



# Consulting Parties Advisory Group

Meeting #3 – July 12, 2024

# Review Topics from Meeting #2



- Endorsed the Advisory Group Charter
- Reviewed examples and discussed options for:
  - Interpretive Displays
  - Salvage and Reuse
  - 3-D Scan
- Discussed timing of NHL District and west side design discussions



# Review Work Plan and Schedule



**May 2024 - November 2024**

**April 2025 - February 2026**

**March 2027 - April 2028**

- Design and the NHL District
- Salvage and Reuse
- Interpretive Displays
- 3-D Scanning

- Video Documentation
- 3-D Model
- Documentation (HAER)
- Archival Records
- Publication
- Public Event

- Book Update
- Wikipedia Entry
- Oregon Encyclopedia Entry

# Review Work Plan and Schedule

	2024				2025				2026				2027				2028				2029				2030				2031							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Salvage and Reuse		■	■	■	■	■	■	■																												■
New Bridge Components in NHL		■	■	■	■	■																														
Interpretive Displays		■	■	■	■	■	■	■																							■	■				
3D Scan		■	■	■					■	■	■	■																								
Video Documentation					■	■			■	■	■	■																								
Documentation			■	■	■	■				■	■	■																								
Archival Records				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Publication				■	■	■	■	■	■	■	■	■	■	■	■	■																				
3D Model				■	■	■			■	■	■	■																								
Public Event							■	■	■	■	■																									
Wikipedia Entry																■	■	■	■	■	■	■														
OR Encyclopedia Entry																■	■	■	■	■	■	■														
Book Update																■	■	■	■	■	■	■														

Planning
Procurement
Implementation



# Focus for Meeting #3

## Design Related Mitigation Items

**Interpretive  
Displays**

**Salvage  
and Reuse**

**3-D  
Scanning**

# Interpretive Displays



Interpretive  
Displays

## Programmatic Agreement Guidelines

Multnomah County shall contract with an experienced firm for the graphic design, display design, and fabrication of three (3) permanent outdoor interpretive displays, consisting of not more than two (2) panels each depicting the Burnside Bridge and its history and significance, including the bridge's social and civic importance.

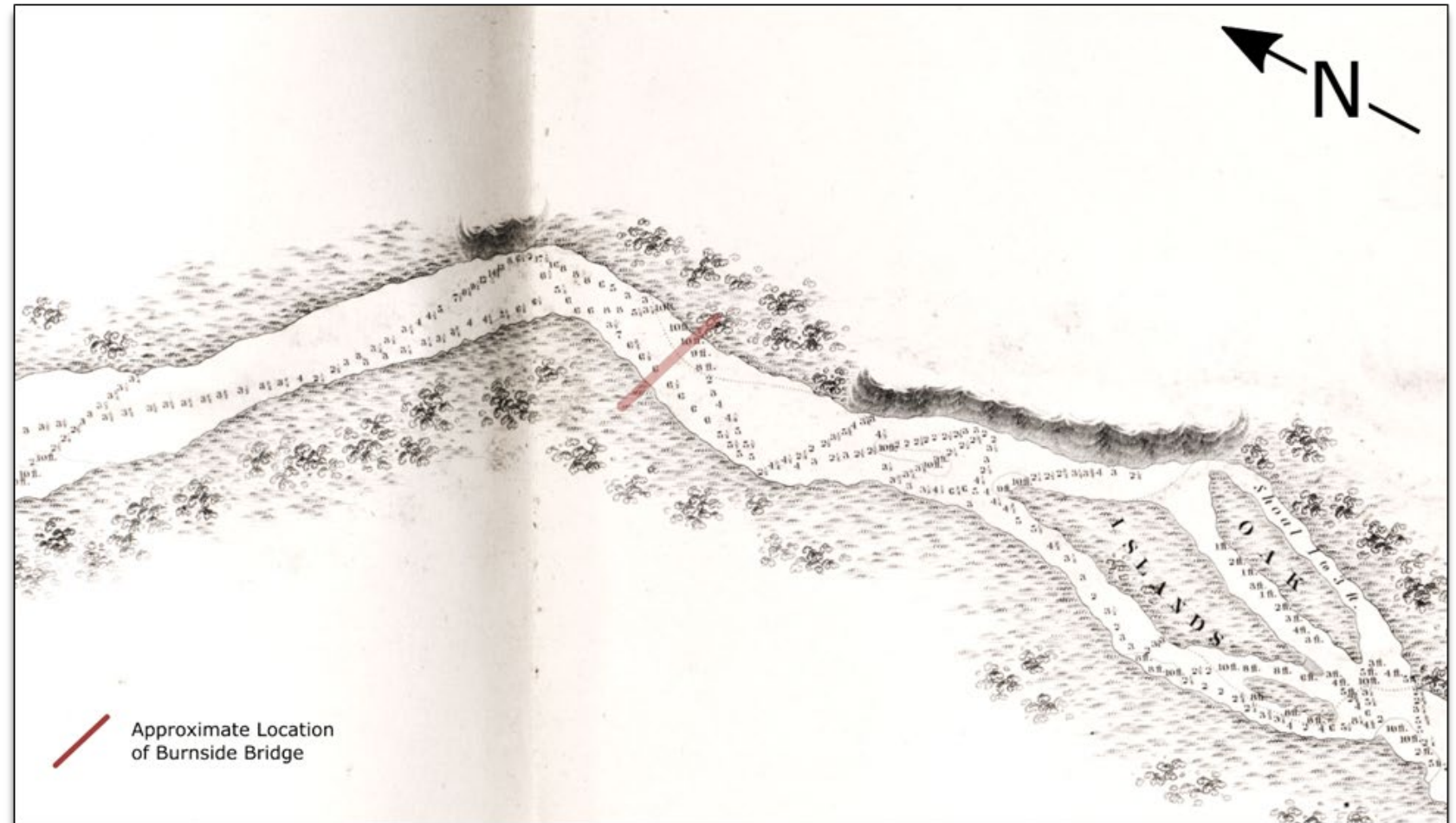
Multnomah County shall install the panels on the new Burnside Bridge. These panels may either be identical in content or encourage users to explore different aspects of the area's history. Multnomah County shall install the interpretive panels no later than the time of bridge opening and shall maintain the panels for a minimum of 10 years in the event the displays are vandalized or weather prematurely.

# Interpretive Displays

## Theme #1: Before the Burnside Bridge

### Possible topics under this theme:

- Precontact: how Indigenous peoples used the Willamette River before non-Indigenous peoples arrived.
- Postcontact: how Indigenous and non-Indigenous peoples used the Willamette River before the Burnside Bridge was built.
- Postcontact: why a bridge at this location was needed after non-Indigenous peoples founded Portland and the city expanded.



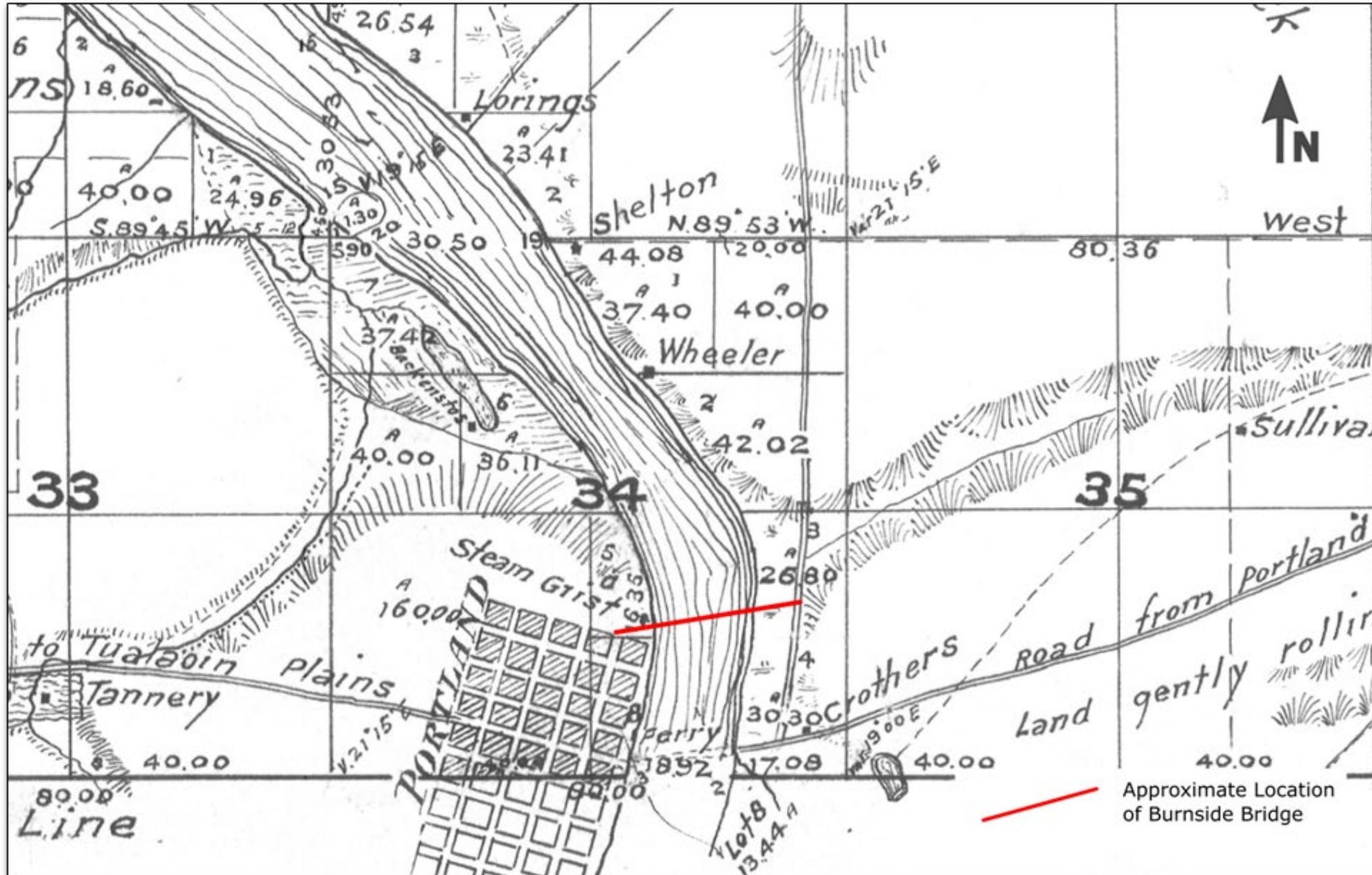
1841 approximate location of the Burnside Bridge indicated.

Source: Wilkes 1858:Sheet No. 7



# Interpretive Displays

## Theme #1: Before the Burnside Bridge



1852 GLO plat with approximate location of the Burnside Bridge.

Source: GLO 1852



# Interpretive Displays

## Theme #2: History of the Burnside Bridge

### Possible topics under this theme:

- First Burnside Bridge at this location and why it was replaced.
- Design and construction of the second Burnside Bridge.
- Designer of the second Burnside Bridge.
- Bascule operation of the second Burnside Bridge: why it opens and how it opens.
- Why the second Burnside Bridge is such a significant and notable work of engineering.

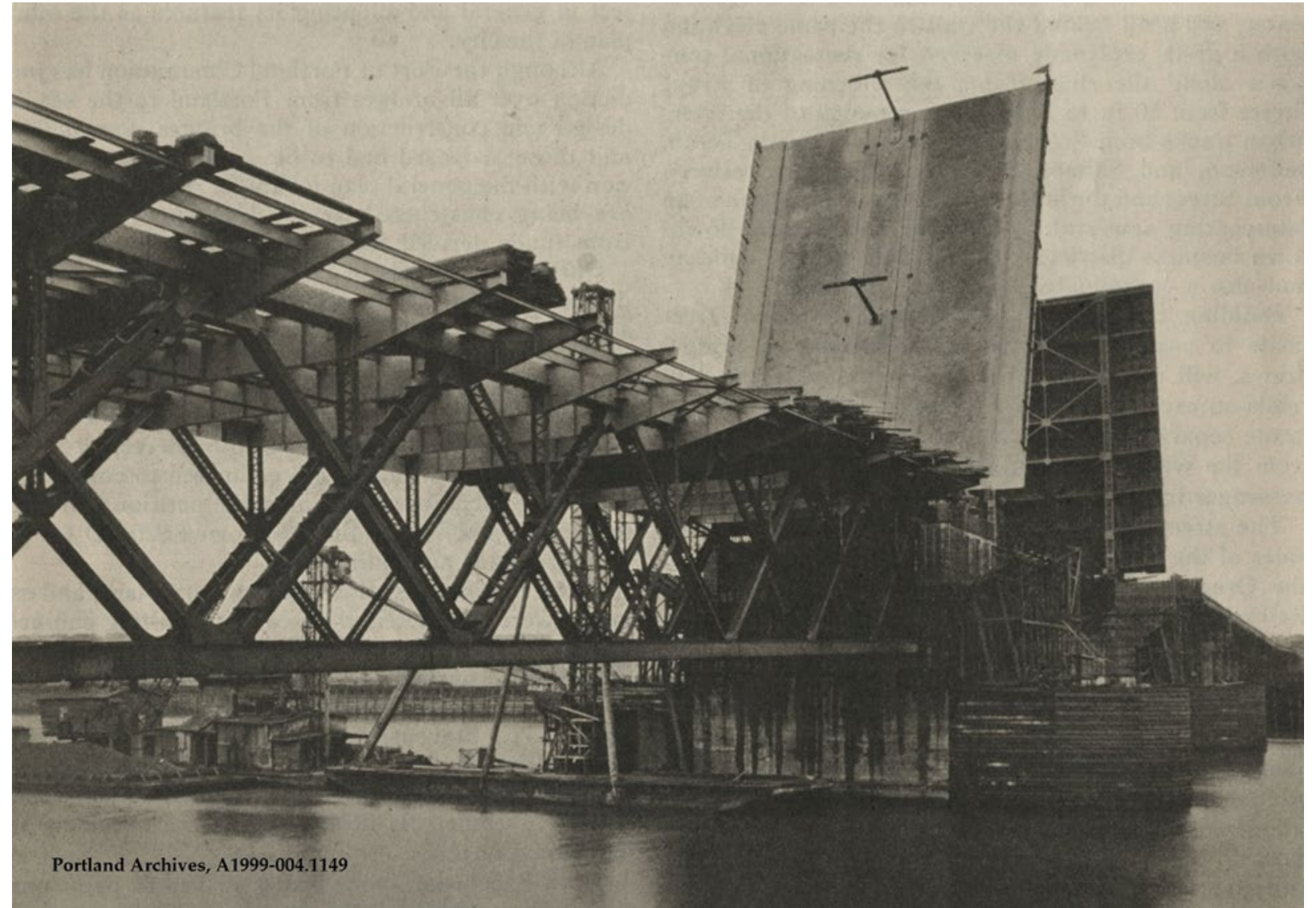


Photo taken from waterfront.

Source: Portland Archives, 1926



# Interpretive Displays

## Theme #2: History of the Burnside Bridge



Photo looking north.

Source: Portland Archives, 1926



# Interpretive Displays

## Theme #2: History of the Burnside Bridge



Burnside Bridge with bascule spans open and a ship is passing through.

Source: Portland Archives, 1926

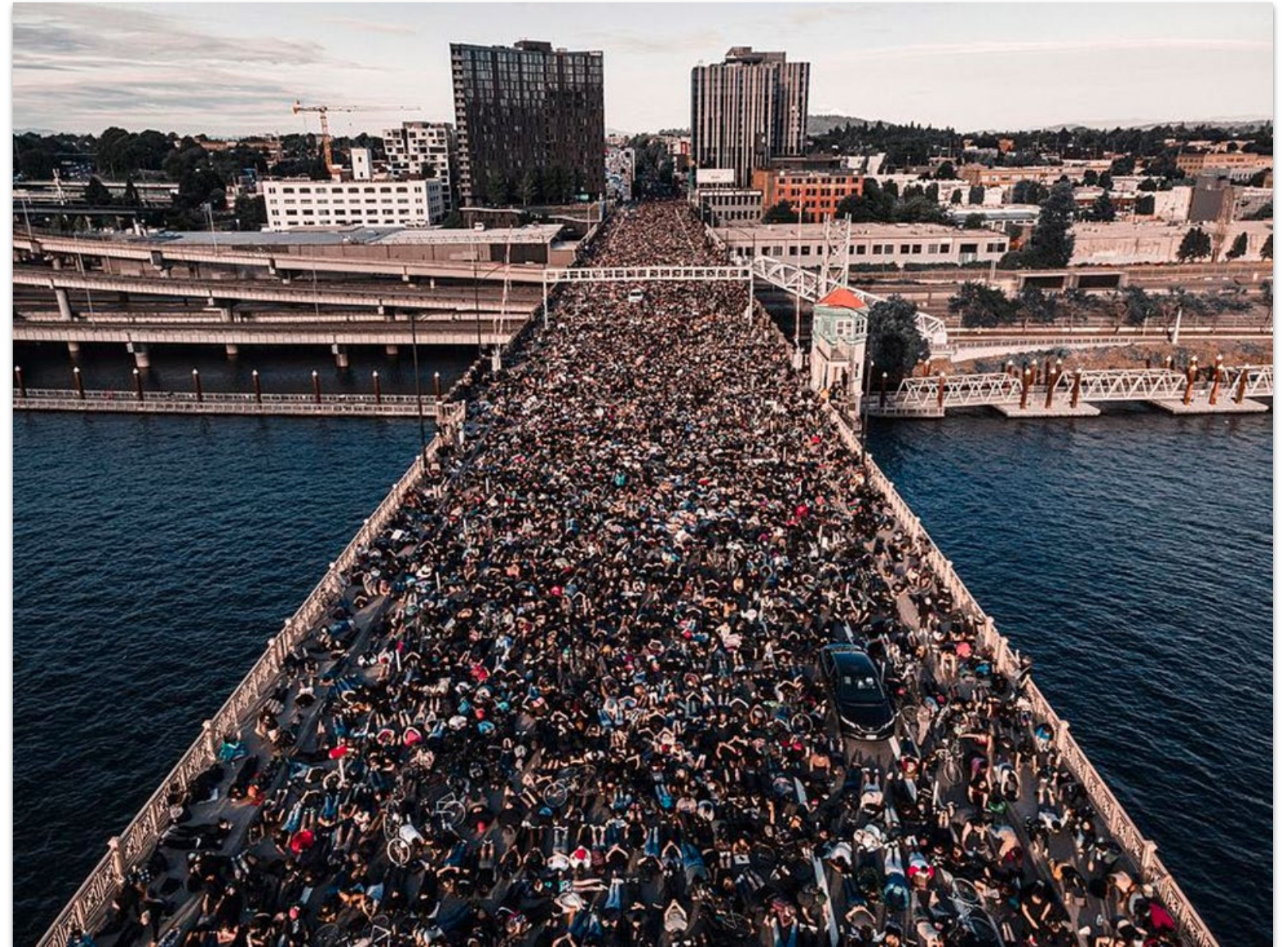


# Interpretive Displays

## Theme #3: Social Importance of the Burnside Bridge

### Possible topics under this theme:

- Automobiles, Buses, and Streetcars: Crossing the Burnside Bridge, 1924 to 2027.
- Events: Rose Parade, protests, and demonstrations.
- Burnside Bridge in art and photography.
- Burnside Bridge in popular culture and public memory.
- Construction and use of the Burnside Skatepark
- Continual use of the Willamette River by Indigenous peoples as a fishery.



Portland Protest #2, June 2, 2020

Source: Andrew Wallner



# Interpretive Displays

## Theme #3: Social Importance of the Burnside Bridge



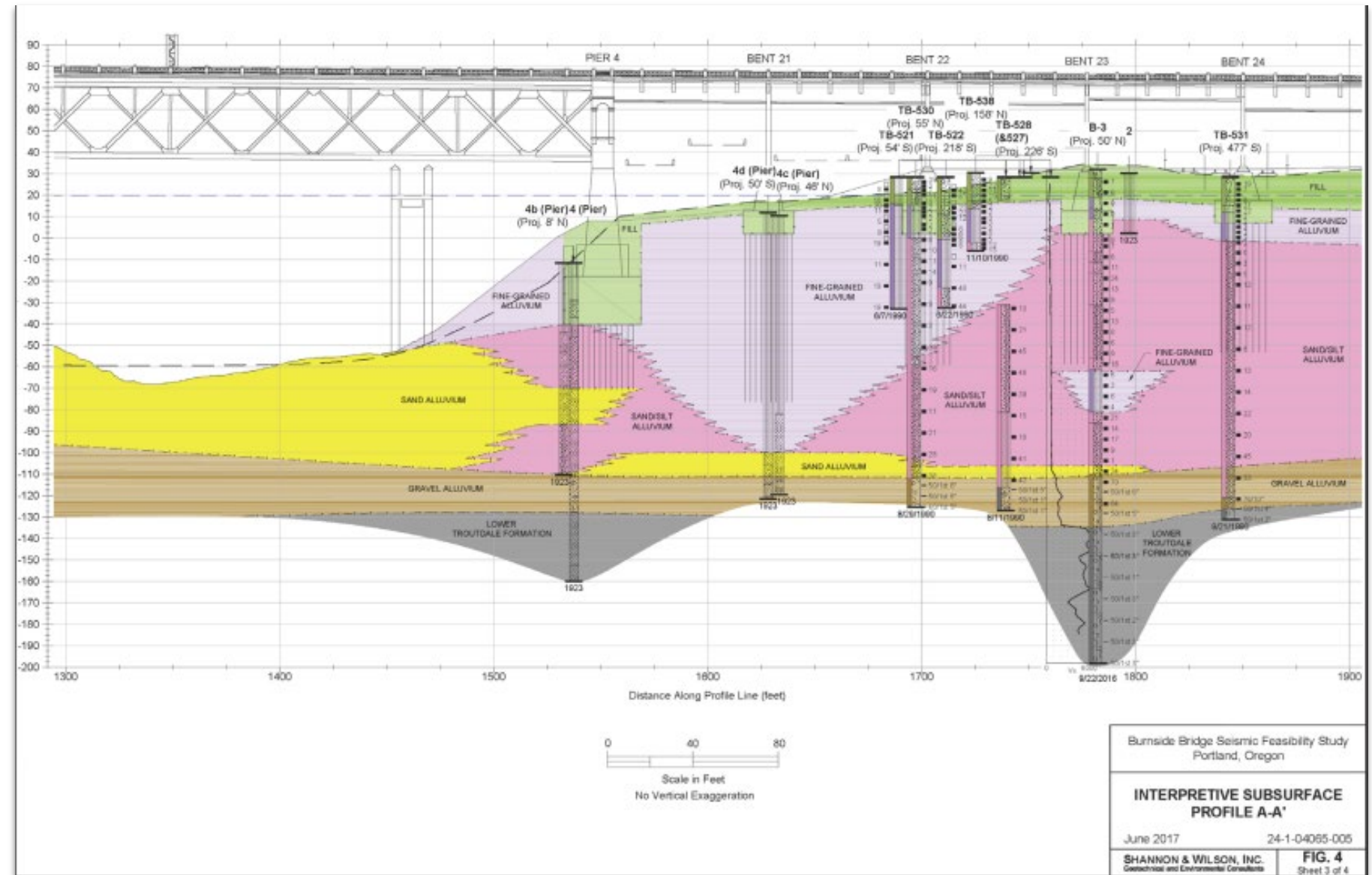
Parade on Burnside Bridge.  
Source: OHS, Oregon Journal

# Interpretive Displays

## Theme #4: Geology and Seismic

### Possible topics under this theme:

- Seismic fault lines in the region
- Precontact seismic events from geologic and Indigenous peoples' perspectives.
- Postcontact seismic events since the arrival of non-Indigenous peoples.
- Soil conditions in the vicinity of the Burnside Bridge.
- Why the replacement Burnside Bridge must be seismically resilient.



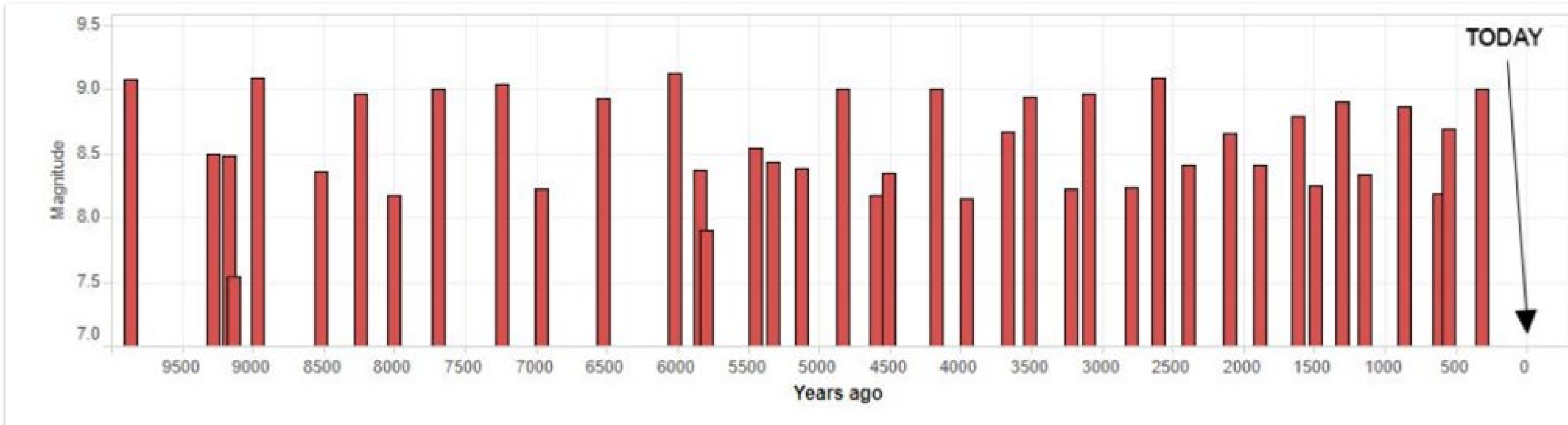
Soils under Burnside Bridge  
Source: Shannon & Wilson, Inc.



# Interpretive Displays

## Theme #4: Geology and Seismic

### Frequency and Magnitude of CSZ Earthquakes (Oregon Live)



# Interpretive Displays

## What makes a successful interpretive display?

### Design

- Lead with a thematic statement.
- Graphics, such as drawings, maps, or photographs to fill in details.
- Small amounts of text (150-200 words), with bold headings, drop capitals, and quotations.
- Strong contrast of graphics with the background.
- Reading comprehension at a 6th grade level.

### Accessibility

- Strong contrast of graphics with the background.
- Audio.
- Braille and other tactile elements.

### Durability



# Interpretive Displays

## Durability

- Porcelain enamel, high pressure laminate, direct-print aluminum, etched stainless steel or aluminum
- Last for over a decade
- Easy to clean from paint, markers, stickers, etc.

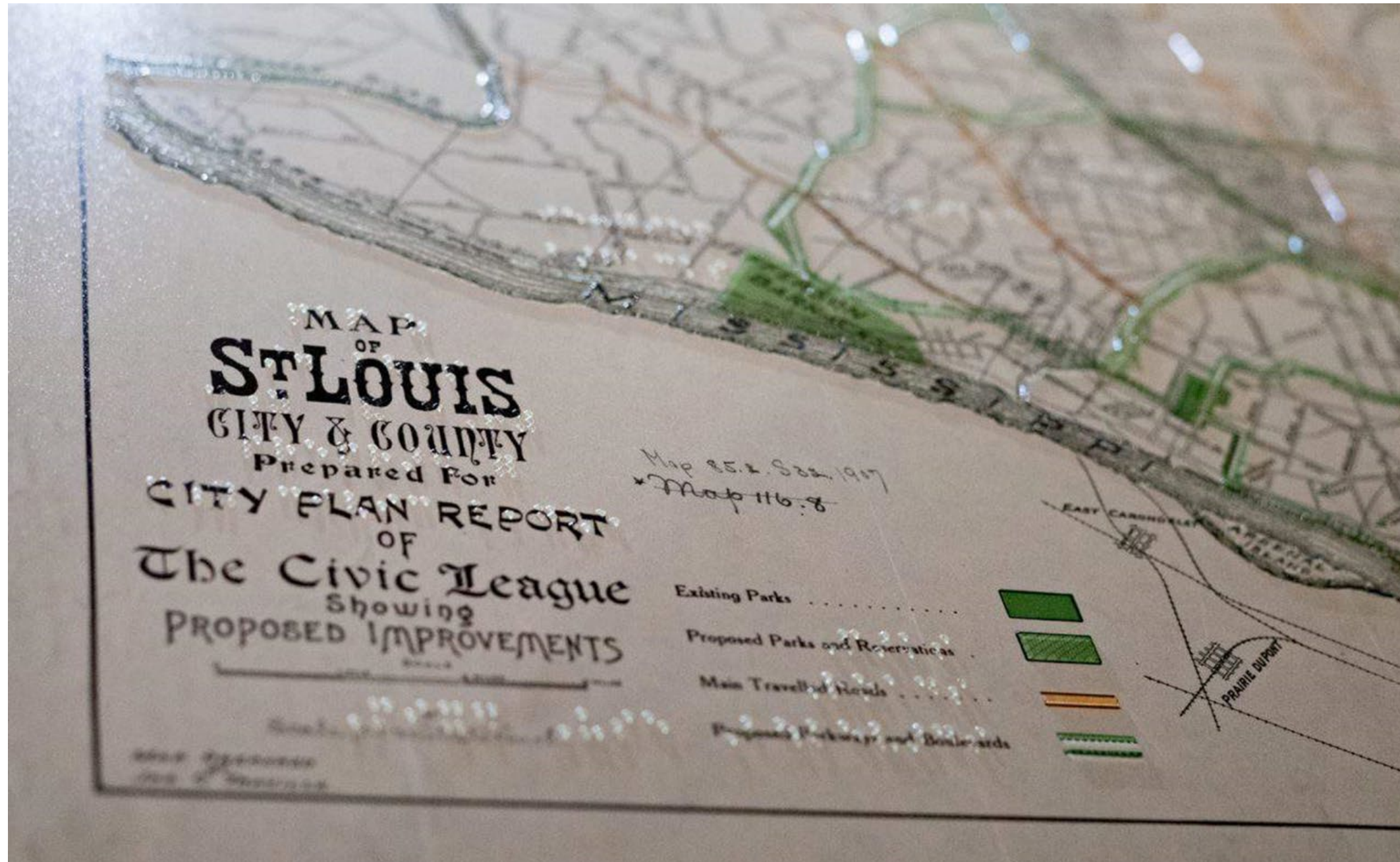


Sellwood - installed 2015  
Source: SeaReach



# Interpretive Displays

## Accessibility



An example of Braille superimposed on a historic map.

Source: Engraphix Architectural Signage, Inc.,  
<https://www.engraphix.com/portfolio/missouri-history-museum-coloring-stl-braille-interpretive-exhibit/>



# Interpretive Displays

## Durability



An interpretive display with a durable stone and steel base and an aluminum information panel etched with an architectural plan and descriptive text.

Source: Courtesy Aluma Photo-Plate Company,  
<https://www.alumaphoto-plateco.com/products/interpretive-signage.html>



# Interpretive Displays

## Example: Hanapēpē River Bridge, Kaumuali‘i Highway, Kaua‘i, Hawai‘i




Interpretive display in Hanapēpē Community Park (Hanapēpē, Kaua‘i County, Hawai‘i) memorializes the history of the former Hanapēpē River Bridge on Kaumuali‘i Highway on Kaua‘i.” Example of an interpretive display integrated with a salvaged section of historic bridge railing.

Source: Courtesy of Historic Hawai‘i Foundation, <https://historichawaii.org/2023/06/22/hanapepebridge-replacement>



# Interpretive Displays

## Example: Columbia River Gorge National Scenic Area

  
**WARRENDALE**

*“TITANIC FRANK’S”* Columbia legacy

After many years of harvesting on the Columbia, Warren realized the need to bolster salmon production. He was an early proponent of hatcheries to augment salmon runs.

Fish wheel near Warren Packing Company cannery.

*Frank Warren's productive and influential life was cut short in 1912, when he drowned after helping others onto lifeboats during the sinking of the RMS Titanic. After Warren's death, his children managed the Warren Packing Company until it closed in the 1930s.*

FROM THE 1870S TO the 1930S, the Columbia River was the lifeblood of a regional fishing and canning industry. The big,

untamed river churned as fish wheels scooped millions of pounds of salmon from the currents. Riverside canneries belched steam and smoke as laborers processed the fish and packed the cans that carried Columbia River salmon throughout the world.

At the industry's leading edge was Portland entrepreneur Frank M. Warren (1848-1912), whose Warren Packing Company cannery was located here at Warrendale. At its peak, Warren's company operated up to 14 fish wheels—about a third of the total number along the Columbia. The cannery employed as many as 150 people, most of them Scandinavians and Chinese.

Immigrants provided much of the labor in the Columbia River canneries.

The many buildings of the Warren Packing Company cannery are long gone. All that remains are rotting timber piling along "blood beach"—so named for the red sand, stained by the rusting scraps of millions of salmon cans.

C O L U M B I A R I V E R G O R G E N A T I O N A L S C E N I C A R E A

An example of an interpretive display from the Columbia River Gorge National Scenic Area.

Source: Courtesy Bob Hadlow, ODOT



# Interpretive Displays

## Example: Sellwood Bridge

**WHEN THE FIRST SELLWOOD BRIDGE** was built, it put a ferry out of business. From 1904 to 1925, the John F. Caples shuttled hundreds of passengers and vehicles across the river each day. Its old landings can still be seen today: on the east side at the end of Spokane Street, and on the west side near the old Staff-Jennings boat yard.

**SPANNING THE DECADES**

In Portland's early days, ferries were the only way to cross the Willamette. When the first bridges appeared, boats still had the right-of-way — the bridges were designed to lift or swing out of the way.

Henry Ford's first Model T hit the road in 1908. Within a decade the Portland streets were packed with chugging motorcars. As traffic on the river slowed, traffic above the river exploded. Bridges were more important than ever—and there weren't enough of them.

In 1922, Multnomah County passed a bond measure for a massive project to modernize Portland's interface with the Willamette. The project included three major bridges, one of which was to cross here at Sellwood.

The Sellwood Bridge, completed in 1925, was the first Willamette bridge to be designed almost exclusively for cars. It had two auto lanes and—unusual for this era—no streetcar tracks. Built high enough over the river to allow boats to pass underneath, it was also the first fixed bridge in the city.

**THE OLD BRIDGE**  
was a four-span continuous sub-divided Roman arch design, built in part out of components recycled from the old Burnside Bridge.

*Everybody "John Caples," Captain James Lee is in the center. Fred Gales, engineer is at the right. Willamette River, Portland, 1904.*

*Tacoma Ave, looking east from bridge.*

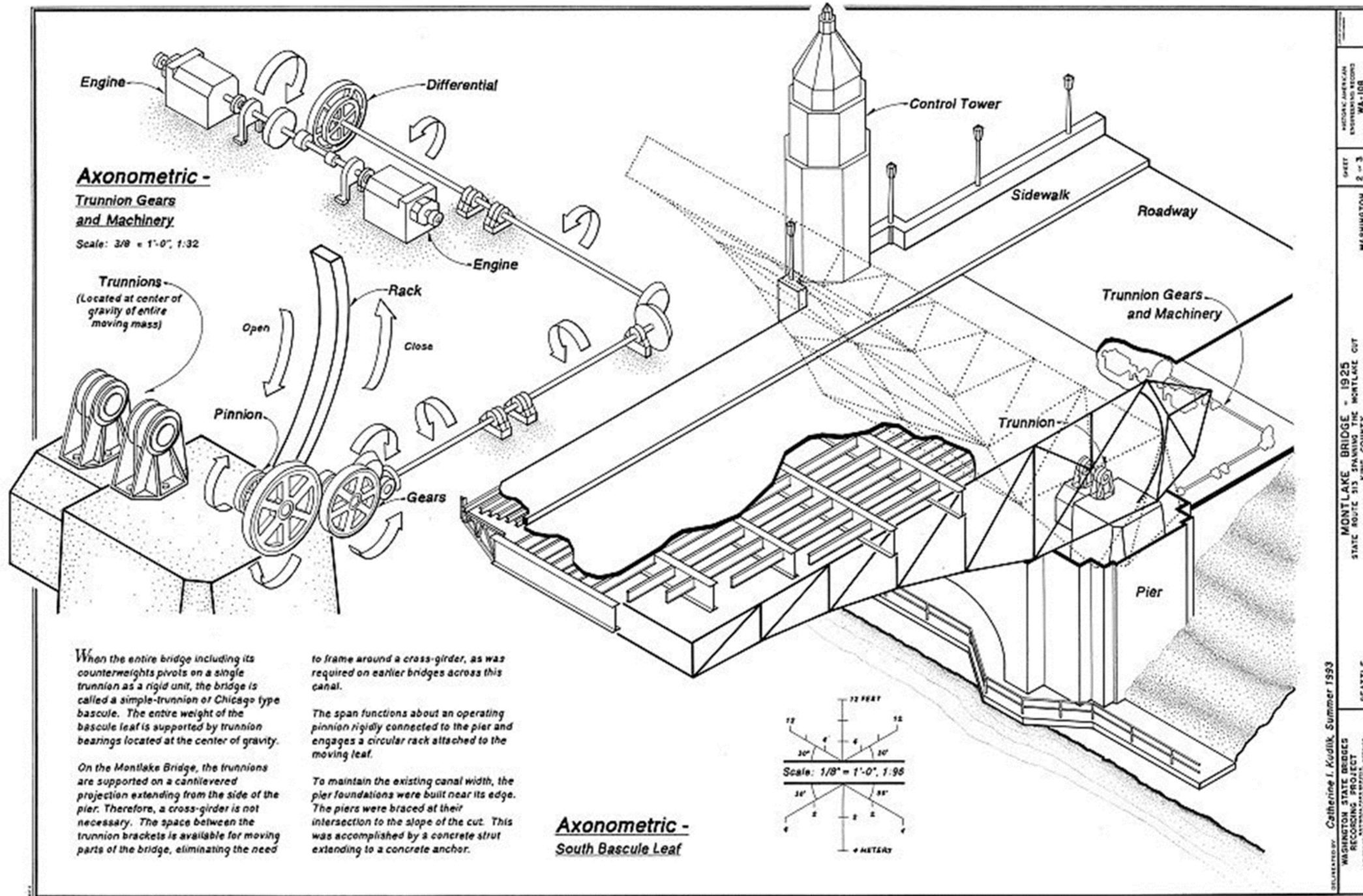
An interpretive display for the Sellwood Bridge in Portland.

Source: Courtesy Bob Hadlow, ODOT



# Interpretive Displays

## Example: Historic American Engineering Record (HAER) drawings



Example of Historic American Engineering Record (HAER) drawings, which could be incorporated into one of the interpretive display panels.  
Source: Courtesy Library of Congress

# Questions

- What themes do you feel are the most important?
  - 1 - Before the Burnside Bridge
  - 2 - History of the Burnside Bridge
  - 3 - Social Importance of the Burnside Bridge
  - 4 - Geology and Seismic
- Which topics within each theme do you feel are the most important?



## Theme #1: Before the Burnside Bridge

### Possible topics under this theme:

- Precontact: how Indigenous peoples used the Willamette River before non-Indigenous peoples arrived.
- Postcontact: how Indigenous and non-Indigenous peoples used the Willamette River before the Burnside Bridge was built.
- Postcontact: why a bridge at this location was needed after non-Indigenous peoples founded Portland and the city expanded.





## Theme #2: History of the Burnside Bridge

### Possible topics under this theme:

- First Burnside Bridge at this location and why it was replaced.
- Design and construction of the second Burnside Bridge.
- Designer of the second Burnside Bridge.
- Bascule operation of the second Burnside Bridge: why it opens and how it opens.
- Why the second Burnside Bridge is such a significant and notable work of engineering.



## Theme #3: Social Importance of the Burnside Bridge

### Possible topics under this theme:

- Automobiles, Buses, and Streetcars: Crossing the Burnside Bridge, 1924 to 2027.
- Events: Rose Parade, protests, and demonstrations.
- Burnside Bridge in art and photography.
- Burnside Bridge in popular culture and public memory.
- Construction and use of the Burnside Skatepark
- Continual use of the Willamette River by Indigenous peoples as a fishery.



## Theme #4: Geology and Seismic

### Possible topics under this theme:

- Seismic fault lines in the region
- Precontact seismic events from geologic and Indigenous peoples' perspectives.
- Postcontact seismic events since the arrival of non-Indigenous peoples.
- Soil conditions in the vicinity of the Burnside Bridge.
- Why the replacement Burnside Bridge must be seismically resilient.





# Salvage and Reuse



Salvage  
and Reuse

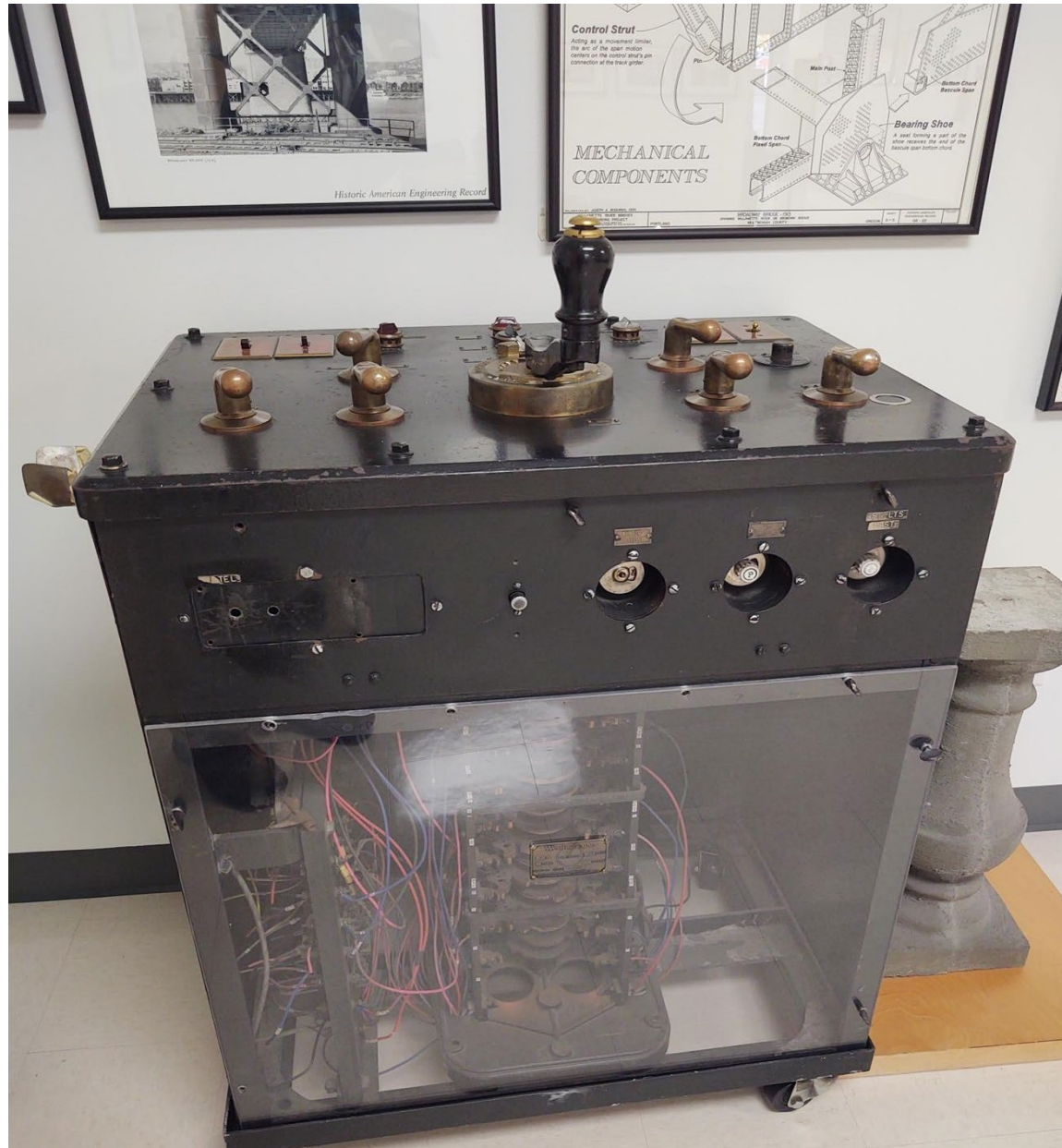
## Programmatic Agreement Guidelines

Multnomah County shall explore options for salvage and reuse of existing features of the Burnside Bridge, including railings, mechanical components, and the operator towers.



# Existing Example of Salvage

## Original Burnside Bridge Control Panel – Housed at ODOT



Portrait of John Frenette, chief operator on Burnside Bridge, 1956

Source: OHS



# Salvage

## Bridge Elements

### 1 - Operator Tower

Entire Operator Tower (as a whole)

Red Terracotta Roof (Terracotta Tile Shingles over Steel Frame with Concrete Slab)

Green Architectural Operators Quarters (Glass Windows and TerraCotta Tiling)

Beige Architectural Tower (Cement Stucco over Terra Cotta Walls)

Walking balcony

### 2 - Metal Bridge Railing

### 3 - Concrete Bridge Railing

Individual balustrades

Balustrade panel

Transition units

### 4 - Steel Structural Components

Individual rivets / bolts

Truss portions (at joints)

### 5 - Historic Name Plate

### 6 - Mechanical Components

Motors and gears (i.e., machinery housed in mechanical room)

Interior trunnion tower

Pinion rack

### 7 - Douglas Fir Piling

Piling from starling

Piling from below foundations

# Salvage

## Operator Tower

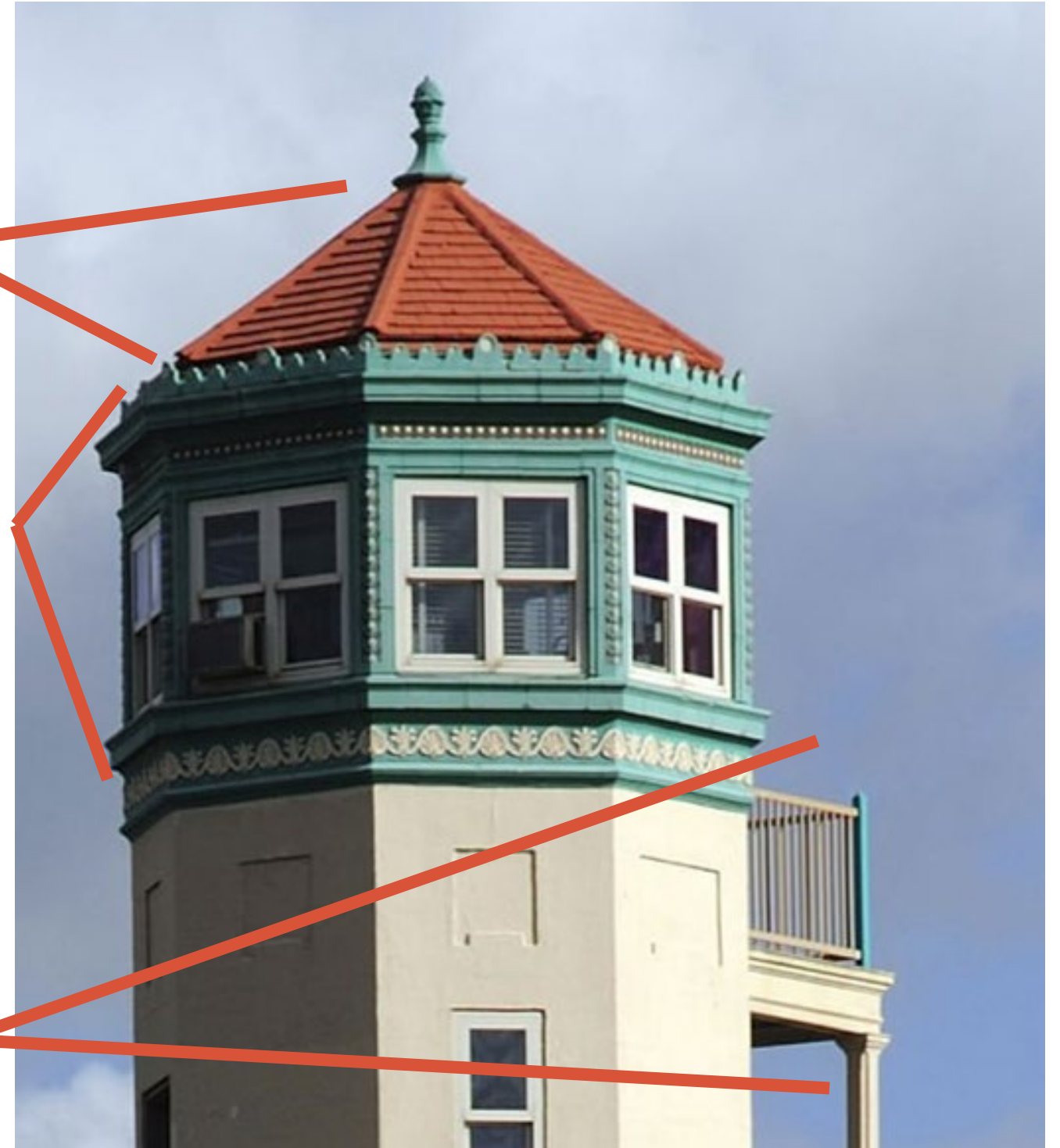


Terracotta Roof

Operators Quarters

Tower

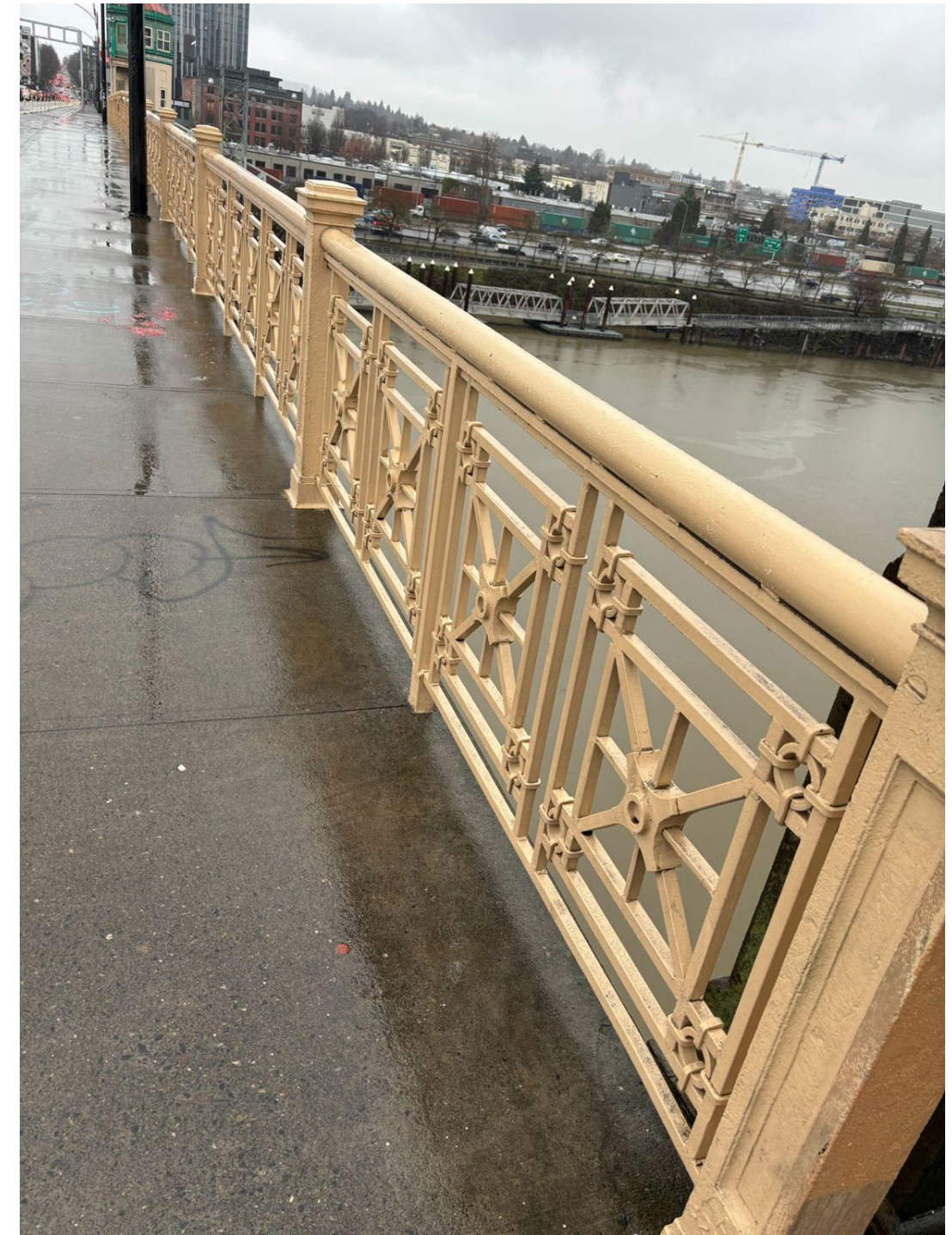
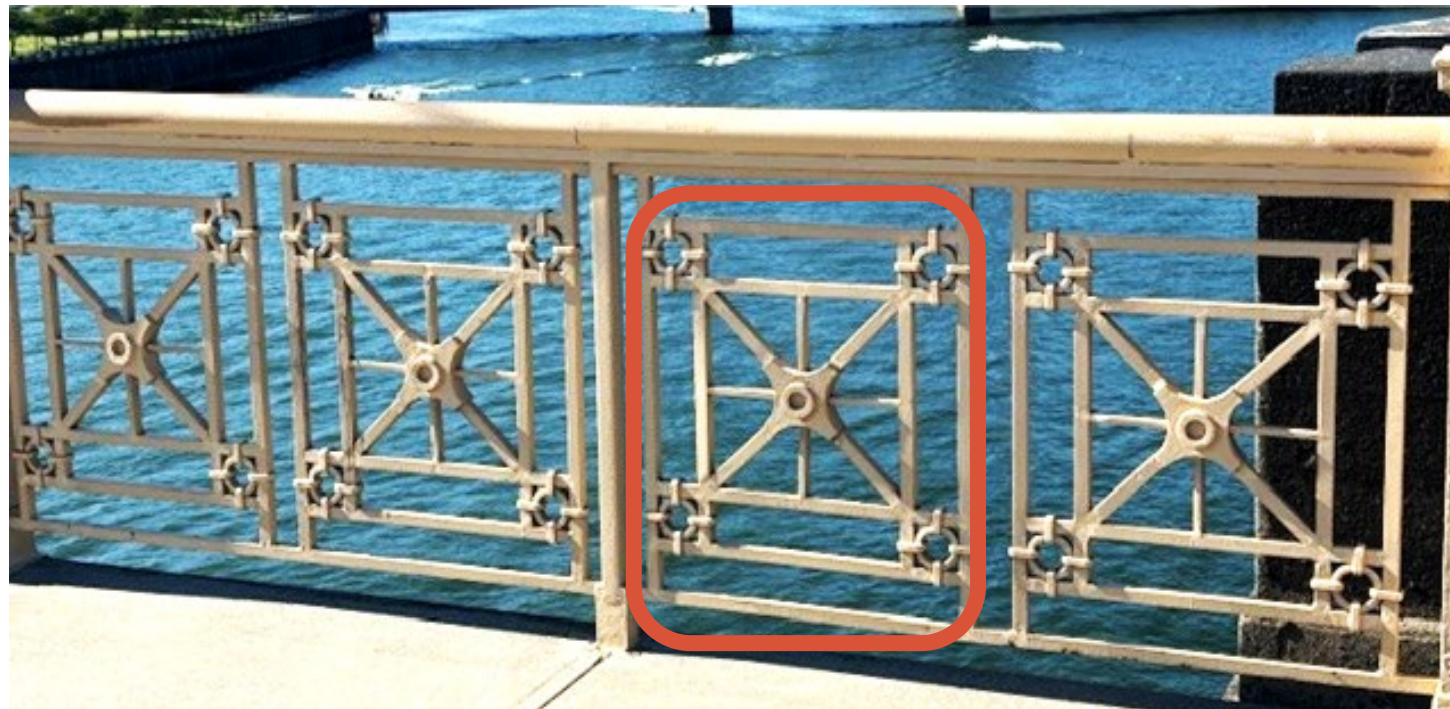
Walking Balcony





# Salvage

## Metal Bridge Railings





# Salvage

## Concrete Bridge Railings





# Salvage

## Steel Structural Components



Approach Truss Node



# Salvage

## Steel Structural Components

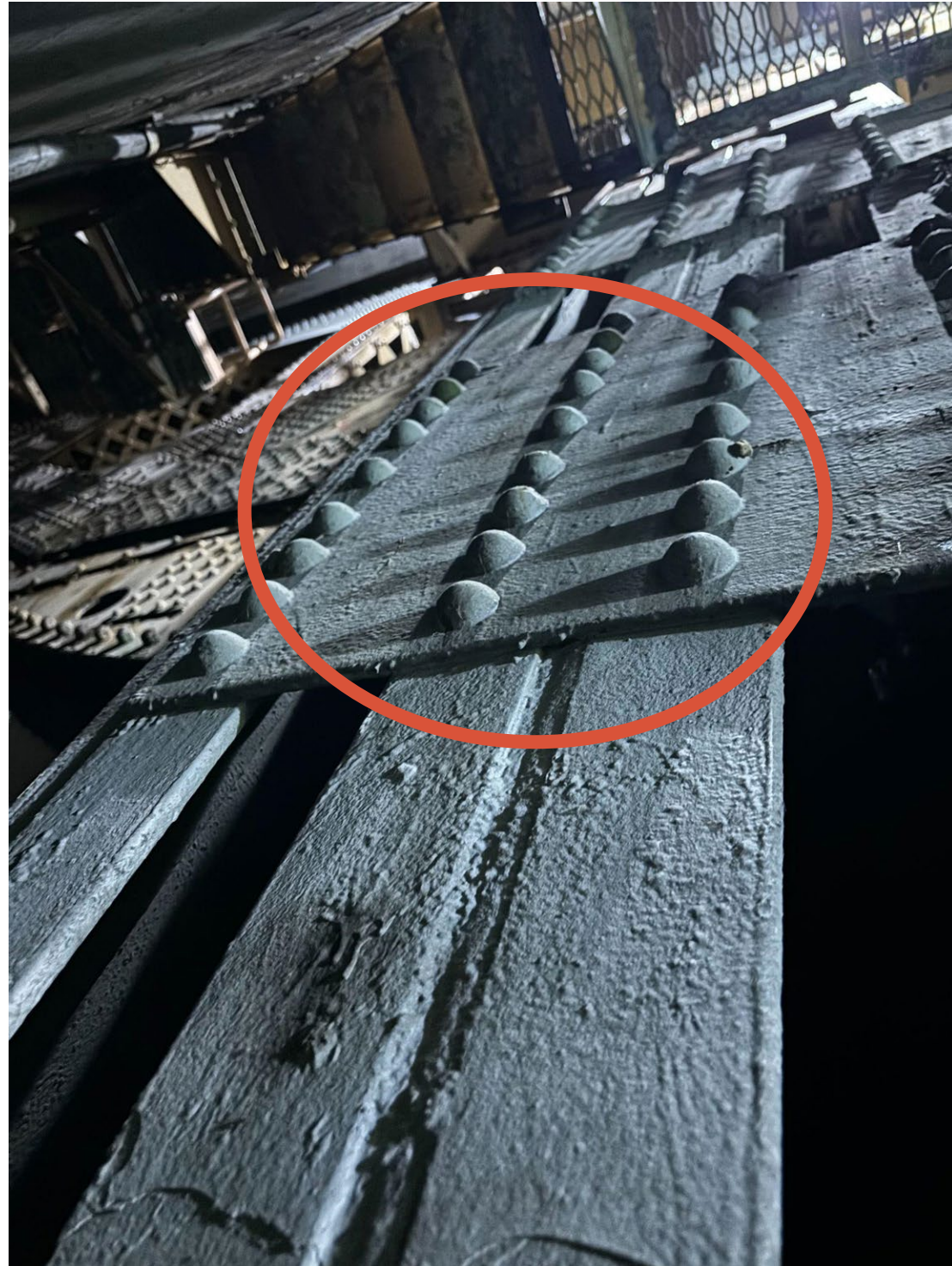


Bascule Span Node



# Salvage

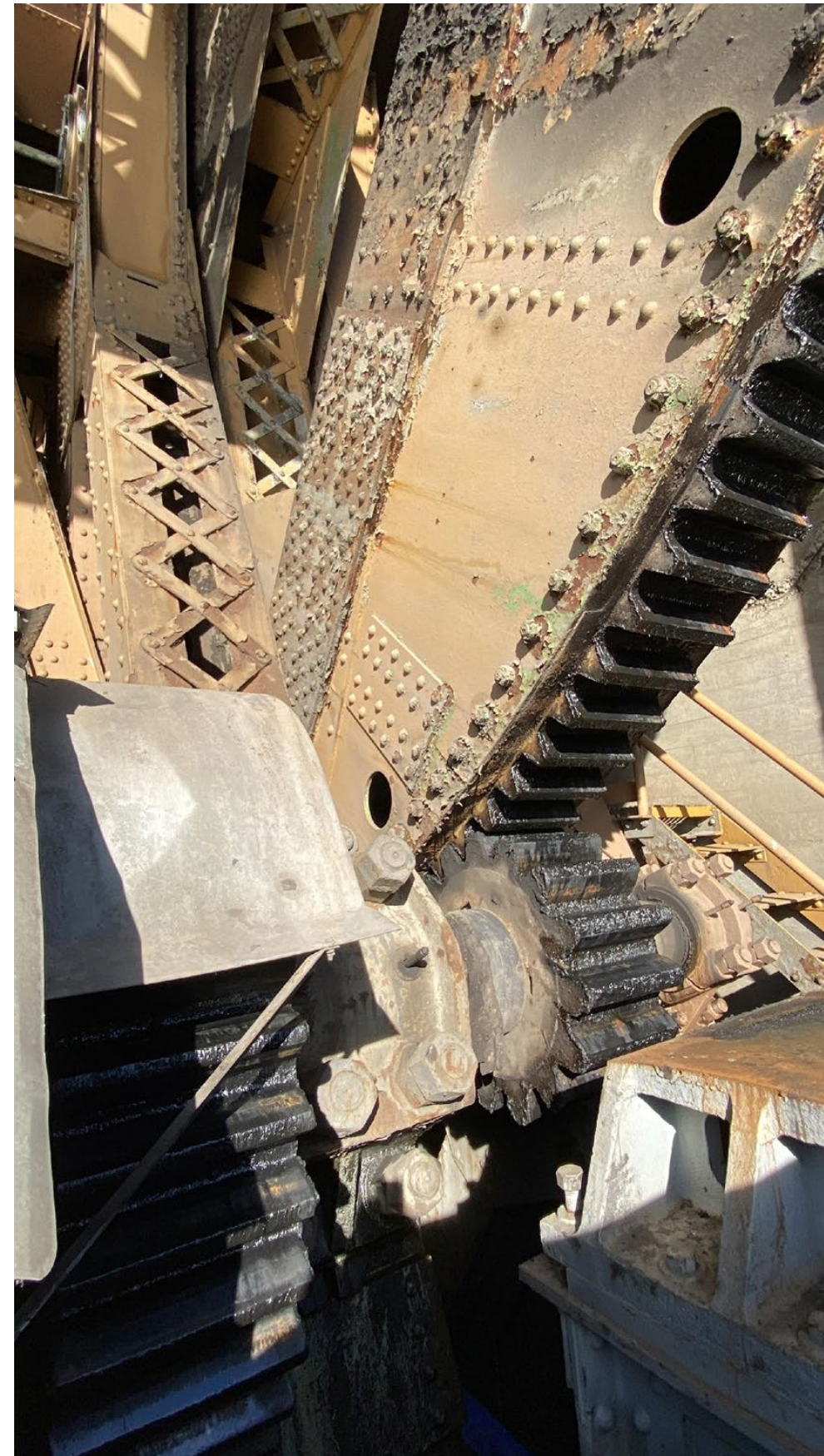
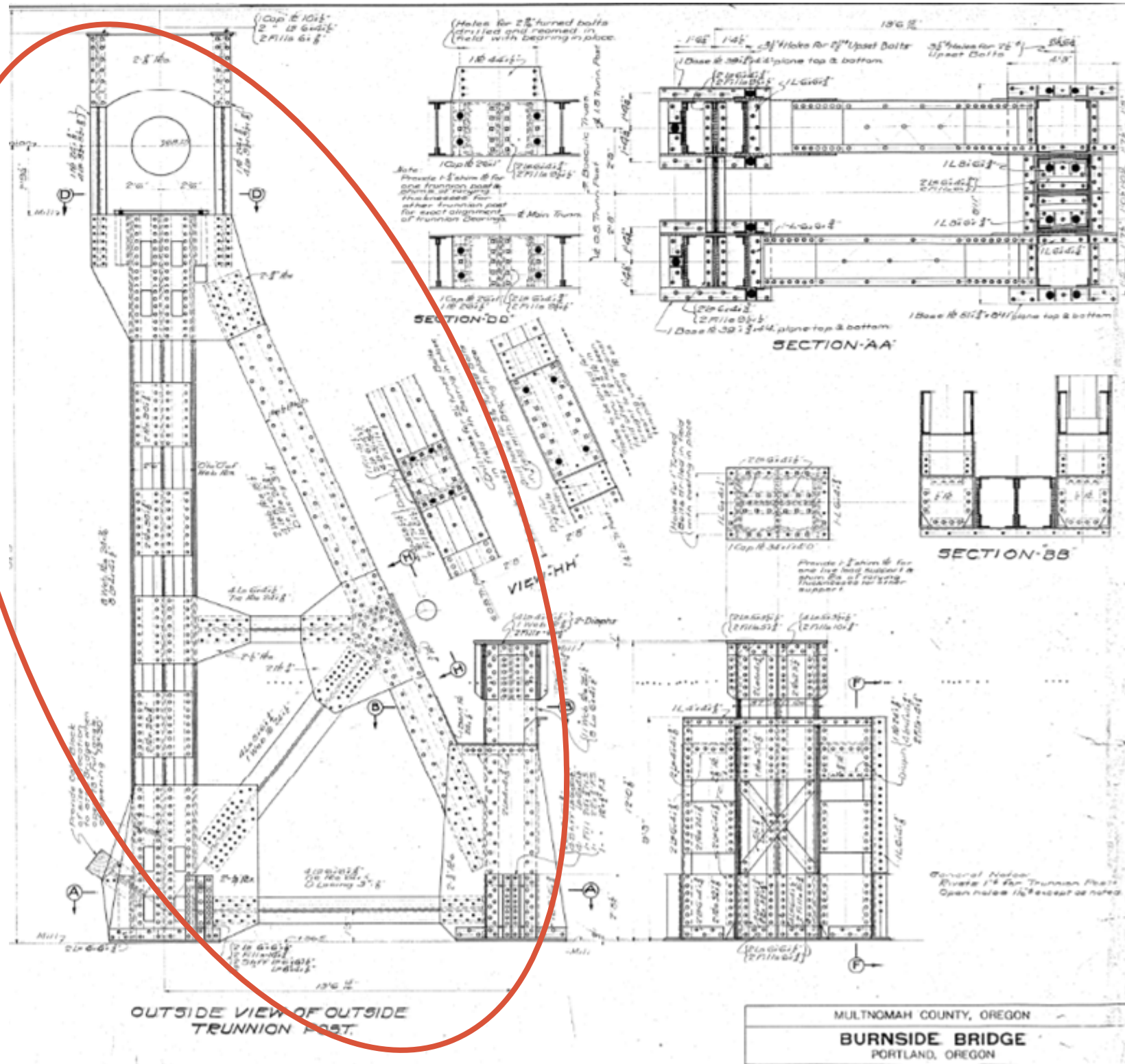
## Steel Structural Components - Rivets / Bolts





# Salvage

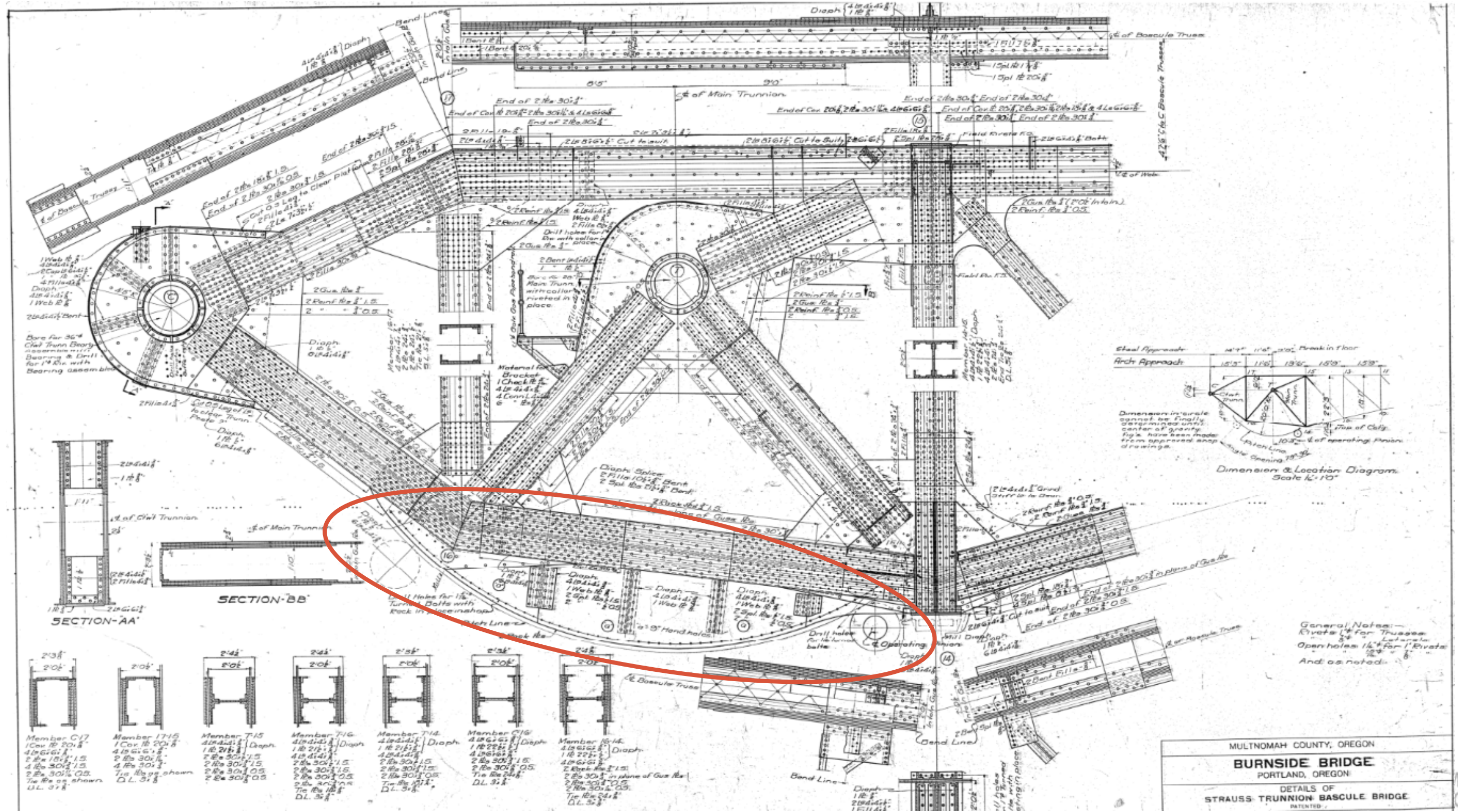
## Mechanical Components - Trunnion Tower





# Salvage

## Mechanical Components - Pinion Rack





# Salvage

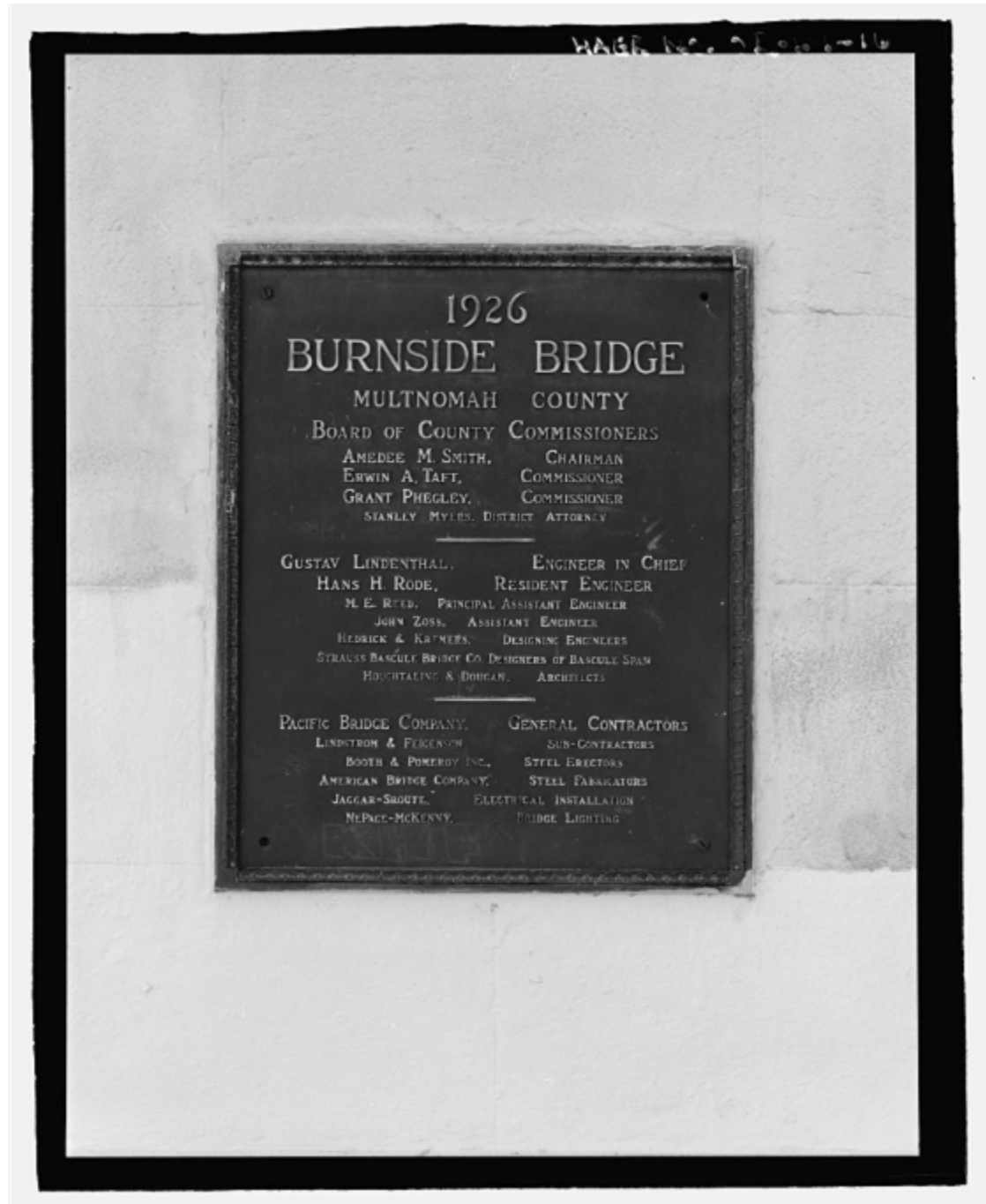
## Mechanical Components - Gears





# Salvage

## Name Plate





Potential Salvage Components					Level of Effort	Risk of Damage
Very Low	Low	Moderate	High	Very High	Infeasible	
<b>1 - Operator Tower</b>						
Entire Operator Tower (as a whole)						
Red Terracotta Roof (Terracotta Tile Shingles over Steel Frame with Concrete Slab)						
Green Architectural Operators Quarters (Glass Windows and TerraCotta Tiling)						
Beige Architectural Tower (Cement Stucco over Terra Cotta Walls)						
Walking balcony						
<b>2 - Metal Bridge Railing</b>						
<b>3 - Concrete Bridge Railing</b>						
Individual balustrades						
Balustrade panel						
Transition units						
<b>4 - Steel Structural Components</b>						
Individual rivets / bolts						
Truss portions (at joints)						
<b>5 - Historic Name Plate</b>						
<b>6 - Mechanical Components</b>						
Motors and gears (i.e., machinery housed in mechanical room)						
Interior trunnion tower						
Pinion rack						
<b>7 - Douglas Fir Piling</b>						
Piling from starling						
Piling from below foundations						



# Salvage and Reuse



## National Endowment for the Arts (NEA) Grants

- Award range: \$10,00-\$100,000
- Require 1:1 cost/share matching funds
- Some require partnering with nonprofits that have a history of arts programming
- Can apply twice per year





# Questions

- What is your top priority to salvage?





# 3-D Scanning



3-D  
Scanning

## Programmatic Agreement Guidelines

Multnomah County shall make a three-dimensional scan of the Burnside Bridge available to Consulting Parties and the public through the County website and upon request during construction. Upon completion of the Project, Multnomah County shall archive the data in the County's permanent electronic records management system.



# 3-D Scanning



- There are several vendors who do 3-D scanning and we will invite them to tour the bridge and describe their services
- It is possible to scan the machinery and counterweight inside of the bridge



# Discussion - Questions





# Next Steps

## Current Project Status

- Bridge Type Survey
- Public Outreach

## September 13<sup>th</sup> meeting:

- Research and planning results
- Draft scopes for procurement
- More input from Advisory Group

## Reminder for Input:

Email to [EQRB-Consulting-Parties@multco.us](mailto:EQRB-Consulting-Parties@multco.us)

## Materials Website

<https://www.multco.us/earthquake-ready-burnside-bridge/consulting-parties-advisory-group-meeting-materials>

