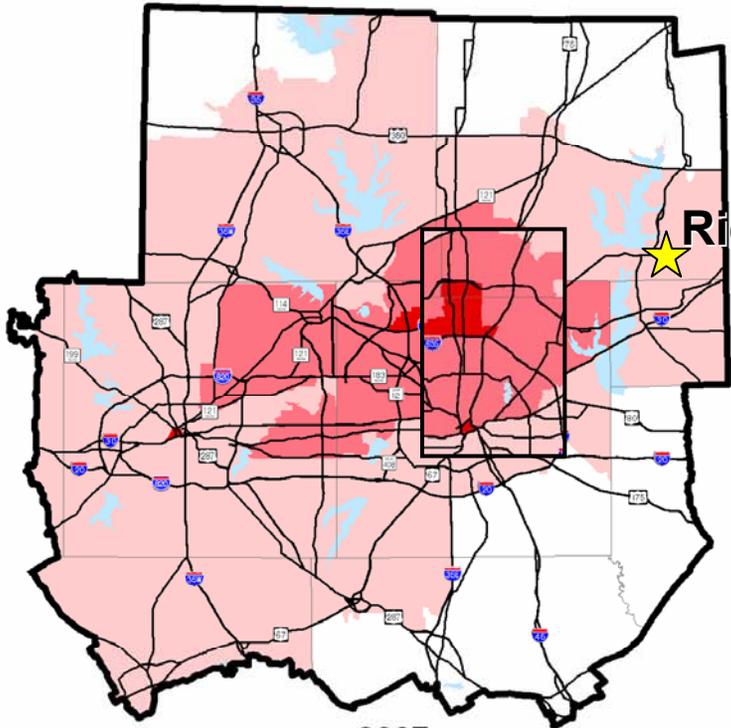




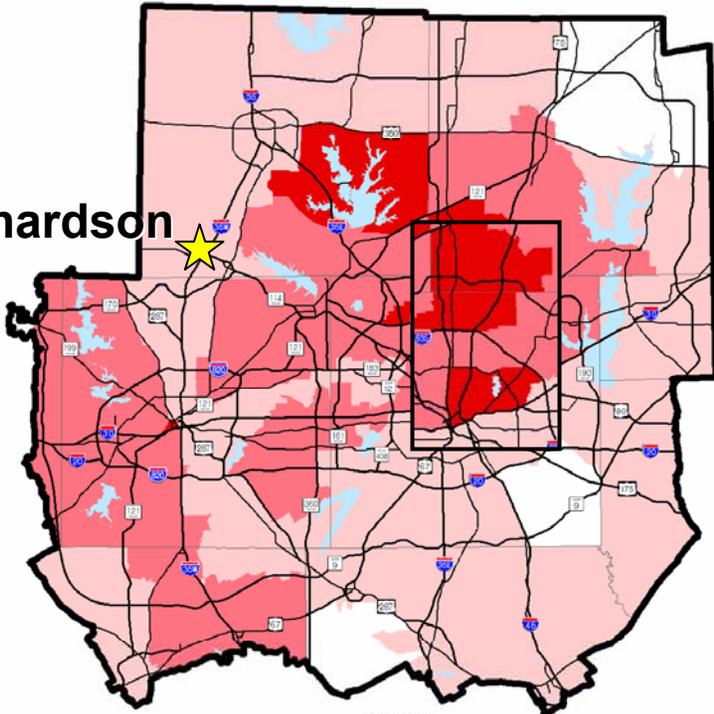
The Metropolitan Transportation Plan

System Performance Levels of Congestion

- Areas with No Congestion
- Areas with Light Congestion
- Areas with Moderate Congestion
- Areas with Severe Congestion
- Roadways



2007
Annual Cost of Congestion \$4.2 Billion



2030
Annual Cost of Congestion \$6.6 Billion



Benefit/Cost Ratio of Plan: 1.51



Bicycle and Pedestrian Facilities

Legend

Recommended Veloweb Routes

- Completed: 112 miles
- Funded: 37 miles
- Needed: 286 miles

Candidate Veloweb Routes

- Completed: 7 miles
- Needed: 202 miles

Freeways

County Boundaries

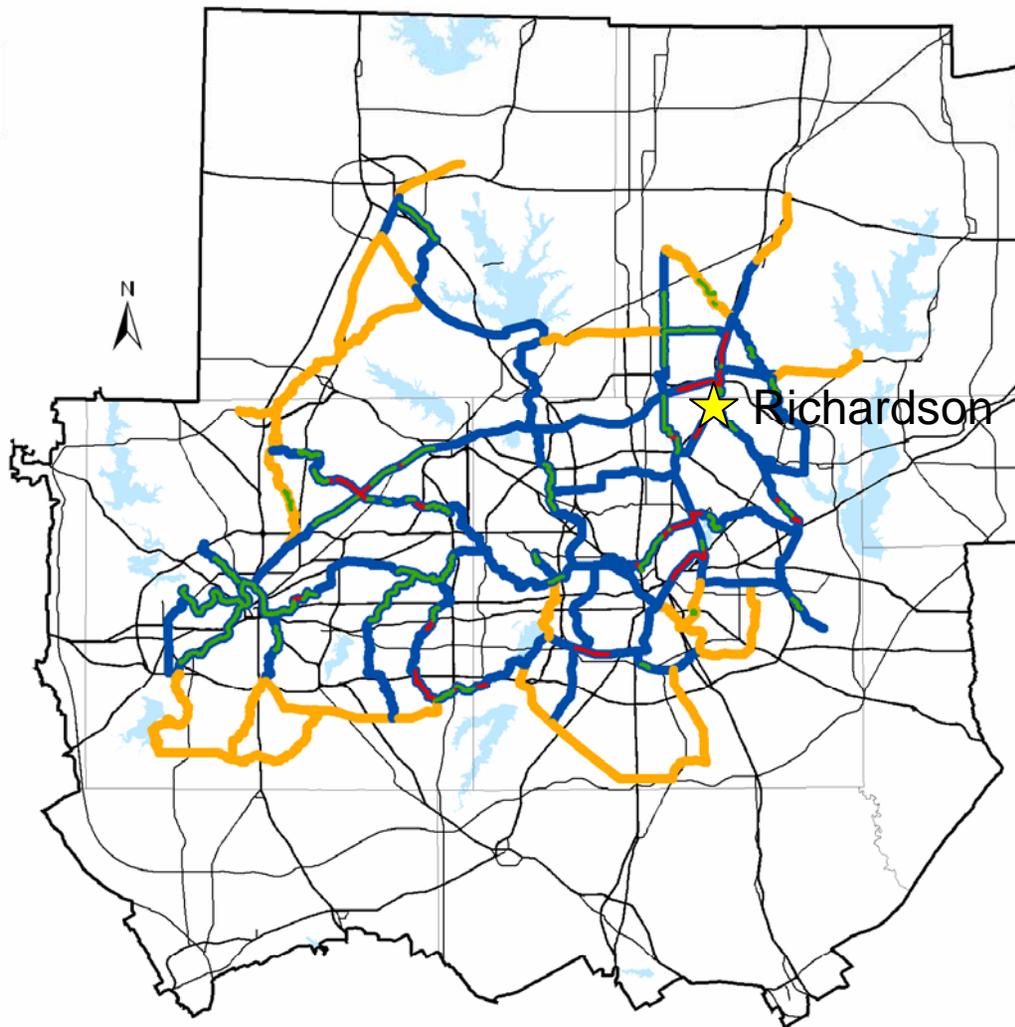
Metropolitan Planning Area Boundary

Major Lakes

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.

All Veloweb routes should be targeted for right-of-way preservation.





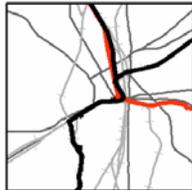
★ Richardson

**Rail Recommendations Dependent
on Regional Transit Initiative Funds**

Legend

- Existing Service, Programmed Projects and Projects Under Development
- Projects Pending Alternative Funding
- Existing Rail Corridors
- Highways

Fort Worth CBD



Dallas CBD

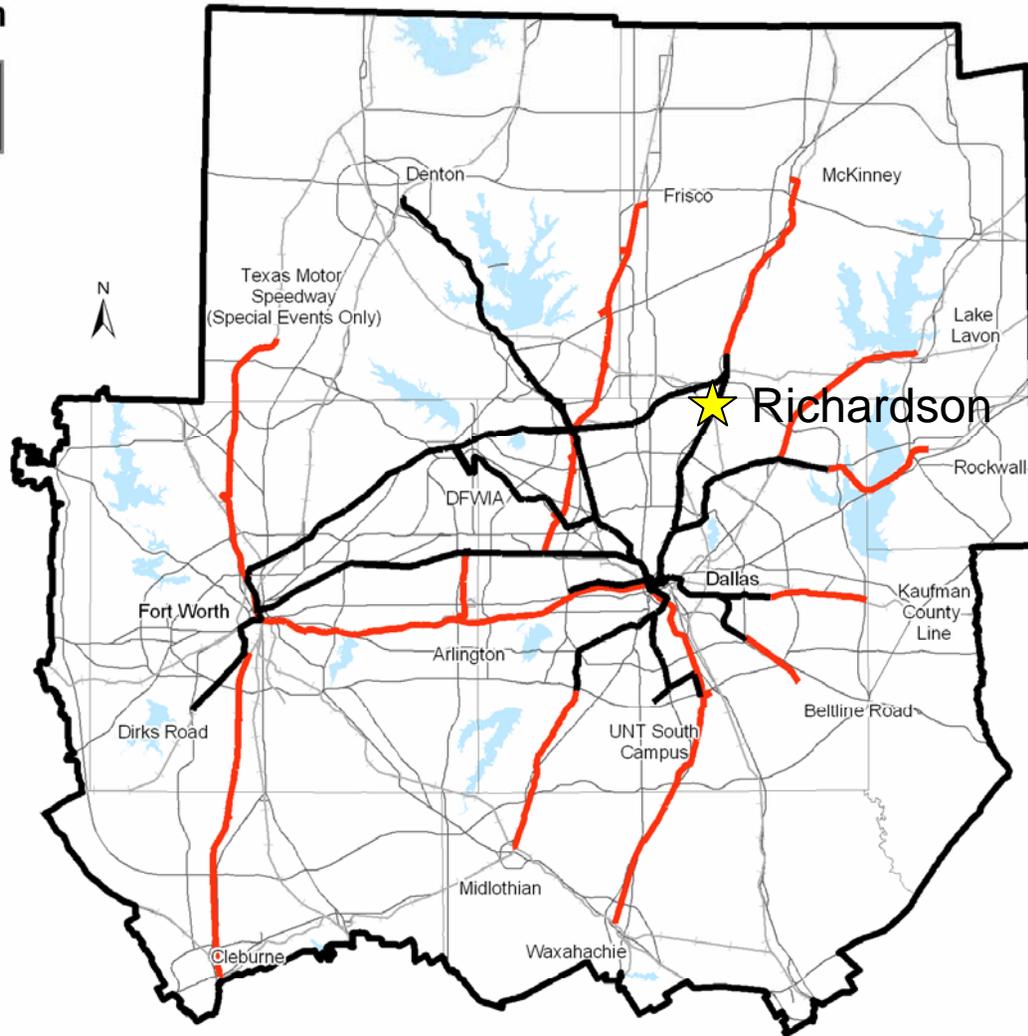


Corridor specific design and operation characteristics for the Intercity Passenger, Regional Passenger and Freight Rail Systems will be determined through capacity evaluation and ongoing project development. Refined rail forecasts are necessary to determine technology and alignment in Future Rail corridors.

All existing railroad rights-of-way should be monitored for potential future transportation corridors. New facility locations represent transportation needs and do not reflect specific alignments.

Institutional structure being reviewed for the region.

The need for additional rail capacity in the Dallas CBD, Fort Worth CBD, DFW International Airport, and other inter-modal centers will be monitored. A grade separation is needed for the Dallas CBD second alignment.



239 Rail Miles in Jeopardy





★ Richardson

Funded Roadway Recommendations

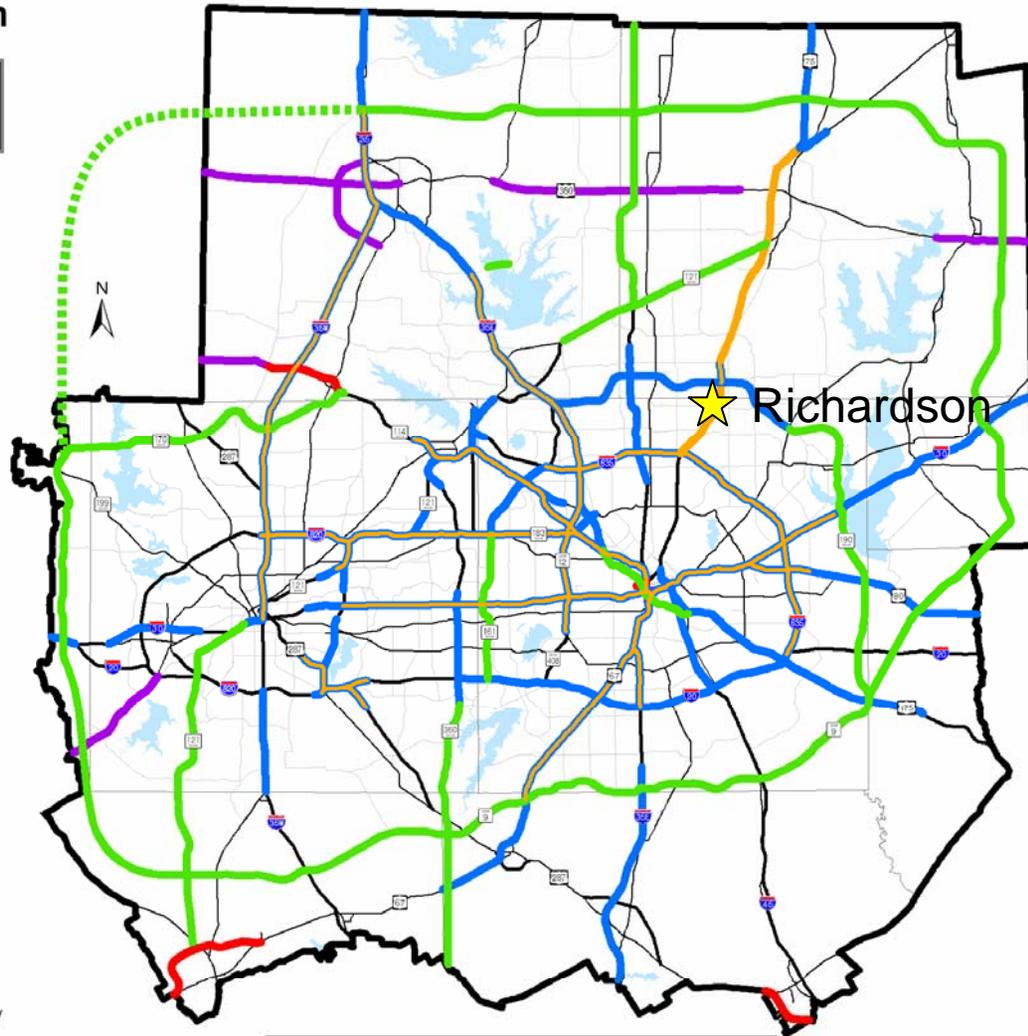
Legend

- New Freeway Facilities
- New Tollway Facilities
- Additional Capacity To Existing Freeway/Tollway
- HOV/Managed Lanes
- Improvements to Existing Freeway and HOV/Managed Lanes
- Selected New/Improved Regionally Significant Arterials
- Freeways/Tollways

Fort Worth CBD



Dallas CBD



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.



\$29.8 Billion Regional Roadway System

Additional Freeway/Tollway lane miles = 3,444
Additional HOV/Managed lane miles = 626

Priced Facilities

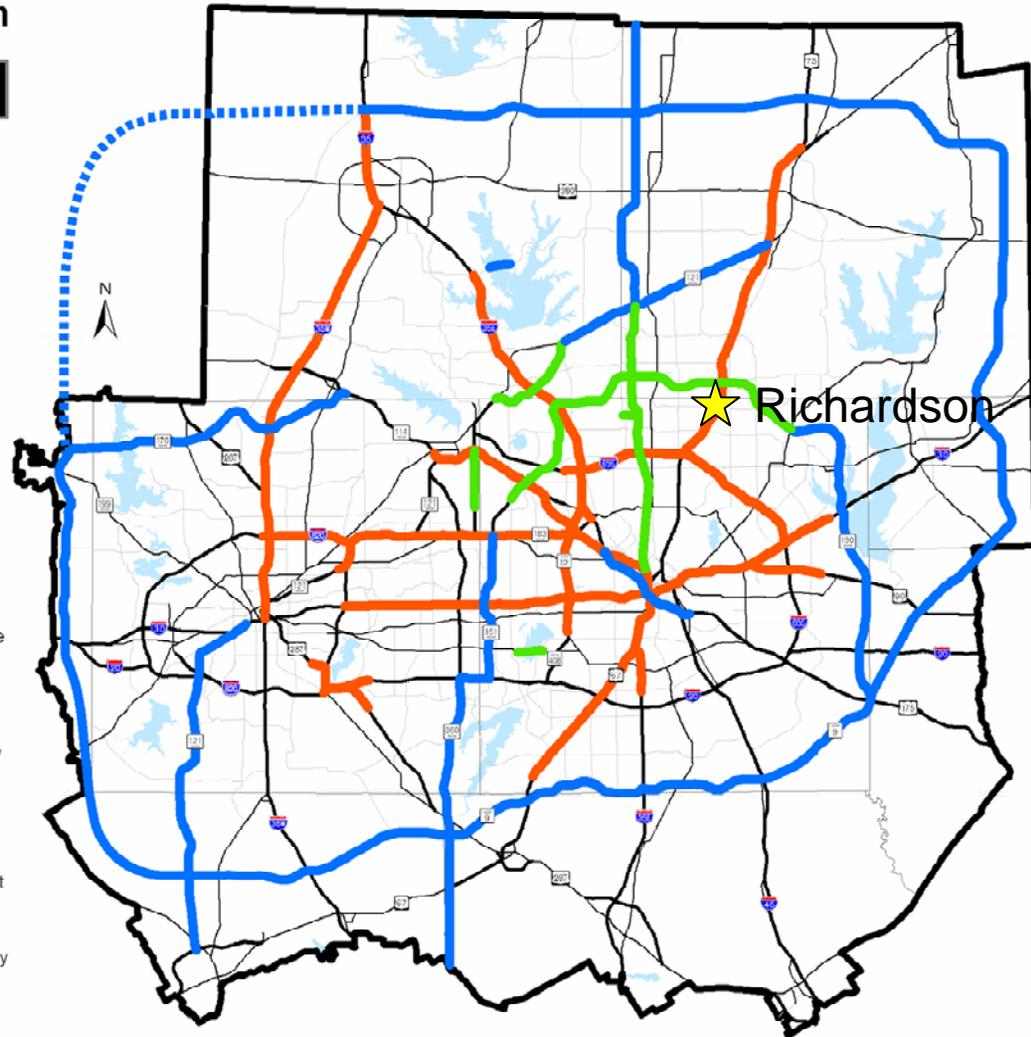
Legend

- Existing Toll Facilities
- Proposed Toll Facilities
- Proposed HOV/Managed Facilities*
- Freeways/Tollways

Fort Worth CBD



Dallas CBD



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* Existing lanes in corridor remain free. Toll charged on new capacity only and will include HOV incentives.





The Metropolitan Transportation Plan

Outer loop / Rail Bypass Regional Corridor

Legend

- Regional Recommended Outer Loop / Rail Bypass Corridor
- TxDOT TTC-35 Tier I Corridor
- TxDOT TTC-35 Potential Connection Zones
- Freeways
- Major Roadways
- Regional Arterials
- County Boundaries
- Metropolitan Planning Area Boundary
- Major Lakes

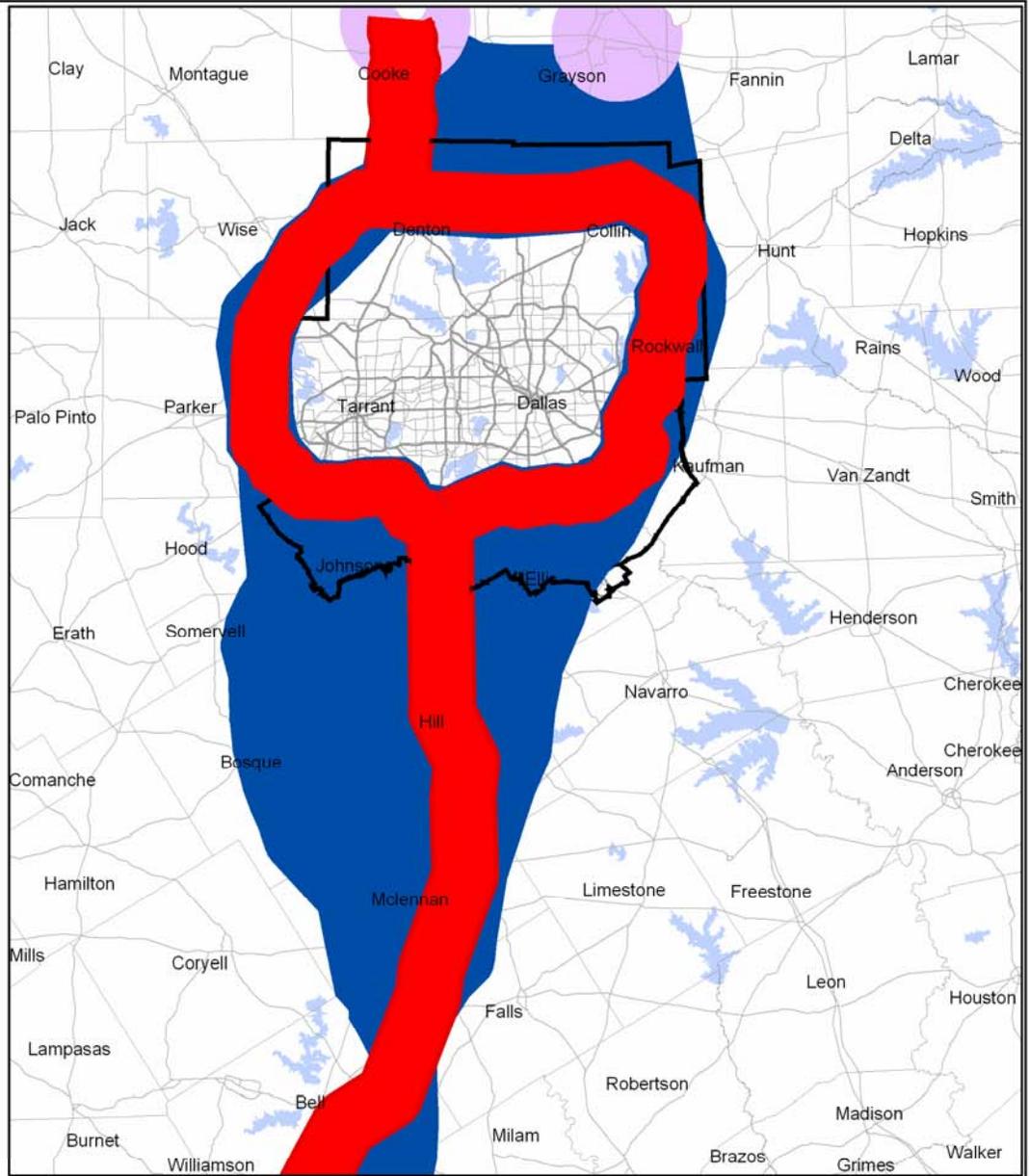


North Central Texas
Council of Governments
Transportation

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

All regional recommended corridors should be targeted for right-of-way preservation.

January 11, 2007



IDENTIFIED FUNDING NEEDS FOR DFW REGION

UPDATED BASED ON MOBILITY 2030 FUNDING LEVELS

Metropolitan Transportation System Components	Funded Needs (Billions/2006 \$)	Unfunded Needs (Billions/2006 \$)
Operation & Maintenance	\$18.7	
Congestion Mitigation Strategies	\$2.1	
Bicycle & Pedestrian Facilities and Transportation Enhancements	\$1.1	
Rail and Bus Transit System	\$11.0 ¹	
HOV and Managed Facilities	\$3.3	
Freeway and Toll Road System	\$26.4	\$12.7²
Regional Arterial and Local Thoroughfare System	\$5.7	\$6.0
Additional Cost to Purchase Right-of-Way		\$1.1
Rehabilitation Costs	\$ 2.6	\$32.1
Goods Movement/Rail Freight Costs (Trans-Tx Corridor)		\$6.7
TOTAL	\$70.9 (55 %)	\$58.6 (45 %)
	\$129.5 Billion	

¹ \$3.4 billion obtained through Regional Transit Initiative

² Includes Freeway-to-Freeway Interchanges

BALANCING DIVERSE OBJECTIVES

DECISION-MAKING FACTORS FOR PROGRAMS, POLICIES, PROJECTS



A light rail train is stopped at a station platform. A large group of people, including men, women, and children, are walking across the platform. The platform has a curved roof structure. The scene is brightly lit, suggesting a sunny day.

QUESTIONS

Chad Edwards
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Planning, and Coordination of Transportation
and Environmental Planning

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