City of Bellevue

2/11/2025

CITY COUNCIL AGENDA TOPIC

King County Metro RapidRide K Line – Transit Priority Lanes and Public Engagement

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EXECUTIVE SUMMARY

INFORMATION ONLY

Metro staff will provide an update on King County Metro's (Metro) RapidRide K Line (K Line), including data related to proposed candidate speed and reliability improvements. Metro will also share feedback they have received at open houses and tabling events as part of their Phase 3 of community engagement. In March, Metro will return to Council to present final Phase 3 community engagement results and seek Council's endorsement of K Line's Locally Preferred Alternative (LPA).

RECOMMENDATION

N/A

BACKGROUND/ANALYSIS

RapidRide is Metro's highest level of service, providing connections between regional centers. RapidRide lines are intended to make transit a convenient and attractive alternative to driving alone. Compared to the standard bus routes they replace, RapidRide lines are up to 20 percent faster and carry up to 70 percent more passengers. To make RapidRide service fast and reliable, Metro works with local jurisdictions to implement capital improvements such as arterial bus lanes, business access and transit (BAT) lanes, high occupancy vehicle (HOV) lanes, new turn lanes, and traffic signals that prioritize buses. RapidRide lines have amenities such as off-board fare payment, all-door boarding, real-time bus arrival signs, and high-quality stations. RapidRide service is provided seven days a week, with buses arriving every 10 minutes during peak travel hours and every 15 minutes outside of peak travel hours, for a minimum of 16 hours a day and potentially up to 24 hours a day.

RapidRide K Line

Metro is in the planning phase for the K Line. The new bus route is planned to begin service as early as

2030. It will connect Bellevue and Kirkland over a 16-mile corridor by providing connections to the Eastgate Park and Ride, Bellevue College, Bellevue Transit Center, Downtown Bellevue, the South Kirkland Park and Ride, Downtown Kirkland and the Totem Lake Transit Center in Kirkland (see Attachment B for the RapidRide K Line route map and Attachment C for the planned route through downtown Bellevue). City Council received briefings on RapidRide K Line on October 28, 2019, June 11, 2024 and November 26, 2024. At the November 26Council meeting, Metro presented the proposed route through Downtown Bellevue along 110th Avenue NE.

In addition to connecting these regional and local centers, the K Line will also provide key regional transit connections, including Sound Transit's 2 Line, Sound Transit's STRIDE bus rapid transit (BRT), and other RapidRide services. By providing a network of frequent transit connections, passengers will be able to reach more locations in less time.

The K Line will serve a variety of major employers in the medical, technology, and aerospace industries, as well as several higher education institutions and other regional destinations. The K Line is intended to operate on arterial roads within Bellevue and Kirkland. Station locations are under development as Metro gathers public input and evaluates potential roadway improvements.

Metro's K Line budget is estimated to be $120 million, and Metro is seeking half of $120 million from the Federal Transit Administration (FTA) via the Small Starts Program.

The K Line is an outcome of the Bellevue *Transit Master Plan* (TMP), adopted by the Bellevue City Council in 2014. The TMP identified the need for enhanced connectivity between Totem Lake, Downtown Bellevue, Bellevue College, and the Eastgate Park and Ride. *Metro Connects*, King County's long-range transit vision adopted in 2021, included this corridor as a future RapidRide line.

Speed and Reliability Projects, Including Business Access and Transit (BAT) Lanes

At the June 11, 2024 Council meeting, Councilmembers directed staff to prioritize transit consistency and reliability in the Council-adopted *RapidRide K Line Guiding Principles* (Attachment A) and in K Line planning. Council noted that people should be able to trust that K Line buses will arrive on time.

At the November 26, 2024 Council meeting, Metro presented candidate speed and reliability improvements. These improvements are critical to meeting Metro's RapidRide targets of reducing transit travel times by 15-30 percent (compared to existing service) as well as making the project competitive for FTA grant funding. Metro's proposed speed and reliability projects include implementing BAT lanes, which operate similar to bus-only lanes, but still allow access for vehicles turning right into businesses, driveways and streets. Emergency vehicles are allowed to use these lanes. Other proposed treatments include transit queue jumps, dedicated turn lanes and intersection reconfigurations (e.g. converting a signalized intersection to a roundabout).

Business Access and Transit Lanes

Speed and reliability treatments focus on reducing delay in the most congested areas of the route. Therefore, prioritizing buses within downtown Bellevue demonstrates the greatest benefit to transit along the K Line route. While dedicated bus only lanes were initially considered as a speed and reliability treatment, Bellevue staff asked Metro to focus potential speed and reliability projects on BAT lanes to balance improved transit travel time with potential impacts to general purpose traffic. Metro is

proposing all-day BAT lanes that operate seven days a week to maintain speed and reliability.

The Council-adopted TMP recognizes BAT lanes as a tool to improve the speed and reliability of transit service. The TMP outlines the city's Frequent Transit Network and candidate projects to support high-quality service.

Based on the TMP and City Council's direction in June, the K Line project includes candidate BAT lane projects along the corridors bulleted below. In general, each BAT lane project proposes that the existing curb lane (lane next to the curb) operates as a BAT lane. In two instances, approximately 25 total existing parking stalls would be removed or restricted to create a BAT lane. While some of the BAT lane projects were identified in Bellevue's TMP, additional projects are proposed to attract more riders, meet Metro's transit travel time saving targets and to make the project competitive for FTA grant funding.

The proposed BAT lanes are as follows (see Attachment C for a map):

- **116th Avenue NE northbound, from Felix Terry Swistak Drive NE (southern Overlake Hospital intersection) to NE 12th Street**. The existing curb lane from Felix Terry to NE 12th Street would operate as a BAT lane.
- **110th Avenue NE northbound, from NE 6th Street to NE 10th Street.** The existing curb lane would operate as a BAT lane between NE 6th Street and NE 8th Street. The existing parking lane between NE 8th Street and NE 10th Street would be converted to and operate as a BAT lane.
- **110th Avenue NE southbound, from NE 10th Street to NE 4th Street.** The existing parking lane would be converted to and operate as a BAT lane between NE 10th Street and NE 9th Street. The existing curb lane between NE 9th Street and NE 8th Street would operate as a BAT lane. A new curb lane being built by development between NE 8th Street and NE 6th Street would operate as a BAT lane. The existing curb lane between NE 6th Street and NE 4th Street would operate as a BAT lane.
- **110th Avenue NE northbound at NE 6th Street.** The existing right-turn pocket would operate as a BAT Lane leading up to the intersection of 110th Avenue NE and NE 6th Street. This would require evaluating the curb space leading up to the intersection of 110th Avenue NE and NE 6th Street to determine if the existing pick-up and drop-off area can be preserved.
- **Main Street westbound, from 116th Avenue NE to 110th Avenue NE.** The existing curb lane would operate as a BAT lane.
- **Main Street eastbound from 110th Avenue NE to 116th Avenue NE.** The existing curb lane would operate as a BAT lane.
- **NE 10th Street westbound, from SR-520 onramp to 110th Avenue NE.** The existing curb lane would operate as a BAT lane.
- **NE 10th Street eastbound, from 110th Avenue NE to 116th Avenue NE.** The existing curb lane would operate as a BAT lane.

Transit Travel Time Benefits and Impacts to General Purpose Travel Time

BAT lanes improve both the speed and the reliability of transit and are more effective at increasing

person-throughput when compared to general purpose lanes because buses can carry more people. However, BAT lanes have the potential to increase travel time for general purpose vehicles in certain instances.

To understand this tradeoff between potential benefits to people using transit and people driving, traffic analyses were conducted to quantify the transit travel time benefits and impacts to general purpose lanes along the entire K Line route. A total of 95 intersections were included in the traffic model.

For downtown Bellevue, a 2044 analysis was conducted to align with the forecasted year in Bellevue's recent Comprehensive Plan update. All results presented in this memorandum reflect analysis for the evening peak travel period in year 2044 unless otherwise stated.

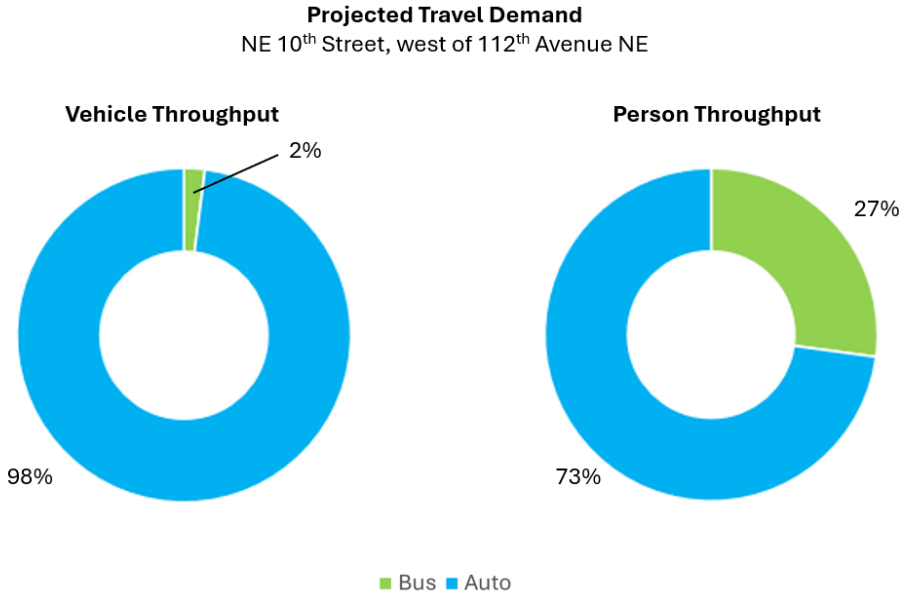
Person-Throughput

Bellevue's policy goals for a multimodal transportation system[1] include optimizing a travel metric called "person throughput." Evaluating what roadway conditions will allow for the most amount of people, across all travel modes, to move through a corridor within a given time period is critical to optimizing this metric. When general purpose traffic lanes reach capacity, buses and other high occupancy help increase the number of people moving through a congested corridor during peak travel times.

In downtown Bellevue, the city assessed person throughput at certain locations along the K Line route assuming K Line implementation with BAT lanes. In 2044, while buses only account for 1-2 percent of the total vehicle trips, they account for 13 – 27 percent of person trips during the evening peak travel period. The person throughput was calculated using K Line ridership projections and other local bus ridership that could use the BAT lanes. Figure 1 below compares vehicle and person throughput with the implementation of K Line at NE 10th Street, west of 112th Avenue NE.

Figure 1. Comparing vehicle throughput versus person throughput at NE 10th Street, west of 112th Avenue NE along the K Line route (2044)

[1] TR-57 – Bellevue Comprehensive Plan 2044 (page TR-24)



Benefits to Transit Travel Time

The following analysis of roundtrip travel time savings reflect conditions during the evening peak travel period (3 p.m. – 7 p.m.) for the year 2035[2]. Implementing the K Line with all improvements identified in Kirkland and Bellevue is expected to provide a 25 percent reduction (or 47 minutes) in roundtrip travel time by transit between Totem Lake and Eastgate when compared to running local transit service on the same route. Speed and reliability improvements account for nearly 60 percent (or 28 minutes) of these travel time savings. The remaining travel time savings result from less frequent stops made by the K Line when compared to local transit service. Overall, the draft K Line project meets or exceeds Metro's RapidRide targets of reducing transit travel times by 15-30 percent compared to existing service.

In downtown Bellevue, which experiences the most congestion, speed and reliability improvements account for a combined savings of seven minutes during the evening peak travel period (3 p.m. – 7 p.m.) in 2044.

Impacts to General Purpose Travel Time in Downtown Bellevue

As mentioned previously, for downtown Bellevue, an additional 2044 evening peak travel period analysis was conducted at the request of Bellevue staff to assess how the proposed BAT lanes might affect downtown streets. Bellevue provided forecasted 2044 PM peak hour volumes. The traffic model assumes that people driving may divert from the K Line route to use parallel streets, such as NE 8th Street. The model assessed all downtown intersections and corridors in the area bounded by NE 12th Street, 116th Avenue NE, Main Street, and Bellevue Way NE.

[2] Metro used the year 2035 to analyze transit travel time savings for the entire route because this is a requirement as part of FTA Small Starts grant funding.

Key findings from the analysis include:

- Some corridors saw improved general purpose travel time while others saw moderate delays as shown in Figures 2 and 3 below.
- For corridors that observed delays, most represented approximately 18 seconds or less of delayed travel time for general purpose vehicles along the entire corridor.
- Two outlier corridors are NE 8th Street, which is projected to have an eastbound delay of 90 seconds, and NE 12th Street, which is projected to have an eastbound delay of 54 seconds.

Furthermore, the traffic model also showed that two intersections that previously met their level of delay performance targets[3] in 2044 are shown as not meeting with the implementation of speed and reliability improvements.

These two intersections are:

- **NE 12th Street and 112th Avenue NE.** While this intersection is shown to exceed volume-to-capacity (v/c) ratio performance targets with the implementation of BAT lanes, the change in v/c is less significant. The v/c ratio changes by approximately one percent.
- **NE 8th Street and 116th Avenue NE.** This intersection is shown to exceed v/c ratio performance targets with the implementation of BAT lanes. The v/c ratio changes by approximately 10 percent. This reflects the anticipated diversion to NE 8th Street.

Prior to the implementation of the RapidRide K Line, Bellevue staff will perform a traffic study that could identify future projects to potentially mitigate these impacts. This study would include an assessment of both intersections noted above that no longer meet their performance targets in 2044, as well as the two corridors of NE 8th Street and NE 12th Street.

Figure 2. Projected Change in General Purpose Travel Time Between Main Street and 112th Avenue NE During the Evening Peak Travel Period in 2044

	Northbound Travel time change (mins) *	Southbound Travel time change (mins)*
Bellevue Way	-	0.6
106th Ave NE	0.3	-
108th Ave NE	0.3	-0.6
110th Ave NE	-0.5	-
112th Ave NE	1.1	-0.6
116th Ave NE	-	-1.1

*Any changes that observed no significant change is symbolized by a "-," typically representing a change of less than 10 seconds.

[3] The Mobility Implementation Plan (MIP) identifies intersection volume-to-capacity (v/c) ratios as a way of measuring performance for the vehicle network.

Figure 3. Projected Change in General Purpose Travel Time Between Bellevue Way SE and 116th Avenue NE During the Evening Peak Travel Period in 2044

	Westbound Travel time change (mins)*	Eastbound Travel time change (mins)*
NE 12th Street	-0.6	0.9
NE 10th Street	-	-
NE 8th Street	-	1.5
NE 4th Street	-	-
NE 2nd Street**	0.3	0.2
Main Street	-0.2	-0.6

* Any changes that observed no significant change is symbolized by a "-," typically representing a change of less than 10 seconds.

** NE 2nd Street was calculated between Bellevue Way NE and 112th Avenue NE.

Employer Shuttles and High Occupancy Vehicle (HOV) Lanes

At the November 26, 2024 Council meeting, councilmembers emphasized the importance of allowing employer shuttles in the BAT lanes. Under current Washington State law (RCW 46.64.165), private employer shuttles are allowed in transit-only lanes and HOV lanes but are prohibited from BAT lanes. A change in state law would be required.

At the request of Bellevue staff, Metro modeled impacts to transit travel times if HOV lanes were implemented in downtown Bellevue instead of the proposed BAT lanes. Given that HOV lanes are more difficult to enforce, Metro conducted analysis assuming that some people driving might unlawfully use these lanes.

Metro found that most (roughly 80 percent) of the transit travel time savings in downtown Bellevue would be lost if HOV lanes were implemented instead of the proposed BAT lanes. Additionally, in Metro's review of recent FTA funding recipients, Metro found that no projects recently awarded recommended HOV lanes as a speed and reliability improvement. Metro is planning to apply for $60 million in Small Starts funding for the K Line. Due to the projected transit travel time savings for BAT lanes and the need to be competitive with other BRT projects applying for Small Starts Grant funding, Metro is recommending BAT lanes as the speed and reliability treatment for the K Line. Bellevue staff has requested information from Metro about the feasibility of changing the state law to allow employer shuttles in BAT lanes.

Phase 3 of Community Engagement – Preliminary Results

A third and final phase of engagement began on January 16 and is expected to end on February 13. Metro's goal is to get detailed feedback will be used to refine the project vision, confirm community

priorities and complete the project's planning stage. Phase 3 of community engagement includes maps and survey questions introducing and requesting feedback on the proposed speed and reliability improvements, including BAT lanes. This phase is focused on providing in-person briefings for further engagement amongst community groups such as the Bellevue Chamber of Commerce, Bellevue Downtown Association and Hopelink's Eastside mobility program.

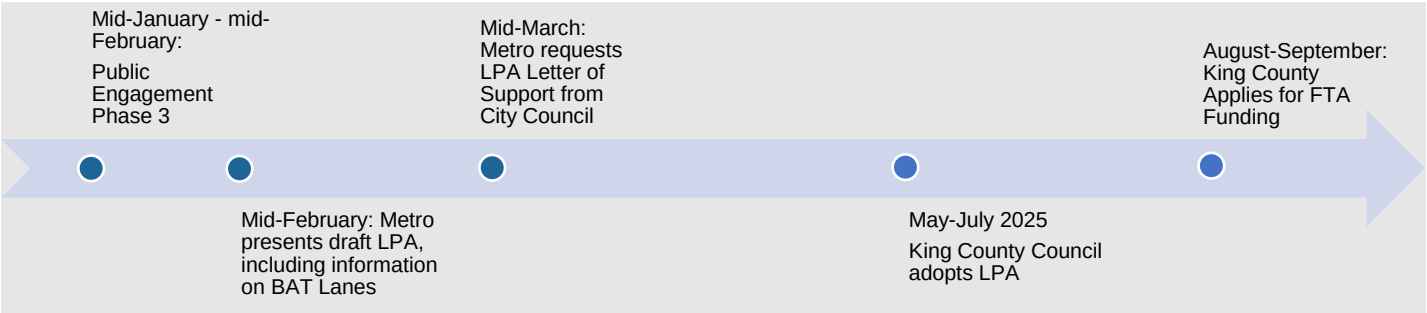
At the February 11 Council meeting, Metro will share feedback they have received at open houses and tabling events.

Locally Preferred Alternative – March 2025

A key decision point for the K Line is adoption of the Locally Preferred Alternative (LPA). The "LPA" is a document that presents the project vision for a transit corridor and is required by the FTA for Small Starts grant funding. Following an evaluation through a local planning process and input from the community, the LPA is adopted as the desired alternative by the appropriate agency and identified as the preferred alternative in the National Environmental Protection Act (NEPA) review process. The LPA defines the core components of the project, including the mode, alignment, roadway and transit capital improvements, and operating characteristics. As a part of identifying roadway and transit capital improvements, the LPA lists generalized speed and reliability treatments the project will consider and highlights areas along the corridor where the project will benefit from transit priority treatments.

Metro will ask the Bellevue and Kirkland City Councils to provide letters in support of the LPA in March. Metro must have the cities' letters to be able to apply for FTA funding for the K Line. Submitting a letter of support for the K Line LPA demonstrates the City of Bellevue supports the core components of the project, including speed and reliability projects, as stated in the LPA and believes implementation is reasonable pending further design refinement and collaboration. Providing a letter of support demonstrates that the City of Bellevue will remain committed as a good faith partner to the future refinement and ultimate delivery of the project. After receiving the letters, the County Executive will transmit the LPA to the King County Council for adoption. Metro must begin preparing an application for federal funding in the spring of 2025 to meet the 2030 target to begin K Line service.

Figure 3. 2025 K Line LPA Timeline



POLICY & FISCAL IMPACTS

Policy Impact

The K Line is a key part of the frequent transit network envisioned in Bellevue's TMP, adopted by the City Council in 2014. The TMP identified potential transit way improvements, including HOV lanes and BAT lanes. Bellevue's partners on the TMP included King County Metro, Sound Transit, Bellevue Chamber of Commerce, Bellevue Downtown Association, Bellevue College, major employers, community-based organizations, and neighboring cities.

On June 11, Council directed staff to use Bellevue's *RapidRide K Line Guiding Principles* (Attachment A) to provide input to Metro in development of the K Line. The *RapidRide K Line Guiding Principles* are based on policy adopted by Council in the TMP, *Comprehensive Plan*, *Mobility Implementation Plan*, *Curb Management Plan*, and other policy documents. City Council requested staff refine the *RapidRide K Line Guiding Principles* to emphasize that the K Line should be consistent, reliable, and appealing. Council also noted that the K Line should connect with and improve multimodal transportation systems. Attachment A reflects Council's feedback.

Fiscal Impact

Bellevue is contributing staff time to the project during the planning phase. The city may consider right of way or other contributions to the project.

OPTIONS

N/A

ATTACHMENTS

A. Bellevue's RapidRide K Line Guiding Principles
B. RapidRide K Line Route
C. RapidRide K Line Route through Downtown Bellevue with Proposed BAT Lanes
D. List of Candidate Speed and Reliability Projects

AVAILABLE IN COUNCIL LIBRARY

N/A