



## Addressing Financial Uncertainty in the Planning Process

September 2, 2011

# Agenda

## Revenues

- What's happening nationally
- Reauthorization
- Addressing uncertainty in revenues

## Costs

- What's happening with costs
- Year of expenditure and inflation
- Addressing uncertainty in costs

**Addressing Financial Uncertainty**

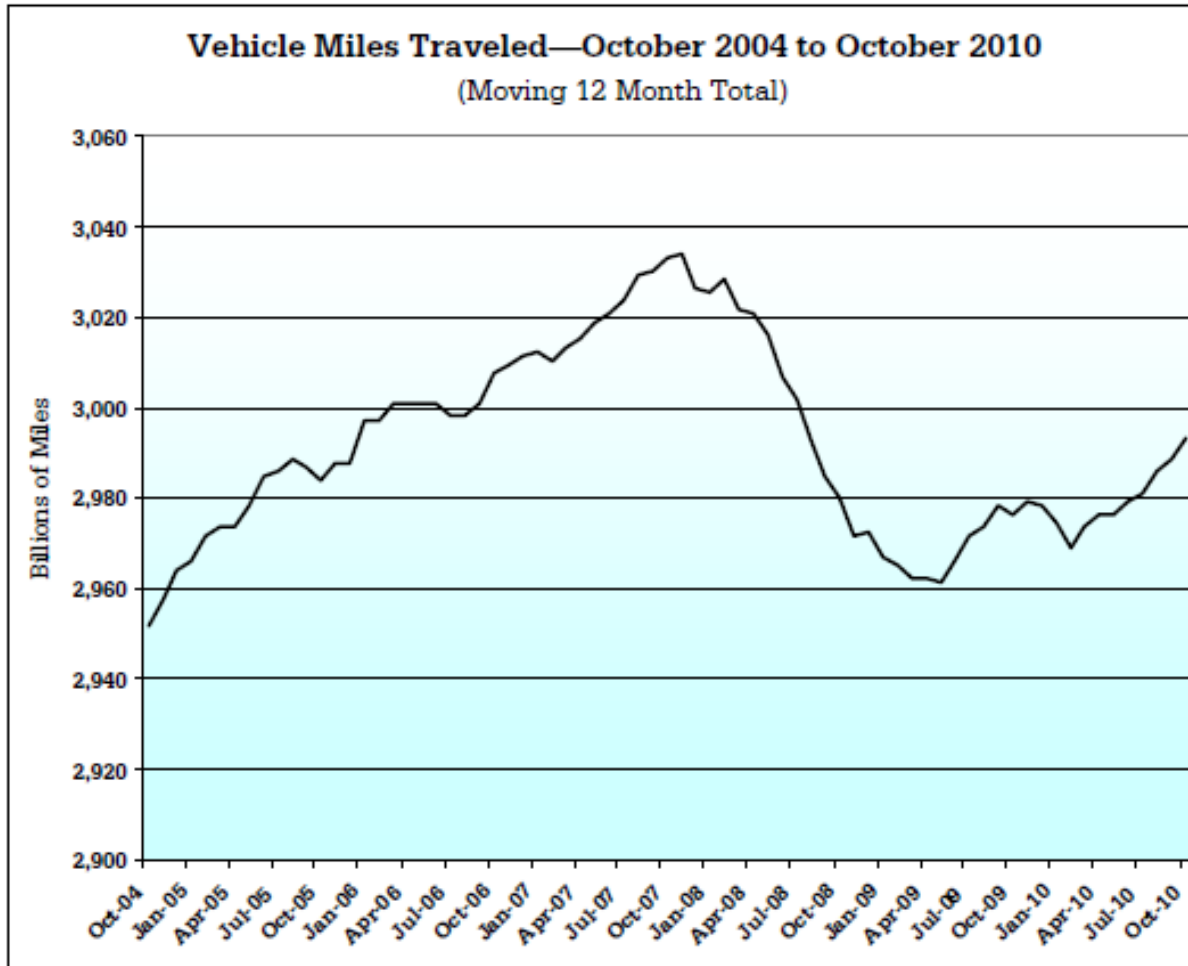
# **REVENUES**

# Federal Surface Transportation Funding

## Outlook for the Highway Trust Fund

- Recent spending in excess of resources
- Future direction: consensus and divergence
  - Administration's FY 2012 budget & reauthorization proposal
  - House T&I Committee reauthorization principles

# VMTs fluctuate, as does the national economy

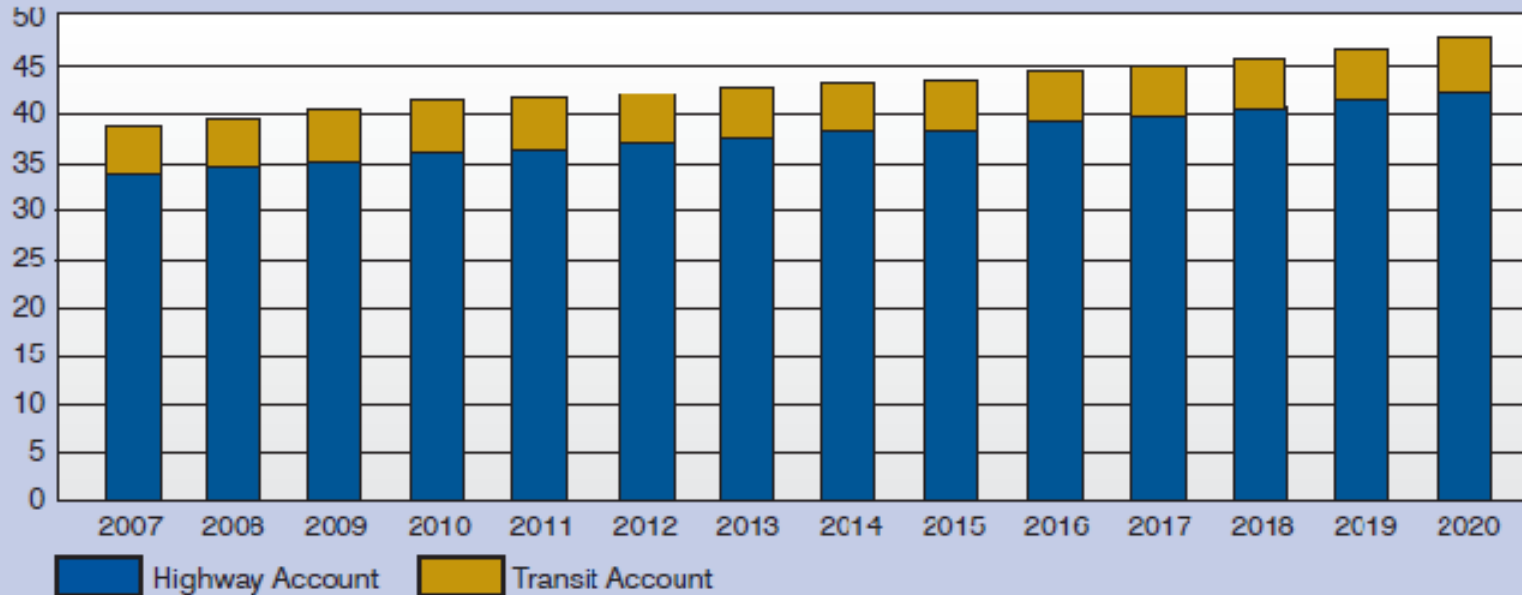


Source: American Association of State Highway and Transportation Officials

## Federal Revenues expected to increase...

**Exhibit 5-14. Projections of Highway Trust Fund revenue, 2007–2020**

Dollars, Billions

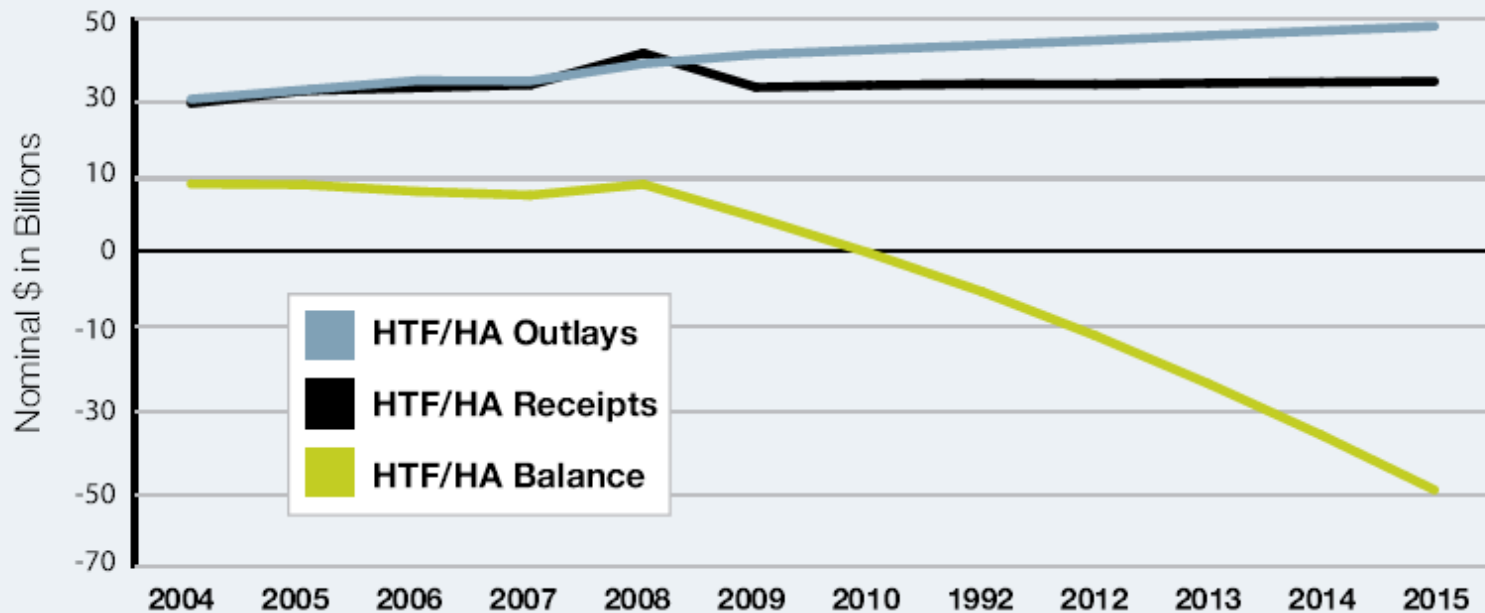


This exhibit shows projections of revenues to the Highway Account and Transit Account of the Highway Trust Fund from 2007 to 2020.

Source: U.S. Department of the Treasury projections and Commission Staff analysis.

## ...but can't support spending levels of SAFETEA-LU

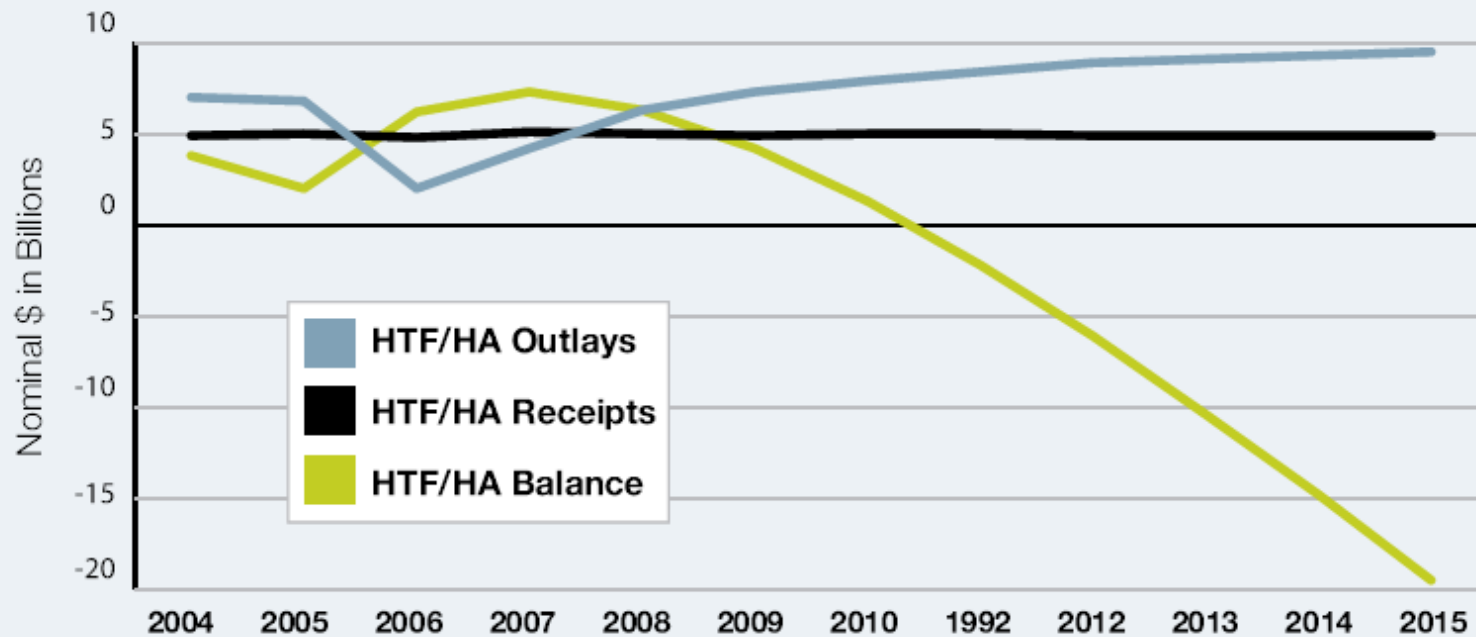
### EXHIBIT 2-12: HTF / HIGHWAY ACCOUNT CURRENT TRENDS



Source: Forecasts made by AASHTO using its federal HTF funding model and based on assumptions contained in the Midsession Review of the FY 2009 Budget

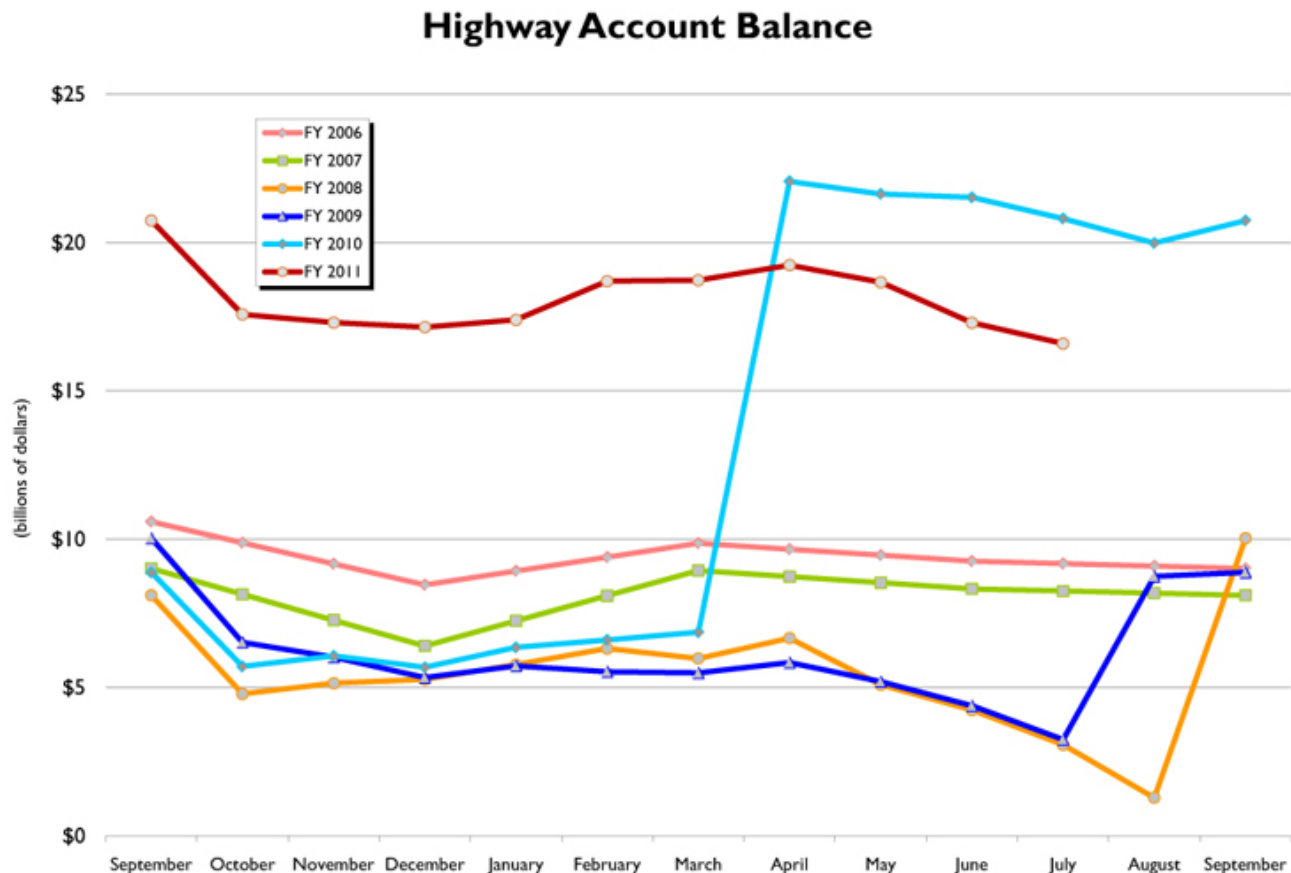
## This applies to both highway and transit spending

### EXHIBIT 2-13: HTF / TRANSIT ACCOUNT CURRENT TRENDS



Source: Forecasts made by AASHTO using its federal HTF funding model and based on assumptions contained in the Midsession Review of the FY 2009 Budget.

# General Fund transfers have prevented HTF insolvency

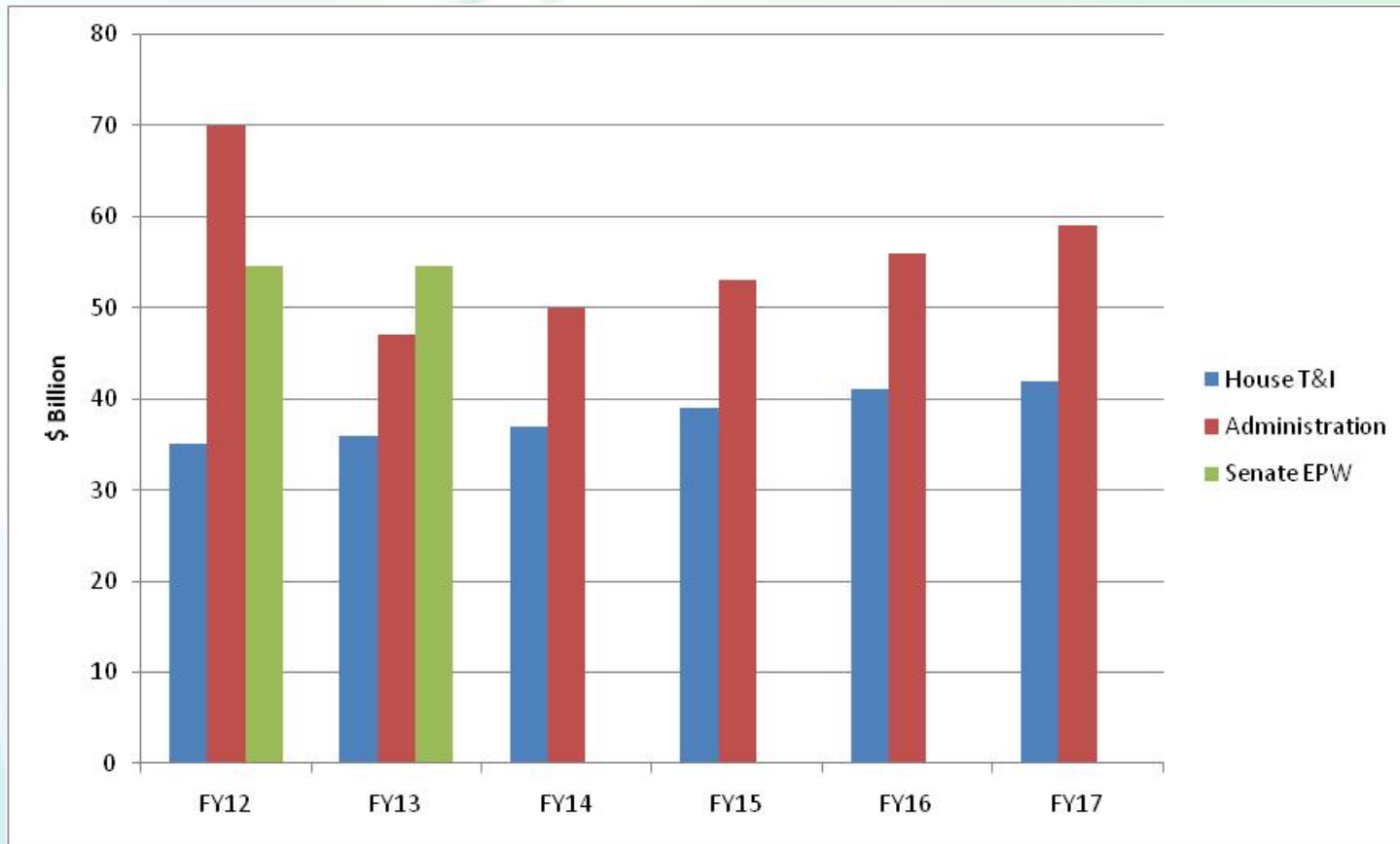


Ending balance for FY 2008 includes \$8.017 billion transferred from the General Fund in September pursuant to Public Law 110-318.

Ending balance for FY 2009 includes \$7 billion transferred from the General Fund in August pursuant to Public Law 111-46.

Ending balance for FY 2010 includes \$14.7 billion transferred from the General Fund in April pursuant to Public Law 111-147.

# Proposed Reauthorization Levels



## The Outcome Range – Significant Uncertainty!

### No new revenues:

- A six-year level below the SAFETEA-LU authorization of \$233 billion

### New revenues:

- A six-year level as proposed by the Administration of \$556 billion

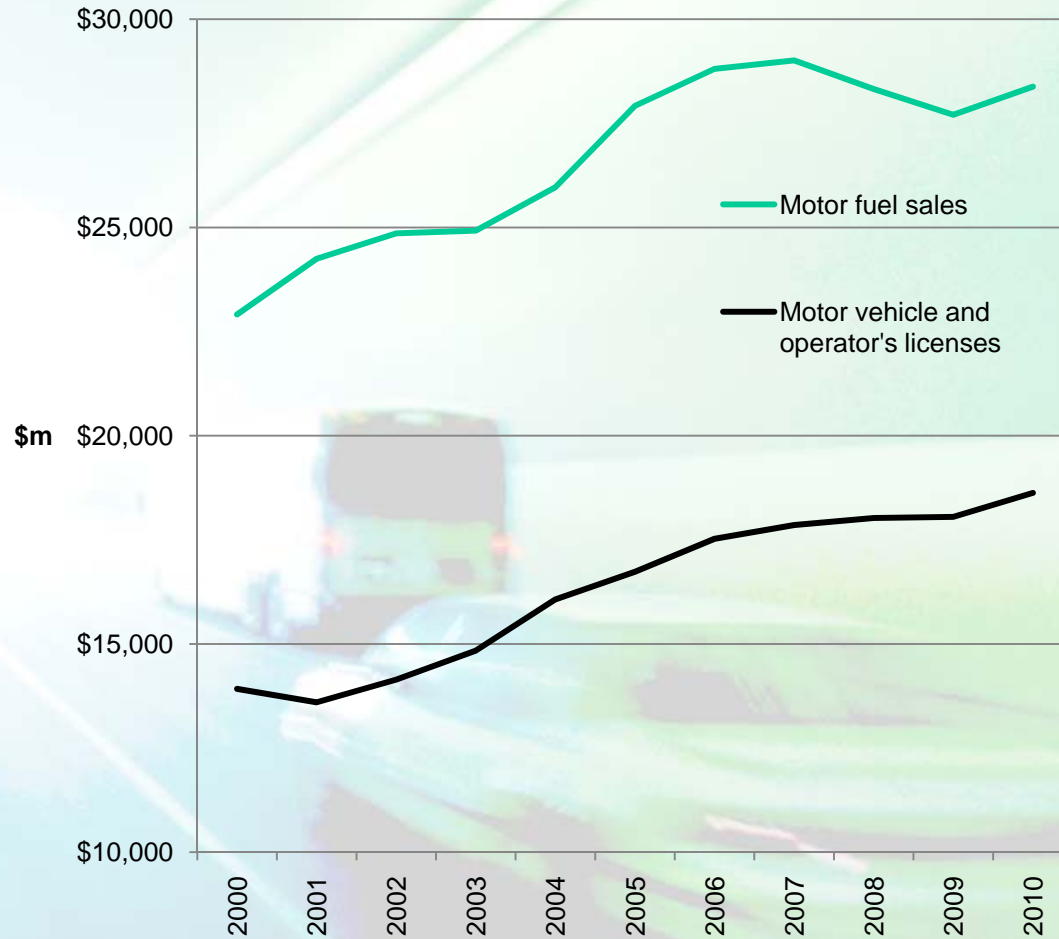
To be continued...

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## Expiring gas tax may be next battle on the Hill

### NATIONAL TOTALS OF STATE AND LOCAL TAX REVENUE, BY TYPE OF TAX



Source: US Census Bureau

## Dealing with Uncertainty

Unprecedented uncertainty is a given...

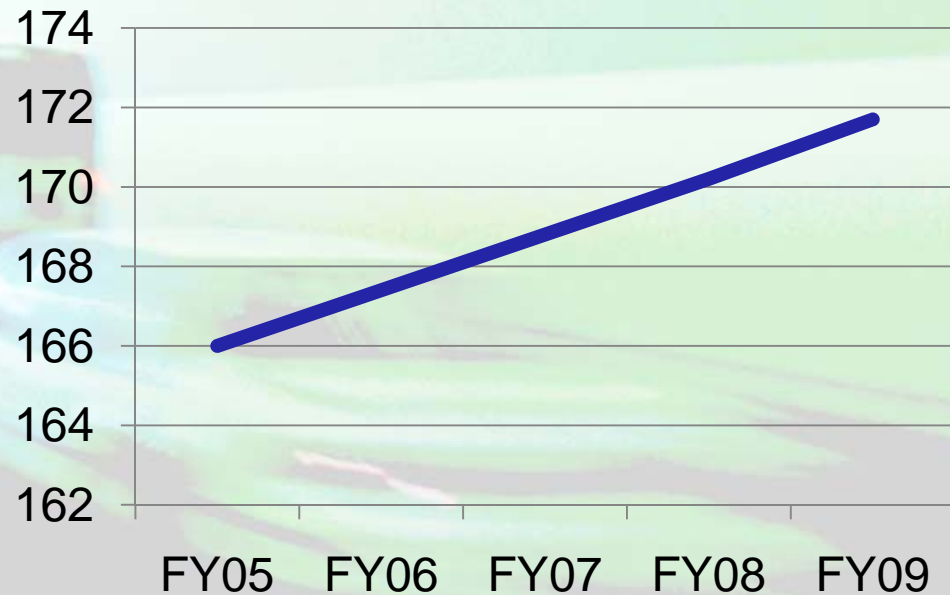
- How does it impact your determination of fiscal constraint?
- How are some of your peers dealing with it?



## Reasonably Expected to Be Available

### Federal funds

- Apportionments – straight line trend
- Discretionary – historic percentage
- ARRA? TIGER?



# Reasonably Expected to be Available

## State funds

- **Motor fuel**
  - When was the forecast last updated?
  - When were underlying factors (population, employment, etc.) updated?
- **Other sources**
  - When were the forecasts updated?
  - How long are they authorized?
  - Do voters have to approve renewal?
  - Annual appropriation?
  - What's the track record?

# Reasonably Expected to Be Available

## Washington State – State Funding Forecast

Figure 3 Forecast to Forecast Biennium Comparison of All Transportation Revenues  
November 2010 forecast - millions of dollars

Forecast to Forecast Comparison for Transportation Revenues and Distributions November 2010 • Millions of Dollars									
	Current Biennium 2009-2011			2011-2013			16-Year Period (2011-2027)		
	Forecast Nov-10	Chg from Sep-10	Percent Change	Forecast Nov-10	Chg from Sep-10	Percent Change	Forecast Nov-10	Chg from Sep-10	Percent Change
<b>Sources of Transportation Revenue</b>									
Motor Vehicle Fuel Tax Collections	2,484.5	1.9	0.1%	2,549.6	11.9	0.5%	21,048.0	(1,809.7)	-7.9%
Licenses, Permits and Fees	873.0	2.9	0.3%	912.7	3.0	0.3%	8,072.5	8.6	0.1%
Ferry Revenue†	301.3	1.7	0.6%	317.9	6.5	2.1%	2,923.8	74.7	2.6%
Toll Revenue	95.8	(0.2)	-0.2%	104.3	0.0	0.0%	947.7	0.0	0.0%
Aviation Revenues ±	5.7	(0.0)	-0.1%	6.0	0.0	0.3%	49.8	(0.4)	-0.8%
Rental Car Tax	43.7	0.5	1.1%	47.4	0.0	0.0%	496.0	(5.2)	-1.0%
Vehicle Sales Tax	54.0	0.2	0.4%	60.6	(0.4)	-0.7%	666.4	0.4	0.1%
Driver-Related Fees	198.0	1.4	0.7%	201.9	1.5	0.8%	1,723.8	8.6	0.5%
Business/Other Revenues ±	7.4	0.0	0.0%	13.1	(0.0)	-0.1%	96.9	(0.2)	-0.2%
<b>Total Revenues</b>	<b>4,063.5</b>	<b>8.3</b>	<b>0.2%</b>	<b>4,213.5</b>	<b>22.5</b>	<b>0.5%</b>	<b>36,024.8</b>	<b>(1,723.3)</b>	<b>-4.6%</b>

Washington State Transportation Revenue Forecast Council:  
November 2010 Transportation Economic and Revenue Forecasts

# Reasonably Expected to be Available

## Pennsylvania – Cooperative Revenue Forecasts

Appendix 2  
Highway/Bridge Base Funding Allocations  
FFY 2011 (\$000)

Region	Interstate Maintenance	NHS	STP	State Highway	Federal Bridge	State Bridge	Urban	Safety	CMAQ	Rail	Enhancements	ACT 44 Revenue	TOTAL
Delaware Valley	0	41,538	40,343	38,588	83,522	30,839	48,703	10,884	43,914	1,115	8,309	82,074	404,017
Southwest Penna	0	39,075	38,242	38,588	109,049	52,981	22,481	9,779	28,320	1,820	4,953	84,121	424,989
Harrisburg	0	7,887	7,738	7,401	13,288	8,471	4,828	2,441	5,231	378	979	14,999	71,418
Scranton/WB	0	7,881	7,214	6,902	12,621	8,128	4,903	2,158	5,472	431	988	14,213	68,781
Lehigh Valley	0	7,787	7,592	7,284	13,034	8,315	7,031	2,209	5,951	308	982	14,101	72,584

**PENNSYLVANIA'S 2009 TRANSPORTATION PROGRAM FINANCIAL GUIDANCE**  
- Pennsylvania Planning Partners

# Reasonably Expected to be Available

## Local Funds

- **How much of a role does it play?**
- **Are specific sources identified?**
- **How long are they authorized (i.e., local option sales tax)?**
  - When were the forecasts last updated?
  - Does the State legislature have to authorize renewal?
  - Do voters have to approve renewal?
  - What's the track record?

# Reasonably Expected to be Available

## Orlando – Metroplan Local Revenue Forecast

<u>Osceola County</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	
<u>Tier 1 Revenues</u>				
Impact Fees (FIAM)	\$33,616,494	\$33,616,494	\$33,616,494	\$34,451,000
Special Projects ('08 CIP)		\$2,072,931	\$3,936,164	\$2,571,000
Gas Tax-Constitutional & County	\$0	\$0	\$0	
Local Option Fuel Taxes	\$0	\$0	\$0	
Other Financing Sources ('08 CIP)	\$1,377,500	\$7,023,056	\$6,332,802	
Infrastructure Sales Tax	<u>\$2,400,000</u>	<u>\$2,400,000</u>	<u>\$2,400,000</u>	<u>\$2,400,000</u>
<b>Total Tier 1 Revenues</b>	<b>\$37,393,994</b>	<b>\$45,112,481</b>	<b>\$46,285,460</b>	<b>\$39,431,000</b>
<u>Tier 2 Revenues</u>				
Second Local Option Fuel Tax	\$0	\$0	\$0	
<u>Tier 3 Revenues</u>				
Transportation Surcharge \$0.01 (25%)	\$0	\$0	\$0	
Rental Car Surcharge	\$0	\$0	\$0	
<b>Total Tier 3 Revenues</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>Total Capital Revenues for Roads</b>	<b>\$37,393,994</b>	<b>\$45,112,481</b>	<b>\$46,285,460</b>	<b>\$39,431,000</b>

*Metroplan Orlando 2030 Long Range Plan Technical Report 3: Financial Resources*

## Reasonably Expected to be Available

### Toll Revenues

- Existing vs. Proposed Facilities
- Underlying traffic forecasts are crucial
- RC Webinar - *Estimating Travel Demand and Revenues for Toll Road Projects*



# Reasonably Expected to be Available

## Toll Revenues

TABLE 1  
ACTUAL REVENUE AS PERCENTAGE OF PROJECTED RESULTS OF OPERATION

Authority/Facility	Year of Opening	Year 1	Year 2	Year 3	Year 4	Year 5
Florida's Turnpike Enterprise/Sawgrass Expressway (6)	1986	17.8%	23.4%	32.0%	37.1%	38.4%
North Texas Tollway Authority/Dallas North Tollway (6)	1986, 1987	73.9%	<b>91.3%</b>	<b>94.7%</b>	<b>99.3%</b>	<b>99.0%</b>
Harris County Toll Road Authority (Texas)/Hardy (6)	1988	29.2%	27.7%	23.8%	22.8%	22.3%
Harris County Toll Road Authority (Texas)/Sam Houston (6)	1988, 1990	64.9%	79.7%	81.0%	83.2%	78.0%
Illinois State Toll Highway Authority/ Illinois North South Tollway (6)	1989	<b>94.7%</b>	<b>104.3%</b>	112.5%	116.9%	115.3%
Orlando-Orange Expressway Authority/ Central Florida Greenway North Segment (6)	1989	<b>96.8%</b>	85.7%	81.4%	69.6%	77.1%

*NCHRP SYNTHESIS 364 - Estimating Toll Road Demand and Revenue*

## New Funding Sources

For each new source identified:

- How much will the source yield?
- When does it need to be in place to yield the forecast?
- *Who has to do what by when (milestones)?*
- Did new sources identified in the last plan happen?

# New Funding Sources

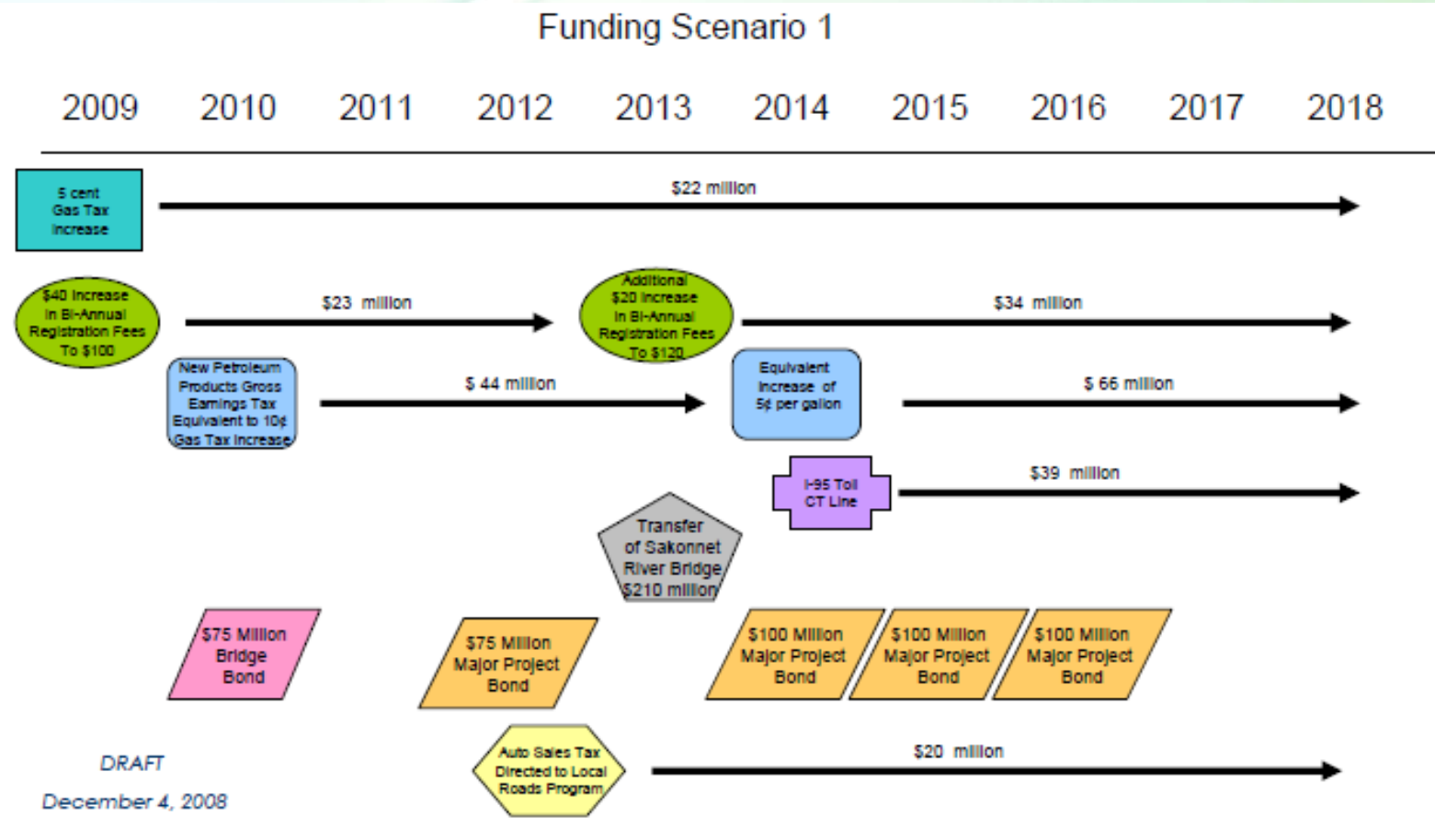
## Los Angeles – SCAG New Source Implementation Milestones

Milestone	Action(s)
1	Establish a Measure Renewal Committee
2	Campaign Finance
3	Marketing/Public Awareness Surveys
4	Expenditure Plan
5	Local Consensus
6	Ballot Measure by Imperial County/Extension of Local Sales Tax by FY2010-2011

*SCAG RTP - APPENDIX F: Implementation Plan for New Revenue Sources*

# New Funding Sources

## Rhode Island – Timing of New Sources



# New Funding Sources

## Washington, DC – What happened since the last plan?

### Finance Actions Since 2004

Listed below are specific finance actions taken by each of the jurisdictions since 2004. As mentioned previously, all jurisdictions committed to funding Metro Matters in order to meet WMATA's most critical short-term capital needs.

#### *District of Columbia*

- The District has committed to funding of the Davis Bill, but is contingent on similar actions to be taken in Maryland and Virginia;
- Dedicated some specific new funding sources to transportation; and

*Progress Report on the National Capital Region's Short-Term Transportation Capital Funding Needs*

# Revenue Scenarios

A method for dealing with uncertainty...

- Likely yields from current sources
- Risks to current sources
- Possible new sources
- Likelihood of new source implementation

North Jersey, Waco TX, Farmington NM

# Revenue Scenarios

## North Jersey – NJTPA

**Table 8-1A**  
**Summary of Capital Funding Assumptions:**  
**Cumulative Total of Funding Available 2010-2035 (Billions of Dollars)**

	Baseline	Plan 2035	Aspirational
Year-of-Expenditure Dollars	\$92.0	\$141.1	\$209.2
2009 Dollars	62.6	91.4	129.6
Increase Over Baseline		46%	107%

*NJTPA Plan 2035 Chapter 8 – Financing Plan 2035*

# Revenue Scenarios

## Waco, TX – Transit Revenue Scenarios

**Table 6.8 – Urban Public Transportation Revenue Assumptions by Scenario**

	<b>Baseline</b>	<b>Low</b>	<b>Low Medium</b>	<b>Medium</b>	<b>High</b>
'TRENDS' estimate of Federal Transit Funds to TX (\$Billions)*	\$1.73	\$2.37	\$2.43	\$3.19	\$5.04
Federal Gas / Use Taxes Dedicated to Transit	Same as current	Same as current	Same as current	10% increase to transit	30% increase to transit
Year of Gas / Use Taxes Increases to Transit	N/A	N/A	N/A	2015	2011
Increase in State Transit Funds	None	None	1% per year	1% per year	4% per year
Farebox Revenues	Change at same percentage change of combined federal / state / local revenues				
					4 % per year plus increase to

*Connections 2035 – The Waco Metropolitan Transportation Plan*

# Revenue Scenarios

## Farmington, NM – Small MPO

<b>OPTION #1</b>	
FMPO Annual Avg Share of D5 Federal Funds (reduced by 25%)	\$ 4,557,000
<i>Assume funding trend continues for next 25 years</i>	
FMPO reasonable revenue estimate from D5	\$ 113,925,000
Estimated Local Avg Entity Contribution to Regionally Significant Roads (reduced by 35%)	\$ 1,428,000
<i>Assume funding trend continues for next 25 years</i>	
MPO reasonable revenue estimate from Local Entities	\$ 35,700,000
<b>Total Estimated Revenues</b>	<b>\$ 149,625,000</b>
<b>OPTION #2</b>	

## Revenue Scenarios

**All the scenarios should be “reasonable”  
Optimism is OK – Fantasy to be avoided**

**The Plan must still be fiscally constrained  
One of the scenarios has to be chosen  
Most areas seem to pick one in the middle**



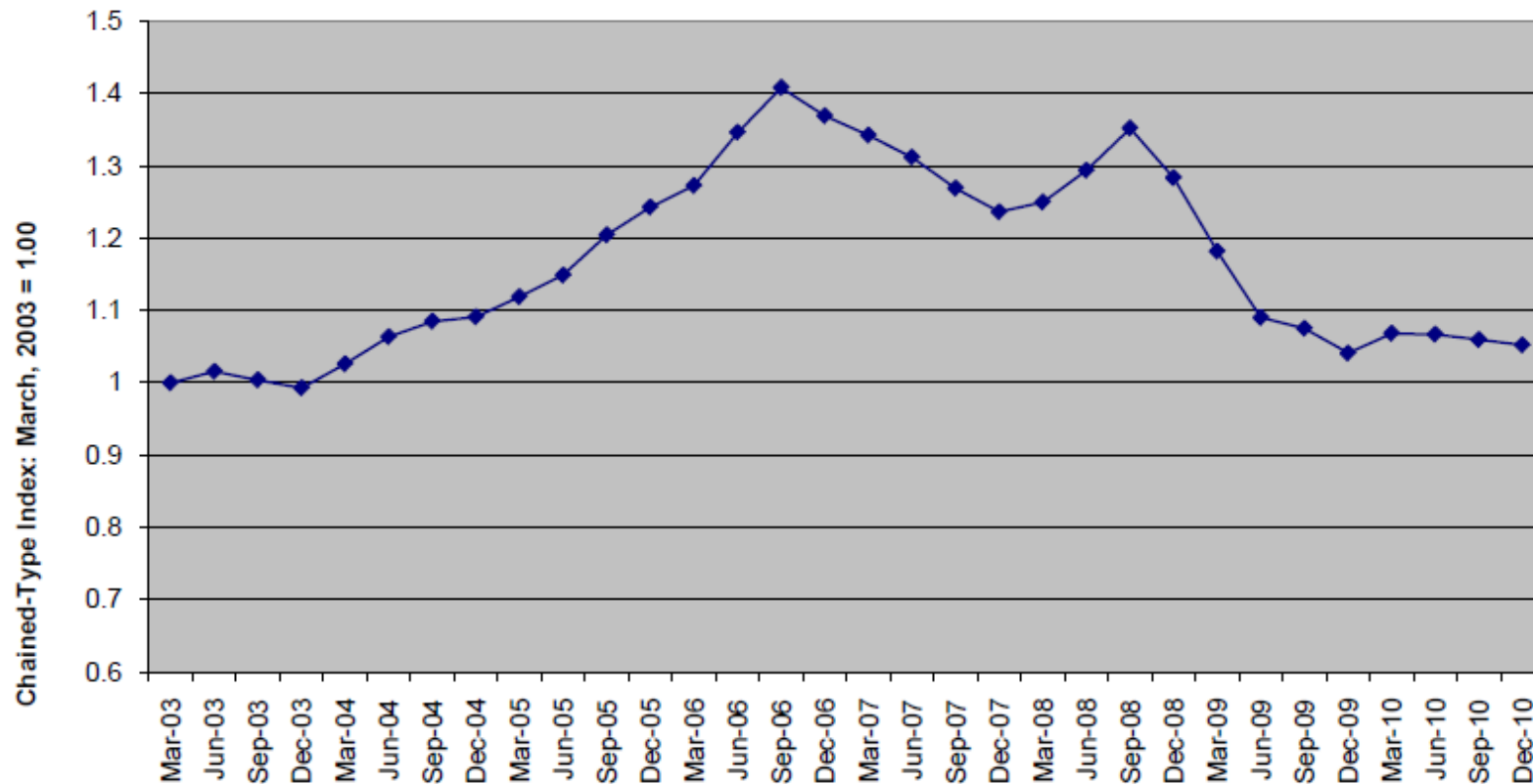
# Dealing with Uncertainty in Revenues

- **Better forecasts and better documentation**
  - Update often
- **Talk about risk to current revenue sources**
  - Likelihood and impact, mitigation
- **Discuss probability of new sources**
  - Who has to do what by when
- **Alternative revenue scenarios are a way to express uncertainty**
- **Tell the public what you don't know**

## Addressing Financial Uncertainty

# COSTS

# Highway Cost Index



Source: FHWA Highway Construction Cost Index

## PennDOT stretches stimulus funding for region's road, bridge project

By [Chuck Brittain](#)  
TRIBUNE-REVIEW  
Saturday, November 21, 2009

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### Low bids stretch state's highway stimulus dollars

1st 20 projects 18% under estimate

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by [Sean Holstege](#) - May. 19, 2009 12:00 AM  
*The Arizona Republic*



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DENVER AND THE WEST

### Low stimulus bids let Colorado add highway projects

By [Jeffrey Leib](#)  
*The Denver Post*

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# Competition

**WBS #:** 38927.3.1  
**TIP #:** U-2928B  
**Contract #:** C202402

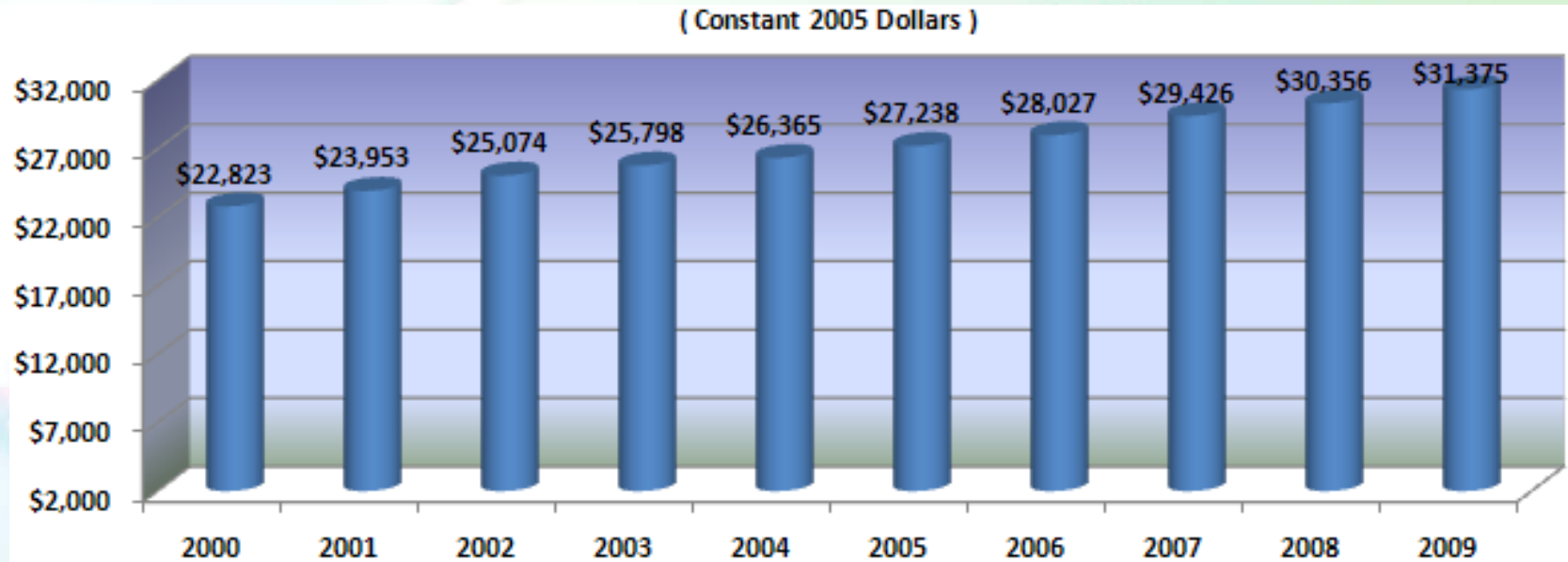
**RPN #:** 005  
**County:** LENOIR  
**Eng. Estimate:** \$21,244,645.76

Contractor	Amount	Difference
HINKLE CONTRACTING COMPANY LLC	\$14,288,757.30	-32.7%
DEVERE CONSTRUCTION COMPANY, INC	\$14,345,327.20	-32.5%
PLT CONSTRUCTION CO., INC.	\$14,382,417.30	-32.3%
BARNHILL CONTRACTING COMPANY	\$14,595,939.22	-31.3%
W. C. ENGLISH, INC.	\$14,831,643.96	-30.2%
HUNTER CONSTRUCTION GROUP, INC.	\$15,143,292.50	-28.7%
S. T. WOOTEN CORPORATION	\$15,281,736.21	-28.1%
E. V. WILLIAMS, INC.	\$15,698,606.87	-26.1%
THE DELANEY GROUP INCORPORATED	\$16,209,638.30	-23.7%
POLIVKA INTERNATIONAL COMPANY, INC.	\$16,284,908.30	-23.3%
RAILWORKS TRACK SYSTEMS INC	\$16,472,270.85	-22.5%
SULLIVAN EASTERN, INC.	\$16,958,210.96	-20.2%
PHILLIPS & JORDAN, INC.	\$17,140,687.99	-19.3%
VECELLIO & GROGAN INC	\$17,969,942.38	-15.4%
TRADER CONSTRUCTION CO.	\$19,481,553.56	-8.3%

**Source: North Carolina DOT**

# Transit Costs

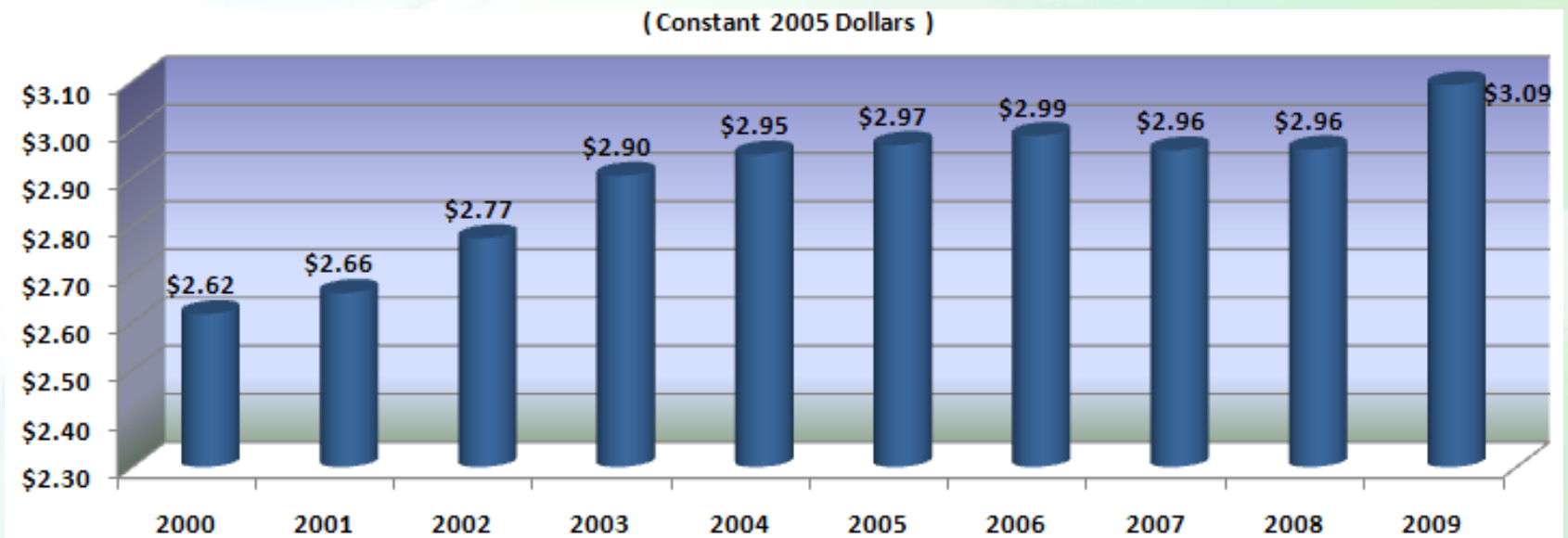
## Total Operating Expenses



Source: National Transit Database

# Transit Costs

## Operating Expense per Unlinked Passenger Trip



Source: National Transit Database

## Year of Expenditure

- Required by Federal regulation
- Mid-point of construction
- Locally derived inflation rate is preferred



## Year of Expenditure: Notable Approaches

Inflation rate derived from:

- **State DOT highway construction cost indexes (OH, FL)**
- **Sector specific forecasts sold by commercial firms (WA)**
- **Expert panel (major projects)**
- **Standard government indexes i.e., CPI, PPI (MO)**
- **“Federal default” rate of 4% (PA)**

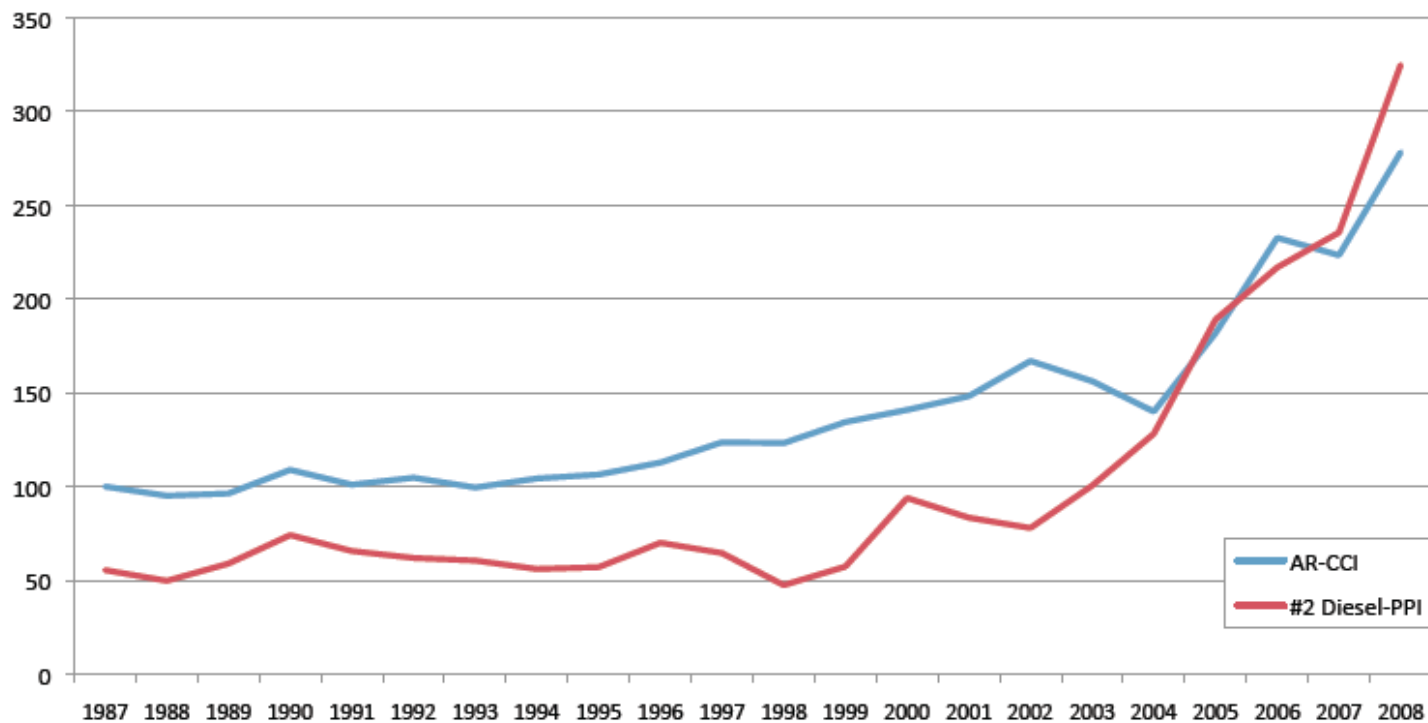
## Sources of Inflation Information

- **FHWA Highway Construction Cost Index**
- **State DOT Cost Indexes**
- **Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov))**
  - Consumer Price Index
  - Producer Price Index
- **Federal Reserve Bank “Current Economic Conditions by Federal Reserve District” – The “Beige Book”**
- **Engineering News Record**
  - Construction Cost Index
  - Building Cost Index
- **Private forecasts**
  - RS Means
  - Global Insight

# Little Rock, AR (Metropolitan)

Energy Information Administration ([www.eia.gov](http://www.eia.gov))

Comparison of AHTD CCI with PPI of Crude Petroleum and Petroleum Products



# Project Costs

- **Is documentation adequate?**
  - Project size
- **Role of MPO in Cost Estimation**
  - Consistency among jurisdictions
  - Getting proper documentation on time
  - Quality control
- **Cost Management Process**
  - Are costs updated? When? By Whom?
  - Communicating risk and uncertainty to the public

# Using Cost Ranges in Planning Documents

- **Long Range Plan**
  - Beyond the first 10 years
  - “Aggregate” cost ranges and bands
    - Categories or grouped projects (i.e., system preservation)
  - Sufficient revenues to cover top of range
- **S/TIP**
  - Ranges not allowed
    - Can be used in outyears
    - Categories or grouped projects (categorical exclusions)
  - How can uncertainty be expressed?

# Cost Ranges in MTP

## Grand Forks, ND/MN

TABLE 15. PROJECT COST RANGES BY IMPLEMENTATION PERIOD (CONTINUED)

Recommended Projects by Implementation Period		Cost Estimate Ranges by Approach			
		2007 Cost	Midpoint of Period	First Year of Period	Last Year of Period
<b>Long-Term Projects (16 to 28 Years)</b>					
1L	32nd Ave S Red River Crossing	\$20,200,000	\$47,900,000	\$37,800,000	\$60,600,000
18A	4-Lane 32nd Ave: 52nd St to 48th St	\$1,100,000	\$2,600,000	\$2,100,000	\$3,300,000
18B	4-Lane Columbia Rd: 34th Ave to 50th Ave	\$5,300,000	\$12,600,000	\$9,900,000	\$15,900,000
18C	4-Lane Washington St: 48th Ave to 57th Ave	\$2,900,000	\$6,900,000	\$5,400,000	\$8,700,000
3B	32nd / Columbia: NB and WB Dual Lefts	\$150,000	\$400,000	\$300,000	\$400,000
8A	Signalize 48th / DeMers and I-29 / DeMers Ramps	\$700,000	\$1,700,000	\$1,300,000	\$2,100,000

GRAND FORKS – EAST GRAND FORKS LONG RANGE TRANSPORTATION PLAN STREET AND HIGHWAY ELEMENT

## Dealing with Uncertainty in Costs

- **Keep YOE inflation forecast up to date**
- **Accelerate projects to take advantage of market conditions**
- **Express uncertainty**
  - Spell out risks
  - Use ranges
- **Keep cost estimates up to date**

# Resources

## Training

- NTI Course: Financial Planning in Transportation
- NHI Course: Highway Program Financing
- NHI Course: Addressing Uncertainty in Cost Estimation
- NHI Course: Risk Management
- IPD Academy
- RC Webinar/Seminars

# Resources

## Technical Assistance

- **RC Planning TST**
  - Definitions, Checklists, Optional Templates
  - Documentation Examples
  - Notable Practices
- **RC Financial Services TST**
  - Help with YOE methodology, cash flow, FMIS, A-87
- **Office of Innovative Program Delivery**

## Questions/Discussion

- **How is your region dealing with financial uncertainty?**
  - In revenues?
  - In costs?
- **What's your assessment of the cooperative revenue estimating process in your State?**
- **Have you used revenue scenarios and/or cost ranges in your planning documents?**

**Thanks!**

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