WilburSmith ASSOCIATES

West Virginia Multi-modal Statewide Transportation Plan

Presented to:
WVDOT/MPO/FHWA Planning Conference

Presented by:
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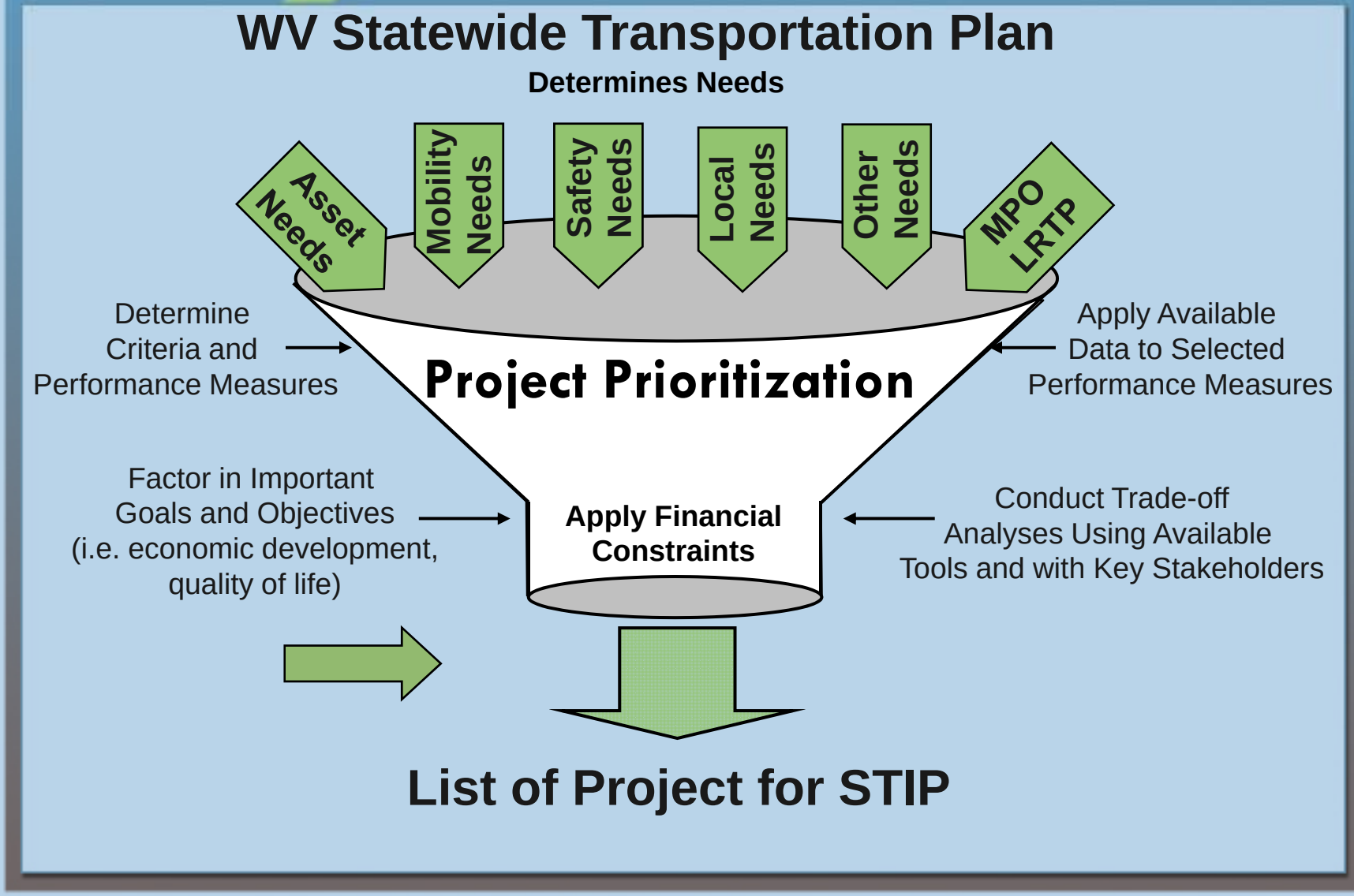
September 16, 2009

Statewide Long Range Transportation Plan



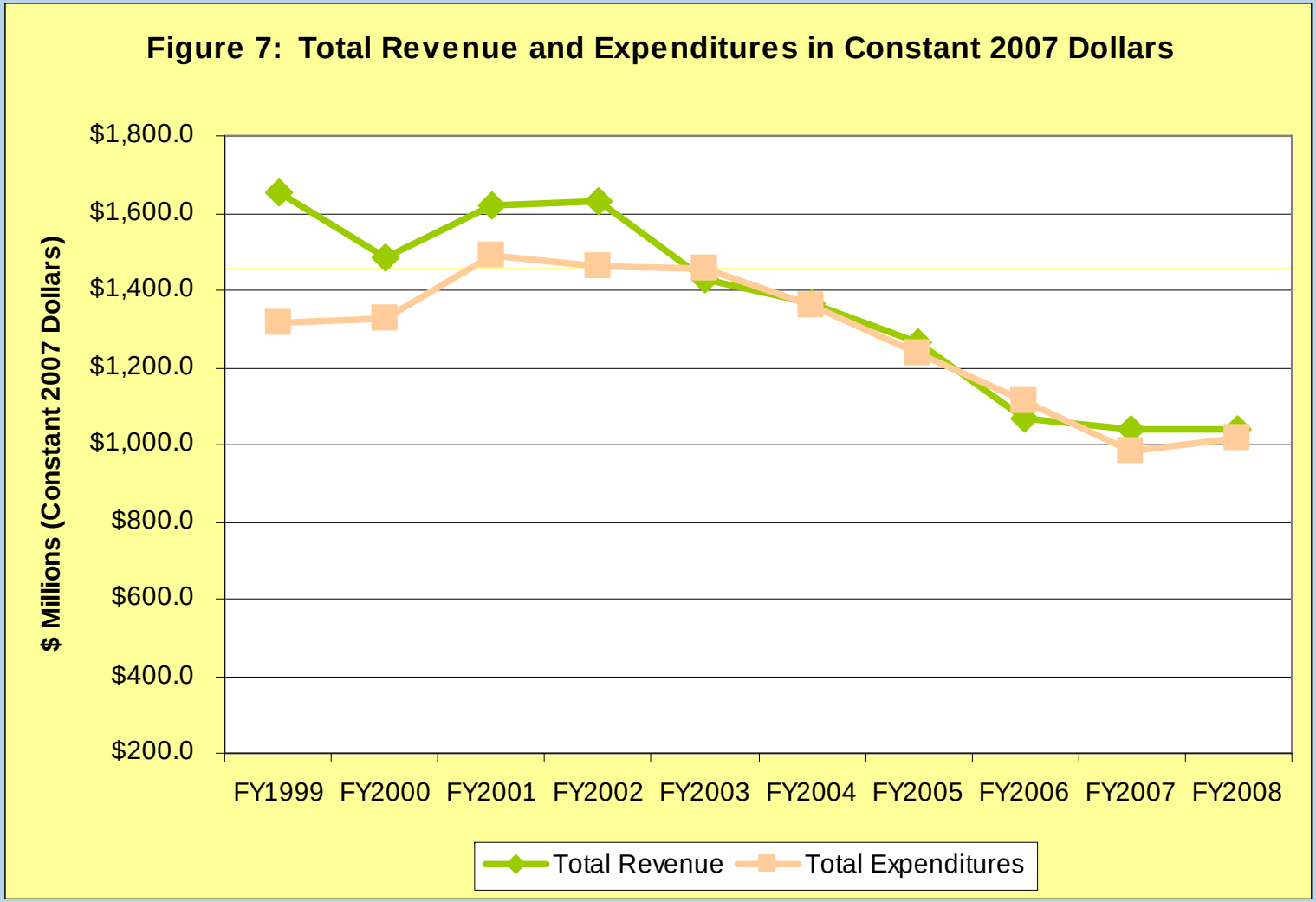
Plan Elements

- Multimodal
- Historic Revenue
- Needs Analysis
  - Factors used in analysis
  - Unconstrained
  - Constrained
- Project Prioritization Methodology
- Public Involvement

Why do a Statewide Plan?

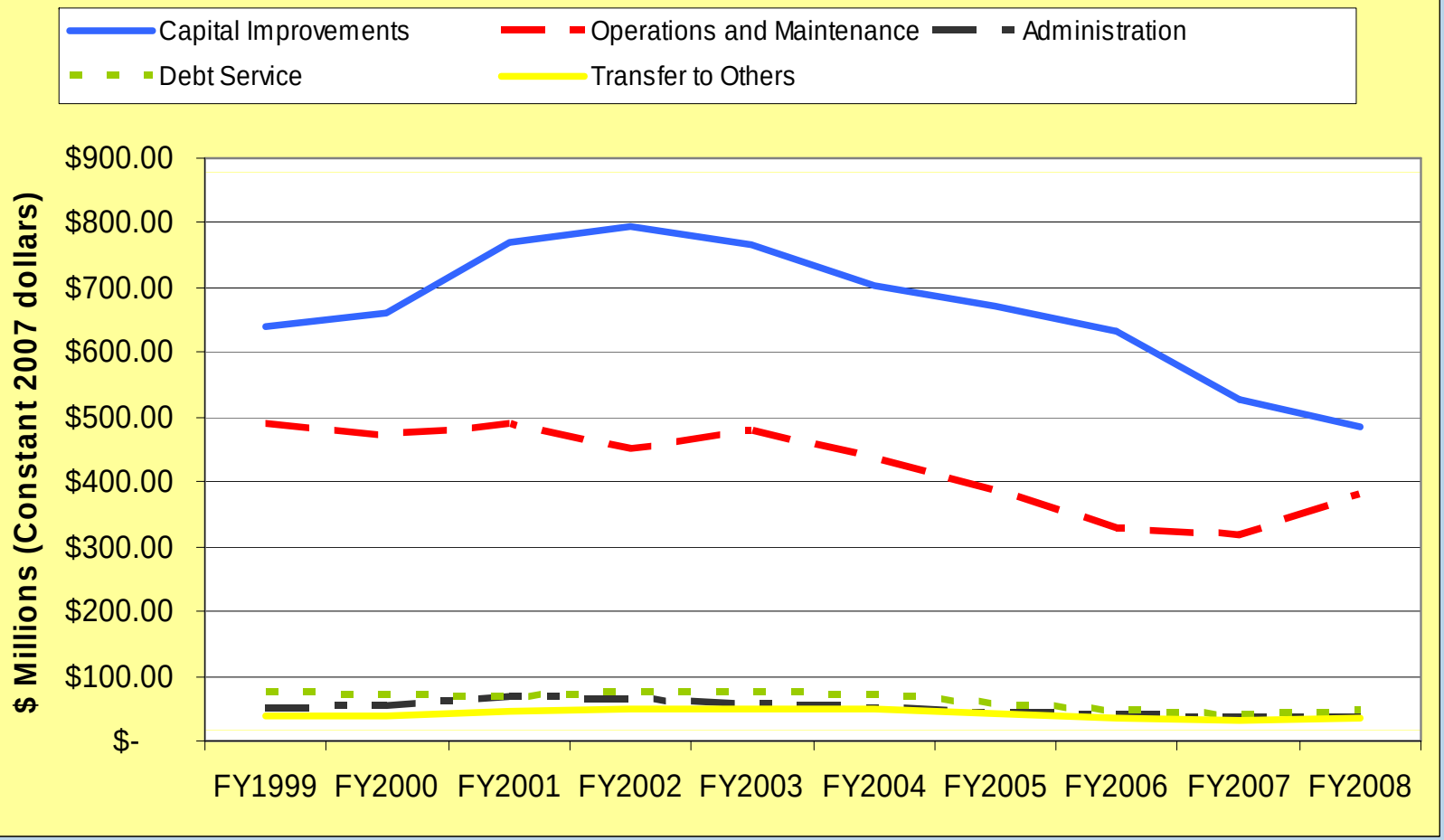
- The Plan will give the WVDOT the ability to better gauge Revenue and Expenses for Future years
- The Plan will Inform the Public about the Challenges, both Fiscally and the Long Term Stewardship of the Overall Transportation System
- Planning for all Modal Agencies
- Setting Overall Priorities for the State's Transportation System
- Used to Feed the STIP

Historical Revenue (FY1999 - FY2008)



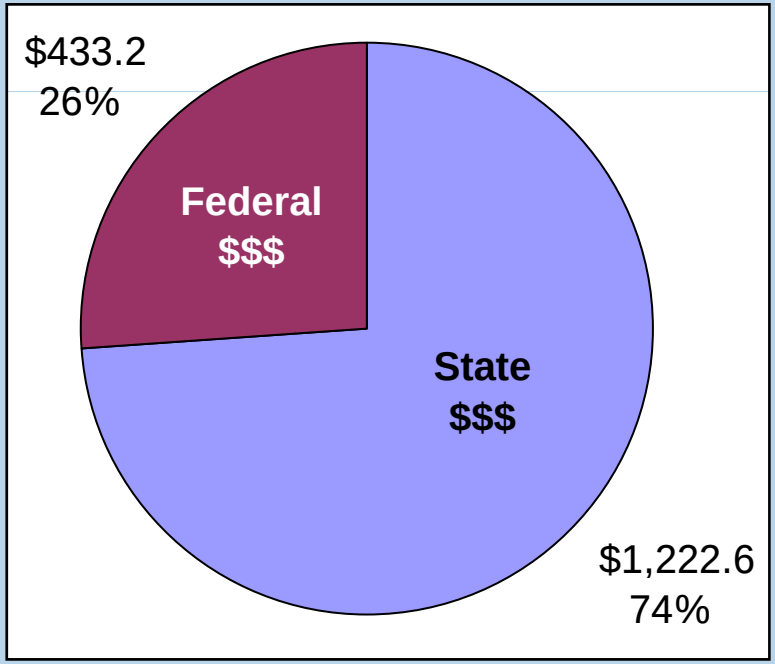
Historical Expenditures (FY1999 - FY2008)

Figure 9: DOH Expenditure Trends in Constant 2007 Dollars

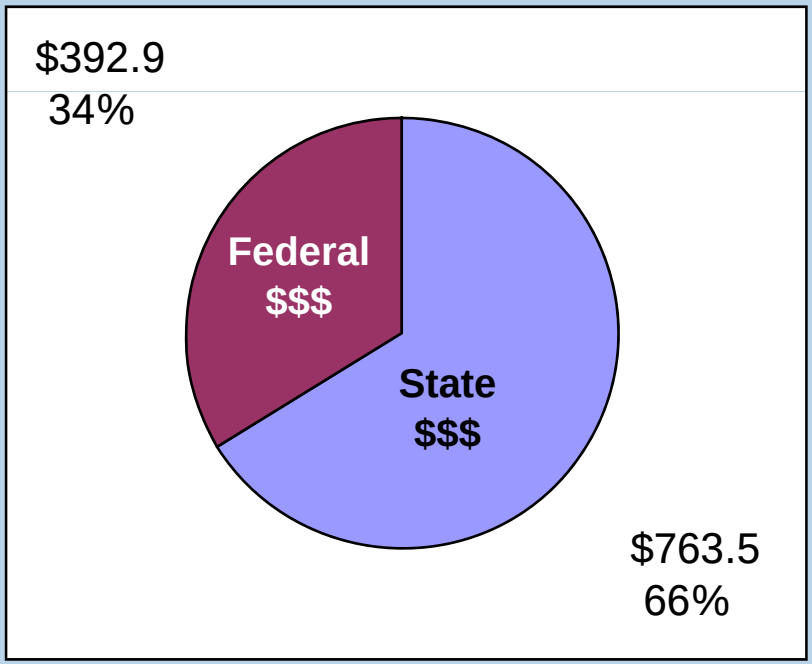


Where does WVDOT get its money?

1999 Transportation Revenue*



2008 Transportation Revenue*



** In 2007 Dollars*

Historical WVDOT Revenues (FY1999 - FY2008)

		Purchasing Power		
• **Total Revenue**		**FY1999**	**FY2008**	
	– Nominal	$1.03b	$1.08b	6%
	– Constant 2007$	$1.66b	$1.16b	30 %
• **State Revenue**				
	– Nominal	$0.76b	$0.72b	6%
	– Constant 2007$	$1.22b	$0.77b	38 %
• **Federal Revenue**				
	– Nominal	$0.27b	$0.37b	37%
	– Constant 2007$	$0.43b	$0.39b	9%

Historical WVDOT Expenditures (FY1999 - FY2008)

Purchasing Power

	FY1999	FY2008	
• **Total Expenditures**			
– Nominal	$0.81b	$1.06b	30%
– Constant 2007$	$1.25b	$1.15b	14 %
• **Capital Improvements**			
– Nominal	$0.40b	$0.52b	30%
– Constant 2007$	$0.74b	$0.64b	14 %

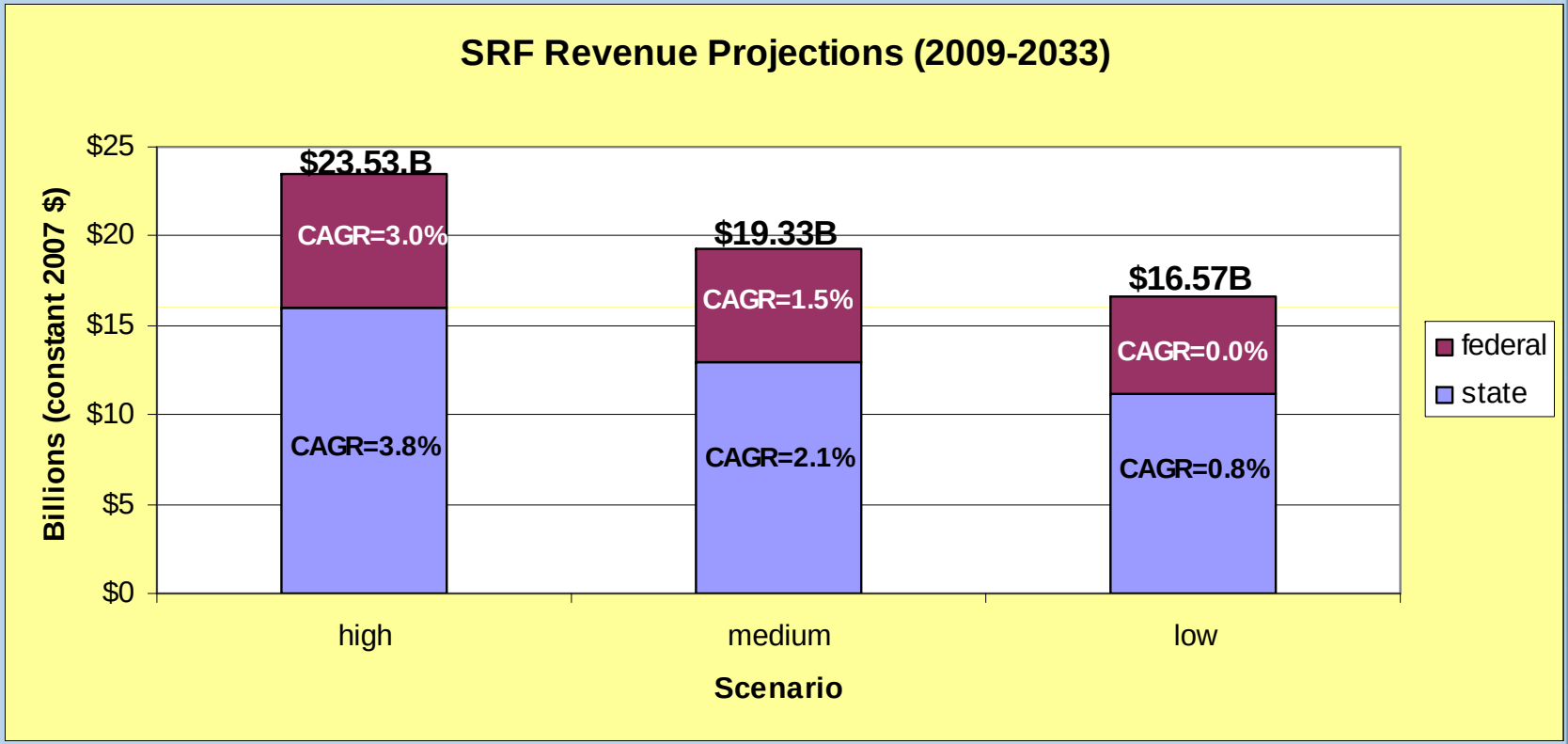
Key Messages

- Over last 10 years WVDOT averaged $1.4 billion/year in revenue
  - 63% from state sources and 37% from federal sources
- Inflation has eroded purchasing power
  - FY2008 revenue is 30% less than FY1999
  - WVDOT's expenditures 14% less than in FY1999

Road Fund Revenue Forecast

- Prepared high, medium and low forecasts
- All assume no change in the tax/fee structure
- Assumed 4% inflation

Future Revenue Estimates



CAGR = Compound Annual Growth Rate

High = economy quickly recovers and conditions are much like the average of the last ten years

Medium = economy recovers more slowly and conditions are less than average of the last ten years

Low = economic recovery slows significantly

Highway and Bridge Needs Analysis

- What level of funding is needed to address all needs?
- What needs can be addressed under a budget constraint?

What Is HERS-ST?

- Estimates future highway investment needs based on benefit/cost evaluations
  - Pavement needs
    - *Resurface, reconstruct*
  - Capacity needs
    - *Add/widen lanes, shoulders*
  - Alignment needs
    - *Vertical and horizontal alignments*
- Needs based on deficiency and feasibility

What is NBIAS?

- NBIAS analyzes bridge structures only and removes culvert records from the dataset.
- Needs will be categorized by four improvement types:
  - –Replacement
  - –Widening
  - –Raising
  - –Strengthening
- Results for will be shown as number of bridges and improvement cost per improvement type

Needs Analysis

Draft Derivation of Suggested HERS and NBIAS Constrained Funding Levels

All Figures in $2007

A	***WVDOT Highway Fund Expenditure Estimates***			
	Forecast and Historical Funding Comparison		**(000)**	**Notes**
1	25 year revenue estimate (all SRF)	$	23,530,000	WSA "high" forecast
2	Annual Average	$	941,200	25 year period - less than historic average see below
3	FY99-FY08 SRF	$	11,090,100	WSA historical revenue and expenditure memo (minus bonds)
3	WV SRF Revenue FY99-FY03 average	$	1,055,200	WSA historical revenue and expenditure memo
4	WV SRF Revenue FY04-FY08 average	$	1,030,850	WSA historical revenue and expenditure memo
5	WV SRF Revenue FY99-FY08 average	$	1,043,026	WSA historical revenue and expenditure memo
B	***Reductions to Forecast for HERS and NBIAS Constrained Needs Analysis***			
1	SRF Revenues	$	1,164,937	WVDOT FY2009 6-year road program
2	Routine maintenance		30%	Analysis of WVDOT FY2009 6-year road program
3	Takedown for new construction		5%	WVDOT FY2009 6-year road program
4	Debt Service		5%	WSA historical revenue and expenditure memo
5	Total		40%	
6	Estimated Bridge and Highway Const Budget (FY2009)	$	698,962	Using 6 year program
7	Estimated NBIAS and HERS Budget (from Forecast)	$	564,720	Using WSA Revenue Estimate
C	***Highway - Bridge Split***			
1	HERS Annual Highway Unconstrained Needs	$	1,092,750	WSA Analysis
3	**HERS % of Total Needs - Consistent with WV Policy**		**82%**	
4	NBIAS Unconstrained Bridge Needs	$	99,240	WSA Analysis
6	**NBIAS % of Total Needs - Consistent with WV Policy**		**18%**	
3	Total	$	1,191,990	
D	***Constrained Funding Estimate for Highway Needs Analysis***			
1	25 year est minus new roads, admin, minor maintenance	$	564,720	
2	**Est Highway HERS Budget**	**$**	**463,070**	Recommended for HERS Analysis
3	**Est NBIAS Budget**	**$**	**101,650**	Recommended for NBIAS Analysis

Results Summary

- Overview of 25-Year Constrained Budget Estimate for Highway and Bridge Needs

Budget – Highways = $463 M annually

– Bridge = $101 M annually

Highways = $11.1 Billion

- $9.8 Billion for Federal-Aid Roads
- $1.3 Billion for Local Road

Bridges = $2.4 Billion

- $300 Million on Coal Resource Transportation System (CRTS) Bridges
- $2.1 Billion on Non-CRTS Bridges

Highway Results

Constrained vs. Unconstrained Needs

CONSTRAINED

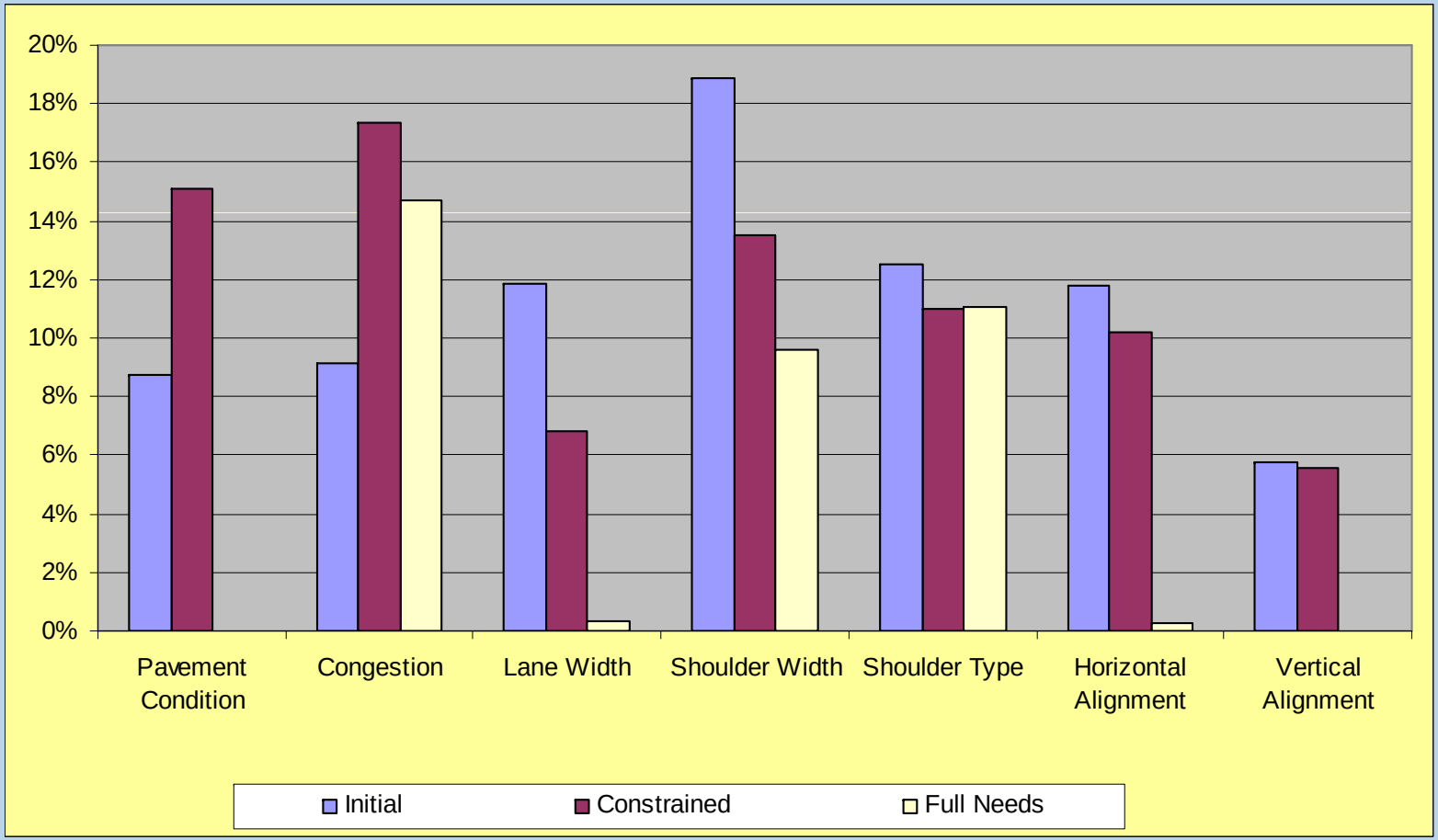
	Improvement Cost ($M)			Lane Miles Improved		
	Federal Aid	Local	State Total	Federal Aid	Local	State Total
Expansion	$ 4,483	$ -	$ 4,483	2,475	-	2,475
Modernization	$ 1,330	$ 655	$ 1,985	1,152	479	1,631
Preservation	$ 3,768	$ 762	$ 4,530	12,063	3,271	15,334
	$ 9,581	$ 1,417	$ 10,998	15,690	3,750	19,440

UNCONSTRAINED

	Improvement Cost ($M)			Lane Miles Improved		
	Federal Aid	Local	State Total	Federal Aid	Local	State Total
Expansion	$ 7,944	$ -	$ 7,944	3,402	-	3,402
Modernization	$ 13,010	$ 1,956	$ 14,966	8,583	1,431	10,014
Preservation	$ 11,565	$ 2,276	$ 13,840	27,926	9,766	37,692
	$ 32,518	$ 4,232	$ 36,750	39,911	11,197	51,108

Highway Results

HERS Results – Percent Deficient Roads, Weighted by VMT

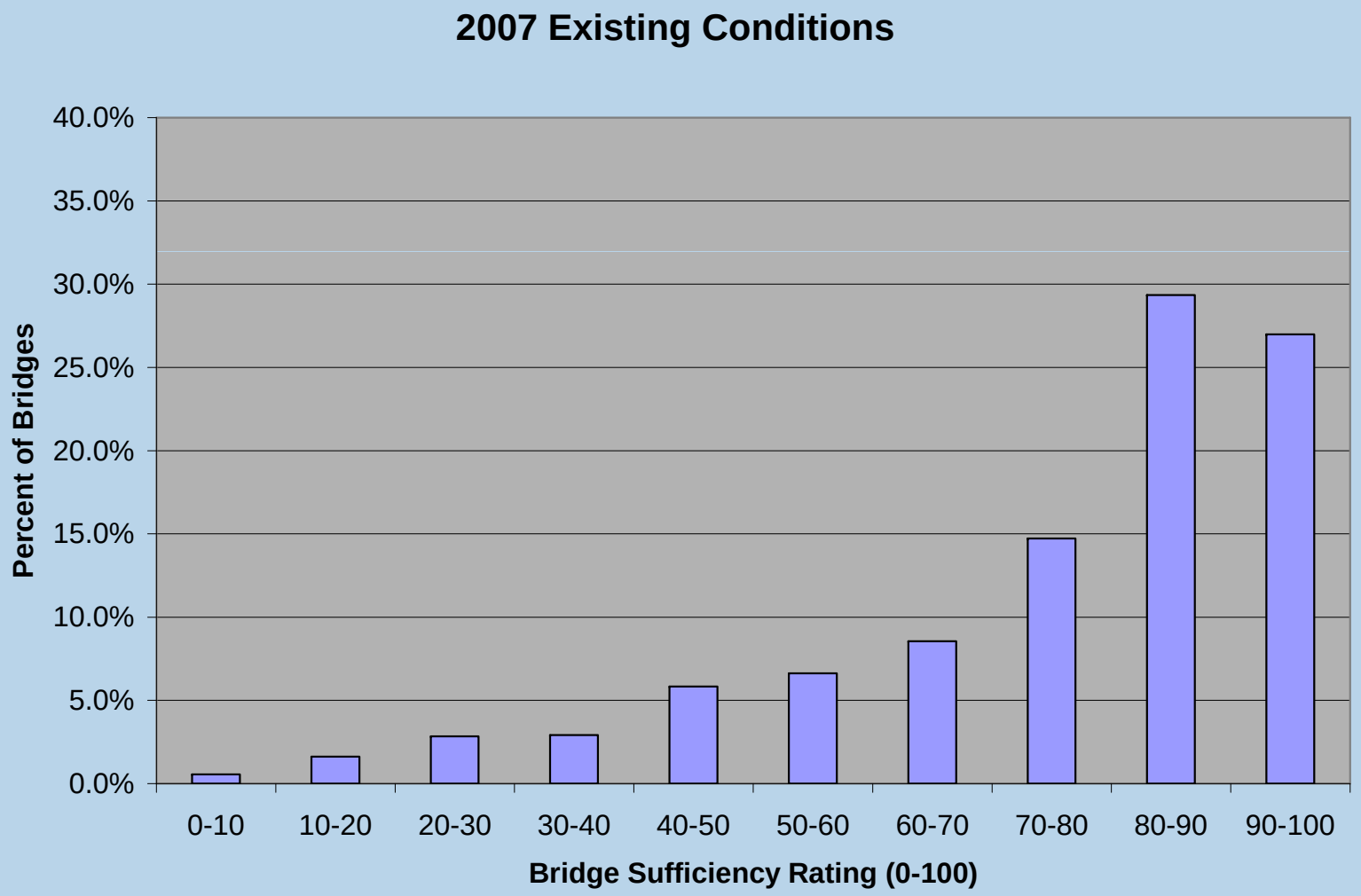


Bridge Needs

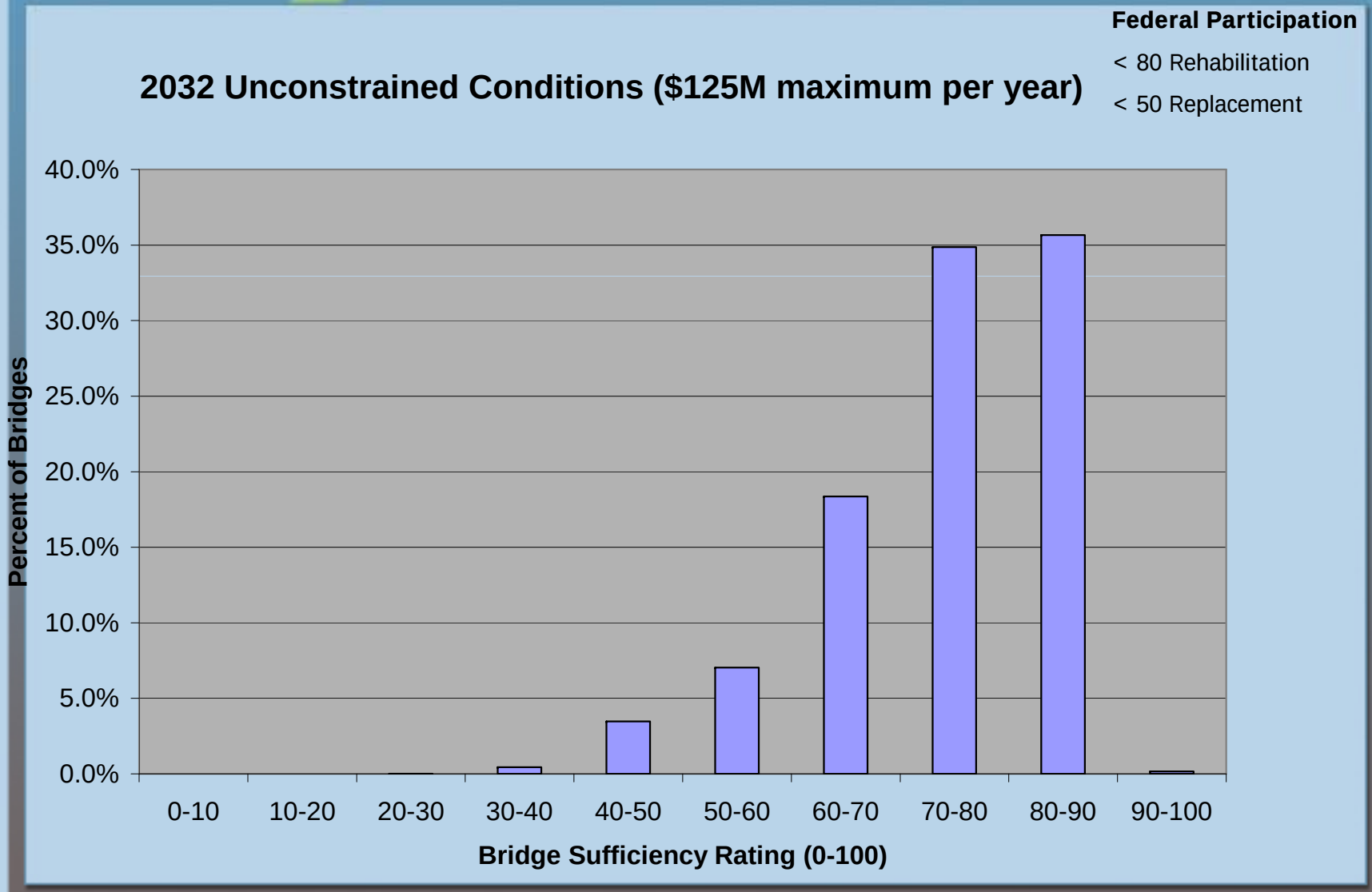
6,243 Bridges Statewide

	Improvement Cost ($ M)			Bridges Improved		
	Non-CRTS	CRTS	State Total	Non-CRTS	CRTS	State Total
Replacement	$ 1,240.9	$ 155.0	$ 1,395.9	727	87	814
Raising	$ 1.1	$ -	$ 1.1	1	-	1
Widening	$ 116.5	$ 14.2	$ 130.7	522	55	577
Strengthening	$ 6.7	$ -	$ 6.7	8	-	8
	$ 1,365.2	$ 169.2	$ 1,534.4	1,258	142	1,400
Maintenance	$ 812.8	$ 133.9	$ 946.7			
	$ 2,220.3	$ 260.8	$ 2,481.1			

Existing Bridge Sufficiency Ratings



Bridge Results – Sufficiency Ratings



Needs - Key Messages

- From 1999 we've lost 30% of revenue
- In order to return to 1999 conditions there is a financial gap.
- To bridge this gap options might include:
  - Congestion pricing
  - Increase gas tax
  - Tolls
  - Increase privilege tax to greater %
  - General fund participation

SUM = Gap in Millions

Needs Analysis (Aviation)

Over the next 10 yrs:

	STATE	FEDERAL	TOTAL
Runway Rehabilitation	$240,132	$9,365,131	$9,605,263
Runway Extensions	$234,974	$9,163,973	$9,398,947
Taxiway Improvements	$291,961	$11,386,460	$11,678,421
Automatic Surface Observing System (ASOS)	$5,000	$195,000	$200,000
Total	$772,066	$30,110,566	$30,882,632

Needs Analysis (Ports)

PRICHARD INTERMODAL TERMINAL -- Approximately $30 Million

CRITERIA	RATING	COMMENTS
Benefits/Availability of Private Substitutes		Currently no access to rail intermodal network within West Virginia. Public/private partnership is necessary. Private shipper could not replicate. Interviews with shippers suggest a compelling business case.
Size of Potential Market		Prichard would be a relatively small intermodal terminal, but projected volumes would render the site feasible. NS has expressed a commitment to serve and support the site, and Class 1 railroad support is crucial.
Suitability of Site		Located on the Heartland Corridor. Site has been vetted and compared to other sites. Reasonable highway access, few residential structures in the area, close to West Virginia manufacturing and population centers.
Funding		Both private and public funding not fully in place, as well as complementary modal systems.

Favorable **Unfavorable**

Needs Analysis (Ports)

POINT PLEASANT FACILITY

CRITERIA	RATING	COMMENTS
Benefits / Availability of Private Substitutes		Overlaps with private facilities in Kenova and Nitro, WV. However, similar facility would probably not otherwise be available in Mason County.
Size of Potential Market		Relatively small market. However, WVPPA has received significant interest in facility, and shipper interviews suggest a role for the facility. Would handle at least a moderate level of traffic.
Suitability of Site		While highway access to the site may be an issue, the preexisting warehousing and ground storage areas make the site relatively inexpensive to convert to civilian transportation and logistics operations.
Funding		No public or private funding commitment

Needs Analysis (Ports)

WEIRTON STEEL PROPERTY

CRITERIA	RATING	COMMENTS
Benefits / Availability of Private Substitutes	○	It will be important to establish the relationship between a public facility and the Half Moon Terminal owned by Starvaggi Industries. It may be difficult to justify public involvement if these facilities overlap and compete.
Size of Potential Market	●	Weirton is located within a relatively industrialized area. Even when one excludes chemical and petroleum products and assumes that a terminal would do no business within Pennsylvania, the addressable market is still more than twice that of the Point Pleasant facility.
Suitability of Site	◓	On the one hand, the quantity of flat, developable land available at the ArcelorMittal sites presents a unique opportunity. On the other hand, many of these locations would be costly to convert to transportation/logistics facilities. With the exception of the former Weirton rail yard, highway access is problematic, and flood elevation may be an issue. Environmental remediation would also need to be addressed.
Funding	○	No public or private funding commitment

Favorable **Unfavorable**

Needs Analysis (Rail)

Over the next 10 – 25 yrs:

RAIL SERVICES	COMMENT	NEEDS
Amtrak	Amtrak's business plan identified strategic improvements	Normal Fleet investments to focus on improving availability and reliability. New Charleston Station.
MARC	Currently no money slated for improvements in the near future.	Identified needs include upgrade Martinsburg layover facility, Martinsburg and Harpers Ferry have constrained parking. Operating Funding for WV Service.
High Speed Rail, Commuter Rail Initiatives, Light Rail Initiatives	On-going Federal Initiatives	No needs yet identified in these categories

Needs Analysis (Transit)

- Targets were established for service based on peer counties level of service
- operating and capital costs were used to estimated costs of service to meet the peer county's level of service.
- To expand service to meet peer levels in counties with current service would require and estimated cost of $14 million operating and $43 million capital cost.
- To establish service in un-served counties is estimated at $5 million operating and $10 million capital cost.

Prioritization Process

1. Evaluate proposed project - confirm it is “eligible” to be on the list
2. Group eligible projects by type and funding source
   - Congressional districts, funding categories, safety, economic development, congestion and available funding aids decision making to ensure balanced program of project types and funding is equitably distributed statewide.
3. Ranked using the recommended prioritization methodology

Eligibility Screen

- Purpose and need
- Interdependence (part of a system)
- Duplication
- Support / Project Sponsor
- Dedicated funding

Analysis Process

- Excel workbook based
- Deals with actual impact measures
  - (time savings, crash reductions, vehicle operating cost savings)
- Focuses on who benefits
  - (how much and how many) and therefore less likely to double-count or miss benefits
- Extensive past research supporting benefit-cost analysis provides guidance on making the hard trade-offs
  - (e.g., travel time savings vs. reductions in fatalities)

Analysis Process - Inputs

- Setting (Urban or rural)
- Length
- Number of lanes
- Freeway or non-freeway
- Free flow speed (or speed limit)
- Annual average daily traffic
- Cost of improvement (engineering, right-of-way, and construction)
- Special funding sources for the project (federal or state earmarks; contributions by local agencies or private groups)

Analysis Process - Outputs

- A set of projects for inclusion in the long-range plan based on estimates of available funds
- Rationale for why the other projects were not included in the long-range plan
  - had lower benefit-cost ratios than the selected projects

Round 1 – Public Involvement

Open house approach:

- Presentation boards
- Interactive stations

Spring Public Involvement Meetings

Monday, March 23, 2009	**Triadelphia Middle School** 1636 National Road Wheeling, WV
Tuesday, March 24, 2009	**Berkeley County Commission** 400 West Stephen Street, Suite 201 Martinsburg, WV
Thursday, March 26, 2009	**TTA Center** 401 13th Street Huntington, WV
Tuesday, March 31, 2009	**Elkins High School** 100 Kennedy Drive Elkins, WV
Wednesday, April 1, 2009	**Capitol Rotunda** State Capitol Complex Charleston, WV
Thursday, April 02, 2009	**Rose G. Smith Theatre, Williamson High School** 801 Alderson Street Williamson, WV
Monday, April 06, 2009	**City Council Chambers** 1 Government Square Parkersburg, WV
Tuesday, April 07, 2009	**Morgantown Municipal Airport, Greater Morgantown MPO** 180 Hart Field Road Morgantown, WV
Monday, April 13, 2009	**Wood Education & Resource Center** 301 Hardwood Lane Princeton, WV

Spring Public Involvement Meetings

- **Three Categories for Comments**
  - Critical Issues
  - Elements Performing Best & Needs Most Improvements
  - Comments/Suggestions

MEETING LOCATION	COMMENTS RECEIVED
Wheeling	17
Martinsburg	3
Huntington	0
Elkins	0
Charleston	2
Williamson	10
Parkersburg	6
Morgantown	4
Princeton	2
TOTAL COMMENTS RECEIVED	**44**

Spring Public Involvement Meetings

CRITICAL ISSUES IDENTIFIED

Economic Development/Employment	Lack of funds (Identify additional sources of revenue)
Intermodal Hubs	Lane capacity in cities
Link traffic signals in cities	Need designated bike and ped trails
Lack of infrastructure involving alternative forms of transportation (Bike/Ped)	Good river, rail and air services
Poor Roads WVDOTs 6-year plan lacks funding for valid projects	Give taxing power to counties to raise money for street improvements
Give power to municipalities for street maintenance	Make roads safe for cyclist
Poor Roads	Roadway maintenance

Spring Public Involvement Meetings

ELEMENTS PERFORMING BEST

Interstate Sections	Grant Program Availability
Equipment is in excellent shape	State of Art WVDOH Buildings
Transit	Aviation
Effectiveness of WVDOH is Improving	Efficiency of WVDOH is Improving
Rail and Interstate Highways	Roads in good shape for the most part

Spring Public Involvement Meetings

ELEMENTS NEEDING MOST IMPROVEMENTS

Highway: Need to Focus on Maintenance	Roads need to be prioritized according to traffic count
Need ports/industry on Ohio River	Secondary roads need improvements and replacement
Grant program process needs to be quicker	Better supervision needed to plan and maintain what we have
Aviation	Paving and resurfacing needs attention
Bike trails will improve health and welfare of our population	State must fund transportation, current road conditions are poor
Local highway safety	Pedestrian Safety

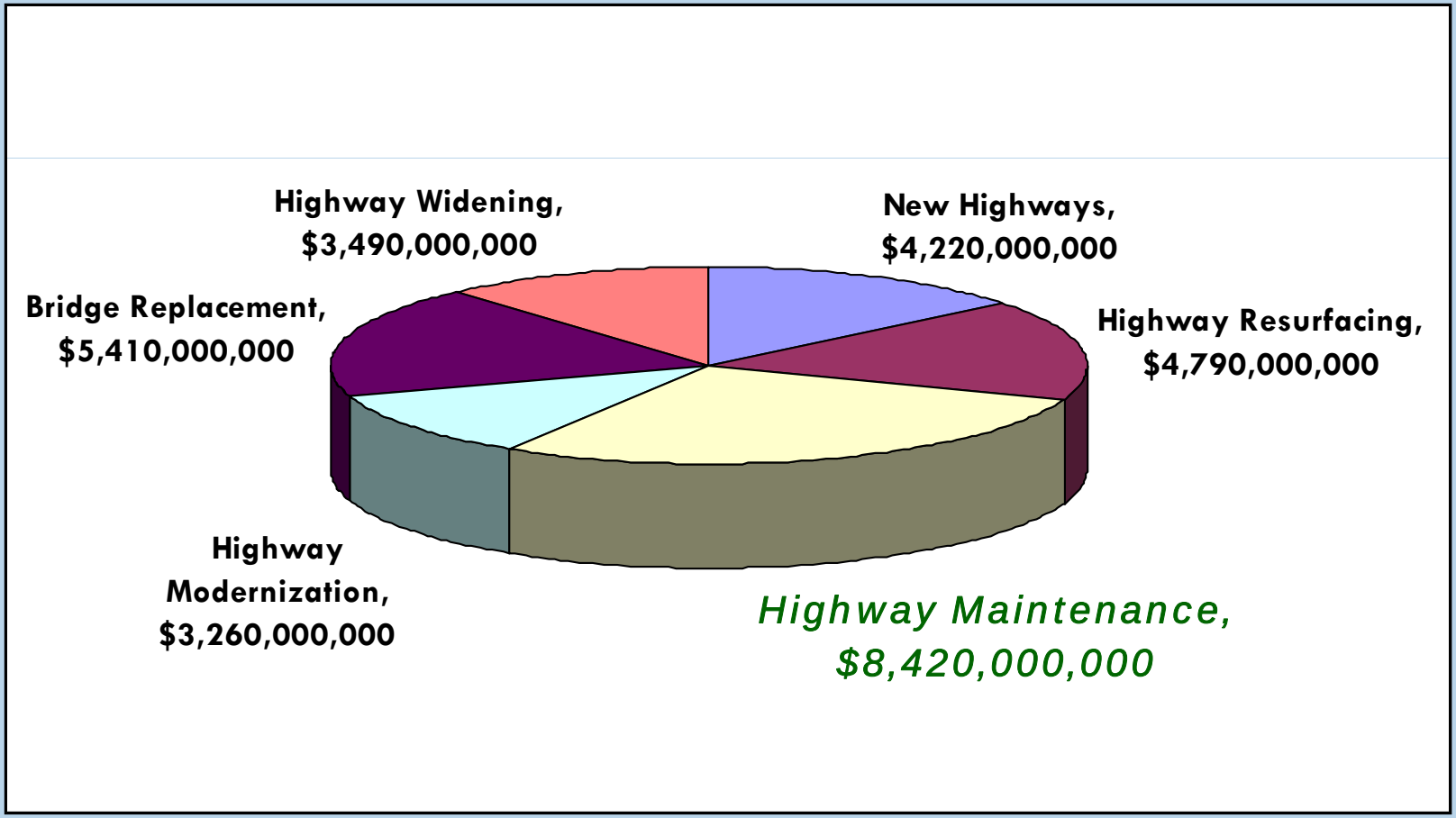
Spring Public Involvement Meetings

COMMENTS AND SUGGESTIONS

Northern Panhandle needs more jobs	Get our Roads OPEN!!
Get people working	Fully fund King Coal
Resurface Roads	Complete 73+74 will boost economic development
Survey home owners in the Eastern Panhandle to determine interest in being maintained by WVDOT and collect service fees	Need bike/ped trails
New sources of funding must be identified	Streets should accommodate all users
Counties collection of impact fees should be made easier	Include bicycles in statewide plan

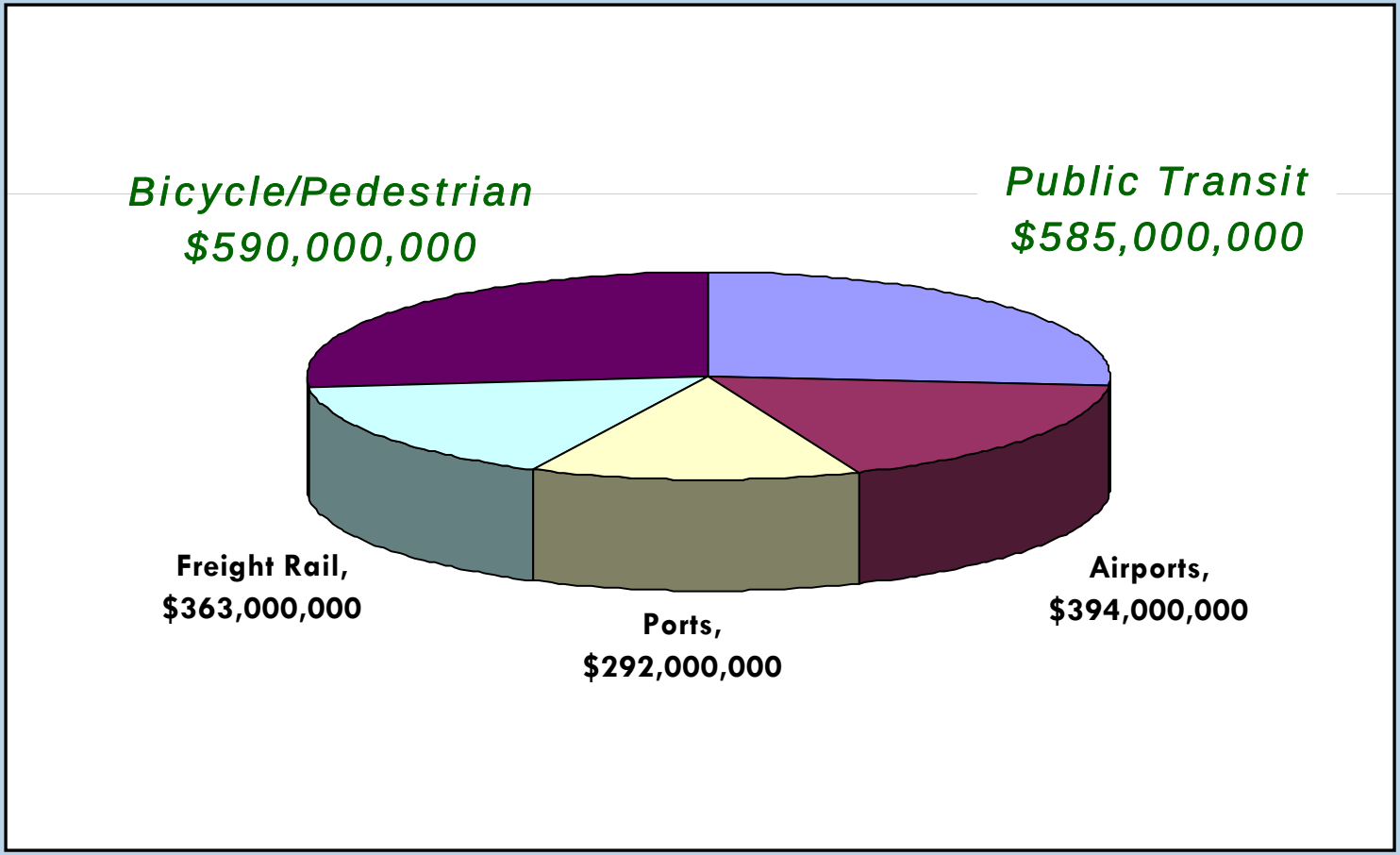
Public Involvement Game Totals

Roadway Money Summary:



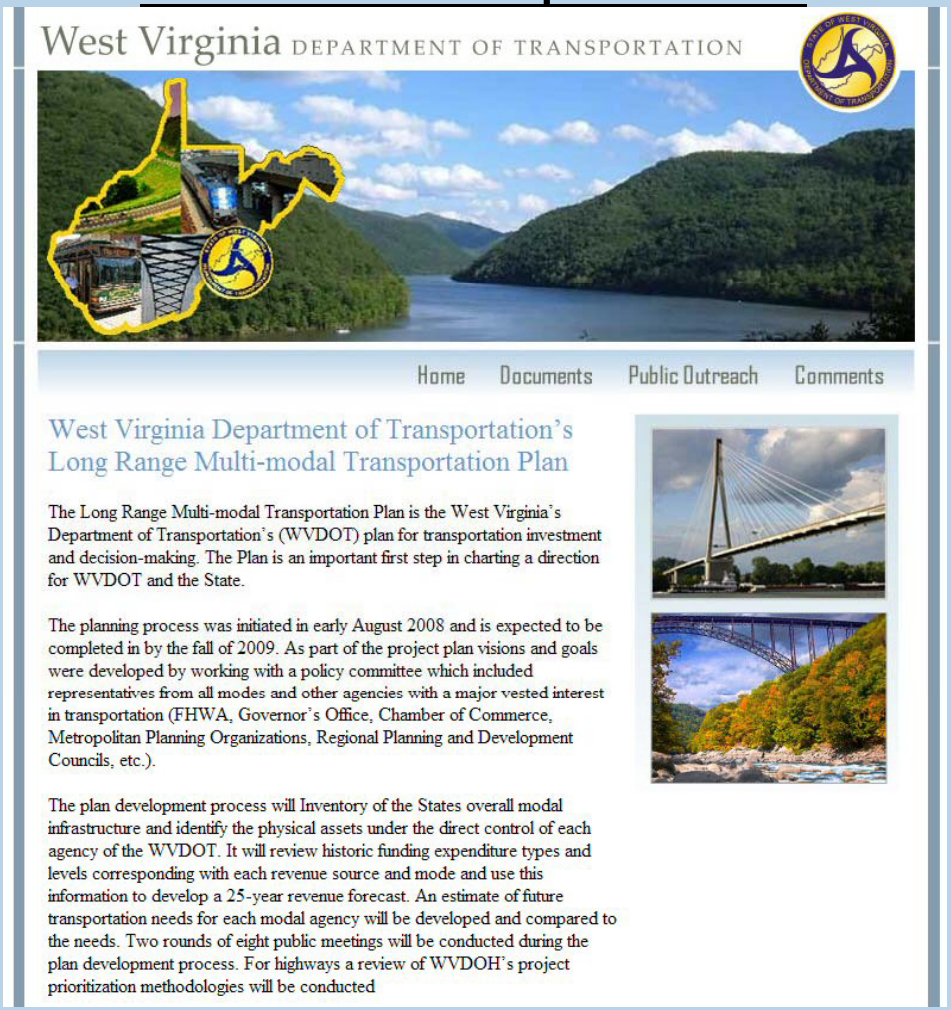
Public Involvement Game Totals

Modal Money Summary:

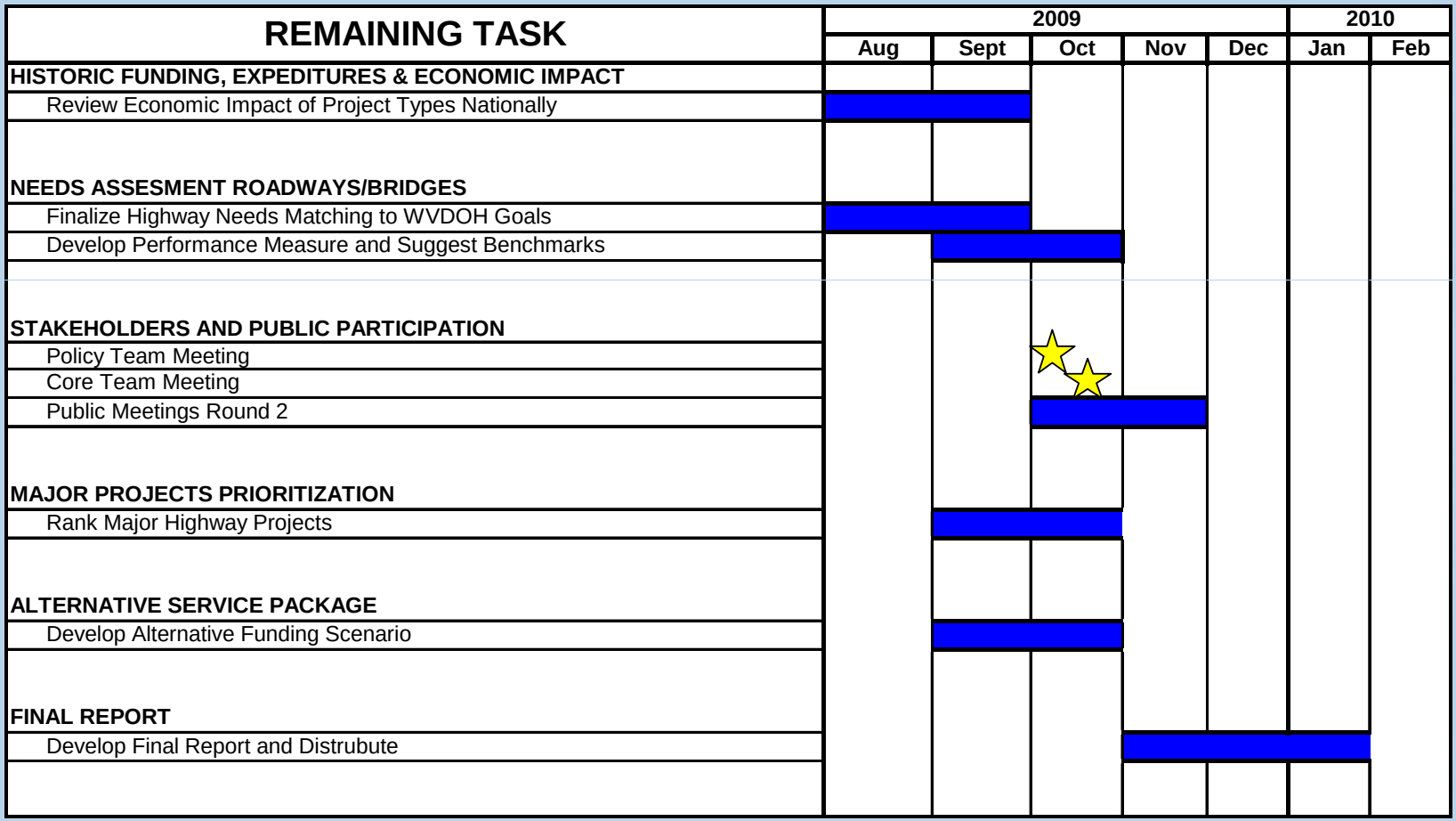


Project Website

www.wvtransplan.com



Project Schedule



QUESTIONS?