

WASHINGTON STATE FERRIES

CAPITAL PROJECTS

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David Sowers, Electrification Program Administrator, WSF

Nicole McIntosh, Director, Terminal Engineering

July 8, 2025

Julie Meredith, Secretary of Transportation

Mike Gribner, Deputy Secretary of Transportation

Steve Nevey, Deputy Secretary of Transportation – WA State Ferries

WSF FUNDING HISTORY

- Initiative-695
- Fare increases
- 7 Vessels built in last 25 years



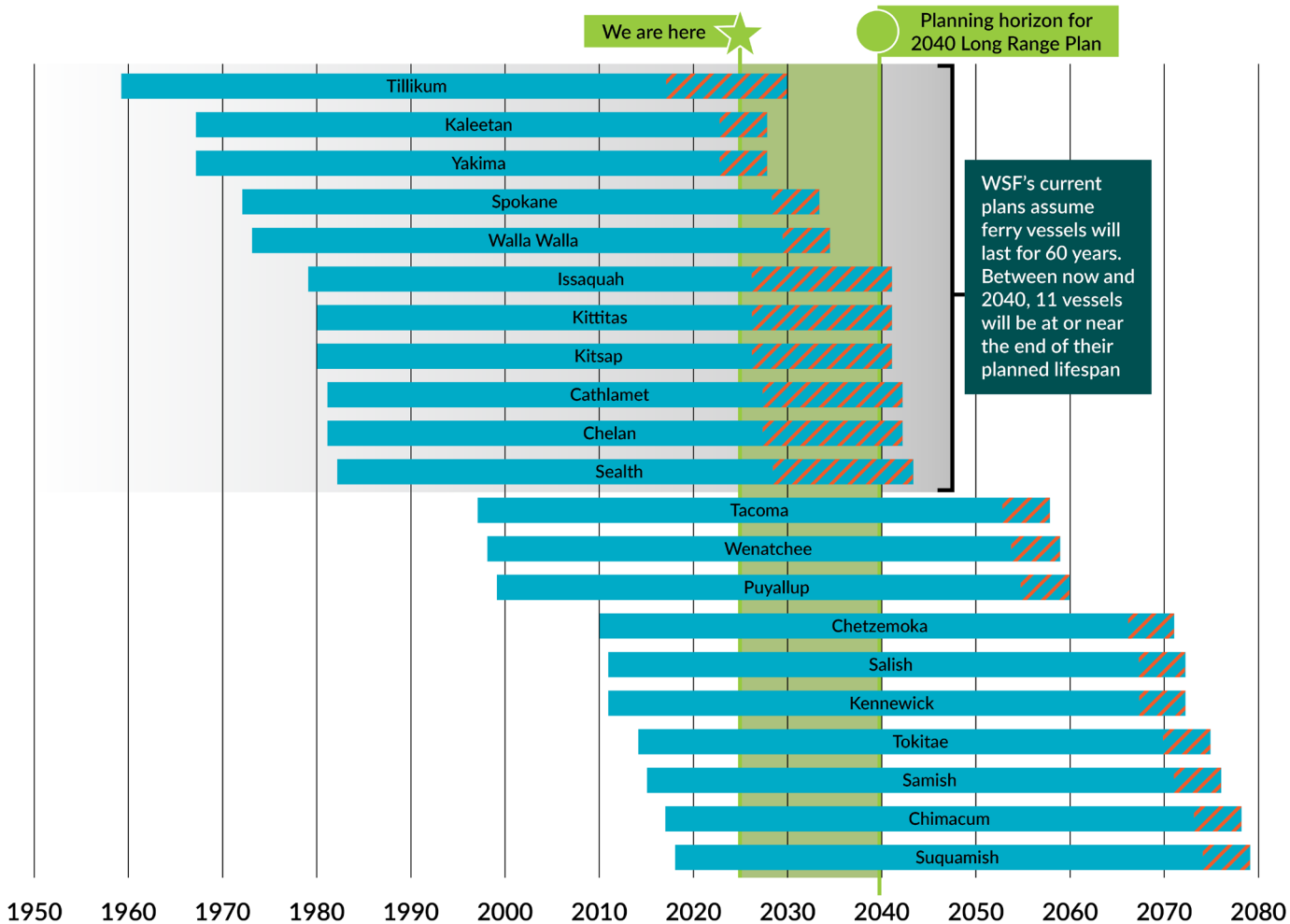
STABILIZE THE FLEET

Rebuild the fleet and update terminals to ensure reliable ferry service continues.

Transition to hybrid-electric to reduce operations and maintenance costs, ensure resiliency, and reduce emissions.



STABILIZE THE FLEET



This chart assumes WSF receiving one vessel per year, and retiring the current fleet as vessels enter service.

WSF Long Range Plans calls for a fleet of 26 vessels by 2040, five more than shown in this graphic. This allows for a service relief boat and enough vessels to allow for U. S. Coast Guard required annual maintenance and preservation work.

 Period of service reliability risk, based on vessel age and condition

STABILIZE THE FLEET

WSF Long Range Plan calls for 26 vessels by 2040 (three more than the current fleet).

This provides 20 active vessels and allows six undergoing maintenance.

Additional time in maintenance means:

- fewer unanticipated breakdowns
- more relief vessels
- preservation to reach 60-year life expectancy

This means more reliable service.

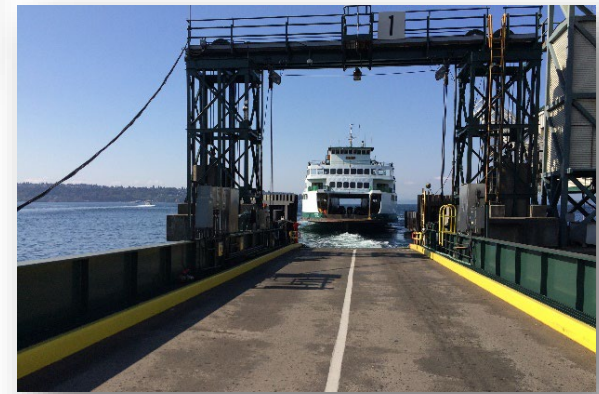


ELECTRIFICATION PROGRAM

Build **16** new
vessels



Convert **6**
existing vessels



Electrify **16**
terminals

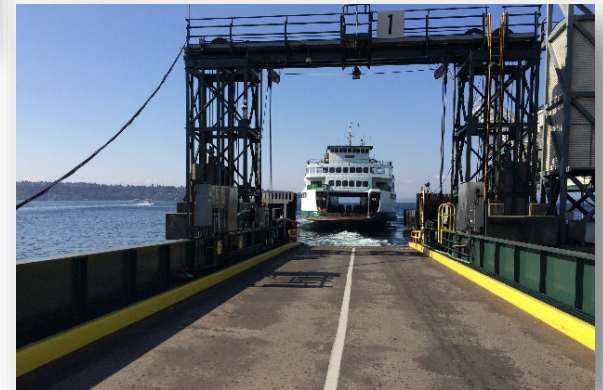
ELECTRIFICATION PROGRAM PROGRESS

Procurement
underway for up to
3 new vessels



1 conversion
complete

2 terminals in
design,
2 pre-design
studies underway



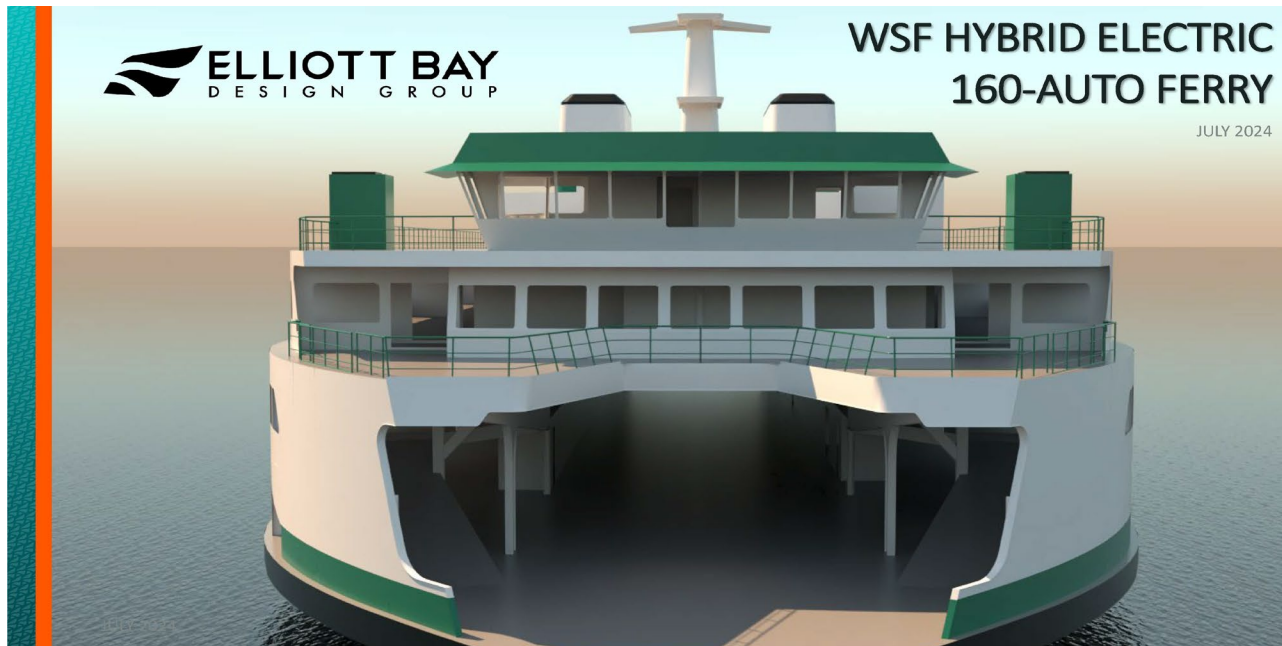
NEW VESSEL OVERVIEW

- Directed to build 16 new ferries by 2040
- Hybrid-electric
- First up: 160-auto capacity ferries (slightly higher auto capacity than the ferries they will replace)
- Designed to move through the water more efficiently
- Up-to-date technologies
- Reduced noise and vibration



NEW VESSEL PROCUREMENT

- In 2024, commenced nationwide shipbuilder procurement for up to five, hybrid electric 160-auto ferries
- 3 shipyards prequalified for the invitation for bid process
- 2 shipyards submitted bids in May 2025 for up to 3 vessels
- Shipyard selected in July 2025



NEW VESSEL TIMELINE

Activity/milestone	Status
Advertisement	Complete
Issue IFB Volume I & II	Complete
Shipyard visits	Complete
Issue prequalification letters (provisional)	Complete
Issue full IFB package (Volumes III-V)	Complete
Bids due	Complete
Bid evaluations	Complete
Contract award recommendation	Complete
Contract award	July 2025
Sign contract	August 2025
Finalize design	2026
Construction start	2027
First vessel due in service	TBD

NEW VESSEL COSTS

Cost per vessel

\$405 million for the first vessel (lower costs for subsequent vessels)

- \$255 million: Shipyard contract
- \$150 million: Owner-furnished equipment (like batteries), engineering, risk reserve funds and other costs

Cost would likely be greater without EHB 1846 (2023) allowing out-of-state procurement.

NEW VESSEL PROCUREMENT

Challenges and Risks

- WSF responsible for design errors and omissions
- WSF responsible for vessel performance
- Shipyard and owner-furnished equipment vendor performance
- Cost escalation, including tariffs

JUMBO MARK II UPDATES

- Built in the 1990s, JMII's are WSF's largest vessels serving the busiest and most populated routes.
- Wenatchee received critical mid-life propulsion system updates and hybrid-electric conversion. Additional elements will be required to complete midlife update.
- This work extends vessel lifespan, modernizes technologies, reduces need for diesel fuel, and reduces greenhouse gas emissions.



TIMELINE & STATUS UPDATE

Activity/Milestone	Status
Contract award to Vigor Marine	July 2023
Wenatchee to Vigor Marine shipyard	September 2023
Wenatchee schedule delay announcement	September 2024
Tacoma and Puyallup delay announcement	March 2025
Wenatchee returns to WSF shipyard	May 2025
Wenatchee returns to service	July 2025
Tacoma and Puyallup decision	August 2026

WENATCHEE FALL 2023

Arrival at Vigor



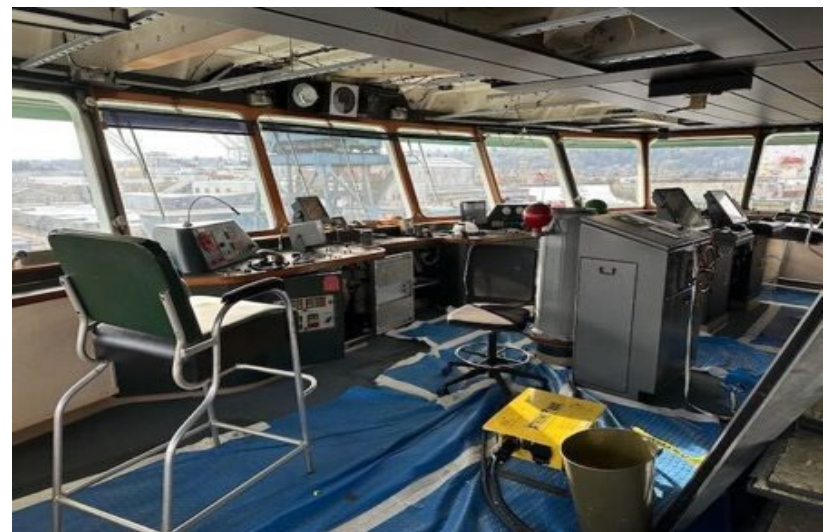
Engine destruction



WENATCHEE SUMMER 2024



WENATCHEE FALL 2024



WENATCHEE SPRING 2025



FUEL COST SAVINGS

BEFORE TERMINAL CHARGING (2025-2029)	AFTER TERMINAL CHARGING (as early as 2029)
Vessel will operate primarily in hybrid mode	Vessel will operate primarily in electric mode
Will save approximately \$1.6 million per vessel per year in fuel costs	Will save approximately \$8 million per vessel per year in fuel costs
Batteries last approximately eight years	Batteries last approximately four years
Will save approximately \$13 million per vessel over the batteries' eight-year life	Will save approximately \$32 million per vessel over the batteries' four-year life

Replacement batteries cost approximately \$7.6 million per vessel

WENATCHEE COSTS

Total cost for Wenatchee conversion and preservation is approximately \$133 million.

- \$37 million: Preservation (propulsion system upgrades, technology, painting and cleaning, etc.), engineering and other program support
- \$96 million: Conversion to hybrid-electric including owner furnished equipment (cable, batteries, etc.) and shipyard contract

WENATCHEE LESSONS LEARNED

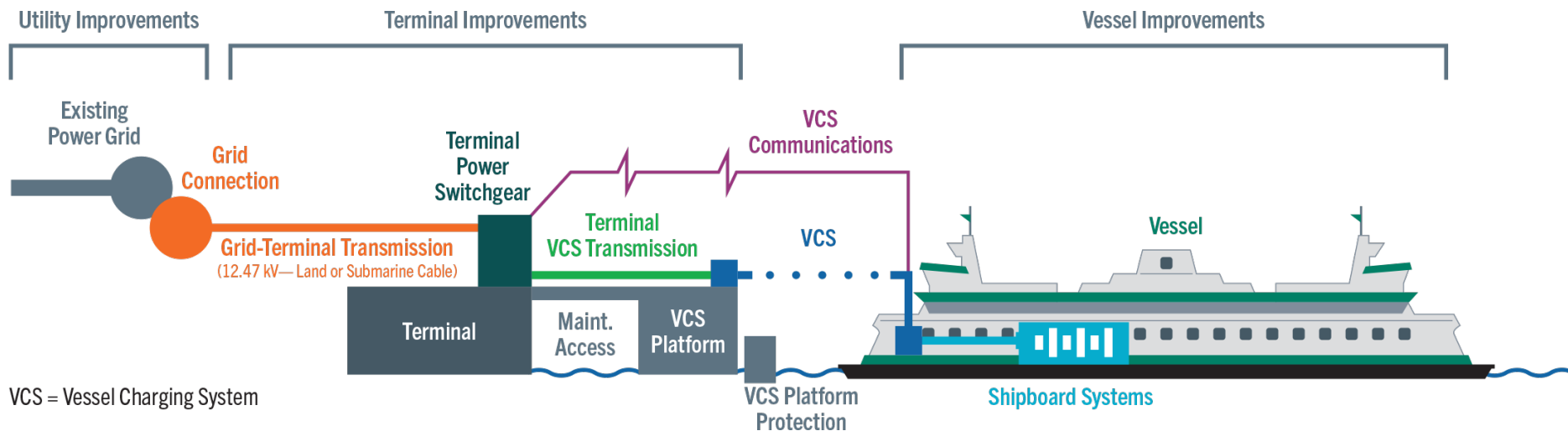
- Improve collaboration among engineering oversight staff
- Improve collaboration among subcontractors
- Involve production teams early
- Allow more time and provide more oversight for quality control of installed products
- Carefully sequence commissioning for electrical systems
- Use shared tools like document control, lifecycle tagging, and real-time field validation developed during Wenatchee upgrades
- Use newly-gained expertise in hybrid marine power systems, test protocols, etc. developed during Wenatchee upgrades
- Increase efforts to verify that electronic vessel plans accurately reflect the vessel

TERMINAL ELECTRIFICATION

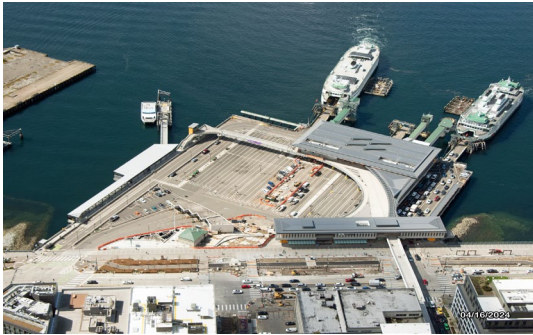
- Anacortes
- Bainbridge Island
- Bremerton
- Clinton
- Coupeville
- Fauntleroy
- Friday Harbor
- Kingston
- Lopez Island
- Orcas Island
- Point Defiance
- Port Townsend
- Seattle
- Shaw Island
- Southworth
- Vashon Island

TERMINAL ELECTRIFICATION

- 16 terminals powered by 5 different utilities
- MOUs in place with Puget Sound Energy and Seattle City Light
- Components grouped into utility improvements (substation capacity) and WSF terminal improvements (e.g., vessel charging system)
- Will use a standard vessel charging system to ensure interoperability



INITIAL FIVE TERMINAL ELECTRIFICATION PROJECTS



Seattle - 2029



Clinton (Whidbey Island) - 2030



Bainbridge Island – 2030+



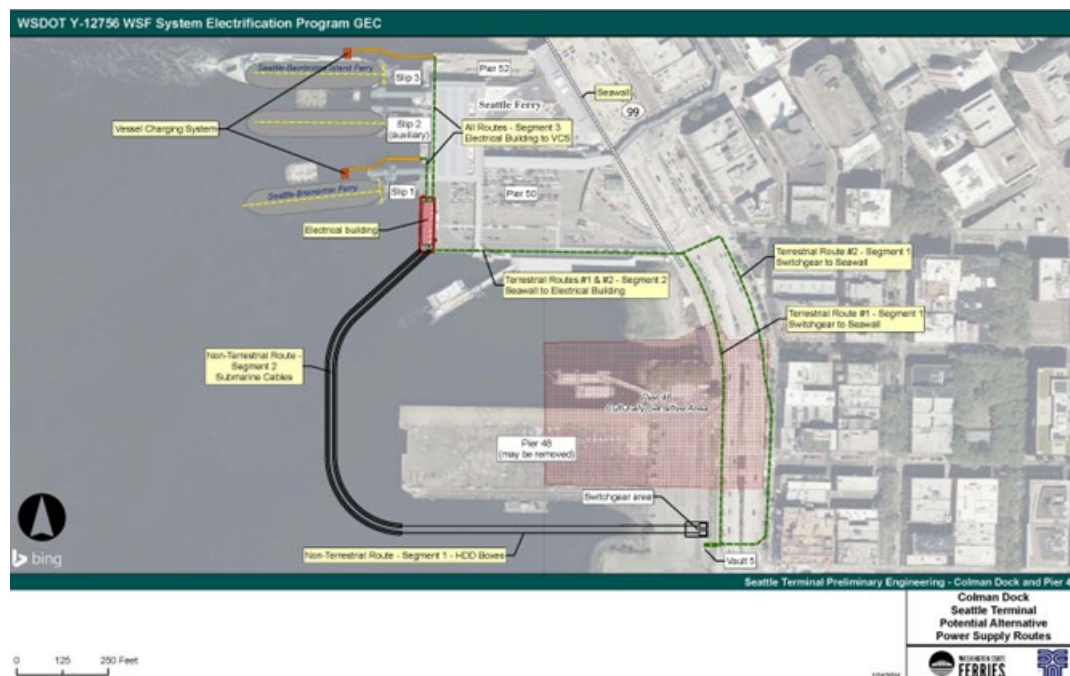
Bremerton – 2030+



Kingston – 2031+

SEATTLE TERMINAL OVERVIEW

- New Colman Dock opened fall 2023
- WSF signed MOU with Seattle City Light fall of 2023
- Seattle pre-design study concluded submarine cable is best option to bring sufficient power to Colman Dock
- Slips 1 and 3 planned for 2029



PRELIMINARY SEATTLE TERMINAL ELECTRIFICATION SCHEDULE

Project phase/milestone	Timing
Predesign study	Fall 2024
Environmental and permitting	Spring 2025-2026
Design	Fall 2024-2026
Construction	2027-2029
Operational	2029

CLINTON TERMINAL OVERVIEW

- PSE utility partner
- Terminal improvement to install vessel charging infrastructure to one vessel slip
- Three terminal delivery location options
- Coordinating Clinton Terminal overhead loading project



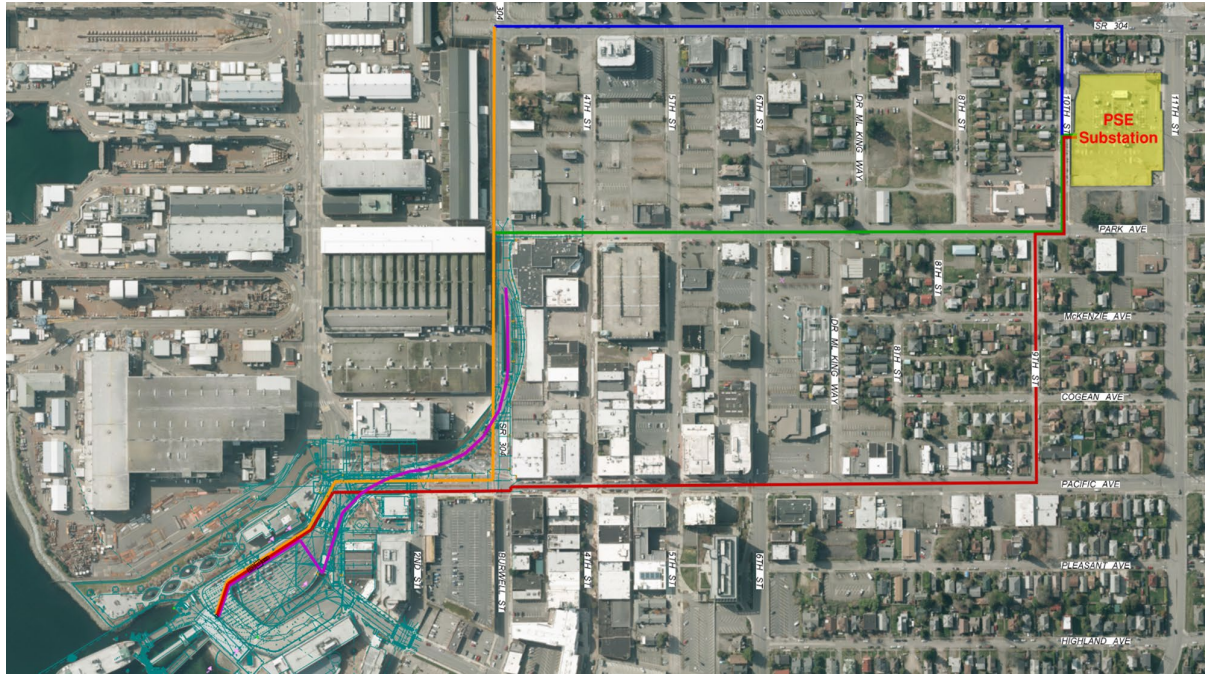
OVERHEAD LOADING PROJECT COORDINATION

- WSF 2040 Long-Range Plan calls for construction of overhead loading and holding area improvements
- Terminal electrification will happen on a similar timeline as the terminal overhead loading project:
 - Planned to go to bid in winter 2028
 - Planned to begin construction summer 2029
 - Not fully funded
- WSF planning coordination and continued community engagement will happen concurrently to minimize customer impacts

PRELIMINARY CLINTON TERMINAL ELECTRIFICATION SCHEDULE

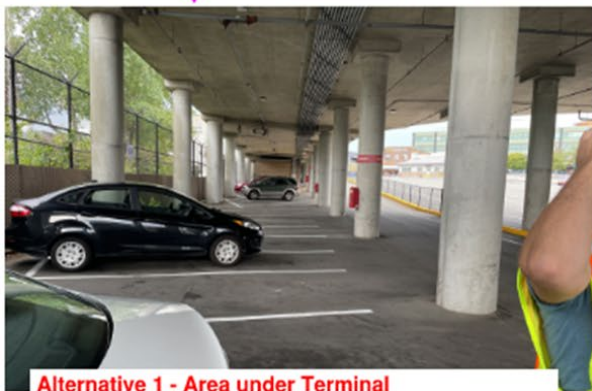
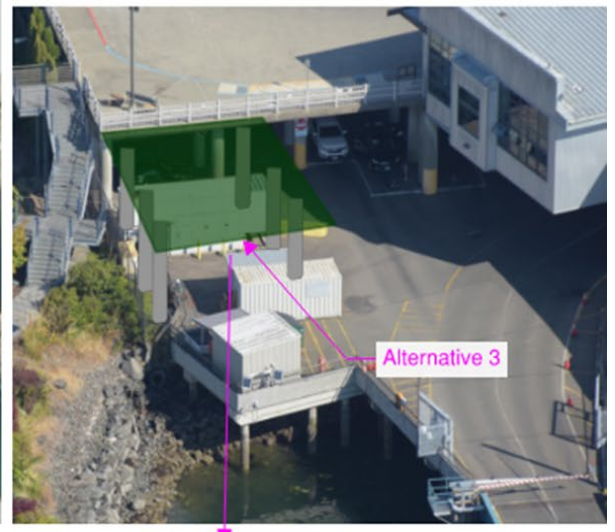
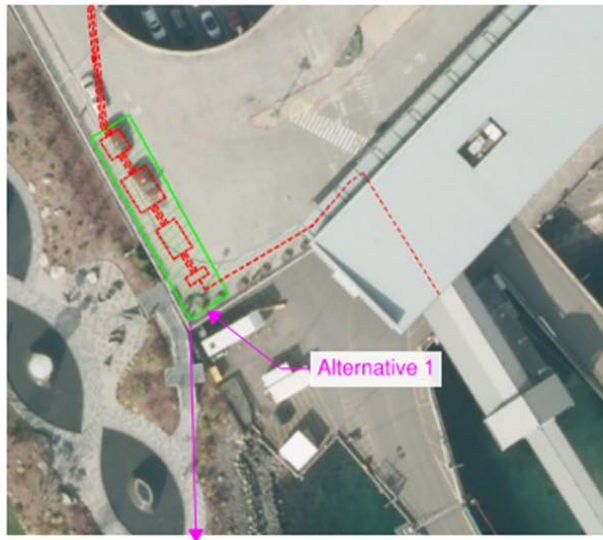
Project phase/milestone	Timing
Predesign study	Fall 2024-Spring 2025
Environmental and permitting	Spring 2025-2026
Design	Fall 2025-2026
Construction	2027-2029
Operational	2030

BREMERTON TERMINAL OVERVIEW



- PSE utility partner; several options for power routing from substation to terminal
- Adding charging infrastructure to one vessel slip
- Continuing collaboration with City of Bremerton for ongoing technical coordination and partner/community engagement

ELECTRICAL EQUIPMENT LOCATION OPTIONS



Alternative 1 - Area under Terminal Drop-off/Pickup Ramp in employee Parking Area



Alternative 2 - Open Area past the Terminal deck



Alternative 3 - Extend Terminal Deck Area

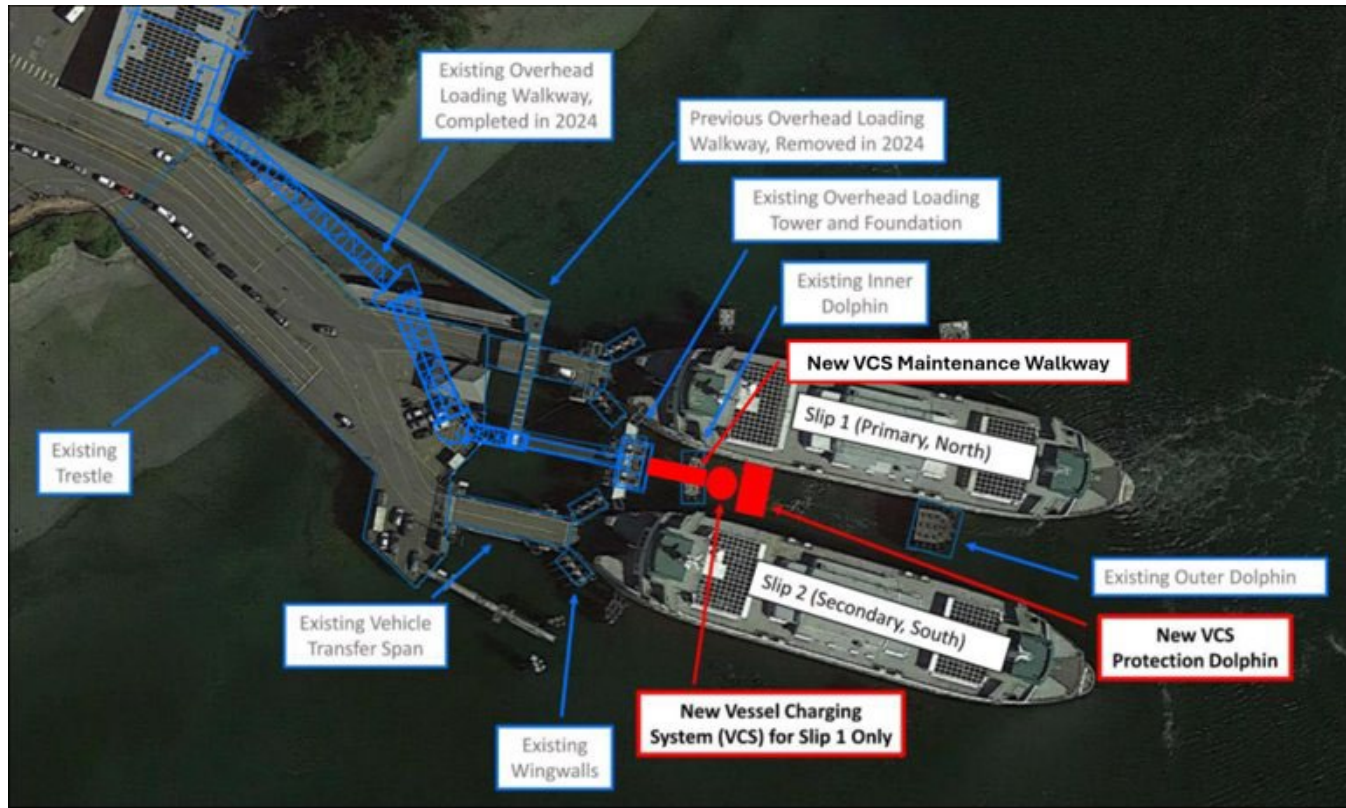
VESSEL CHARGING LOCATION



PRELIMINARY BREMERTON TERMINAL ELECTRIFICATION SCHEDULE

Milestones	Target Dates
Initiate community engagement	Oct. 2024
Complete pre-design study	Spring 2025
Issue RFP for contractor	Summer 2026
Construction begins	Winter 2027
Terminal/hybrid-electric vessel operational	Fall 2029

BAINBRIDGE TERMINAL OVERVIEW



- PSE utility partner; power routing from Murden Cove Substation to terminal
- Adding charging infrastructure to one vessel slip
- Planned completion 2029

ROUTING POWER TO THE TERMINAL



PRELIMINARY BAINBRIDGE TERMINAL ELECTRIFICATION SCHEDULE

Project phase/milestone	Timing
Predesign study	Fall 2024-Spring 2025
Environmental and permitting	Spring 2025-2026
Design	Fall 2024-2026
Construction	2026-2028
Operational	2028

STABILIZE THE TERMINALS: UPCOMING PRESERVATION OR IMPROVEMENT

- Fauntleroy
- Kingston
- Mukilteo
- Bremerton
- Vehicle Transfer Spans
 - Anacortes
 - Coupeville
 - Edmonds
 - Lopez Island
 - Orcas Island

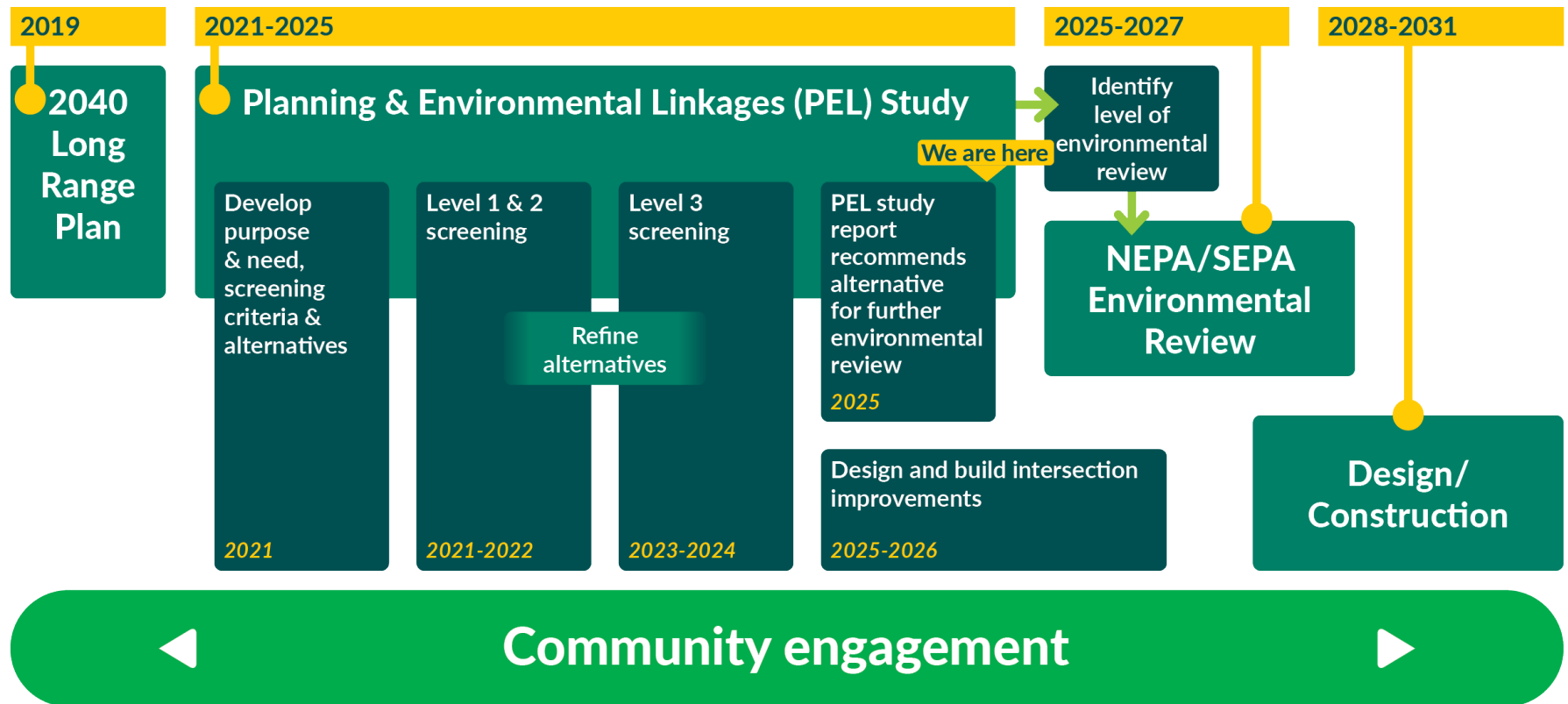
REPLACING THE FAUNTLEROY TERMINAL

The Fauntleroy ferry terminal was built in the 1950s and needs significant work to maintain safe and reliable ferry service.

- Challenges the terminal faces include:
 - Rising sea levels
 - Ferry traffic along Fauntleroy Way SW
 - Small dock only holds 84 vehicles
 - Aging and seismically vulnerable structure



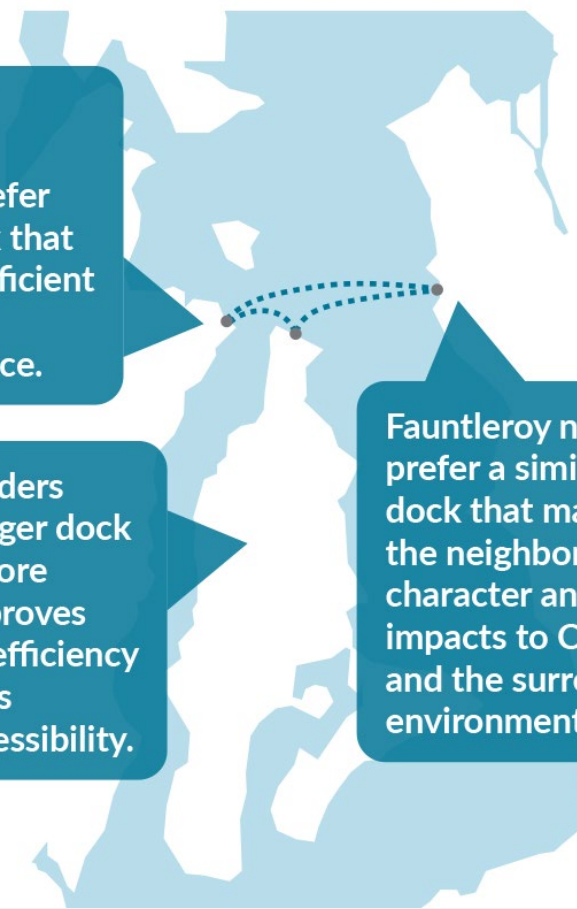
PROJECT TIMELINE



COMMUNITY ENGAGEMENT

WSF heard from all three Triangle Route communities through the Planning and Environmental Linkages Study

What we heard

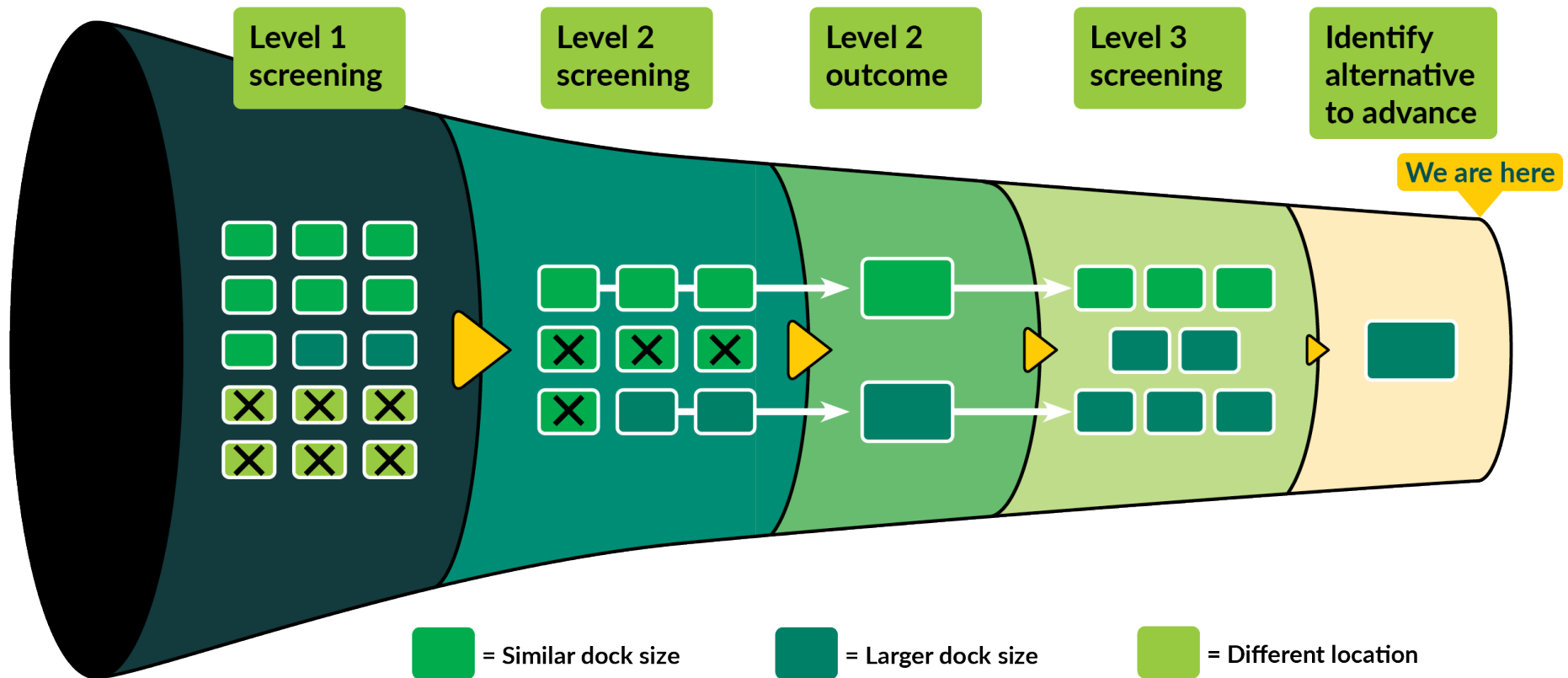


Southworth community members prefer a larger dock that prioritizes efficient loading and reliable service.

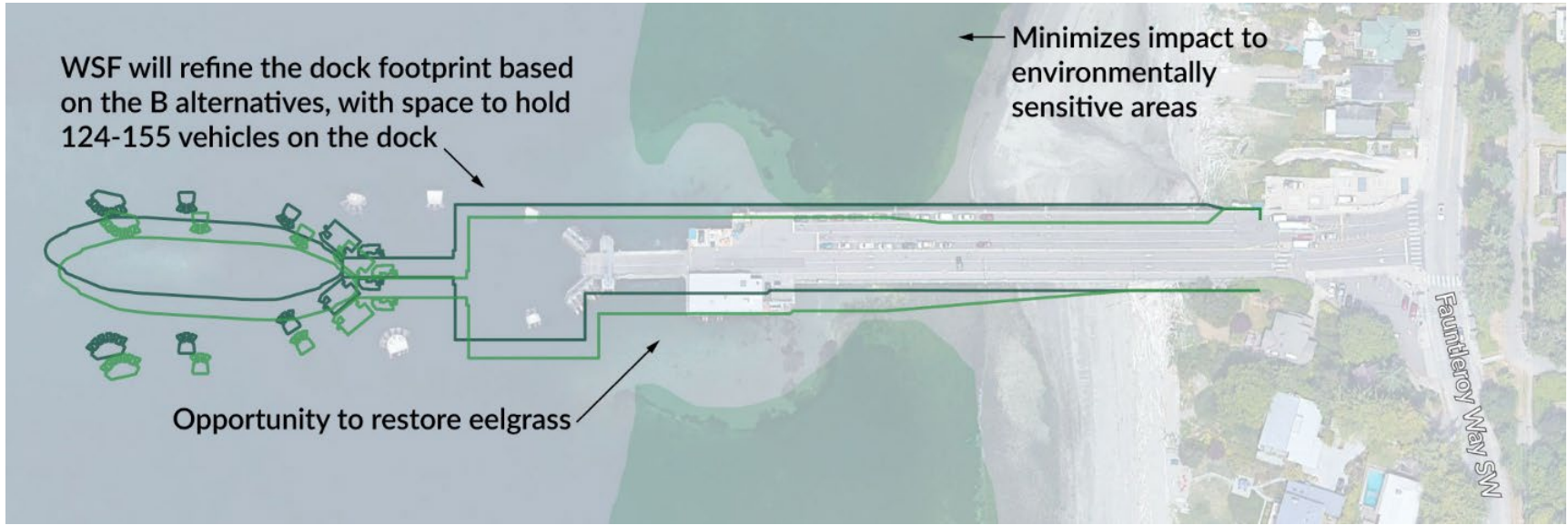
Vashon Islanders support a larger dock that holds more vehicles, improves operational efficiency and increases terminal accessibility.

Fauntleroy neighbors prefer a similar-sized dock that maintains the neighborhood character and minimizes impacts to Cove Park and the surrounding environment.

SCREENING PROCESS



MOVING FORWARD: MID-SIZE B ALTERNATIVE FOOTPRINT



WSF recommends the B alternative footprint

- Improves operational efficiency and minimizes environmental impacts
- Mitigates impacts to Cove Park
- Dock moved into deeper water creates opportunity to restore eelgrass and macroalgae

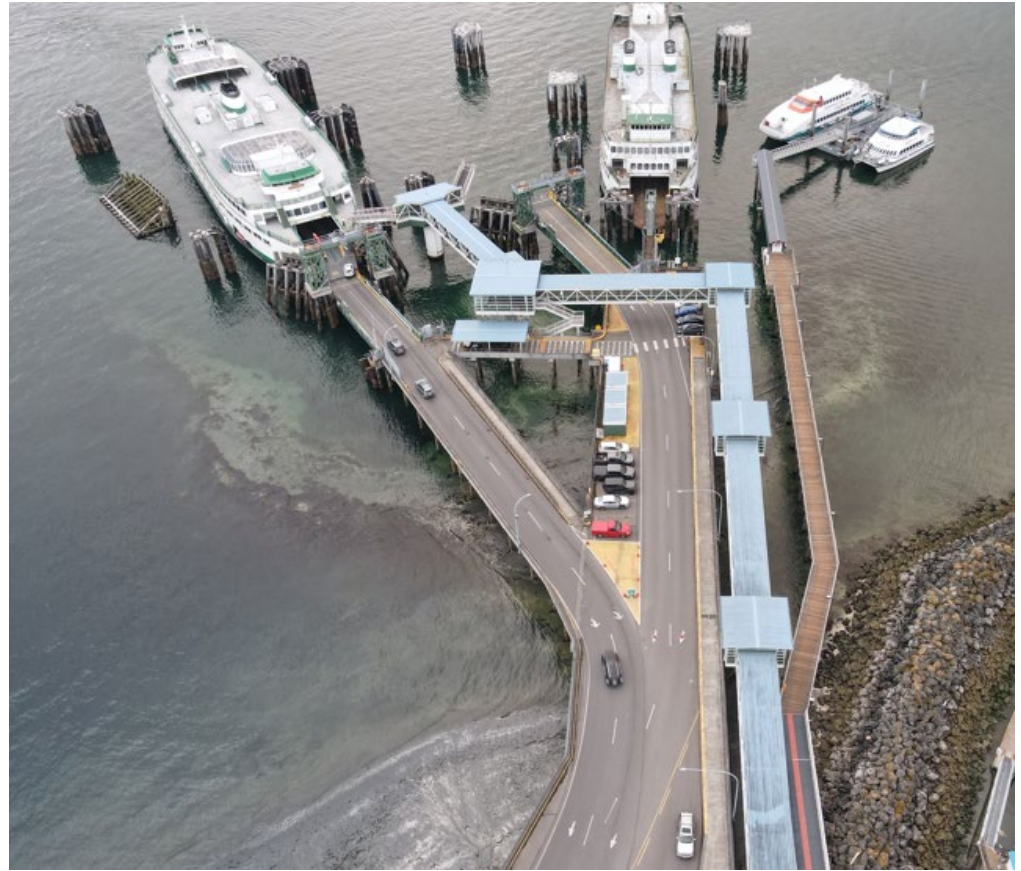
KINGSTON TRESTLE SEISMIC RETROFIT

Trestle is seismically vulnerable and needs updated to modern standards.

Reinforce the trestle with pods on piles designed to resist seismic forces. Demolish and rebuild part of the trestle.

Construction started June 16, 2025.

Complete in September 2026.



MUKILTEO WINGWALL REPAIR

In January 2026, construction crews will begin work at our Mukilteo ferry terminal to repair and reposition the left (west) wingwall.

The wingwall was damaged during a hard landing in 2022.

This work will require shutting down ferry service for four hours midday for pile driving activities.

Tentative closures will be for two weeks, one week with no closures, followed by one more week of midday closures.



BREMERTON DOLPHIN REPAIR

Replace two dolphins (outlined in red) with updated design (outlined in green).

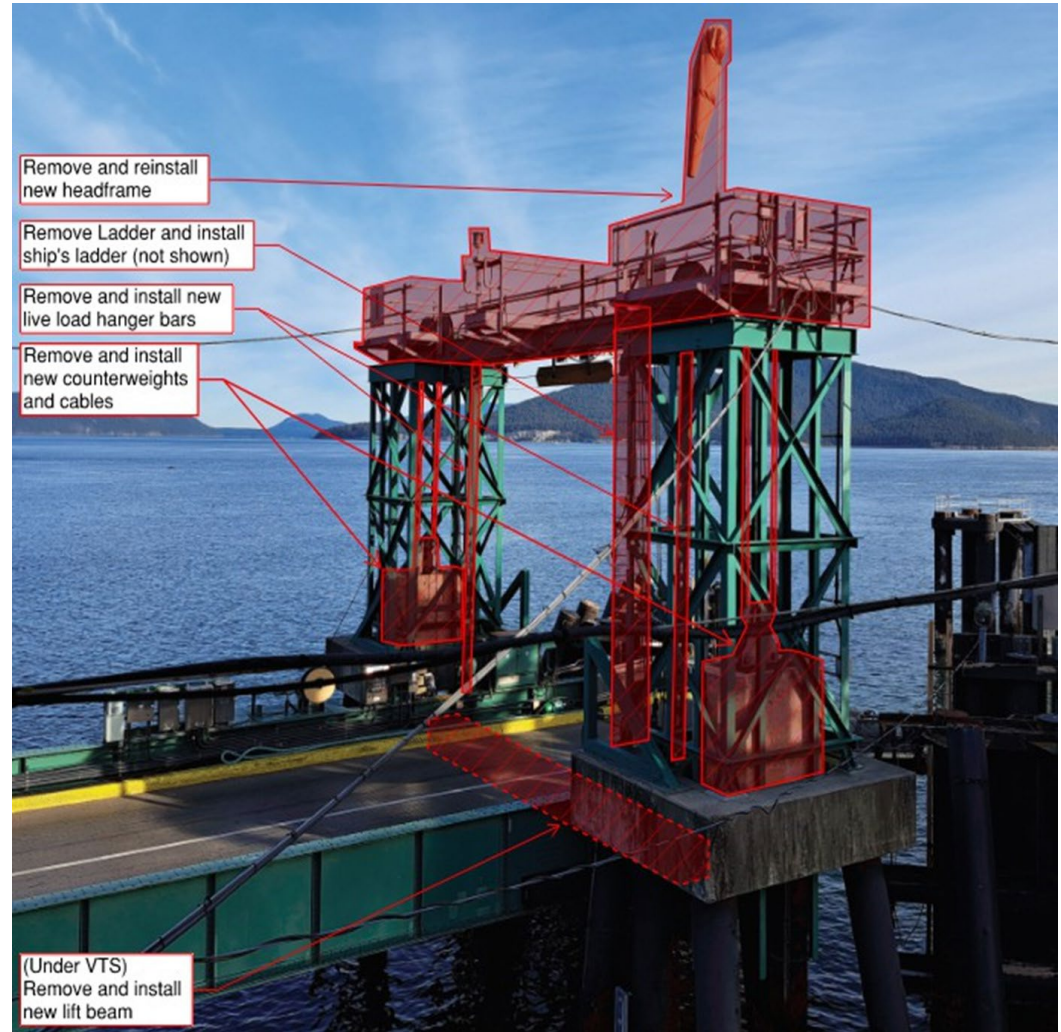
Dolphins are near the end of their lives.

Construction in second half of 2025. Complete in March 2026.



VEHICLE TRANSFER SPAN UPGRADES

- Replaces decades-old mechanical and electrical systems that raise and lower the span.
- Five terminals in 2026/2027: Anacortes, Coupeville, Edmonds, Lopez Island and Orcas Island.
- Robust community engagement for planning service during upgrades



QUESTIONS?



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