

Future Mobility in Collin County



**Presented by
Collin County
Commissioners Court**

Spring, 2016



Collin County Growth

- High growth rate sustained over last 40 years
- 6th Largest County in Texas
- Population at “build-out” estimated to be 2.1 M - 3.4 M



Question!

What should the transportation system in Collin County look like for over 2 million people?



Examples in Other Counties

What do the systems of “limited access roadways” (LARs) look like in Dallas and Tarrant Counties?

LARs Comparison

1,959,449

2,496,859

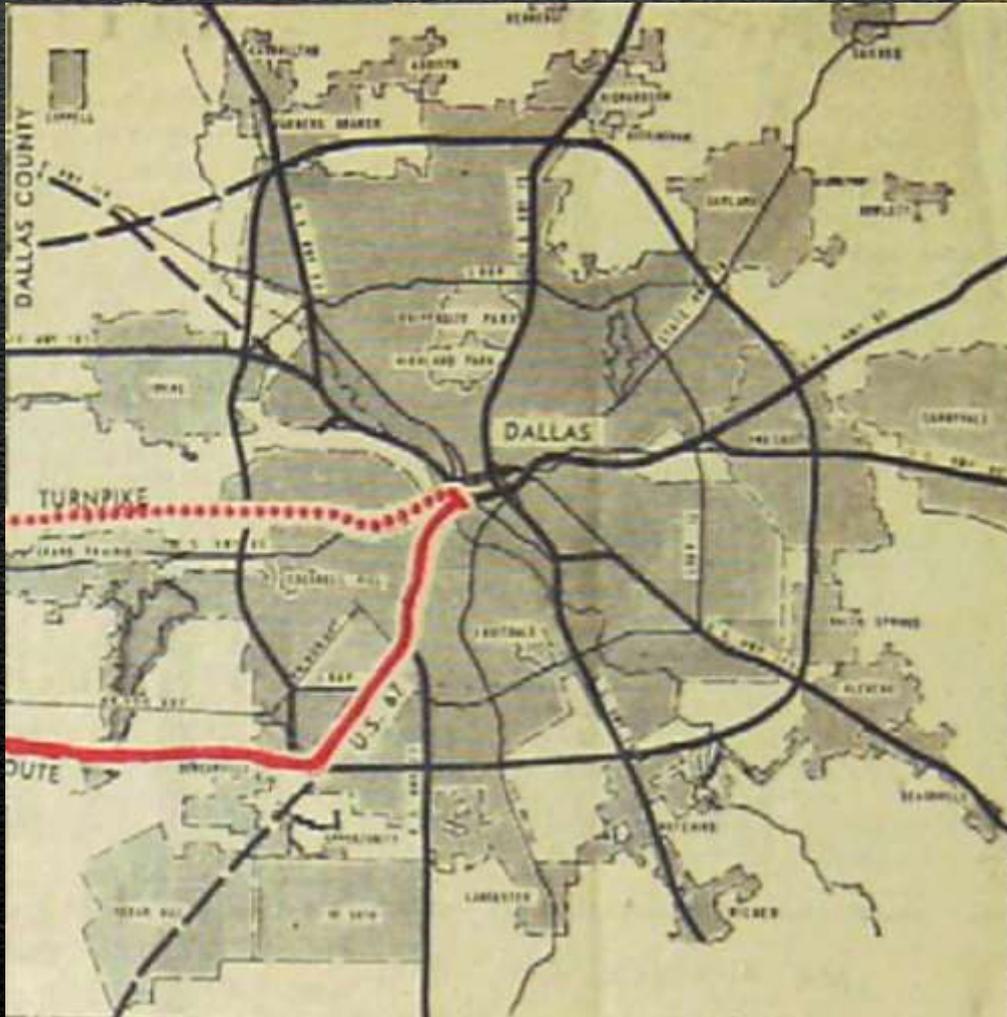
Denton County
Population 789,094

Collin County
Population 949,673





LARs Network Planning in Dallas Co



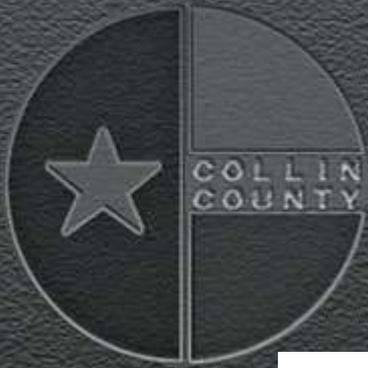
*Dallas Morning
News
July 2, 1957*

Dallas Co. Population

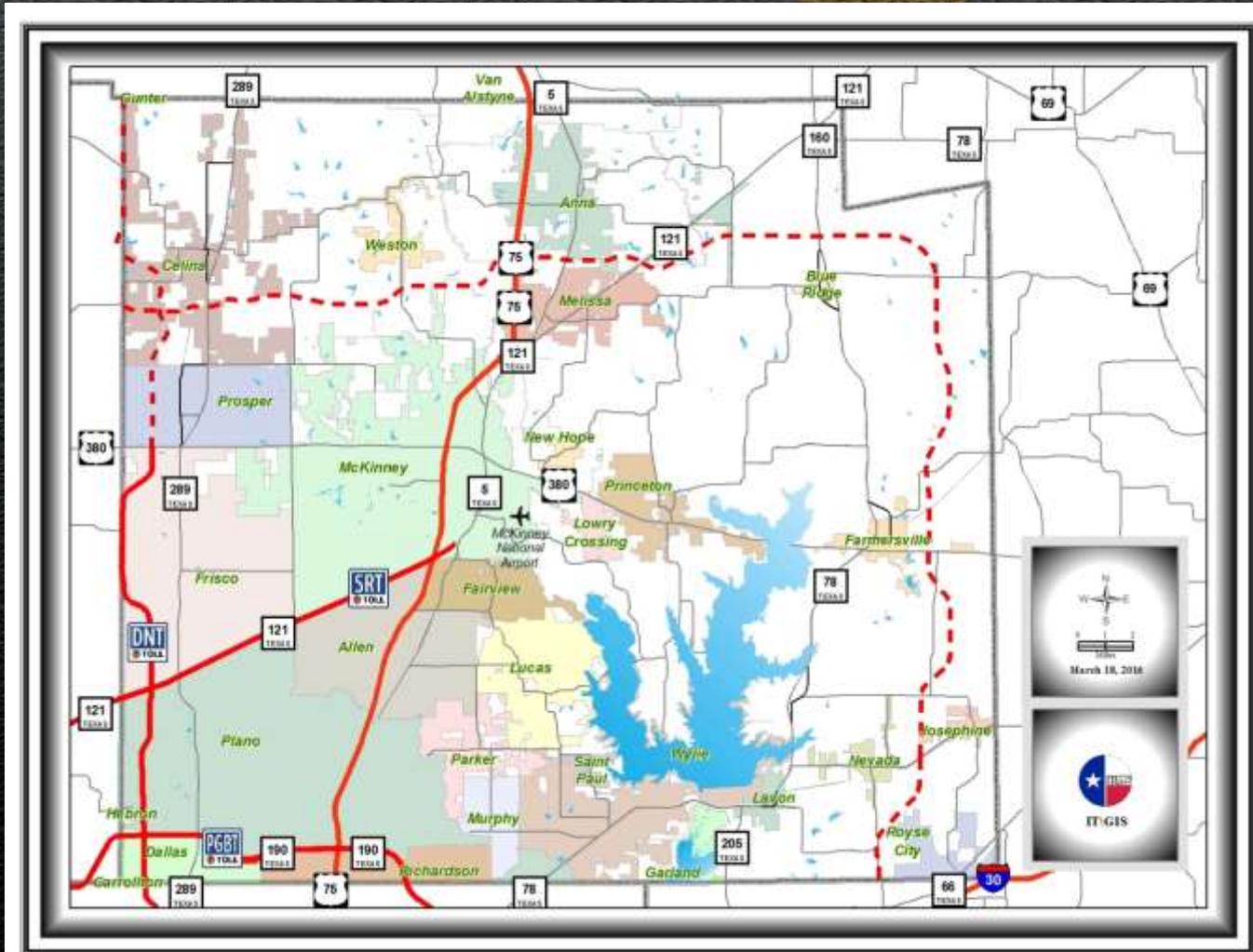
1950: 614,799

1957: 850,508 est.

1960: 951,527



Existing and Currently-Planned LARs





Traffic: Today and Tomorrow

Examples of 6-lane arterials

	<u>Capacity</u>	<u>Current</u>	<u>Build-out</u>	
US 380	45,000	50,000	93,000	
SH 78	45,000	22,000	61,000	
				vehicles per day



Traffic: Today and Tomorrow

Build-out?





SO !

**How do we determine what the
transportation system should be?**



Strategic Planning

Take strategic steps forward

What are those steps?



Planning Strategically

- Resist the urge to plan for tomorrow or even 2035 or 2040. Think “BUILD- OUT” when planning.
- Analyze traffic demand at build-out



Planning Strategically

- Partner with TxDOT, cities, transit agencies and NCTCOG to develop build-out plan
- It will appear to be an overwhelming task – will require **EVERYONE** to accomplish it



Planning Strategically

- Take a lesson from planning in Dallas County before the 50s
- Identify major roadway “backbone” for the mobility system



Efforts To-Date

- **2014 Update to Mobility Plan included first demographic scenario**
 - **2.1M population**
 - **1.2M employment**



Efforts To-Date

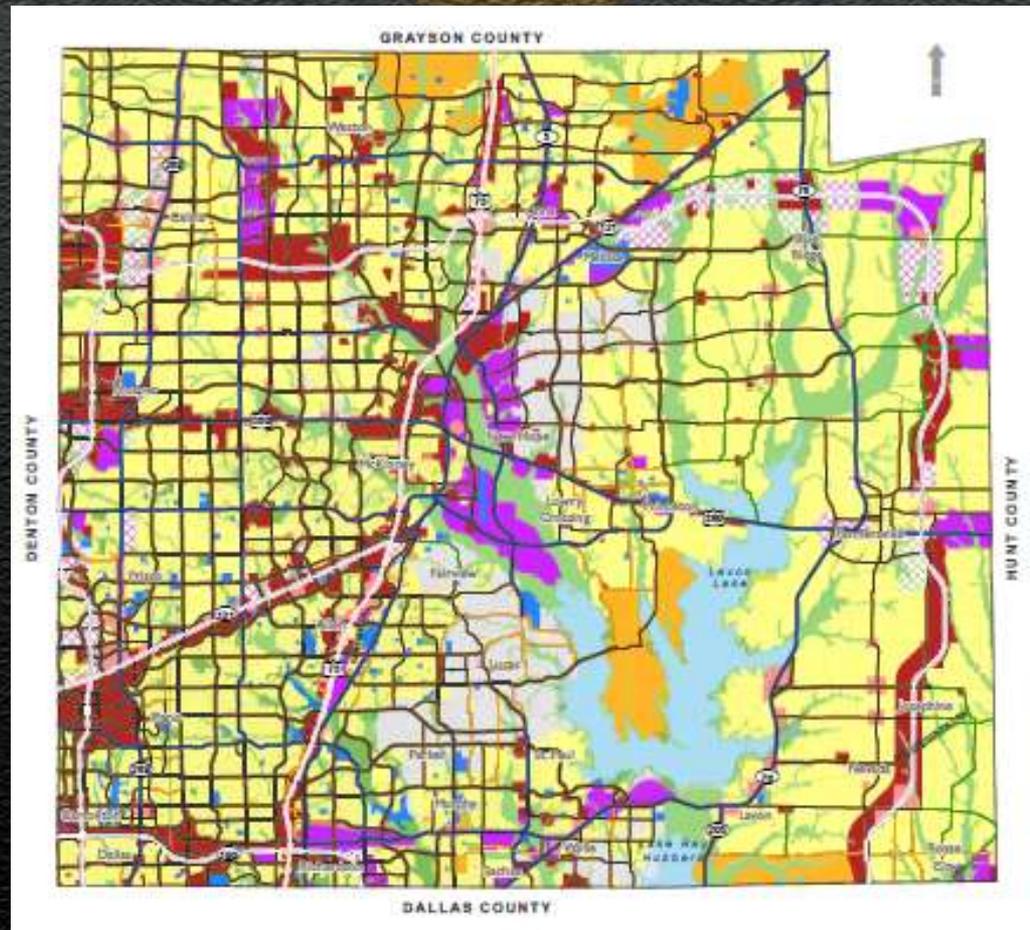
- **Developed second demographic scenario**
 - **Assumed east side will develop same as west side**
 - **Along Outer Loop, included typical development for a LAR**



Efforts To-Date

2nd Scenario Results:

- 3.44M Pop
- 1.6M Empl





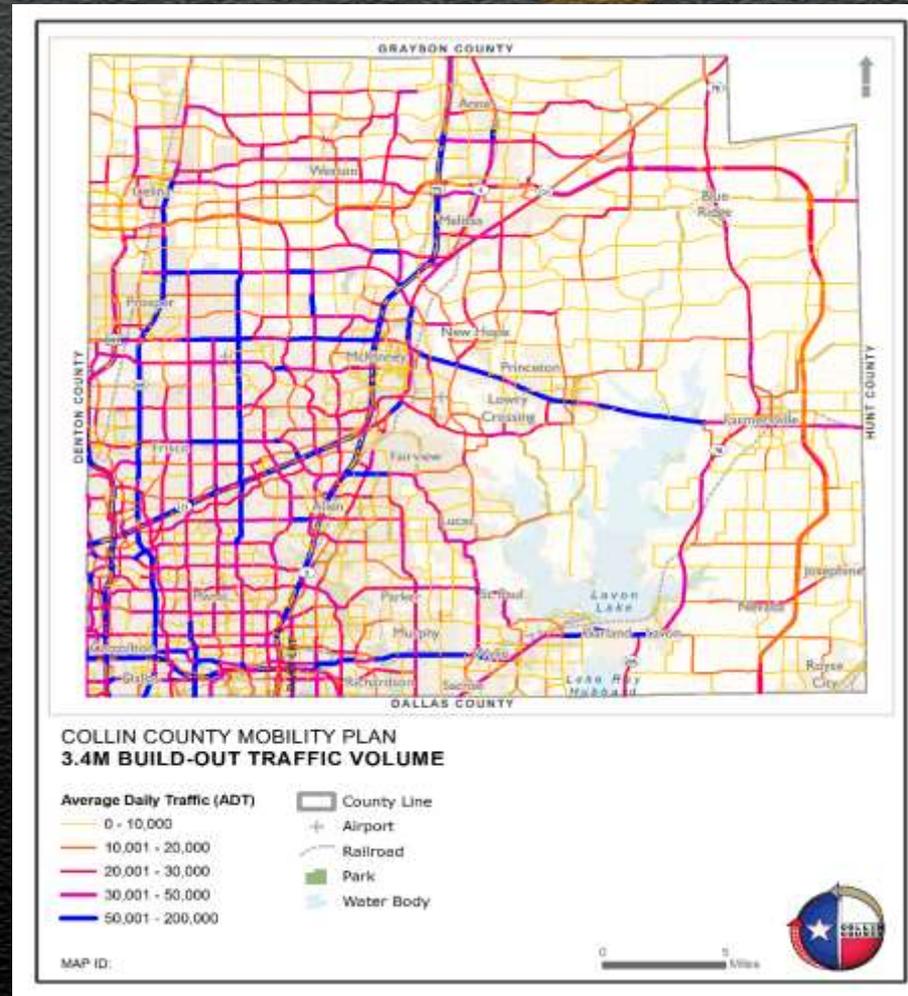
Efforts To-Date

- Ran build-out travel demand models for both scenarios



Candidates for LARs

Blue roads -
exceed
capacity of
6-lanes

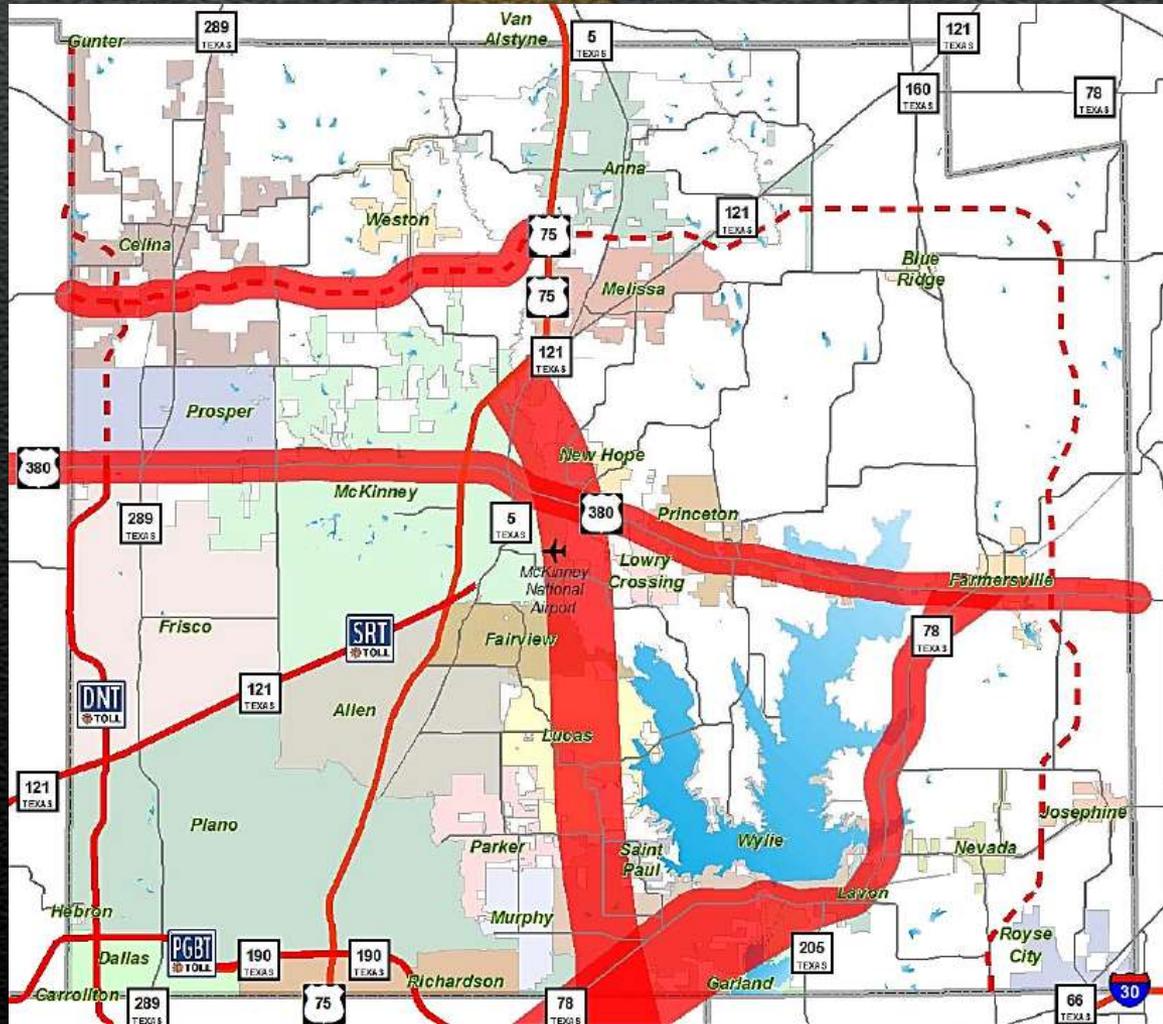




Planning Strategically

LARs

1. US 380
2. SH 78
3. N-S Road
betw US 75
& Lake Lavon
4. Outer Loop





Planning Strategically

Long-term
planning and
working
together can
prevent THIS





Planning Strategically

And provide THIS





Planning Strategically

Beyond congestion,
what impact will each of these
conditions have on our economy?





Economic Impact

From the dawn of civilization, transportation has been the defining force in economic progress. The earliest settlements were concentrated along the great navigable waterways of the world, and trails and trade routes determined commerce for millennia. Over time, railroads, highways, and, more recently, airports have been added to the infrastructure complex of the world. As at the beginning, modern economies are defined by accessibility and logistics, and superior transportation offerings are a critical factor in the competitiveness and success of a region.

Dr. M. Ray Perryman, March 21, 2016



Economic Impact

Thoroughfares generally only support “local” retail and commercial





Economic Impact

But limited access roadways
support larger
regional commercial
like THIS





Economic Impact

or THIS





Economic Impact

or THIS





Economic Impact

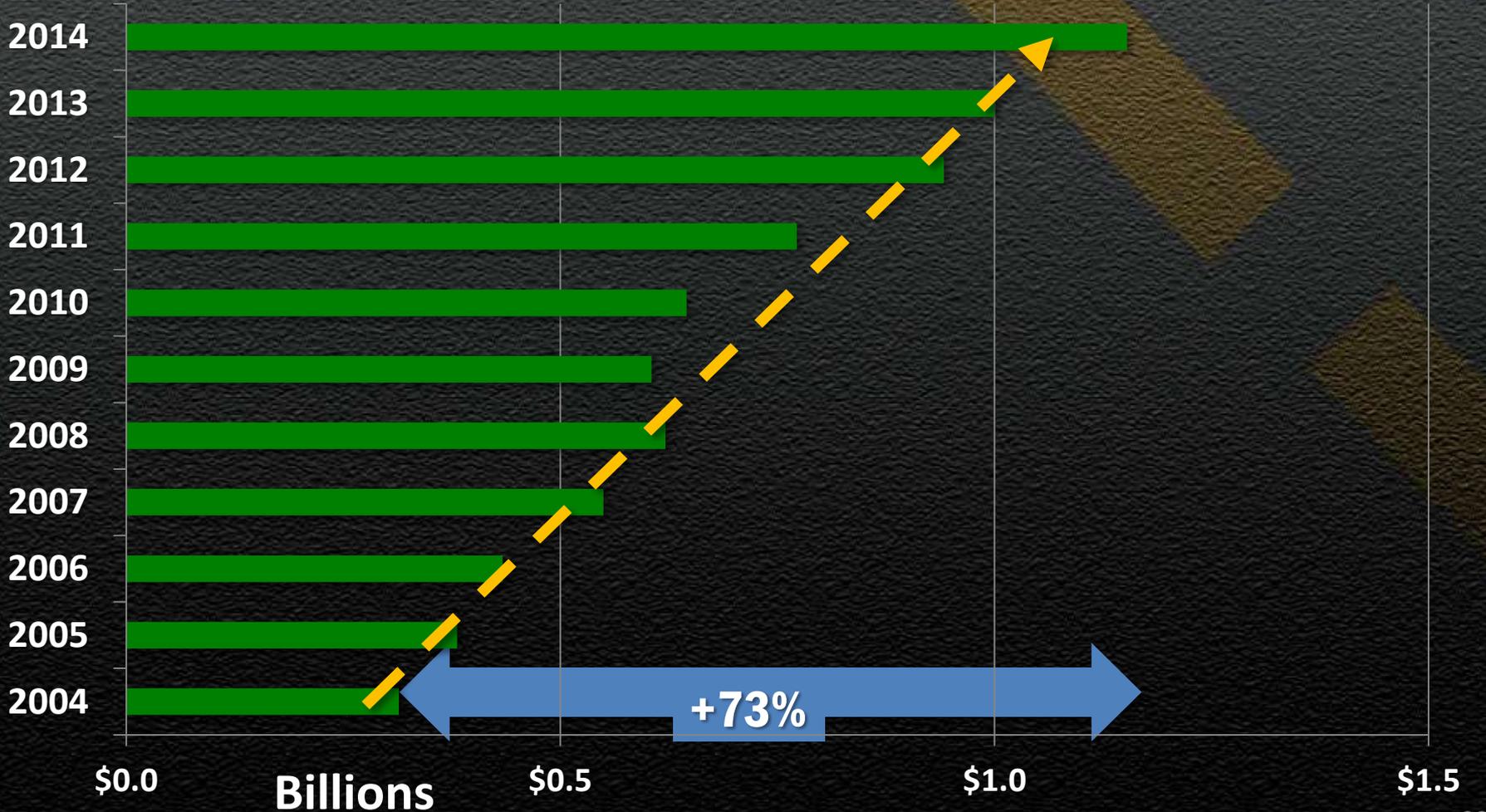
A very important question must be answered now:

Will the “economic engine” that has made Collin County what it is today be maintained – or left to grind to a halt?



Economic Engine

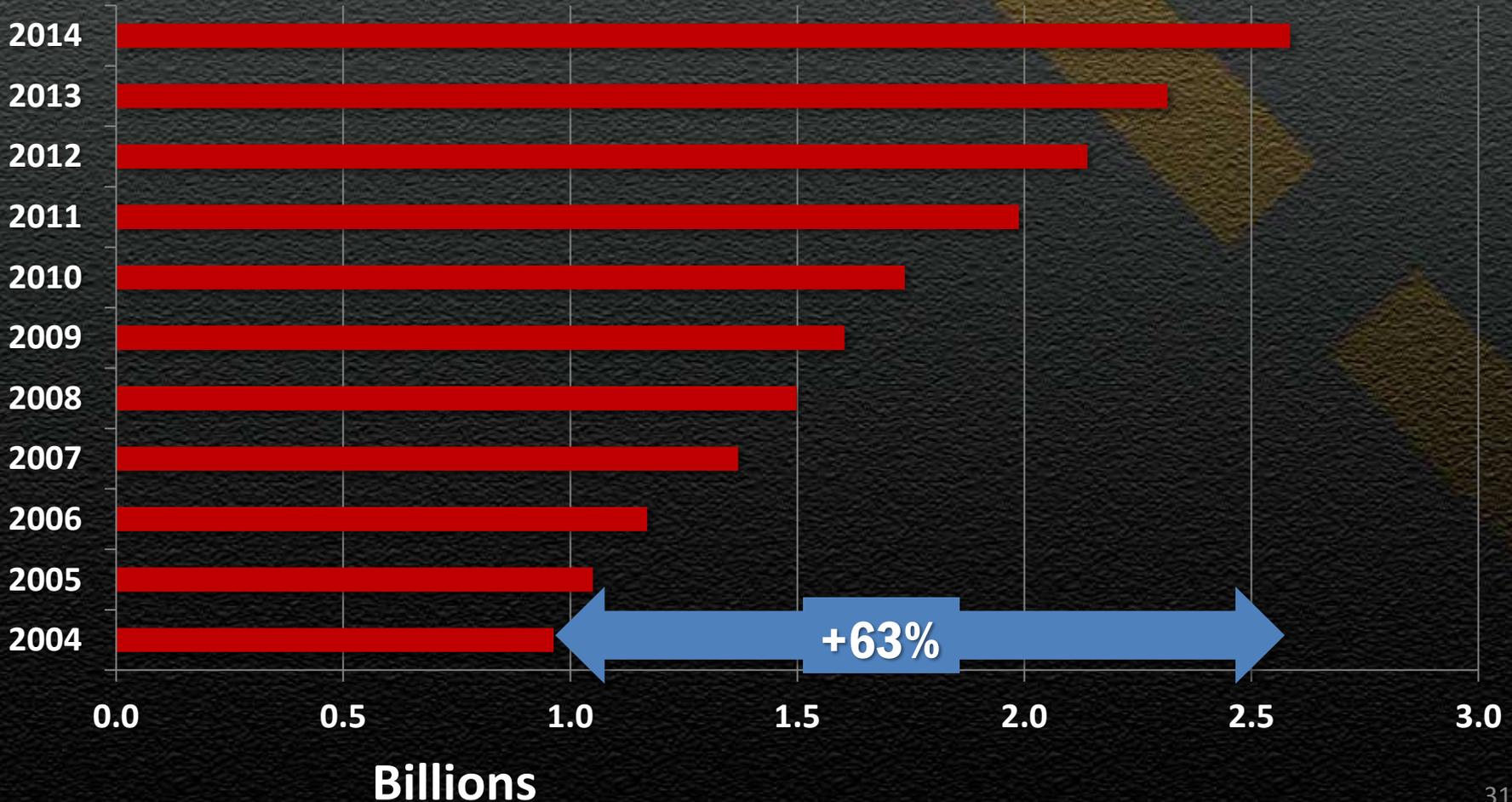
DNT - Taxable Sales (1-Mile Corridor Buffer)





Economic Engine

US 75 - Taxable Sales (1-Mile Corridor Buffer)





Economic Engine

5.5 Miles: PGBT-SRT

2014 Taxable Sales per Mile:

\$209.6 Million

Avg. Yearly Growth per Mile:

\$15.2 Million



18 Miles: I-635-SRT

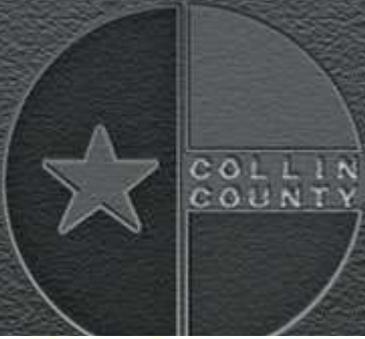
2014 Taxable Sales per Mile:

\$143.6 Million

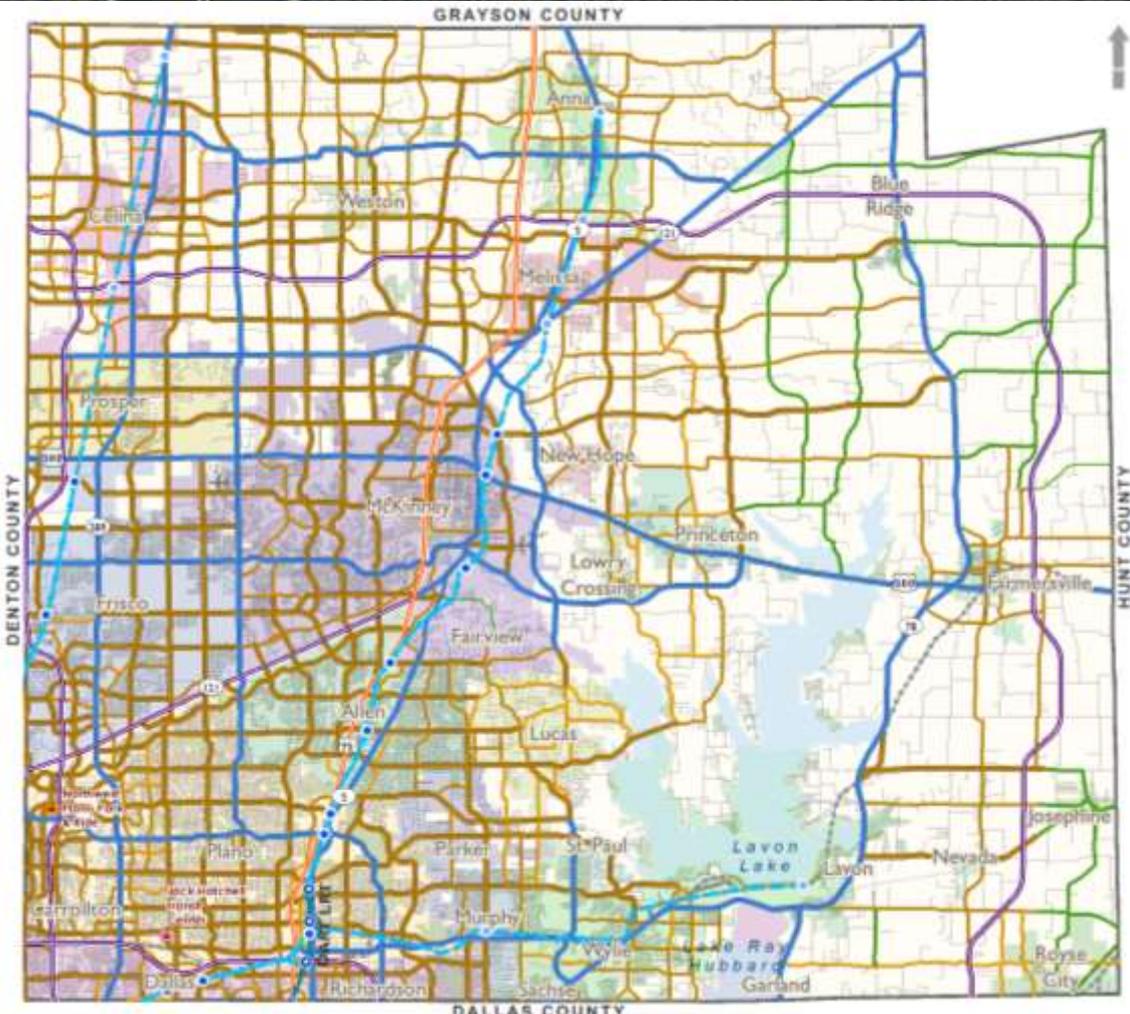
Avg. Yearly Growth per Mile:

\$9 Million





Estimated Funding Needed for LARs and Principal Arterials (blue) to 2040



Outer Loop Rockwall Co to Denton Co 4 main lanes 4 service road lanes	\$2.4 billion
US 75 Re-build H 635 to SRT	\$3 billion
US 75 Widening OL to Co Line	\$190 million
US 78 as a LAR PGBT to FM 6	\$790 million
US 380 as a LAR US 75 to Preston Rd/SH 289	\$535 million
LAR Parallel to US 75 from Laud Howell/FM 543 to PGBT	\$1.1 billion
DNT Extension and Widening	\$1.6 billion
SRT Widening includes Denton Co	\$110 million
PGBT Widening including Dallas and Denton Co	\$78 million
Collin Co Mobility Plan Principal Arterials	\$1.3 billion
TOTAL 2040 NEEDS	\$11.103 billion



Estimated Funding Available to 2040

		MPA	Collin**
Maximize Existing System	Infrastructure Maintenance <ul style="list-style-type: none"> Maintain & Operate Existing Facilities Bridge Replacements 	\$37.4	\$4.0
	Management and Operations <ul style="list-style-type: none"> Improve Efficiency & Remove Trips from System Traffic Signals and Bicycle & Pedestrian Improvements 	\$7.2	\$0.9
	Growth, Development, and Land Use Strategies More Efficient Land Use & Transportation Balance	\$3.6	\$0.5
Strategic Infrastructure Investment	Rail and Bus Induce Switch to Transit	\$27.2	\$2.4
	HOV/Managed Lanes Increase Auto Occupancy	\$43.4	\$8.3
	Freeways/Tollways and Arterials Additional Vehicle Capacity		
Mobility 2040 Expenditures		\$118.9*	\$16.1*

DRAFT

*Actual dollars, in billions. Values may not sum due to independent rounding.

**Estimated values, actual figures will be determined by ongoing project and program implementation.



Collin County Estimated Gap Through 2040

Needs \$11.1B

Available \$ 8.3B

Gap \$ 2.8B

Over 25 years, per year is \$112M

For 5 years, that is \$560M



Next Steps

- **Develop process for cities, TxDOT, transit agencies and NCTCOG to work together on build-out plan**



Next Steps

- **Cities and County agree where LARS should go in order to maximize larger commercial development as opposed to neighborhood commercial**



Next Steps

- **Work together to find routes through our fast-growth county now in order to preserve ROW**



Questions?



Contacts

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