



BELLEVUE  
**PEDESTRIAN  
& BICYCLE**  
IMPLEMENTATION INITIATIVE

# »» DEMONSTRATION BIKEWAY AND BIKE SHARE PILOT

downtown corridor project and citywide permit program



January 11, 2018

# » DOWNTOWN DEMONSTRATION BIKEWAY PROJECT OVERVIEW

## PROJECT PURPOSE

The city could install the first high-comfort bikeway in Downtown as a demonstration project in 2018. Based on their inclusion in existing plans, four streets were identified as candidates for the project: 108th Ave, 106th Ave, Main St, and NE 2nd St. Several bicycle projects completed in 2017 and others coming in 2018 provide improved connections to Downtown for people on bikes, but none connect to bike lanes in Downtown. Leveraging [Transportation Levy](#) funds, the demonstration bikeway could begin to address this gap, make progress on established goals, and help make Downtown a safer and more comfortable place to bike.

## PBII CONTEXT

The City Council envisions a well-connected network of bicycle facilities in Bellevue that enhance livability, support economic vitality, and serve the mobility needs of people of all ages and abilities. Investments in bicycle facilities will help make Downtown a more attractive and accessible place for people to live, work, and visit.

Consistent with this vision and Council direction for the [Pedestrian and Bicycle Implementation Initiative](#) (PBII), the recommendations included here reflect a strategy that:

- Advances demonstration projects that test experimental facility design treatments;
- Identifies early-win opportunities that can be implemented quickly to advance project delivery;
- Balances the needs of various roadway users and their associated design requirements;
- Promotes physically separated facilities to minimize conflicts between roadway users where possible;
- Prioritizes a connected network that “fills the gaps” in lieu of piece-meal implementation.

**Parking, Painted Buffer, and Post Separation**



**Planter Box Protected Bike Lane**



**Green Pavement Markings**



## WHAT IS A HIGH-COMFORT BIKEWAY?

A “high-comfort” bikeway provides separation between people on bikes and autos to create a riding environment that is comfortable for most adults and potentially even children and older adults. Examples of separation treatments include wide painted buffer areas, posts, and planter boxes. The number of conflict points is minimized and they are painted green to increase visibility.

Comfort on a bicycle is context-sensitive. On streets with higher speed limits and more auto traffic, greater separation is required between motor vehicles and people bicycling to provide a “high-comfort” experience. For the Downtown demonstration bikeway project, design concepts for all four candidate corridors sought to maximize the amount of separation provided to the extent possible while balancing the needs of all street users.

## BENEFITS AND TRADE-OFFS

Each candidate project offered its own set of benefits and challenges. Introducing a new bicycle facility on any of the candidate streets would involve trade-offs—but so does providing no accommodations for people to bike safely. For example:

- It may be possible to create a protected bikeway along much of a corridor, but portions may be impacted by construction activity.
- It may be necessary to repurpose travel lanes, turn lanes, or on-street parking along some of the candidate project streets, while on others it may be possible to add new on-street parking.
- Installing new bike lanes may increase auto travel time through some intersections, but providing no bike lanes has left Downtown an unwelcoming place to bike, so some people ride on sidewalks or avoid bicycling altogether.

## WHY A DEMONSTRATION?

Using temporary and low-cost treatments, the demonstration project would provide a real-world opportunity to evaluate how the latest bikeway design concepts function in Bellevue. Outcomes will be monitored and adjustments could be made after installation as needed to improve operations. Compared with more traditional project delivery, this approach makes it possible to implement improvements more rapidly and iteratively, collect data to understand the project’s benefits and impacts, make modest operational refinements if necessary, and determine what the appropriate next steps are prior to potentially making more expensive and permanent investments.

The demonstration project is expected to be in place from mid-2018 through at least early 2019. During this time, data will be collected to evaluate how the project impacts travel for all street users, local businesses, and others in the community. If outcomes are favorable, City Council could approve more permanent upgrades in the future, including more robust bike lane separation, traffic signal modifications, durable pavement markings, and other changes to curbs and the streetscape. This demonstration project could help guide other Downtown bicycle improvements.

## COMMUNITY ENGAGEMENT

To get feedback from people who live, work, or visit downtown, a survey was available online and an open house was held at City Hall.

### Online Survey

More than 1,200 people responded to the [online survey](#), available from Nov. 10, 2017, through Jan. 1, 2018. The survey asked the public for help selecting the preferred street and developing a design that balances community priorities. Some takeaways include:

- 57 percent (650/1,137) feel somewhat or very unsafe riding a bicycle in Downtown. Only 18 percent feel somewhat or very safe; 25 percent do not bike there.
- 63 percent (720/1,137) feel somewhat or very unsafe when driving next to people bicycling in Downtown.
- 60 percent (680/1,138) strongly support bike lanes in Downtown. 24 percent are strongly opposed.
- 46 percent (506/1,111) strongly agree and 17 percent (184) agree that some tradeoffs to motor vehicle traffic flow and parking are acceptable to provide safe facilities for people who bike in Downtown.
- 69 percent (749/1,084) think people biking in Downtown should ride on-street in designated bike lanes.
- 38 percent (391/1,030) would prefer the demonstration bikeway to be on 108th Ave NE. 23 percent would prefer none of the four candidate corridors, 11 percent would prefer 106th Ave NE, and 10 percent would prefer Main St.

### Open House

An open house was held on Nov. 30, 2017 from 5–7 p.m. at City Hall to provide the public an opportunity to learn more about the candidate projects and voice their perspectives to city leaders and staff. The following are takeaways from the thirty-six completed comment cards:

- 69 percent (25/36) of respondents would prefer the demonstration bikeway to be on 108th Ave NE.
- 36 percent (13/36) identified Main St as their preferred second corridor if sufficient funding is available to implement additional improvements.

## RECOMMENDATION

### 108th Ave NE

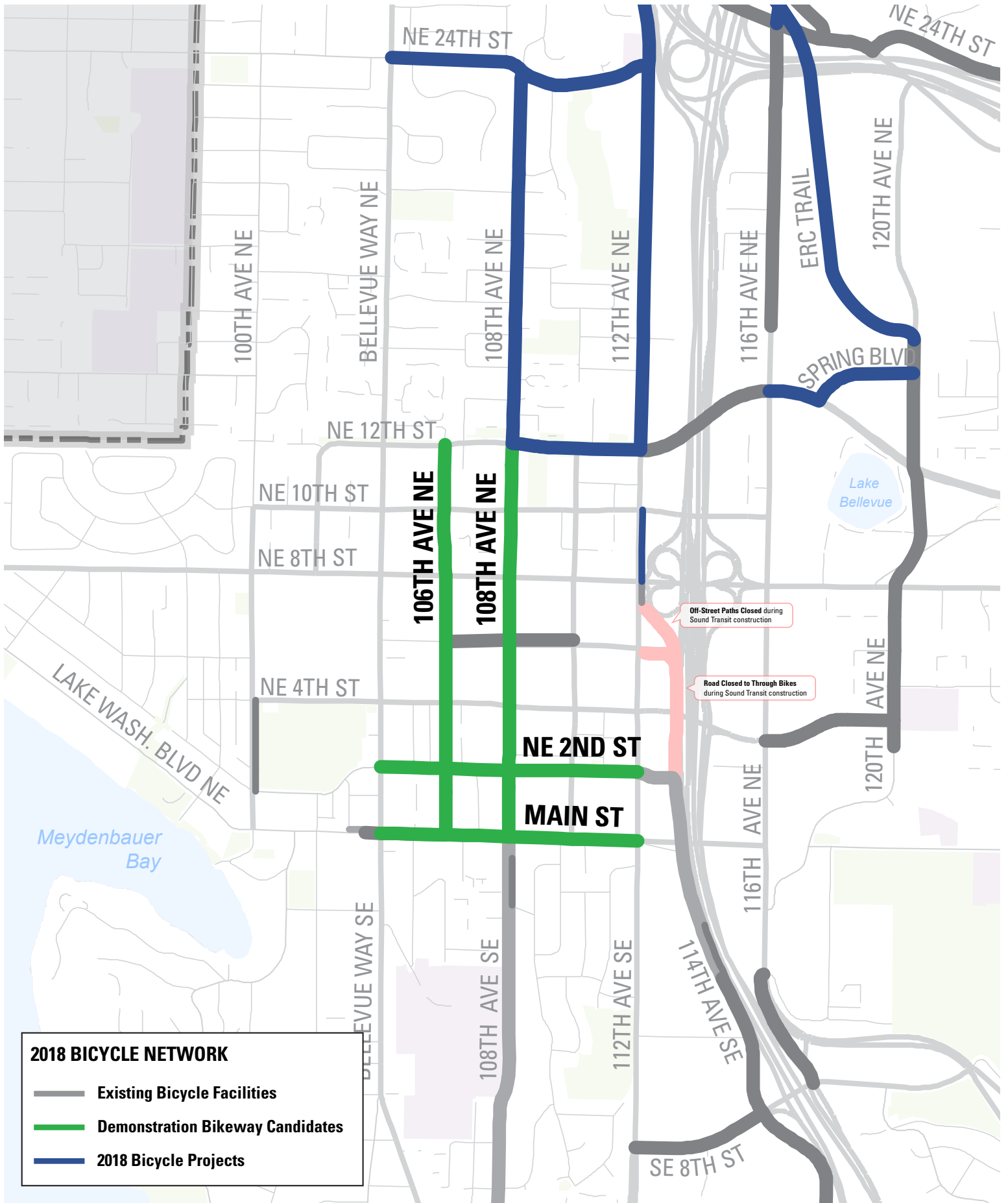
It is recommended that a demonstration bikeway project be implemented along 108th Ave NE from Main St to NE 12th St. This is identified by the [2009 Pedestrian and Bicycle Transportation Plan](#) as a north-south priority bicycle corridor and provides continuous connections to multiple regional bicycle routes.

Due to the many competing priorities for limited street space, the design and dimensions of bicycle facilities will vary along the corridor. The following pages depict the design concept as of January 11, 2018, which is subject to change as engineering design is completed over the coming months.

### Before-and-After Assessment

A before-and-after study will be conducted to assess outcomes for all street users, including people bicycling, walking, driving, using transit, and transporting goods, based on data and community engagement. The data collection period informing the evaluation will last through December 2018. Some examples of the issues to be addressed include:

- How will bicycle use in Downtown change? Will people ride more often or for a wider variety of trip purposes?
- Will the bikeway reduce the rate and severity of conflicts between people driving, biking, and walking?
- Will auto travel time be impacted, and if so, by how much? Do the project's benefits outweigh its impacts?
- Where are the weakest links, and what would be required to improve them if the demonstration project is refined or ultimately made permanent?
- Does the public support the project after installation?

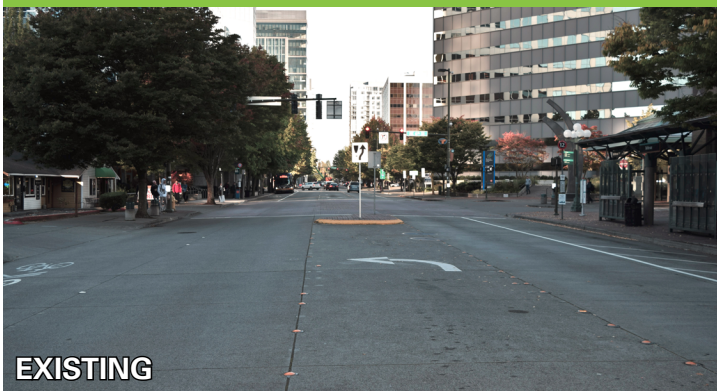


## » 108TH AVE NE MAIN ST TO NE 12TH ST

### BICYCLE FACILITY IMPROVEMENTS

The project would install high-comfort bikeways from Main St to NE 12th St. Improvements would include protected bike lanes (posts or planter box separation), buffered bike lanes (paint separation), striped bike lanes (standard paint stripe), and shared lane markings (sharrows) along various segments of the corridor. Shared lane markings would only be used in segments where the presence of physical infrastructure (e.g. an existing crosswalk refuge island, a planted median) results in spaces that are too narrow to maintain continuous bike lanes. The visualization below and the map and street section illustrations on the following pages provide an indication of how the concept under consideration could be implemented. Design details are subject to change as engineering work is completed.

At NE 6th St (Bellevue Transit Center), looking north



EXISTING



CONCEPT

### TRADE-OFFS AND OUTCOMES

Overall, the bicycle facilities under consideration would provide a bicycling environment that is expected to be comfortable for most adults. It is not possible to achieve a design that is truly an “all ages and abilities” facility as a demonstration project, as that would require continuous protected bike lanes or physically separated bikeways along the entire length of the corridor—which would be significantly more expensive and could not be implemented rapidly.








The 108th Ave NE corridor has no significant hills, but bikeway continuity would be impacted midday at one location where private construction is ongoing. These demonstration facilities would connect to existing bicycle improvements on 108th Ave SE south of Main St (installed in 2017) and improvements planned and funded for installation in 2018 from NE 12th St to NE 24th St (levy project).

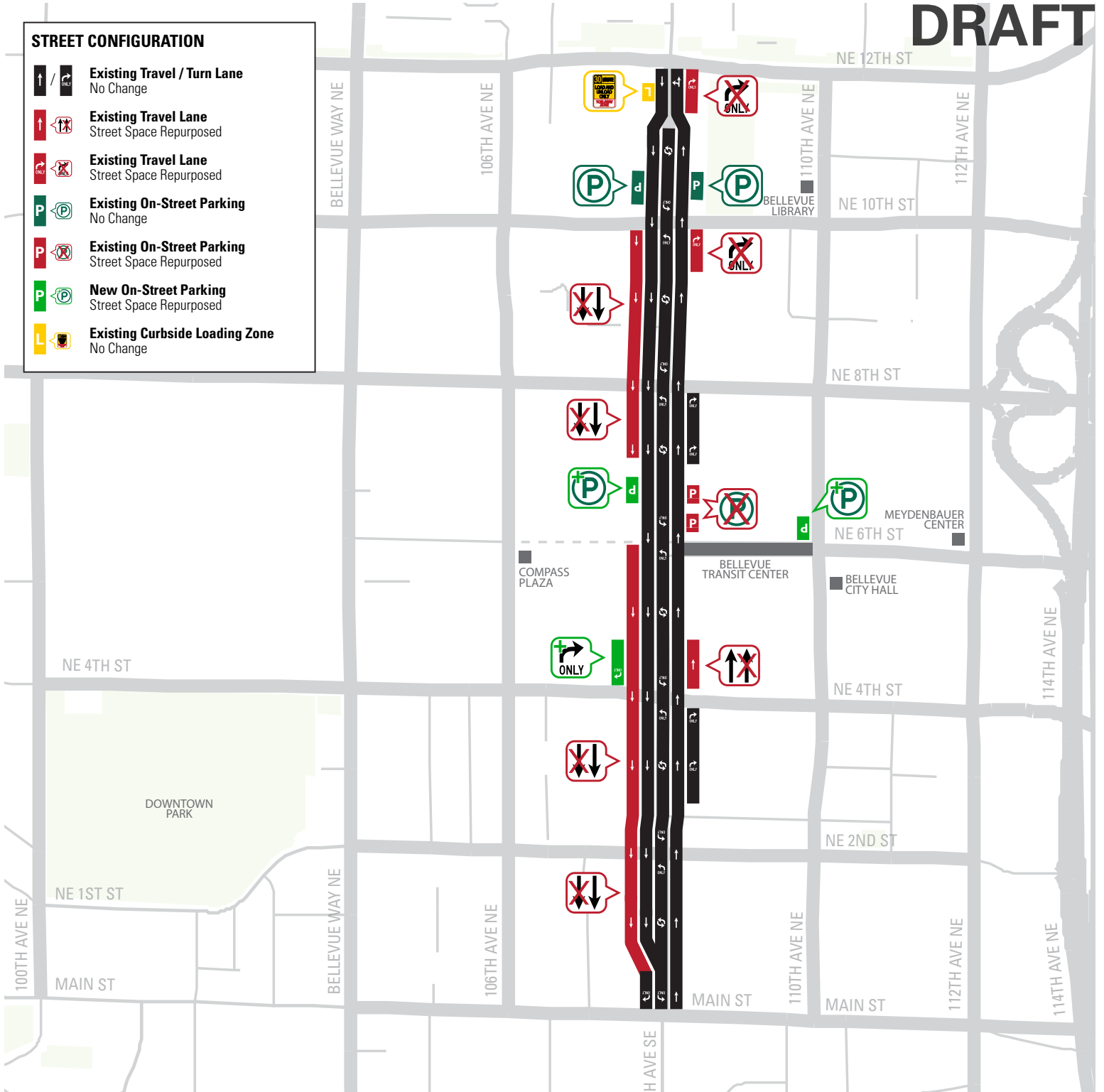
Bicycle improvements on 108th Ave NE would be accomplished by (i) repurposing one southbound travel lane from NE 10th St to approximately NE 7th St and from NE 6th St to north of Main St; (ii) repurposing northbound right turn lanes at NE 12th St, NE 10th St, and north of NE 4th St; and (iii) relocating existing pick-up/drop-off parking north of NE 6th St to other locations near the transit center. Other existing travel and turn lanes and on-street parking would be retained, and a new southbound right turn lane would be created at NE 4th St. The diagram on the opposite page depicts these modifications to the existing street configuration.



**DRAFT**

**STREET CONFIGURATION**






-  **Existing Travel / Turn Lane**  
No Change
-  **Existing Travel Lane**  
Street Space Repurposed
-  **Existing Travel Lane**  
Street Space Repurposed
-  **Existing On-Street Parking**  
No Change
-  **Existing On-Street Parking**  
Street Space Repurposed
-  **New On-Street Parking**  
Street Space Repurposed
-  **Existing Curbside Loading Zone**  
No Change

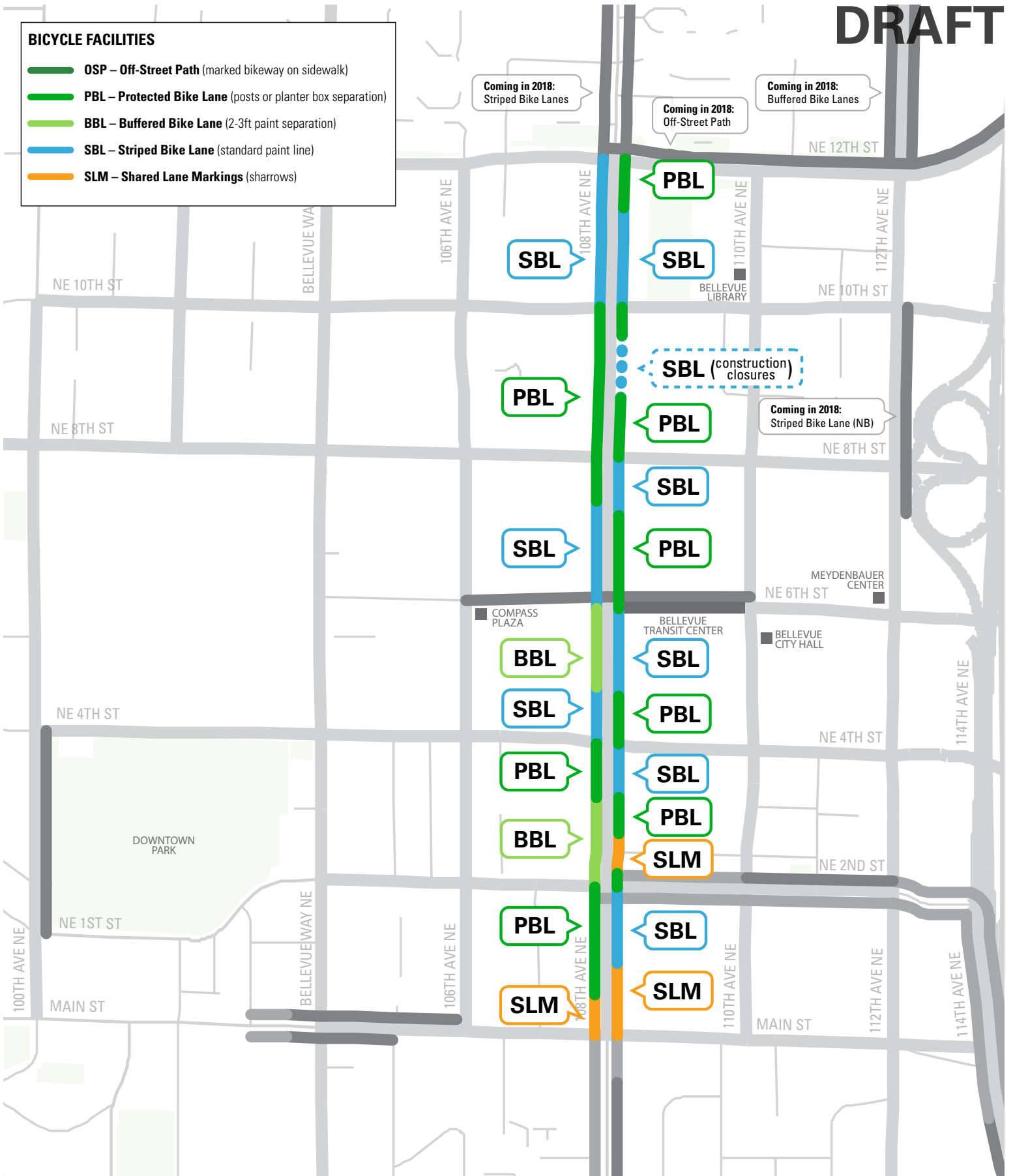


*Note: Tradeoffs based on bikeway design as of January 11, 2018. Design details are subject to change as engineering work is completed.*

# DRAFT

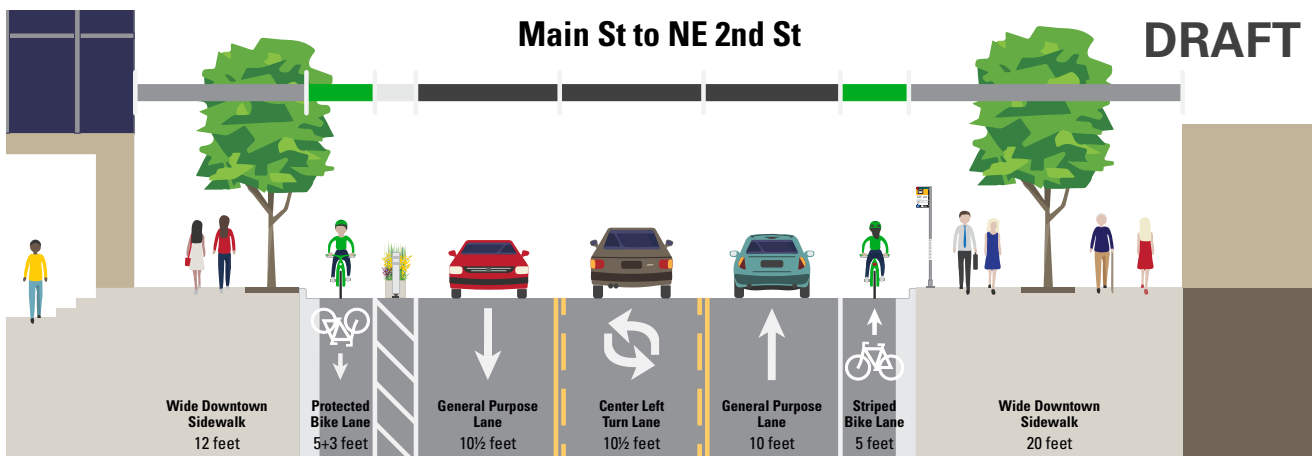
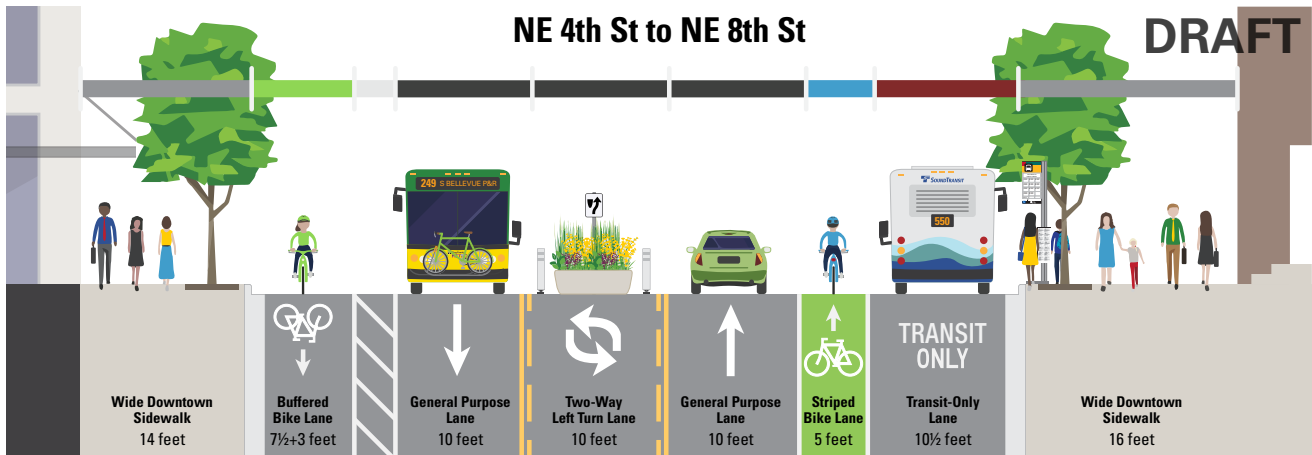
### BICYCLE FACILITIES

-  **OSP – Off-Street Path** (marked bikeway on sidewalk)
-  **PBL – Protected Bike Lane** (posts or planter box separation)
-  **BBL – Buffered Bike Lane** (2-3ft paint separation)
-  **SBL – Striped Bike Lane** (standard paint line)
-  **SLM – Shared Lane Markings** (sharrows)



Note: Design details are subject to change as engineering work is completed. Dimensions shown on opposite page are representative.





# » CITYWIDE BIKE SHARE PERMIT PILOT PROGRAM OVERVIEW

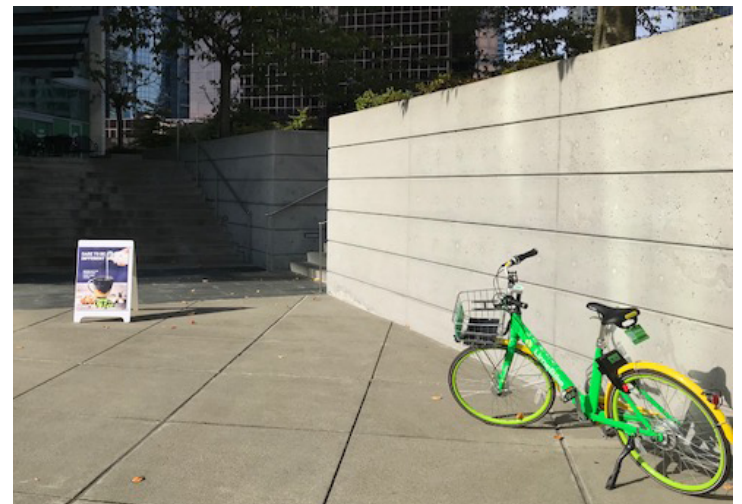
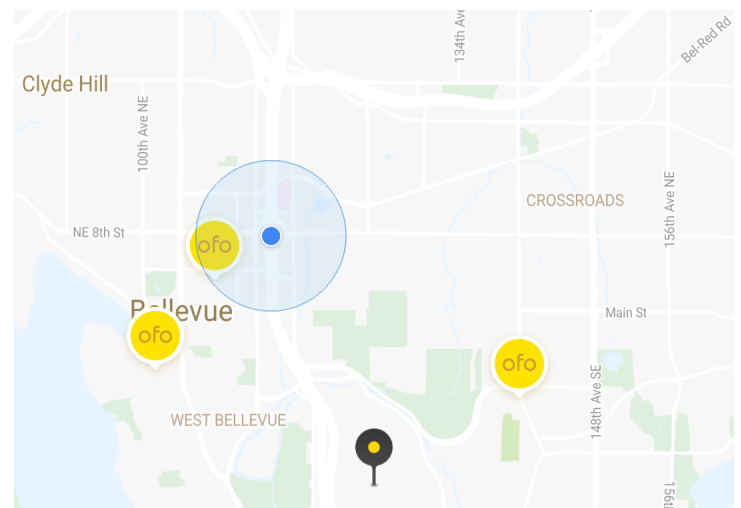
## PURPOSE

The city's interest in bike share stems from its goals and policies to facilitate mobility options. We want people who live in, work in, and visit Bellevue to have more choices about how they get where they want to go.

Several bike share companies have expressed an interest in operating in Bellevue, and local businesses and members of the public have asked to have bike share introduced as a travel option. In an online survey that was available from September through October of 2017, nearly 400 respondents (about 55%) indicated that they would use bike share if it was available in Bellevue today. A variety of concerns have also been expressed, which are generally consistent with those reported by media in other communities with free-floating bike share services.

The intent of a bike share permit is to establish a legal framework for private companies to operate bike share services in Bellevue as a pilot program for a period of up to one year. Compliance with permit terms will be monitored carefully and enforced as warranted to ensure consistency with community values. Data will be collected from bike share operators and via community engagement, which will inform evaluation of the program. Without a permit, the city would have little influence over how private bike share is operated in Bellevue, likely resulting in antagonistic rather than cooperative relations with regional service providers.

The City of Bellevue is not currently considering the investment of city funding into owning or operating a bike share service. If a bike share demonstration is launched in 2018, it will be privately funded. The city's role is primarily one of regulation and enforcement—determining how bike share companies are allowed to operate here and ensuring that they abide by those requirements once established.



## BACKGROUND

Bike share is a shared mobility option that is ideal for short distance, short duration, point-to-point trips. Users pick up a bicycle in one location and park it in another. Bike share is a convenient, low-cost transportation option that helps people connect to transit, improves the pedestrian experience, facilitates spontaneous trips farther or more quickly than by walking, and increases bicycling in communities where it is available.

In July 2017, the City of Seattle introduced a pilot permit allowing and regulating private bike share operations citywide. The permit applies to station-based and free-floating bike share service models; however, all currently permitted operators use free-floating, self-locking bikes without physical stations that are accessed via smartphone apps. Issued permits are valid through December 31, 2017 or a later date not to exceed one year as approved by the Seattle DOT. In early 2018, SDOT staff will undertake an evaluation of the data collected through December 2017 and make recommendations about how the program should be modified.

Some of the bikes from Seattle have been seen on Bellevue streets at various times since the pilot program launched in July 2017. Multiple companies are seeking permission to formally expand their operations into Bellevue. With or without a permit in place, it may be necessary for Bellevue to respond to issues related to bike share bikes being used and parked in Bellevue by people traveling from Seattle—particularly following the recent opening of the 520 Bridge Trail. A formal permit and close working relationship with private bike share operators could help to simultaneously provide a new mobility option for people in Bellevue and minimize the extent to which issues arise without a clear process for managing them.

## POLICY

Bellevue's adopted Comprehensive Plan and Council-approved Pedestrian and Bicycle Implementation Initiative (PBII) scope of work direct staff to evaluate and support establishment and operation of bike share.

### Comprehensive Plan

**TR-16.** Evaluate and facilitate car-sharing and bike sharing programs.

**TR-115.** Support establishment and operation of a bicycle sharing program in Bellevue.

### PBII Scope of Work

**Task 6** – Provide people in Bellevue access to a bicycle when they want one, without having to worry about storage, security, and maintenance.

Task 6.1 – Establish a vision, articulate goals and objectives, and define measures of effectiveness for a bike share service operating in Bellevue.

Task 6.2 – Complete an assessment of the market potential for bike share service in Bellevue informed by both community outreach and technical analysis.

Task 6.3 – Develop the system plan for the implementation of bike share in Bellevue, including the service area, system size and phasing, hub locations, and guidelines for permitting.

Task 6.4 – Develop an estimate for the capital and operating costs associated with the system plan.

Task 6.5 – Publish a Bellevue Bike Share Feasibility and Implementation Report that assess the potential for and defines the process, parameters, costs, funding strategies, and timeline by which bike share would be implemented in Bellevue.

## COMMUNITY ENGAGEMENT

### Eastside Bike Share Vendor Fair

The Eastside Bike Share Vendor Fair was held on Sep. 27, 2017 from 5–7 p.m. at Bellevue City Hall to provide a broad audience the opportunity to learn about the diverse array of bike share products offered by a variety of companies. The informational event was hosted in collaboration with King County Metro, Redmond, Kirkland, and Issaquah. Six bike share companies from across North America and China had representatives available to demonstrate their products and answer questions.

### Online Survey

More than 800 people responded to the [online survey](#), available from Sep. 8 through Oct. 30, 2017. The survey asked the public about their familiarity with bike share in other cities and their interest in seeing bike share come to Bellevue. Some takeaways include:

- 55 percent (378/691) said they would use bike share if it was available in Bellevue today. 24 percent said they were not sure; 22 percent said they would not.
- 71 percent (489/686) said they would use bike share in Downtown Bellevue, 32 percent in BelRed, 31 percent in Crossroads, and 23 percent in Eastgate/Factoria.
- 69 percent (555/804) feel somewhat or very unsafe riding a bicycle in Downtown.
- 45 percent (310/695) had never used any type of bike in other cities. About 40 percent had used station-based and free-floating programs in other cities.
- Among six bike share service qualities, convenience (service area and number of bikes) was ranked the most important by 29 percent (194/666).
- 80 percent (408/511) said they would ride in Downtown somewhat or much more often than they do now if bike share was available.

The most common concerns expressed in write-in comments relate to the need for more safe bike lanes (82 / 17%) and protected bike lanes (53 / 11%) in Bellevue, opposition to using city funding for bike share (44 / 10%), and concern about bike clutter (36 / 8%).

## PROGRAM GOALS

The following describes the City's goals for the regulation of privately operated bike share through a Right-of-Way Use Permit.

- **Pilot Goal:** Implement a long-term, limited-duration permit, not to exceed one year, during which private bike share operations may use and occupy the public right-of-way to provide free-floating or hub-based services with conventional or electric pedal-assist bicycles in accordance with the requirements established.
- **Safety Goal:** Ensure that bike share bicycles are safe to ride, helmet use and safe riding behavior is encouraged, and operators assume all liability for their use of the public right-of-way.
- **Parking Goal:** Facilitate the convenient provision of bicycles where people want them while maintaining orderly and accessible public space and minimizing impacts to private property.
- **Operations Goal:** Ensure that fleets are responsibly managed and permitted operators are responsive to maintenance needs, City permit compliance notifications, and user feedback.
- **Data Goal:** Collect bicycle availability, usage, user profile, collision, and complaint data from all permitted operators to support program oversight and help inform infrastructure investment priorities.
- **Enforcement Goal:** Monitor operations for compliance with the requirements established, issue warnings or penalties to address noncompliance, and enact additional or altered permit conditions as needed to resolve problems based on the data provided to the city as part of the pilot program.
- **Fees Goal:** Recuperate all costs incurred to the city to administer and oversee privately owned and operated bike share services.