

Regional Emergency Transportation Routes

PHASE II

Session 7a: Planning Prioritization

Briana Calhoun | June 30, 2026



Agenda

01 Introduction

02 Project Background

03 The Process

04 Outcomes &
Recommendations

SECTION 01

Introduction

Project Team



Fehr & Peers



SECTION 02

Project Background

Project Background

Overview

- Natural and human-caused disasters can occur at any time.
- Transportation networks play a critical role in emergency response.
- Regional coordination helps protect public safety, economic activity, and quality of life.

This project helps partners make proactive planning and funding decisions for **regional emergency transportation routes.**

Emergency Transportation Routes (ETRs)

ETRs are priority surface roads targeted during an emergency for:



Rapid Damage Assessment



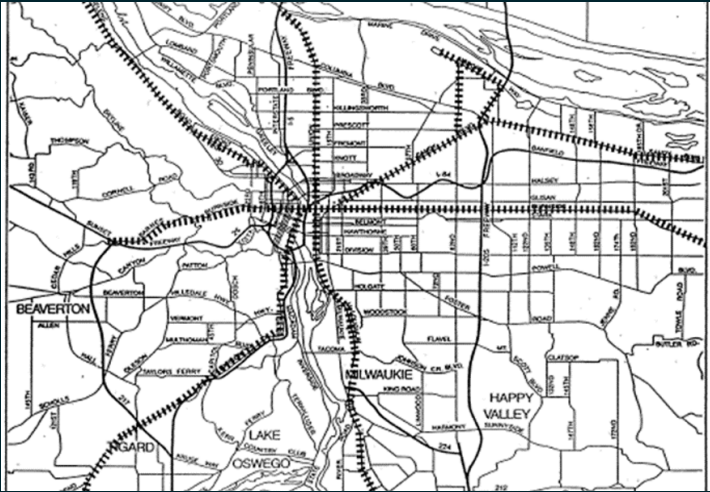
Debris Clearance & Repair



Critical Response

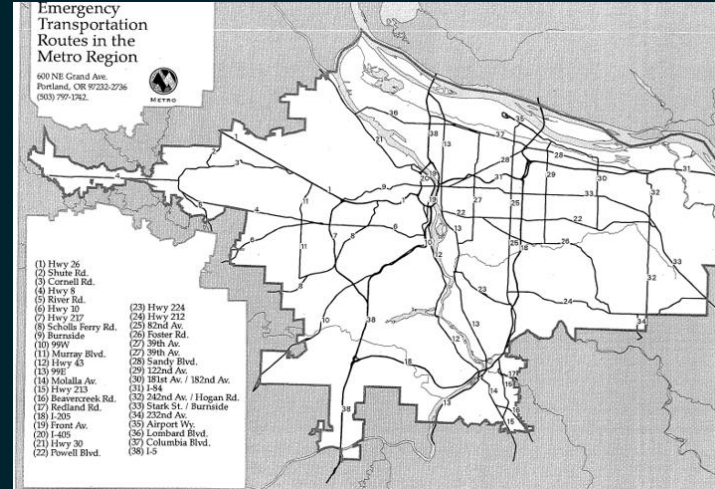
- An ETR designation may also factor into long-term maintenance and investment decisions.
- **These are not evacuation routes**, though there can often be overlap with evacuation planning efforts.

Evolution of the RETRs



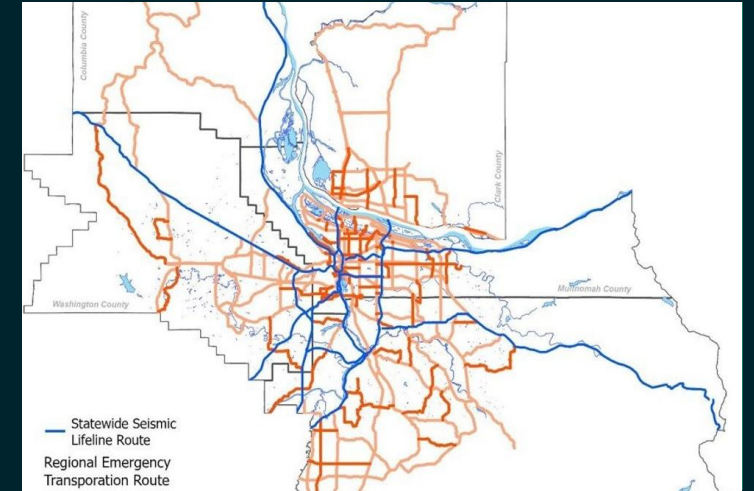
Designated Emergency Lifeline Corridors (1994)

- 3 counties
- 6 routes identified
- Mainly N/S, E/W



Emergency Transportation Routes (1996)

- 3 counties
- First ETRs
- Relatively simple criteria – flat, state-owned, low landslide potential



RETRs (2021)

- Expanded to 5 counties
- Considered connectivity & access, route resilience, community & equity

SECTION 03

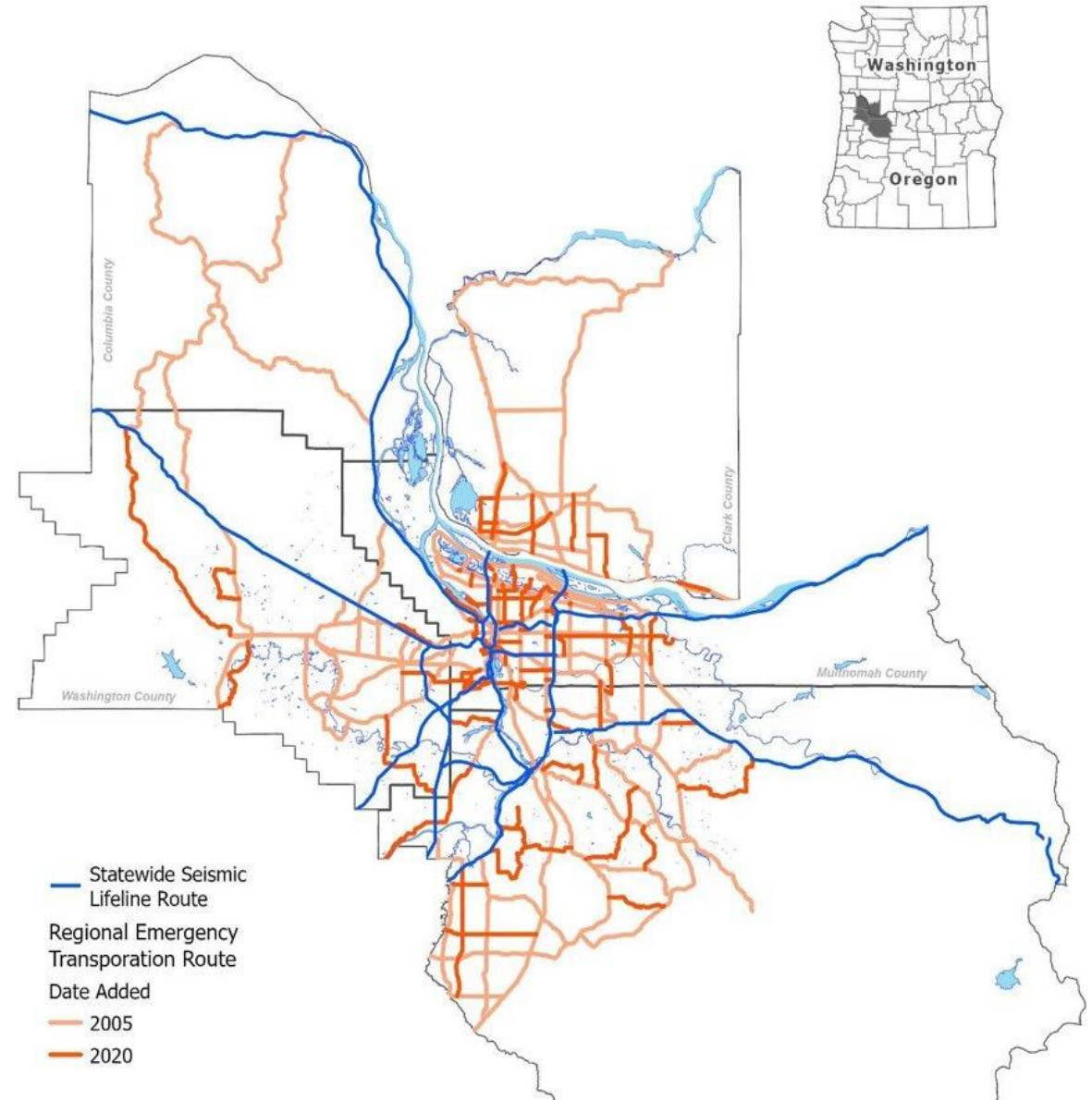
The Process

Project Scope

How do we prioritize these routes to cover a variety of **land use and roadway contexts**, as well as plan for a range of potential **emergency scenarios**?

Out of Scope:

- Evacuation or recovery planning
- Operational guidelines
- Funding decisions



Key Steps

01.

Review best practices for prioritization using other examples within the US.

02.

Through an iterative process with partners, **develop and refine the prioritization methodology.**

03.

Finalize the tiering results and map for RETRs.

04.

Provide recommendations for future work.

Best Practices

There aren't a lot of documented examples of prioritization for emergency response routes, most examples focused on evacuation needs.

Common Themes Include:



Life-saving and life-sustaining facilities should be top priority for access (hospitals, fire stations, etc.)



Rely on major roadways that connect multiple destinations and accommodate high traffic volumes



A connected network is most effective

Engagement



Project Work Group

Their iterative feedback ensured the methodology was technically sound, operationally relevant, and regionally consistent.



Technical Workshops

Their expertise grounded the framework in real-world emergency response needs.



Community Based Organization Workshops

Their input highlighted equity considerations and reinforced the importance of accessible, community-centered emergency planning.

Methods

After rounds of iteration, the analytical process to designate routes in 3 tiers has **four steps**:

01.

Score based on proximity to key destinations

02.

Ensure the Hospitals and Airport are served by Tier 1 routes

03.

Look at the overall distribution of Tier 1 routes and how these serve areas with higher:

- Population density
- Concentrations of vulnerable folks

04.

Confirm that the Tier 1 routes and state routes create a cohesive network

Step 1: Score Routes

1. Score routes based on proximity to **points of interest** and **roadway characteristics**.
2. Split routes into three tiers based on total points.

- Hospitals
- Fire stations
- Police stations
- Connections to State Seismic Lifeline Routes
- Arterials & highways

- Fueling centers
- Airports
- Public works facilities and water treatment sites
- Debris management sites
- Emergency operation centers

Step 2: Apply Automatic Criteria

Some criteria overrides the quantitative scoring.

Hospitals and the Portland Airport must have a Tier 1 route directly serving them.

Step 3: Review SVI and Population Density

Use **Metro's Social Vulnerability Index (SVI)** and identify the Census block groups with the highest SVI and/or highest population density.

Consider:

- Is the block group served by a Tier 1 route, and what is the density of Tier 1 routes around it?
- How are routes serving more rural population centers?



Step 4: Confirm Connectivity

Confirm that the Tier 1 and ODOT State Seismic Lifeline Route/WSDOT Priority Routes create a connected network.

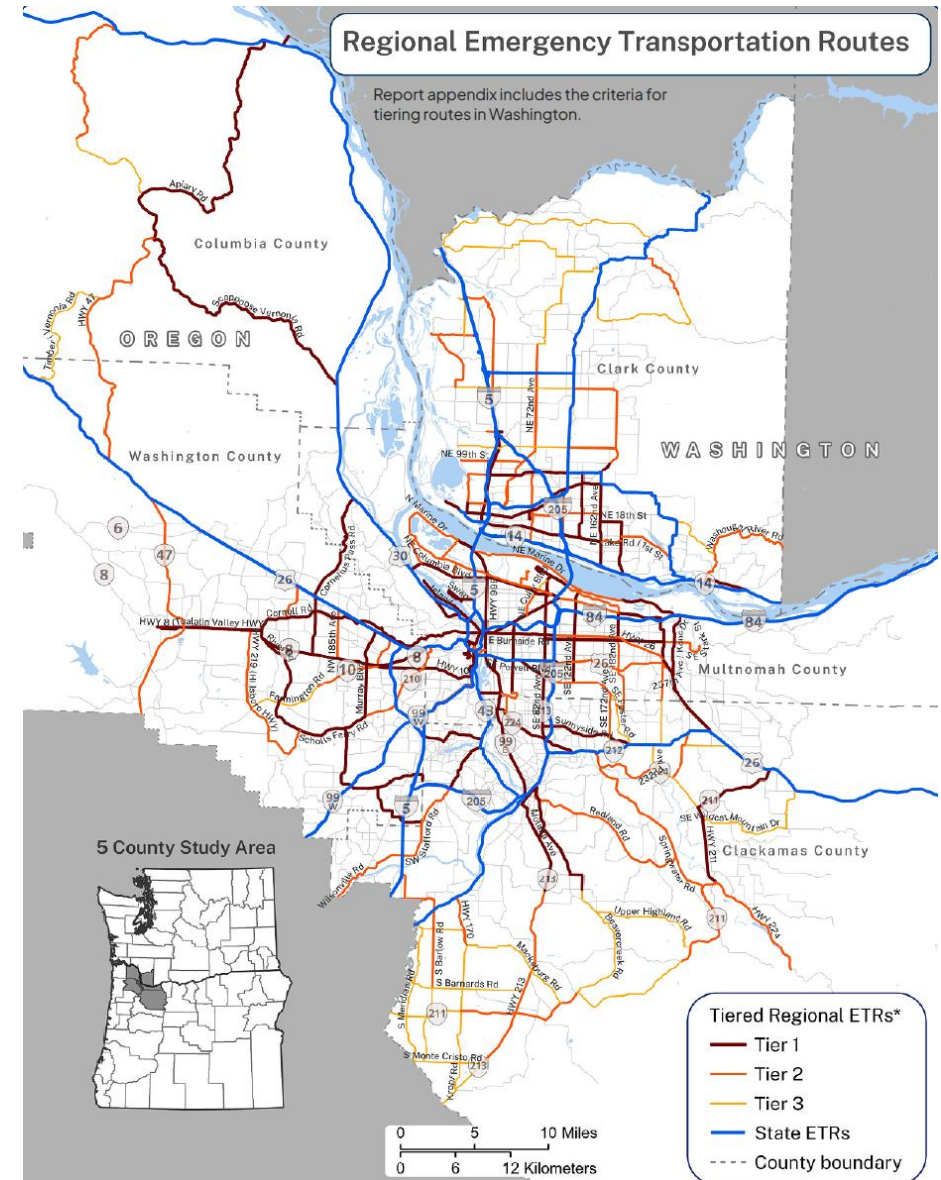


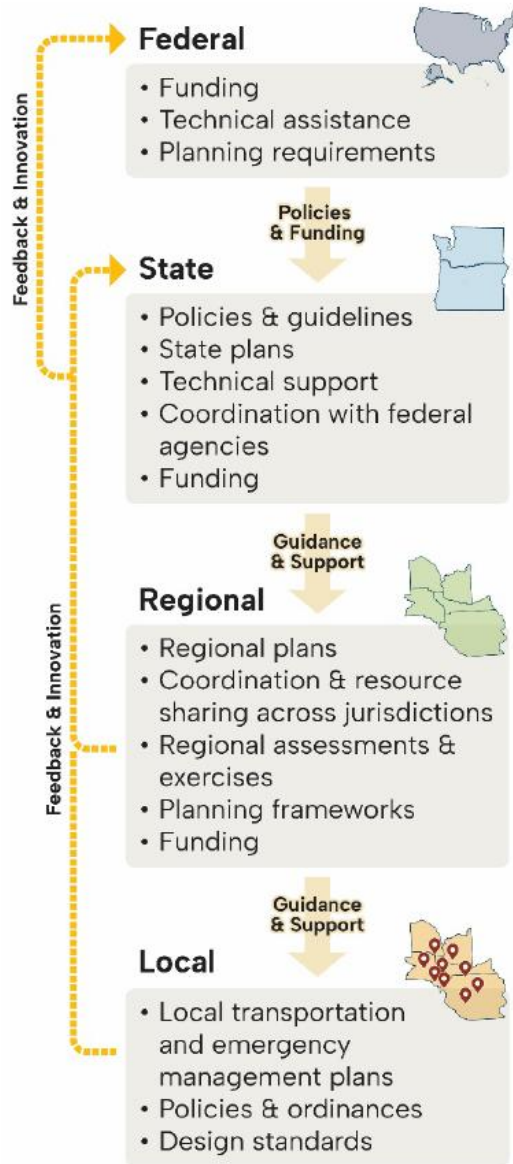
SECTION 04

Outcomes & Recommendations

A tiered RETR network that spans the five-county region.

- Tier 1 routes are highest priority for rapid damage assessment, debris clearance, and emergency response after a disaster.
- Tiers 2 and 3 increase connectivity, redundancy, and access to critical locations and communities.





Recommendations

01.

How do we integrate RETRs into all levels of planning, engineering, and emergency response?

02.

Local, regional, and state agencies each play essential but distinct roles in strengthening RETRs and integrating them into other planning processes.

Takeaways



Bring together a wide range of technical experts and community leaders



Maintain a consistent group of stakeholders that will be champions for the work



Tie your technical process to meaningful outcomes

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Questions?