



Pennsylvania's Bridge Program

Presentation to
Planning Partners

February 11, 2008

Brian Thompson, P.E.,
Acting Director – PennDOT Bureau of Design

1



Pennsylvania's Bridge Program

- Condition of PA Bridges
- Accelerated Bridge Program

2



Pennsylvania's Bridge Program

Condition of PA Bridges

3

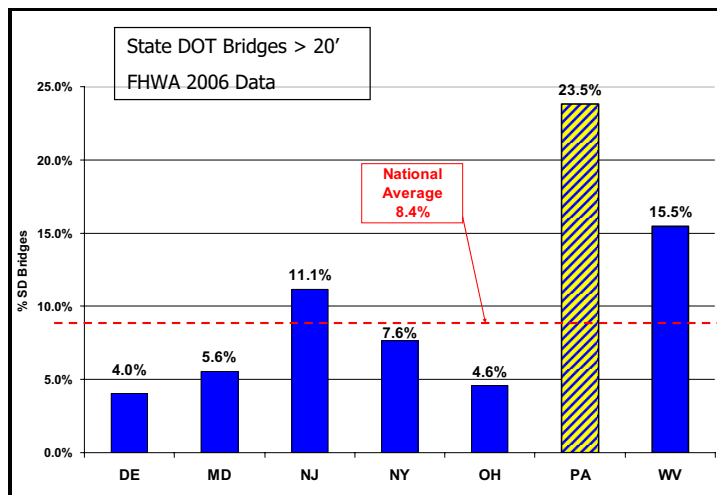


PA Bridge Statistics

- Bridges
 - Count: 25,314
 - Deck Area: 110 Msf
- Structurally Deficient (SD) Bridges
 - Count: 5,935 – 23.5%
 - Deck Area: 22.5 Msf – 20.5%
- Average age 50 years

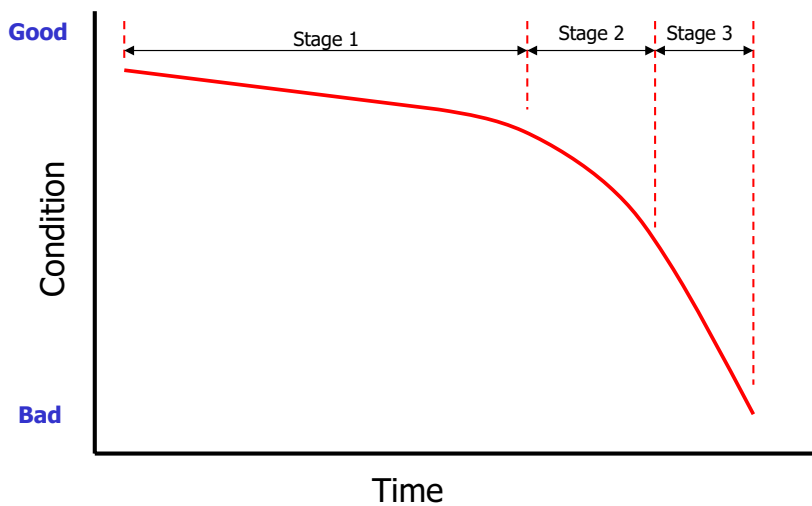
4

Comparison with Neighboring States



5

Bridge Condition Deterioration Curve



6

Emergency Repairs



Web deterioration on SR 743 in Hershey – January 2008

7

Bridge Deterioration



Bottom flange section loss and rusting of webs near backwall in Somerset County (SR 2037)

8

Bridge Deterioration



06 0082 0202 0531

05-08-2005

Spall and delam in RT spandrel beam bay-1 span-9

Spalling and exposed rebar in spandrel beam in Berks County (SR 0082)

9

Pennsylvania's Bridge Program

Accelerated Bridge Program

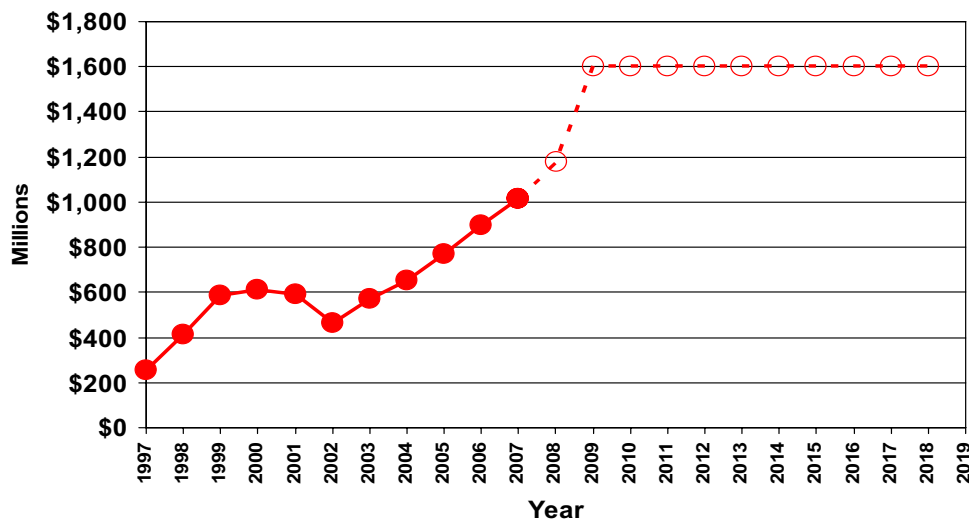
10

Funding

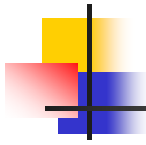
- Current Bridge Funding Program – \$1.1 Billion/year
- Accelerated Bridge Funding Program - \$1.6 Billion/year
 - Direct larger portion of current funding to bridges
 - Bond \$200 million a year for 10 years

11

Total Funding – 1997 to 2018



12

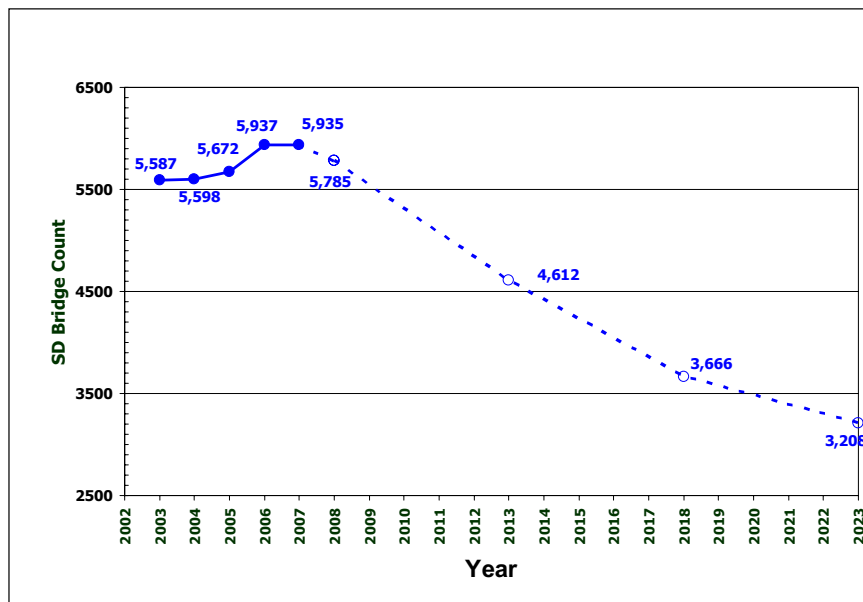


Projected SD Bridge Results

Time	Cumulative Funding	Remaining SD %	Remaining SD Bridges
Today	-----	23.5%	5,935
5 years	\$7.6 B	18.3 %	4,612
10 years	\$15.5 B	14.5 %	3,666
15 years	\$23.0 B	12.7 %	3,208
25 years	\$39.8 B	11.5 %	2,890



SD Bridges – 2002 to 2023

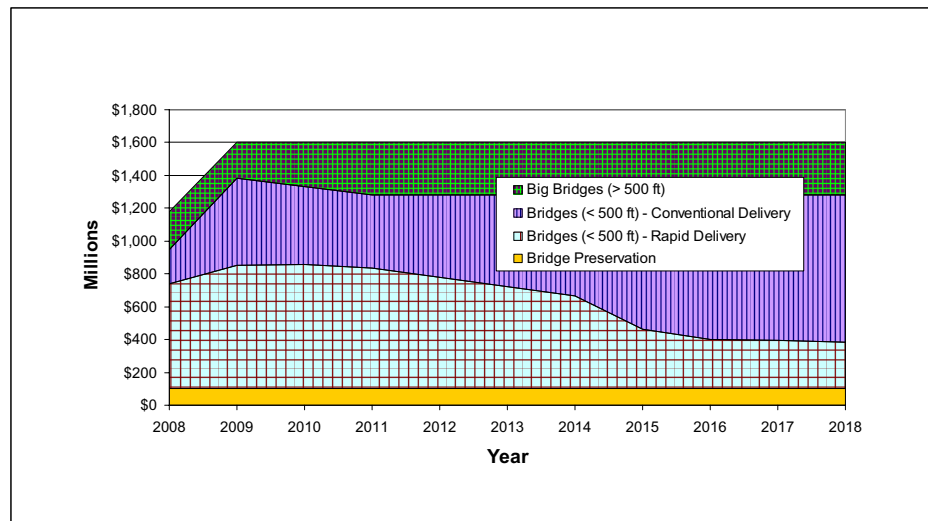


Key Components

- Focus on SD Bridges
- Risk Assessment Tool
- Big Bridges (> 500 feet)
- Bridges (\leq 500 feet)
 - Rapid Delivery
 - Conventional Delivery
- Bridge Preservation

15

Allocation of Funds



16



Project Delivery Methods

- Expanded Design Build Contracts
- Group contracts by region and type
- Continue Streamlining Design
- Use Smart Transportation principles
- Design 100 year life bridges

17



Implementation

- Accelerated Bridge Program
Delivery Team
- Coordination with Agencies
- Coordination with MPO/RPO
- Coordination with Business Partners

18



Authorizations Needed

- Capital Budget
- Bonding

19



Summary

- \$2 B bonding over 10 years + larger focus of current funds
- Results in 3 years
 - 1,000 SD bridges let/rebuilt
- Results in the first 10 years:
 - \$15.5 B total expenditures on bridges
 - 4,100 SD bridges let/rebuilt
 - 40% Reduction in SD bridges

20

Questions?

