Willamette River Bridges Capital Improvement Plan

Board of County Commissioners

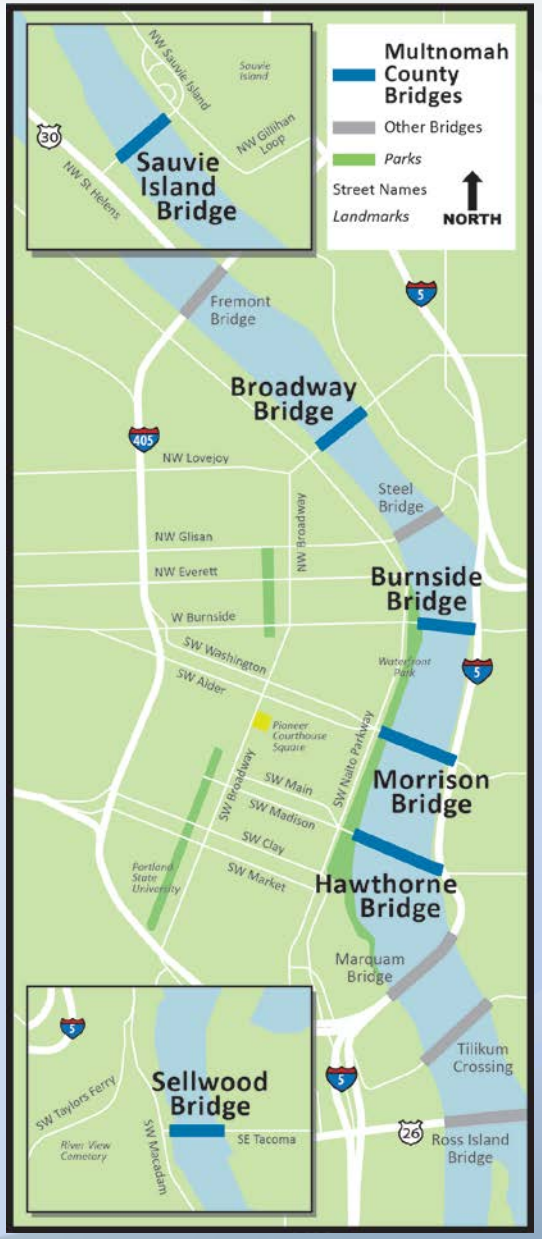
February 12, 2015

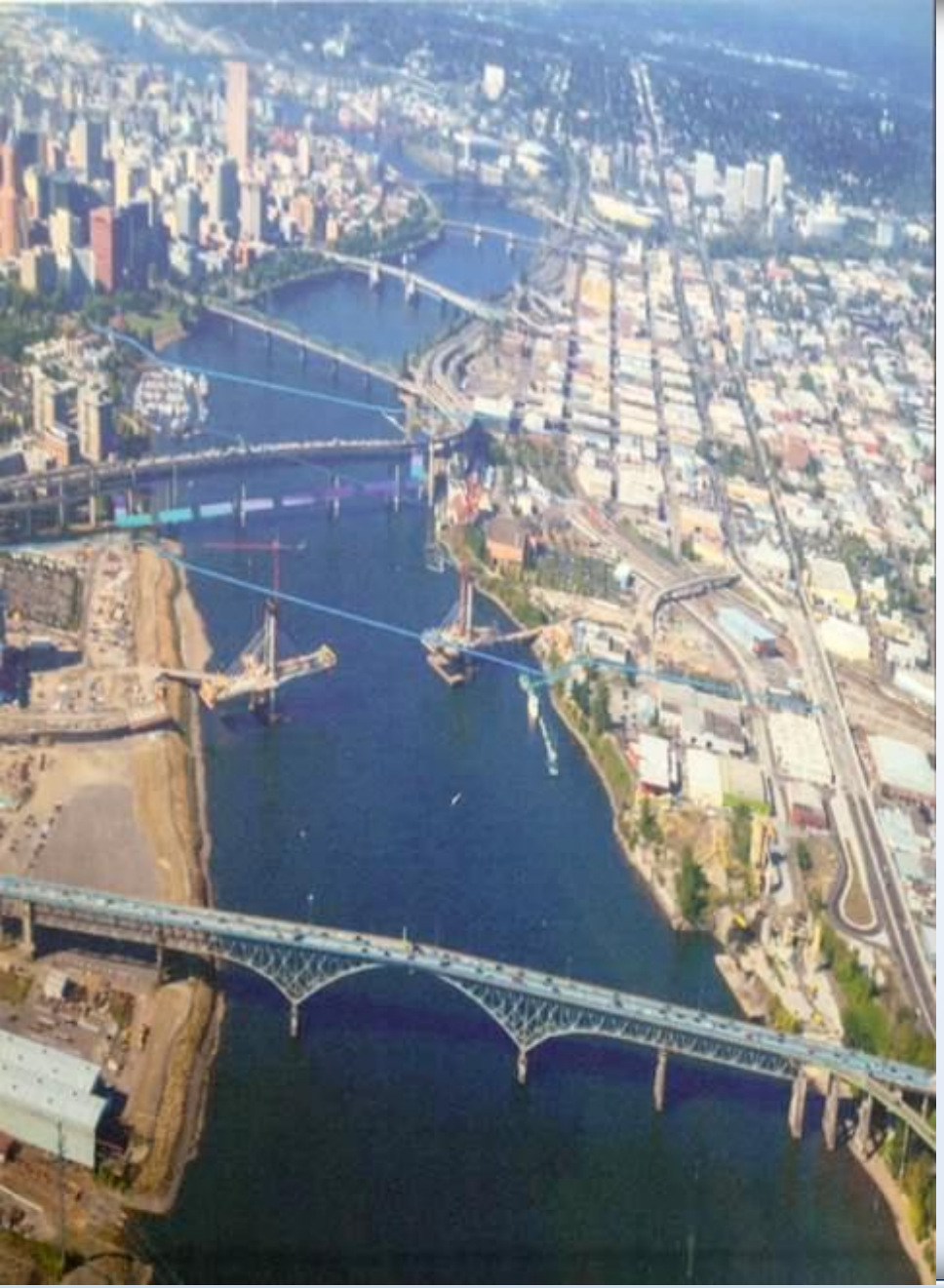
Agenda

- Purpose and Objectives
- Process
- Results
- Call to Action

CIP Purpose

- Action plan for 2015-2034
- Maintain County's bridge investment
- Provide safe and reliable connections
- Prepare for expected earthquakes





Artist Rendering of Portland in 2013 (Pre-CSZ Event)

Courtesy of City of PDX Water Bureau

Artist Rendering of Portland in 2013 (Pre- & Post-CSZ Event)

Courtesy of City of PDX Water Bureau

Regional Seismic Threat

- 37% Probability of a Magnitude 8+ Cascadia Subduction Zone earthquake in the next 50 years
- Large scale fatalities and injuries
- Billions in economic loss
- <u>Time to act is NOW!</u>

Source: Vincent/Wang presentation to BCC on 10/21/14

County Bridge Seismic Vulnerabilities

- Downtown bridges are highly vulnerable to major earthquakes
- Seismic retrofitting is possible, but very expensive
- Burnside Bridge is a designated Lifeline Route over the Willamette River

Burnside Bridge

Source: Cannon/Drahota presentation to BCC on 11/6/14

Summary of Results

- 53 capital projects in 20 years
- Preservation and maintenance- $650M
- Seismic Resiliency- $650M
- Priority for Burnside Bridge
- Need to start now!

Project Objectives

- Collaborative decision process
  - Rational programming basis
  - Stakeholder input
  - Values-driven selection criteria
- Comprehensive technical assessment
  - Determine current bridge condition
  - Assess life cycle and capital needs
  - Identify projects and costs

Next Steps

By June 2015:

- Publish draft Bridge CIP for public comment
- Conduct final stakeholder outreach
- Finalize Bridge CIP
- Integrate Bridge CIP into County Transportation CIP

Project Context

Considered the following:

- Unconstrained needs
- Prioritized projects
- Iconic / historic status
- Preserve county bridge investment

Bridge CIP Development Process

Stakeholder Summit #1 Spring 2014

Stakeholder Summit #2 Winter 2015

Stakeholder Engagement

Continual Stakeholder Outreach

Apply County Values → **Conduct Engineering Assessment** → **Establish Project Bundles** → **Prioritize Projects** → **Finalize Plan**

- Equity Lens
- Establish Performance Criteria

- Knowledge
- Inspect Bridges
- Evaluate Needs
- Develop Remedies
- Establish Costs

- Similar Work
- Urgency of Need
- Efficiencies

- Assess Project Performance
- Calculate Cost of Inaction
- Consider Costs

- Implement Bridge CIP

Applying County Values in the Bridge CIP

- Inform project development criteria
- Model for applying the Equity Lens
  - People, Place, Process, Power, and Purpose
  - Develop broad criteria
  - Openly engage stakeholders
  - Consider needs of all multi-modal user groups
  - Deliver future projects with equity in mind toward creating small business capacity-building opportunities

Stakeholder Engagement

- Stakeholders
  - Partner agencies
  - Stakeholder organizations
  - General public
- Engagement Methods
  - 30 one-on-one stakeholder meetings
  - 2 Summit Meetings
  - Project website
  - Resulted in 10 CIP projects

Public/Partner Agency Input Themes

Very grateful for the opportunity to contribute!

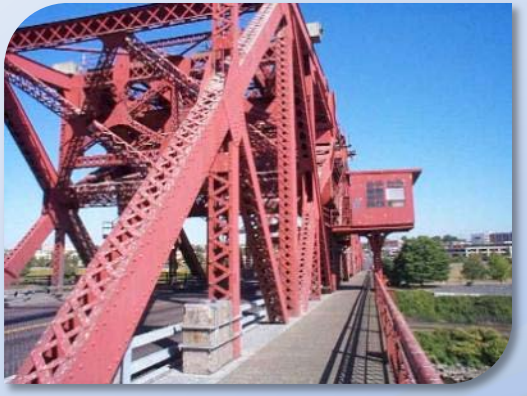
- Maintain bridge serviceability as lifeline routes
- Improve multi-modal connections
- Accommodate future bridgehead development
- Maintain coordination with other Agency's CIPs
- Provide better lighting for safety and aesthetics

Conduct Engineering Assessment

Assess existing conditions:

- Bridge inspections & operational tests
- Interviews with County staff
- Stakeholder input

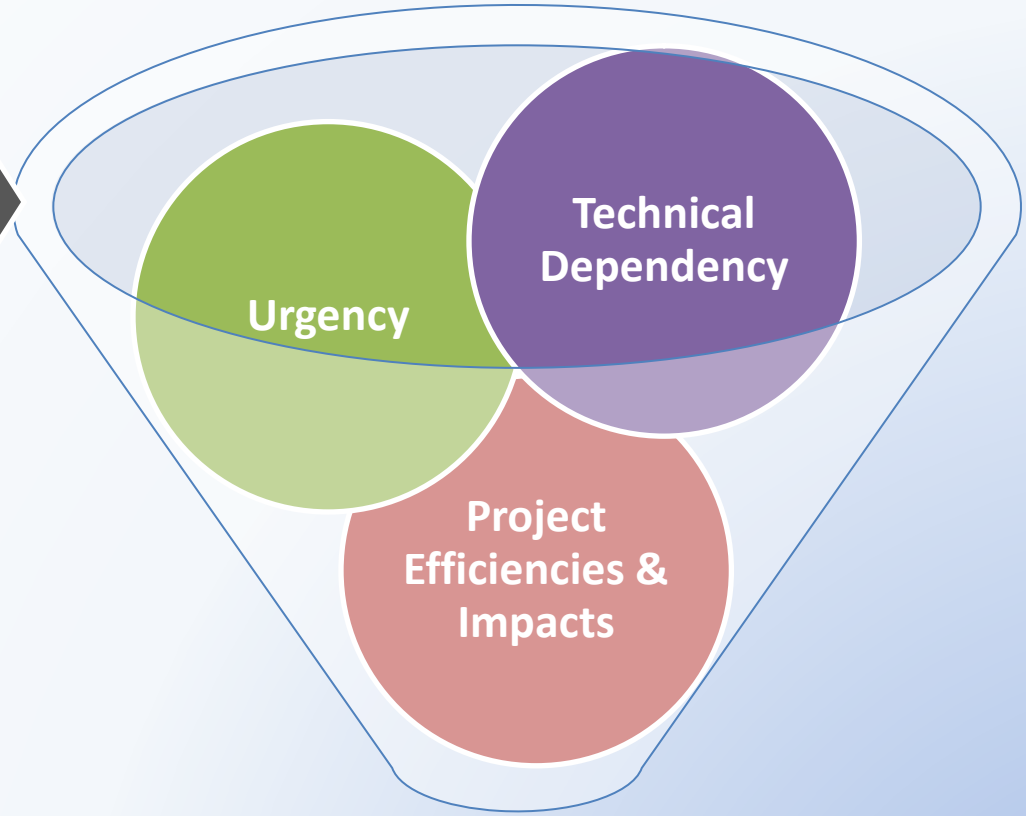
Forecast 20 year needs:



- Historical information
- Lessons learned
- Life cycle performance assessment

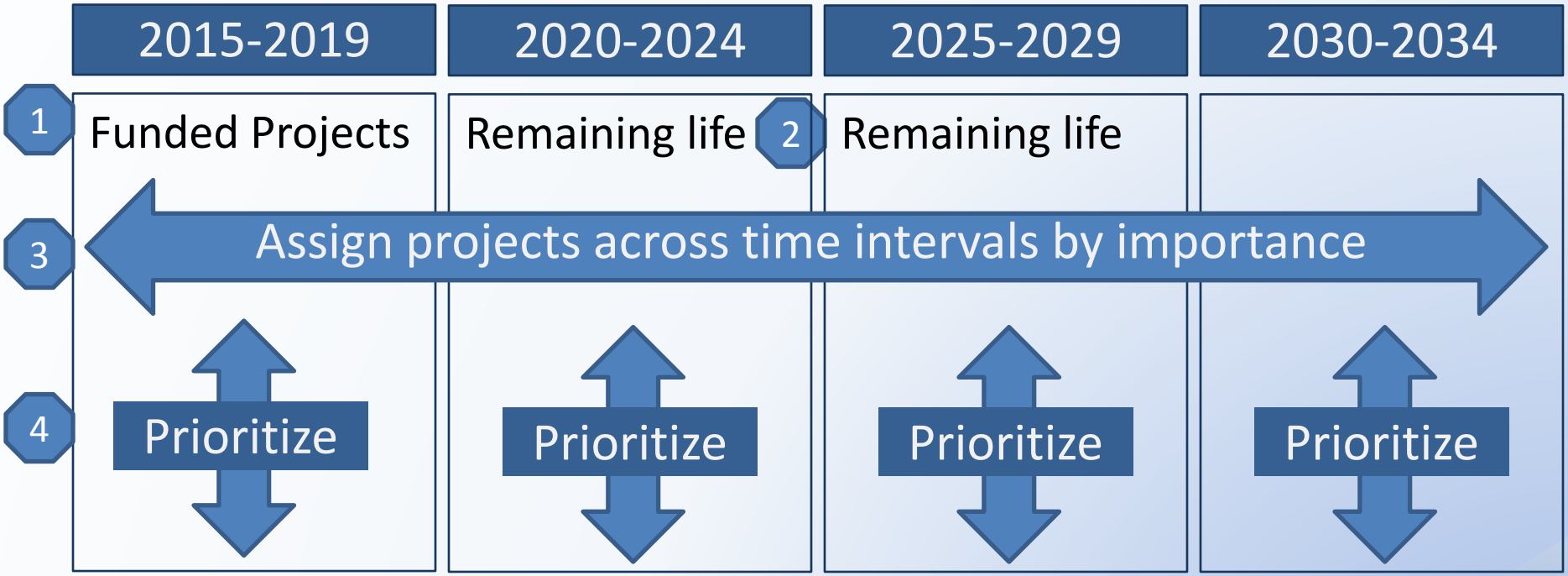
Establish Bridge CIP Projects

400 Bridge Needs and Deficiencies



53 Capital Projects

Prioritize Projects

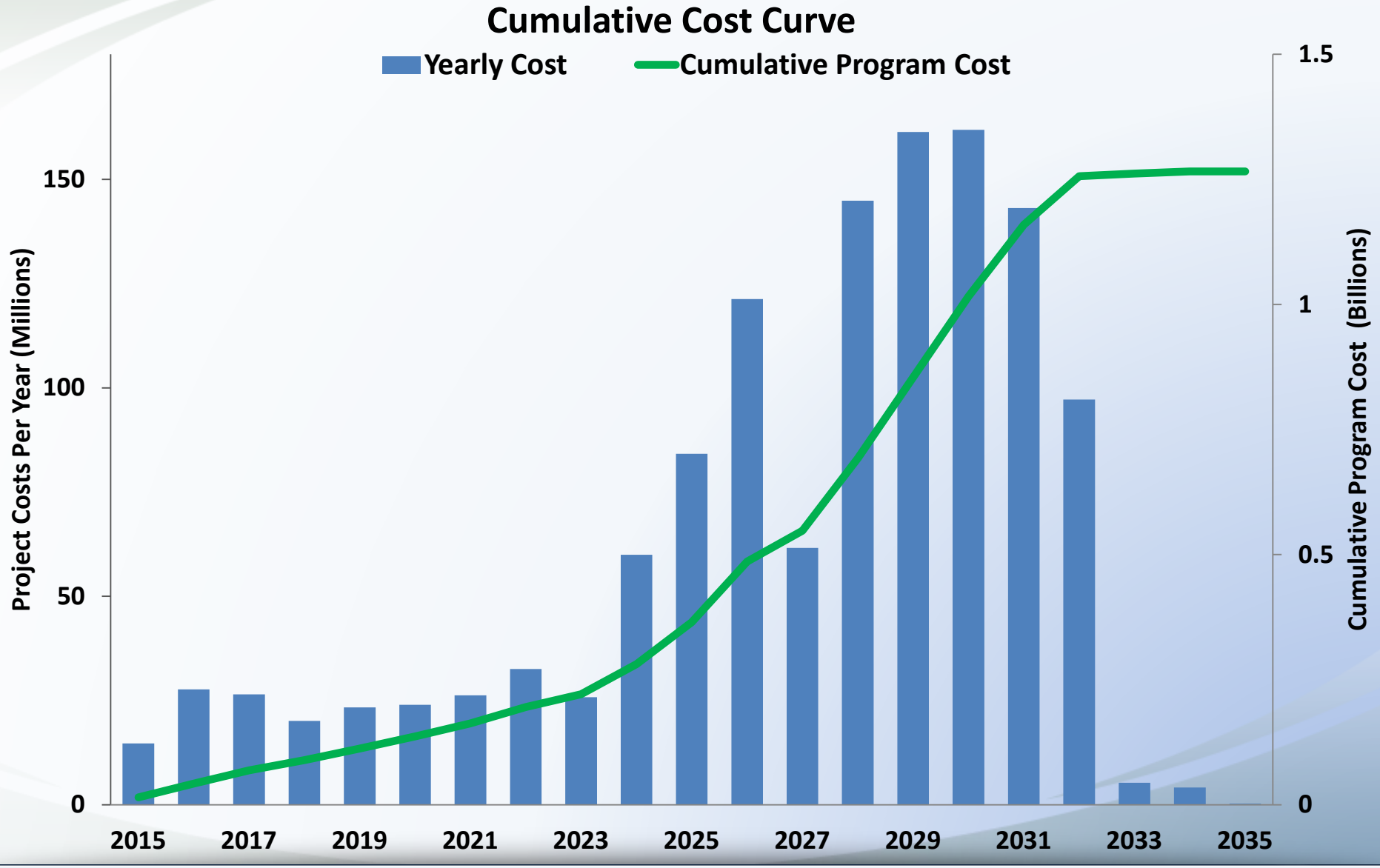


Cost-Benefit Prioritization

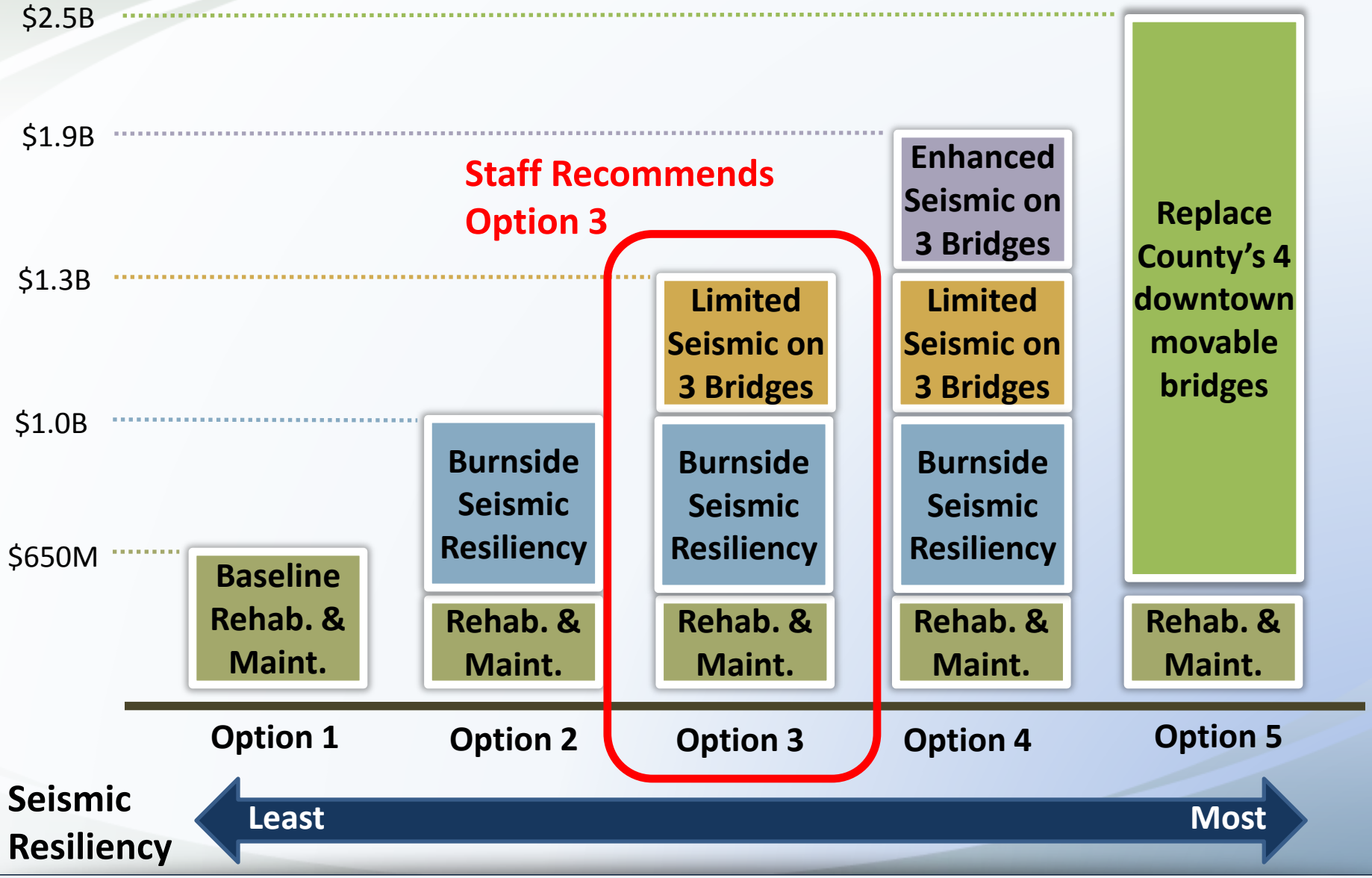
Factors that drive a project's priority:

- Urgency
- Consequence of inaction
- Alignment with County values
- Cost
- Available funding

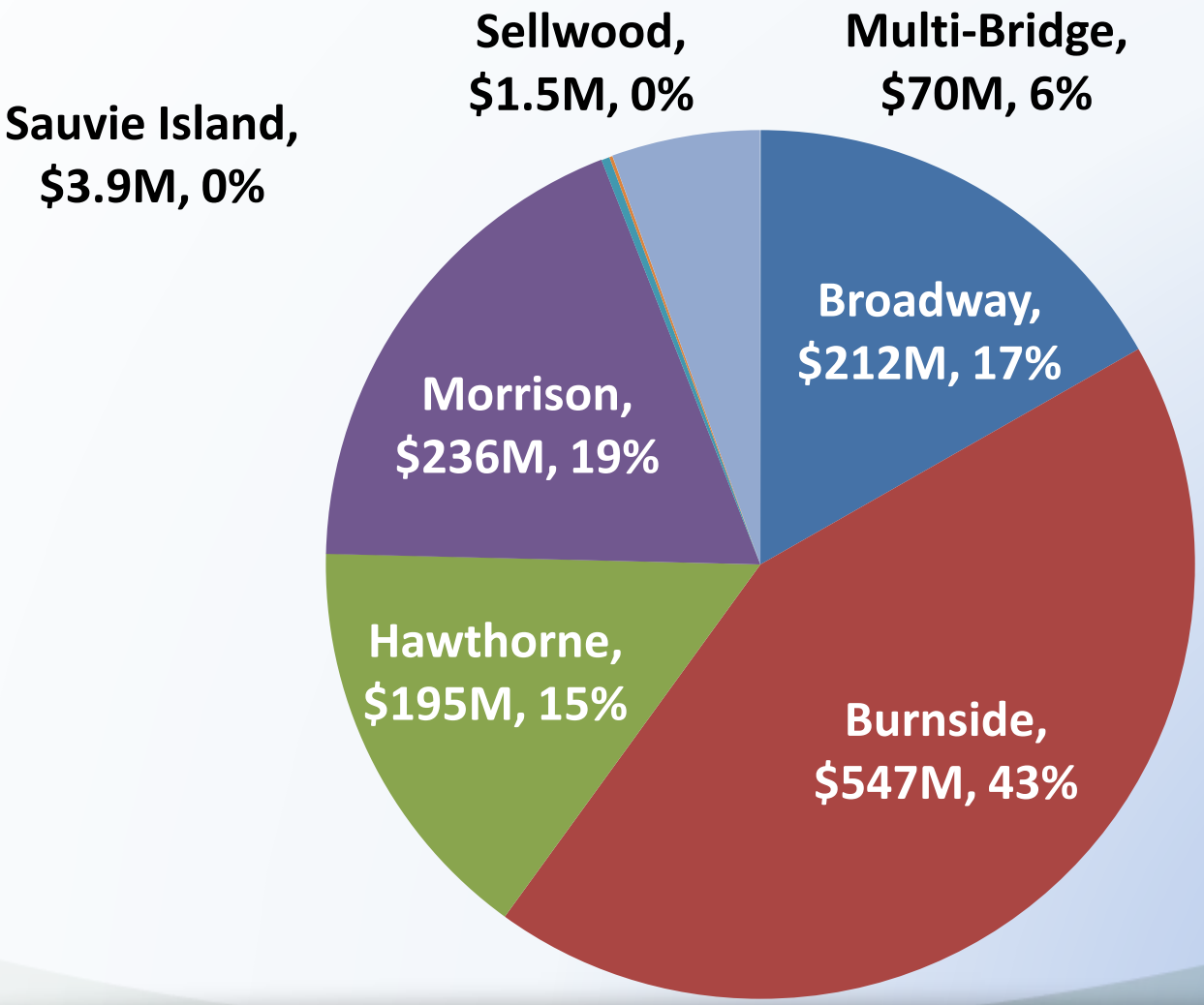
Prioritization Results



Seismic Investment Options



Results by Bridge



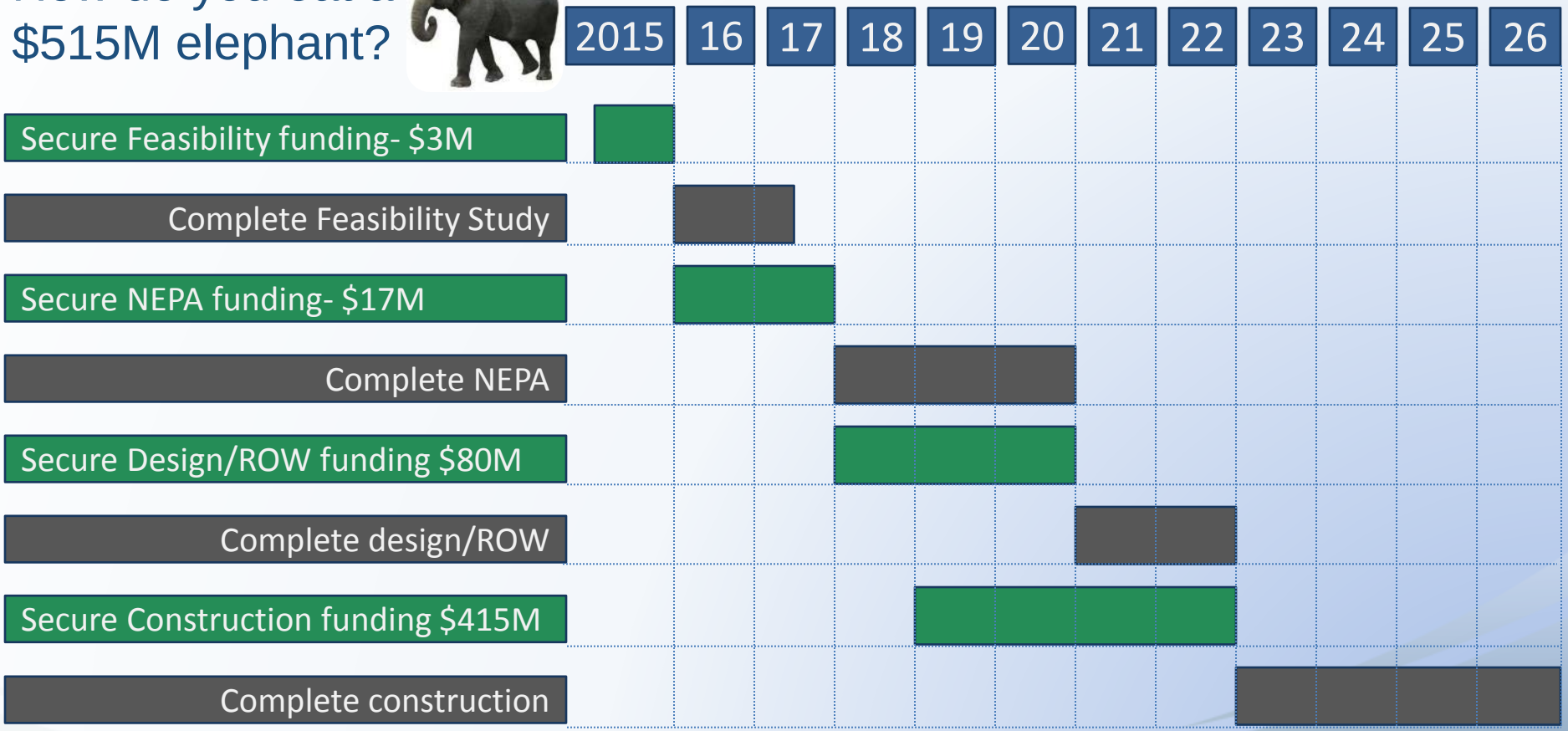
Project Highlights

Top 6 projects:

- Burnside Seismic Resiliency / Feasibility Study (2015)
- Broadway Paint Project (2015)
- Burnside Rehabilitation (2016)
- Broadway Rall Wheel Replacement (2016)
- Burnside Seismic Resiliency – NEPA Phase (2017)
- Morrison Paint and Structural Rehabilitation (2017)

Burnside Seismic Resiliency

How do you eat a $515M elephant?



Call to Action

Bridges are vital to community:

- 200,000 daily crossings
- Economic vitality
- Community connectivity

CIP is action plan for:

- Safe and reliable bridges
- Seismic resiliency

Needed Now

- **Secure funding**
- **Start Burnside feasibility study in 2015**

Questions