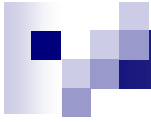




Traffic Congestion in Houston

Presented by Bill King

www.BillKingHouston.com



The “Travel Time Index” Defined

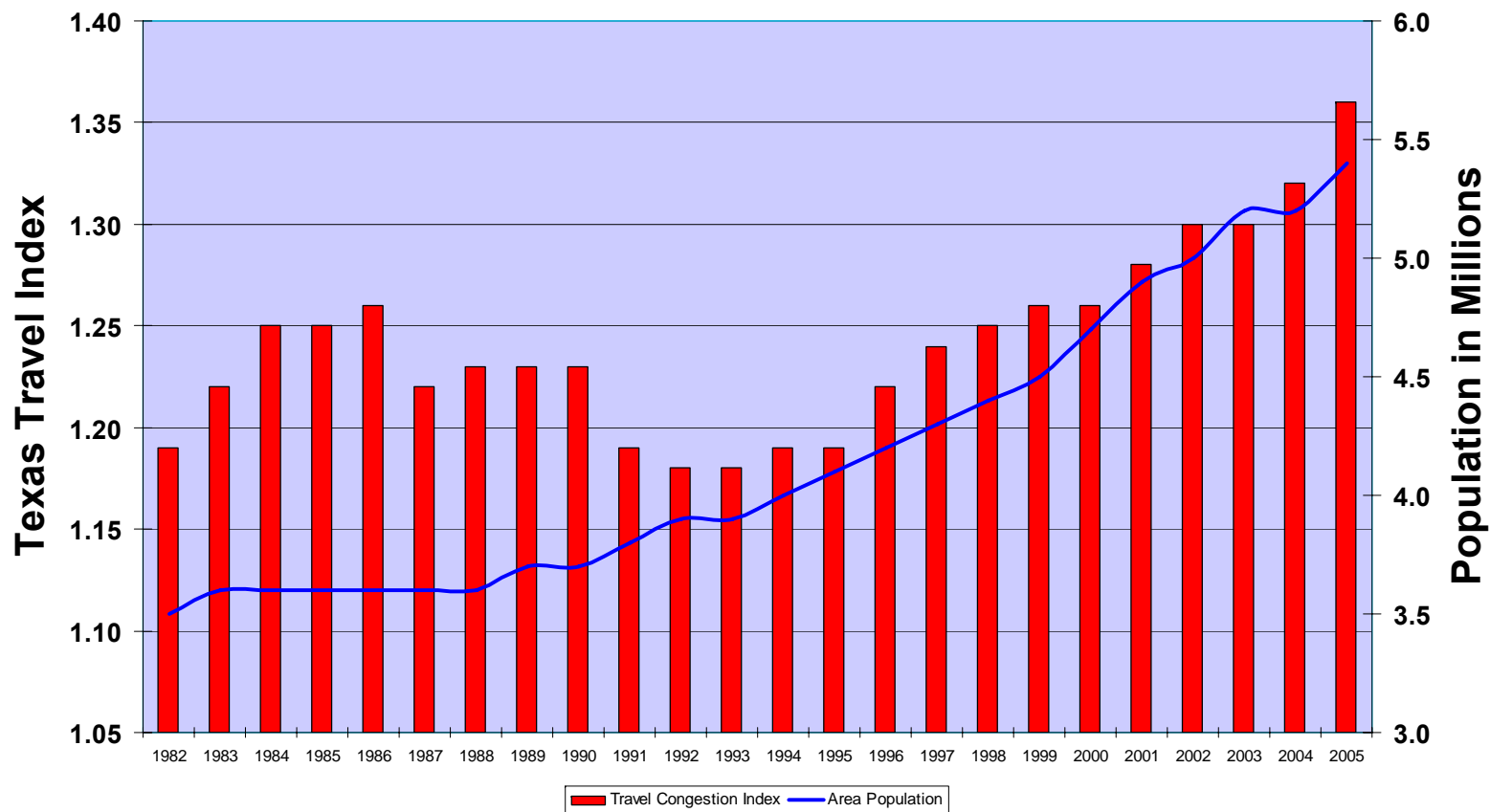
1.36

30 Minute Trip = 41 Minute Trip

(+ 36%)

The History of Congestion in Houston

Growing Congestion Problem In Houston

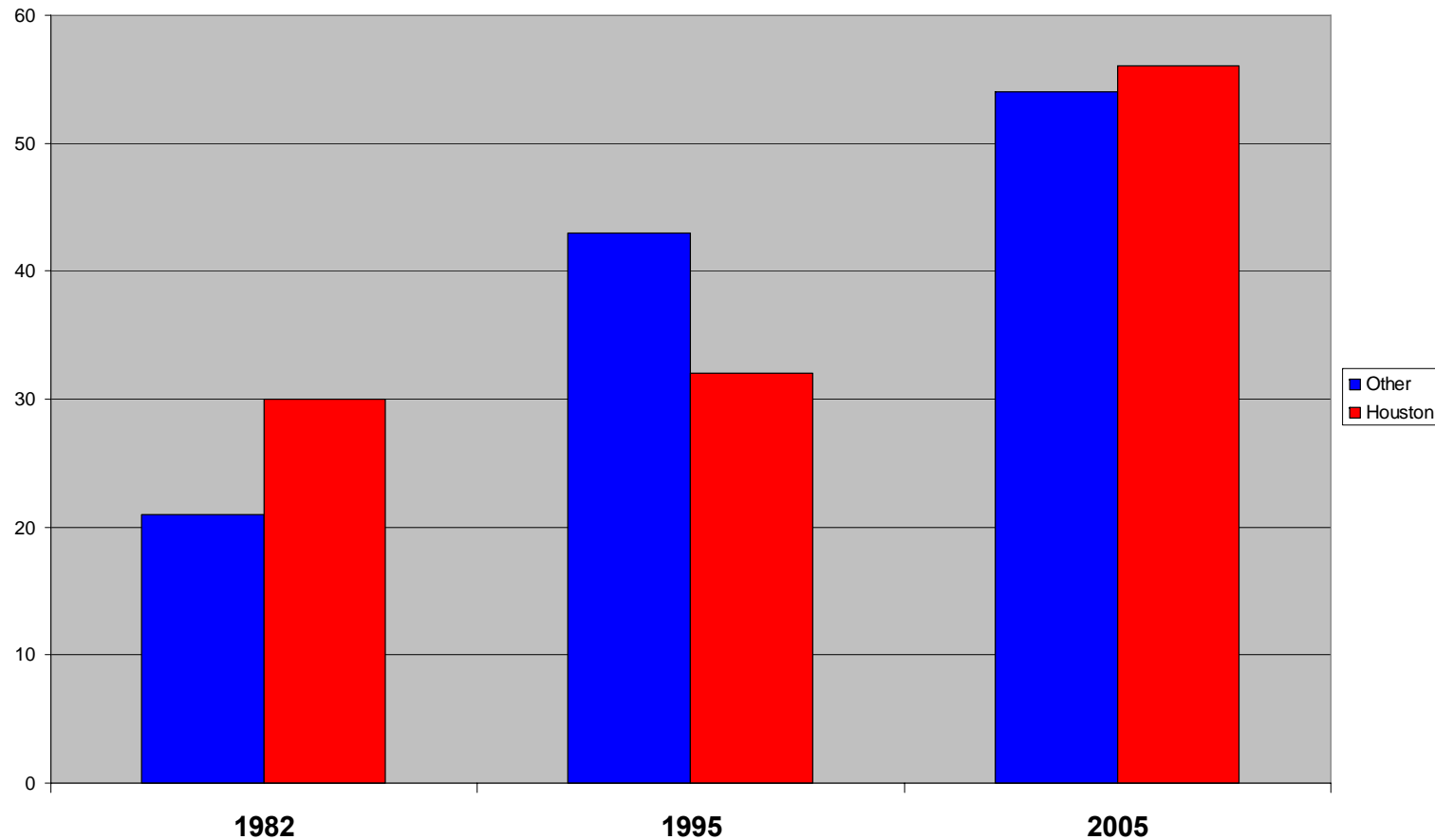


Congestion data taken from the Texas Transportation Institute 2007 Urban Mobility Study

Population Data Taken from the Texas State Library and Archive Commission (1982-1999) and the Texas State Data Center (2000-2005)

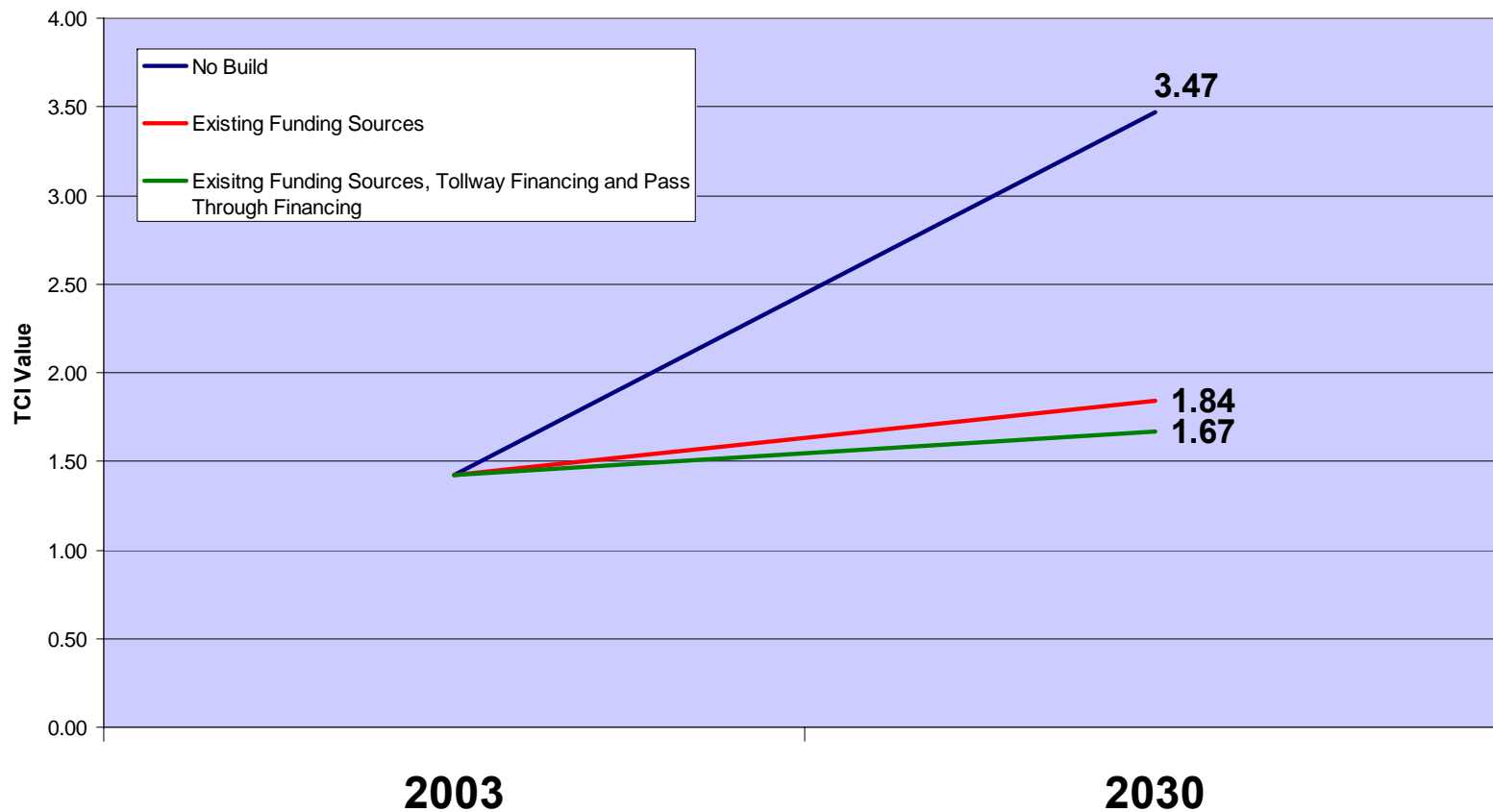


Houston Congestion Now Worse Than Other Major U.S. Cities



Data taken from the Texas Transportation Institute 2007 Urban Mobility Study

Congestion Expected to Get Worse in Houston Under Most Scenarios



Graphic taken from the Houston-Galveston Area Council 2006 Texas Metropolitan Mobility Plan



The Cost of Houston Congestion

(Annually)

Time = 124 Million hours
≈ 56 hours per Commuter

Fuel = 92 Million gallons
≈ \$250 Million
≈ \$125 Per Commuter

Increased Emissions
≈ 874,000 Tons of CO₂

**Additional Cost of
Vehicle Maintenance**
= ???



Fundamental Congestion Equation

■ Demand

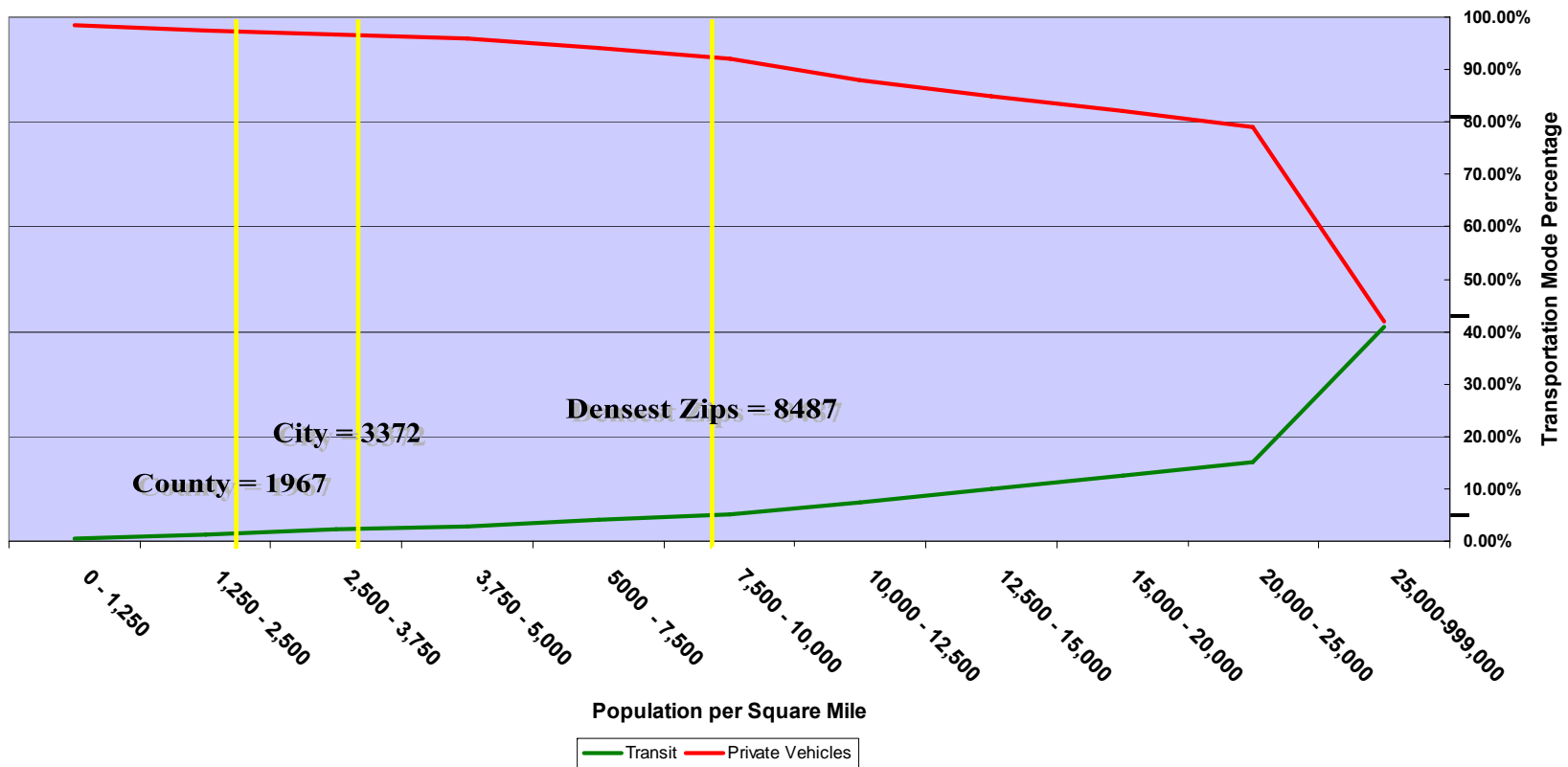
- Limit growth/change development patterns
- Transit alternatives
- Telecommuting
- Flex Hours

■ Supply

- Build more lane miles
- Increase the efficiency
 - Incident Management (Safe Clear, MAP)
 - Ramp/Intersection Improvements/Grade Separations
 - Smart Streets-ITS

Houston Density Limits Effectiveness of Transit

The Impact of Density on Modal Volume



Modality Info per 2006 Transportation Research Board's "Commuting in America"
 Density Data per 2000 Census per U.S. Census Bureau



Daily Trips by Type - 2007

Home to Work	3,560,000	18%
Home to Other (School, Store, etc.)	9,540,000	48%
Other - Not Home Based	2,050,000	10%
Work Related	3,400,000	17%
Misc. (Taxi, Transient)	1,330,000	7%
Total Daily Trips	19,880,000	
*Source – HGAC Model – Harris and surrounding counties		



Sources of Roadway Funds

■ Local

- Property Taxes
- Sales Taxes (METRO)
- Tolls (HCTRA)

■ State\Federal

- Vehicle Registration Fees (\$500MM)
- Federal Fuel Tax
 - 18.4¢/gal.
 - \$2.5 Billion
- State Fuel Tax
 - 20¢/gal. (5¢ to Education)
 - \$2.2 billion



Your Share of the Gas Tax

- Drive 15,000 miles per year @ 15mpg
- Use 1,000 gallons of gas
- @ 38.4¢ per gallon
- **Annual Cost = \$384**

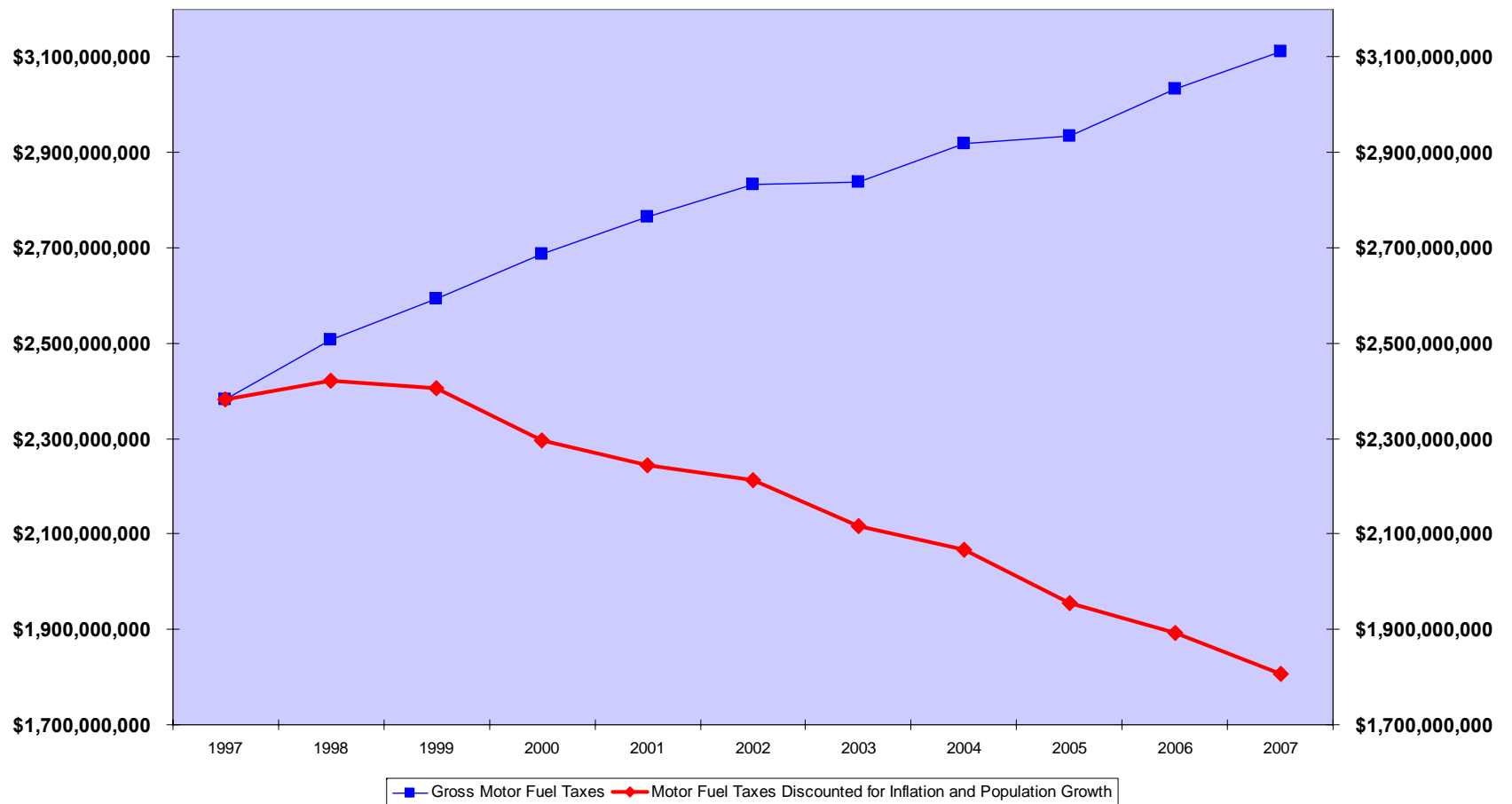


State/Federal Highway Funds (2007)

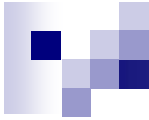
- Total fuel tax, license & misc. receipts ➤ 5.7 Billion
- Total borrowing ➤ 3.0 Billion
- Total Resources ➤ 8.7 Billion
- Maintenance Expenses ➤ 4.7 Billion
- New Design & Construction ➤ 4.1 Billion

Decreasing Investment in Roads Statewide

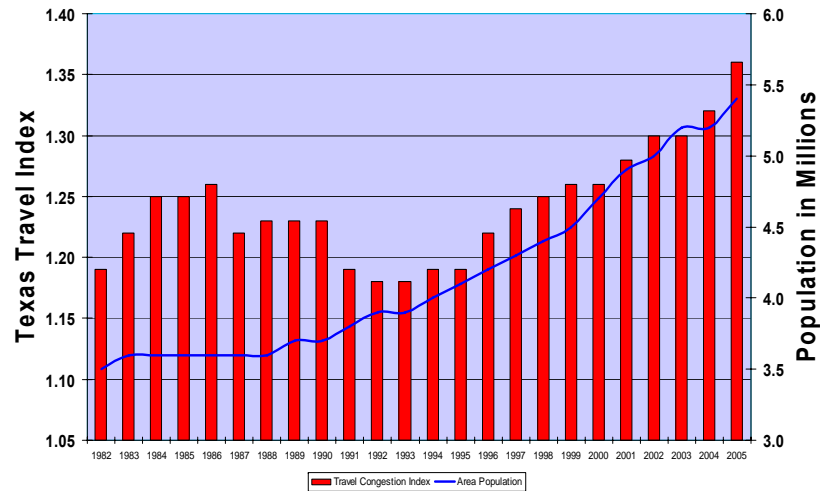
Motor Fuel Taxes Discounted for the Effects of Inflation and Population Growth



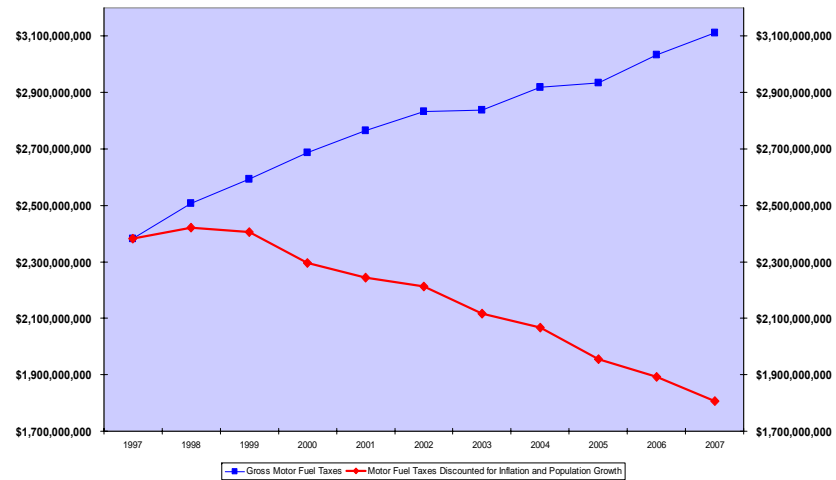
Revenue data per Texas Comptroller. Census data per U.S. Census Bureau. Inflation Data per Consumer Price Index.



Growing Congestion Problem In Houston



Motor Fuel Taxes Discounted for the Effects of Inflation and Population Growth



The History of Congestion vs. Real Investment to Roadways

Congestion data taken from the Texas Transportation Institute 2007 Urban Mobility Study

Population Data Taken from the Texas State Library and Archive Commission (1982-1999) and the Texas State Data Center (2000-2005)

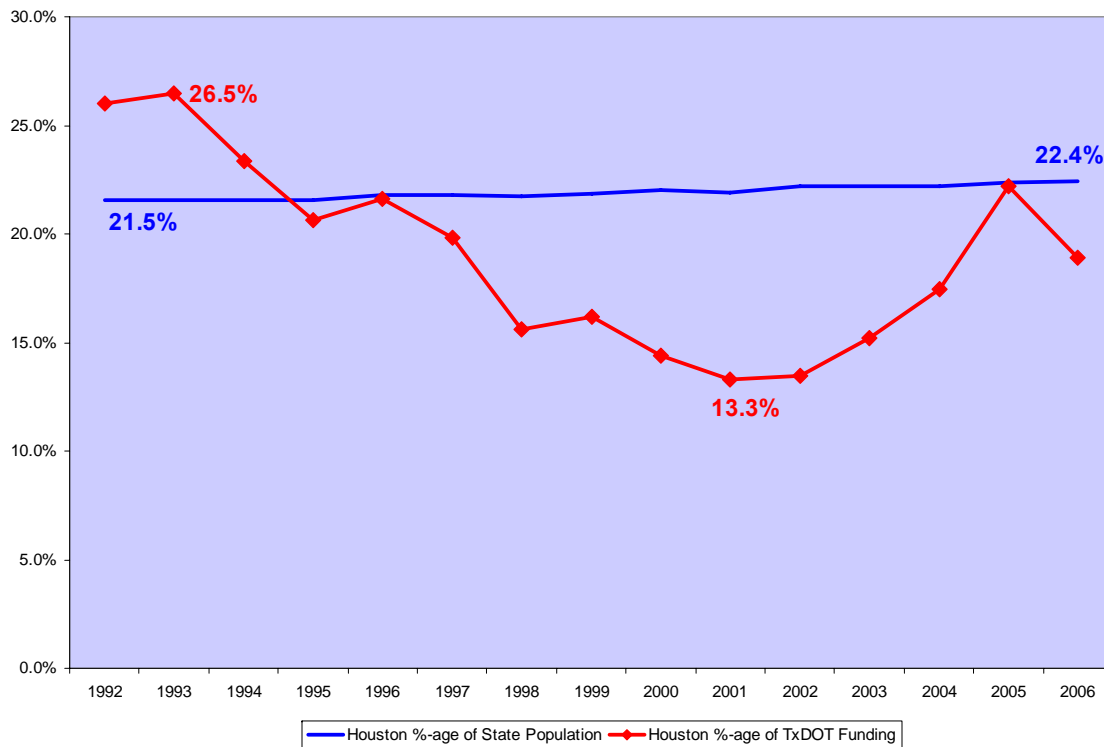
Lost in Washington

- Federal government only returns 78% of motor fuels tax collected in Texas



Lost in Austin

\$1,300,000,000 Shortfall in Last 10 Years



- Houston Population as a %-age of state population averaged 22.1% for the 10 year period shown
- In that same time period, TxDOT funding to the Houston Region averaged 16.7% of all state funding

Data from TxDOT's annual DISCO publications.



Houston's Donation to Other States and Other Texas Cities

Donated to Other States	\$100 Million
Donated to Other Regions in Texas	\$135 Million
Total Donated by Houstonians	\$235 Million Annually

Houston Region's Vehicle Collision Facts



84,080 serious crashes
627 fatalities
93,971 persons injured

**Likelihood of a fatal
or injury crash was:**

**36% higher than
statewide average**

**149% higher than
national average**

Percent of Congestion Caused by Incidents (Collisions & Breakdowns)



Houston = 50%

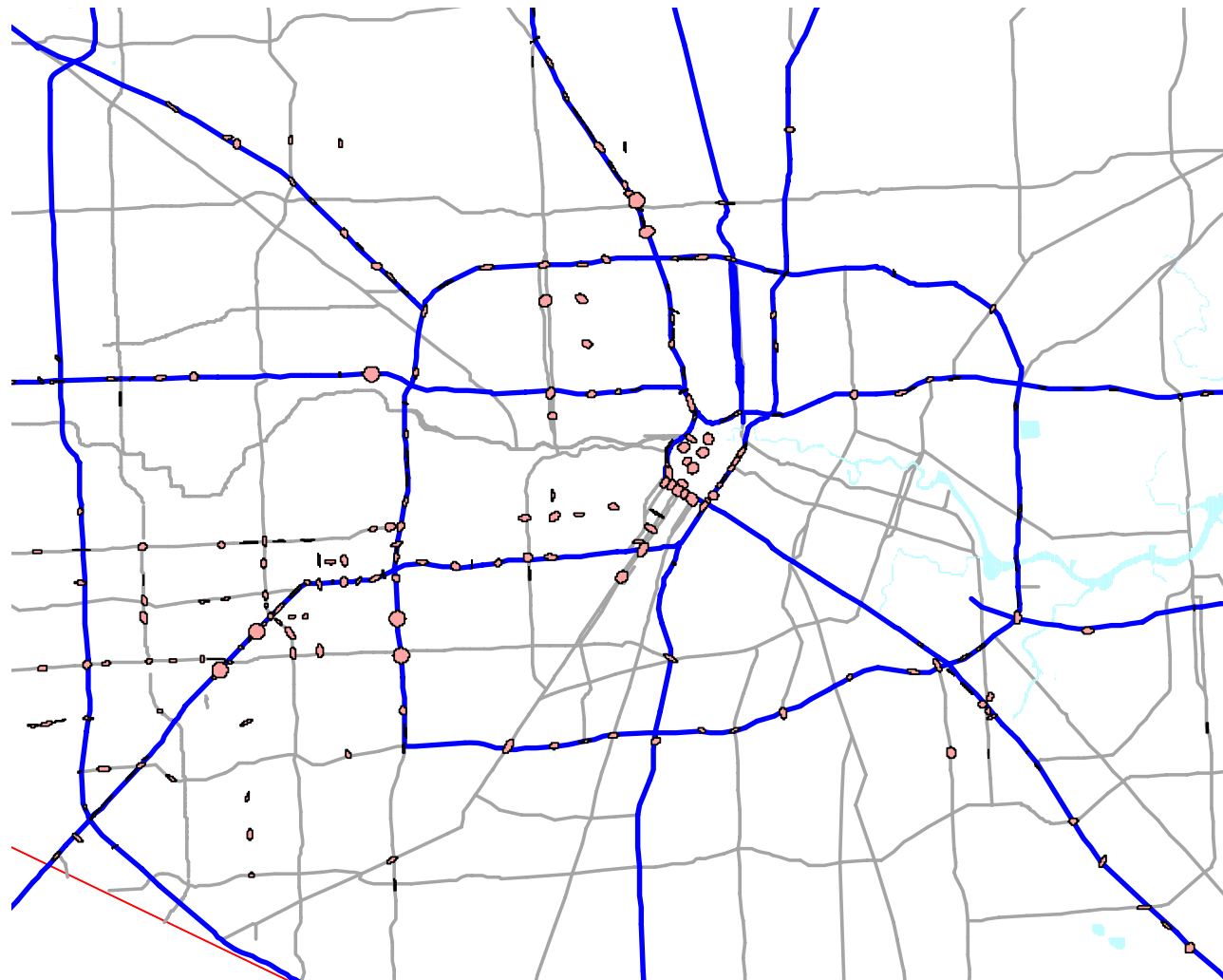







Causes of Collisions (Fatal/Injury crashes only)

	Houston Region	U.S. Average
Speeding	39%	13%
Failing to yield	20%	19%
Failing to stop	11%	9%
Running red light	8%	5%
DUI/DWI	7%	7%
Following too close	3%	2%
Improper turn	2%	2%
National Safety Council, 1999.		

Major Crash Hot Spots in Central Houston: 1998-2000

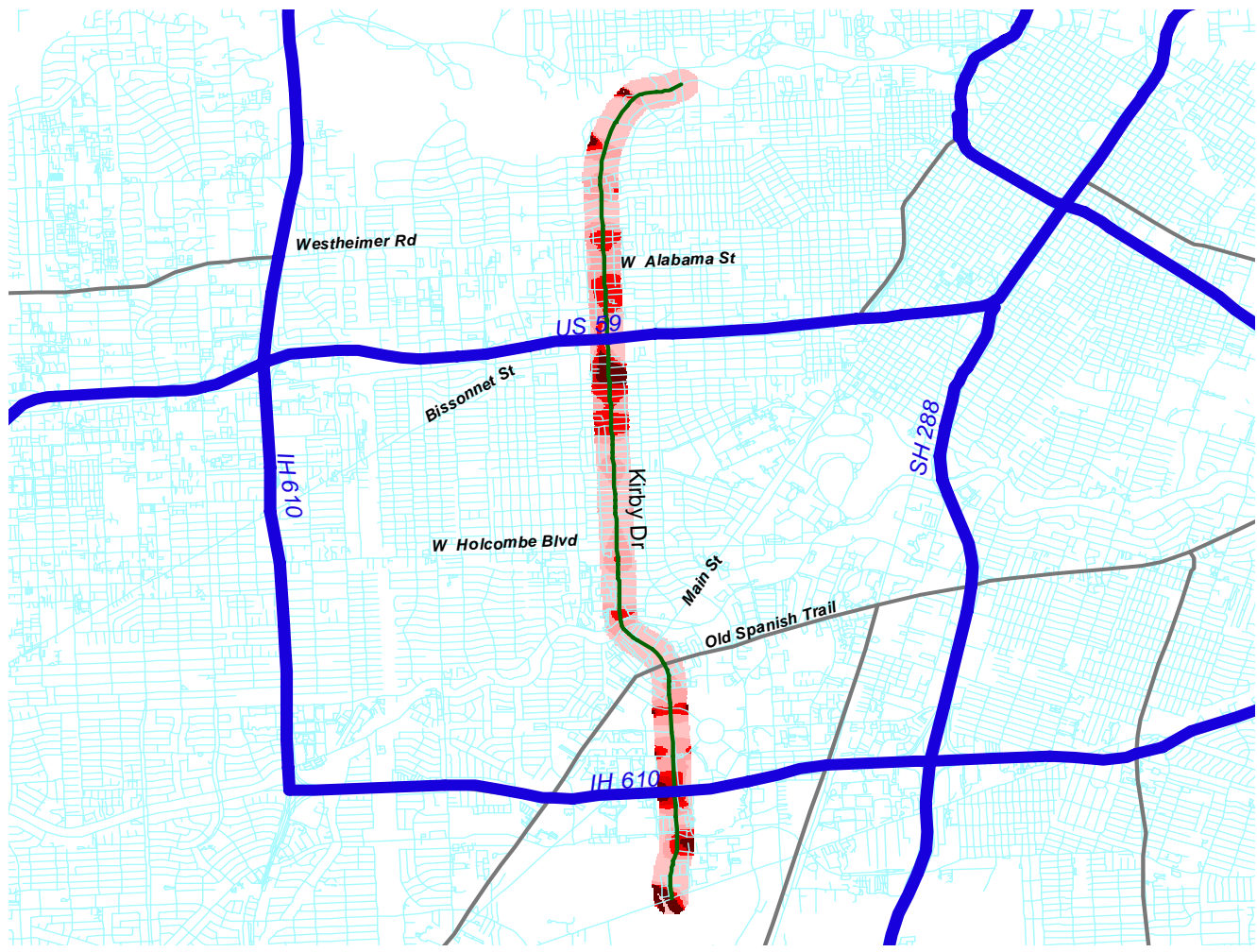
Location of Hot Spots with 78 or More Crashes



	Hot spots: 78+ crashes
	Freeway
	Water
	Arterial
	Counties



High Risk Locations on Kirby Drive: 1998 to 2000 Crashes Per 100 Million Vehicle Miles Traveled



Legend

- Freeways
- Kirby Dr
- Arterials
- Street

Crash risk

- Low
- High





Cost & Benefits from Hot Spot Mitigation

Type of Project	Number	Crashes	Estimated One-Time Cost	Estimated Annual Benefit
Freeway segments	150	7,766	\$75 million	\$58 million
Intersections	70	3,756	\$35 million	\$28 million
Arterial segments	124	4,930	\$62 million	\$37 million
Total			\$172 million	\$123 million



HGAC/TTI Estimates

Cost of Congestion in Houston Region	\$2.3 Billion
Cost of Crashes	\$4.0 Billion
Total Cost	\$6.3 Billion

Some Ways to Tackle Congestion

- Address crash rate

- Intersection improvements
- Safety based enforcement efforts
- Truck rollovers



- Improved construction administration

- San Felipe
- Incentive payments for finishing early



Some Ways to Tackle Congestion

- Improved Incident Management
 - Pay for all tows
 - Coop programs with County & small cities
- At grade railroad crossings
 - 1200 crossing – (fixing just 55 - \$800 million)



Some Ways to Tackle Congestion

- Improvements to HOV Lanes
 - Restrooms
 - Better parking
 - More buses
 - Extend lanes
- Sales Tax Only Transit??





What is necessary?

- Send a clear signal to our elected officials that relieving traffic congestion is our priority



Portland 1999 Regional Transportation Plan

- *Increased congestion will “signal positive urban development . . . **Transportation solutions aimed solely at relieving congestion are inappropriate.**”*



What is necessary?

- Send a clear signal to our elected officials that relieving traffic congestion is our priority
- Make investments that have the highest cost – benefit ratio for reducing congestion



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