

Memo

June 6, 2023

To:	Sound Transit Board members
From:	Julie Timm, Sound Transit CEO
Subject:	Responses to Board members' questions on East Link Starter Line (ELSL)

Purpose

This memo outlines questions asked by Board members in May 2023 Committee meetings, and the responses from staff. All questions are related to the East Link Starter Line (ELSL), a potential segment of the East Link Extension that, if the Board approves this later in 2023, would open in 2024 as the first portion of the 2 Line to serve stations between the South Bellevue and Redmond Technology Stations.

Questions and Responses

Question	Response
Instead of a 14- or 20-hour span of service for ELSL when it initially opens, is a 16-hour span of service possible and if so, what would that look like? <i>(REO Chair Walker, May 4, 2023)</i>	<p>The 14- and 20-hour spans of service were developed because they closely coordinate with the number of hours per shift. A 14-hour service span would require two shifts for operators and maintainers whereas a 20-hour service span would require three shifts. In addition, we estimate that the 14-hour service span for ELSL would lower risk of competing staffing resources to support both ELSL and LLE.</p> <p>Creating a 16-hour service span would require staggering shifts. Our modeling shows that this would not change the number of operators, maintainers, or vehicles but would cost more by extending or adjusting shifts. This would require additional conversations with King County Metro to understand the specifics and we are continuing to understand this with our partner.</p>
What passengers do we not serve when we have a shorter span of service for light rail on the 2 Line? <i>(SEC Chair Balducci, May 11, 2023)</i>	<p>A shorter service span for light rail would mean that approximately 15% of potential riders would not be able to use light rail but would still use bus service. When the span of service is reduced ~30% (20- to 14-hours), we estimate this could miss ~15% of riders. If the daily forecast range is 4,600-6,400 riders, 15% less would be a loss of 700-1,000 light rail riders.</p> <p>We estimated this by analyzing ridership patterns on existing King County Metro routes in the same service area as ELSL, so this is not a fully built out model of assumptions, but rather an informed estimate of ridership impacts. Additionally, we are evaluating proxy ridership data that could help us understand the types of riders potentially impacted by East Link Starter Line service spans.</p>
What impacts would we see by having 1-car vs. 4-car consists? <i>(SEC Chair Balducci, May 11, 2023)</i>	<p>Sound Transit initially ran 1-car consists (single cars) when the initial segment opened until 2011; we could again run single cars if requested. We would need to make some changes to the platforms but these could be accommodated.</p>

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	<p>Calculating the change between 1-car and 4-car consists is a combination of impacts from personnel (operator and mechanical labor, cleaning, hostling, sanding, etc) and vehicles/spare parts. We estimate some savings for mechanical, parts, and energy. What doesn't change are fixed expenses for services that are incurred no matter the length of the consist, such as security, operators, supervisors, police, fare enforcement, agency overhead, etc.</p> <ul style="list-style-type: none"> • Dropping from 2-car consists to 1-car consists is nearly negligible for personnel costs whereas it reduces the number of cars in service from 23 to 11. • Dropping from 4-car consists to 1-car consists would further reduce the number of vehicles in service from 40 to 11, but again would have nearly negligible impacts to personnel. • Even though we would have fewer vehicles in service with 1-car consists, we will still mechanically support the additional vehicles at OMF East even if they're not in passenger service right away. <p>From a ridership perspective, 1-car consists at 10-minute headways would carry approximately 900 riders per/hour, and we forecast a demand of approximately 400 riders/hour. Therefore, we estimate that 1-car consists would be more than sufficient to accommodate forecasted ELSL ridership.</p>
<p>What are the trade-offs for having ELSL or LLE open first in 2024? <i>(SEC Chair Balducci, May 11, 2023)</i></p>	<p>We are currently evaluating the different scenarios with advantages and disadvantages. Staff will return to the SEC for more on this evaluation later this year, potentially as soon as at the July meeting.</p>

Next Steps

We are evaluating more specifics on the cost implications for 16-hour service span. Additionally, we are evaluating proxy ridership data that could help us understand types of riders impacted by East Link Starter Line service spans, due to a discussion with SEC Chair Balducci on June 2.