

Responses to Councilmember Questions from March 19, 2019 Study Session

Mercer Island Transit Interchange Operational and Configuration Study

Responses provided by Sound Transit and King County Metro Staff

1. What are the anticipated light rail travel times from Mercer Island to points east and west?

Sound Transit is currently in the process of updating ridership numbers for the entire Link network approved as part of the ST3 plan. Here are some times to and from popular destinations from Mercer Island:

- Mercer Island – International District/Chinatown: 9 min
- Mercer Island – Westlake: 14 min
- Mercer Island – University of Washington: 20 min
- Mercer Island – Bellevue Downtown: 10 min
- Mercer Island – Redmond Technology Station: 20 min

It is anticipated East Link trains will run at least at 8-minute intervals during peak hours. For additional information:

<https://www.soundtransit.org/system-expansion/east-link-extension>
<https://www.soundtransit.org/system-expansion/mercer-island-station>

2. What is the anticipated increase in light rail ridership over time?

- Projected East Link ridership—including the downtown Redmond extension—is anticipated to be approximately 43,000 to 52,000 daily riders by 2026.
- Full LINK System Ridership – Today, Link averages 80,000 boardings every weekday. In 2040, estimates are that Link trains will carry between 480,000 and 590,000 every weekday. By 2040, when the high-capacity transit system (Link, BRT and Commuter rail) is built out, Sound Transit will have between 560,000 to 690,000 average weekday boardings.

Sound Transit projects ridership using various assumptions that reflect best available information, such as regional employment and population forecasts, which provide information about a specific period in time. While this information gives us a rough idea of what we can expect in terms of ridership, there are other assumptions that affect these numbers. As such, Sound Transit does not publish estimates for a project’s opening year for a variety of factors including coordination with King County Metro bus routes and transfers, changing rider behavior and a project’s specific opening date.

Since light rail projects are often coordinated with King County Metro bus re-routes to reduce duplicative service, and since the King County Council and Sound Transit Board don’t vote on the reroutes until 2022, the exact number of bus routes and riders transferring at each light rail station are unknown until this is finalized and would affect projected ridership. Rider behavior will also be unknown until East Link opens. To give you an example, Central Link, which opened in 2009, took 8 to 9 years for ridership to mature and rider behaviors to settle out. The project’s specific opening date will also influence projected ridership. For example, a project that opens in June would only have 6-months’ worth of potential ridership compared to the projection that it would be open for a calendar year.

3. What is the possibility of opening the South Bellevue Park-and-Ride prior to start of East Link revenue service?

The South Bellevue Park-and-Ride closed May 30, 2017. For the next approximately 5 years, Sound Transit will be using this park-and-ride site to stage equipment and materials to build the light rail tracks, station, systems, and bus transfer facility. Sound Transit has established (temporary) alternate commuter parking lots at various locations, and will explore opportunities to open the park-and-ride sooner if possible. The Memorandum of Understanding between Sound Transit and the City of Bellevue encourages Sound Transit to consider opening the South Bellevue Park-and-Ride at the earliest date construction conditions make it possible.

4. Why do regional buses have to connect to light rail at Mercer Island and not South Bellevue?

To access South Bellevue, Metro customers would have to travel off I-90 onto Bellevue Way, north to the station, and then board Link and double back down Bellevue Way to I-90. Particularly eastbound, the merge from Bellevue Way to I-90 is extremely congested and presents safety and operational challenges for buses merging across several lanes to get from Bellevue Way into the center HOV lane. This travel time, assuming a 5-minute light rail trip from South Bellevue to Mercer Island, is 10 minutes longer in each direction during peak travel periods than traveling directly from Eastgate to Mercer Island.

In addition, direct service to Mercer Island avoids out-of-direction travel and provides safer, quicker connections to/from the I-90 HOV lanes, resulting in faster bus travel times and discouraging Eastside drivers from parking on Mercer Island to reach Link light rail. Finally, Metro has already planned to completely fill the capacity for bus transfers at South Bellevue Station and cannot plan for additional routes there.

5. Why is drop-off continuing on the north side of N Mercer Way?

North side drop off is required for transit interchange operations. Westbound buses will exit I-90 from the HOV off-ramp onto northbound 80th Avenue SE. Buses will take a left (westbound) on North Mercer Way and drop off customers at the existing bus stop of the north side of North Mercer Way. Buses will then make a 180-degree turn at the proposed roundabout at 77th Avenue SE and travel back east to pick up customers at the existing bus stop on the south side of North Mercer Way.

If the existing bus stop of the north side of North Mercer Way was not accessible, then all pickup and drop off would occur at the existing bus stop on the south side of North Mercer Way. Drop off at this location would require buses to circulate through the town center to then reach layover west of the existing bus stop on the south side of North Mercer Way to be able to pick up passengers for start of service once the layover had finished.

6. Can the designated layover space on the south side of N Mercer Way be used for passenger pick-up/drop-off?

Layover is designed to be located upstream from the first in-service stop to allow for efficient and reliable operations. Thus, use of layover space on the south side of N Mercer Way for passenger activity reduces layover capacity and does not meet King County Metro's operational needs. In addition, dropping off passengers on the south side of N Mercer Way extends the length of passenger trips, and bypasses their desired destination.

7. How is bicycle and pedestrian safety at the roundabout being addressed?

The proposed roundabout will be designed with bicycle and pedestrian safety in mind. In fact, national studies have shown that roundabouts have a better safety record when compared to signalized intersections. Insurance Institute for Highway Safety and the Federal Highway Administration (FHWA) have studied roundabouts and have shown that roundabouts reduce injury crashes significantly. Their studies show the following reduction in collisions:

- 37% reduction in overall collisions;
- 75% reduction in injury collisions;
- 90% reduction in fatality collisions; and
- 40% reduction in pedestrian collisions.

There are a number of reasons why roundabouts help reduce the likelihood and severity of collisions, including: lower travel speeds, no “light to beat” increasing vehicular speeds that reduce impacts from yellow- and red-light runners, and roundabout geometry eliminates the possibility for “t-bone” or head-on collisions.

In addition, roundabouts improve the safety of all modes of travel—including pedestrians—as the roundabout geometry forces vehicles to slow down as they enter and exit the roundabout. The design of the proposed roundabout at 77th Avenue SE and N. Mercer Way will verify the sightlines for pedestrians and vehicles and ensure that they meet or exceed requirements set by WSDOT, this includes checking these sight lines with buses located in the layover zones. The proposed crossing just east of the proposed roundabout, providing a connection from the I-90 Trail to the future light rail station entrance along 77th Avenue SE, is planned to be at least 10-feet-wide and contain ample space for pedestrians, bicyclists, and other users to safely cross the street with the improved visibility that a wide crossing provides.

For additional information on roundabouts:

<https://www.wsdot.wa.gov/Safety/roundabouts/benefits.htm>

<https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/>

8. How many buses can layover at Mercer Island at any given time?

There will be approximately 4 spaces on Mercer Island for buses to layover, which will limit non-local bus volumes to below existing levels that serve the island.

9. Can the transit interchange operate without the layover space on the north side of N Mercer Way?

Layover on the north side of N Mercer Way is absolutely necessary to meet Metro’s operational needs. The current operation using both sides of N Mercer Way for layover and active drop-off/pick-up represents a significant reduction from the service Metro planned for this area.

10. The layover space on the north side of N Mercer Way is located between the secondary Park and Ride entrance/exit and the new roundabout. How will this design address potential pedestrian, bicycle and vehicle conflicts with buses using the layover space?

There are countless examples throughout the county where on-street layover is adjacent to active driveways. Metro employs professional drivers who adhere to all roadway rules and regulations.

11. If trains are at capacity, would buses return to service between Seattle and Mercer Island?
We do not anticipate a scenario where Link trains would not be able to accommodate ridership to, from and through Mercer Island. Sound Transit will be running 4-car trains every eight minutes, with each of those trains having the capacity for 800 riders. Metro has no plans to operate duplicative East Link routes between Mercer Island and Seattle once East Link light rail is operational.
12. Will the 630 Shuttle continue?
In 2021, roughly 18-24 months before East Link opens, Metro will lead an extensive public engagement and planning process to give Mercer Island residents and visitors the opportunity to provide input and feedback on transit services and routing when East Link opens. This process will guide Metro’s decisions about the existing Route 204, Route 630, and other transit and mobility services on Mercer Island.
13. What is the purpose of the 80th Avenue SE bus stop? Is there a local benefit to this bus stop?
This bus stop would be reserved for local Mercer Island buses only and would be located in-lane and south of the I-90 EB HOV on-ramp. No impact to pedestrian space or flow would occur. Such a stop would exclusively benefit local customers by providing a more convenient connection between East Link and local Mercer Island services. The stop would allow local MI riders to connect to transit heading south without crossing the street, and in the direction of their travel. Metro does not have a position on whether there is a stop at this location, and can coordinate with Mercer Island about potential uses and more detailed benefits of such as stop. If there is no stop on 80th, local buses will continue to drop off and pick up on North Mercer Way.
14. Is Metro working with private employers regarding shuttle services?
Yes. Through the Shared Employer Shuttle Program, Metro aims to collaborate closely with private mobility providers to develop new transportation options for regional employers looking to offer efficient commute options for their workforce. This program is not exclusive to Mercer Island nor directly factored into Metro bus operations at the transit interchange. For additional information: https://kingcounty.gov/depts/transportation/metro/programs-projects/innovation-technology/innovative-mobility/shared-employer-shuttles.aspx
15. Will every bus that comes to Mercer Island layover on Mercer Island?
It is very likely that all buses coming to Mercer Island will layover on the Island for at least a few minutes. Constrained layover will limit the amount of service that can be provided to Mercer Island.
16. What is the minimum amount of layover space needed for Metro operational requirements?
Layover space for 4 buses is the minimum amount needed to meet Metro’s operational requirements.
17. What are the plans for the remaining property after the roundabout is built?
Plans for the property not disposed to the City of Mercer Island for the roundabout are unknown at this time (Sound Transit to retain ownership of this remaining property). However, Sound Transit intends to work closely with the City of Mercer Island on a

redevelopment strategy that is compliant with local zoning codes and development plans. The process for disposition of surplus property would take place once the East Link Light Rail project is complete and all Sound Transit project uses have been finalized; sometime after 2023.

18. Will the space allocated for the transit interchange be necessary after light rail service reaches Issaquah and other Eastside communities in 2041?

According to Metro Connects, when East Link opens, Metro will terminate some of its current I-90 services on Mercer Island to 1) avoid duplication with East Link light rail service; and 2) reinvest those service hours to provide even more frequent local connections and transfers to light rail. In 22 years, when Link service is planned to open in Issaquah, Metro will re-evaluate service based on current travel markets and land use. It may be that the transit interchange will continue to be an important facility. If the curb space is not needed by Metro, it could be reallocated to different modes in order to meet our region’s evolving travel needs.

19. How were the 150-175 people who commute between Mercer Island and the Eastside destinations calculated? Can we determine where they are coming from and going to?

The data showing 150-175 people either board, or alight on Mercer Island is obtained by Automatic Passenger Counts (APC), which only records a person entering or leaving the coach. There is no way to determine the person’s origin or destination, only that they entered or left the bus. The data cited includes ridership from Routes 554 and 216, which were chosen because they currently serve Sammamish and Issaquah, travel markets in areas of East King County that will not be duplicated by East Link. We focused on routes that will not be served by East Link as a proxy for trips that will still be needed after East Link arrives, and because these corridors are planned for service to Mercer Island in Metro Connects. Ridership was pulled from three consecutive service periods from Summer 2017 to Spring 2018. We included eastbound boardings from EB N Mercer Way and westbound alightings from WB N Mercer Way. These are actual people who are getting on and off buses on Mercer Island.

20. How is Sound Transit working with and assisting homeowners that will be impacted by the 77th/N Mercer Way roundabout?

Per the Settlement Agreement, both Sound Transit and the City of Mercer Island agreed to construct the 77th Avenue SE Configuration—including a new roundabout—which will result in Sound Transit acquisition of private property. Sound Transit complies with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (as amended), Revised Code of Washington (RCW) Chapter 8.26, and Washington Administrative Code (WAC) Chapter 468-100 to ensure uniform and equitable treatment for persons displaced by federally-funded public projects (in this case, East Link). Sound Transit will provide relocation advisory services and payments for eligible displaced owners and tenants.

We have already started talking to the affected property owners. Sound Transit Board action in April will authorize Sound Transit to work more closely with the property owners. Owners of real property needed for the roundabout will be offered just compensation for their land and improvements that will be acquired for the project. Sound Transit will provide relocation advisory services and payments for eligible displaced owners and tenants.

For more information:

<https://www.soundtransit.org/system-expansion/building-system/easing-construction-impacts/property-acquisition-relocation>

21. How will Sound Transit provide buffers for neighbors to the north of the proposed new layover space and the new roundabout?

Sound Transit intends to work closely with the City of Mercer Island as the design progresses to provide appropriate buffers and screening between the roundabout/transit interchange and the neighborhood to the north. For reference, the distance between the proposed roundabout and the nearest residence is greater than the distance between the current North Mercer Way/77th Avenue SE intersection and existing residences. It is also important to note the proposed layover space along North Mercer Way would continue to be screened from view from the neighborhood to the north via the existing wood fence along the south side of SE 24th Street.

The 2017 SEPA Addendum to the East Link Extension FEIS studied potential environmental impacts of the 77th Avenue SE configuration with the proposed roundabout. The 2017 SEPA Addendum found that the proposed transit integration would not result in significant adverse impacts or potential impacts would be within the overall range of impacts identified and mitigated per the FEIS.

For more information:

<https://www.soundtransit.org/get-to-know-us/documents-reports/2017-sepa-addendum-to-east-link-final-eis-executive-summary>

22. Will the timing of the traffic signal at the 80th Avenue SE/North Mercer Way intersection be studied to determine appropriate time intervals?

Safety improvements and increased operational efficiencies—including potential signal timing changes—at the 80th Avenue SE/North Mercer Way intersection will be discussed and developed as the transit interchange design moves forward.

It is anticipated that the transit interchange will result in a greater number of pedestrians using the west crosswalk at the 80th Avenue SE/N Mercer Way intersection, due to transfers between the bus drop-off and the 80th Avenue SE light rail station entrance. While the transit interchange is still in the early design stages, pedestrian and bicycle safety at this location is a concern for all stakeholders and appropriate safety measures will be discussed and incorporated into the design moving forward, including the potential for the following:

1. Providing painted crosswalks or other pavement markings (or materials) to improve visibility of pedestrian/bicycle crossings.
2. Improving horizontal and vertical sight distances through the removal of extraneous curbside clutter such as newspaper boxes, redundant utility poles, or overgrown vegetation.
3. Explore the use of bulb-outs and other traffic calming measures that reduce pedestrian/bicycle crossing lengths/times and reduce traffic speeds.
4. The use of signage and lighting to alert drivers to crossings.

<p>5. Working with WSDOT, Metro, and the City of Mercer Island on signal timing changes that improve pedestrian safety, such pedestrian lead phases, pedestrian-only phases, and pedestrian-activated (push button) phases.</p> <p>6. Include design measures that promote the ease of bus traffic through the intersection. Limit or prohibit right turn on red movements.</p>
<p>23. When Metro redeploys service hours on the Eastside, following opening of East Link, how much additional service or more frequent service can Mercer Island anticipate receiving?</p>
<p>See responses to #12 and #18 above.</p>
<p>24. Explain how the average 15-minute layover is calculated. How long will bus layovers actually last?</p>
<p>Mandated operator rest periods are generally uniform, scheduled to be about 15 minutes. Metro has an incentive to minimize time not spent providing service. A reasonable anticipated range is 10 to 20 minutes.</p>