



Performance-Based Planning and Programming at MnDOT

Using MnDOT's experience to inform the development and implementation of a national PBPP framework

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Your Destination... Our Priority

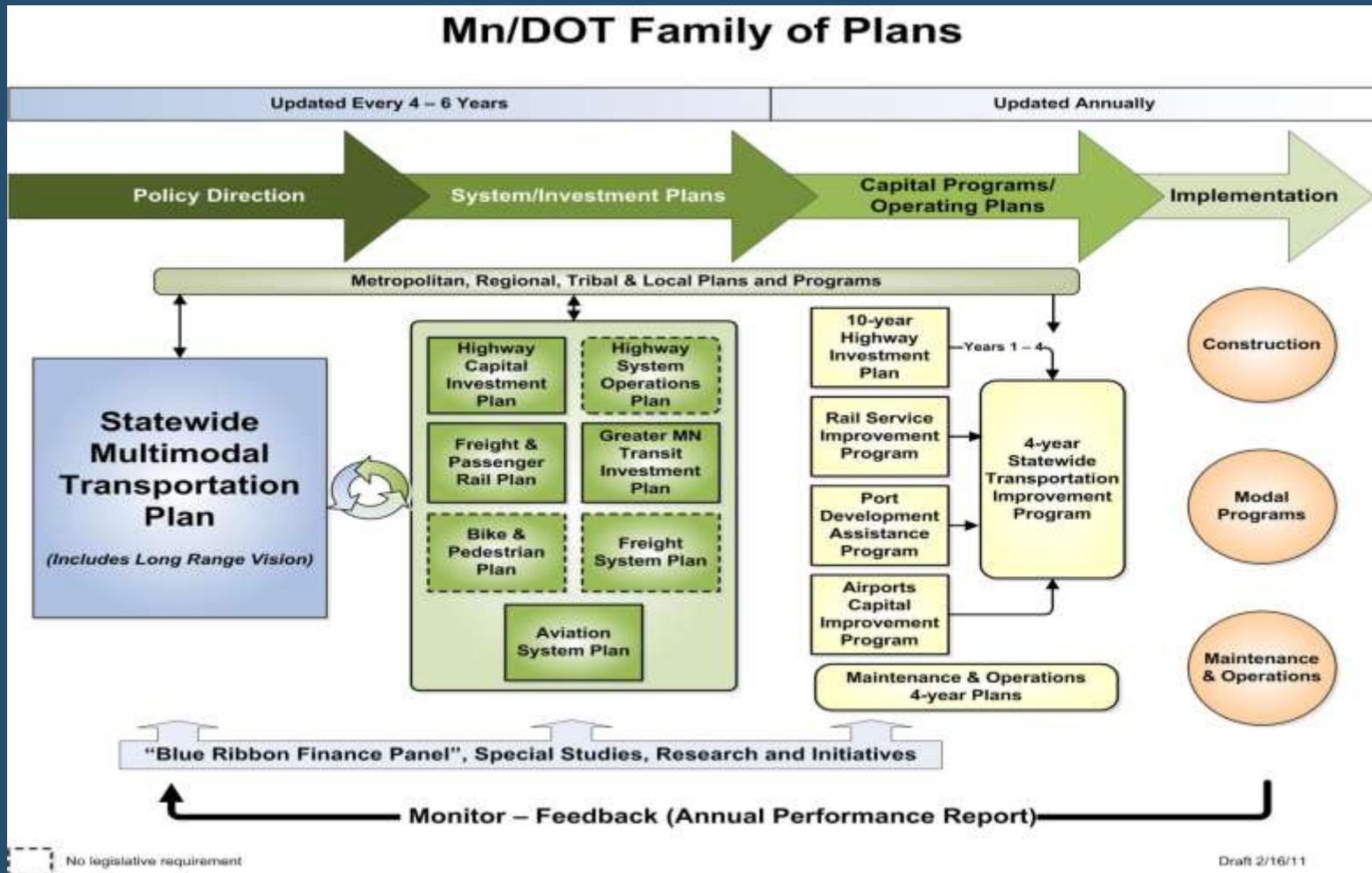




Presentation Objectives

- Describe MnDOT's PBPP process
 - Key elements
 - Links to decision making
- Relate some key lessons from MnDOT's experience to the debate around a national PBPP framework

MnDOT Planning and Programming: Overview





Key Elements of MnDOT's PBPP Framework

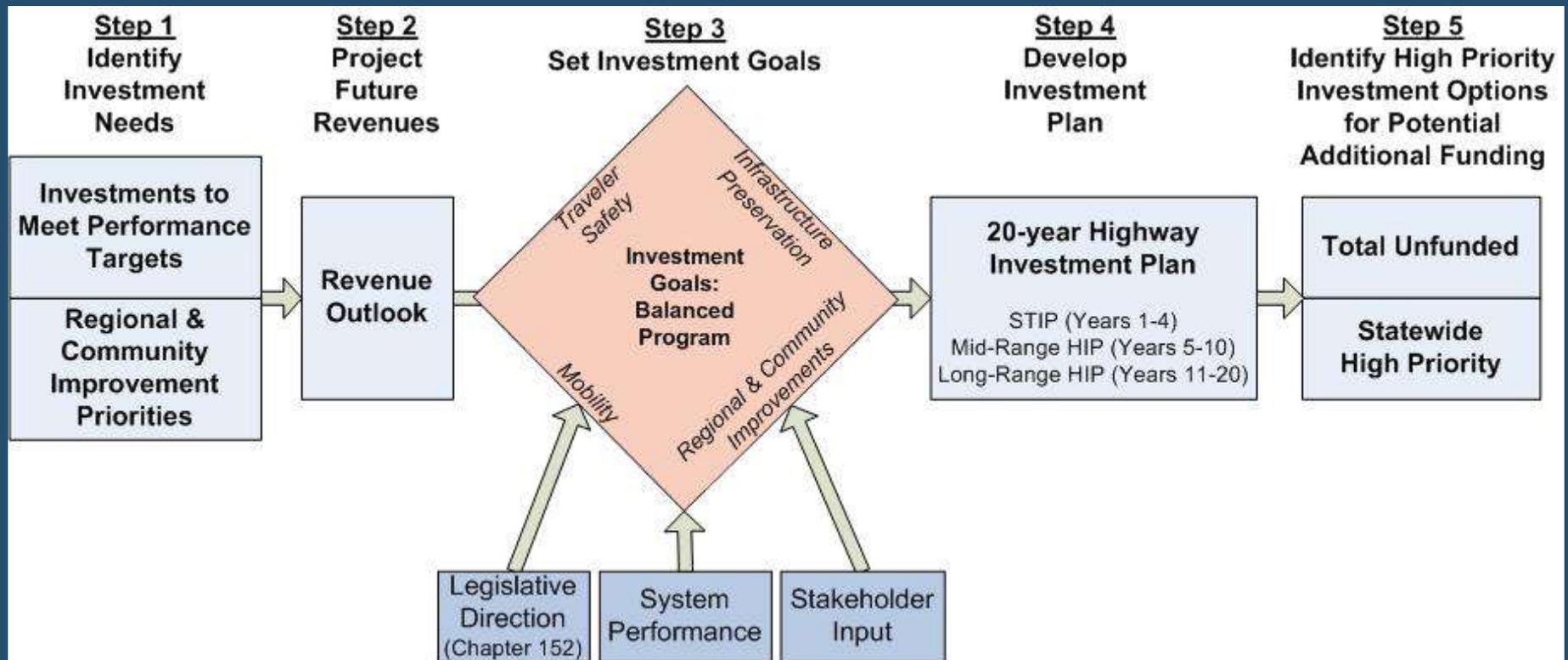
- Policy goals expressed as performance measures and targets
- Systems for collecting performance data
- Predictive performance models
- Fiscally constrained investment planning
- Risk-based investment priorities and strategies
- Performance monitoring on an annual basis



Ten Policy Goals – Each with Measures to Guide Decisions and Track Progress

1. Traveler Safety	6. Twin Cities Mobility
2. Infrastructure Preservation	7. Greater MN Mobility
3. Maintenance & Operations	8. Community Development
4. National-Global Connections	9. Energy and Environment
5. Statewide Connections	10. Accountability and Transparency

20-year Highway Investment Plan: 5 Step Process





Step 1: Identify Investment Needs

Group Goals & Measures into Investment Categories

- **Infrastructure Preservation**
 - Pavement: Pavement Management System
 - Bridge: Chapter 152 Program, NBI Bridge Ratings
 - Other Infrastructure (Signs, lighting, traffic signals, etc.): life cycle replacement cost
- **Safety**
 - Roadway Enhancements (edge treatments, turn lanes, etc)
 - Capacity Improvements
- **Mobility**
 - Twin Cities Congestion Mitigation- mgt and capacity
 - IRCs – predictive corridor speed model
- **Regional/Community Priorities – by Districts**
 - Economic Development, Quality of Life



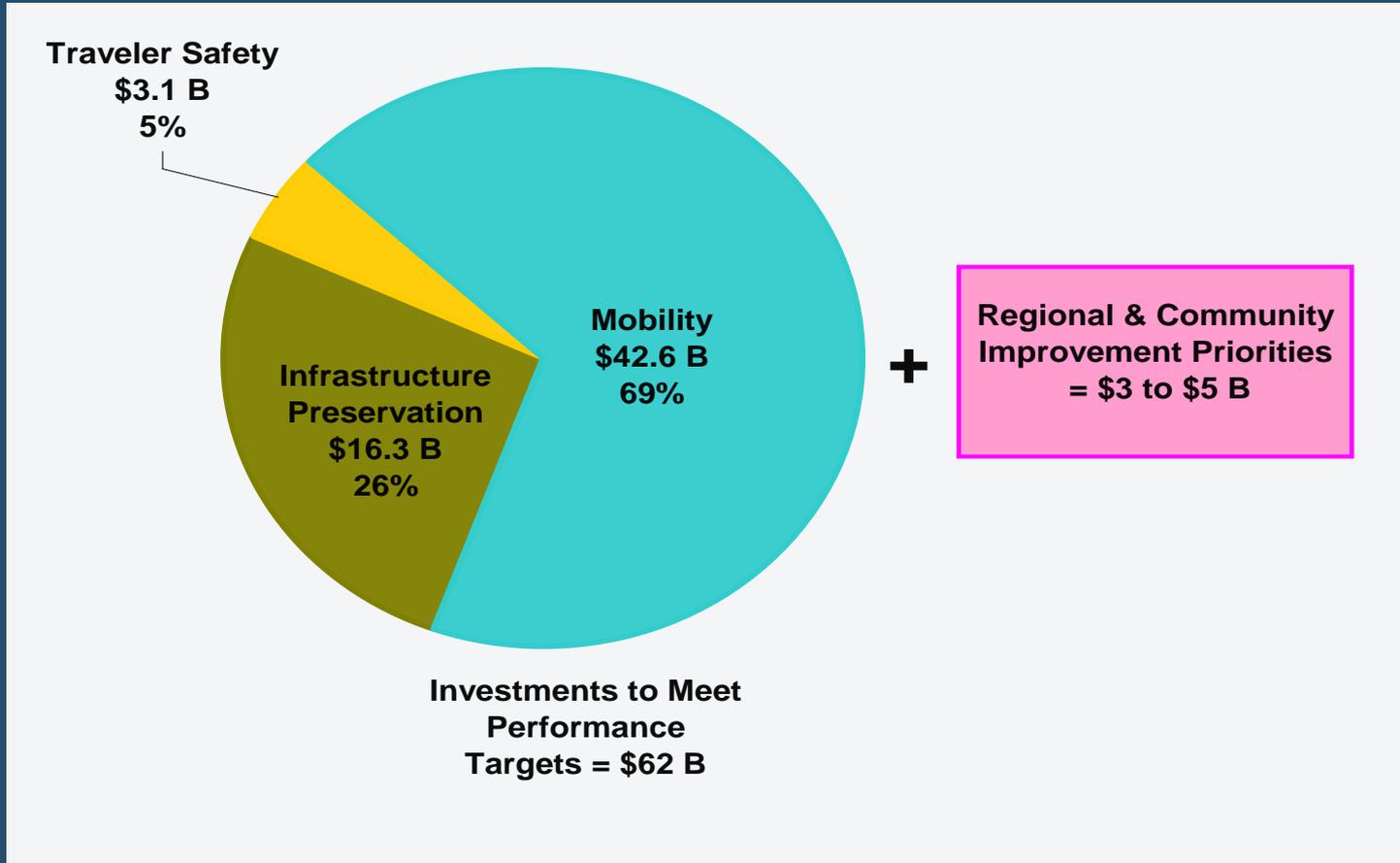
Step 1: Identify Investment Needs

Use Targets, Data Systems & Models to Project Needed Investment

Infrastructure Preservation Category	Performance Measure	Target	Method for Determining Needs
Pavement	RQI (Ride Quality Index)	PA > 70% good < 2% poor Non-PA > 65% good < 3% poor	Pavement Management System
Bridge	Structural Condition of Bridges over 20 ft and on Principal Arterials	>84% in Good or Satisfactory condition, <2% in Poor condition	Bridge Management System
Other Infrastructure (signs, lighting, traffic signals, drainage, etc)	Condition or Life Cycle Replacement	Varies	Inventory and condition assessment Estimate of assets/ replacement cost



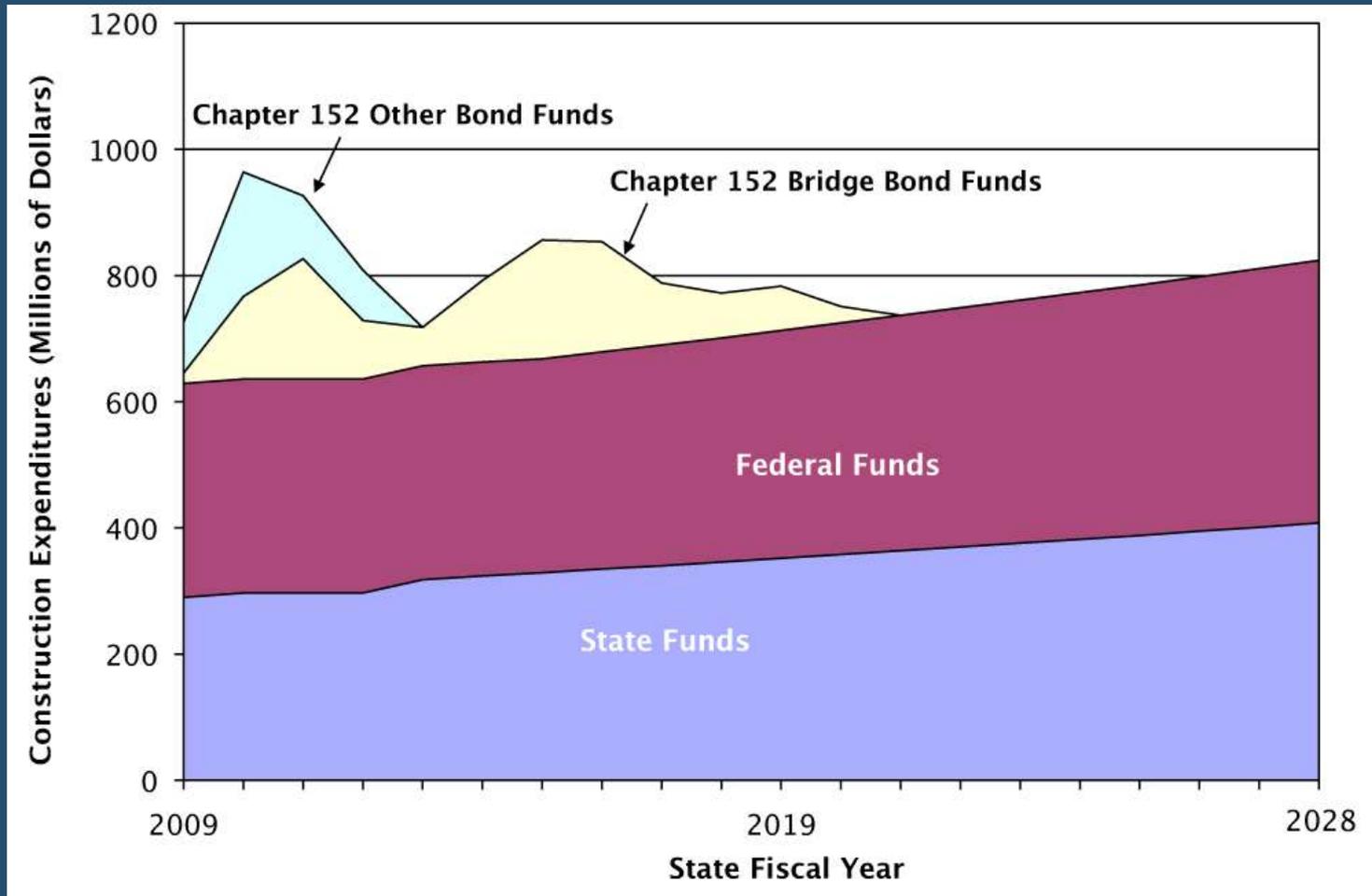
2009-2028 Investment Needs: \$65 B*



*Year of Construction



Step 2: Project Revenue \$15 B (2009-2028)





Step 3: Set Priorities for Available Funding

Goal: Balance investments across 4 strategic priorities

- Safety
- Mobility
- System Preservation
- Regional/ Community Priorities

Approach: Risk assessment

- Chapter 152 Legislative direction: bridges, interchanges, transit advantages
- System Performance trends
- Public and Stakeholder Input



Investment Guidelines

1. Bridge Preservation (Ch. 152 requirements + 85% of need for non-Ch.152 bridges)
2. Traveler Safety (3 x Highway Safety Improvement Program Goal)
3. Pavement Preservation (70% of remaining projected funding)
4. Other Infrastructure (provide some level of funding)
5. District discretion
 - Traveler Safety (Capacity Improvements)
 - Mobility
 - Regional & Community Improvement Priorities

Step 4: Develop Investment Plan- \$15 B

Preservation \$11.6 B

- Ch. 152 Bridge 2.5
- Other Bridge 2.6
- Pavement 5.8
- Other Infrastructure 0.6

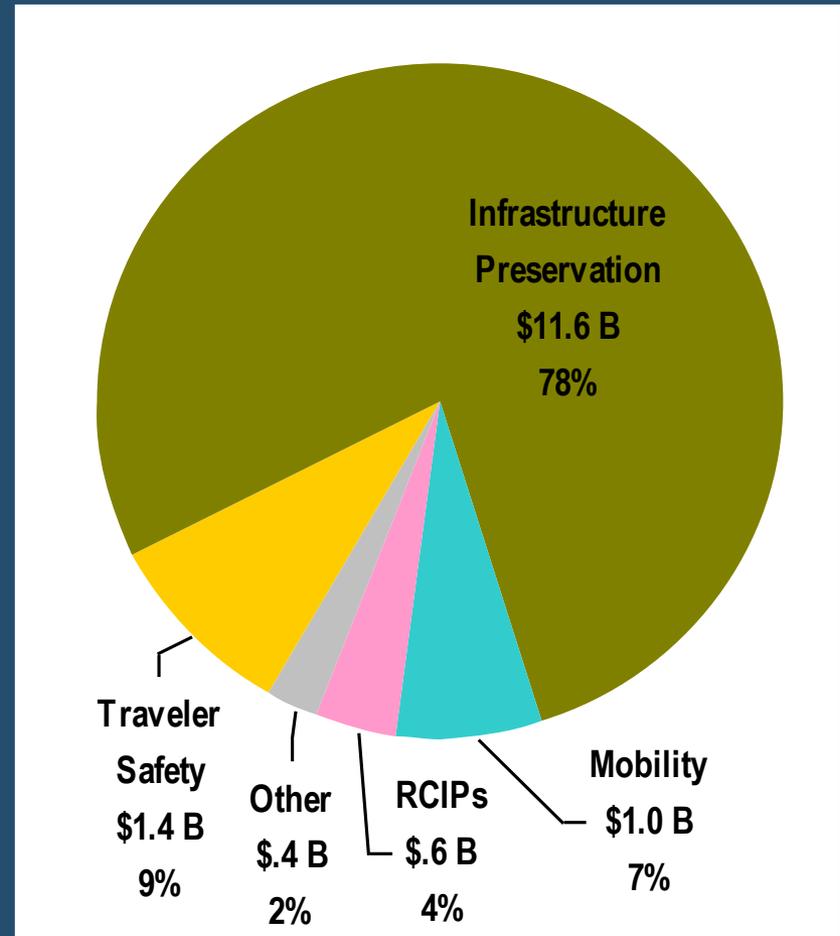
Traveler Safety \$1.6 B

- System-wide 0.8
- Safety/Capacity 0.6

Mobility \$1.1 B

- TC Metro 0.9
- IRC/Gr MN 0.2

(\$ in Billions, Year of Construction)





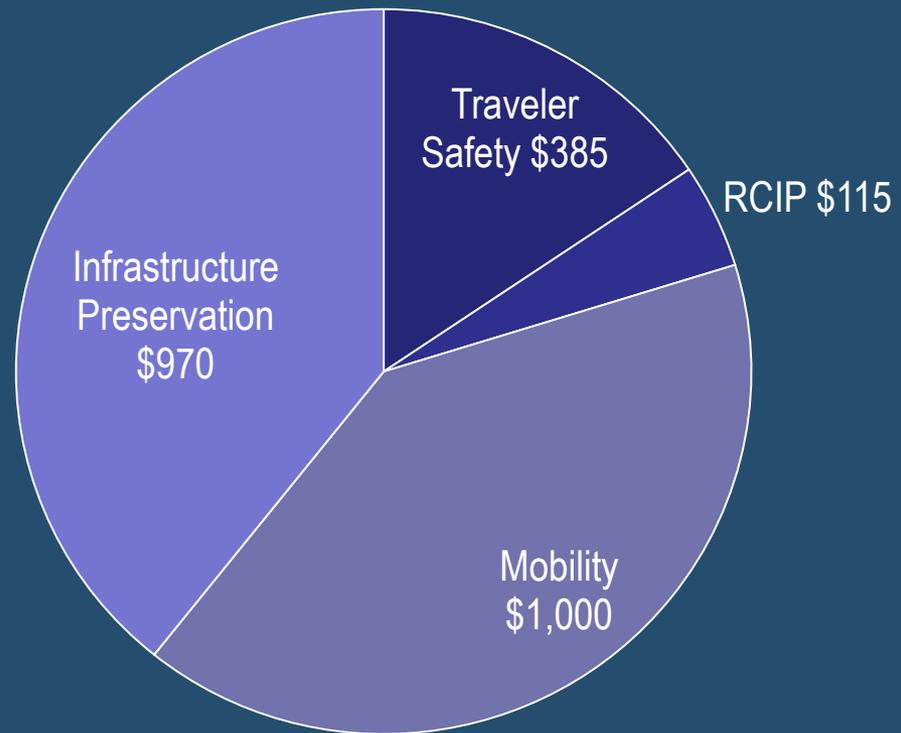
Statewide Projected Performance

Performance Category	Projected Performance
Bridges	
Chapter 152	
Other Bridges	
Roadway Fatalities	
Pavement	
Other Infrastructure	
Mobility	
Greater Minnesota Interregional Corridors	
Twin Cities Freeway Congestion	



Step 5: Identify High Priority Investments Options for Potential Additional Funding

Identify 5% of the unmet needs as high priority investment options distributed across all four investment categories





Links to Decision Making

- 10-year HIP/STIP
- System performance monitoring & the development of risk management strategies

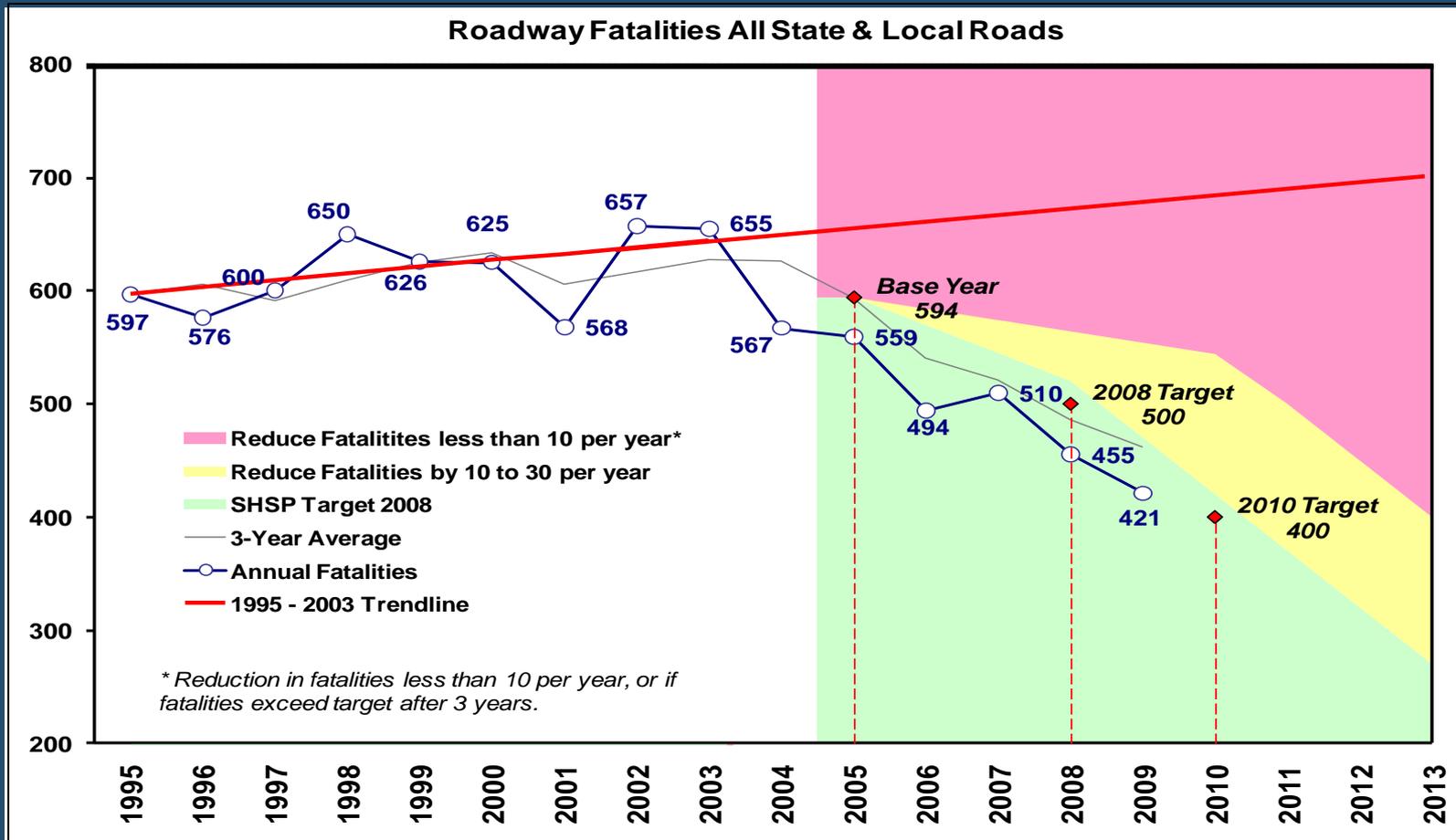
10-Year Highway Investment Plan



- Updated Annually
- Adjust investment direction in response to potential changes in:
 - Projected revenues
 - Construction costs
 - Performance trends
 - Risk assessment
- Years 1-4 (STIP): Committed Projects, timing could still change
- Years 5-10: (HIP) Projects still in scoping, subject to change

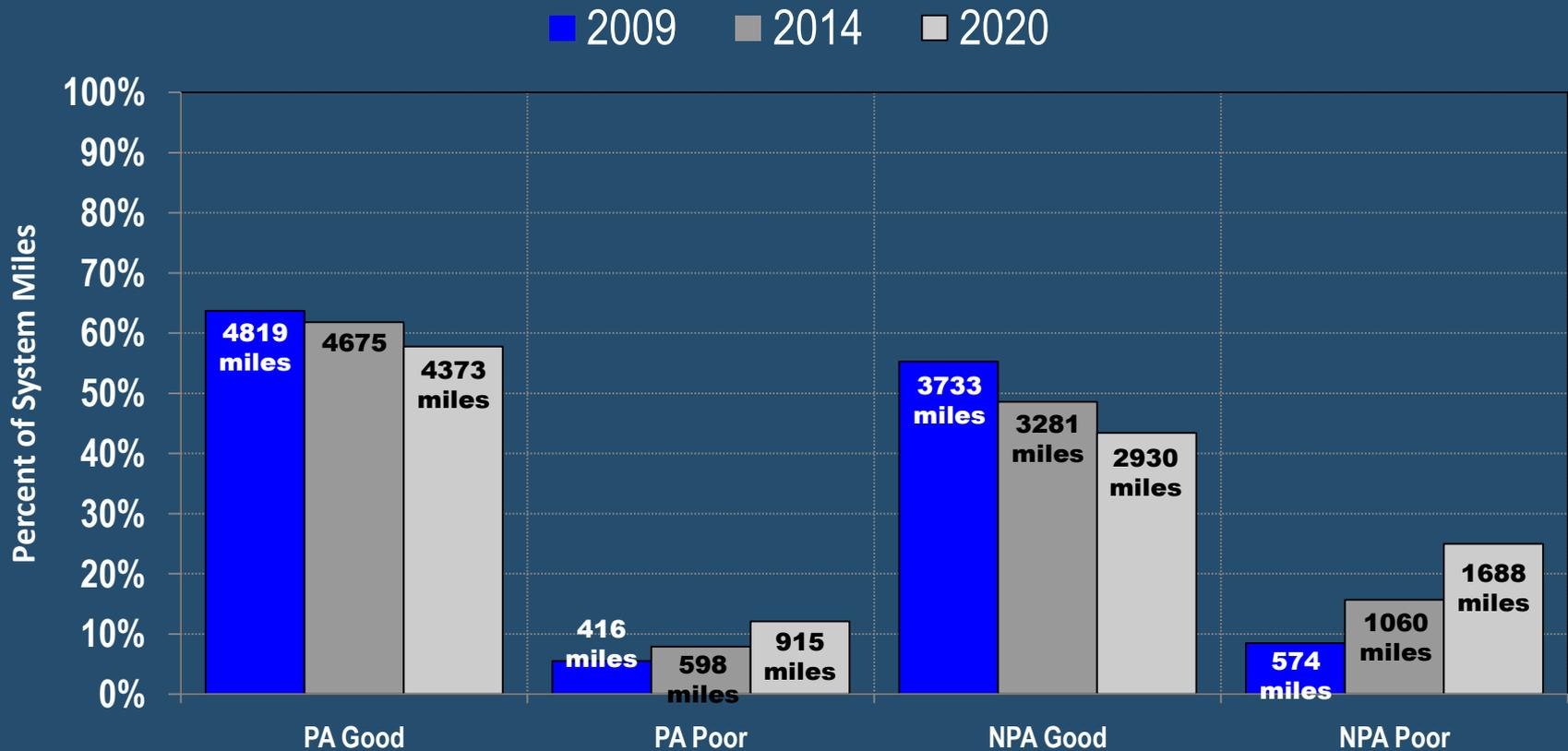


System Performance Monitoring Statewide Safety Trend



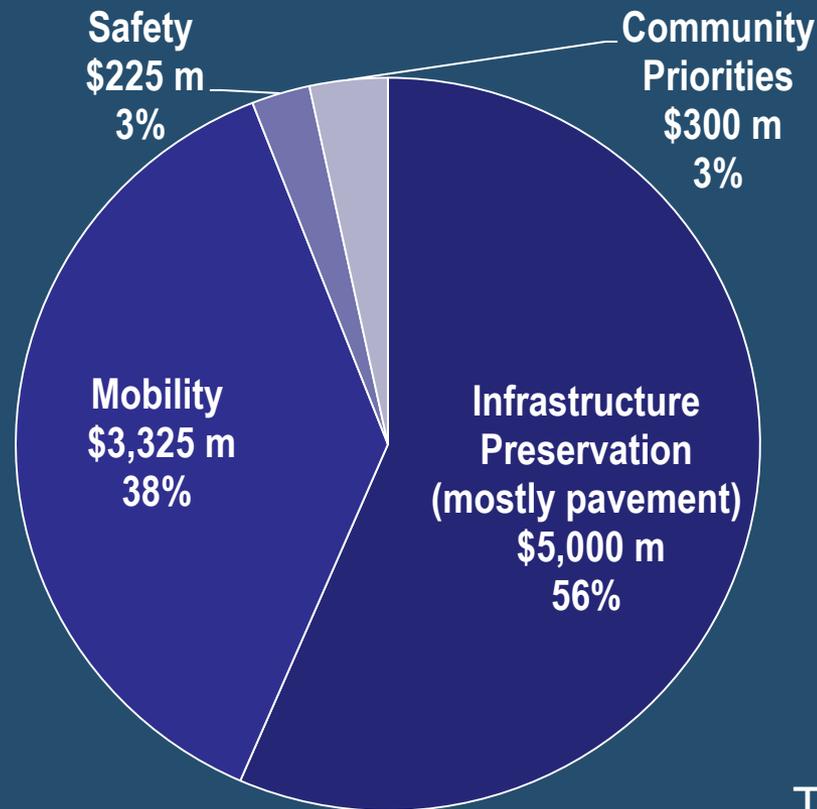


System Performance Monitoring Pavement Condition





Interim Risk Management Investment Strategy in Response to Governor's Request



Total: \$8.85 Billion



Lessons Learned (1 of 2)

- Performance-based planning and programming is a decision-making process and a communication tool – not an enforcement mechanism

It allows us to:

- Make informed decisions
- Understand and anticipate outcomes
- Promote a consistent, transparent approach across districts
- Tell a story that resonates with legislators and the public



Lessons Learned (2 of 2)

- Imperfect measures and unattainable targets can still add value
 - Don't wait for perfect measures/models to assess or project performance
 - Aspirational targets provide direction; Interim targets provide accountability
- Fiscal constraint facilitates tradeoffs



Additional Information:

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