



City of Bellevue

450 110th Avenue NE
Bellevue, WA 98004

Meeting Agenda Transportation Commission

Thursday, December 14, 2023

4:30 PM

Room 1E-108

Special Meeting: Bike Bellevue

1. Welcome and Meeting Purpose

Transportation Commission meetings are conducted in a hybrid manner with both in-person (Room 1E-108) and virtual options. Public comment will not be taken at this Special Meeting. You may attend the meeting and listen to the proceedings:

- In-person
- By calling (206) 452-7011 and entering Phone Conference ID: 668 149 957#; or
- Click on the link below and enter Meeting ID 264 777 694 568 Passcode: wJmsHy

<https://www.microsoft.com/microsoft-teams/join-a-meeting>

2. Agenda Items

- a) 23-749 Mobility Implementation Plan Overview
- b) 23-750 Bike Bellevue Overview
- c) 23-751 Modeling Overview

3. Response to Commission Questions

4. Adjournment

For alternate formats, interpreters, or reasonable modification requests please phone at least 48 hours in advance 425-452-2029 (voice) or email cterry@bellevuewa.gov. For complaints regarding modifications, contact the City of Bellevue ADA, Title VI, and Equal Opportunity Officer at ADATitleVI@bellevuewa.gov.

Rules of decorum for public communication and conduct at meetings were adopted by the City Council in Ordinance 6752. Copies of this ordinance can be found on the city's website, and are also available from the City Clerk's Office.

Transportation Commission Special Meeting Bike Bellevue Glossary of Terms

BKRCast Bellevue, Kirland and Redmond activity-based travel demand model

BKRCast is an activity-based model developed from the Puget Sound Regional Council (PSRC) SoundCast model with additional detail in the BKR area. The city uses BKRCast to predict how travel behavior will change based on changes in land use patterns and improvements to the transportation network.

LTS Level of Traffic Stress

A data-driven approach to evaluating bikeways by matching up bicycle facility design, traffic speed limit, and traffic volume to individual perceptions of bicyclist comfort.

PMA Performance Management Area

The Performance Management Areas (PMA) are defined geographic areas, based on the type and intensity of existing and planned land use and the diversity of the mobility options that are and are planned to be accessible. These geographic areas are where Performance Targets for the vehicle mode are set and where progress toward improving mobility for each mode is summarized.

- *Type 1 PMA includes the High Density Mixed-Use areas of Downtown, BelRed and Wilburton/East Main*
- *Type 2 PMA includes the Medium Density Mixed-Use areas of Crossroads, Eastgate and Factoria*
- *Type 3 PMA includes the Low Density, predominantly residential areas of the city*

Performance Targets

- *Pedestrian*
 - *Arterial segment with a sidewalk on both sides of the street*
 - *Arterial segment that has a designated pedestrian crossing at an intersection or mid-block crossing location, according to the intended spacing or specific pedestrian trip generators*
- *Bicycle*
 - *Corridor (arterial corridors and intersections) on the bicycle network in general, and the Bicycle Priority Network in particular, that meets the Level of Traffic Stress (LTS) Performance Target*
- *Transit*
 - *Frequent transit network route where riding a bus would take less than twice as long as driving a car between defined activity centers*
 - *Bus stop that meets the intended passenger amenities*
- *Vehicle*
 - *System Intersection where the volume-to-capacity (v/c) ratio meets the Performance Target (v/c Performance Target varies by Performance Management Area)*
 - *Segment of a Primary Vehicle Corridor where travel speed is meets the Performance Target (corridor travel speed target varies by Performance Management Area)*

TUTS Typical Urban Travel Speed

The “typical urban travel speed” metric is based on the speed of a person in a vehicle traveling along an arterial. This equates to an average speed of about 40% of the posted speed limit. Note that this urban travel time varies according to Performance Management Area and the metric assumes that a driver will inevitably experience some delay at traffic signals.

V/C Volume-to-Capacity Ratio

A volume to capacity (v/c) ratio measures the amount of traffic at an intersection relative to the amount of traffic the intersection was designed to accommodate.

HEAT Health Economic Assessment Tool

In its current version the HEAT tool, developed by the World Health Organization (WHO), supports assessments of the health and economic impacts of walking and cycling on premature mortality in an integrated manner through changes in physical activity levels, exposure to air pollution while walking or cycling, and risk of fatal crashes in traffic. In addition, the tool also estimates the impacts on carbon emissions due to shifts between active and motorized travel modes.

ICLEI International Council for Local Environmental Initiatives

A global network of local governments devoted to solving the world's most intractable sustainability challenges. Our standards, tools, and programs credibly, transparently, and robustly reduce greenhouse gas emissions, improve lives and livelihoods and protect natural resources in the communities we serve. The City of Bellevue is a Steering Committee Local Government member for the Greenhouse Gas Contribution Analysis.

Implementation levels A, B, and C represent different increasing levels of cycling infrastructure to facilitate more travelers to make cycling a mode of first choice.

- *Level A implementation locations have bike stations in central business districts that provide secure parking, repair, rentals, and proper changing facilities. There is a continuous network of on-street bicycle lanes for a combined network density of 2 miles of bicycle lanes per square mile.*
- *Level B provides a continuous network of routes for cyclists including bike lanes, boulevards, and shared-use paths. Boulevards include traffic diverters to limit automobile use/speed. There are four miles of bicycle lanes per square mile.*
- *Level C includes approaches similar to Level A; bike stations are locations at all major business centers and transit hubs. This approach also includes bike lanes, boulevards, and shared use paths for a total of eight miles of bicycle lanes per square mile.*

MOVES Motor Vehicle Emissions Simulator Model

EPA's MOtor Vehicle Emission Simulator (MOVES) is a state-of-the-science emission modeling system that estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics.

Trip vs. Tour

In BKRCast, tours are travel events with a primary purpose that start at a person's home and eventually return home. Tours can be made up of two or more trips and can include sub-tours and intermediate stops. Trips are travel events from an origin to a destination.

Transportation Commission Questions for 12/14 Special Meeting

1. When was the last time a true bike count was done by the city to reflect how many bike trips were being taken?
2. Has the city done any year-round studies of bike ridership to see how it fluctuates with different seasons?
3. What percentage of all travelers in Bellevue choose to ride a bike to work on a daily basis?
4. What happened to the corridors/ plans that were proposed in the 2016 bike plan? Why are we not building on that plan?
5. What major stakeholders in the Bellevue business community have you personally reached out to?
6. How has the city notified Bellevue businesses and Bellevue residents specifically about the plan to take out 6 miles of vehicle lanes and turn them into bike lanes?
7. Why are you looking at taking car lanes away from corridors that parallel each other?
8. Why are you looking at taking cars lanes away from Northrup & 20th when the 520 trail runs right next to it?
9. What are the alternatives to building more bike infrastructure without taking away vehicle travel lanes?
10. What about Spring Blvd? That was built as a great roadway with bikes lanes on the side. Why not focus on extending that on through as the principal East/ West route?
11. What about poor weather conditions in our area and the impact that has on the desire to ride a bike?
12. Is staff considering maintenance in Bike Bellevue?
13. Is staff considering Fire Department operations in Bike Bellevue?

BKRCast model

14. Does it assume no Eastrail in both Build and No Build scenarios? Is Eastrail in the TFP2033 network?
15. How did it compute mode tours in build vs. no-build?
16. Does it provide route/corridor data per mode?
17. Which alternative does this assume from the Comp Plan Update 2023 DEIS?
18. Why are there no changes in Project Area Bike Work Tours between Build and No Build?

Equity / Enhancing Equitable Access

19. What are the separate walk vs. bike statistics? Separate this where "Active Transportation" or "Non Motorized" are stated.
20. Why did we select those particular equity indicators? Why not include low income families?

Alta Accessibility Report

21. Add "Baseline + Eastrail" scenario to compare Build vs No Build scenarios. Why was this excluded? Are we assuming Eastrail is built out if and only if Bike Bellevue is built out?
22. Job accessibility is increased, but how do we calculate actual usage? Can people afford housing 20 minutes bike distance to their work?
23. Why is 200% of federal poverty line used here (vs. 100% fed poverty line)? Separate walking and biking stats (they are often stated together).

Economic Impact from Physical Activity and Crash Risk study (F&P)

ICLEI

24. What % of buildings provide secure parking, repair, rentals, and proper changing facilities (Level A)?
25. Why is: $0.8\% + (2.2\% - 0.4\%) = 2.6\%$ bike mode share a valid calculation? 2.2% is from Level A; 0.4% is from No Amenities (All arear population density). BKRCast models 0.86%, an increase of 0.06%.
26. Why was the default of 0% used for re-assigned active trips? Where was trip reassignment done in ICLEI? In BKRCast Bike tours increased by 210 but walk decreased by 122 (in project area). But this data was not used in the HEAT tool (2.6% bike share mode was used from ICLEI).

27. Take up time for active travel demand was left at 1. Does this imply the entire network is available in 2022?
28. Why was ICLEI Level B also calculated and presented?
29. ICLEI's model assumes the cost of gasoline has a significant impact on bike mode share. Does this apply to Bellevue, considering recreational use and EVs?

GHG Emission Reduction

30. How do EVs and WA policy through 2035 change these numbers? It says it takes EVs into account -- how?
31. Which is more accurate, ICLEI or BKRCast?

Modeling Analysis Summary

32. 2019 Citywide households is stated as 70,980. [U.S. Census Bureau QuickFacts: Bellevue city, Washington](#) states 59,800 for 2017-2021 (2.48 people/household). Why the difference?
33. In Mode Share for both Project Area and Citywide, Bike is listed as 0% in 2019 and 1% in 2035 Build and No Build. Can you go to two significant digits, or is the within the error band?
34. Why do some corridors improve in speed and V/C going from No Build to Build?
35. If the .2 mph reduction in travel speed is an average of all the proposed corridors. What is the average reduction per direction specifically for the corridors where you are looking to remove a car lane?
36. If the overwhelming majority of people that work in Bellevue do not live in Bellevue, does that hold true for people that choose to bike to work?
37. Where are the bicycle commuters mainly coming in from?
38. Of the 33,000 new residents coming in by 2035, what percentage of them will want to commute by car?
39. What percentage of all travelers in Bellevue choose to travel by Car/ Carpool/ Transit or Company Shuttle (essentially anything that requires a vehicle lane)?

BKRCast model

40. How does BKRCast calculate net 88 Walk/Bike tours in the project area vs. ICLEI's 2.6%?
41. Alta Accessibility Model (Replica Places) indicates 1627 trips that end in project areas (2022). BKRCast indicates 1068 in study area (2019). Is the difference expected?
42. Why does the SR520 trail drop from 682 (No Build) to 496 (Build) in Bike Daily Volumes?
43. Why do Project Area Walk Tours drop by 123 comparing No Build to Build?
44. How do you consider network resiliency for all modes? What if there is a localized failure?
45. What is the error band for the Build/No-Build calculations? What is the level of convergence?
46. How do we describe/quantify the # trips and impact to the transportation area outside the project area?

Dynameq DTA Model

47. What is the "Crit Vol" in Intersection V/C Ratio? Is it the lane/direction that has the highest volume (e.g., eastbound with right turn)? Is this the same as the "Critical Lane"? Is it the same lane/direction in base year, Build and No Build?
48. Why do some V/C ratios in downtown get better going from No Build to Build (especially where a travel lane is removed)? What happened to the No Build trips?