EARTHQUAKE READY BURNSIDE BRIDGE

Stakeholder Representative Group – Meeting 1

April 17, 2017

Agenda

- Introductions
- Charter
- Project Overview
- Stakeholder Interests
- Alternatives Development
- Screening Process
- Closing Remarks

Burnside Bridge

SRG Charter

SRG Purpose

- Input on Feasibility Study
- Identify Stakeholder Interests
- Provide Informed Feedback

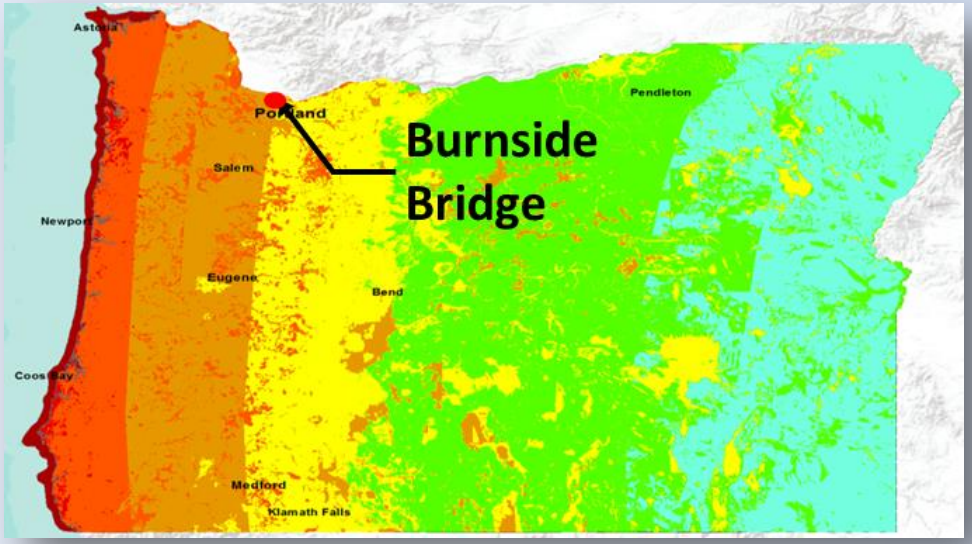
Role and Expectations

- Attend Four SRG Meetings
- Act as Liaison to Organization

Project Background

Regional Earthquake Risk

- 1 in 3 chance of Magnitude 8+ earthquake within 50 years
- Thousands of fatalities and injuries
- Billions in economic loss

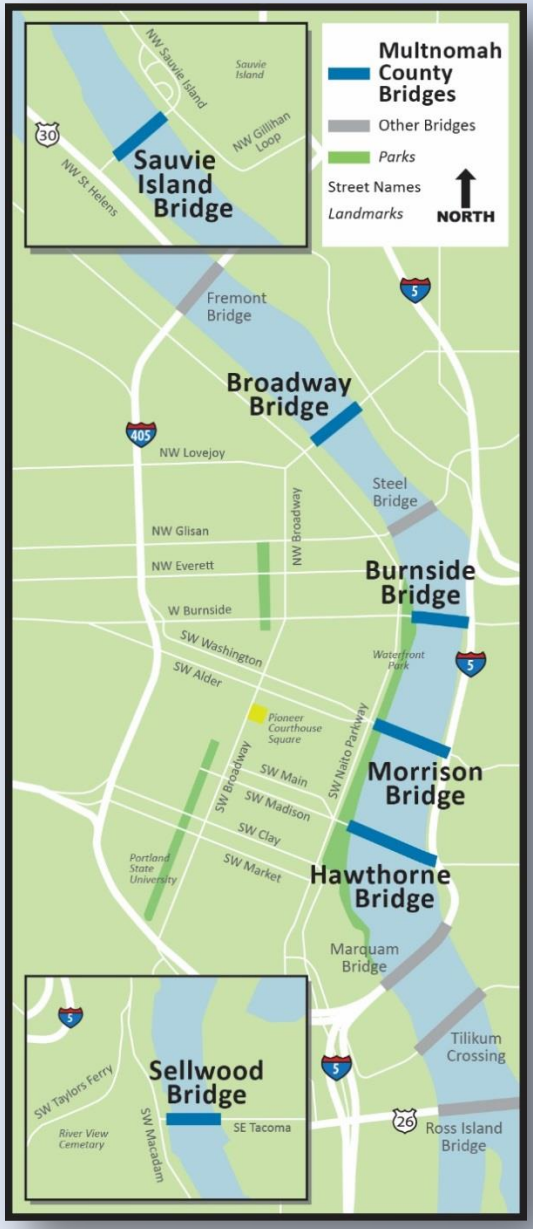


Source: *Oregon Resilience Plan (2013)*

Project Background

Earthquake Vulnerabilities

- Downtown bridges vulnerable to major earthquakes
- Board of County Commissioners adopted the Bridge CIP in 2015
- CIP identified the Burnside Bridge as its number one priority for seismic resiliency



Project Background

Burnside Bridge, over 90 years of Service

- 40,000 vehicles, 2,000 bicycles and pedestrians daily
- Three bus lines
- 300 openings a year
- Crosses Blue/Red Max Lines, 78k weekday riders
- Crosses Union Pacific Railroad mainline

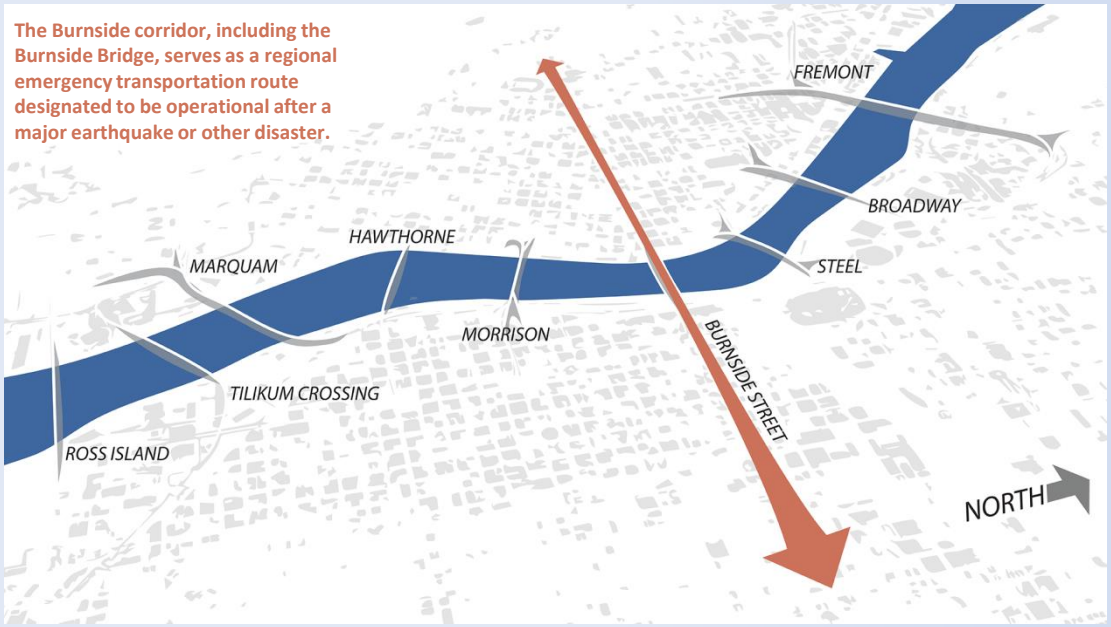
Burnside Bridge

Project Background

Burnside Street: Regional Lifeline Route

Over 17 miles long, Burnside Street connects Gresham to Washington County through downtown Portland

- Metro designated Burnside a Priority 1 route in the late 1990s
- City of Portland designated Burnside Street an evacuation route
- Only non-state owned Priority 1 route across the Willamette River
- ODOT is prioritizing investing in the I-205 corridor



Sources: Metro Regional Emergency Transportation Routes Report, 1996

Portland City-wide Evacuation Plan 2014; portlandoregon.gov/pbem/65295)

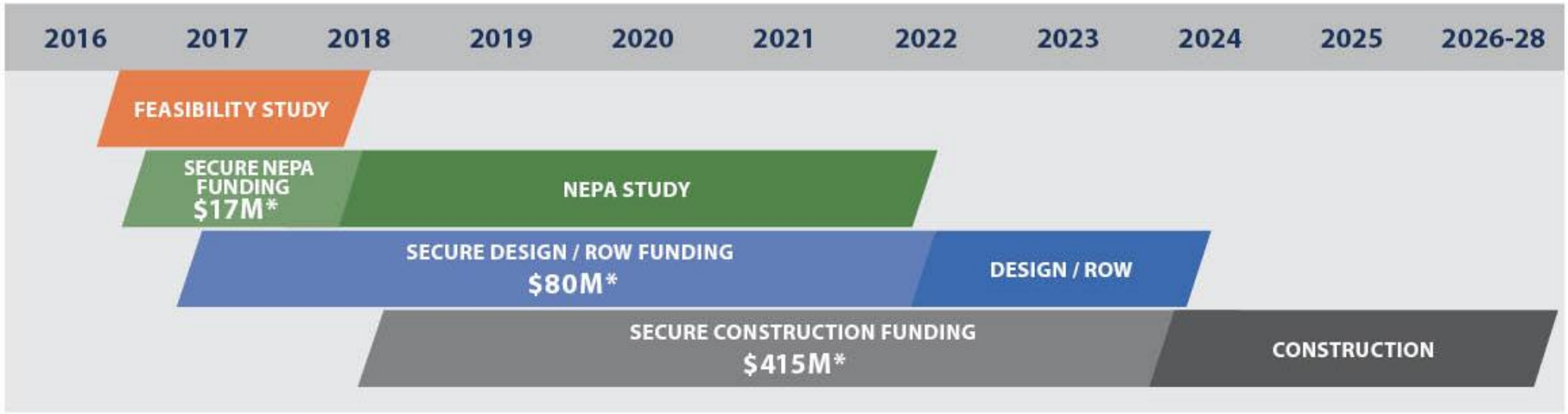
Project Overview

Burnside Bridge

- **Purpose**: To create a resilient lifeline crossing
- **Goal**: To recommend rehabilitation and/or replacement alternatives for further NEPA-phase analysis
- **Timing**: Study to be completed in Fall, 2018
- **Funding**: Needed for future phases

Project Overview

PROJECT PHASING



* Source: Multnomah County Willamette River Bridges Capital Improvement Plan (2015-2034)

Project Overview

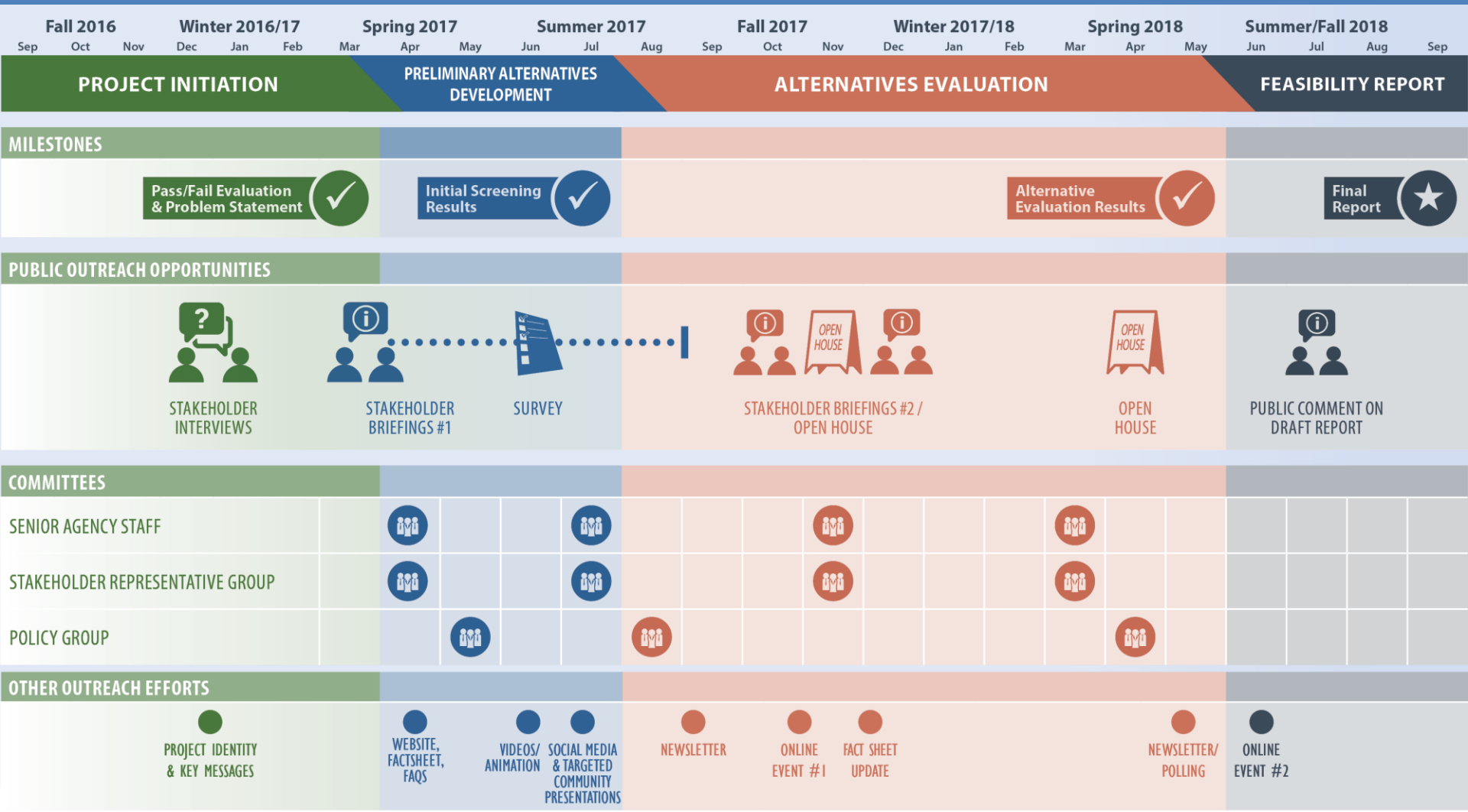
What is a Feasibility Study?

- Planning Level Study
- Involves the community, agencies, elected officials and others
- Looks at a wide range of Willamette River crossing options
- Narrows those options by screening and evaluating them against technical, environmental, social and other considerations
- Results in a range of feasible crossing options for consideration during next project phase (NEPA)

What is the National Environmental Policy Act (NEPA)?

- Federal Regulation – Environmental Impact Statement
- Involves the community, agencies, elected officials and others
- Provides a detailed analysis of potential impacts and mitigation
- Results in the final design alternative

Project Overview



Project Overview

Stakeholder Representative Group Members

- American Automobile Association (AAA)
- Buckman Community Association
- Burnside Skatepark
- Central City Concern
- Central Eastside Industrial Council (CEIC)
- Multnomah County Bike / Ped Advisory Committee member
- Neighborhood Emergency Teams (NETs)
- Old Town/ Chinatown Association
- Oregon Trucking Association (OTA)
- Portland Spirit
- Portland Saturday Market
- Sharon Wood Wortman (Historic Resources)
- The Street Trust (formerly BTA)
- University of Oregon School of Architecture student
- Willamette Riverkeeper

Project Overview

Senior Agency Staff Group Members

- Multnomah County
- Metro
- TriMet
- Portland Development Commission
- Oregon Department of Transportation (Region 1)
- City of Portland
- City of Gresham
- City of Beaverton
- Clackamas County
- Washington County
- Federal Highway Administration (Oregon)
- Oregon State Senator Taylor (District 21)
- Oregon State Representative Smith Warner (District 45)

Project Overview

Policy Group Members

- Multnomah County
- Metro
- TriMet
- Portland Development Commission
- Oregon Department of Transportation (Region 1)
- City of Portland
- City of Gresham
- City of Beaverton
- Clackamas County
- Washington County
- Federal Highway Administration (Oregon)
- U.S. Senator Merkley's office
- U.S. Senator Wyden's office
- U.S. Representative Blumenauer's office
- U.S. Representative Bonamici's office
- Oregon State Senator Taylor (District 21)
- Oregon State Representative Smith Warner (District 45)

Project Overview

Seismic Resiliency Committee Members

- Multnomah County Bridge
- ODOT Bridge
- FHWA Bridge
- WSDOT Bridge
- City of Portland – PBOT Bridge
- Portland State University
- HDR Engineering
- Parametrix
- Shannon and Wilson
- Hart Crowser
- Hardesty and Hanover

Project Overview

Stakeholder Interests

Project Setting

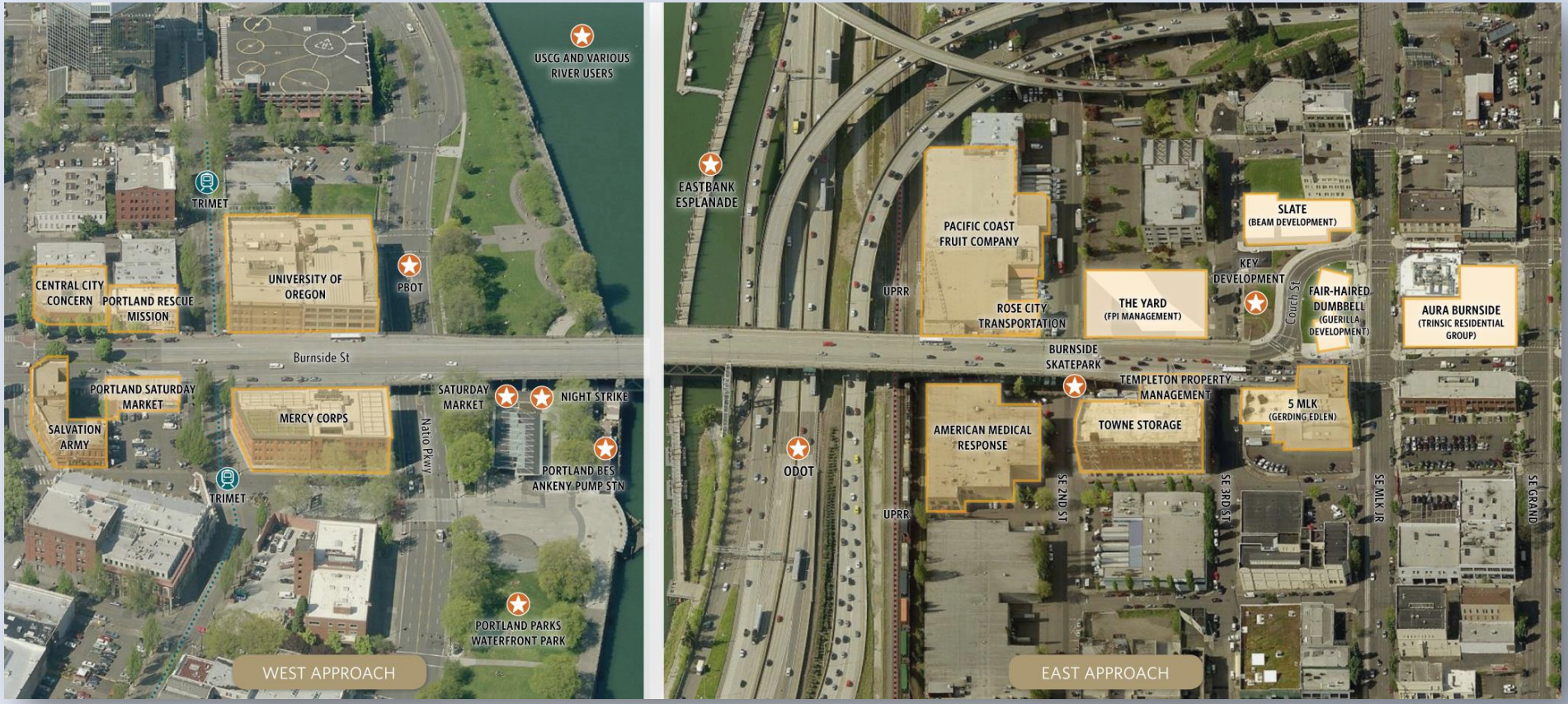
- Urban Environment
- Public Use Areas
- Multi-agency Involvement
- Bridge and River Users
- Natural Environment
- Economic Development

Stakeholder Interest

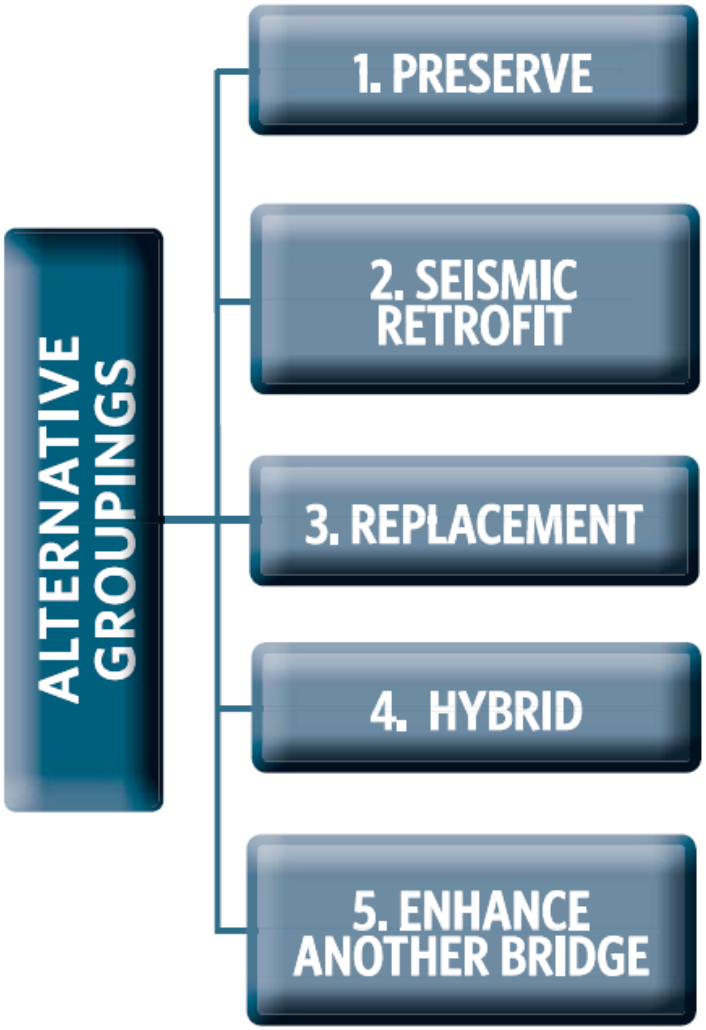
- What are your interests in the project?

Stakeholder Interests

What are your interests in the project?

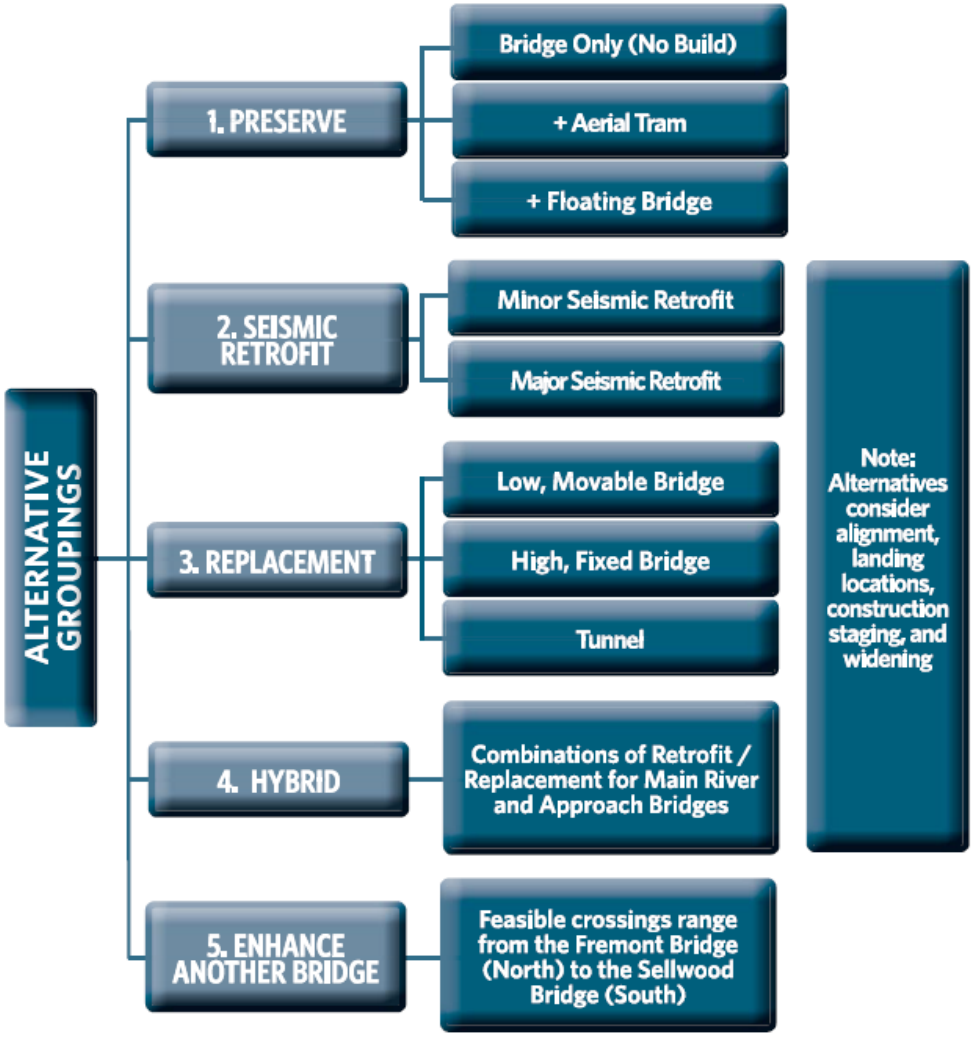


Alternatives Development



What Alternative Groupings create an earthquake-ready crossing?

Alternatives Development



What alternatives are being considered within each grouping?

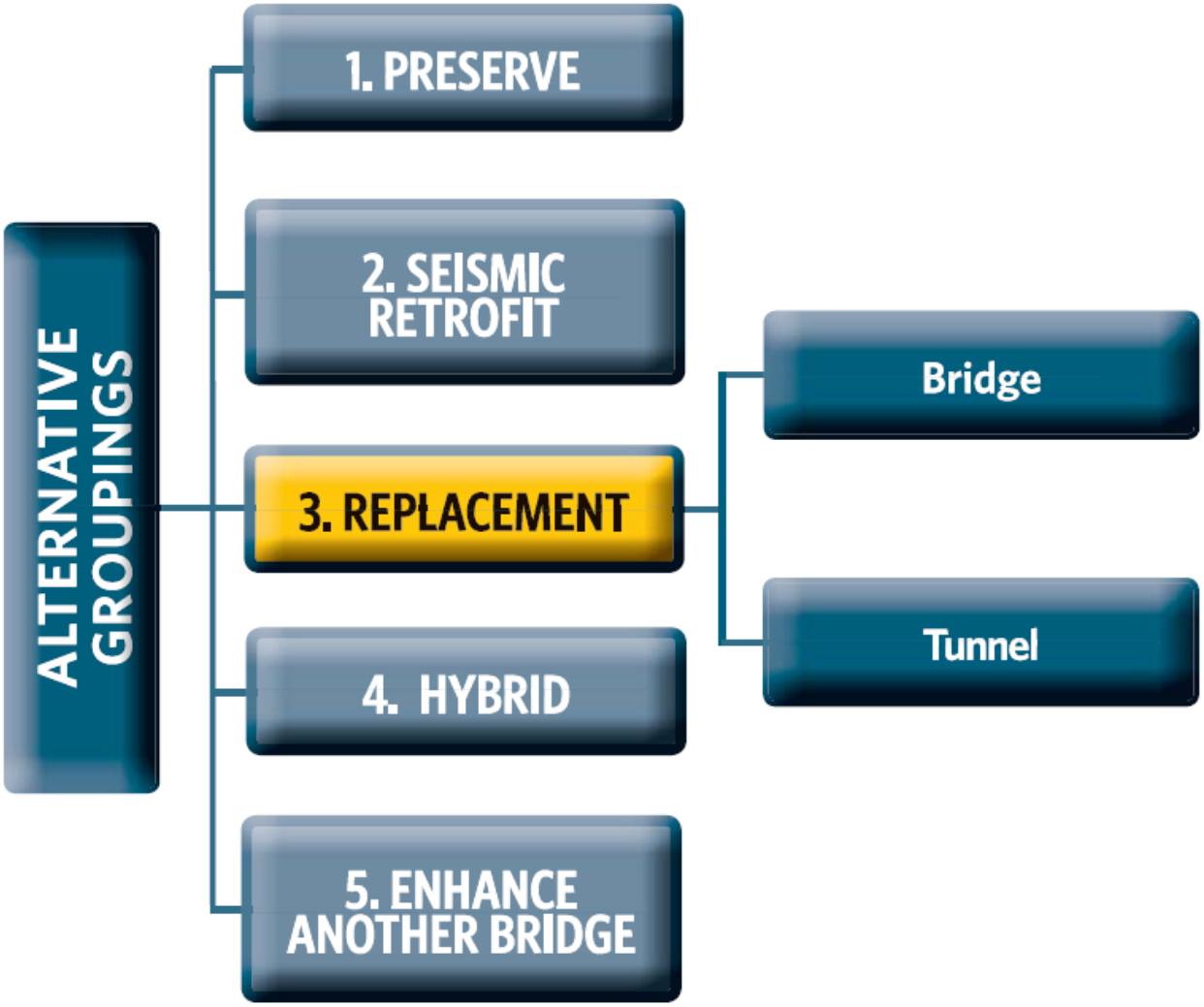
Low, Movable Bridge Replacement; Existing Alignment; Single Bridge

EARTHQUAKE READY BURNSIDE BRIDGE

REPLACEMENT CROSSING ALTERNATIVES

(This is one of 100+ Design Options under consideration)

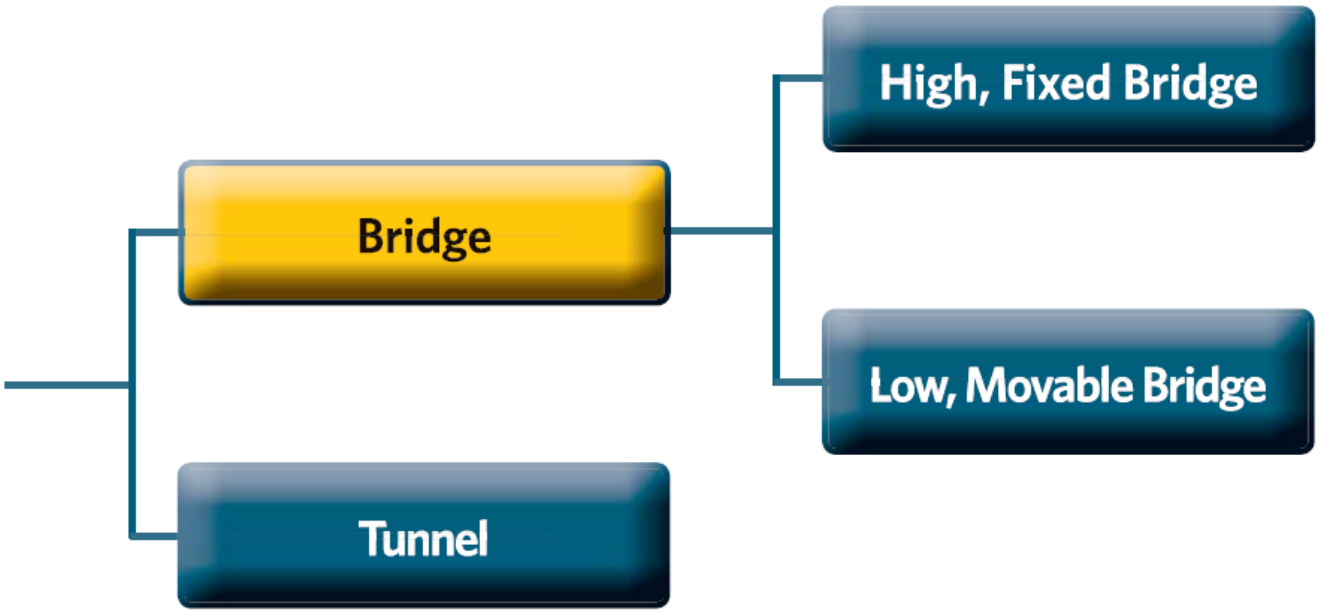
Alternatives Development



Key Questions:

Q1. What are the bridge replacement options?

Alternatives Development

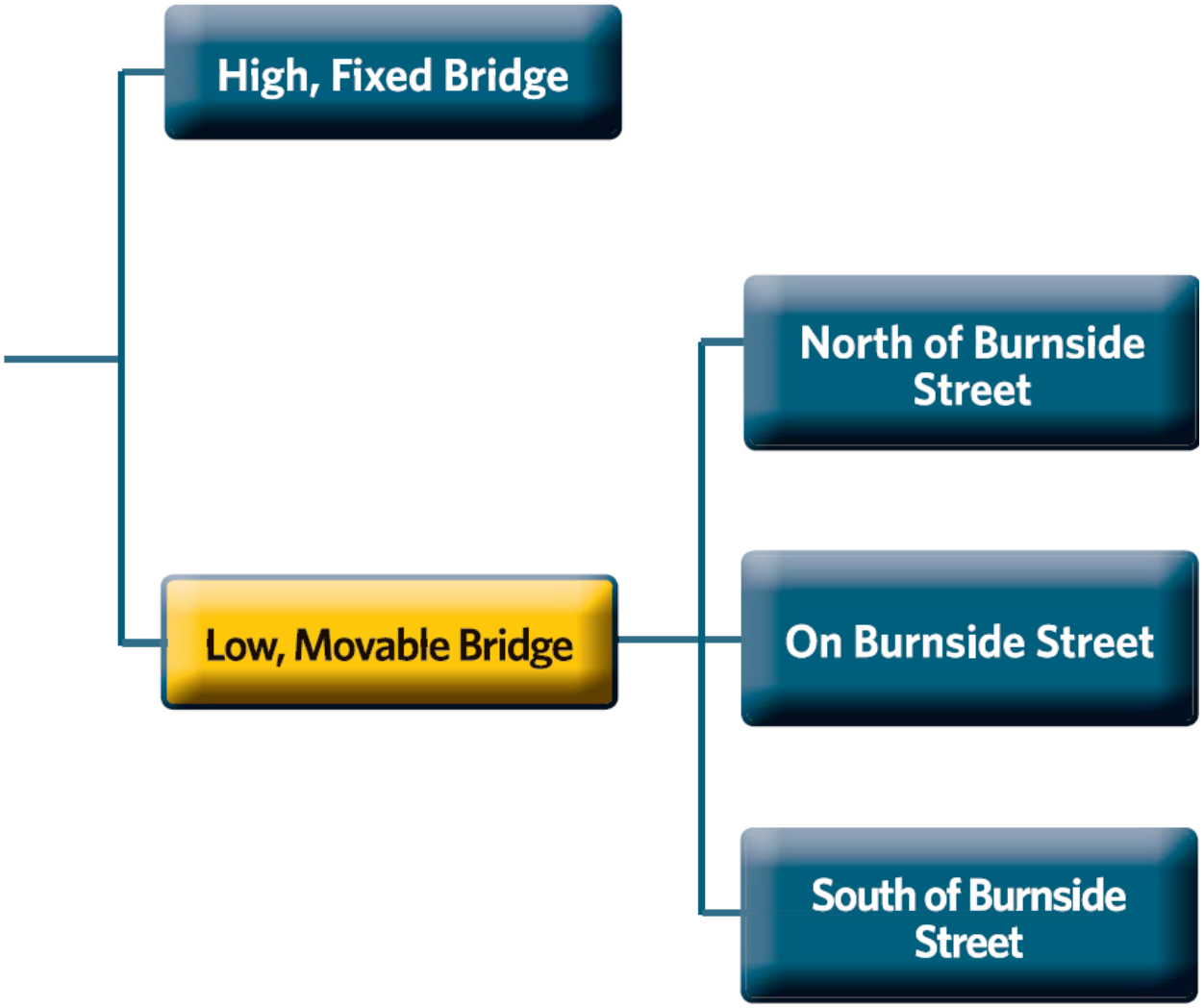


Key Questions:

Q1. Bridge

Q2. How high is the bridge?

Alternatives Development



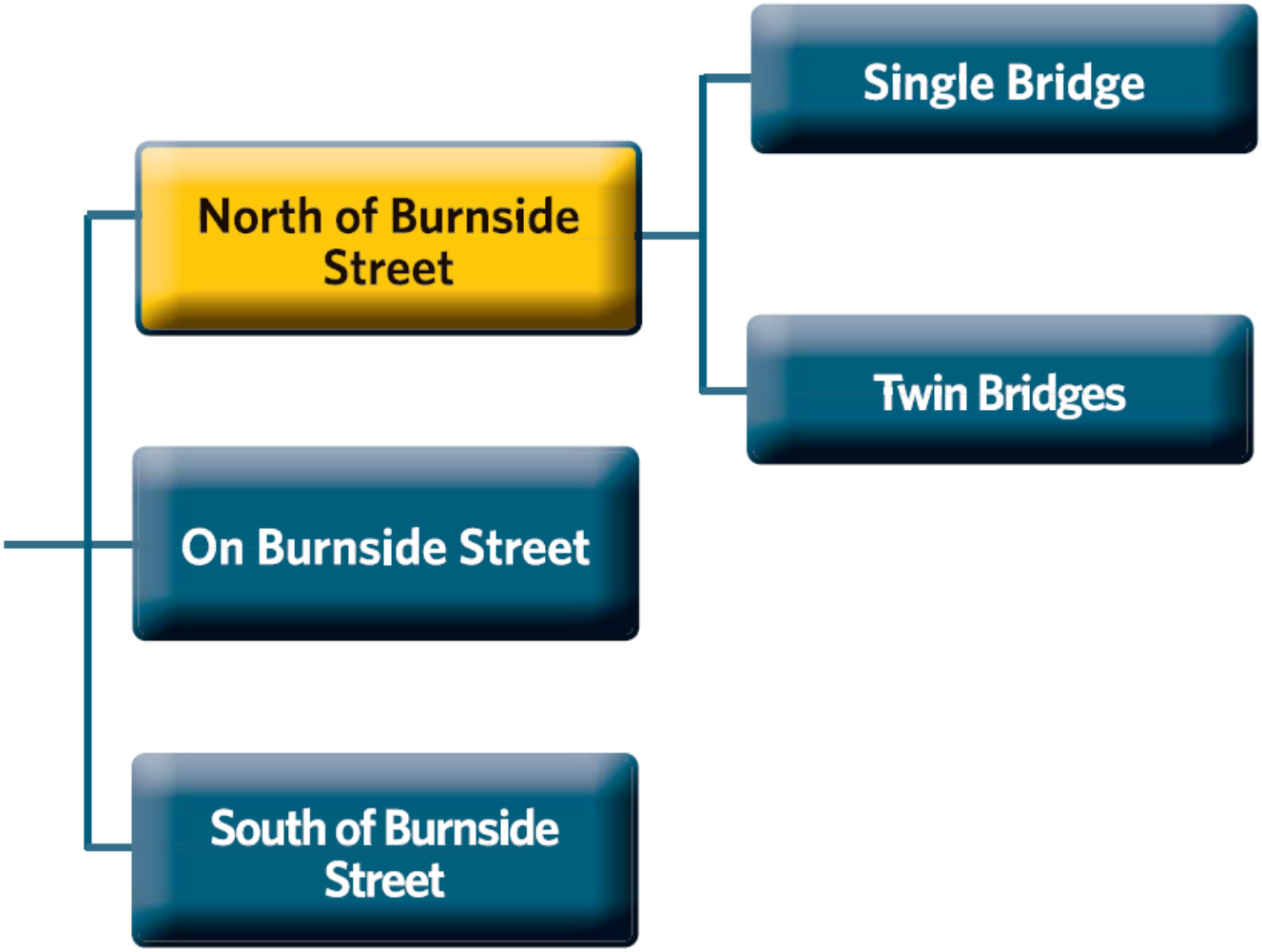
Key Questions:

Q1. Bridge

Q2. Low, movable bridge

Q3. Where does the bridge cross the river?

Alternatives Development



Key Questions:

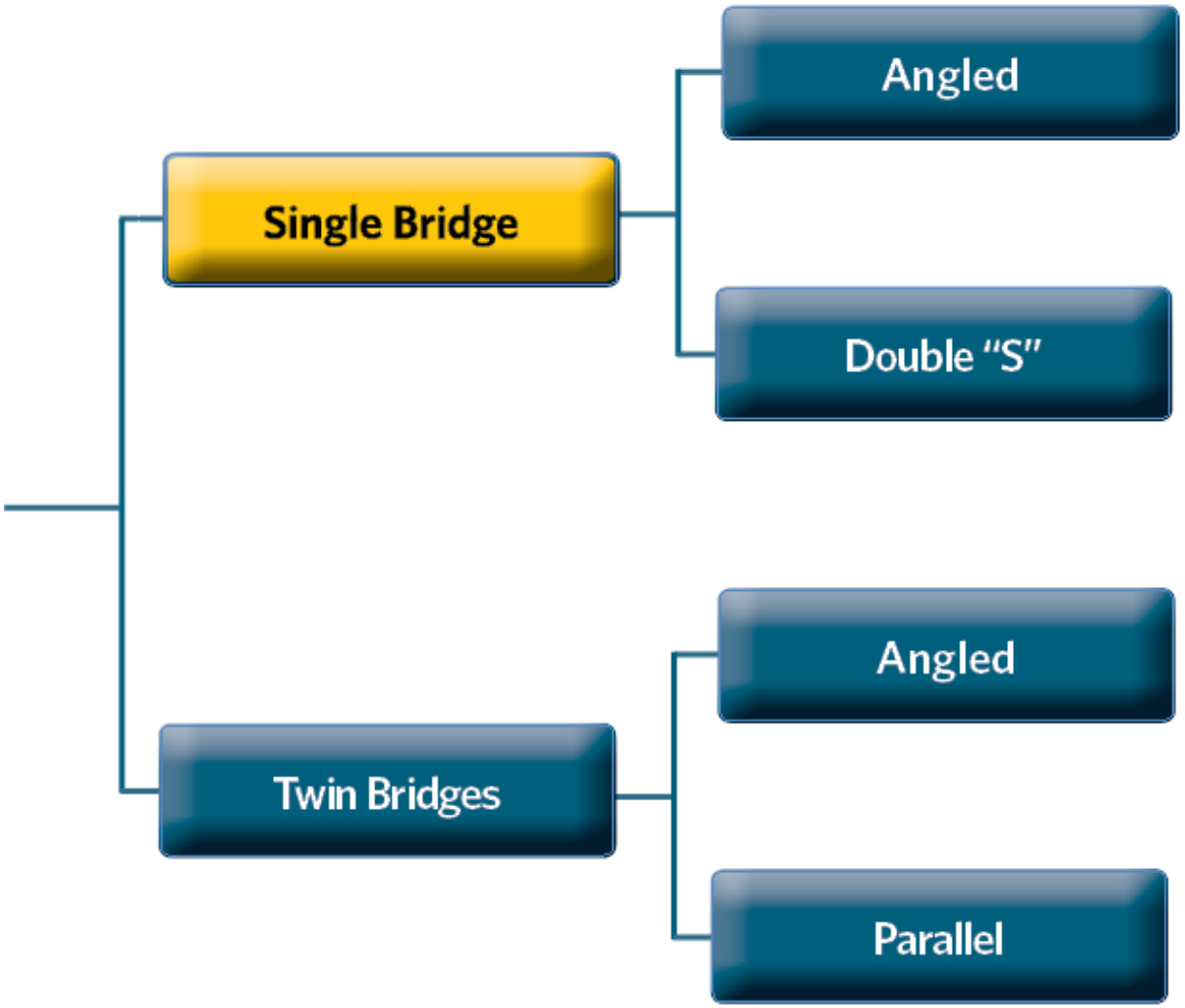
Q1. Bridge

Q2. Low, movable bridge

Q3. North of Burnside Street

Q4. How many bridges are there?

Alternatives Development



Key Questions:

Q1. Bridge

Q2. Low, movable bridge

Q3. North of Burnside Street

Q4. Single bridge

Q5. **What is the roadway alignment shape?**

Low, Movable Bridge Replacement; North Alignment; Single Bridge; West Angled + East Couplet Alignment

EARTHQUAKE READY BURNSIDE BRIDGE

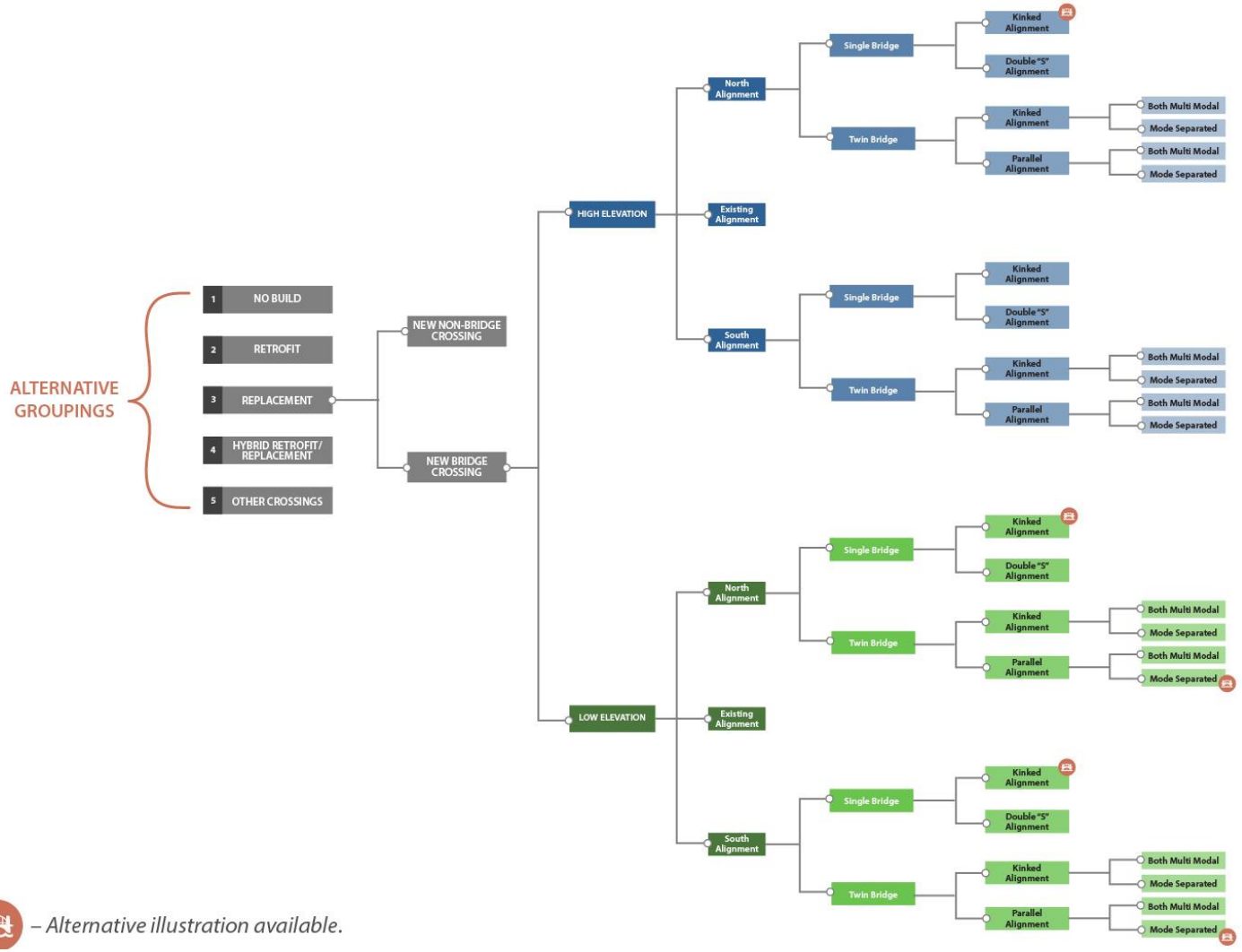
REPLACEMENT CROSSING ALTERNATIVES

(This is one of 100+ Design Options under consideration)

Multnomah County

HDR

Alternatives Development



– *Alternative illustration available.*

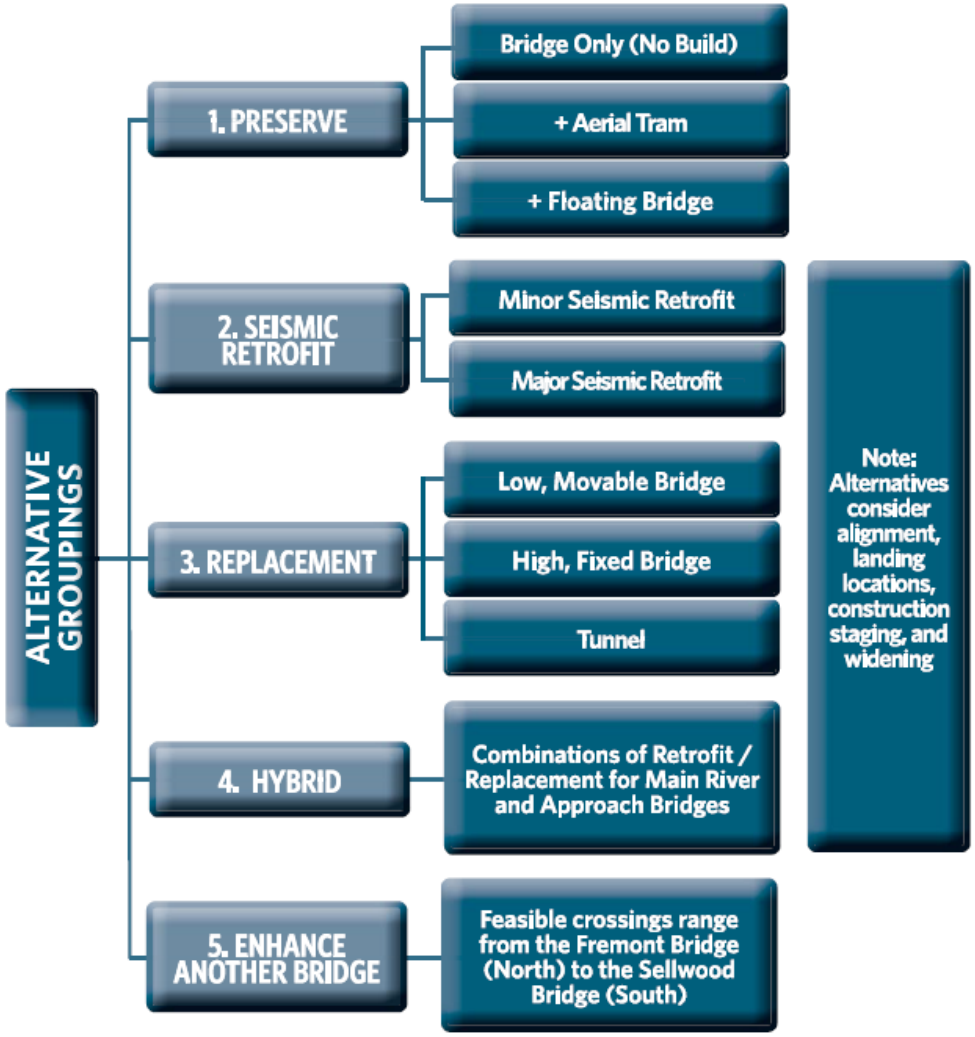
HIGH ELEVATION

LOW ELEVATION

LOW ELEVATION

(These are six of 100+ Design Options under consideration)

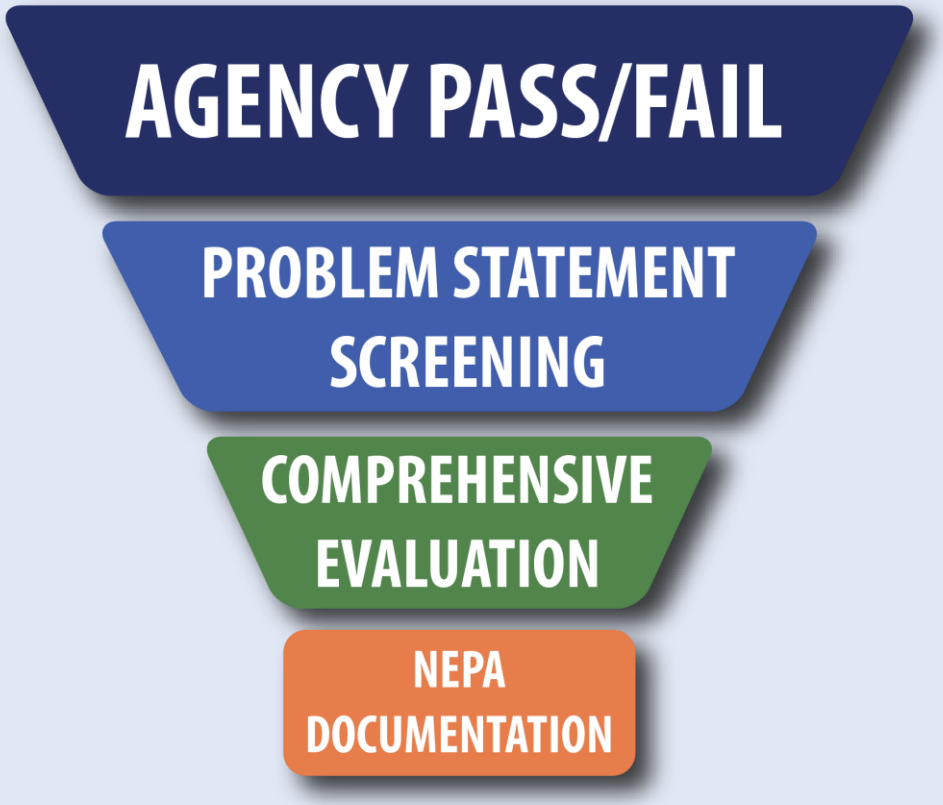
Alternatives Development



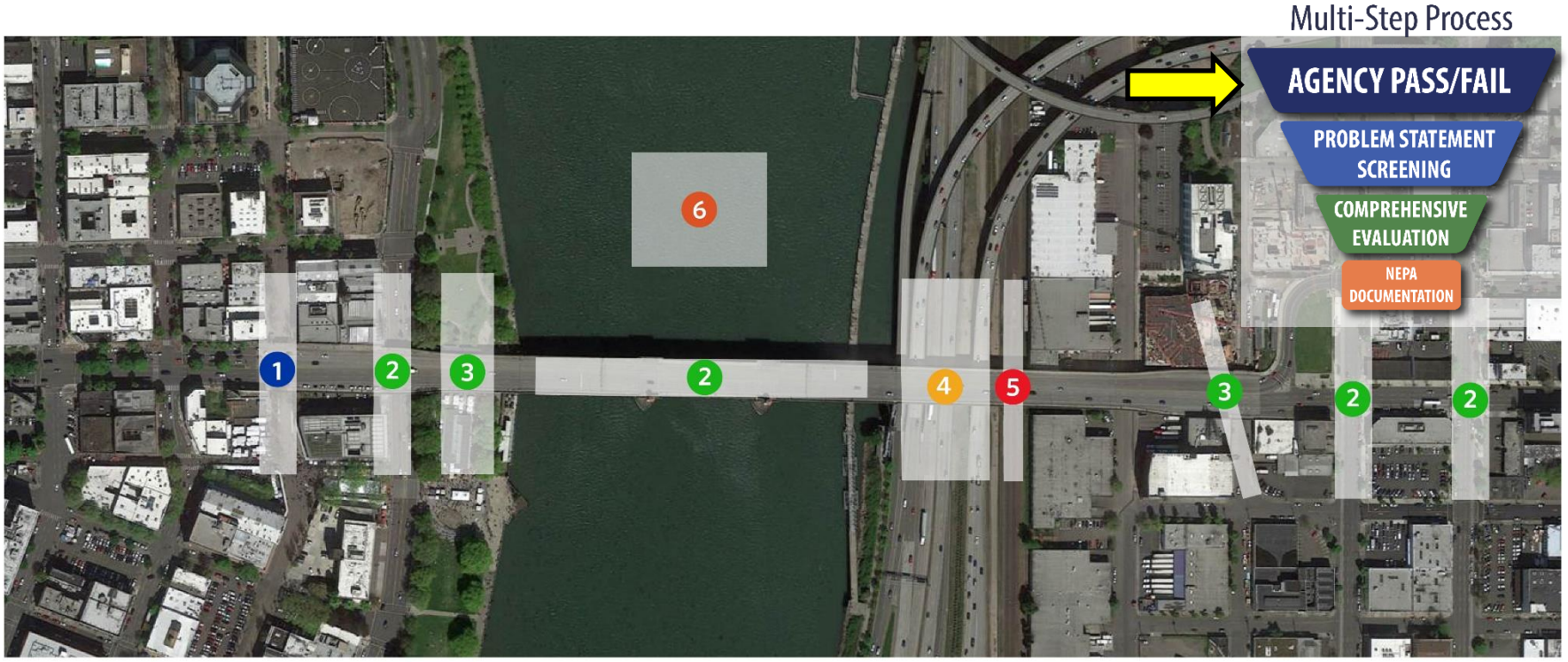
Are we missing any alternatives?

Alternatives Development

Multi-Step Process



Agency Technical Pass / Fail Criteria



TRIMET

1 TriMet Lightrail Service

2 City of Portland Roadway (Naito Pkwy, NE/SE MLK, NE/SE Grand)

3 City of Portland Combined Sewer Overflow

OREGON DEPARTMENT OF TRANSPORTATION

4 Oregon Department of Transportation Highway Facilities (I-5 and I-84)

UNION PACIFIC

5 Union Pacific Railroad Mainline

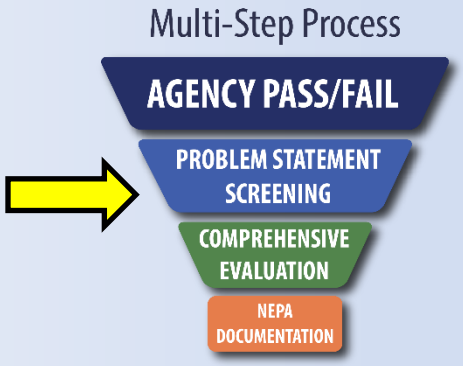
6 U.S. Coast Guard / River Navigation

Problem Statement Screening

Good/Fair/Fails

Seismic Resiliency

Emergency Response



Good/Fair/Poor

Multi-modal Needs

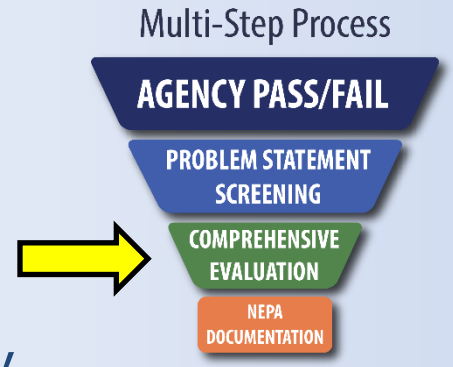
Emergency Plans

Long-term function

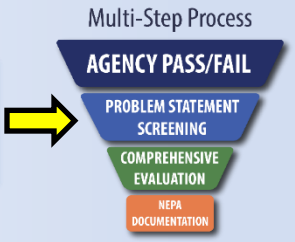
Comprehensive Evaluation

Example of Future Evaluation Topics

- Social Elements
- Recreation
- Land Use
- Right of Way Impacts
- Historical/Cultural Resources
- Natural Environment
- Equity and Diversity
- Sustainability
- Congestion/Traffic Operations
- Economic Development
- Construction Impacts
- Multi-modal

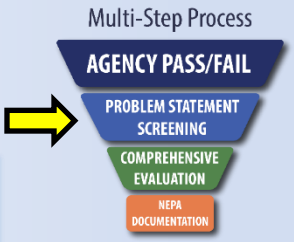


Problem Statement Screening Criteria



Screening Criteria	Definition	Rating
	Does the crossing meet our Seismic Design Criteria?	Good Fair Fail
	After an earthquake, does the crossing: • Provide unobstructed access • Connect the lifeline route on either side of the river • Address the capacity and congestion needs for first responders	Good Fair Fail

Problem Statement Screening Criteria



Screening Criteria	Definition	Rating
	After an earthquake, how well does the crossing provide access for: • Bike/Ped/ADA • Passenger Vehicles (Bus, freight, cars) • River users	Good Fair Poor
	How consistent is the crossing with State, Regional & Local Emergency Management Plans?	Good Fair Poor
	In the long term, how successful will this crossing be in: • Improving accommodations for all modes • Reducing the level of maintenance required to achieve the design life	Good Fair Poor

Closing Remarks

Next Steps

- Policy Group Meeting
- Screen Alternative Groupings
- Agency Technical Meetings
- Develop Draft Evaluation Criteria
- Stakeholder Briefings
- SRG Meeting #2 – July 2017
- Feedback – 2 weeks from this meeting
- Questions?

Closing Remarks

Thank You