Generating Public Involvement in Transportation

Current Conditions, Economic Impacts of Transportation, and Cost Trends

Overview

- Currently, what is the condition of North Dakota's roads?
- How does road condition impact user costs?
- How do user costs relate to the economy?
- How does inflation affect road condition?

Current System Condition

- International Roughness Index (IRI) - measurement of the “bumpiness” of the road.

- Low values (0-94) indicate a very smooth riding quality, while higher values, (above 220), indicate a rougher riding road.

- In 2005, the statewide average IRI was 114
  - Concrete pavements – IRI = 95
  - Flexible pavements – IRI = 128

State Highway Conditions

- Flexible Pavements
  - Very Good – 6%
  - Good – 35%
  - Fair – 22%
  - Mediocre – 39%
  - Poor – < 1%
- Concrete Pavements
  - Very Good – 22%
  - Good – 38 %
  - Fair – 20%
  - Mediocre – 18%
  - Poor - < 1%

Pavement smoothness based upon IRI measurements
(Source: NDDOT)

Current County Conditions

- County Major Collectors
  - 24% Good
  - 43% Fair
  - 33% Poor
- Local Road Conditions
  - 12% Good
  - 48% Fair
  - 32% Poor
  - 8% Not Rated

Good = Some Signs of Wear
Fair = Noticeable Signs of Wear Throughout
Poor = Significant Wear Throughout
(Source: Survey of County Engineers)

How does road condition impact user costs?

Highway User Costs

- Pavement Roughness
- Congestion
- User Costs
  - Travel Time Costs
    - Travel Speed
      - Pavement Quality
      - Congestion
  - Operating Costs
    - Travel Speed
    - Input Costs

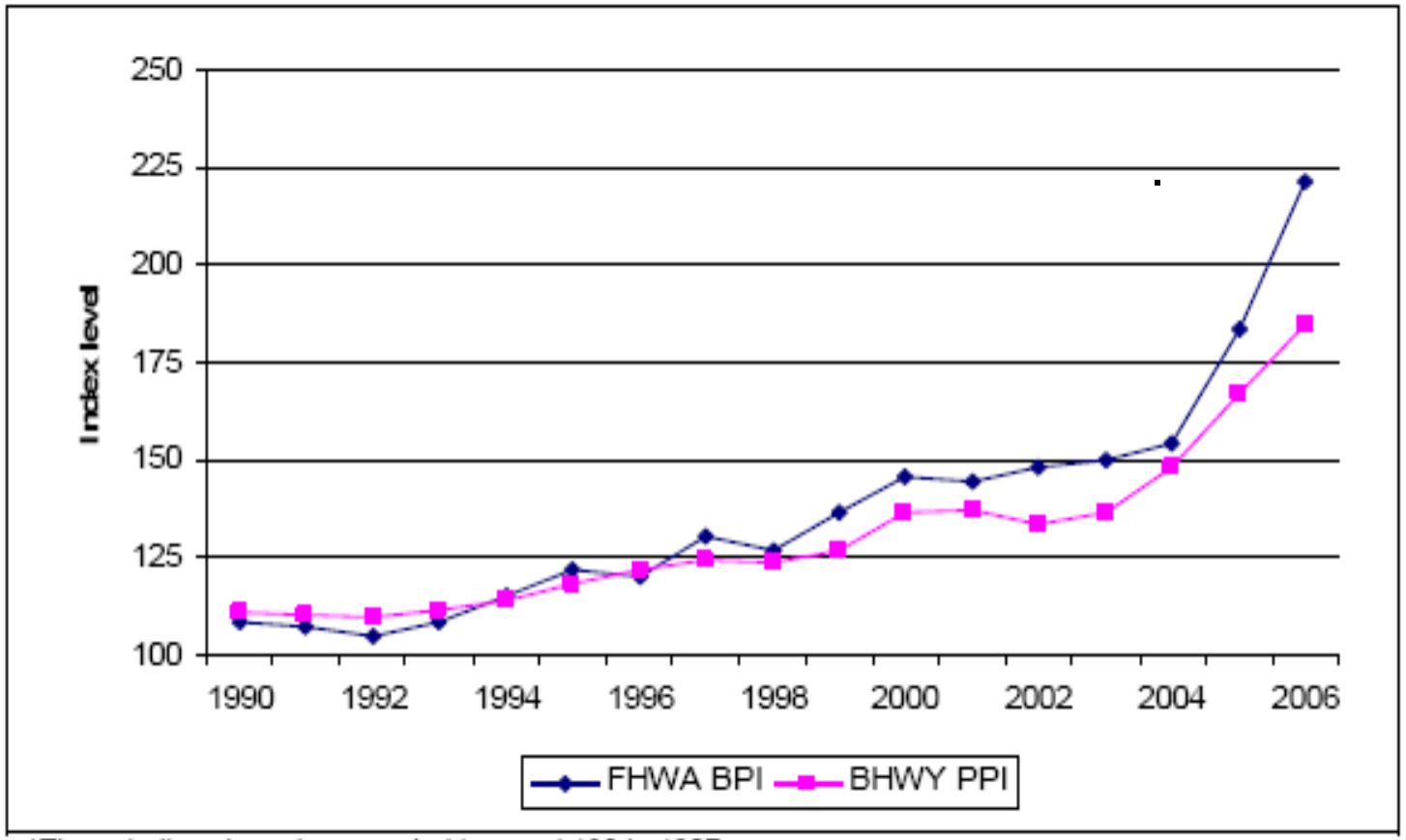
Transportation Cost Impact on the Economy

- Commuter Costs - Consumer Spending
- Intermediate Input Costs - Production Costs
- Delivery Costs - Prices Received
- Construction Spending

What are the impacts of inflation on road conditions?

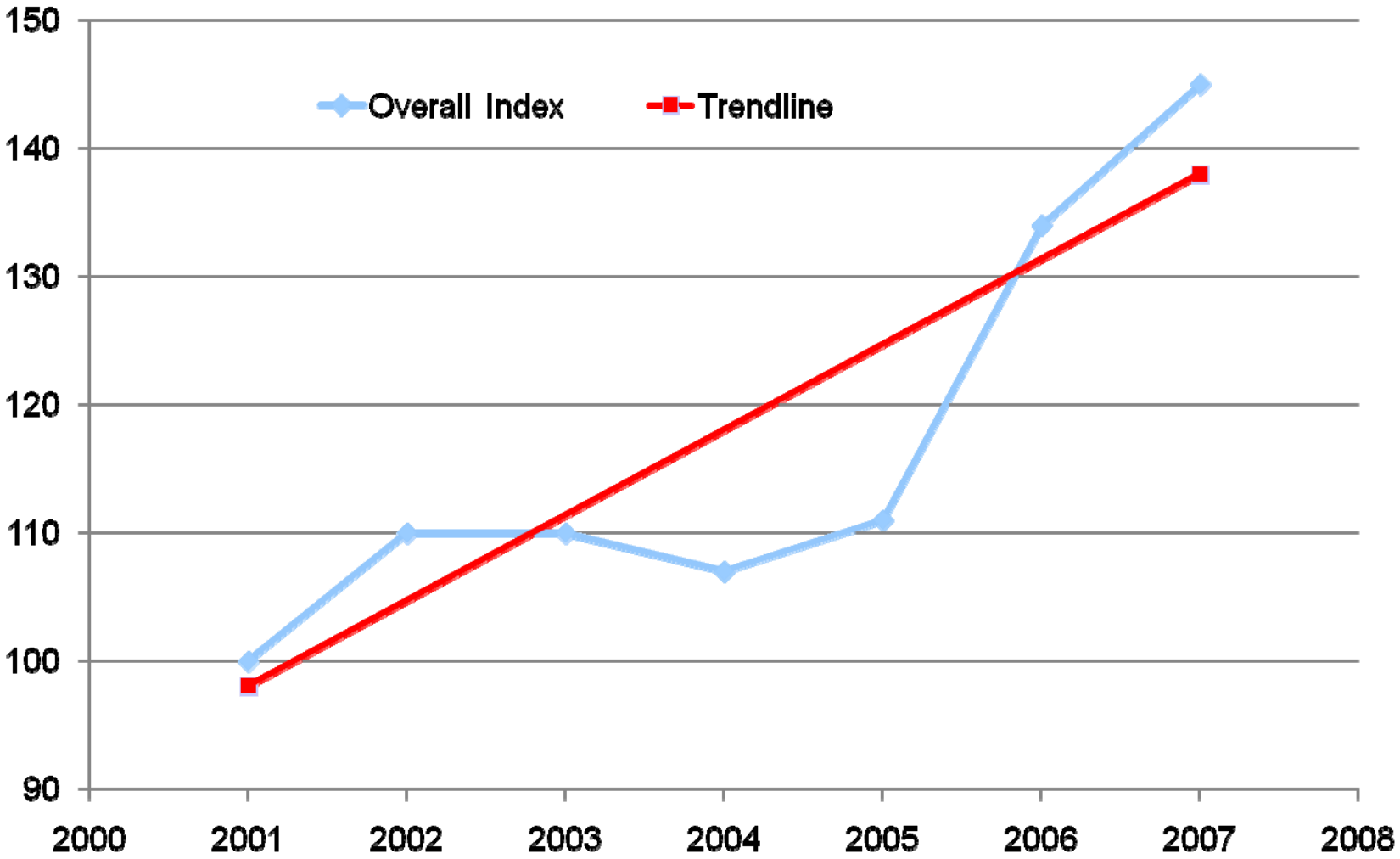
National Highway Construction and Maintenance Cost Indices*

(Source: FHWA)



*These indices have been scaled to equal 100 in 1987.

North Dakota's Overall Construction Cost Index

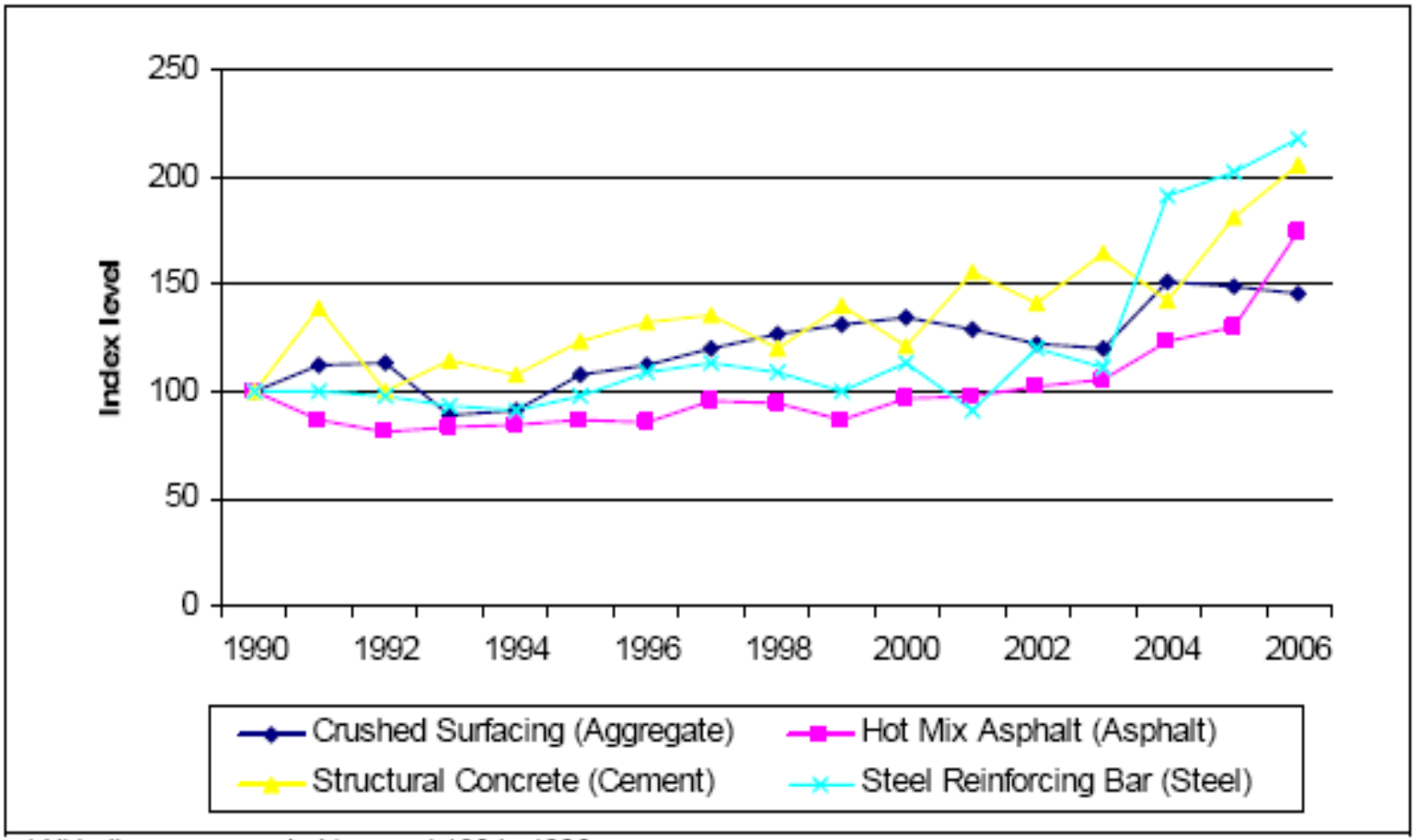


FHWA Cost Study

- A dollar will have lost between 37 and 60 percent of its value between 2005 and 2009, if highway project inflation continues at its 2006 pace.

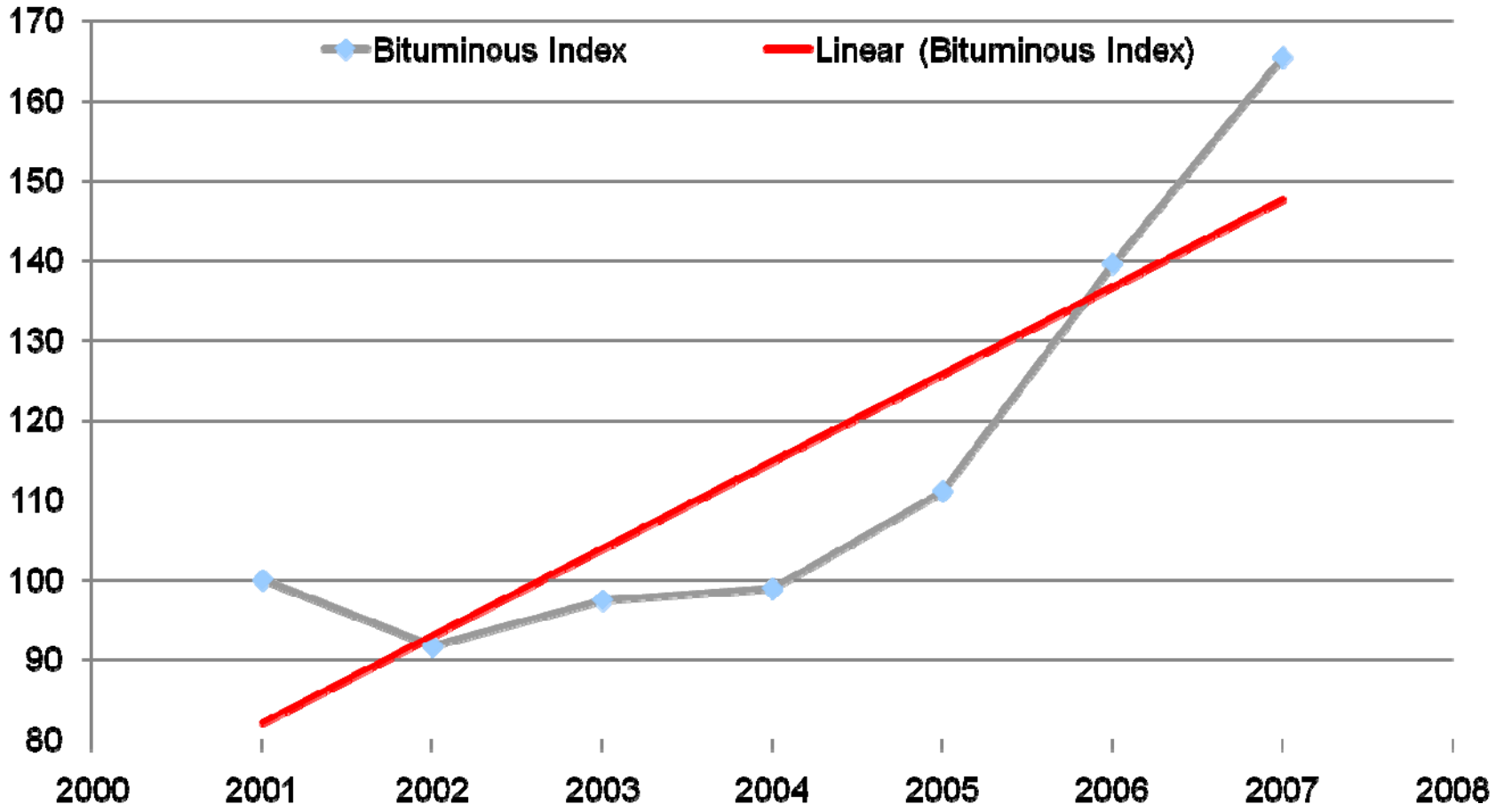
- 2009 SAFETEA-LU $42 billion
  - 2005 value between $16.8 and $26.6 billion

Growth in Commodity Input Costs for Highway Construction in Washington State (Source: FHWA)



*All indices were scaled to equal 100 in 1990.

Bituminous Paving Overall Cost Index



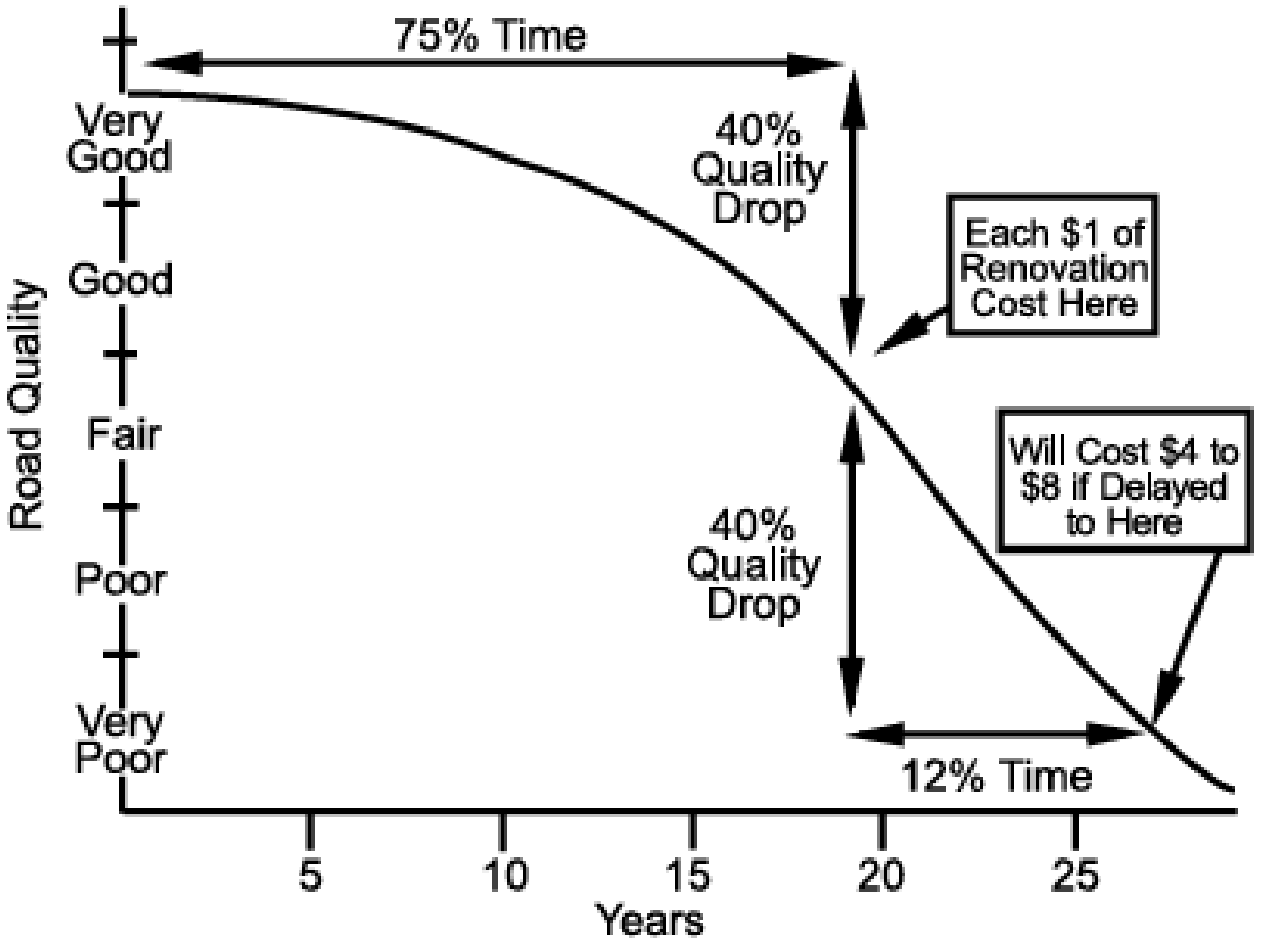
FHWA Cost Study

- Cost increases differed greatly from state to state
  - Variations in cost a result of transportation costs
- Main factor in cost increases is fuel prices
- Commodity costs are expected to remain elevated, if not escalate in the near future.

Highway System Implications

- Nominal Disbursements and Revenues increased by 18 percent from 2001-2005
- Producer Price index has increased by 32 percent over the same time frame
- The same funding level “buys” fewer improvements it did five years ago

Timeliness of Improvements



Highway System Implications

- Construction and maintenance cost increases in relation to pavement quality and user costs
  - Selective improvements
  - Improvement backlog