

Amtrak Cascades Service Development Plan

October 2023

Outline of today's topics

- Corridor overview and goals
- FRA requirements and process
- Revised purpose and need of the Service Development Plan
- Service option development process
- Highlights of five preliminary service options
- Preliminary capacity improvements
- Scenario analysis
- Next steps
- Questions & answers

Amtrak Cascades overview

Linking Vancouver, BC, Seattle, Portland and Eugene

- 461-mile corridor
- Serving 18 cities along the corridor
- More than 800,000 annual riders prior to the pandemic
- Operate on railroad tracks owned by BNSF, Sound Transit and Union Pacific
- 2023 ridership and revenue nearing 2019 levels

Daily round trips	Current	When restored in fall 2023
Seattle - Portland	4	6
Seattle - Vancouver	2	2
Portland - Eugene	2	2



Service Development Plan goals



Develop a plan for future improvements to Amtrak Cascades, focusing on service between Portland and Vancouver, British Columbia

Looking at improvements over next 20 years

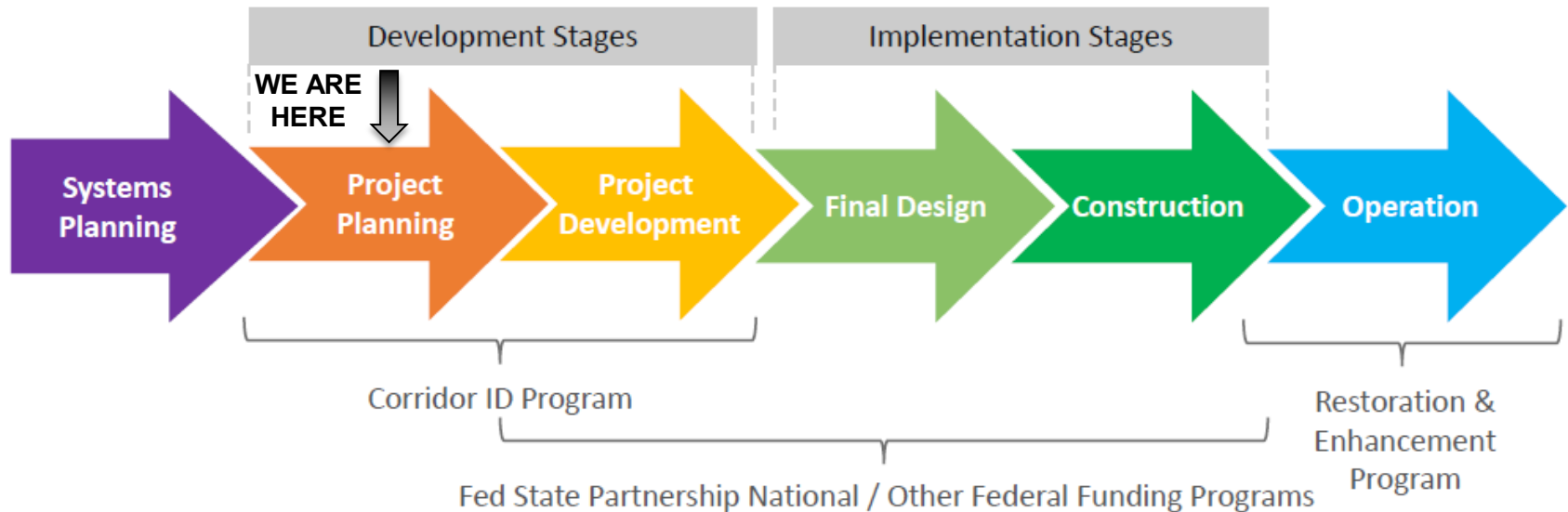
- Examining travel trends, population growth, community needs and other factors

Prepare for federal funding opportunities

- FRA's Corridor Identification and Development Program requires a state Service Development Plan for future grant funding
- Imperative that the Service Development Plan includes all elements outlined by FRA
- Previous long-range plans do not meet current FRA standards

FRA process for funding opportunities

FRA Project Lifecycle Stages – Corresponding FRA Funding Programs



Elements of a Service Development Plan

Activity	Purpose and Need Development	Alternatives Analysis	Transportation Planning	Environmental Planning	Financial Planning	Governance Planning	Implementation Planning	Service Development Plan Preparation
Work Products	Preliminary Purpose and Need*	Service Options*	Operations Analysis*	Environmental Concerns Analysis	Financial Plan	Corridor Governance Report	Phased Implementation Plan	Service Development Plan
		Investment Packages*	Ridership and Revenue Forecasts*		Benefit-Cost Analysis			
			Station Area and Access Analysis					
			Conceptual Engineering Plans					
			Capital Cost Estimates					
			Labor and Fleet Plans*					
			Operations and Maintenance Cost Estimates					

These are FRA requirements from the Corridor Identification and Development Program Service Development Plan [*Draft Statement of Work Framework*](#)

Initial iterations of the work products in **blue** are part of the Preliminary Service Development Plan – additional analysis to be performed in the next phase of work

Listening to public feedback

- WSDOT conducted extensive outreach to obtain feedback from the public, advocacy groups, planning organizations and other stakeholders regarding the Preliminary Purpose & Need statement
- Activities included:
 - Public survey in four languages
 - Informational website and comment form
 - Email notifications to those who subscribed to the Amtrak Cascades distribution list
 - Text message campaign in several languages targeted to limited-English speakers and low-income populations
 - Social media posts in four languages

Top priorities identified through public feedback:

- More frequent service
- Expanded service
- Shorter travel times
- Reliable service
- Better local connections at stations

Final Preliminary Purpose and Need

The purpose of the proposed Project is to enhance intercity passenger rail service for travelers along the existing route used for the Washington state segment of the Pacific Northwest Rail Corridor (PNWRC). The Project would:

- Meet growing intercity travel demand with more frequent, reliable and customer-focused service
- Strengthen multimodal connections to improve accessibility and provide better travel options
- Support greenhouse gas reduction goals
- Support the economic vitality of communities served by PNWRC passenger service
- Address transportation system equity issues along the corridor
- Ensure the rail corridor has the capacity to support needs of all passenger and freight rail service providers

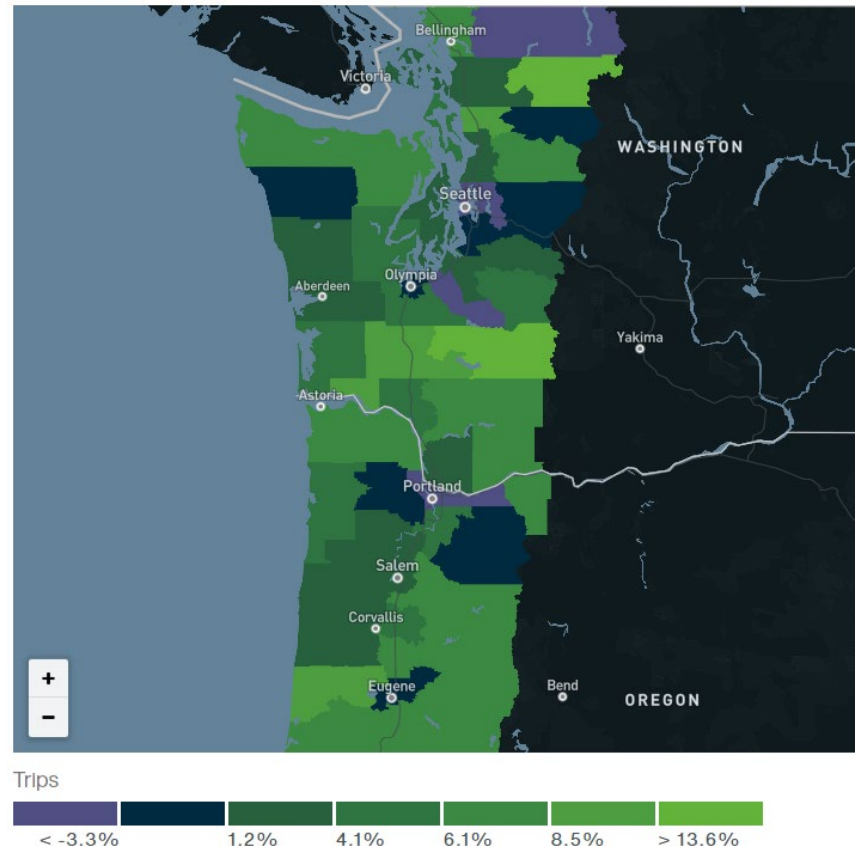
Additionally, the project will:

- Avoid or minimize negative community and environmental impacts
- Be a cost-effective investment

Developing service options

Based on feedback from the public survey, individual comments and webinar discussions, WSDOT and its consultant team began examining:

- Analysis of data, including ridership, demographic and travel flows
- Connectivity Analysis
- High-level operational considerations, including preliminary estimates of station-to-station travel times

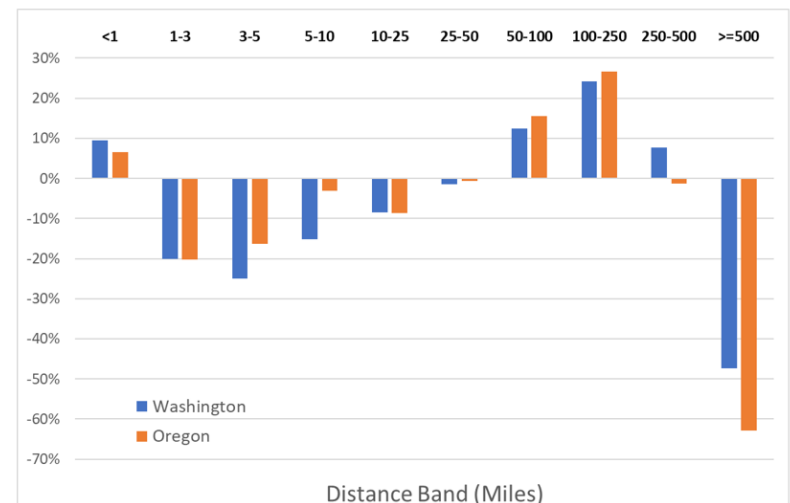
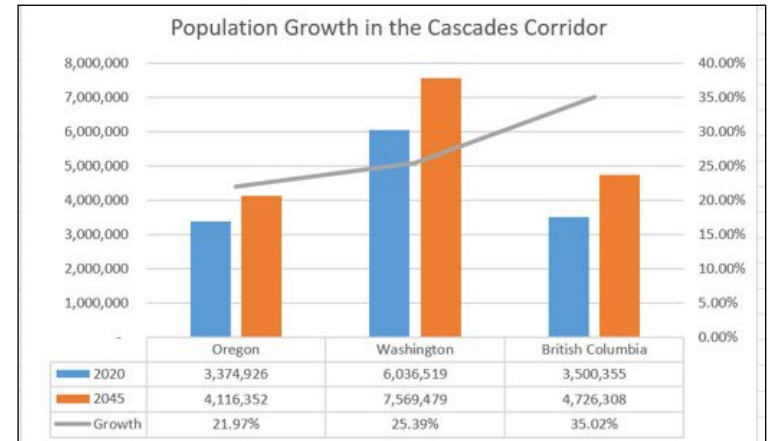


Change in Total Auto Trips Along Cascades for July 2022 versus July 2019

Information used to identify options

WSDOT and its consultant team looked at:

- Current ridership data
- Demographic data for the corridor
- Projected population and employment growth
- Travel patterns in the region, post-pandemic
- Interviews with employers
- Anticipated future congestion on roads and highways
- Markets that may not be fully serviced (i.e. latent demand)
- Carry-over data and information from previous planning efforts, such as 2019 State Rail Plan and 2006 Amtrak Cascades Long-Range Plan



10-25% Increase in short and mid-distance trips between 2019 and 2021

Narrowing down potential service level options

- Amtrak Cascades service partners (FRA, BNSF, Sound Transit, CN, Amtrak, Oregon DOT) were consulted regularly during the analysis
- Initial analysis looked at 13 options, a wide range of low, medium, and high service frequency
- Used ridership projections, feasibility, multi-modal connectivity, equity and travel time improvements to narrow down to five options
- Then looked at infrastructure improvements needed to attain each option
- Further analyzing five options based on potential “what if” scenarios that might occur
- Preliminary alternatives will be the service options and initial list of infrastructure improvements



Service option characteristics

Service frequency

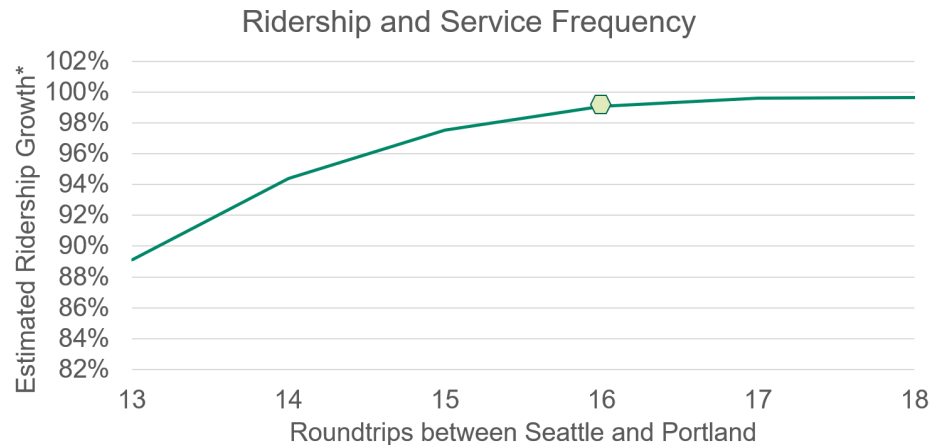
- Frequency from 2006 Long-Range Plan (13 round trips Seattle – Portland)
- Lower service frequency options
- Higher service frequency options

Stop patterns

- Express (*non-stop*)
- Limited (*stops in Tacoma and Vancouver, WA*)
- Partial rail service for new Seattle – Vancouver, BC trips
(*rail between Seattle – Bellingham, bus between Bellingham – Vancouver*)

Top speed

- Increase from 79 to 90 mph in straight sections



*Ridership growth based on six rail roundtrips for the northern corridor segment

Service option A

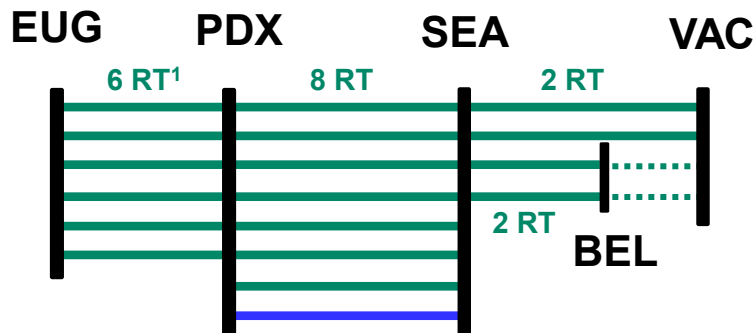
All options are preliminary concepts subject to further analysis and refinement

Schedule

	Travel Time	Roundtrips
Seattle-Portland		8
Local	3h 11m	7
Limited	n/a	0
Express	2h 51m	1
Seattle-Vancouver		4
Local	3h 46m	2
Express	n/a	0
Rail / bus	4h 7m	2

Highlights

- Projected ridership 54% over baseline
- Highest speeds of 79 mph
- Need at least 6 more trainsets
- Infrastructure improvements
 - North of Seattle – low level
 - South of Seattle – medium level
- Travel time reduction via service patterns
- Potential building block service option



Travel times are preliminary estimates

All options include six roundtrips between Eugene and Portland, as identified in ODOT's Service Development Plan

Service option B

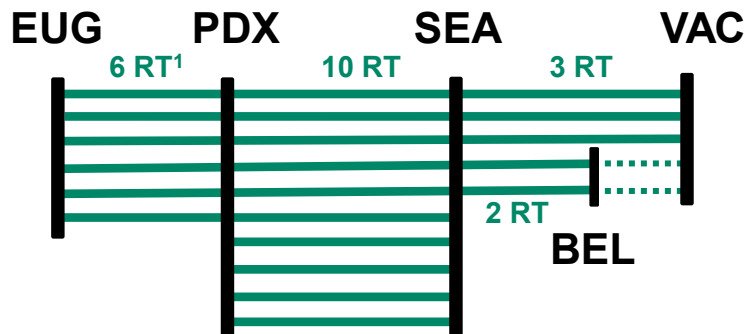
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Schedule

	Travel Time	Roundtrips
Seattle-Portland		10
Local	3h 11m	10
Limited	n/a	0
Express	n/a	0
Seattle-Vancouver		5
Local	3h 46m	3
Express	n/a	0
Rail / bus	4h 7m	2

Highlights

- Projected preliminary ridership 78% over baseline
- Highest speeds of 79 mph
- Need at least 6 more trainsets
- Infrastructure improvements
 - North of Seattle – low level
 - South of Seattle – medium level
- Potential building block service option



Travel times are preliminary estimates

All options include six roundtrips between Eugene and Portland, as identified in ODOT's Service Development Plan

Service option C

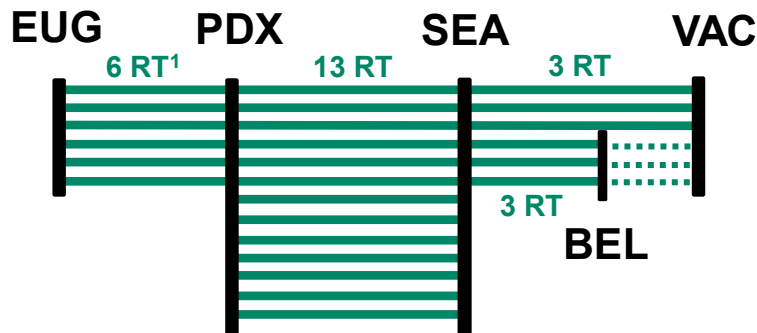
All options are preliminary concepts subject to further analysis and refinement

Schedule

	Travel Time	Roundtrips
Seattle-Portland		13
Local	3h 05m	13
Limited	n/a	0
Express	n/a	0
Seattle-Vancouver		6
Local	3h 39m	3
Express	n/a	0
Rail / bus	4h 00m	3

Highlights

- Projected preliminary ridership 112% over baseline
- Highest speeds of 90 mph
- Need at least 9 more trainsets
- Infrastructure improvements
 - North of Seattle – low/medium level
 - South of Seattle – high level
- Second highest ridership performance
- Travel time reduction via track improvements



Travel times are preliminary estimates

All options include six roundtrips between Eugene and Portland, as identified in ODOT's Service Development Plan

Service option D

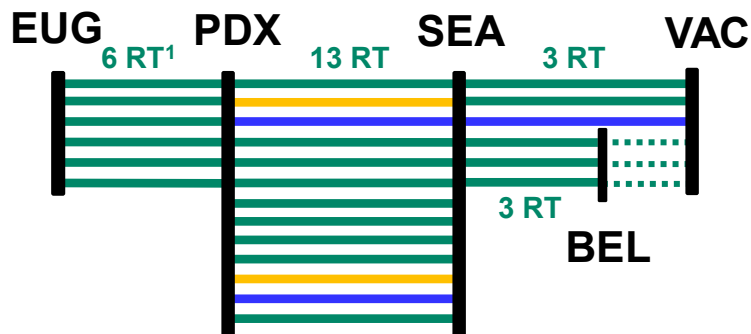
All options are preliminary concepts subject to further analysis and refinement

Schedule

	Travel Time	Roundtrips
Seattle-Portland		13
Local	3h 11m	9
Limited	2h 57m	2
Express	2h 51m	2
Seattle-Vancouver		6
Local	3h 46m	2
Express	3h 33m	1
Rail / bus	4h 07m	3

Highlights

- Projected preliminary ridership 89% over baseline
- Highest speeds of 79 mph
- Need at least 11 more trainsets
- Infrastructure improvements
 - North of Seattle – low level
 - South of Seattle – medium/high level
- Travel time reduction via service patterns
- Express and limited trains serve major markets in both directions in morning and evening
- Potential for phased travel time reductions



Travel times are preliminary estimates

All options include six roundtrips between Eugene and Portland, as identified in ODOT's Service Development Plan

Service option E

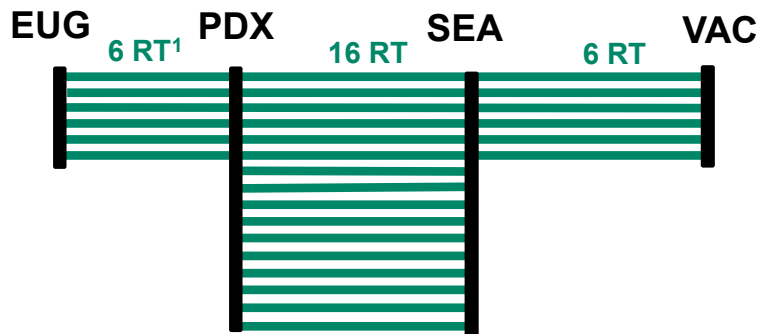
All options are preliminary concepts subject to further analysis and refinement

Schedule

	Travel Time	Roundtrips
Seattle-Portland		16
Local	3h 05m	16
Limited	n/a	0
Express	n/a	0
Seattle-Vancouver		6
Local	3h 39m	6
Express	n/a	0
Rail / bus	4h 00m	0

Highlights

- Projected preliminary ridership 140% over baseline
- Highest speeds of 90 mph
- Need at least 9 more trainsets
- Infrastructure improvements
 - North of Seattle – low/medium level
 - South of Seattle –high level
- Highest overall ridership growth



Travel times are preliminary estimates

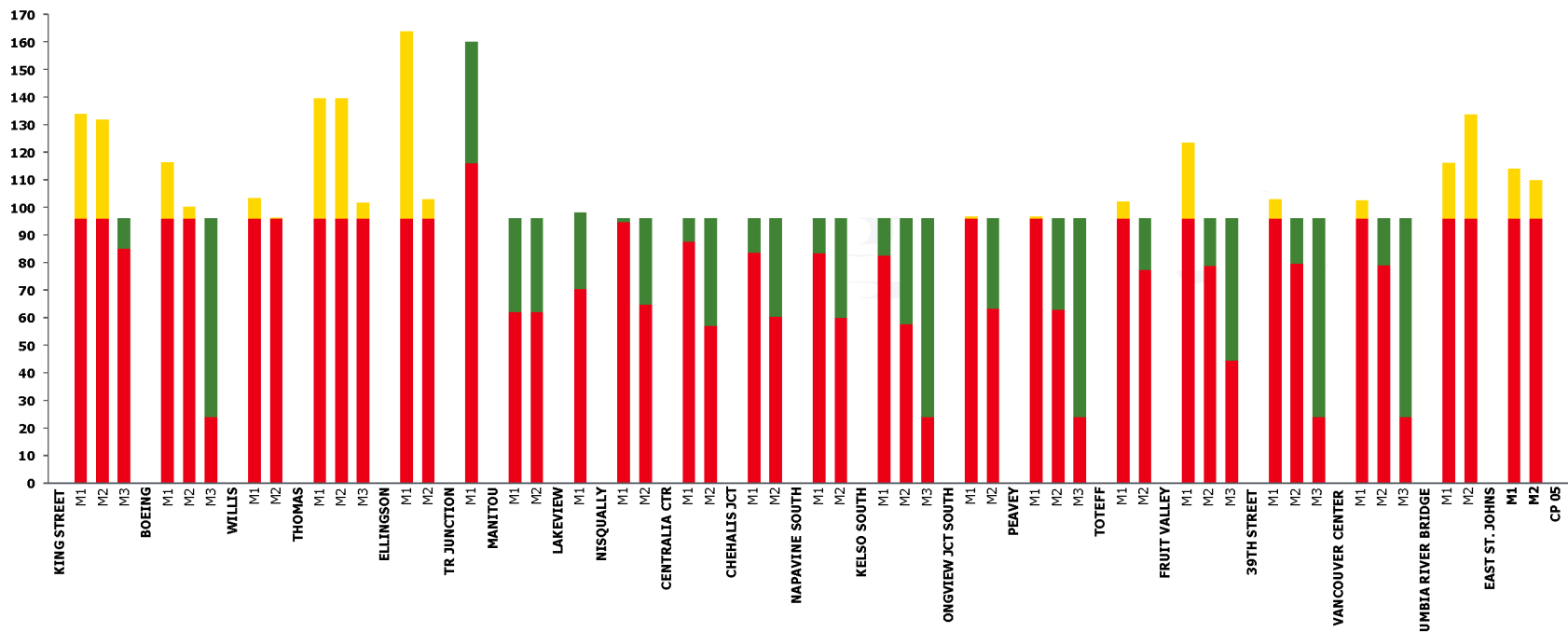
All options include six roundtrips between Eugene and Portland, as identified in ODOT's Service Development Plan

Identifying preliminary capacity improvements

WSDOT worked with service partners to examine current and future capacity on the route, identify areas expected to be over-capacity, and develop preliminary infrastructure needs to support each of the identified service options.

2045 capacity south of Seattle with Service Option E

Over Capacity Unallocated Capacity Consumed Capacity



Preliminary capacity improvements identified south of Seattle

Improvement type	Location	Service Option				
		A	B	C	D	E
Controlled siding (3.3 miles)	Seattle (Georgetown/Boeing Field)	●	●	●	●	●
Expand yard facilities	Auburn Yard	●	●	●	●	●
Controlled siding (1.7 miles)	Puyallup	●	●	●	●	●
Extend triple track (4.2 miles)	Puyallup – Tacoma	●	●	●	●	●
Controlled siding (2.2 miles)	Dupont	●	●	●	●	●
Reconfigure junction	Portland, OR (North Portland Junction)	●	●	●	●	●
Extend triple track (2.8 miles)	Kent – Auburn			●	●	●
Extend triple track (1.9 miles)	Portland, OR (Willbridge Yard)					●

Preliminary capacity improvements identified north of Seattle

Improvement type	Location	Service Option				
		A	B	C	D	E
Expand yard facilities	Everett (Delta Yard)	●	●	●	●	●
Controlled siding (0.5 miles)	White Rock, BC	●	●	●	●	●

Does not include any necessary improvements in Canada between the Fraser River Bridge and Pacific Central Station in Vancouver, BC

Purpose of scenario analysis

- Final step is to look at potential travel market scenarios that could affect Cascades ridership
- “What if” analysis to assess the range of potential impacts on system performance measures under various service options and plan for uncertainties
- Major factors considered to define scenarios:
 - External trends
 - Post-pandemic travel behavior change
 - Emerging technologies
 - Land use changes
 - Supporting service enhancements
 - Additional transit service
 - Station accessibility
 - Policy initiatives
 - Vehicle mile traveled (VMT) pricing
 - Parking restrictions
 - Future investment
 - Current air travel forecasts

Scenarios

- Two plausible scenarios as bookends intended to represent extremes
 - Higher demographic growth and improved rail and transit services
 - Lower demographic growth and improved highway travel condition
- Four additional scenarios addressing the following major factors
 - Urban growth shifts to suburban and rural areas
 - Potential improvements to enhance rail service (station accessibility, reliability, amenities)
 - Possible improvements to enhance transit service
 - Air travel increases as forecasted in the corridor

Next steps

Preliminary Service Development Plan

- Complete scenario analysis
- Prepare final report
- Public comment on final report

FRA Corridor ID Program process *(if accepted into the program)*

- Step 1: Scoping
- Step 2: Service Development Plan (full corridor, including Oregon)
- Step 3: Preliminary engineering / NEPA

For more information about the FRA Corridor ID Program visit:

<https://railroads.dot.gov/corridor-ID-program>

Information

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