



# **Managing the Nation's Bridges**

## ***Better, Faster, Cheaper, Safer, Smarter***

**National Bridge Management, Inspection,  
and Preservation Conference**

**November 1, 2011**

**Kirk T. Steudle, P.E.**

**Director, Michigan Department of Transportation**

**President, American Association of State Highway Transportation Officials**



# BETTER

- New Materials
- Better Designs



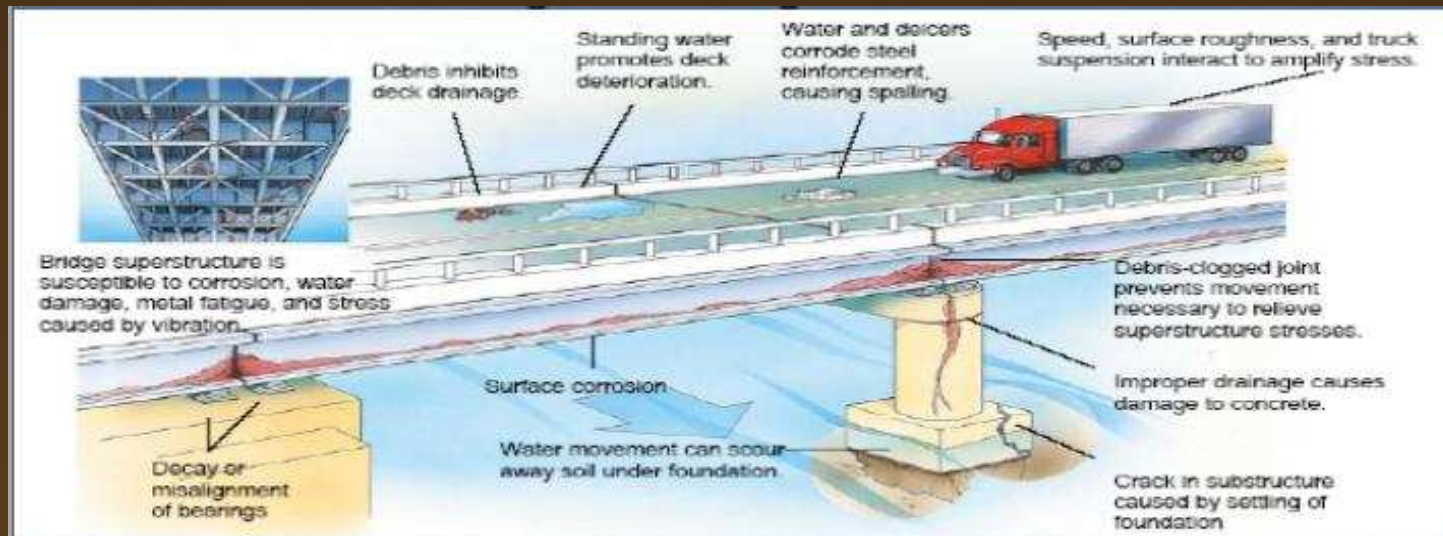
**Ultimate Load Test Setup of Control Beam**



# SHRP 2- Safety, Renewal, Reliability, Capacity

## SHRP 2- Project (R19A)

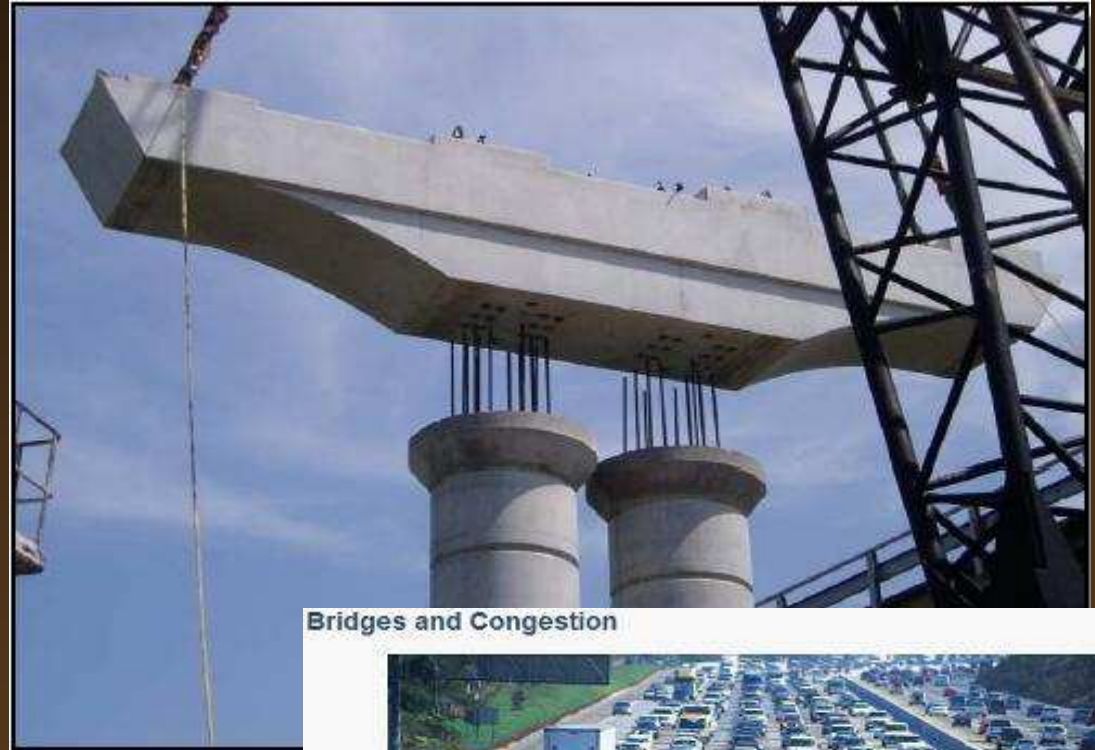
Project Title: **Bridges for Service Life beyond 100 Years: Innovative Systems, Subsystems, and Components**





# FASTER

- Accelerated Bridge Construction (ABC)
- Prefabricated Bridge Element Systems (PBES)
- Every Day Counts



Bridges and Congestion



# SPMTs

## Self Propelled Modular Transporter

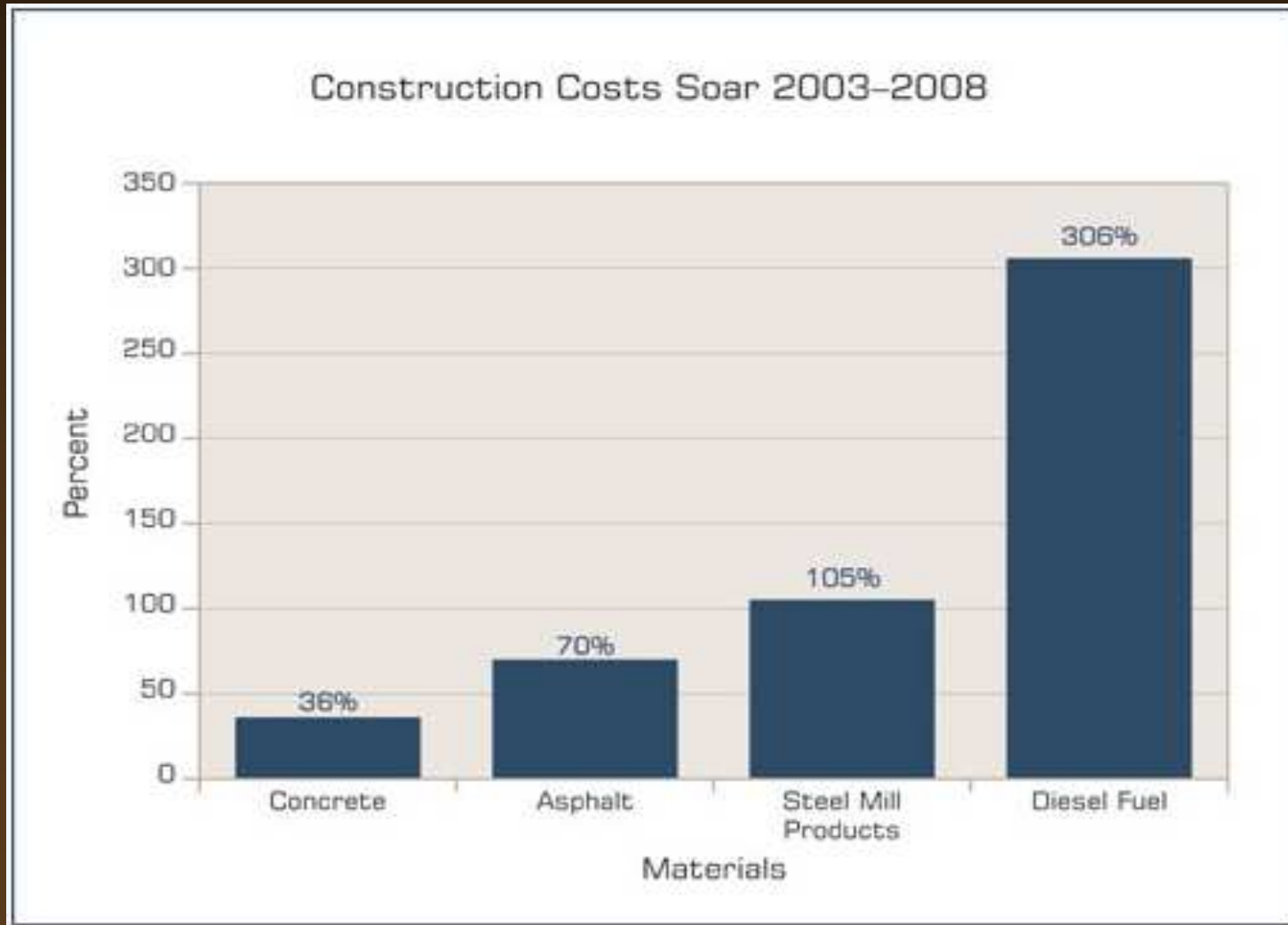


I-80 State to 1300 East Sequence



**UTDOT**  
CONNECTING COMMUNITIES

# CHEAPER?



# Definition: Bridge Preservation

## ■ Bridge Preservation

- Actions or strategies that prevent, delay or reduce deterioration of bridges or bridge elements, restore the function of existing bridges, keep bridges in good condition and extend their useful life. Preservation actions may be preventive or condition-driven.

# SD

# SAFER

# FO

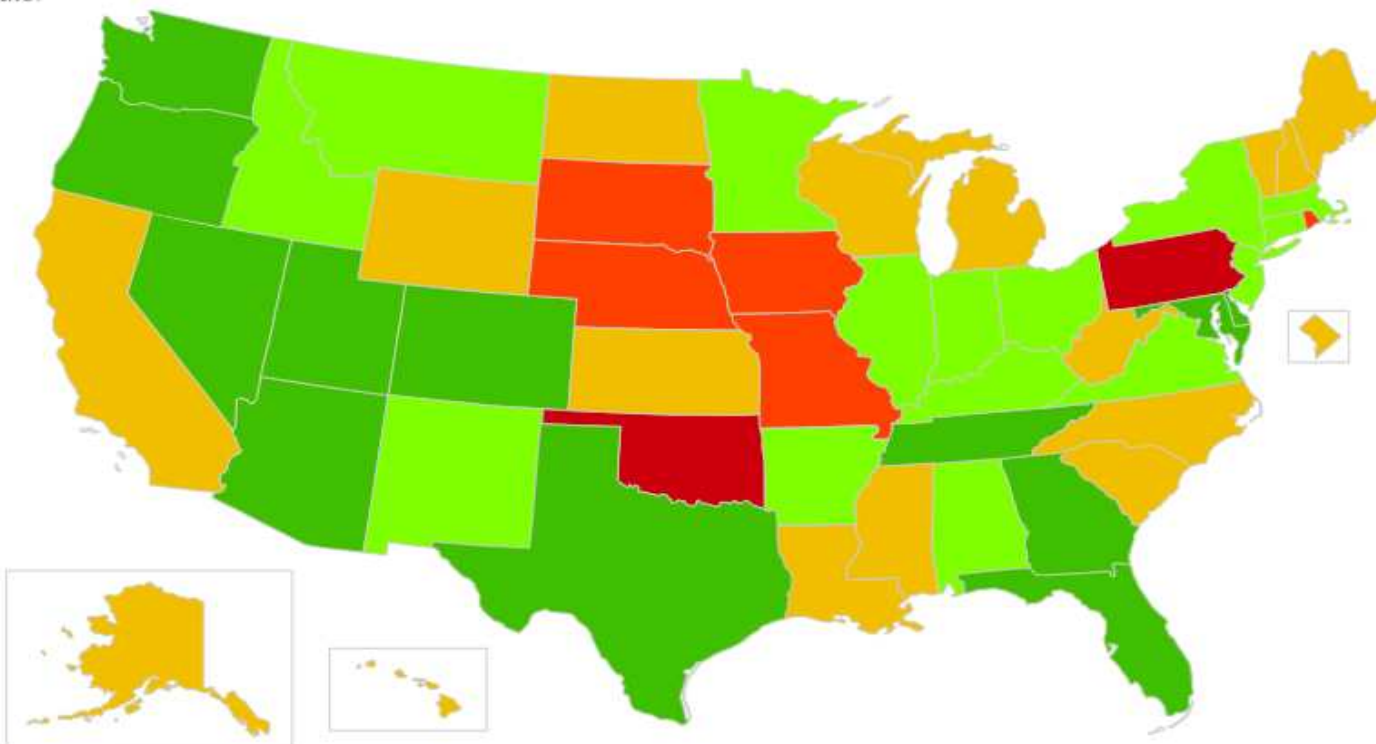
The Fix We're In For: The State of Our Bridges

[Find Bridges](#)

[State Data](#)



Select a state:



Deficient  
Bridges

25%+

22-25%

17-22%

12-17%

7-12%

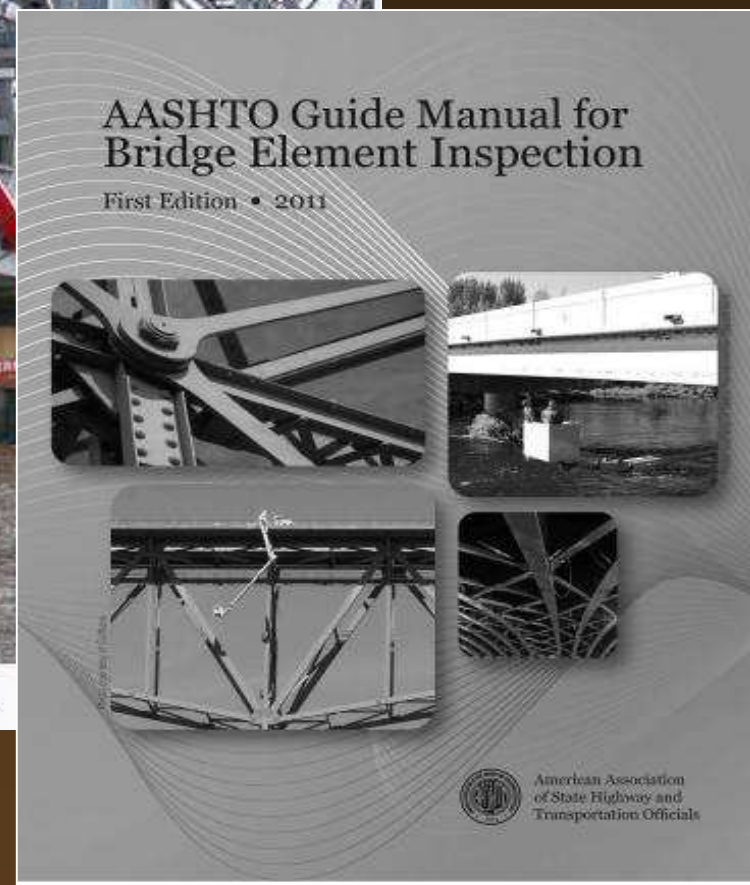
0-7%



# Bridge Inspection



Snooper truck inspection.  
Photo courtesy of Duluth Shipping News.

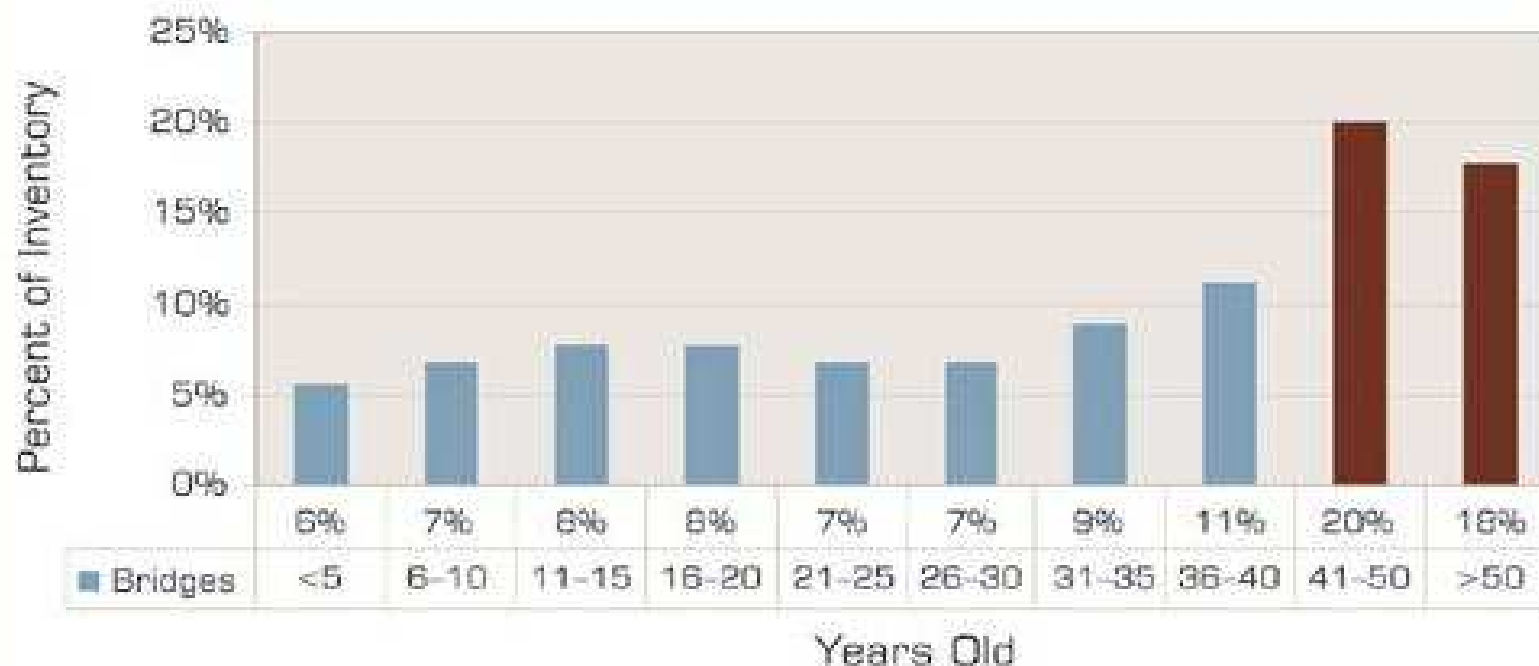




# Bridging the Gap

Restoring and Rebuilding the Nation's Bridges

Age of U.S. Bridges





# Bridging the Gap

Restoring and Rebuilding  
the Nation's Bridges

- Top Five Problems for Bridges
  - Age and Deterioration
  - Congestion
  - Soaring Construction Cost
  - Maintaining Bridge Safety
  - New Bridge Needs



# Bridging the Gap

Restoring and Rebuilding  
the Nation's Bridges

- Top Five Solutions for Bridges
  - Investment
  - Research and Innovation
  - Systematic Maintenance
  - Public Awareness
  - Financial Options



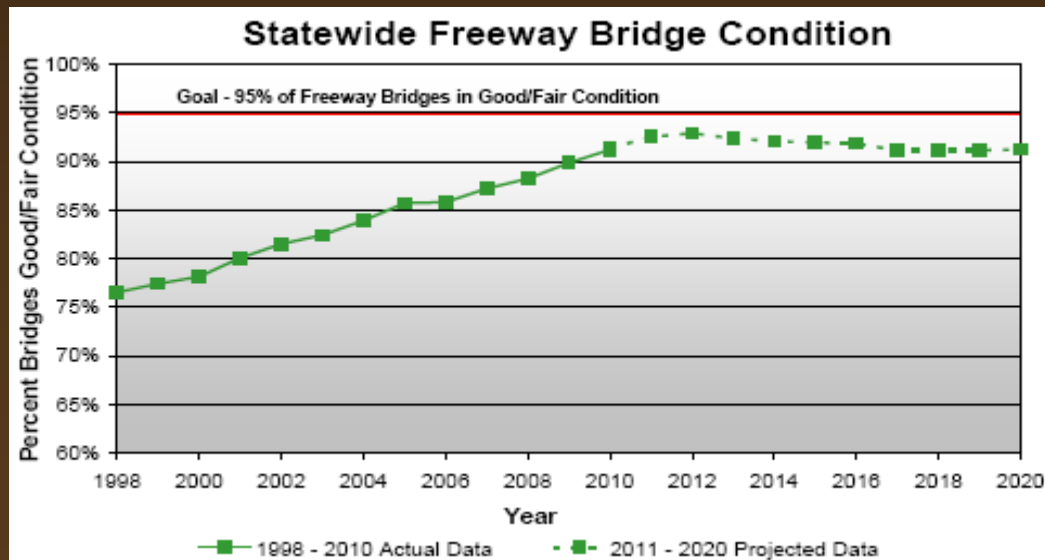
# SMARTER

- Innovation
- Research
- Health Monitoring
- Asset and Performance Management
- Data Driven Decisions
- Partnerships






# Performance Measures

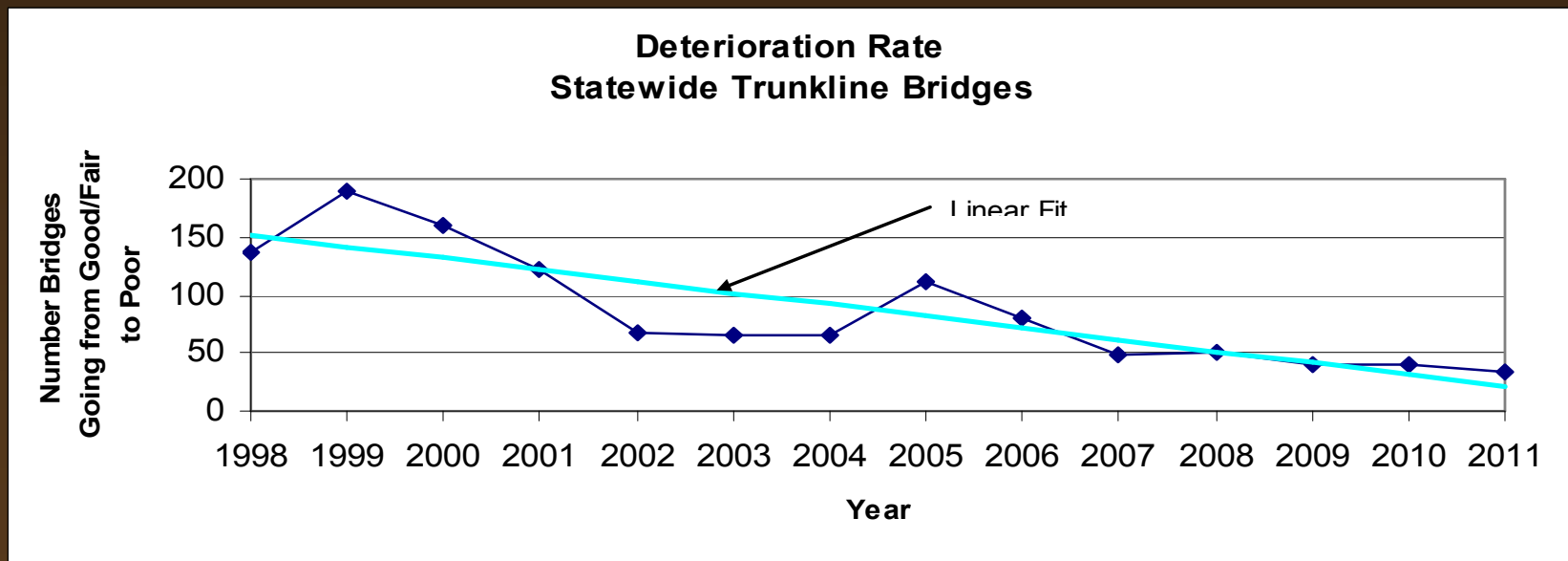
## Michigan DOT Freeway Bridge Condition



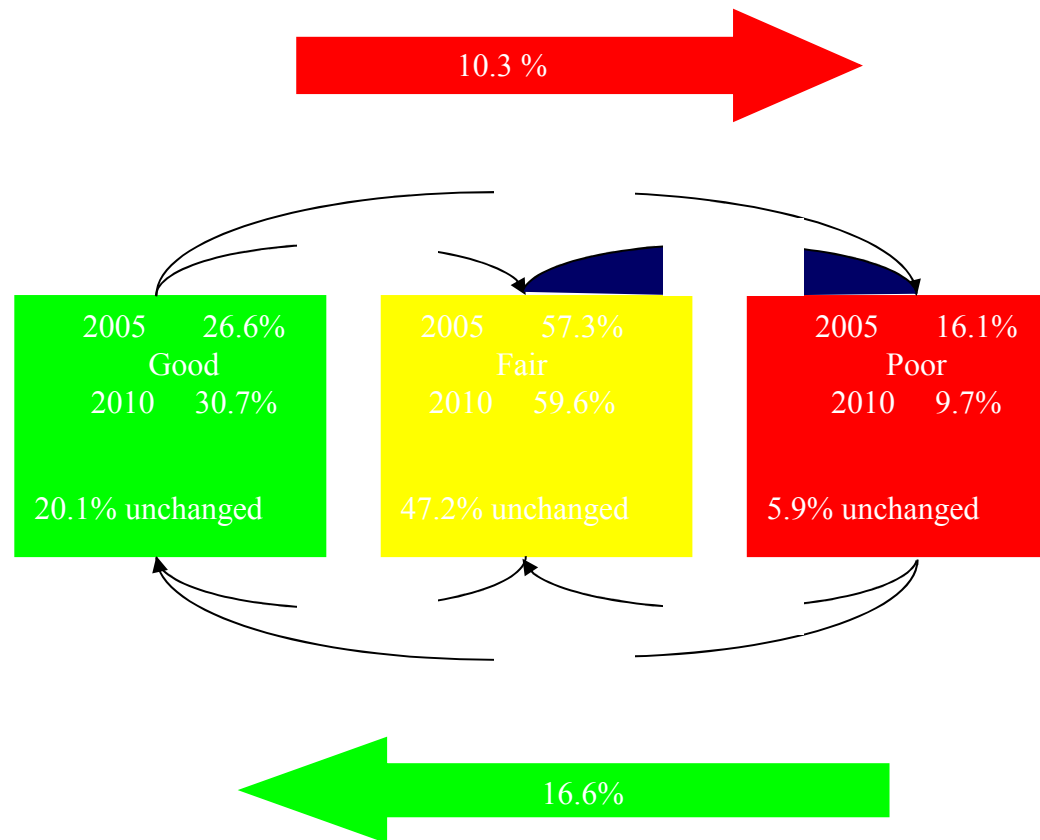
## Virginia DOT Bridge Condition

Bridge Condition	
Target 92% Non-Red (Non-SD)	
	1689
	3231
	15944
Green and Yellow Percent: 91.9%	

# Performance Measures For Preservation



# Performance Measures For Preservation





# AASHTO Bridge Preservation Partnerships



**Thank You  
and have a Great Conference!**

