

# Bridge Preservation Course Series

- Course 1: Bridge Preservation Fundamentals (4 hours)
  - ❑ FHWA-NHI-130106A
- Course 2: Establishing a Bridge Preservation Program (5 hours)
  - ❑ FHWA-NHI-130106B
- Course 3: Communication Strategies for Bridge Preservation (3 hours)
  - ❑ FHWA-NHI-130106C



FHWA-NHI-130106A

## Bridge Preservation Fundamentals

### Lesson 1

#### Definitions and Terminology

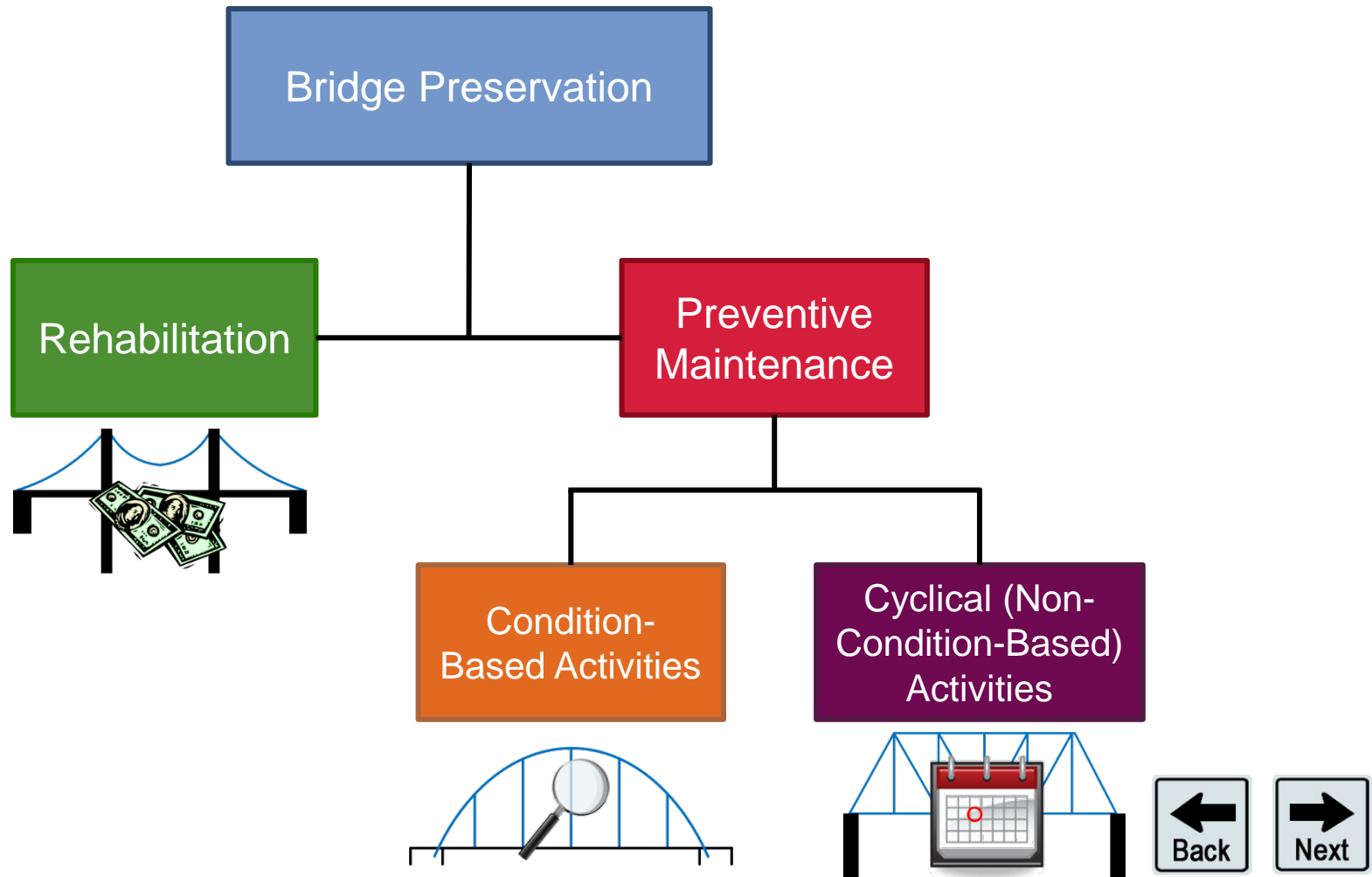


**Bridge preservation** is the actions or strategies that prevent, delay, or reduce deterioration of bridges or bridge elements, restore the function of existing bridges, keep bridges in good condition, and extend their life. Preservation actions may be preventive or condition-driven.

*Source: AASHTO Subcommittee on Maintenance*



## Bridge Preservation Components



FHWA-NHI-130106A

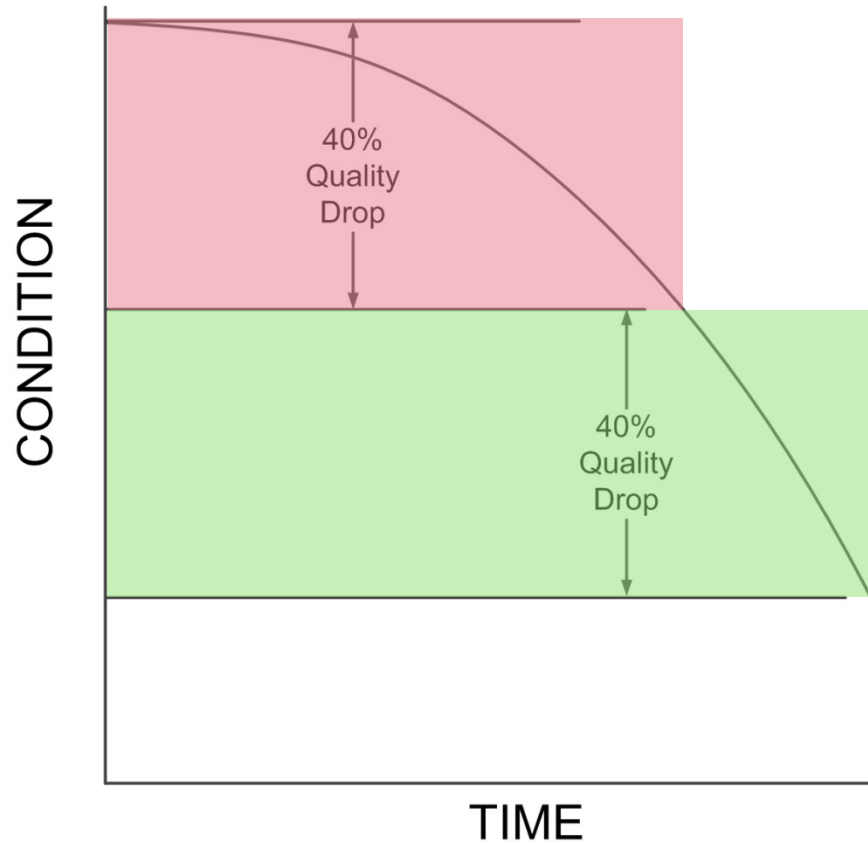
## Bridge Preservation Fundamentals

### Lesson 2

Benefits of Timely Bridge  
Preservation and  
Consequences of  
Deferred Maintenance



## Keep Bridges in Good Condition and Extend Their Useful Life





FHWA-NHI-130106A

Bridge Preservation  
Fundamentals

Lesson 3

Deck Preservation  
Practices and Activities

Cyclical & Condition Based Activities



FHWA-NHI-130106A

## Bridge Preservation Fundamentals

### Lesson 4

## Superstructure Preservation Practices and Activities



Cyclical & Condition Based Activities



## Bridge Superstructure Material Types





FHWA-NHI-130106A

Bridge Preservation  
Fundamentals

Lesson 5

Substructure Preservation  
Practices and Activities



Cyclical & Condition Based Activities



FHWA-NHI-130106A

### Bridge Substructure Material Types



FHWA-NHI-130106A

Bridge Preservation  
Fundamentals

Lesson 6

Culvert Preservation  
Practices and Activities





## FHWA-NHI-130106B

### Establishing a Bridge Preservation Program

#### Lesson 1

### Goals, Objectives, and Performance Measures





## What are goals?

**Goals** are typically long-term aims of an organization and are more general and less structured than objectives.

## What are objectives?

**Objectives** are short-term specific actions that must be taken to achieve desired outcomes and are specific and usually outlined into steps or actions that often include deadlines and budget limitations.

## What are performance measures?

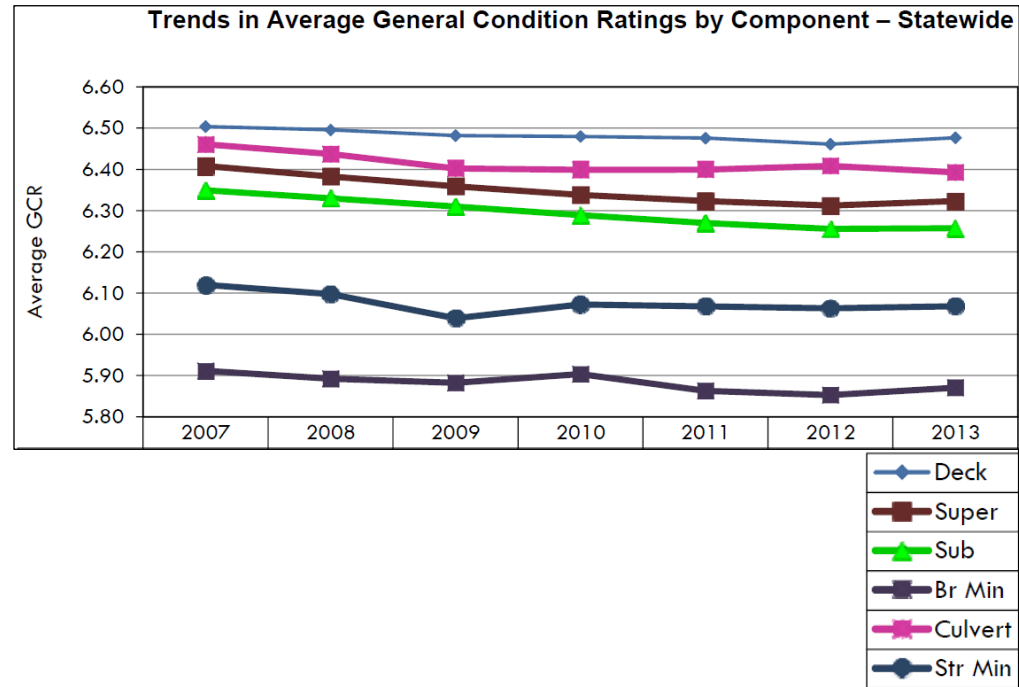
**Performance measures** are specific steps that can be evaluated and monitored for their completeness.



# FHWA-NHI-130106B

## Establishing a Bridge Preservation Program Lesson 2

### Needs Assessments and Data Management



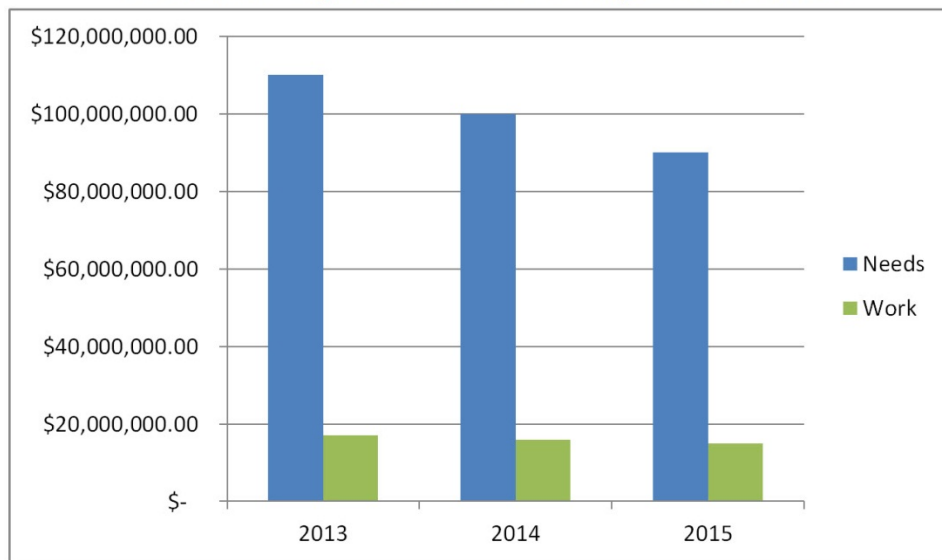
# FHWA-NHI-130106B

## Establishing a Bridge Preservation Program

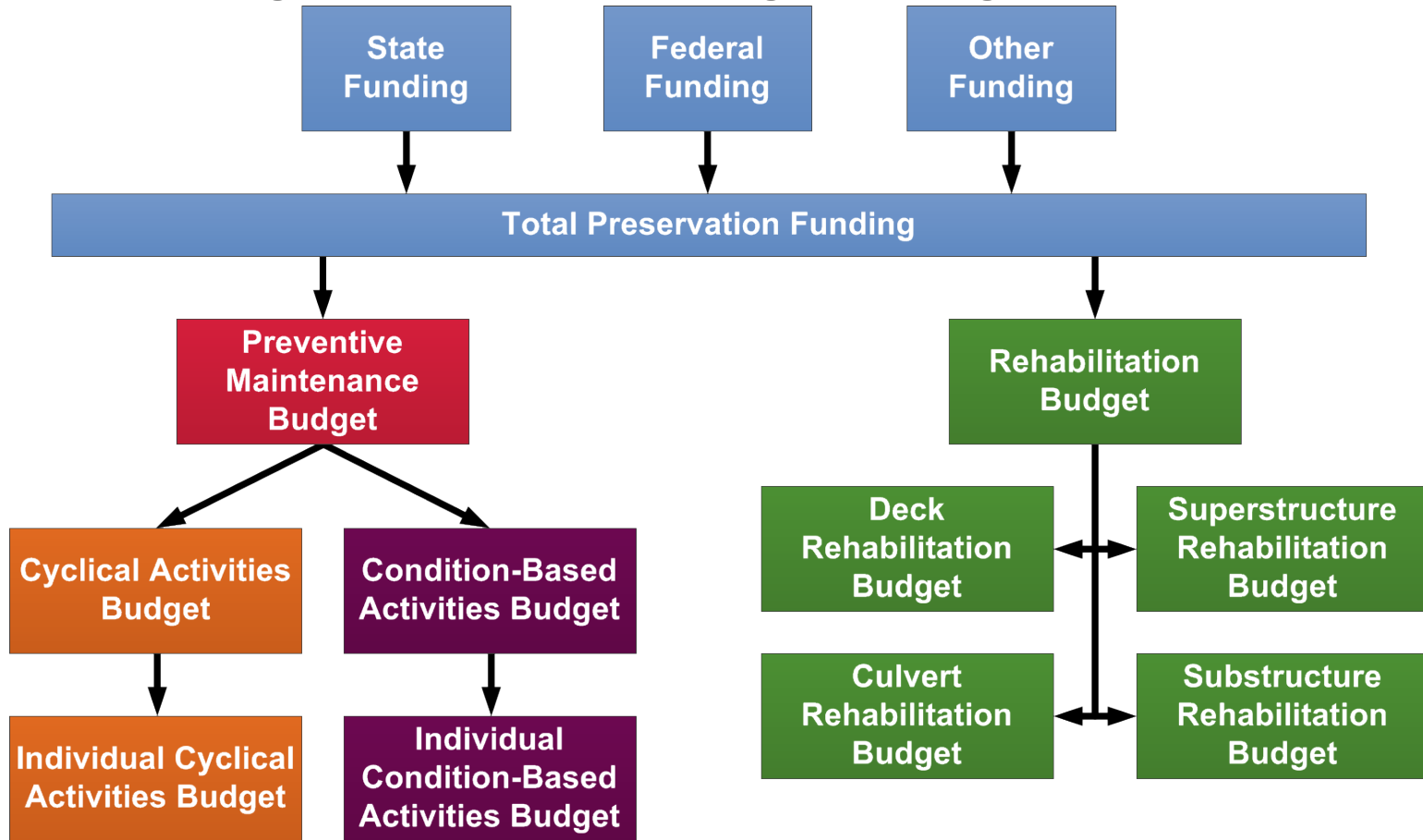
### Lesson 3

## Budgeting and Resource Allocation

Needs and Projected Work for Bridge Preservation



## Bridge Preservation Funding and Budget Allocation





# FHWA-NHI-130106B

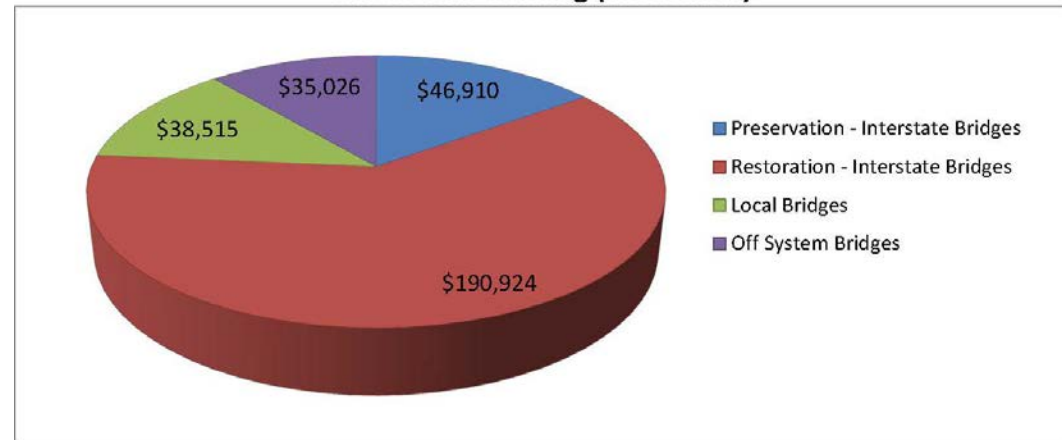
## Establishing a Bridge Preservation Program

### Lesson 4

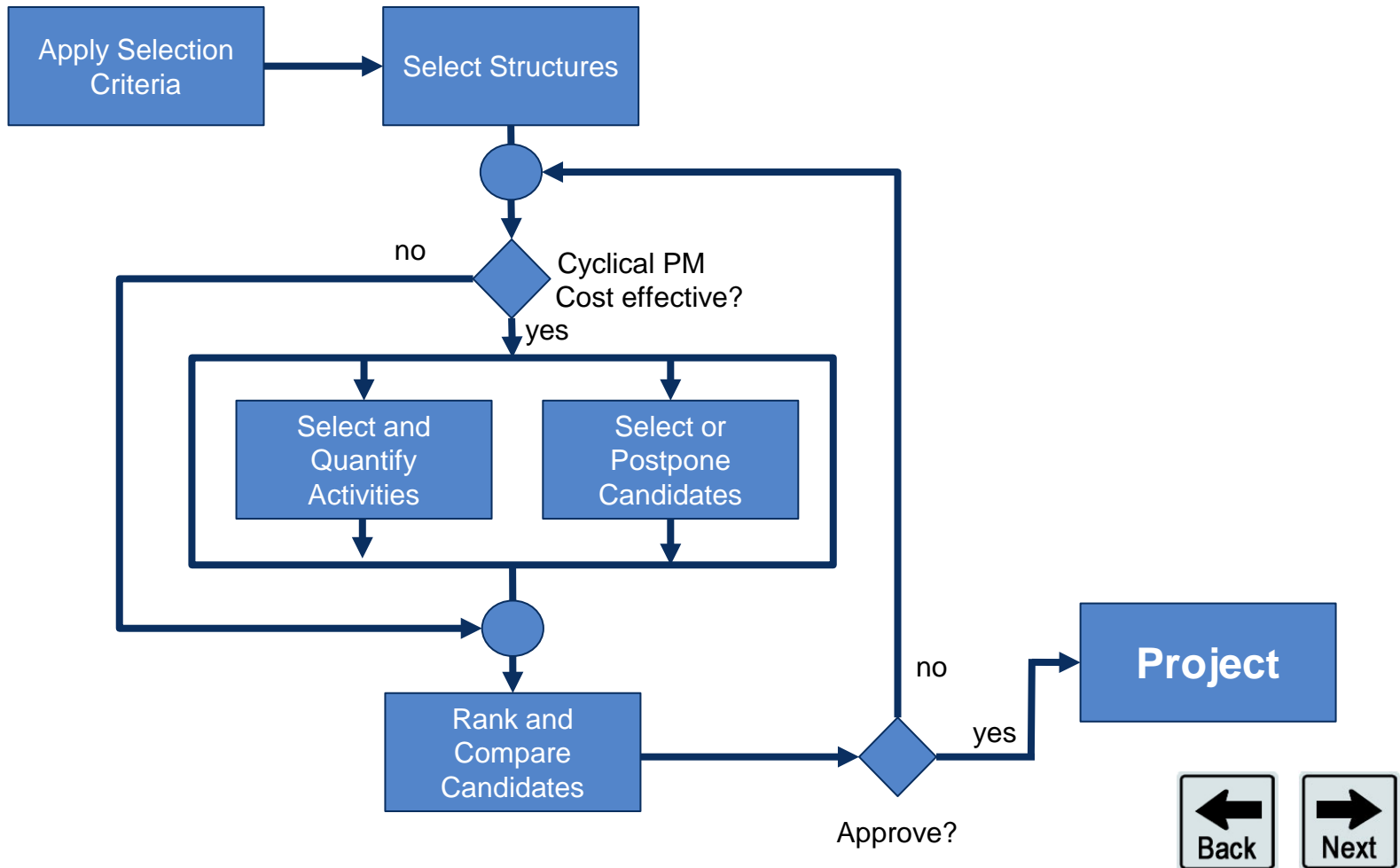
## Work Plan Development and Implementation

- Evaluate the needs
- Perform analysis (iterative process)
- Identify work candidates
- Create projects
- Create programs

Three Year Funding (thousands)



## Cyclical PM Work Item Selection Process



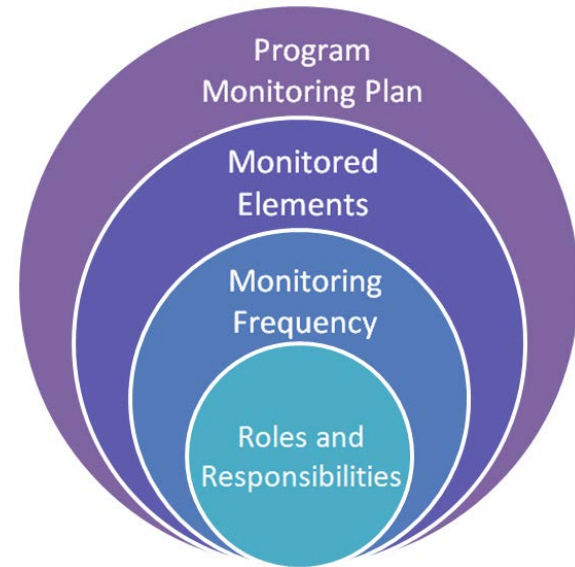
# FHWA-NHI-130106B

## Establishing a Bridge Preservation Program

### Program Monitoring

#### Lesson 5

- Evaluates effectiveness of entire program
- Measures gaps between the baseline and achievements
- Measures gaps between achievements and goals
- Provides information for adjustments in line with continuous improvement processes



## FHWA-NHI-130106C

# Communication Strategies for Bridge Preservation

## Lesson 1

Identifying Internal Champion(s)  
then Identify Customers and  
Stakeholders



\*\*\*A Great Resource is NCHRP Report 742

Communicating the Value of Preservation: A Playbook\*\*\*





# FHWA-NHI-130106C

## Communication Strategies for Bridge Preservation

### Lesson 2



## Designing the Message

Fierce competition for attention:  
Must Be Succinct and compelling  
Communicate to thrive!



## Message Design Activities

1. Establish a sound foundation of facts
2. Target the right audience so message resonates
3. Coordinate with DOT's other messages
4. Address specific situation(s):
  - Infrastructure Condition
  - Lack of Resources
  - Customer Values
  - Remember : No single message or group of messages will work for every audience or situation

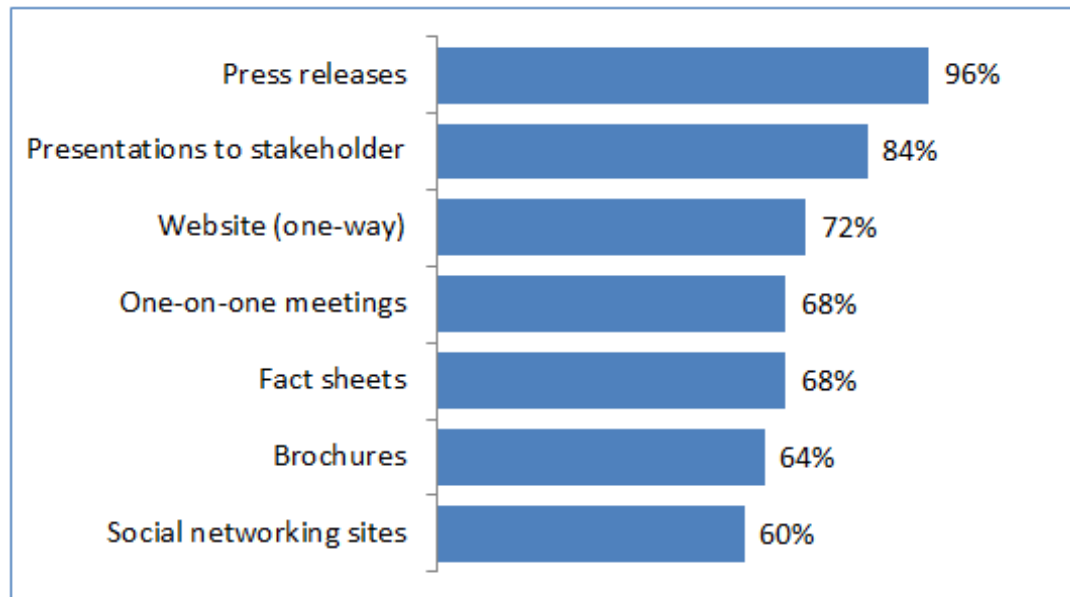


# FHWA-NHI-130106C

## Communication Strategies for Bridge Preservation

### Lesson 3

## Communicating the Message



Most Common Communication Delivery Methods



## FHWA-NHI-130106C

### Communication Strategies for Bridge Preservation

#### Lesson 4

## Performing Market Research

Website comments ; News clip tracking; Public hearings or meetings; Satisfaction surveys; Focus groups; etc.

### Bridge Preservation Market Research

**1. Are consumers satisfied with bridge conditions with your state?**

- Yes
- No

**2. Which of the following do you think consumers see as the greatest value of a strong bridge preservation program?**

- Fewer bridge restrictions
- Overall cost savings





# Thank You

**Richard W Dunne, PE** | Technical Manager Structures | Michael Baker International  
300 American Metro Blvd., Suite 154 | Hamilton, NJ | 08619

[O] 609-807-9670 | [M] 609-468-7051

richard.dunne@mbakerintl.com

|

