Welcome and General Meeting Procedures

Welcome to the Passenger-Only Ferry Study Updates – Webinar 3

- This is a listen-only webinar
- Please use the chat feature for questions or comments – please do not use the “raise hand” feature
- Questions or comments will be placed in a queue for PSRC staff to read and provide answers at appropriate times during the webinar
- Please note: the meeting is being recorded, and the chat box is part of the public record

Puget Sound Passenger-Only Ferry Study

December 15, 2020 Webinar

Puget Sound Regional Council

2020 Puget Sound Passenger-Only Ferry Study

Overview of Project Scope:

- 12-County Puget Sound Region, including Lake Washington and Lake Union
- Analyze potential new passenger-only routes:
  - Terminal locations and capacity
  - Passenger demand/ridership
  - Capital and operating elements
- Assess environmental aspects of POF service
- Conduct early, inclusive, and continuous outreach

kpff

Progressions
Sawyer & Associates Consulting

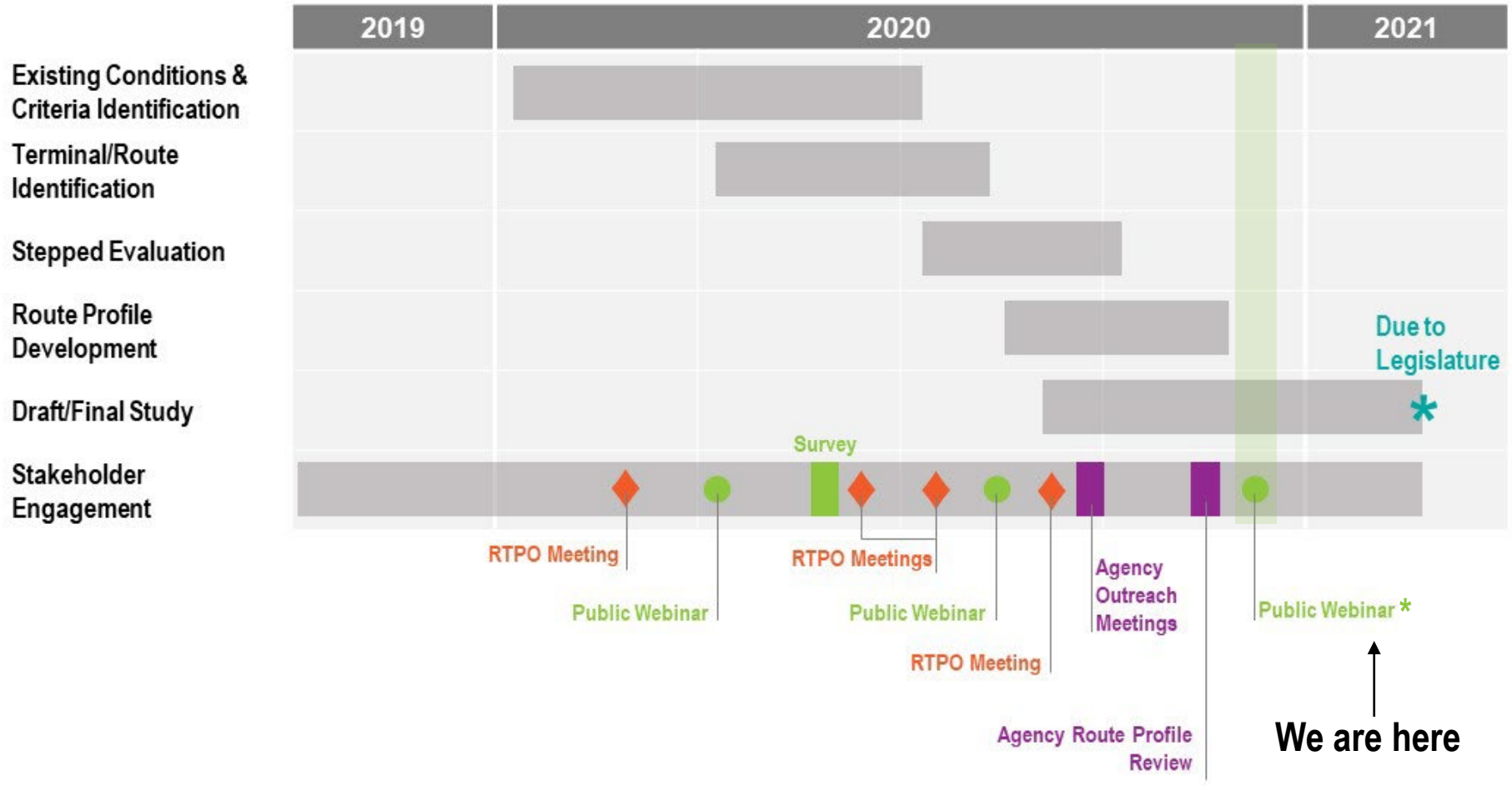
BERK
STRATEGY ANALYSIS COMMUNICATIONS

Elliott Bay Design Group
Architectural & Engineering Services for the Marine Industry

BLUE COAST ENGINEERING

LUND FAUCETT

Puget Sound POF Study Schedule



Agenda

1. Overall Study Findings
   - Overall POF
   - Electrification
   - Engagement
   - Cross-regional

   ** Pause for Questions **
2. Route Profiles and Findings
   - Review of Route Analysis Approach
   - Review of Previously Shared Route Findings
   - Route Profile Assumptions

   ** Pause for Questions **
   - Route Profiles
   - Route Findings
3. Next Steps in Implementation

   ** Pause for Questions **

Overall Passenger-Only Ferry Study Findings

Importance of time-competitive travel

- Regardless of route type

Route characteristics are specific to the route.

- Vessel speed, confined waterways, currents, wind action, multimodal connections

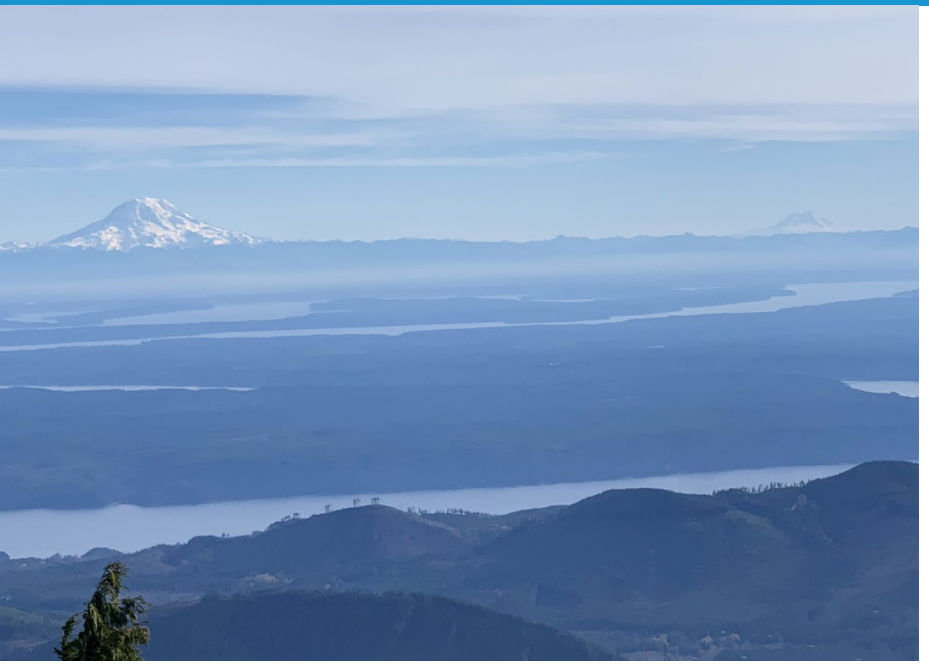
POF service operates in a unique marine environment.

- Tribal treaty rights
- Sensitive habitat and marine mammal protection
- Marine traffic

POF improves transportation resiliency.

- System redundancy
- Emergency response

Electrification Findings



Electrification potential for most routes is generally low with current technology.

Low and zero emissions technologies are rapidly evolving.

- Hydro foils
- Alternative power
- Battery advancements

Regional efforts can be taken to advance electrification.

- Standardization of terminal infrastructure
- Standardization of vessel charging systems
- Harmonization of utility rates for mass transportation

Engagement Findings

There is generally public interest and enthusiasm for POF service.

- Positive feedback on potential time savings, route directness, additional modal options, and resiliency.
- Reactions vary by community, ranging from strong community support on one end to concerns about compatible with community vision/uses on waterfront on the other end of the spectrum.

Induce demand that could serve multiple purposes, including economic development, tourism.

Each potential route is unique and requires community engagement to implement.

- Concerns relating to specific terminal locations, modal connections, and parking.

Cross-Regional Findings

Further siting identification and analysis is needed for all sites in Seattle.

- Seattle (downtown)
- Lake Washington
- Lake Union

Tribal coordination is an essential element in nearly all waterfront development.

- Tribal fishing rights
- Culturally sensitive shoreline properties

Common marine environmental considerations may require further evaluation.

- Wake impacts
- Protected species- marine mammals
- Sensitive shoreline vegetation
- Noise
- Air quality

Examine equity in each stage of POF planning and implementation.

- Community engagement
- ORCA LIFT

Stepped Analysis Approach

** Indicates study-wide priority
* Indicates regional priority

Step 1
- Confined waterways
- Land use compatibility

Step 2
- Travel time savings
- Community interest

Step 3
- Travel time savings **
- Commute ridership potential *
- Discretionary trip opportunities *
- Modal connections *
- Community interest
- Resiliency contribution
- Operational considerations

Further Analysis
- Route profiles

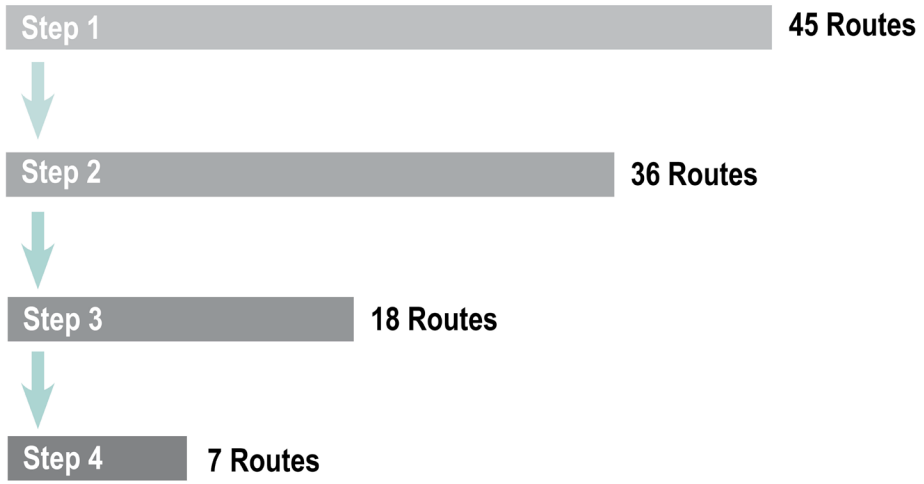
Steps 1 through 3

	ROUTE	STEP 1 Initial Review	STEP 2 Mode	Time Savings	Community Support	Additional Consideration	STEP 3 Rank
North Sound (Whatcom, Skagit, Island, San Juan)	Anacortes – Des Moines	●	Car	15	○	○	
	Bellingham – Everett	●	Car	-90			
	Bellingham – Friday Harbor	●	**Car**	**110**	●	**N/A**	**3**
	Bellingham – Port Angeles	●	Car	90	○	○	
	Bellingham – Seattle	●	Car	-20	○	○	
	Blaine – Friday Harbor	●	Car	105	○	○	
	Camano Island – Everett	LU					
	Clinton – Tacoma	●	Car	65	○	○	
	Coupeville – Camano Island	LU					
	Coupeville – Clinton	LU					
	Langley – Camano Island	LU					
	Oak Harbor – Everett	●	Car	30	○	○	
	Oak Harbor – Seattle	●	Car	70	○	○	
	Orcas Island – Bellingham	●	Car	95	●	●	16
	Whidbey (Clinton/Langley) – Everett	●	**Car**	**30**	○	**Resiliency**	**7**
	Whidbey (Clinton/Langley) – Kingston	●	Car	85	○	○	
	Whidbey (Clinton/Langley) – Seattle	●	Car	55	●	N/A	15
PSRC (King, Kitsap, Pierce, Snohomish)	Bainbridge Island – Des Moines	●	Car	55	○		
	Everett – Seattle	●	Car	0	○	Ridership	13
	Fremont – Seattle (South Lake Union)	●	Bus	-10	○	Ridership	18
	Gig Harbor – Seattle	●	Car	35	●	N/A	4
	Gig Harbor – Tacoma	●	Car	-15			
	Kenmore – Seattle (University of WA)	●	**Bus**	**15**	●	**N/A**	**6**
	Kirkland – Seattle (University of WA)	●	**Bus**	**15**	●	**N/A**	**4**
	Port Orchard – Seattle	CW					
	Poulsbo – Seattle	CW					
	Renton – Seattle (University of WA)	●	**Bus**	**15**	○	**Ridership**	**9**
	Renton – Seattle (South Lake Union)	●	**Bus**	**25**	●	**N/A**	**8**
	Seattle – Des Moines	●	Light Rail	-25			
	Seattle (Shilshole) – Seattle	●	Bus	30	●	N/A	10
	Silverdale – Bremerton	CW					
	Silverdale – Seattle	CW					
	Southworth – Des Moines	●	Car	50	●	N/A	12
	Steilacoom – Tacoma	●	Car	-5	○	○	
	Suquamish – Seattle	●	Car	35	●	N/A	2
	Tacoma – Seattle	●	**Bus**	**15**	●	**N/A**	**1**
Peninsula RTPO (Clallam, Jefferson, Mason)	Tacoma – Olympia	●	Car	-45			
	Hoodsport – Port Angeles	●	Car	-60			
	Hoodsport – Port Townsend	●	Car	-40			
	Hoodsport – Seattle	●	Car	15	○	○	
	Port Angeles – Seattle	●	Car	25	●	N/A	14
	Port Townsend – Bellingham	●	Car	45	●	N/A	17
	Port Townsend – Seattle	●	Car	50	●	N/A	10
	Shelton – Seattle	CW					
Thurston County	Olympia – Seattle	●	Car	-15			

KEY

LU: Land use is prohibitive.
CW: Confined waterway is prohibitive.
Mode: Travel mode used to compare POF travel times.

●: This route met the analysis metric.
○: This route did not meet the metric for further analysis.



Step 3 Findings

	Highest priority elements					*Secondary priority elements*				
	Travel Time Savings	Existing Commute Demand	Potential Commute Demand	Support Criteria	Modal Connections Quality	Relative Recreational Potential	Modal Connection Distance	Resiliency	Seaworthiness	RANK
***Tacoma – Seattle**	●	●	●	●	●	-	●	○	-	1
Suquamish – Seattle	●	●	●	○	●	-	●	●	-	2
***Bellingham – Friday Harbor**	●	○	○	●	●	●	●	●	-	3
***Kirkland – UW**	○	●	●	●	●	-	●	○	-	4
Gig Harbor – Seattle	●	●	●	○	●	-	●	●	-	4
***Kenmore – UW**	●	●	●	●	●	-	●	○	-	6
***Whidbey – Everett**	●	○	○	●	●	-	●	●	-	7
***Renton – SLU**	●	●	●	●	●	-	●	○	-	8
***Renton – UW**	●	●	●	●	●	-	●	○	-	9
Shilshole – Seattle	●	●	●	●	○	-	○	○	-	10
Port Townsend – Seattle	●	○	○	○	●	●	○	●	▼	10
Southworth – Des Moines	●	○	○	○	●	-	●	●	-	12
Everett – Seattle	○	●	●	○	●	-	○	○	-	13
Port Angeles – Seattle	●	○	○	●	●	-	●	●	▼	14
Whidbey – Seattle	●	○	○	○	●	-	●	●	-	15
Orcas Island – Bellingham	●	○	○	○	○	○	●	●	-	16
Port Townsend – Bellingham	●	○	○	○	●	○	○	●	▼	17
Fremont – SLU	▼	●	●	○	○	-	○	●	-	18

● : High score
● : Middling score
○ : Low score

▼ :POF travel time is longer than the competitive mode

▼ : Less 0.5 points

▼ : Less 1 point

Route Profiles

Tacoma – Seattle

Bellingham – Friday Harbor

Whidbey – Everett

Lake Washington/Lake Union Routes

- Kenmore – UW
- Kirkland – UW
- Renton – UW
- Renton – South Lake Union

Route Profiles

Key Assumptions

Service levels

- Commute: 3 round trips per each peak (AM/PM) commute period
- Discretionary: seasonal and periodic trips
- Point-to-point service

Travel Time

- Slowdown zones and maneuvering time included.
- Compared to existing competing mode (car, bus or rail)

Ridership estimates

- 2018 as a base year (using Soundcast), assuming start-up service
- Additional induced demand may be realized outside of estimates

Costs

- Uses best known information
- Includes operating costs only
  - Revenue and funding are not included
  - Landing and maintenance site lease, acquisition and improvement is not included

Tacoma – Seattle

OPERATING PROFILE

- Commute service
- Hourly departures
  (3 AM peak & 3 PM peak)
- Top service speed of 35 knots
- Foss Waterway slowdown (4.3 knots)
- Commencement Bay slowdown (12 knots)

FLEET

Fleet- 3 vessels

2 service vessels

1 back-up vessel

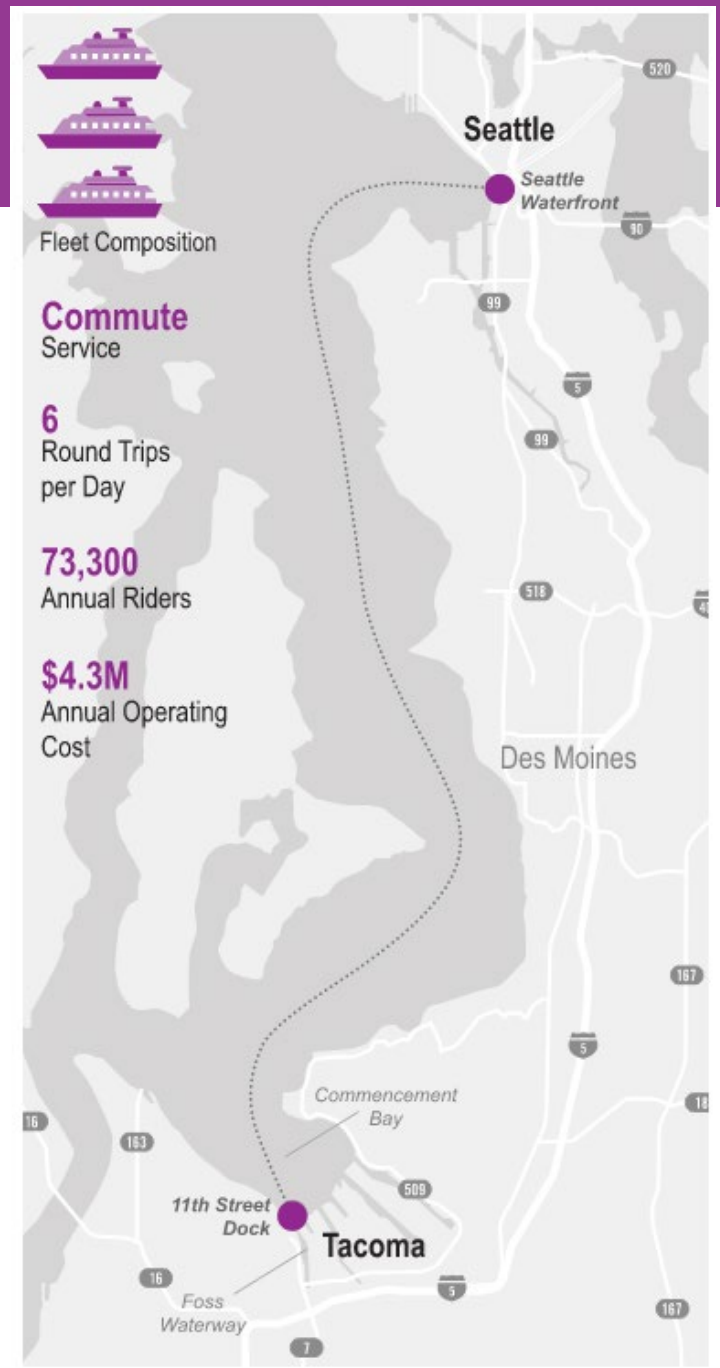
Maximum Passengers per Vessel

between 150 and 250

APPROXIMATE TRAVEL TIMES

	Bus	Sounder	POF	Time Saved
11th Street Dock - Downtown Seattle Waterfront	70 minutes	60 minutes	55 minutes	5 to 15 minutes

POF travel time is from dock to dock and include maneuvering time and slowdown zones. Transit times are from transit stop to transit stop.



Tacoma – Seattle

TACOMA 11TH STREET DOCK

- Overwater improvements, ticketing, & signage
- Federal, state, & local approvals

SEATTLE WATERFRONT

*Not all piers were evaluated for docking options.

- Capacity constraints
- Varying levels of infrastructure investment

Tacoma – Seattle

RIDERSHIP

Estimated Ridership	
Estimated Daily Riders	290
Projected Annual Ridership	73,300

COST SUMMARY

Annual Operating Costs (in thousands)	$4,280
Operating Labor	$1,160
Energy / Fuel	$800
Maintenance (Labor, Materials, & Contracts)	$1,065
Insurance & Other	$545
Management, Support, & Overhead	$710

ENVIRONMENTAL

- Environmental permitting
- Habitat and wake assessment
- Electrification potential

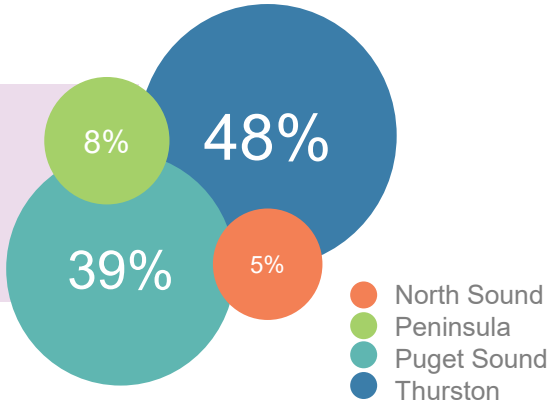
RESILENCY

- Alternative to I-5 corridor
- System redundancy

Tacoma – Seattle

COMMUNITY OUTREACH

- Tacoma community connections
- Ruston option
- Seattle landings
- Competing modes

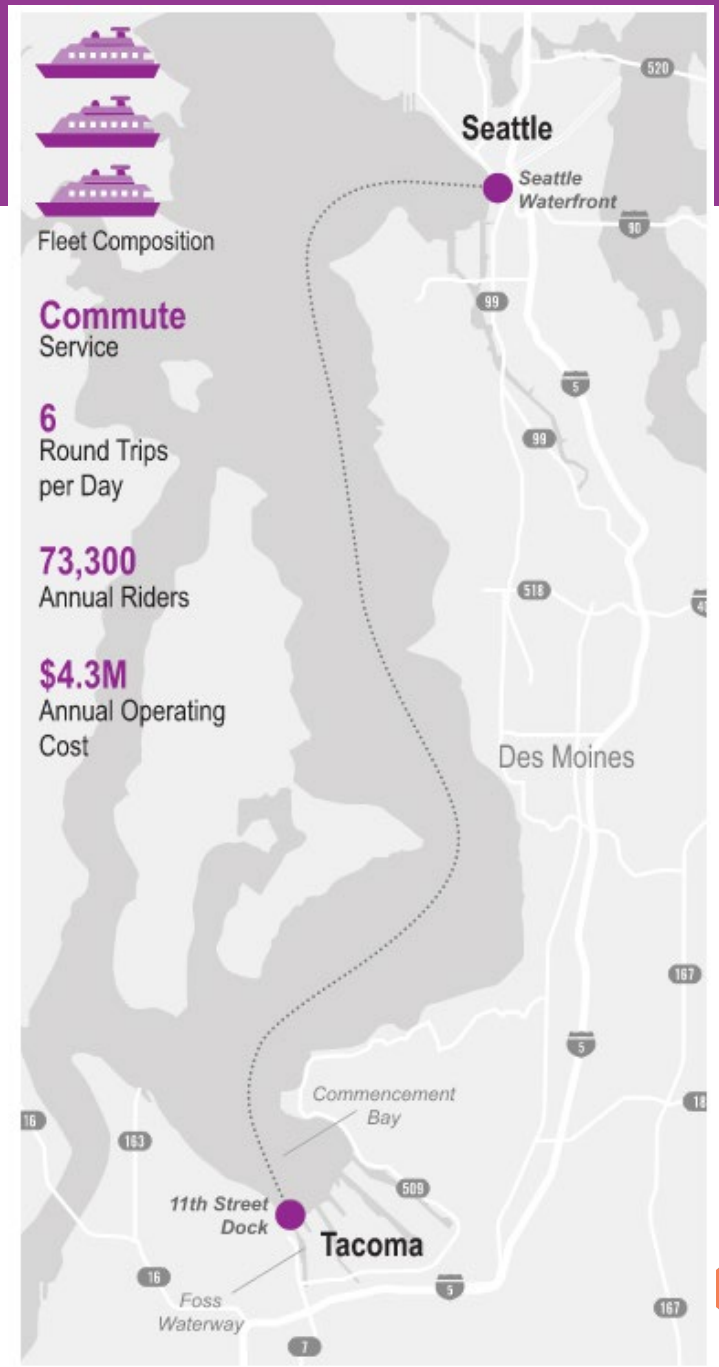


HURDLES

- POF landing capacity limitations in Seattle
- Low potential for electrification with current technology
- Increased capital costs of fleet size

OPPORTUNITIES

+ High community interest
+ Previous feasibility study
+ Kitsap Transit's Seattle Terminal Siting Study
+ City of Des Moines Study



Bellingham – Friday Harbor

APPROXIMATE TRAVEL TIMES

	Car & WSF	POF	Time Saved
Bellingham Cruise Terminal - Friday Harbor Marina	160 minutes	50 minutes	110 minutes

POF travel time is from dock to dock and includes maneuvering time and slowdown zones. Car travel time is the time traveled between representative city locations.

OPERATING PROFILE

- Recreational/discretionary service
- Seasonal (4 round trips a day)
- Top service speed of 35 knots
- Friday Harbor Marina Entrance slowdown (7 knots)

FLEET

Fleet- 2 vessels
1 service vessel 1 back-up vessel
Maximum Passengers per Vessel
between 150 and 250

Bellingham – Friday Harbor

BELLINGHAM FAIRHAVEN STATION

- Ticketing & signage
- Local approvals

FRIDAY HARBOR MARINA

- Ticketing & signage
- Local approvals

Bellingham – Friday Harbor

RIDERSHIP

Estimated Ridership	
Estimated Daily Riders	120
Projected Annual Ridership	21,200

COST SUMMARY

Annual Operating Costs (in thousands)	$2,010
Operating Labor	$535
Energy / Fuel	$400
Maintenance (Labor, Materials, & Contracts)	$410
Insurance & Other	$330
Management, Support, & Overhead	$335

ENVIRONMENTAL

- Environmental permitting
- Electrification potential

RESILIENCY

- Ferry-dependent community
- Access to mainland medical and other services
- System redundancy

Bellingham – Friday Harbor

HURDLES

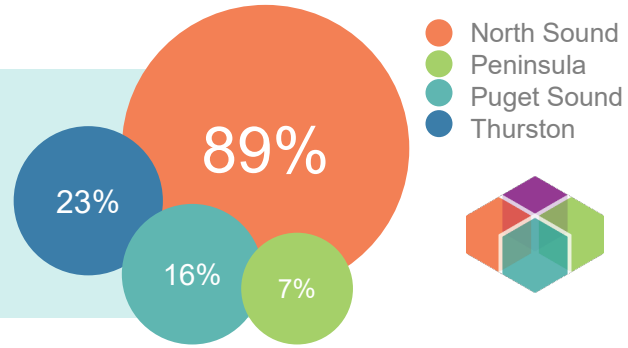
- Sea states
- Low projected ridership

OPPORTUNITIES

+ High community interest
+ Economic development opportunity
+ Resiliency contribution
+ Potential pilot service
+ Align with regional planning
+ Potential for year-round service and/or service to additional stops

COMMUNITY OUTREACH

- Day trips
- Financial feasibility
- Reliability
- Additional stops
- Bicycle connections and space on vessel



Whidbey – Everett

OPERATING PROFILE

- Commute service
- Hourly departures (3 AM peak & 3 PM peak)
- Top service speed of 35 knots
- Jetty Island slowdown (7 knots)

FLEET

Fleet- 2 vessels
1 service vessel
1 back-up vessel

Maximum Passengers per Vessel
up to 150

APPROXIMATE TRAVEL TIMES

	Car	POF	Time Saved
Clinton Terminal - Port of Everett Guest Dock 1	50 minutes	20 minutes	30 minutes

POF travel time is from dock to dock and includes maneuvering time and slowdown zones. Car travel time is the time traveled between representative city locations.

Whidbey – Everett

WSF CLINTON TERMINAL

- In-water and overwater, ticketing, & signage
- Federal, state, and local approvals

EVERETT GUEST DOCK 1

- Ticketing & signage
- Local approvals

Whidbey – Everett

RIDERSHIP

Estimated Ridership	
Estimated Daily Riders	60
Projected Annual Ridership	14,500

ENVIRONMENTAL

- Environmental permitting
- Habitat evaluation
- Electrification potential

COST SUMMARY

Annual Operating Costs (in thousands)	$1,750
Operating Labor	$625
Energy / Fuel	$120
Maintenance (Labor, Materials, & Contracts)	$445
Insurance & Other	$270
Management, Support, & Overhead	$290

RESILENCY

- Bridge- and ferry-dependent community
- Access to mainland medical services
- System redundancy

Whidbey – Everett

HURDLES

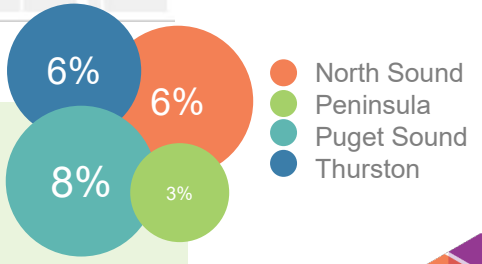
- Everett transit connections
- Low projected ridership

OPPORTUNITIES

+ High potential for electrification
+ Align with Clinton redevelopment
+ Possible private operator partnership
+ Proximity to Naval Station Everett
+ Potential Hat Island Ferry partnership

COMMUNITY OUTREACH

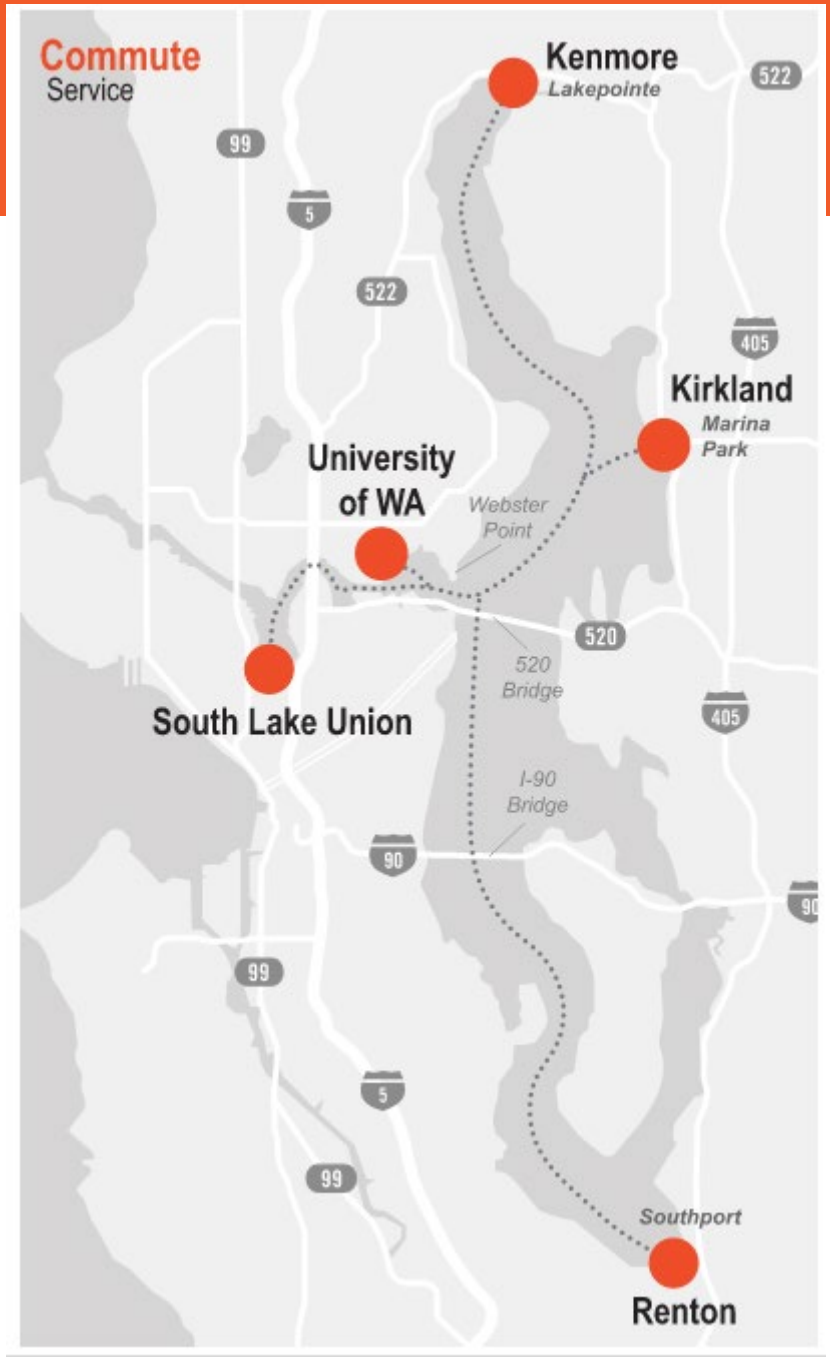
- More connections
- Transit access in Everett
- Clinton rideshare
- Parking
- Governance
- Navy and USCG proximity



Lake Washington/Lake Union

OPERATING PROFILE

- Commute service
- Hourly departures
  (3 AM peak & 3 PM peak)
- Top service speed of 28 knots
- Webster Point to SLU, SR-520 Bridge, and I-90 Bridge slowdowns (7 knots)



APPROXIMATE TRAVEL TIMES

	Bus	POF	Time Saved
Kenmore - UW	45 minutes	30 minutes	15 minutes
Kirkland - UW	35 minutes	20 minutes	15 minutes
Renton - UW	60 minutes	35 minutes	25 minutes
Renton - SLU	75 minutes	60 minutes	15 minutes

POF travel times are from dock to dock and include maneuvering time and slowdown zones. Transit times are from transit stop to transit stop.

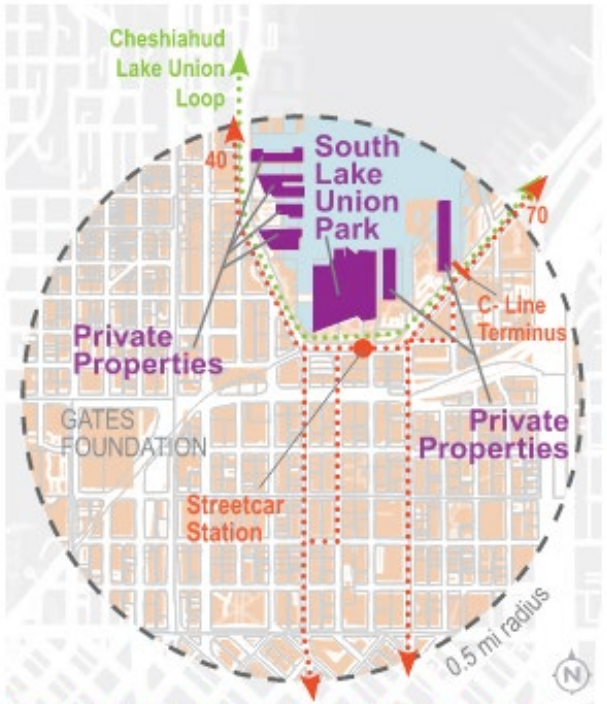
Lake Washington/Lake Union

UNIVERSITY OF WASHINGTON

Route shown represents light rail only.

- Overwater improvements, ticketing, & signage
- Federal, state, & local approvals

SOUTH LAKE UNION



Routes shown include only C-Line, Seattle Streetcar, KC Metro 40 & KC Metro 70.

- Capacity constraints
- Varying levels of infrastructure investment

Lake Washington/Lake Union

KENMORE

- In-water and overwater improvements, ticketing, & signage
- Federal, state, & local approvals

KIRKLAND

- Ticketing & signage
- Local approvals

RENTON

- Ticketing & signage
- Local approvals

Lake Washington/Lake Union

RIDERSHIP

	KENMORE - UW	KIRKLAND - UW	RENTON - UW	RENTON - SLU
Estimated Ridership	129,700	147,700	39,600	47,600
Daily	510	580	160	190

COST SUMMARY

	KENMORE - UW	KIRKLAND - UW	RENTON - UW	RENTON - SLU
Annual Operating Costs (in thousands)	$2,015	$1,805	$2,095	$3,335
Operating Labor	$680	$625	$680	$1,160
Fuel	$160	$80	$190	$225
Maintenance (Labor, Materials, & Contracts)	$520	$480	$530	$875
Insurance & Other	$320	$320	$345	$520
Management, Support, & Overhead	$335	$300	$350	$555

RESILIENCY

- Alternative to I-90 & SR-520 bridges
- System redundancy

ENVIRONMENTAL

- Environmental permitting
- Habitat and wake evaluation

Lake Washington/Lake Union

COMMUNITY OUTREACH

Lake Washington Communities

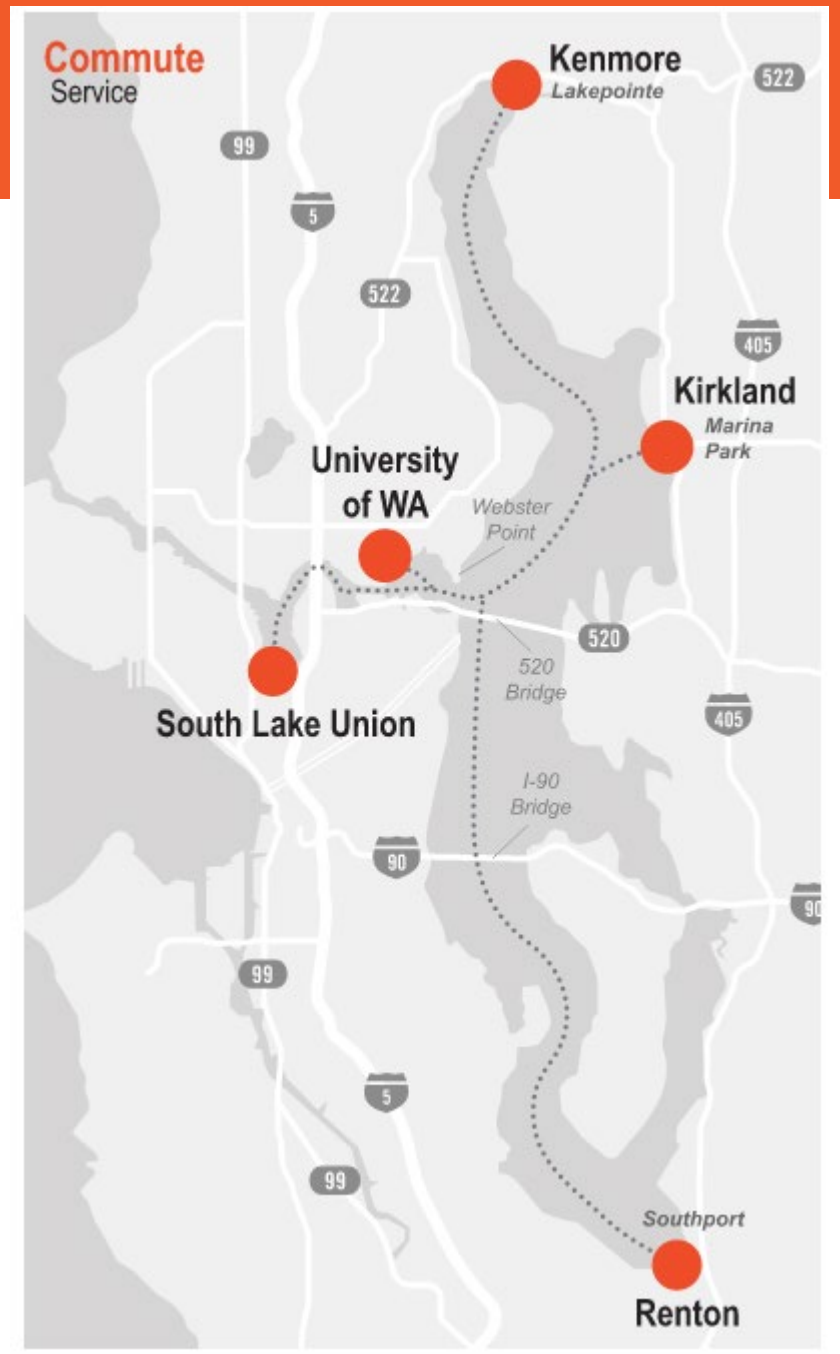
- Transit dollars
- Development challenges and opportunities
- First/last mile connections
- Consider equity

Seattle-side

- UW crew
- Pedestrian connections
- ORCA/U-PASS
- Recreational craft
- Grant restrictions
- Recreational/transportation uses

Lake Washington/Lake Union

	Hurdles	Opportunities
KENMORE - UW	- High capital costs and high level of infrastructure improvements needed. - Kenmore site development challenges. - Accessibility improvements needed at UW. - Sensitivity to recreational boating traffic at UW may require more extensive coordination.	+ High estimated ridership. + An implementation study was recently conducted, showing interest in this route and providing more detailed next steps. + Long standing City and community support. + Integrated infrastructure potential with future Lakepointe development. + Recent local funded bond measure to improve pedestrian access to waterways.
KIRKLAND - UW	- Accessibility improvements needed at UW - Sensitivity to recreational boating traffic at UW may require more extensive coordination.	+ Highest estimated ridership. + Possibility for alignment with City of Kirkland Marina Park redevelopment plans.
RENTON - UW	- Low estimated ridership. - Accessibility improvements needed at UW. - Sensitivity to recreational boating traffic at UW may require more extensive coordination.	+ Higher travel time savings. + Recent dock improvements in Renton.
RENTON - SLU	- Low estimated ridership. - High operating costs compared to other Lake routes. - This route needs an additional vessel to meet services levels, which increases upfront capital investment. - There is need for additional coordination to identify an adequate landing site in South Lake Union.	+ An implementation study was recently conducted, showing interest in this route and providing more detailed next steps. + Recent dock improvements in Renton.



Route Findings

Existing landing infrastructure could potentially be used for pilot service.

Landing sites in Seattle require additional analysis and planning.

Vessel sizes vary by route type.

- Puget Sound
- Lake routes

Route Findings

Some landings have experienced recent growth that could have noteworthy impacts on potential travel demand.

All routes need to comply with operating protocols.

- Marine mammals
- Slow down zones
- Wake wash

Route Findings

Fuel price is a key driver for route costs.

- Emerging and evolving technologies

Efficiencies could be realized by partnering with an existing operator.

- King County Water Taxi
- Kitsap Fast Ferries

Next Steps for POF Implementation

Local

- Incorporate the route and associated facilities into regional transportation plan(s): local comprehensive plan(s) and other appropriate implementer plans (transit agency, port, etc.).
- Develop a business and implementation plan.

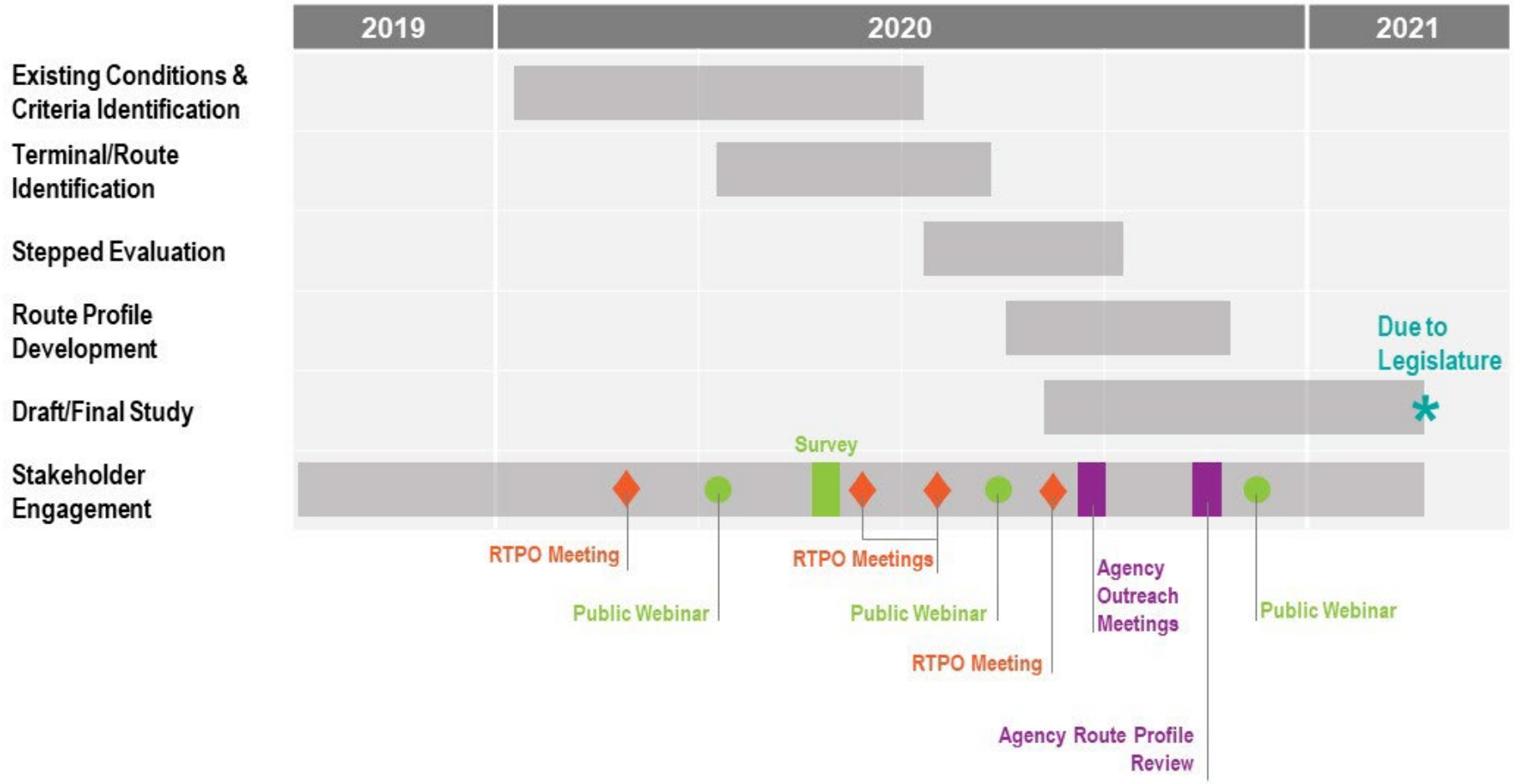
State

- The State can continue to support policy work and explore funding provisions to ensure local jurisdictions have the tools they need to support implementation.

Federal

- Investigate funding opportunities.

Next Steps—


2019
2020
2021
Existing Conditions & Criteria Identification
Terminal/Route Identification
Stepped Evaluation
Route Profile Development
Draft/Final Study
Stakeholder Engagement
Due to Legislature
*
Survey
RTPO Meeting
Public Webinar
RTPO Meetings
Public Webinar
RTPO Meeting
Agency Outreach Meetings
Agency Route Profile Review
Public Webinar

Questions and For More Information

To review the draft report, please visit:

https://www.psrc.org/passenger-ferry-study

Deadline for feedback: December 28th, 2020

Your input continues to strengthen this study.

Please keep in touch through our listserv and the project website.

Please contact POF_Study@psrc.org to be added to the project stakeholder email list.

Thank you.

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