

Seattle Department of Transportation

# MOVE BALLARD



## Near-Term Project Concepts for the Ballard Hub Urban Village



# CONTENTS

<b>1 BACKGROUND</b>	<b>4</b>
1.1 Purpose	4
1.2 Objectives	5
<b>2 EXISTING TRANSPORTATION CONDITIONS</b>	<b>6</b>
2.1 Street Network	6
2.2 Pedestrian Network	11
2.3 Bicycle Network	12
2.4 Transit Network	14
2.5 Freight Network	15
<b>3 EXISTING PLANS</b>	<b>17</b>
3.1 Pedestrian Master Plan (2009 – Currently Being Updated)	17
3.2 Transit Master Plan (2012 – Updated 2016)	18
3.3 Bicycle Master Plan (2014)	20
3.4 Freight Master Plan (Ongoing)	21
3.5 Move SEattle	21
<b>4 COMMUNITY OUTREACH</b>	<b>22</b>
4.1 Outreach Overview	22
4.2 Phase I Outreach	22
4.3 Phase II Outreach	25
<b>5 MULTIMODAL PROJECT EVALUATION CRITERIA AND PRIORITIZATION</b>	<b>27</b>
5.1 Developing the Project List	27
5.2 Prioritization Criteria	28
<b>6 PRIORITIZED PROJECT LIST</b>	<b>30</b>
<b>7 STATION AREA ASSESSMENT</b>	<b>43</b>
7.1 Purpose of the Station Area Assessment	43
7.2 Evaluating Transit Orientation	43
7.3 Station Area Comparison	44
7.4 Results	45

# 1 BACKGROUND

## 1.1 PURPOSE

The Ballard neighborhood has experienced significant residential growth over the past 15 years. Between 2000 and 2010 alone, the population increased by 24 percent and the number of housing units grew by nearly 40 percent in a largely built-out urban environment. More recently, in the five years since 2010, there was about 30 percent net growth in residential units (about an additional 2,200 more units added to the existing 7,000 or so units) within the same area. Plans for future high capacity transit will potentially spur sustained growth and change in the Ballard Hub Urban Village.

As the urban village becomes more dense, there is increasing need to plan for mobility choices and safety improvements. *Move Ballard* is a plan to identify and prioritize near-term multimodal transportation studies and improvements to help meet the transportation demands of the neighborhood. *Move Ballard* has been developed in coordination with the *Ballard Urban Design Framework*. Together, these two plans articulate a shared vision and strategies to guide future development and transportation investments in Ballard.

*Move Ballard* incorporates the goals and objectives of other planning work, including existing neighborhood plans, previous transportation studies, and citywide modal plans (including the master plans for pedestrian, bicycle, transit, and freight modes). Furthermore, in anticipation of a possible Sound Transit 3



*New Development: Move Ballard is a transportation plan to ensure mobility as Ballard continues to grow and change.*

project list and vote in the fall of 2016, this study evaluates and prioritizes potential future light rail stations identified in the *Ballard to Downtown Seattle Transit Expansion Study* (2014). Understanding the neighborhood's preference for high capacity transit (HCT) station locations along with the connectivity and mobility challenges to reach those stations will allow the Seattle Department of Transportation (SDOT) to more effectively partner with Sound Transit to implement HCT in Ballard.

## 1.2 OBJECTIVES

The primary objectives of *Move Ballard* are summarized below:

- Identify existing accessibility and mobility challenges for all modes of transportation through extensive community outreach
- Review prior studies, existing modal plans, and work with local organizations to identify project concepts that best meets Ballard's needs and goals
- Develop an integrated land use and transportation strategy by coordinating with the *Ballard Urban Design Framework*
- Enhance safety and convenience of more space efficient transportation modes (transit, bicycle, pedestrian) in order to enhance mobility while maintaining freight and vehicle access
- Identify community preferences for future potential light rail station locations and understand the transit-oriented development (TOD) potential in Ballard



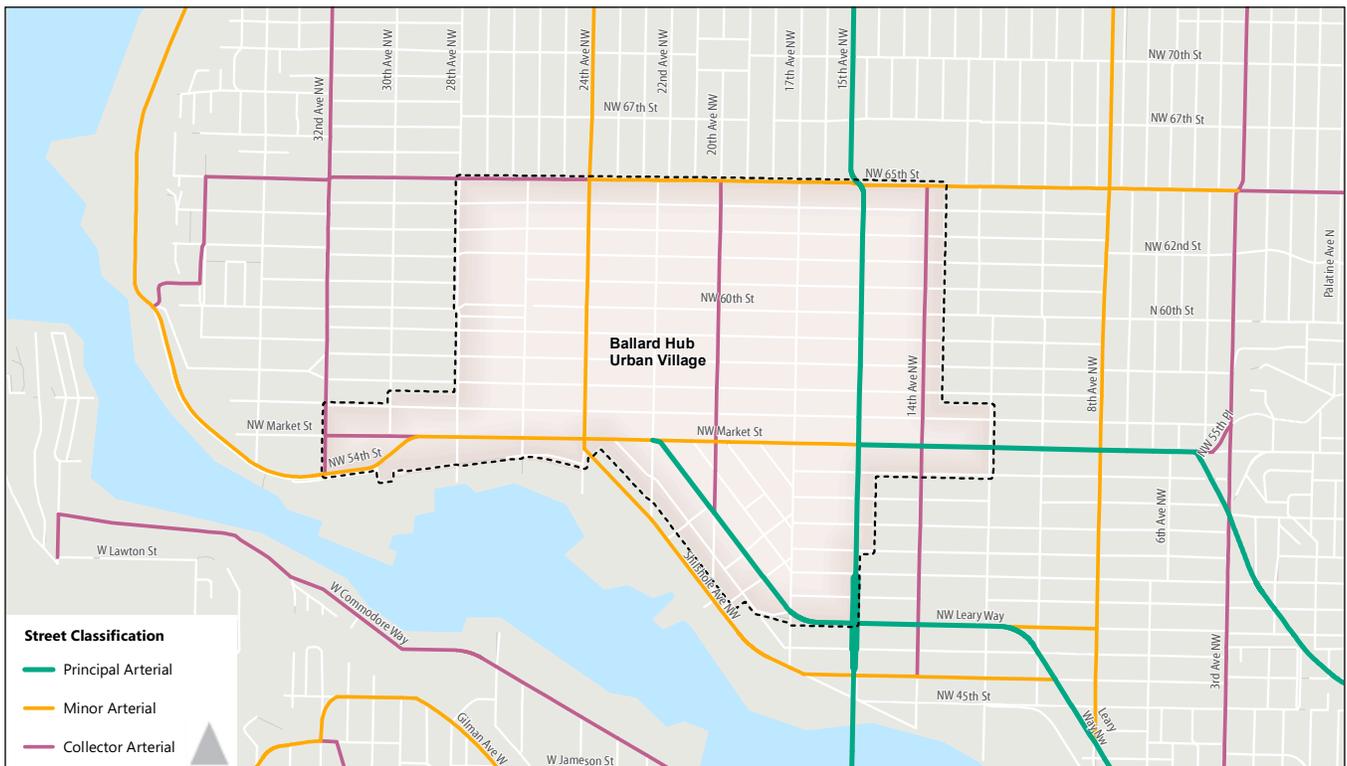
# 2 EXISTING TRANSPORTATION CONDITIONS

## 2.1 STREET NETWORK

The Ballard Hub Urban Village streets are laid out on a cardinal grid, except for a portion of old Ballard with diagonal streets aligned with Salmon Bay (bordered by Shilshole Ave 15th Ave, and Market St). In this triangle, the off-angle streets results in irregular intersections that can be challenging to navigate, as shown in the photo

of Leary Ave and 20th Ave. See **Figure 1** for a map of the study area and street grid. In general, the grid of streets allows for multiple routes for all travelers and is generally considered more conducive to walking and biking. Ballard's street grid lays a good foundation for an interconnected multimodal transportation system.

**FIGURE 1: BALLARD HUB URBAN VILLAGE STUDY AREA**



Source: City of Seattle



*The intersection of Leary Avenue, 20th Avenue, and Vernon Place has five legs approaching at unusual angles.*

As Ballard developed, it was laid out with streets of varying widths. Some of the neighborhood's wider streets like 14th, 15th, 20th, and 24th Aves made up portions of Seattle's early streetcar network.

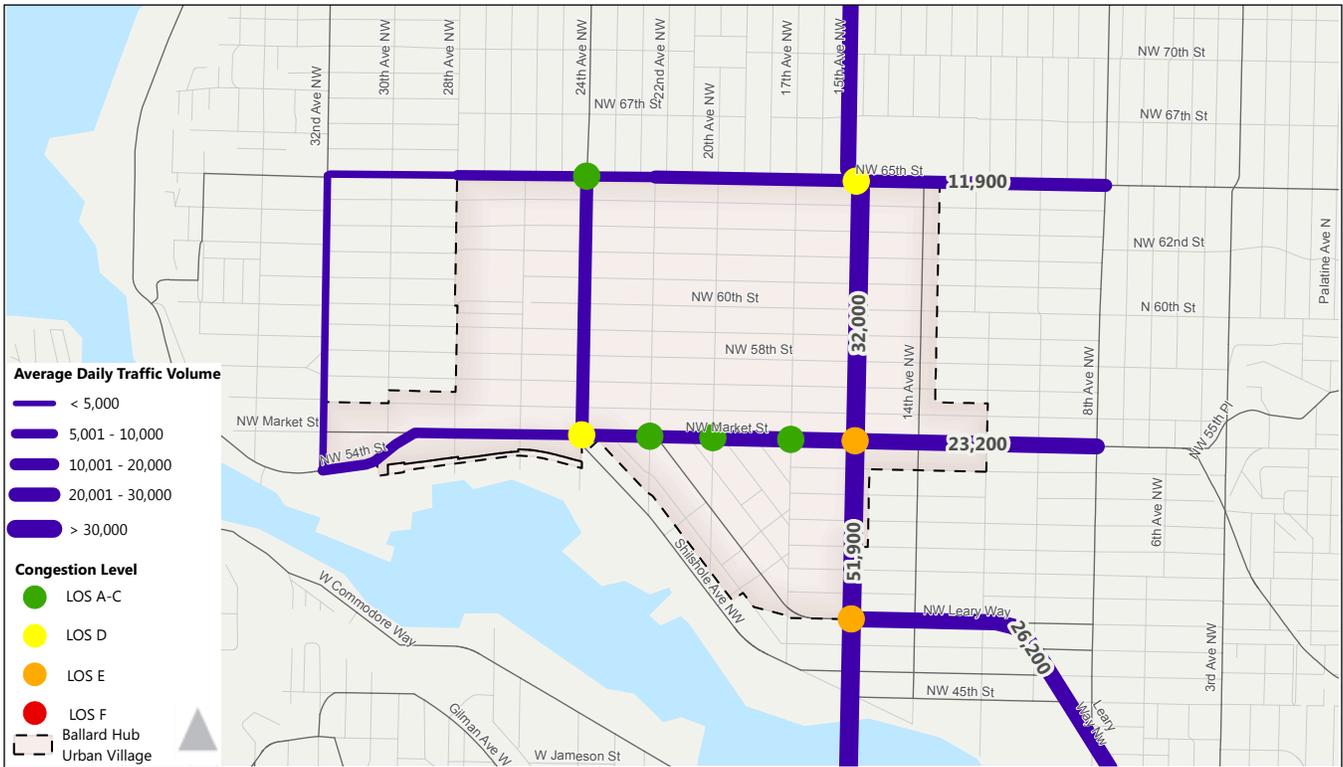
The variety of street widths in Ballard is typical for Seattle neighborhoods and provides space for different transportation options on different streets. Wide streets with lower traffic volumes may provide the opportunity to remove lightly-used travel lanes for other modes. Narrow streets, on the other hand, can be challenging to reconfigure to improve freight access or add bicycle lanes. Wide, busy streets like 15th Ave and Market St can be difficult to cross without a traffic signal for all travelers. **Figure 2** shows the right-of-way widths for major streets in Ballard.



*Some major streets in Ballard have relatively low traffic volumes, like the section of Leary Avenue between Market Street and 17th Avenue.*



**FIGURE 3: AVERAGE DAILY TRAFFIC VOLUMES**



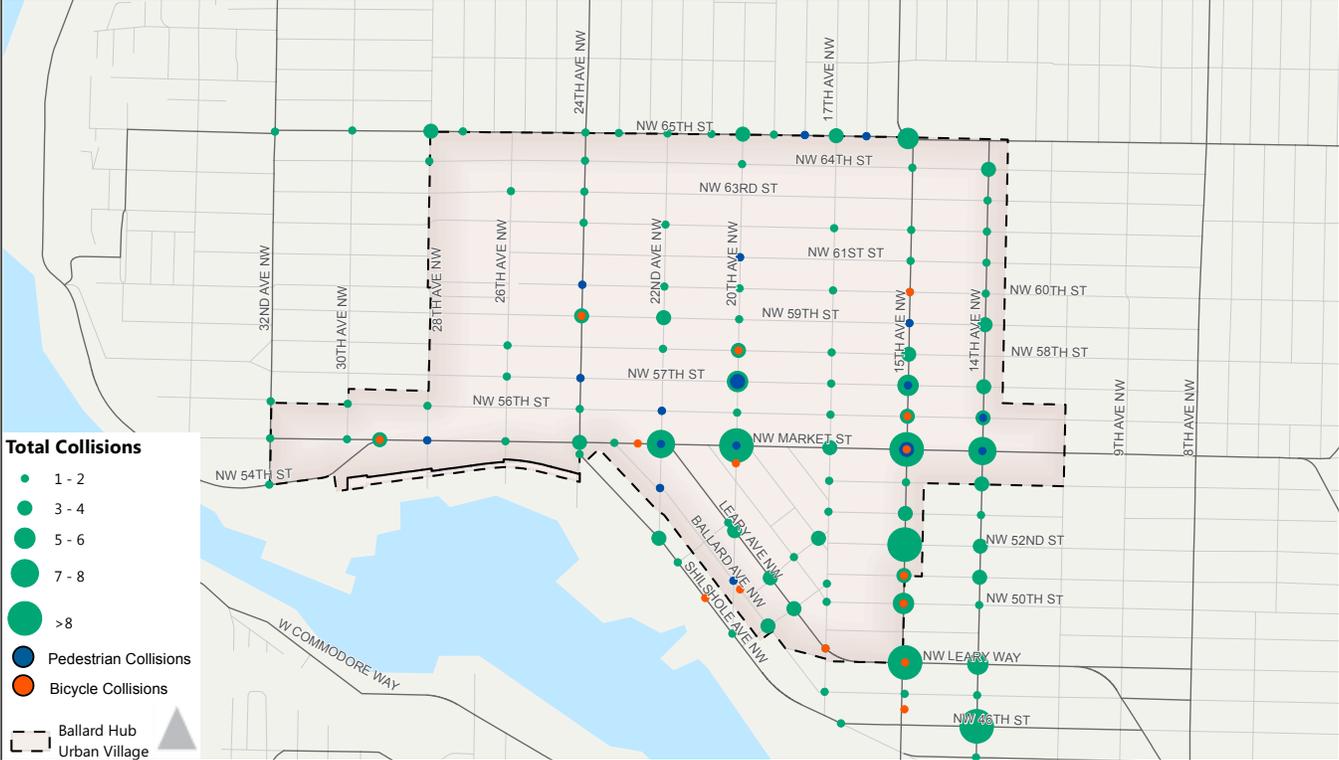
Source: City of Seattle

A review of collision data (2012-2014) indicates that Ballard is relatively typical for Seattle neighborhoods, with most collisions involving vehicles only. Vehicle collisions tend to be concentrated on the busiest arterials in Ballard, particularly on Market St, 15th, and 14th Ave (**Figure 4**). Pedestrian and/or bicycle collisions are concentrated at intersections locations

along the 15th Ave and Market St corridors. Beyond these major streets, the intersection of 20th Ave/57th St has also been the site of three pedestrian collisions between 2012 and 2014. An analysis of collisions on the street network indicates that Ballard does not have any “High Collision Locations” as defined by SDOT<sup>1</sup>.

<sup>1</sup>A High Collision Location is an area with more than 10 collisions per year if there is a traffic signal or 5 collisions per year if there is not a traffic signal.

**FIGURE 4: TOTAL COLLISIONS (2012 - 2014 DATA)**



Source: City of Seattle



*The intersection of 20th Avenue/57th Street has a relatively high number of pedestrian –vehicle collisions.*



*The busy intersection of Market Street/Leary Avenue/22nd Avenue has several high activity “conflict points” between people walking, biking, and driving.*

## 2.2 PEDESTRIAN NETWORK

The Ballard Hub Urban Village has a relatively complete pedestrian network along the street grid that facilitates walking. Sidewalks exist on almost all streets; however, there are some sections that are missing on and near Shilshole Ave in the Ballard Interbay Northend Manufacturing and Industrial Center (BINMIC). Sidewalk conditions are variable, with several areas exhibiting aged, worn, narrow, cracking, and uneven surfaces. The sidewalks along Ballard Ave are relatively narrow when considering adjacent pedestrian-oriented destinations like restaurants, retail, and the Ballard Farmers Market, which could take advantage of more space for café seating, retail displays, or additional market space. New sidewalks built as part of redevelopment are wider with landscaping and Americans with Disabilities (ADA) compliant curb ramps.



*Sidewalk along Ballard Avenue near 20th Avenue is narrow and uneven.*



*The intersection at 15th Avenue and Market Street is large and busy with cars, trucks, and buses. Generous landscaped buffers and wider sidewalks could enhance pedestrian safety and comfort across 15th Ave NW.*





*When people bike on sidewalks, it often illustrates where they want to be and where there are gaps in the bike network.*

Traveling east-west through Ballard can be challenging due to limited access across the 15th Ave arterial. The BGT is the primary east-west bicycle corridor, but there is a gap along a key segment, known as the “Missing Link,” between 11th and 30th Aves NW. We are currently studying how to design a continuous bicycle facility that

also supports the movement of other modes. Another challenge is crossing Salmon Bay to the south. One route is on the Ballard Bridge, however the limited sidewalk widths on the bridge create a challenging north-south crossing for people walking and biking.

## 2.4 TRANSIT NETWORK

Bus service exists between Ballard and major destinations in Seattle. The following routes serve Ballard:

- RapidRide D (Downtown Seattle, Uptown, Queen Anne, Interbay, Crown Hill)
- Route 15 (Downtown Seattle, Uptown, Queen Anne, Interbay, Crown Hill, Blue Ridge)
- Route 17 (Downtown Seattle, Queen Anne, Ballard, Sunset Hill, Loyal Heights)
- Route 18 (Downtown Seattle, Uptown, Queen Anne, Interbay, Loyal Heights, North Beach)
- Route 28 (SoDo, Downtown Seattle, Queen Anne, Fremont, Greenwood, Broadview)
- Route 29 (Queen Anne, Downtown Seattle)
- Route 40 (Downtown Seattle, South Lake Union, Fremont, Crown Hill, North Beach, North Seattle College, Northgate)
- Route 44 (Government Locks, Wallingford, University District, Montlake)

Bus service to the neighborhood is frequent, with RapidRide D and routes 40 and 44 providing better than 15 minute frequency throughout the day. As part of the Market/45th Transit Improvement Project, we have improved Route 44 speed and reliability through transit signal priority, stop consolidation, bus bulbs, and more efficient signal and intersection design (e.g. Market and 24th). However, some service can be slow due to traffic congestion and a lack of dedicated right-of-way, particularly on Route 44 between Ballard and the University District and RapidRide D through Uptown. The stops in Ballard with the highest daily ridership are generally located on Market St and 15th Ave (see **Figure 6**). The locations with the highest boardings are Market St and 15th Ave (1,700 daily boardings) and Market St and Ballard Ave (1,300 daily boardings). Transit stop amenities in Ballard are typical of Seattle, with shelters and benches near higher ridership stops. The RapidRide D Line has additional amenities such as real time arrival signs and ORCA pass readers. Some high ridership stops have inadequate passenger waiting areas, with narrow sidewalks that do not accommodate all riders waiting for transit.

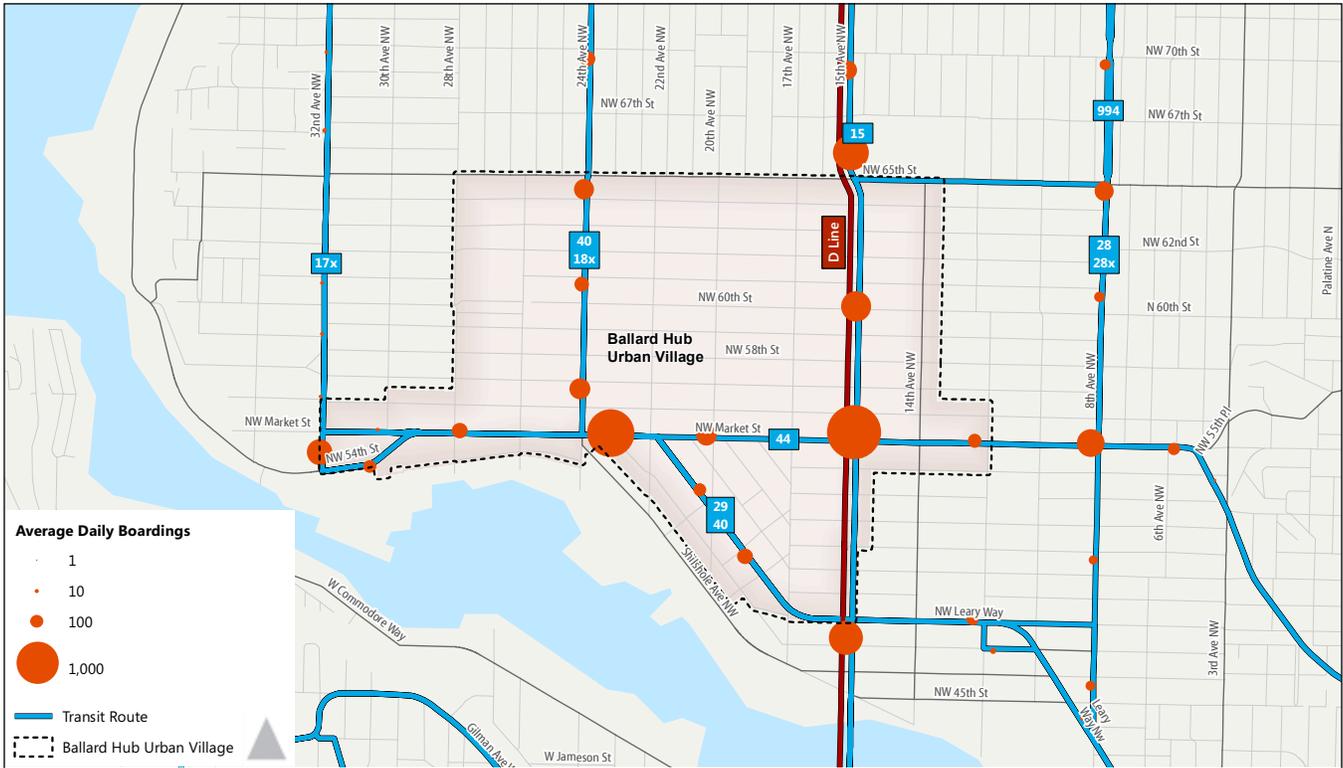


*Crowded bus stop at 15th Avenue/65th Street with people heading toward Downtown Seattle.*



*People waiting for the Route 44 near 15th Avenue/Market Street.*

**FIGURE 6: TRANSIT ROUTES AND RIDERSHIP**



Source: City of Seattle

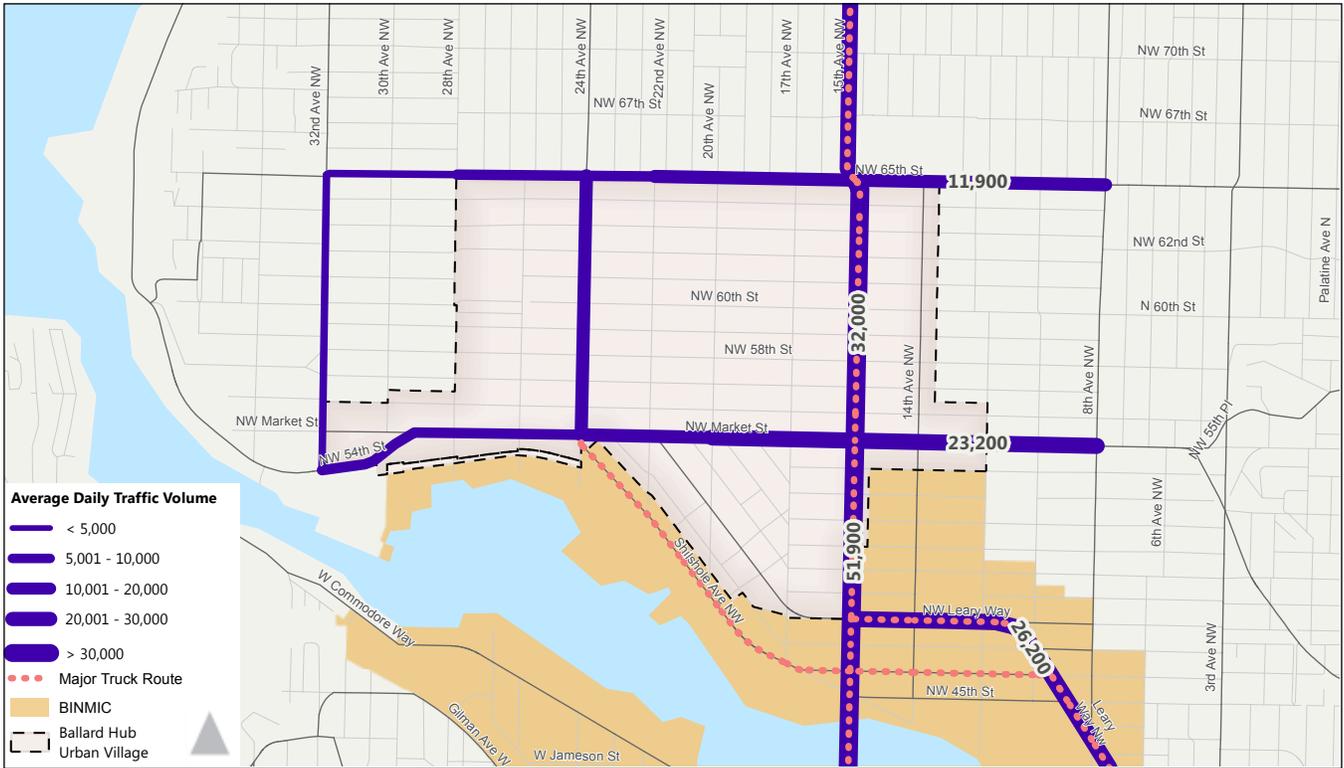
## 2.5 FREIGHT NETWORK

The Ballard Interbay Northend Manufacturing & Industrial Center (BINMIC) adjacent to the study area is a designated industrially zoned area that relies on regional freight access to distribute products and receive supplies. The increasing density of Ballard also means that there are more trucks serving construction sites and delivering products. Therefore, supporting freight and local access are high priorities in *Move Ballard*.

A major truck street is an arterial street that accommodates significant freight movement through the city, and to and from major freight

traffic generators. Typically designated as principal arterials, major truck streets generally carry heavier loads and higher truck volumes than other streets in the city. SDOT uses the designation of major truck street on an on-going basis as an important criterion for street design, traffic management decisions and pavement design and repair. The current designated major truck streets in Ballard include Shilshole Ave, 15th Ave, and Leary Way east of 15th Ave (see **Figure 7**). In addition to the major truck street network, the City's Freight Master Plan is under development and will provide guidance on improving freight mobility throughout Seattle.

**FIGURE 7: MAJOR TRUCK ROUTES AND VEHICLE VOLUMES**



Source: City of Seattle



Photo on left shows a truck unloading goods at a Ballard Avenue storefront; photo on right shows trucks on 15th Avenue, which is a Major Truck Route.

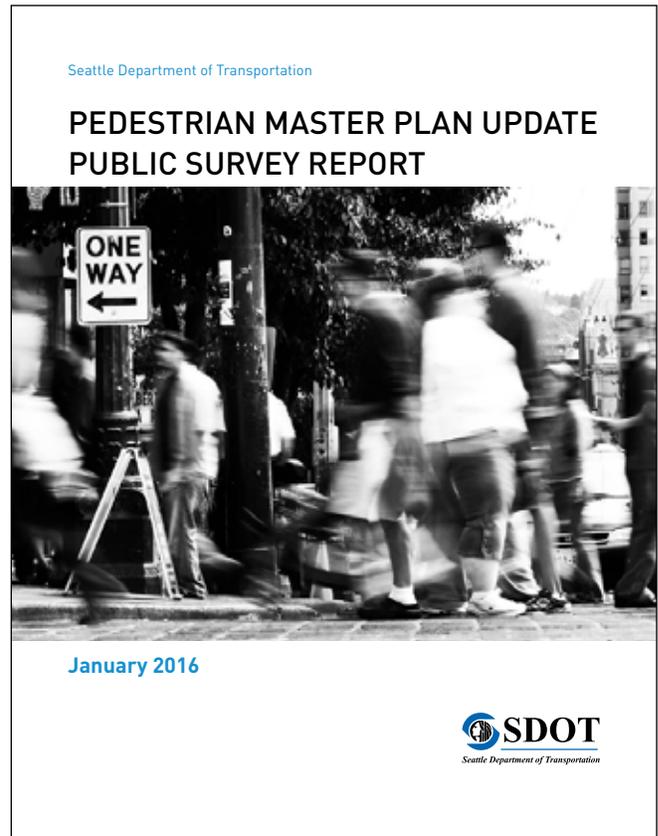
# 3 EXISTING PLANS

Since 2009, the City of Seattle has created or is in the process of updating citywide modal plans for pedestrian, bicycle, transit, and freight. These plans are 20-year look aheads that set a vision for a quickly growing Seattle. They served as the starting point for developing the universe of projects that were evaluated and prioritized as part of *Move Ballard*. However, *Move Ballard* analyzed modal plan priorities and local conditions to identify and prioritize specific projects that address specific neighborhood transportation issues and modal plan goals.

## 3.1 PEDESTRIAN MASTER PLAN (2009 – CURRENTLY BEING UPDATED)

The 2009 Seattle Pedestrian Master Plan (PMP) includes policies, programs, and a prioritization framework to direct investments to make Seattle a safer, more walkable city. Using data-based assessment, the plan identifies “High Priority along the Roadway” and “High Priority Crossing the Roadway” locations for improvement. **Figure 8** shows the 2009 high priority opportunity areas for Ballard, with locations along Market St, 15th Ave, 14th Ave, 65th St, and Shilshole Ave. Also shown is the pedestrian activity on key arterials roadways throughout the study area.

We are currently updating the PMP, which will update the prioritization process, revise the toolbox of strategies, establish performance targets, and develop a five-year implementation plan. Pedestrian priorities in Ballard may change under the updated PMP.





a Seattle streetcar network (**Figure 9**). Three corridors that serve the Ballard area include:

- RapidRide D: Crown Hill – Ballard – Downtown
- RapidRide 5: Ballard – U District – Laurelhurst via Market St/45th St
- RapidRide 6: Northgate – Ballard – Downtown

**FIGURE 9: SEATTLE LONG-RANGE HIGH CAPACITY TRANSIT VISION**



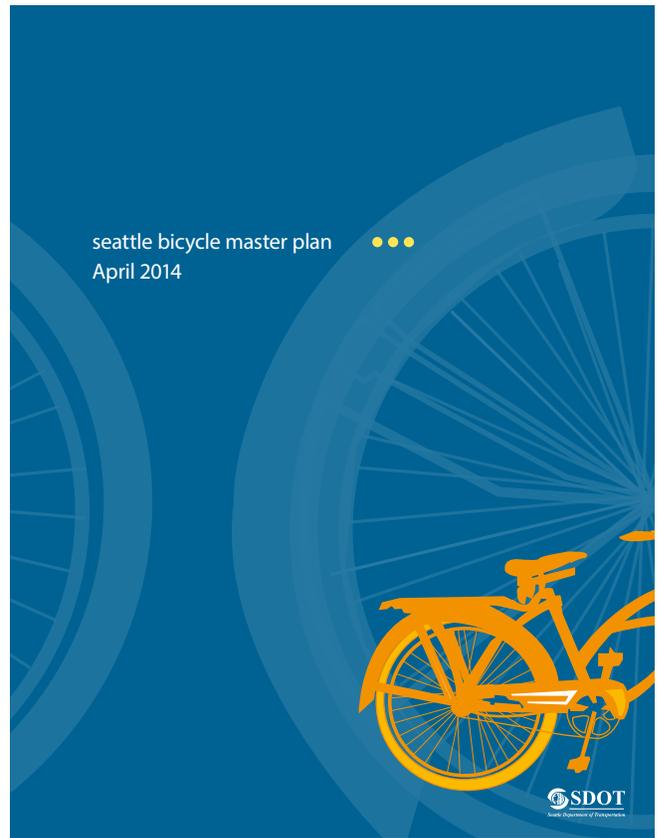
Source: City of Seattle

### 3.3 BICYCLE MASTER PLAN (2014)

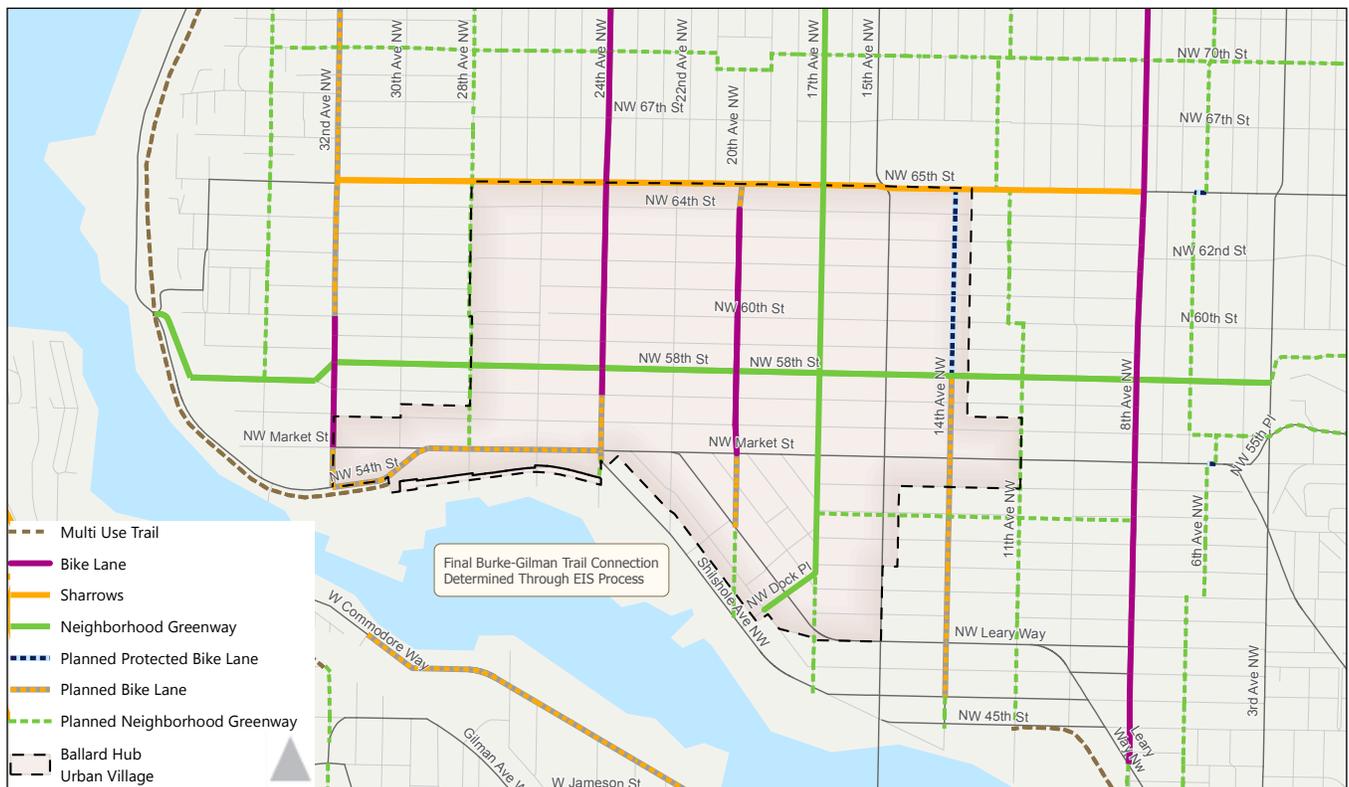
Adopted in spring 2014, the Seattle Bicycle Master Plan (BMP) sets forth a vision to make riding a bicycle a comfortable and integral part of daily life for people of all ages and abilities. Through it, we developed goals for bicycling in the city and mapped out a citywide network of routes with accompanying local connectors. The BMP also identifies facility types ranging from off-street trails to protected bicycle lanes and neighborhood greenways. Many streets in Ballard have planned bicycle facilities as shown in **Figure 10**.

The 2016 BMP Implementation Plan outlines projects slated for completion by 2020 and is updated annually. The BMP Implementation Plan includes the following Ballard-area projects. The scheduled year of completion is indicated in parentheses.

- 17th Ave Greenway (2016)
- Phinney Ave / 43rd St Bicycle Lanes (2015)
- 83rd St Greenway (2019)
- Burke-Gilman Trail Missing Link (2018)



**FIGURE 10: BIKE MASTER PLAN FUTURE NETWORK**



Source: City of Seattle

### 3.4 FREIGHT MASTER PLAN (ONGOING)

We are currently in the process of developing a Freight Master Plan (FMP). The plan will outline why freight is important to the city and will focus primarily on urban goods mobility and delivery. Elements of the plan will include an existing conditions report, policy framework, future conditions assessment, identification of near- and long-term improvements, design guidelines, and the creation of an implementation strategy that includes a prioritization framework.

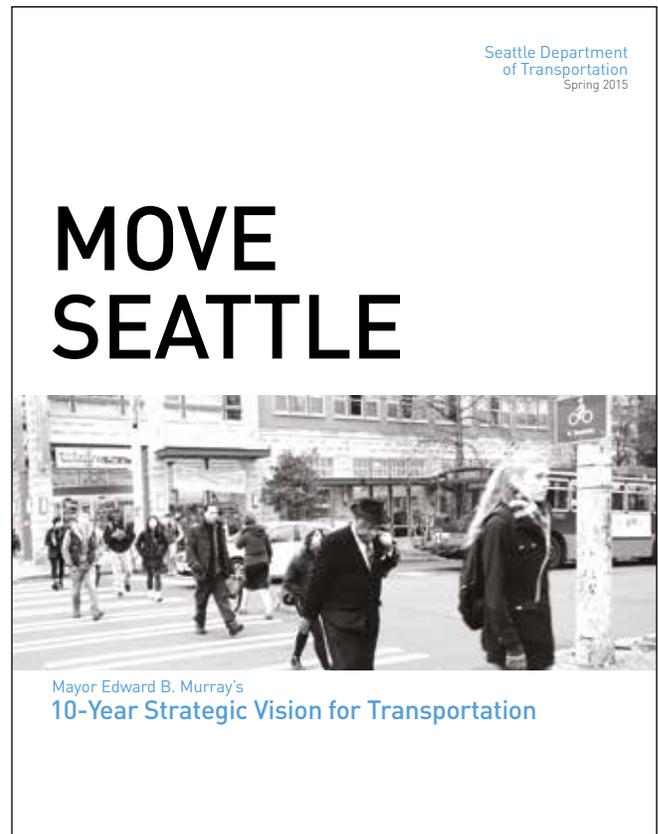
Ballard is adjacent to the Ballard-Interbay Northend Manufacturing Industrial Center (BINMIC), an industrial area that extends south to the northeast end of Downtown. The study area is serviced by the following major truck streets: 15th Ave, Leary Ave, and Shilshole Ave. With an active commercial core and its adjacency to the BINMIC, freight movement is an important piece of the neighborhood's transportation network.

SDOT is coordinating *Move Ballard* with the Freight Master Plan to ensure compatibility with future Freight Master Plan projects.



### 3.5 MOVE SEATTLE

In addition to these modal plans, the City identified strategic multimodal transportation projects to be implemented in the next 10 years in the Move Seattle plan. The Levy to Move Seattle passed in 2015, and this will be a funding source for the identified projects, most of which are mentioned in the modal plans.



# 4 COMMUNITY OUTREACH

To deliver on our commitment to inclusive outreach, we sought public input to ensure we heard representative voices during the *Move Ballard* planning process. This degree of outreach is important as transportation represents a significant cost for many households, but especially for low income households and seniors on fixed incomes. Improvements for people who walk, bike, and ride transit help ensure non-motorized forms of transportation are convenient, reliable, and safe options while cutting household transportation costs. Additionally, the outreach process included conversations with business and freight interests in the area. While Ballard has seen a significant influx of new residents over the past 15 years, additional employment will give more opportunity to both live and work within the community, thereby, elevating the importance of active transportation infrastructure.

## 4.1 OUTREACH OVERVIEW

Combined outreach efforts by SDOT and the Office of Planning and Community Development (OPCD) staff for the *Urban Design and Transportation Framework* (UDTF) (with *Move Ballard* as a

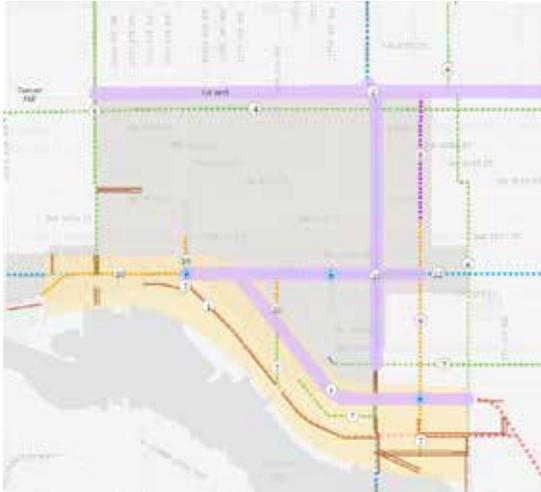
supplemental transportation component), resulted in engagement with a broad audience. The cornerstone to this outreach was the advisory role of the Urban Design and Transportation (UDaT) working group of the Ballard Partnership for Smart Growth representing more than 50 Ballard business, neighborhood, and community leaders. UDaT's monthly meetings provided a venue for city staff to receive input and gauge community sentiment during the identification, development, and prioritization of transportation improvement projects.

## 4.2 PHASE I OUTREACH

The emphasis of the first phase of outreach was to get community input on prioritizing improvement projects identified in the citywide modal plans, identify new potential improvement projects, and prioritize four future potential light rail station locations that were identified in the *Ballard to Downtown Seattle Transit Expansion Study* (2014). The project's online presence came by way of a website launched in early 2015 as well as a survey, which some 200 people took between April and June 2015.

### Ballard Multi-modal Transportation Projects Web Map Survey

The following transportation projects have been identified in Seattle's modal plans. The responses to this survey can help inform decision makers of the level of prioritization that is given to each project. The project numbers refer to the projects in the [Interactive Web Map Tool](#).



\* 1. Please identify the level of prioritization that should be given to each project.

**Definitions:**

**Hub Urban Village (HUV)** - communities that provide a balance of housing and employment.

**Neighborhood Greenway** - routes on residential streets that are designated and designed to give travel priority to bicyclists and pedestrians of all ages and abilities.

**Protected Bicycle Lane** - designated space for bicyclists that are physically separated from motor vehicle travel lanes, parking lanes, and sidewalks.

**Bicycle Lane** - designated space for bicyclists with pavement markings and signage.

	High priority	Somewhat high priority	Medium priority	Somewhat low priority	Low priority
(1) Sidewalk Improvements - Multiple locations within Ballard HUV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(2) Improved Crosswalks for Pedestrians/Bicyclists - along NW 65th St (from 28th to 8th Ave.), along Market St. (from 24th to 14th Ave.), & along 15th Ave. (north of Market St.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(3) Improved Crosswalks for Pedestrians/Bicyclists - along Leary Ave. NW & 15th Ave. (south of Market St.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(4) Neighborhood Greenway - along NW 64th St.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5) Neighborhood Greenway - along 28th Ave. NW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(6) Neighborhood Greenway - along 11/12th Ave. NW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(7) Neighborhood Greenway - south of NW Market St.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(8) Protected Bicycle Lane - along 14th Ave. NW (from 58th St. to 65th St.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(9) Bicycle Lane - along 14th Ave. NW (from 46th St. to 58th St.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(10) Bicycle Lane - along Market St. (from 30th Ave. to 24th Ave.), along 24th Ave. NW (from Shilshole Ave. to 57th St.) & along 20th Ave. NW (from Leary Ave. to Market St.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(11) Trail Connection - Burke-Gilman Trail (precise alignment to be determined through EIS process)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(12) Speed and Reliability Improvements - for buses on Market St.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(13) Speed and Reliability Improvements - for buses on 15th Ave.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(14) Truck Route Improvements - Multiple locations including along 15th Ave., Shilshole Ave., and Leary Way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

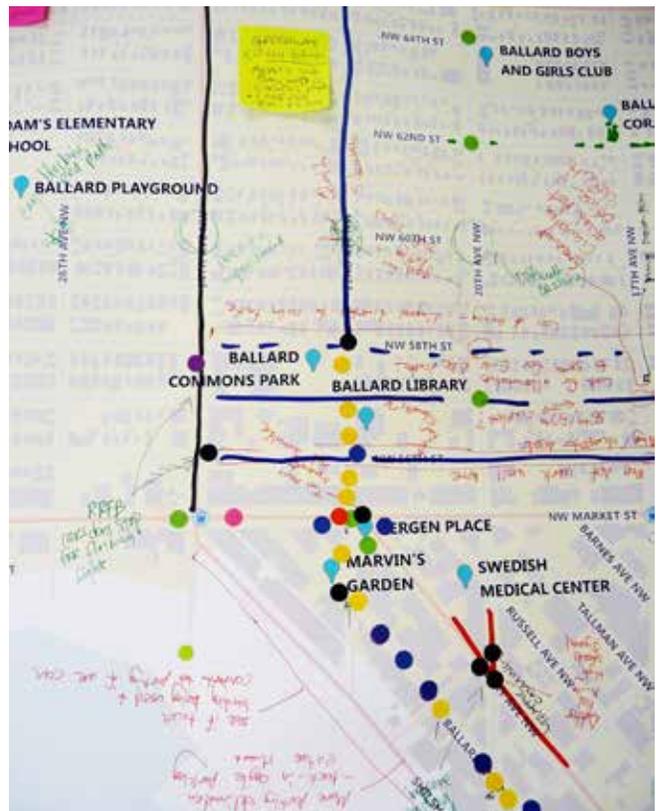
Screenshot of the online survey from the Move Ballard website.

### 4.2.1 Stakeholder Meetings

In addition to monthly meetings with the UDaT Working Group, SDOT staff met with the Central Ballard Residents Association, the East Ballard Community Association, North Seattle Industrial Association, Young Professionals in Transportation, Connect Ballard, and seniors and staff from Seattle Housing Authority residences and the Ballard Landmark (private retirement living community) to introduce the project and get feedback on their priorities for improvement projects and preference of potential future light rail station locations.

### 4.2.2 Open House #1

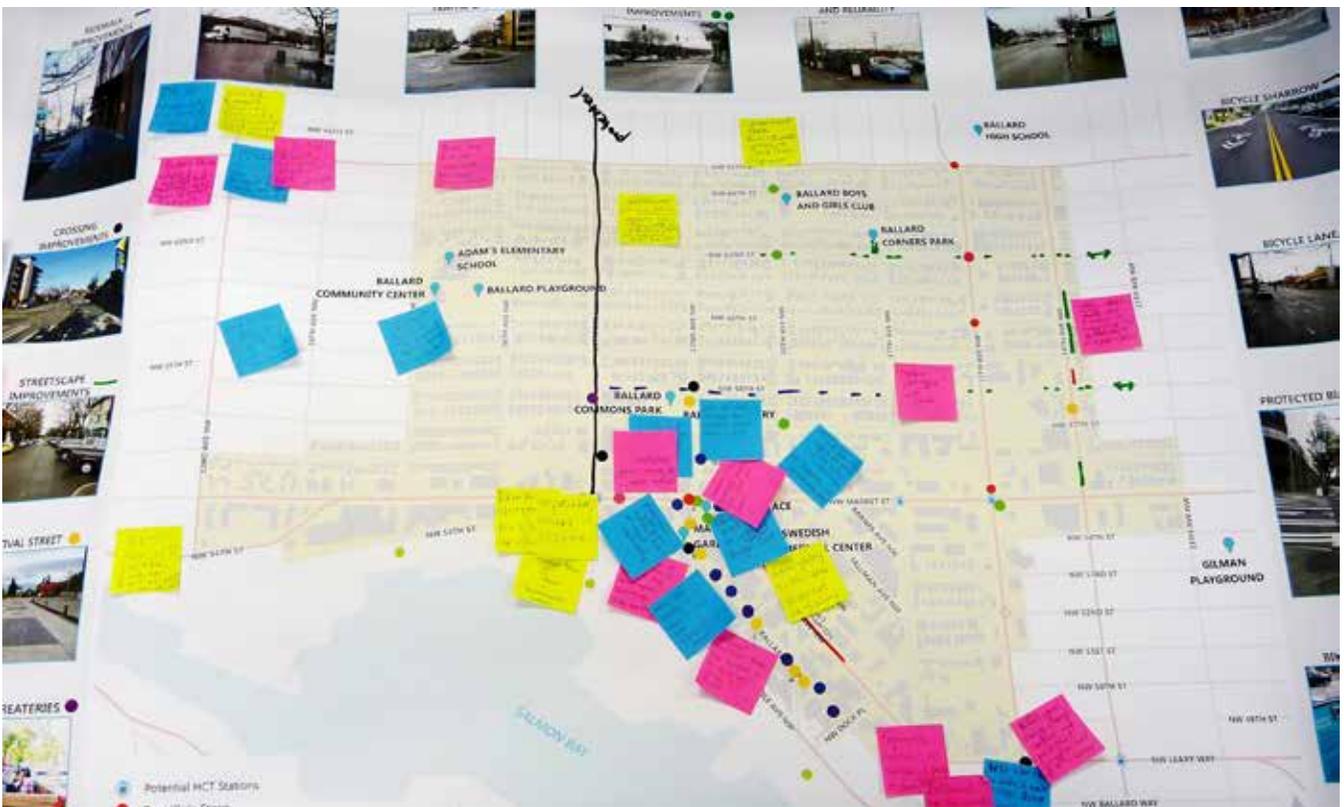
At the May 7, 2015 Open House, co-hosted by SDOT and OPCD, the Project Team introduced *Move Ballard*, presented existing conditions, and provided an opportunity for over 75 attendees to give feedback on transportation issues, potential projects, and future light rail station locations.



Feedback on projects and transportation "hot spots" from a stakeholder meeting.



*UDaT Working Group Meeting held prior to the Open House.*



*Open House project feedback.*



*Presentation during the May Open House.*

While the project team received diverse feedback at the open house, five primary themes dominated participants' comments on transportation issues and potential projects:

- Safety: Make it safer to cross the street.
- Connectivity/Mobility: Enhance walking and biking facilities to destinations within and outside of Ballard
- Reliability: Improve transit reliability.
- Access: Improve business and neighborhood accessibility for all modes of transportation.
- Placemaking: Enhance areas for moving, waiting, and gathering within the public realm.

Given the strength of these five themes, the project team used these ideas for prioritizing the projects, as described in the next chapter.

In addition to the Open House, SDOT and OPCD staff also co-hosted "office hours" outside of the Ballard Library on two daytime occasions to supplement staff time in the community, and to reach those who were unable to attend the Open House.

## **4.3 PHASE II OUTREACH**

### **4.3.1 Open House #2**

After understanding the values of the community, the second phase of outreach was focused on getting feedback on a draft list of transportation improvements identified by the project team. As described in the next chapter, many of the improvements brought forward came from Phase I of the outreach process. Moreover, the project prioritization criteria were a direct outcome of the Phase I outreach.



*Visitors reviewing the high-priority projects at the second Open House in November.*

At the November 18, 2015 Open House, we asked attendees to comment on thirteen transportation improvements that scored high in the project prioritization process. Approximately 70 people attended the Open House and were generally supportive of the high-priority projects. Community feedback was used to refine project elements. Comments on the project boards presented at both Open Houses along with detailed survey responses can be found in the Technical Appendix.

### **4.3.2 Stakeholder Meetings**

Following the second Open House, the project team continued to meet with the UDaT Working Group and other stakeholders to refine the project list and conceptual designs of the high priority projects to ensure that the concepts are both feasible and address community concerns. This outreach coincided with additional internal project review with SDOT staff. The results of the final outreach and internal project vetting are reflected in the project list and project descriptions in **Chapter 6**.

# 5 MULTIMODAL PROJECT EVALUATION CRITERIA AND PRIORITIZATION



*Project list development and prioritization process.*

The *Move Ballard* project list development involved reviewing existing plans and studies, community outreach, and collaboration with city staff. The project evaluation involved developing a prioritization framework to narrow down the list of projects and additional review with the community and City staff resulted in the finalized list. A summary of the process is below.

## 5.1 DEVELOPING THE PROJECT LIST

Seattle's citywide modal plans, along with prior transportation studies done in the Ballard neighborhood served as the starting point for identifying multimodal transportation projects for *Move Ballard*.

From this starting point, the project team worked with the community to get feedback on the

projects from the modal plans and other projects that could address specific transportation issues identified by local groups. Following the initial outreach efforts, nearly 100 transportation projects were identified throughout the study area. Many projects were submitted via the online survey and open house, where the project team was able to reach a diverse group of Ballard residents and employees. This substantial list of projects reflects the high interest level in improving transportation in Ballard.

The list of over 100 transportation projects were consolidated to 45 transportation projects. Projects along major corridors were combined into a single corridor study, and similar projects in the same area that would be completed at the same time were consolidated.



*Pedestrian crossing improvements at the Leary Avenue, 20th Avenue, and Vernon Place intersection were a top priority for many community groups.*

## 5.2 PRIORITIZATION CRITERIA

To prioritize these projects, the project team identified evaluation criteria informed by Move Seattle and other City prioritization frameworks. The prioritization criteria include:

- **Safety** – improves the safety of the community by improving high collision locations.
- **Equity** – serves a range of socioeconomic demographics and vulnerable sectors of the community.
- **Accessibility** – improves access to destinations and connects transportation facilities.
- **Neighborhood Vitality and Placemaking** – improves neighborhood economic vitality by ensuring freight and local delivery truck access, maintain loading zones, or adding parking. The placemaking component also evaluated how the project improves the pedestrian and biking environment within the community.
- **Modal Plan Implementation** – evaluates a project’s consistency with the planned projects in one of the City’s adopted modal plans.

Evaluation Category	Criteria
Safety	Improves safety for people walking and biking Collision history (total collisions and pedestrian/bicycle-related collisions) for a three year period
Equity	Proximity to senior housing and/or low income housing, zero car households, people of color, and civic destinations
Accessibility	Improves access for vulnerable populations Improves access to retail stores, high transit ridership stops, and potential high capacity transit station locations
Neighborhood Vitality + Placemaking	Improves freight/delivery truck access, adds loading zones or parking spaces Improves the walking environment (improves sidewalks, installs parklets, adds sidewalk furniture, etc.)
Modal plan Implementation	Implements a planned project in one of the City’s adopted modal plans

In addition to these evaluation categories, consideration was also given to the ability to be implemented in the near term, such as the Shilshole Ave and 17th Ave Truck Access Improvement project.



*Feedback on potential projects following a community meeting with SDOT staff.*

# 6 PRIORITIZED PROJECT LIST

After the prioritization framework was applied, 10 projects rose to the top of the list. The list included a mix of near-term projects that could be implemented in the next one-to-three years and longer-term projects that address major transportation needs, but require additional

study and a major financial commitment from the City. The Technical Appendix contains the detailed scoring results for all projects. Top rated projects are presented in the table below, and expanded project descriptions are included later in this section.

Name	Location	Project Description	Implementation Priority <sup>1</sup>
Leary Ave & 20th Ave Crossing Improvement	Intersection of Leary Ave, 20th Ave and Vernon Pl	Improve pedestrian safety and crossings by installing a full traffic signal and curb extensions across 20th Ave and crosswalks across all intersection legs.	●
Ballard Five Points Crossing Improvement	Intersection of Leary Ave, 22nd Ave and Market St	Improve pedestrian crossing by widening crosswalks. Explore the feasibility of a pedestrian scramble phase to further enhance pedestrian crossings and reduce pedestrian/vehicle conflicts.	● (crosswalk widening only)
20th Ave NW & NW 57th St Pedestrian Crossing	Intersection of 20th Ave and 57th St	Improve pedestrian safety and crossings by installing crosswalks, ADA ramps, and potential curb extensions.	●
Shilshole Ave NW & 17th Ave NW Truck Access Improvements	Intersection of 17th Ave & Shilshole	Improve freight access to the Ballard Bridge by adding an eastbound left turn lane.	●
17th Ave NW Greenway Connection	Intersection of 17th Ave & Ballard Ave to intersection of 45th St & 11th Ave	Connect 17th Ave Greenway to Ballard Bridge and existing BGT. Pending results of the BGT EIS to determine final alignment.	●

<sup>1</sup>Priority considered project expense, level of complexity, and community priority.

Name	Location	Project Description	Implementation Priority <sup>1</sup>
Leary Ave NW Corridor Study	Leary Ave NW from 17th Ave to Market St	Study corridor to determine how to accommodate freight, transit, and bicycle travel. This project will consider the final results of the Freight Master Plan, Burke-Gilman Trail (BGT) EIS, and the Route 40 BRT Corridor Study. This project could include priority lanes (e.g. transit/truck) and improved crossings.	
Ballard Ave Streetscape Concept Plan	Ballard Ave from 20th Ave to 22nd Ave	Increase sidewalk widths and enhance pedestrian realm by widening sidewalks 3-4 feet using a curbless design to accommodate Ballard Farmers Market uses. Concept would maintain 11 foot travel lanes and 8-9 foot on-street parking lanes.	
15th Ave & Market St Intersection Study	Intersection 15th Ave & Market St	Improve pedestrian safety and crossings. Enhance transit accessibility in conjunction with final Sound Transit decision on HCT between Ballard and Downtown.	
14th Ave NW Corridor Study	14th Ave NW from Market St to NW 65th	Implement mix of in-street minor separation (bike lanes) and protected bicycle lanes as identified Bicycle Master Plan. Include wide travel lanes and parking lanes to accommodate freight movement south of 56th St.	
NW Market St Corridor Study	Market St from 24th Ave to 30th Ave	Study implementation of in-street minor separation (bike lanes) as adopted in Bicycle Master Plan pending the outcome of the BGT EIS. Reconfigure intersection of Market St/54th St.	

# Leary Ave NW & 20th Ave NW Crossing Improvement

## Purpose and Need

This near-term project would improve pedestrian safety, visibility, and access on Leary Ave NW at the 20th Ave NW intersection. Improvements at this intersection are important because the crossing distances are long, and the crossing is at a geometrically challenging 5-legged intersection. In addition, a large number of vehicles are turning and are not always able to safely see pedestrians in the intersection.

The focus of this project is to formalize the vehicle movements through the intersection with interim curb extensions and a new traffic signal. Curb extensions will also reduce pedestrian crossing distances for some legs of the intersection, and the traffic signal will increase the number of safe crossing opportunities. Given the angle of the streets and the need for freight access (particularly between the arterials of Leary Ave and 20th Ave north of Leary Ave), some curb extensions are modest to allow for truck turning access. This project proposes no change to the curbs along Leary Ave so as to not preclude future improvements related to the Burke-Gilman Trail or the Route 40 Bus Rapid Transit Corridor projects.

This improved crossing was the most frequently requested project throughout the public outreach phase. The full corridor enhancements are identified as a potential long-term project and could install permanent curb extensions as driveway access is consolidated and redevelopment occurs.

## Potential Project Elements

- New traffic signal and crosswalks across 20th Ave and Vernon Pl; add a new crosswalk across Leary Ave just south of Vernon Pl.
- Add interim pedestrian bulb outs and curb extensions; this improves pedestrian visibility and shortens the crossing distance.

Cost Estimate



Community Support



Project Benefits

SAFETY

CONNECTIVITY/  
MOBILITY

ACCESS



Photo Above: Example of interim curb extension - paint and plastic bollards;

Photo Below: Existing crosswalk on Leary Ave



# Ballard Five Points Crossing Improvement (Market St/22nd Ave NW/Leary Ave NW)

## Purpose and Need

The NW Market St / 22nd Ave NW / Leary Ave NW intersection experiences significant foot traffic: approximately 450 pedestrian crossings in the PM peak hour, or about 12 pedestrian crossings per "walk" cycle at the signal. This intersection is in the core of Ballard's commercial and multifamily district and is adjacent to transit stops, retail, and Bergen Place Park. This project would improve the pedestrian crossing environment by initially widening crosswalks to serve the high demand.

SDOT is also studying whether an all-pedestrian crossing or "scramble" phase could be added to allow diagonal crossings at the 22nd Ave NW / NW Market St intersection. This change will improve pedestrian safety by reducing the conflicts between pedestrians and turning vehicles from 22nd Ave NW. The unique pedestrian "scramble" connects parts of Ballard across Market St and activates the public space by emphasizing pedestrian and bicycle crossings at this key intersection. The scramble phase also has the potential to enhance freight movement by eliminating conflict with pedestrians crossing Leary Ave while Market St has the green signal. This would allow trucks to more easily turn east from Market St to Leary Ave to access the freight network and Ballard Bridge. A more comprehensive study of traffic circulation in this portion of Ballard would be needed to confirm whether the pedestrian scramble should be implemented while maintaining vehicle and transit flows in the area.

## Potential Project Elements

- Initially widen crosswalks at the intersection; potential decorative pavement
- Study the addition of a pedestrian scramble phase at the intersection. Study other circulation changes such as one-way traffic on 22nd Ave or allowing left turns from Ballard Ave to Market St to facilitate better signal phasing

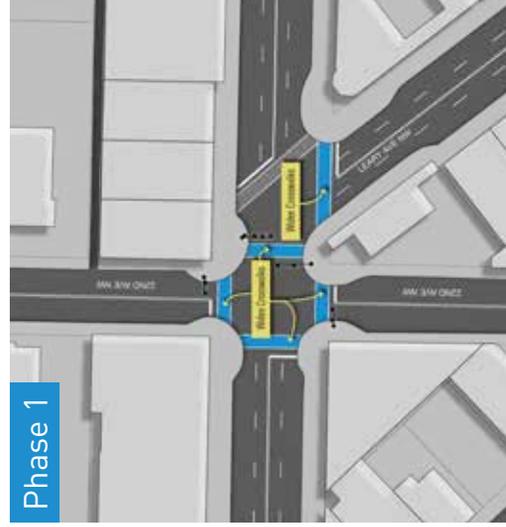
Cost Estimate



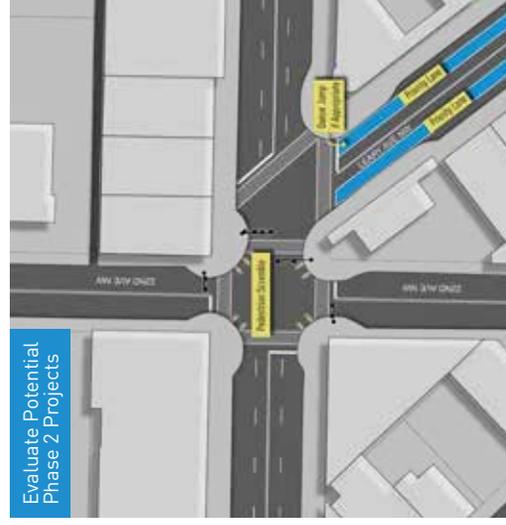
Community Support



Project Benefits



Phase 1



Evaluate Potential Phase 2 Projects



# 20th Ave NW & NW 57th St Pedestrian Crossing

## Purpose and Need

Ballard has a grid street network north of NW Market St, however there are locations near residential and retail land uses with no marked pedestrian crossings. One location is on 20th Ave NW at NW 57th St. The added crossing, potentially an RRFB or an all-way stop, would provide a safe marked pedestrian crossing. This new crossing will help accommodate the expected increase in pedestrian activity near the Ballard core area.



## Potential Project Elements

- Crosswalk markings
- Upgraded ADA curb ramps
- A crossing with rectangular rapid flashing beacons (RRFB) would require RRFB signs, poles, and power source. Another option is an all-way stop
- Construct curb bulbs into the parking lane to reduce crossing distance

Cost Estimate

Community Support

Project Benefits

SAFETY

CONNECTIVITY/ MOBILITY

ACCESS



# Shilshole Ave NW / 17th Ave NW Truck Access Improvements

## Purpose and Need

This improves freight access and mobility from the industrial sector between Shilshole Ave NW and the Ballard Bridge, a designated truck street. This is accomplished by adding an eastbound left turn pocket on Shilshole Ave NW at 17th Ave NW, a typical freight movement to access the Ballard Bridge. The current intersection layout has a one lane approach. Vehicles making a left turn onto 17th Ave NW can have trouble seeing on-coming cars around the curve, and vehicles can backup through moving vehicles as they wait for a gap to make the left turn.

This project would improve freight and auto access and mobility. By improving the freight access to truck streets, it also encourages separation of freight and the pedestrian activity near Ballard Ave.

## Potential Project Elements

- Remove limited parking (about 3 spaces) on the northwest side of the intersection; reallocate pavement width to accommodate an eastbound left turn pocket
- Remove about 3 parking spaces on the east side of 17th Ave to accommodate large truck turns
- Repaint roadway edge lines and striping to accommodate the new turn lane pocket
- Add no parking signs at appropriate locations

Cost Estimate



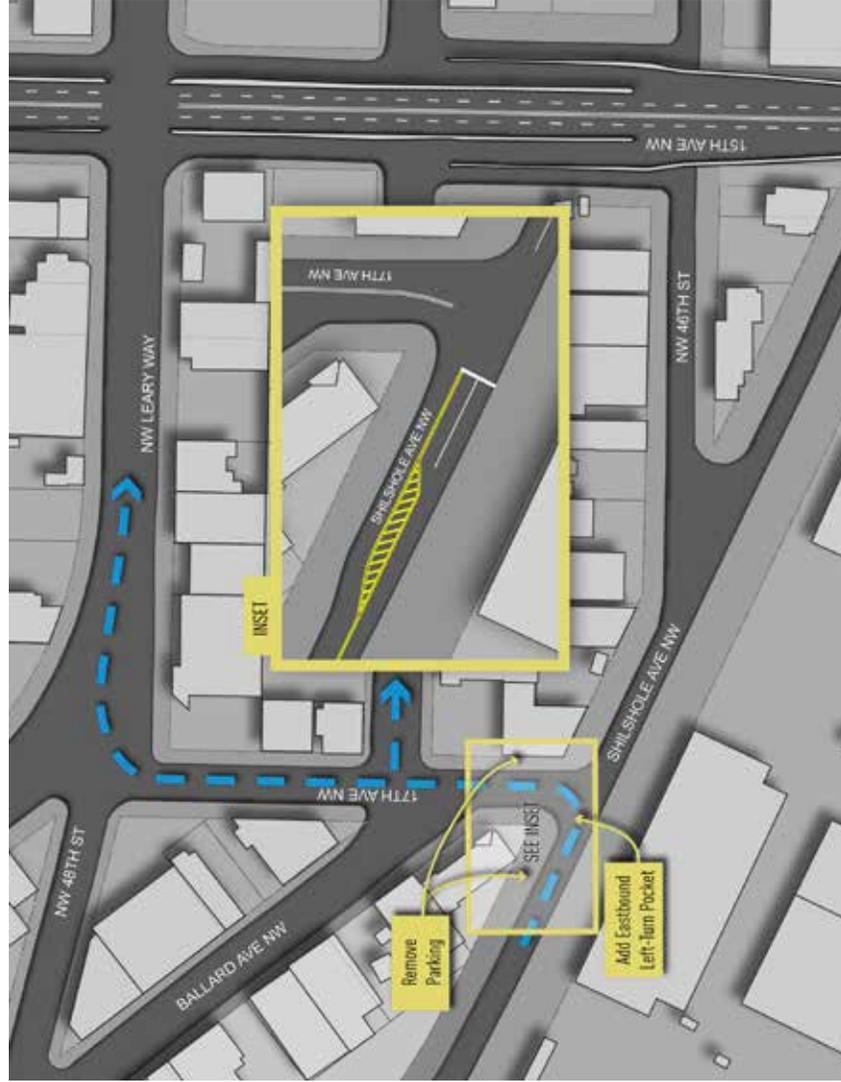
Community Support



Project Benefits

CONNECTIVITY/  
MOBILITY

ACCESS



# 17th Ave NW Greenway Connection

## Purpose and Need

The 17th Ave NW Neighborhood Greenway is currently under construction. SDOT committed to connecting this neighborhood greenway to the Ballard Bridge, RapidRide transit stop and the protected bicycle facility on NW 45th St in 2016.

## Potential Project Elements

- Provide lighting and pave unimproved 15th Ave NW Right Of Way, under Ballard Bridge ramp, between NW 46th & NW 48th St to provide north-south access for people who walk and bike

Design elements will be identified in 2016 through technical analysis and community input, however there are a few common neighborhood greenway elements we use everywhere:

- Change the speed limit to 20 mph along the route
- Add about one speed hump per block
- Add signs and pavement markings to help people find their way
- Add some combination of curb extensions, rapid flashing beacons, crosswalks, medians, or traffic signals at busy intersections
- Add stop signs at streets crossing the greenway
- Resurface sidewalks and streets; add curb ramps

### Cost Estimate



### Community Support



### Project Benefits

SAFETY	CONNECTIVITY/ MOBILITY	ACCESS
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Specific Design will be analyzed through the Greenways Process

# Leary Ave NW Corridor Study (NW Market St – 17th Ave NW)

## Purpose and Need

A long term vision for the Leary Ave NW corridor will provide safe pedestrian crossings, improved neighborhood access, and more mobility options. This is implemented through intersection improvements at key locations and priority lanes. Modest traffic volumes on Leary Ave NW (fewer than 10,000 daily vehicles) allow for a potential rechannelization to include priority lanes (i.e. bus rapid transit/freight only lanes or bicycle facilities), which can improve access to commercial areas for trucks, transit users, and bicycles. On-street parking would be retained as much as is practical. This project will need to coordinate with the Freight Master Plan, Route 40 Bus Rapid Transit project, and the Burke- Gilman Trail EIS outcome.

## Potential Project Elements

- Rechannelize Leary Ave NW; this could include priority lanes (bus+truck or bicycle)
- Add traffic signal at Dock Pl as part of the 17th Ave Greenway Project
- Add traffic signal and re-configure intersection at 20th Ave NW to ensure safe crossings and freight access
- Add traffic signal at 17th Ave NW to improve crossings and freight access to Shilshoe Ave
- Potential transit queue jump for northbound Leary Ave NW to westbound NW Market St for BRT
- Potential pedestrian scramble at 22nd Ave NW and NW Market St to improve crossings and reduce vehicle/pedestrian conflicts

Cost Estimate

Project Benefits

Community Support	SAFETY	CONNECTIVITY/ MOBILITY	RELIABILITY	ACCESS
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Above: Leary Avenue Corridor (NW Market St to 17th Ave NW)  
 Right: Leary Avenue NW at NW Market St  
 Bottom Right: Leary Avenue NW at 20th Avenue NW  
 Below: Leary Avenue NW at NW Dock Pl



# Ballard Avenue Streetscape Concept Plan (Market St - Dock Pl)

## Purpose and Need

**Ballard Ave is a historic corridor that has become a regional dining and shopping destination.** A long term vision to enhance the pedestrian environment and activate the street space includes introducing an "urban curbless" treatment similar to Bell St in Belltown and constructing permanent wider sidewalks, updating crosswalks, and installing more streetlights to increase pedestrian and bicycle visibility. In the shorter term, pedestrian lighting and low cost improvements that contribute to the historic feel and pedestrian safety are high priorities for the community. This improves the general livability and economic vitality of the neighborhood by increasing activity along the commercial corridor, while accommodating delivery needs to local businesses.

## Potential Project Elements

- "Urban curbless" street design between 20th Ave NW and 22nd Ave NW (with possible extension to Market St)
- Widen sidewalks by 3-4 feet, while maintaining wide lanes for service delivery access
- Add bicycle sharrows (shared lane markings) and parking (staple racks, corrals)
- Improve lighting for pedestrians
- Upgrade crosswalks and ADA curb ramps at pedestrian crossings
- Maintain on-street parking
- Maintain historic character of street

Cost Estimate



Community Support



Project Benefits

SAFETY

CONNECTIVITY/  
MOBILITY

ACCESS

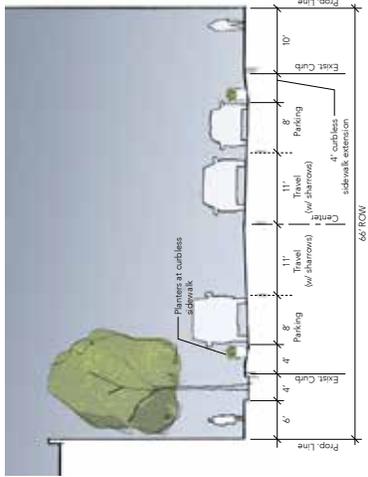
PLACEMAKING



# Ballard Avenue Streetscape Concept Plan (Market St - Dock Pl)



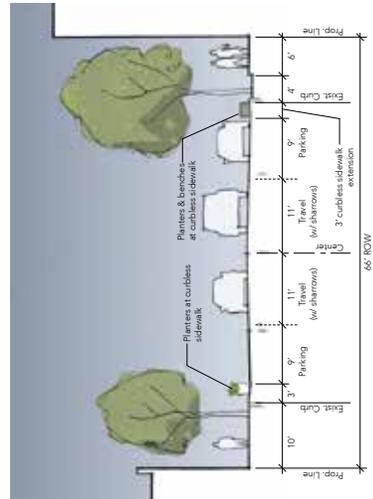
**STREET VIEW** Looking Southeast over the intersection of Ballard Avenue and NW Vernon Place



Ballard Ave. between NW Vernon Pl. and 20th Ave NW



**STREET VIEW** Looking Southeast along Ballard Avenue from 22nd Ave NW



Ballard Ave. between 22nd Ave NW and NW Vernon Pl.

Sidewalk extension adds 3 feet to sidewalk at the intersection of Ballard Ave.

# 15th Ave NW & NW Market St Intersection Study

## Purpose and Need

**This location is the intersection of two main arterials that access the Ballard neighborhood and is the busiest intersection in the study area.** Not only are there high vehicle volumes, this large intersection is part of the major truck route and the location of Ballard's highest transit ridership stops. As such, there is substantial pedestrian activity accessing transit and the adjacent retail and residential land uses (approximately 480 pedestrians are crossing the intersection during the PM peak hour). This study will determine the most appropriate intersection treatments that balance the needs of all intersection users. The study is necessary to plan for improved pedestrian access to not only meet existing demand, but potential future demand with the city's planned Market & 45th BRT projects. Additionally, pending the results of the upcoming Sound Transit 3 vote, Sound Transit may locate a high capacity transit station here as well. With even more transit activity, adjacent development, and regional traffic/freight growth, identifying a long-term plan for the intersection is important.



## Potential Project Elements

- A long term study, pending results of the ST3 vote which may locate a high capacity transit station here

Cost Estimate



Community Support



Project Benefits

SAFETY

CONNECTIVITY/  
MOBILITY

ACCESS



# 14th Ave NW Corridor Study (NW Market St – NW 65th St)

## Purpose and Need

The 14th Ave NW corridor currently has a wide median with parking. This project would add higher quality protected bicycle lanes and buffered bicycle lanes as planned in the Seattle Bicycle Master Plan from NW Market St to NW 65th St. The bicycle facilities will complement the planned facilities in the 14th Ave NW Park project (NW 59th – 61st St). This project improves bicycle safety and access by providing a designated connection between the East Ballard community and the commercial land uses and transit on Market St. This project features wide travel lanes to facilitate freight movement. This project would also seek to better organize on-street parking.

## Potential Project Elements

- Coordinate with the Seattle Parks Department so designs match any future changes to the 14th Ave NW median south of the 14th Ave Park (NW 59th - 61st St)
- Remove median to accommodate freight while allocating space for the new bicycle lane/protected bicycle lane
- Add protected bicycle lanes from NW 58th St to NW 65th St
- Add bicycle lanes from NW Market St to NW 58th St; include wide travel lanes for freight access
- Modify crossing at NW 65th St for safe pedestrian and bicycle crossing

Cost Estimate



Community Support



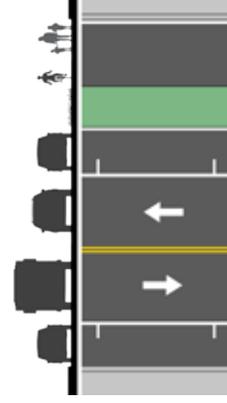
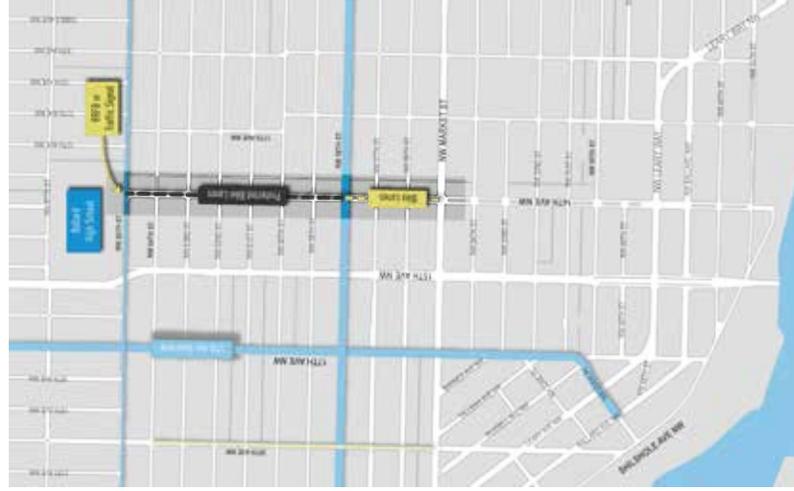
Project Benefits

SAFETY

CONNECTIVITY/  
MOBILITY

ACCESS

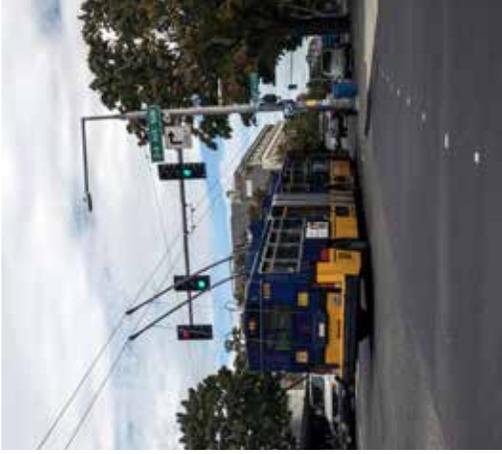
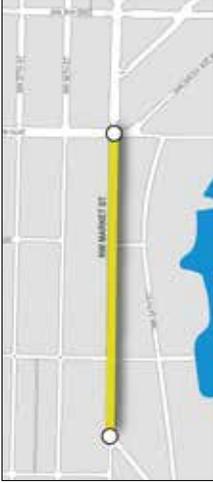
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# NW Market St Corridor Study (Ballard Locks – 24th Ave NW)

## Purpose and Need

**Market Street is Ballard's primary mixed-use commercial street and is a major east-west arterial.** However, west of 24th Ave NW, Market St traffic volumes begin to decline to the point that four through lanes are not necessary to accommodate smooth traffic flow. This project would explore the potential to reallocate right-of-way to better accommodate pedestrian and bicycle access to the neighborhood. This project will closely coordinate with the Burke-Gilman Trail EIS outcome and the Market St/45th St transit improvements from Move Seattle.<sup>1</sup> Potential non-motorized access improvements could include a bicycle facility (which may be part of the Burke-Gilman Trail) or a three-lane vehicle cross-section to provide a vehicle turning lane and potential for a pedestrian crossing refuge island. Another component would be the reconstruction of the intersection at 54th Street to square-up the intersection and improve pedestrian crossings.



## Potential Project Elements

- Re-channelize Market St to three lanes: two general purpose through lanes, two-way left turn lane, and potentially bicycle lanes
- Potentially remove parking on one side of the street, which could improve truck turning visibility; however, parking removal may not be considered if there are no bicycle lanes on the corridor
- Revise intersection at Market St/54th St to improve pedestrian crossings and calm traffic speeds
- Traffic calming or turn restrictions at 24th Ave NW/NW 56th St intersection

<sup>1</sup> Once the details of the Burke-Gilman Trail EIS are known, details about the parking and bike lane configuration will be defined.

Cost Estimate

Project Benefits

Community Support

CONNECTIVITY/ MOBILITY

ACCESS



# 7 STATION AREA ASSESSMENT

## 7.1 PURPOSE OF THE STATION AREA ASSESSMENT

The Ballard to Downtown Seattle Transit Expansion Study (2014), jointly led by SDOT and Sound Transit, identified five conceptual alignments for HCT connecting Ballard to Downtown Seattle. Along those alignments were four discrete potential station locations within the Ballard Hub Urban Village:

- 15th Ave & Market St
- 17th Ave & Market St
- 24th Ave & Market St
- 14th Ave & Leary Way

The purpose of this assessment is to evaluate and compare the transit orientation of the areas surrounding these potential stations. Transit orientation is the degree to which an area supports rail and bus ridership while reducing overall reliance on personal automobiles. For the purposes of this study, we defined station areas as the primary market area for transit patronage: ½-mile buffers or the approximate equivalent of a 10-minute walk for the average person. Evaluation criteria include factors related to high transit ridership, increased walking and biking, redevelopment opportunities, and community input. The results of this assessment will be used to inform discussions with Sound Transit as it further develops its ST3 package of transit projects.

## 7.2 EVALUATING TRANSIT ORIENTATION

When evaluating the transit orientation of a potential station area (most commonly defined as the ½-mile buffer surrounding the station), it is customary to assess the “3 D’s of Transit Oriented Development (TOD)” – *density, diversity and design*.

*Density* is the number of residents, households, employees, businesses, or a combination thereof, usually averaged by acre. *Diversity* reflects the mix of transit supportive land uses such as retail, services and community facilities. *Design* is some measure of the general walkability, accessibility and connectivity of the area. Although the 3 D’s of TOD provide the basis for this assessment of transit orientation, the measures have been further refined and expanded. The “6 P’s of TOD” listed below capture a more holistic view of future station potential by incorporating existing transit performance, development opportunities, and community preferences.

- *People (Density)* – Combined number of residents and employees. Whereas the former generate transit trip that originate in Ballard, the latter help optimize the transit investment by attracting trips to Ballard.
- *Places (Diversity)* – Number of retail and service establishments that allow residents and employees to meet their needs without the daily use of a car.
- *Pedestrian/Bicycle (Design)* – Composite measure of the accessibility of the area for pedestrians and cyclists. Average block size is used as a proxy for connectivity given that a finer grain grid affords pedestrians more direct options for reaching their destinations. Smaller blocks also support more compact and space efficient urban development. Miles of biking facilities include neighborhood greenways, trails, and protected and traditional bicycle lanes.
- *Performance* – Existing transit ridership within the study area. This serves as a gauge for the intermodal connectivity of the area with local and regional bus routes.

- *Potential* – Acres of underutilized land (excluding single family, BINMIC, and civic uses) that could be redeveloped in the future under existing zoning.
- *Preferences* – Results from the online survey asking the relative favorability of each potential station location.

### 7.3 STATION AREA COMPARISON

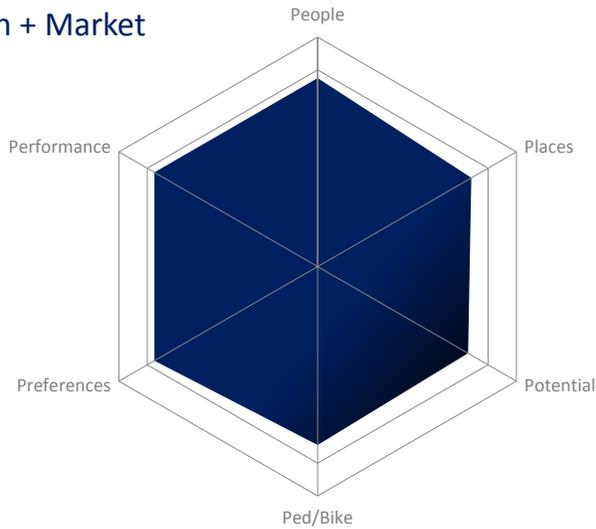
Using the 6 P’s, it is possible to conduct a high level comparison of the four discrete station areas identified in the Ballard to Downtown Transit Study. Although the final station location(s) will be ultimately determined by Sound Transit after extensive community outreach and through a required environmental process, this analysis in the table below provides an initial starting place for those future discussions. Note that the darker shaded boxes have the most favorable ratings in each category.

Both the Market & 15th and Market & 17th station areas exhibit stronger transit orientation than do those at Market & 24th and Leary & 14th. Whereas Market & 15th outperformed the other areas in four categories, Market & 17th scored highest across three measures. A key limiting factor for the other two station areas is their constrained primary market areas due to their proximity to Salmon Bay. A significant portion of their ½-mile buffers fall within the Ship Canal. Thus, there are fewer residents and employees within convenient walking distances of their station locations. Further diminishing the potential of the Leary & 14th station area are its limited redevelopment opportunities. These results are consistent with the online survey asking participants to rate the favorability of each station location. The nearly 200 survey participants ranked Market & 15th as the most optimal site for a future high capacity station and Leary & 14th the least favorable location.

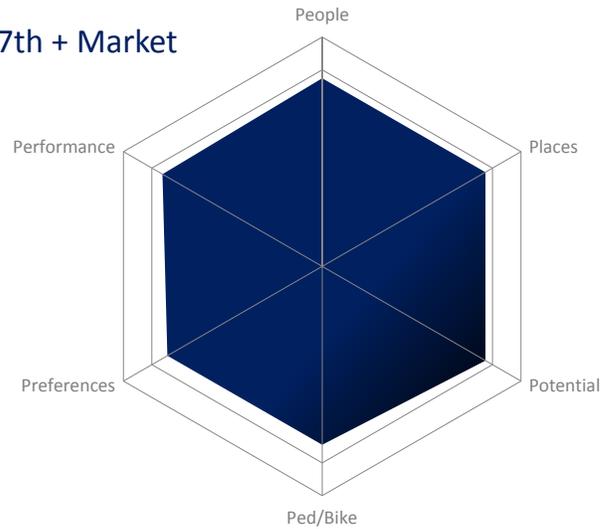
Station Name	People	Places	Potential	Pedestrian/Bicycle		Preferences	Performance
	Residents + Employees	Retail + Services Businesses	Underutilized Acreage	Average Block Size	Bikeway Miles	Average Score (4 = Most Favorable, 1 = Least Favorable)	Existing Daily Transit Ridership
15th Ave & Market St	14,374	687	23.0	2.24	7.21	3.05	5,274
17th Ave & Market St	14,353	737	25.3	2.55	8.20	2.87	5,143
24th Ave & Market St	11,680	691	20.4	2.66	5.99	2.49	2,609
14th Ave & Leary Way	12,142	423	6.3	2.62	5.16	1.60	3,352

To give a sense of the order of magnitude differences between the station areas, the station scored for the 6 P's were indexed on a scale of 1-100. The radar graphs below illustrate the relative balance across the evaluation criteria for each of the station areas.

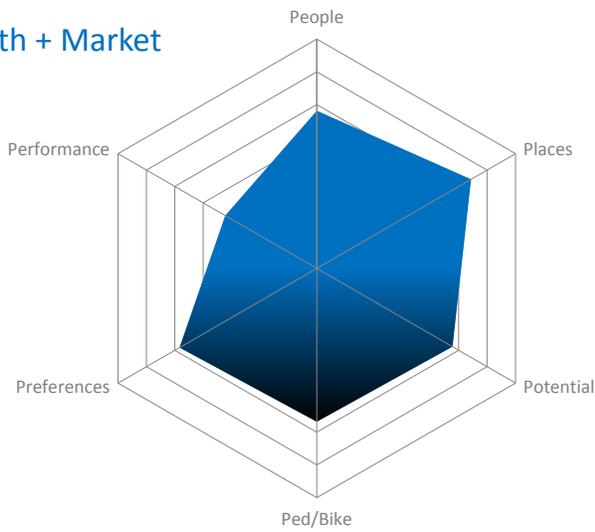
### 15th + Market



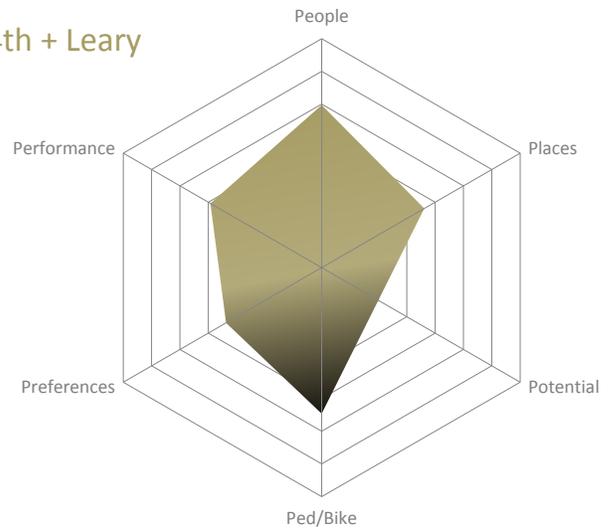
### 17th + Market



### 24th + Market



### 14th + Leary



## 7.4 RESULTS

Based on the station area assessment, stations in the vicinity of Market St and 15th Ave or 17th Ave are the preferred locations for future high capacity transit.

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5.2016