

The Seattle Department of Transportation

Madison Street Corridor Bus Rapid Transit Study Survey Summary Report

March 2015



 **SDOT**
Seattle Department of Transportation


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1 INTRODUCTION AND METHODOLOGY

Between January 19 and February 6, 2015, SDOT conducted an online survey for the Madison Corridor BRT Study. The survey instrument was developed in SurveyMonkey and a print survey version was distributed for those without access to a computer.

This report summarizes survey results and key findings. The purpose of the survey is to better understand the community’s transit need along the Madison Street corridor, determine community preferences for end-of-line routing and bikeway routing options. Question topics included general travel behaviors, terminus routing preferences, corridor improvement priorities, and importance of various transfers. The survey was completed by 1,660 respondents. Most surveys were completed using SurveyMonkey; only 16 completed on paper forms.

At the end of the survey, respondents were directed to an interactive web-mapping exercise hosted by Wikimaps. The final section of this report summarizes the results of the mapping exercise.

Respondent Demographics

A comparison of the ages of the survey respondents to the age of people living near the planned BRT line¹ is presented in Figure 1-1. The survey respondent sample is generally consistent with the actual age distribution for those living along the corridor. According to American Community Survey data from 2013, residents between the ages of 25 and 34 are the largest age group in the study area, at 28%. They were also well-represented in the survey, where 31% of respondents are in this same age group. Residents aged 35 to 44 are over-represented in the sample by 8 percentage points.

Figure 1-1 Age, Survey Sample vs. Population

	Under 18	18-24	25-34	35-44	45-54	55-64	65-74	75 and over
Sample	0%	4%	31%	23%	16%	14%	8%	4%
Population ^(a)	9%	14%	28%	15%	12%	11%	6%	5%

Data source: (a) 2013 ACS 5-Year Estimates, Table B01001

Figure 1-2 shows the proportion of Hispanics/Latinos represented in the sample compared to their actual share of the population. The survey sample is very close

¹ For the purpose of this analysis, the population living near the planned alignment are all residents of 2013 ACS Block Groups that intersect a 3/8 mile buffer of Madison St between Western Avenue and MLK Jr Way.

to the actual ethnic make-up, but slightly under represents the Hispanic/Latino population of the area (by 2 percentage points). Figure 1-3 shows the percent of respondents by race compared to the actual share of the population in the study area.

Figure 1-2 Ethnicity, Survey Sample vs. Population

	Not Hispanic/ Latino	Hispanic/ Latino
Sample	95%	5%
Population ^(a)	93%	7%

Data source: (a) 2013 ACS 5-Year Estimates, Table B03002

Figure 1-3 Race, Survey Sample vs. Population

	White	Black/ African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Other
Sample	59%	9%	3%	26%	3%	0%
Population ^(a)	71%	11%	1%	11%	0%	6%

Data source: (a) 2013 ACS 5-Year Estimates, Table B03002

Geographically, survey respondents live in close proximity to the study area. Fifty-five percent of respondents live in the five closest ZIP codes to the corridor (see Figure 1-4). This signals that the responses generated from the survey are reflective of the immediate community’s needs and preferences.

Figure 1-4 Top home ZIP codes

ZIP Code	Number	Percentage
98122	352	21.5%
98112	266	16.2%
98104	132	8.0%
98101	90	5.5%
98102	75	4.6%

2 KEY FINDINGS

Overall, the respondents to the survey use a mix of transportation modes to meet their daily mobility needs. Walking, transit and driving were the most common modes used by the respondents. This transportation mix influenced respondents decisions for selecting the issues related to BRT on Madison Street. Key findings from the survey include:

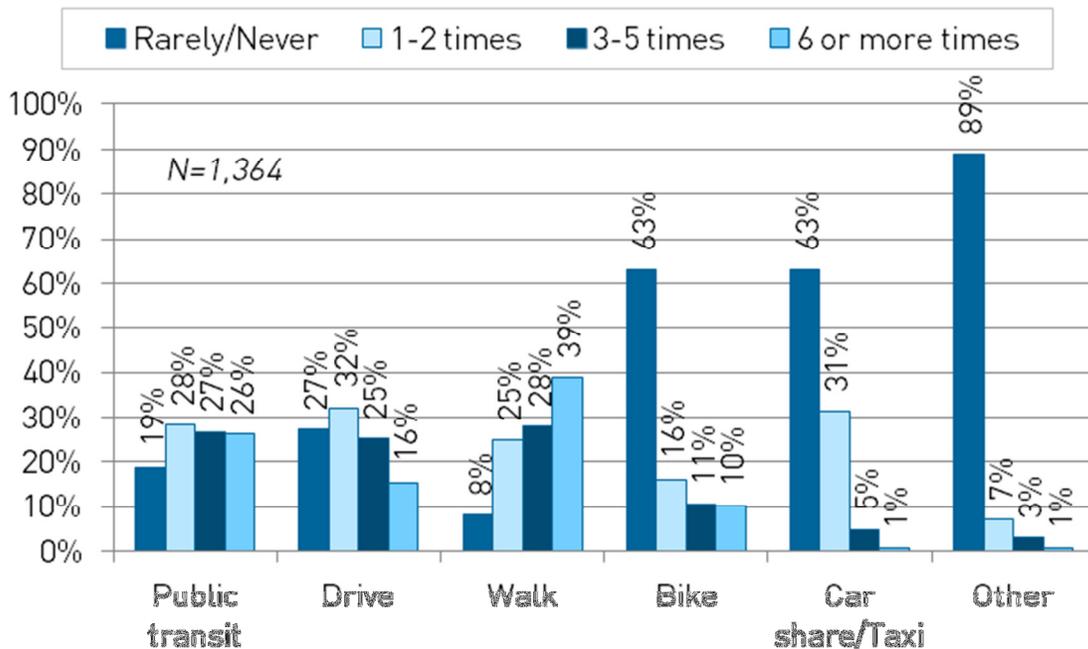
- **High existing transit use.** Most respondents use transit at least once per week, indicating existing demand for transit service in the corridor.
- **Transit service and safety improvements.** Transit service and pedestrian safety are ranked as the two most important corridor improvements, followed closely by sidewalk conditions and transit passenger comfort. These improvements indicate the importance of transit and the pedestrian realm for survey respondents.
- **Importance of transfers.** Respondents communicated the need to connect the Madison BRT to Seattle’s regional transit network. The top four transfer points ranked by survey respondents would provide connections to the Downtown Seattle Transit Tunnel (DSTT), the Seattle Streetcar, multiple bus lines, and Washington State Ferries. Additionally, there was a significant volume of comments on the mapping exercise suggesting that planned stations should move as close as possible to major intersections to facilitate existing or future transfers.
- **Preference for MLK as eastern terminus.** There is strong support for the MLK terminus option. Over 50% of respondents supported the eastern terminus option at MLK Jr Way, compared to only 15% who supported the 23rd Avenue terminus. The mapping exercise also revealed strong preferences for a terminus at MLK as well as demand for destinations beyond MLK, particularly the Arboretum and Madison Park.
- **Balanced support for two western terminus options.** There was almost equal support of each western terminus routing option.
- **Preference for Union bicycle route.** More than half of respondents supported developing a bicycle route using Union (Alternative 2).
- **Station locations.** The mapping exercise indicated that survey respondents care first and foremost that station locations facilitate transfers and minimize walking to major north-south corridors (even those without existing transit service). Respondents indicated support for decreasing stop spacing in Downtown and First Hill to allow for a second downtown stop near 5th Avenue and revised spacing in First Hill (8th/9th Avenue, Boren, and Broadway were all popular stops).

General Travel Behavior

The respondents to the survey use a variety of modes for their personal mobility (Figure 2-1 and Figure 2-2).

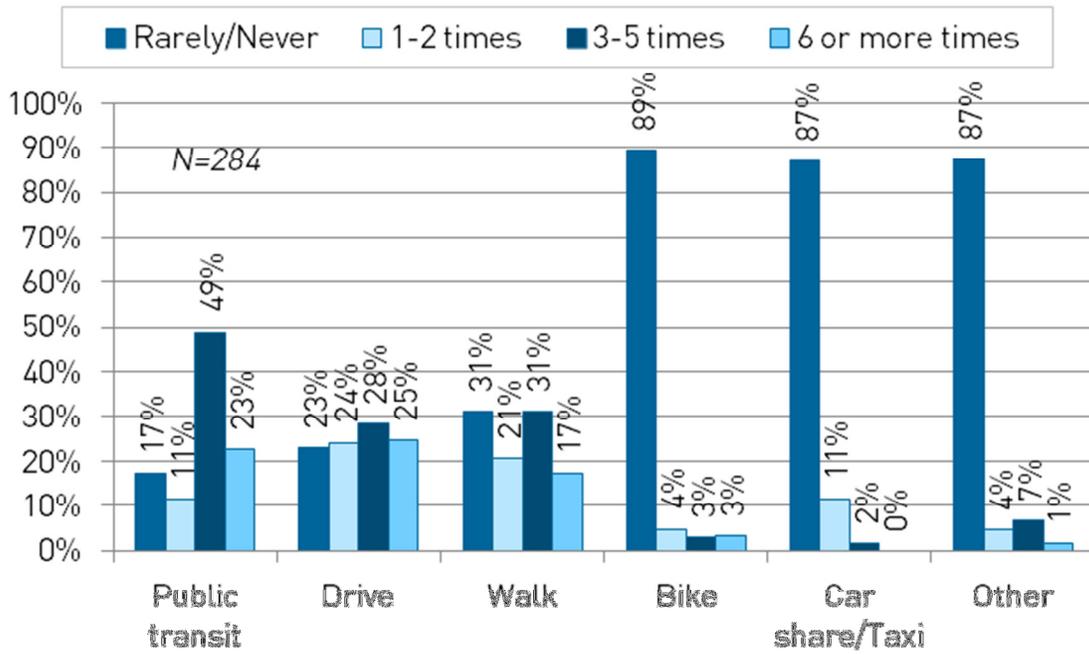
- More than half (53%) of the respondents who live in Seattle use public transit three or more times a week; 72% of non-Seattle resident respondents ride transit at least three times a week.
- Only 41% of Seattle respondents drive a car three or more times a week; 53% of non-Seattle respondents drive three or more times a week.
- Two-thirds (67%) of Seattle respondents walk at least three times a week, but only 48% of non-Seattle respondents do so.
- Very few respondents to the survey bike, use taxis, car-share, or other on-demand transportation services, but Seattle residents use these modes at greater frequencies than non-Seattle residents.

Figure 2-1 Frequency of mode use; Resident respondents



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Figure 2-2 Frequency of mode use, Non-resident respondents



Local Transportation Issues

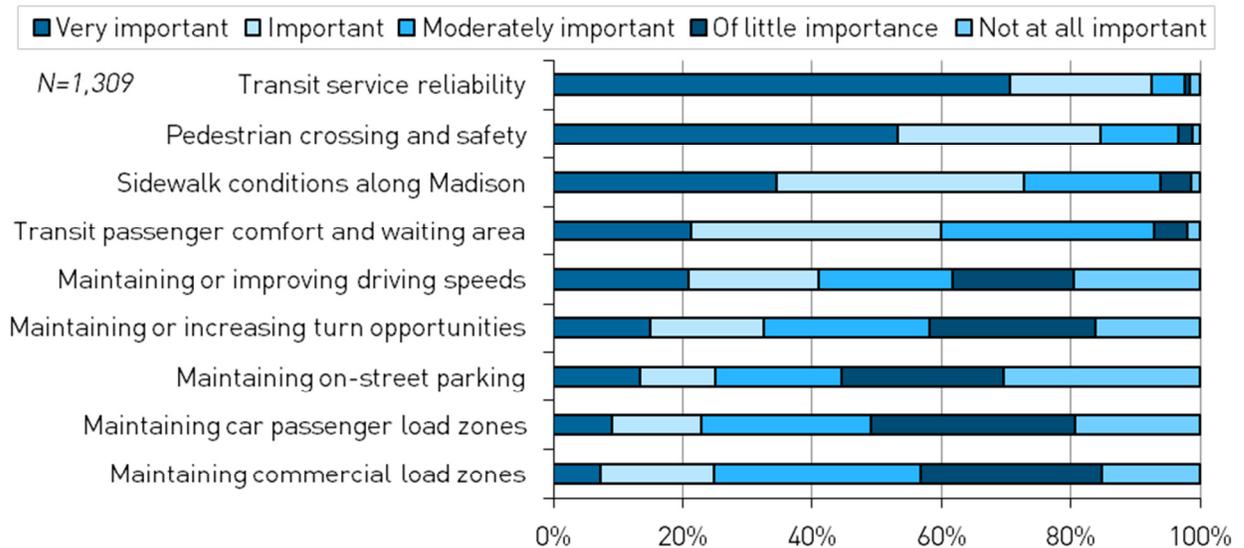
Survey respondents were asked to rate the level of importance for various transit, street, access, and mobility improvements in the Madison Corridor.

Two items respondents believed were most important were transit service reliability and pedestrian crossings and safety (Figure 2-3 and Figure 2-4). These two were considered very important by more than half of respondents (72% and 55%, respectively), with non-Seattle residents supporting these more than Seattle residents.

Sidewalk conditions along Madison Street and transit passenger comfort and waiting areas were two other highly rated improvements, both considered very important, important or moderately important by more than 90% of respondents living in and out of Seattle.

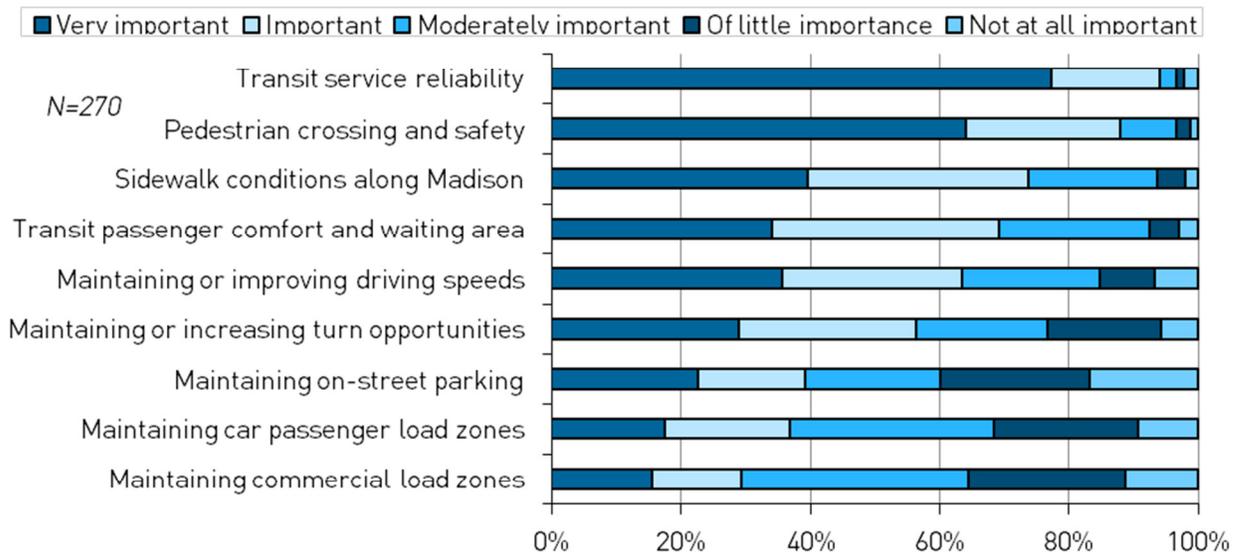
The improvement which had the highest share of respondents indicating it was of little importance or not at all important was maintaining on-street parking. Non-Seattle residents rate this the lowest (39% indicated it was very important or important), although they did rate this higher than Seattle residents (25%). This signals that respondents are willing to reduce on-street parking supply in exchange for better transit facilities.

Figure 2-3 Corridor improvements; Resident respondents



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Figure 2-4 Corridor improvements; Non-resident respondents



Survey respondents who use transit often (three or more times per week) indicated that transit service reliability was the most important corridor improvement, followed by pedestrian safety, sidewalk conditions and transit passenger comfort.

For those respondents who only use transit two or fewer times per week, they also chose transit reliability, pedestrian safety and passenger comfort as their top choices. Infrequent transit users were more likely to support maintaining turn opportunities and driving speeds.

Figure 2-5 Corridor improvements; Frequent transit users

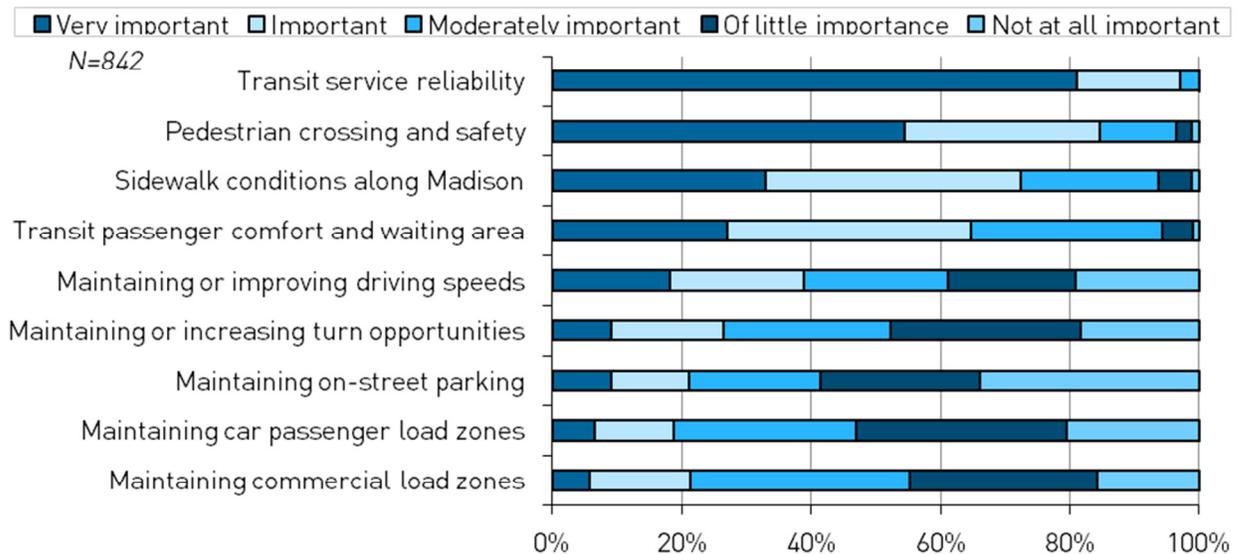
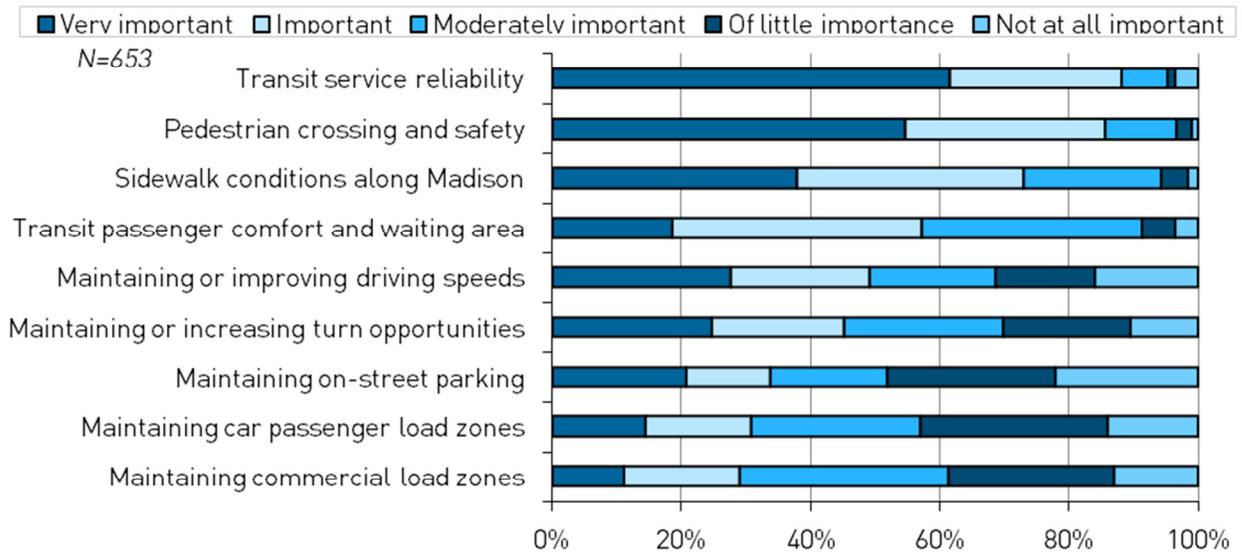


Figure 2-6 Corridor improvements; Infrequent transit users



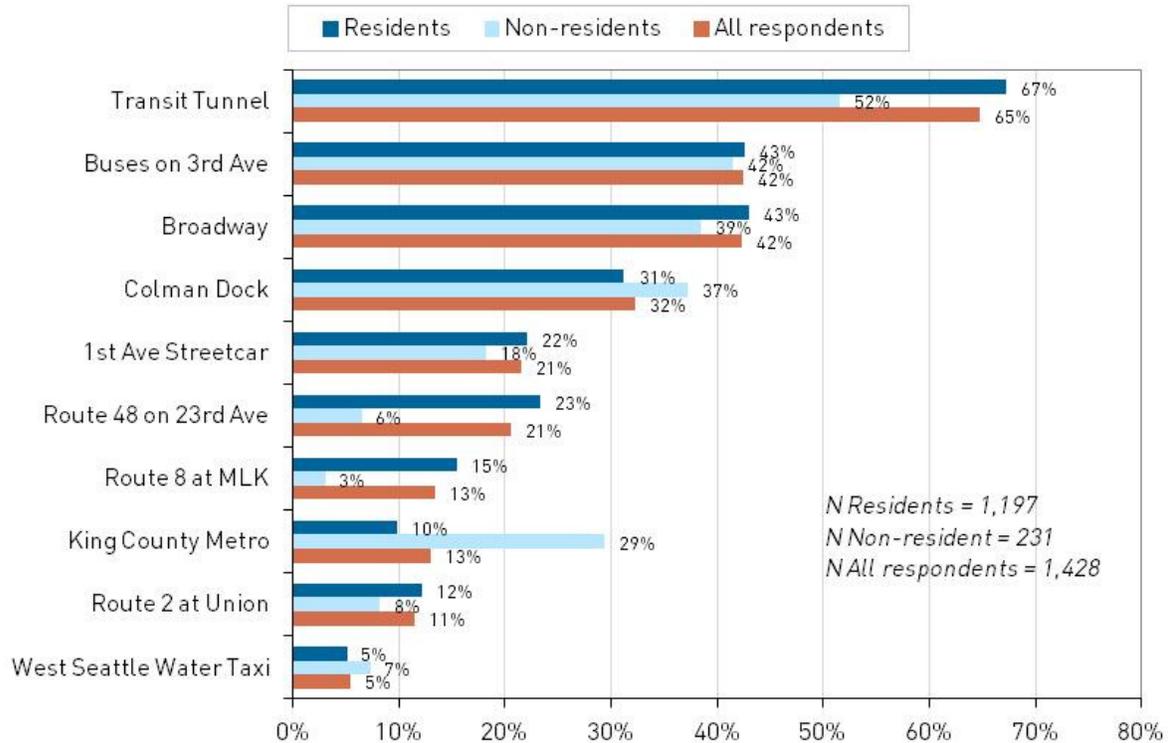
Respondents were asked to select the transit transfer points that were most important for connecting to or from a future Madison BRT line (Figure 2-7). The top three locations were:

- The Downtown Seattle Transit Tunnel (65%)
- 3rd Avenue (42%)
- Broadway (42%).

Response rates were similar between Seattle and non-Seattle residents, though Seattle residents were much more likely to want to transfer to the Transit Tunnel, Route 48, and Route 8. Non-Seattle residents were more likely to want to transfer to King County Metro routes.

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Figure 2-7 Importance of transfer points along Madison



Survey respondents were also asked to provide their input on the BRT alignment at both ends of the line (Figure 2-8 and Figure 2-9 show the alignment options). Survey respondents were almost equally supportive of both options at the west end in downtown Seattle, with the Madison/Spring couplet having more support by 8 percentage points. Non-Seattle residents, though, were more likely to support the Madison/Spring couplet (Figure 2-10).

In responses regarding the eastern terminus, there was a noticeable difference between Seattle residents and non-Seattle residents (Figure 2-11). Sixty-one percent of Seattle residents supported the MLK Jr Way terminus, while 50% of non-Seattle residents had no opinion. Only 15% of all respondents supported the 23rd Avenue/Olive terminus.

Figure 2-8 Western alignment options

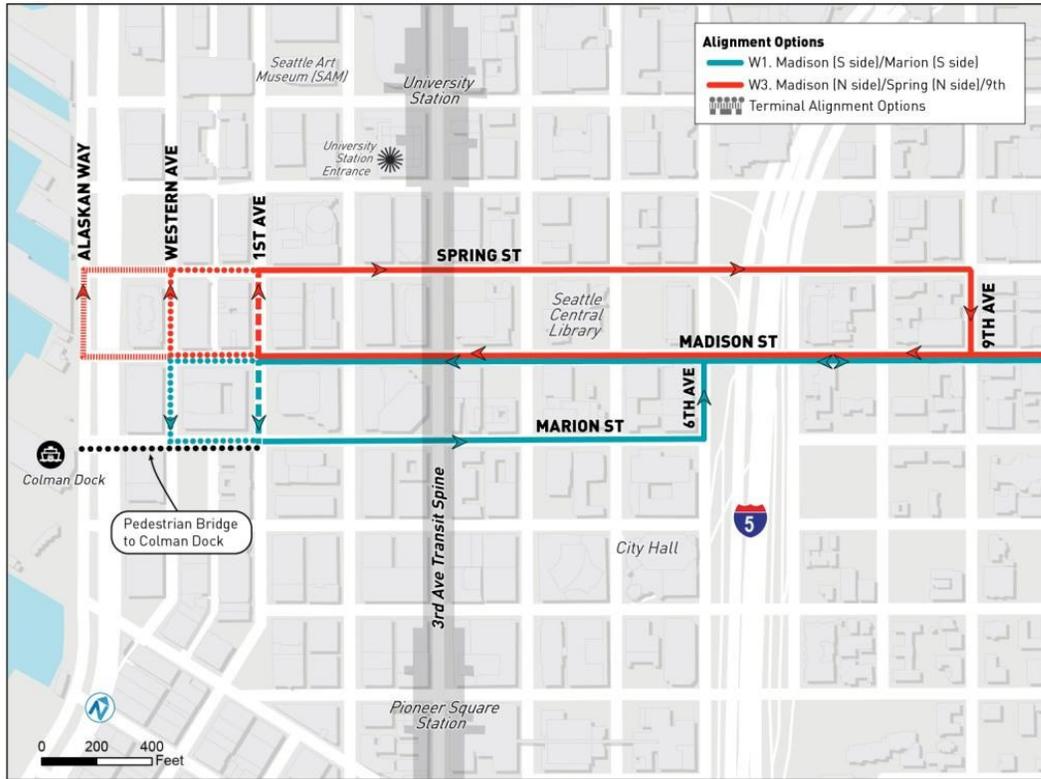
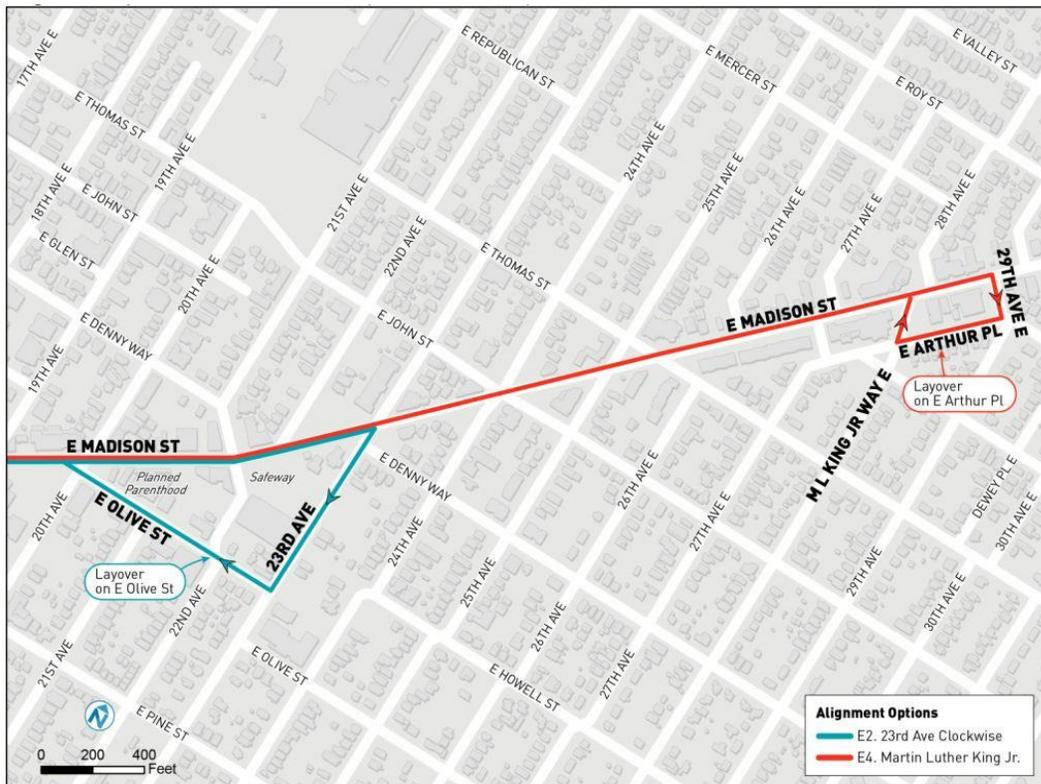


Figure 2-9 Eastern alignment options



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Figure 2-10 Western alignment preference

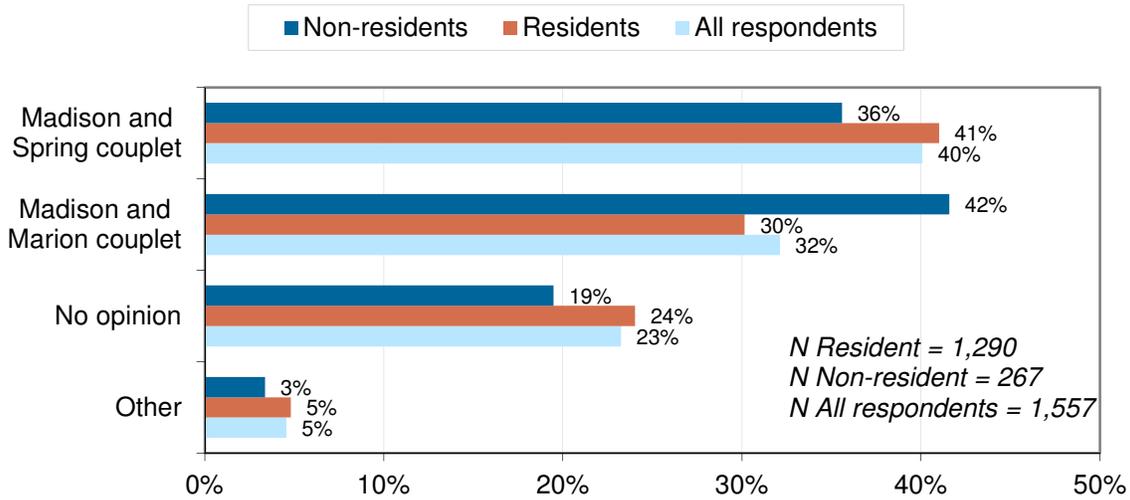
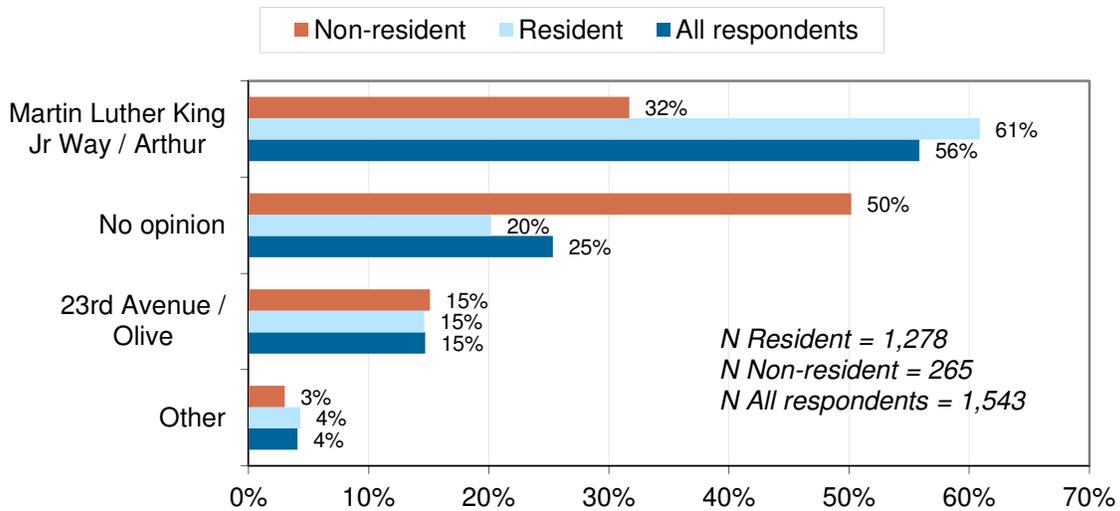


Figure 2-11 Eastern alignment preference



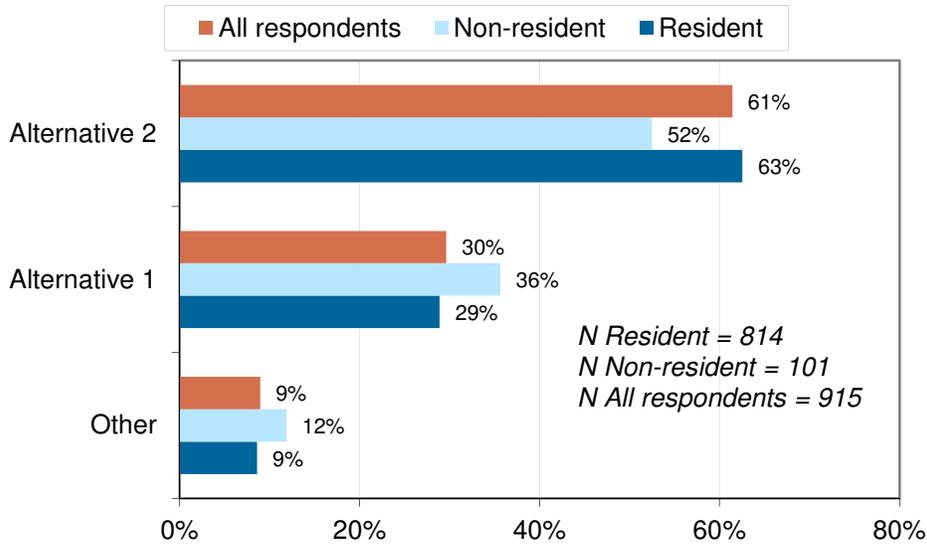
As part of the Madison Corridor BRT project, SDOT is planning improvements on one east/west bicycle facility in the general vicinity of the Madison Street corridor (Figure 2-12). The survey presented two options for improved bicycle access. Of the respondents who indicated an opinion², Alternative 2 received the most support with 63% of Seattle residents and 52% of non-Seattle residents (Figure 2-13). This option would enhance bicycle facilities along Union St, 27th Ave and Arthur Pl. Alternative 1 (which would improve Broadway, Denny Way, 21st Ave, Thomas St, and 24th Ave) was supported by roughly three-tenths of respondents.

² 40% of respondents to this question indicated "No opinion." The data presented here ignores these responses and calculated the percent of people who selected Alternative 1, Alternative 2 or Other.

Figure 2-12 Bicycle route options



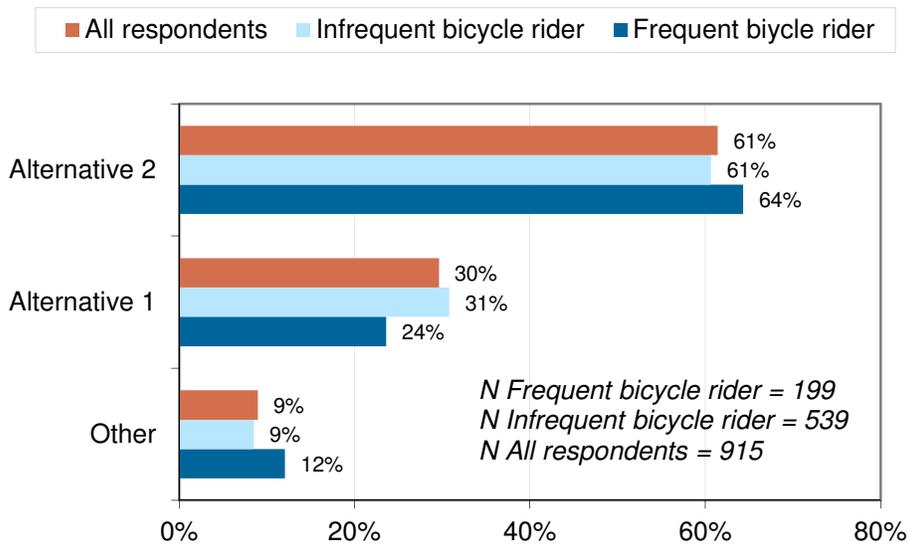
Figure 2-13 Bicycle route preference



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There was minimal difference between frequent and non-frequent bicycle riders in the route selected for improvements (Figure 2-14). More than 60% of both frequent and infrequent bicycle users³ selected Alternative 2 as their top choice.

Figure 2-14 Bicycle route preference, by frequency of bicycle use



Additionally, the survey asked respondents to select the intersections which are most important to enhance access and improve safety for people traveling on foot and by bicycle (Figure 2-15). The intersection of 12th Avenue and Madison Street was selected by three-fifths of respondents, followed by 23rd Avenue and Madison and 12th Avenue and Denny. These rates were very similar for people who are frequent bicycle riders and those who are not (Figure 2-16).

³ Frequent riders are those who indicated they ride a bicycle at least three times a week. Infrequent riders ride two or fewer times per week.

Figure 2-15 Intersection enhancement preference

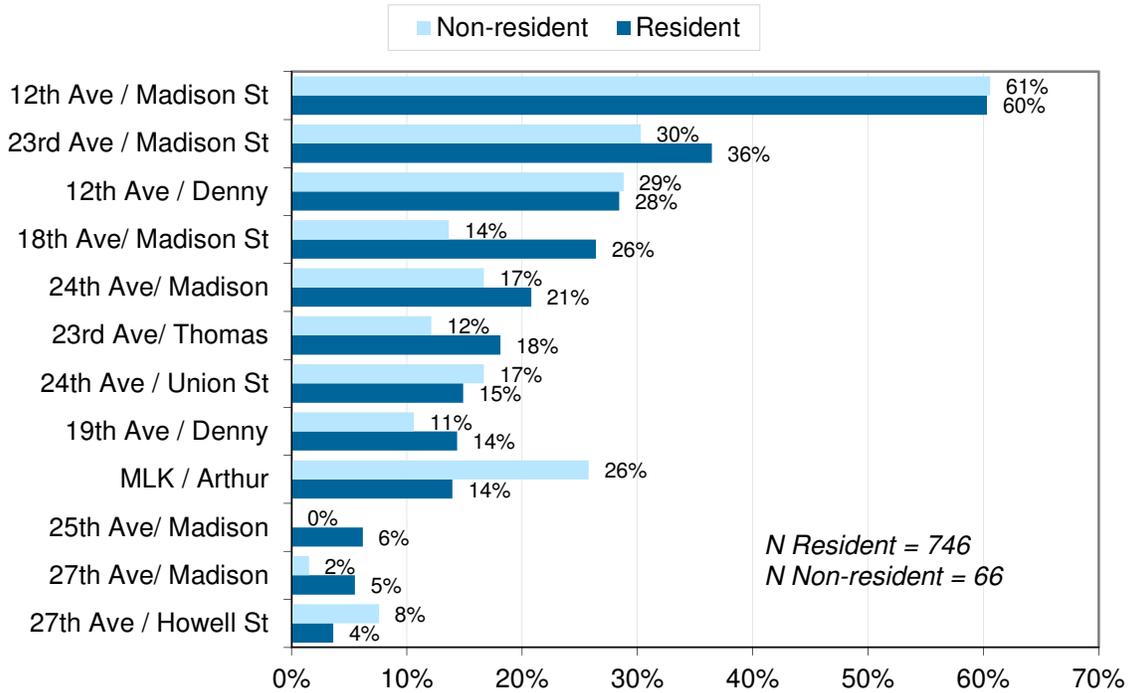
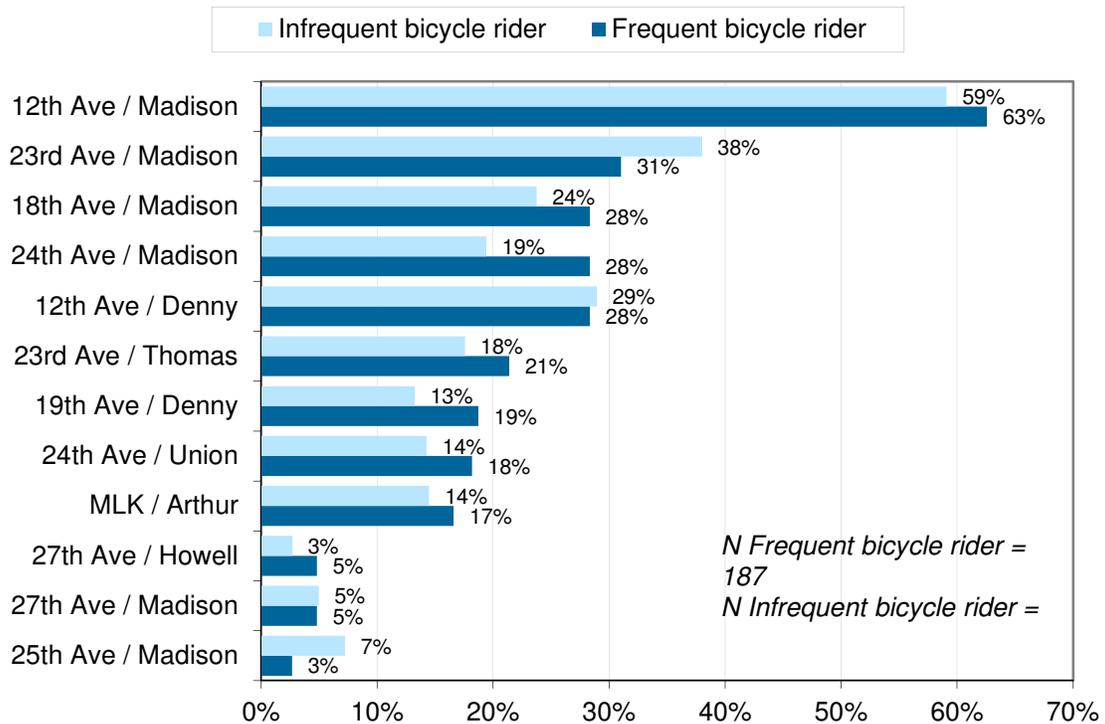


Figure 2-16 Intersection enhancement preference, by frequency of bicycle use



3 WIKIMAP SUMMARY

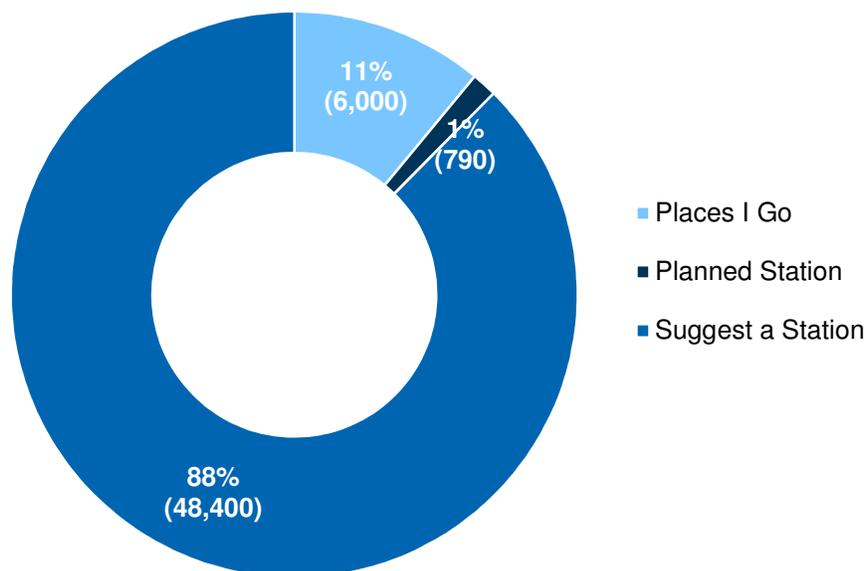
Overview

The Madison Street Corridor BRT Study’s online survey was supplemented by a web-based mapping exercise, linked from the final survey page. The mapping exercise was hosted on the Wikimap platform, a program that allows people to place new content on a map and vote (agreed or disagree) on other’s content. Survey participants were asked to comment on three topics:

- **Planned Stations.** Survey respondents could vote “like” or “dislike” for planned stations but could not add comments.
- **New Proposed Stations.** Respondents could also propose new station locations and comment and vote on those proposed by previous survey respondents.
- **Destinations.** Respondents were asked to identify places they travel to in the Madison corridor, which other participants could also vote and comment on.

A total of nearly 3,000 votes and comments were added to the online map from nearly 500 respondents, including 170 points for suggested stations and 397 points for destinations. The majority of votes and comments were related to user suggested stations (Figure 3-1). Some stations attracted as many as 200 votes and comments from survey participants. Planned (proposed) station comments are low because respondents could not comment on an existing station; rather they could suggest a station in the same location to add a comment. Some “suggested” stations are placed to comment on proposed station locations.

Figure 3-1 Total Votes and Comments by Type



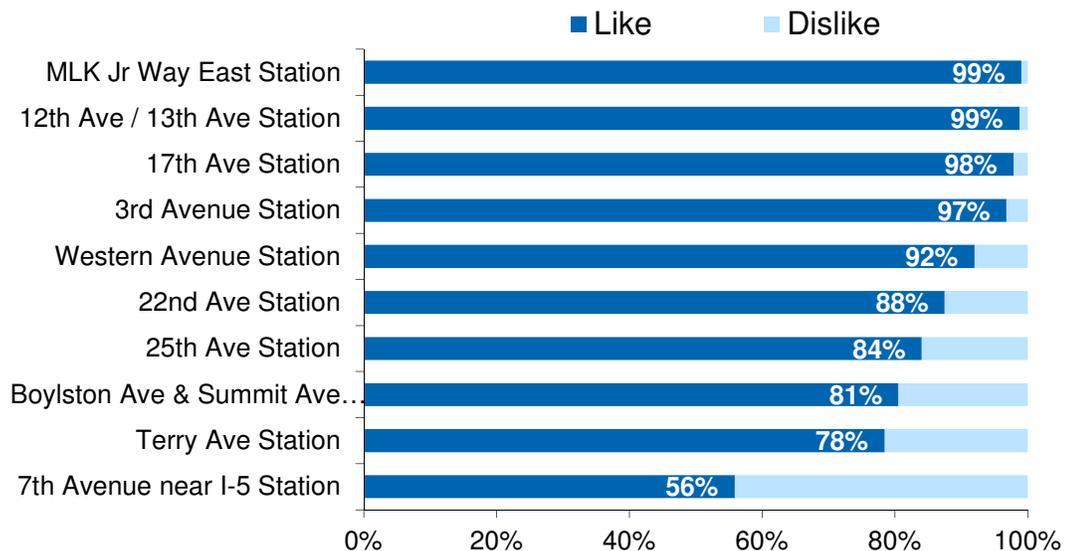
Proposed Stations

A total of 10 proposed stations were shown in the mapping exercise (general locations), and respondents were able to indicate their like or dislike of the proposed station locations. Figure 3-2 and 3-3 (on page 3-20) show survey results by station. The most popular stations, in terms of percentage of voters who liked the station, were the stations at MLK Jr. Way East, 12th/13th Avenue, 17th Avenue, and 3rd Avenue. The 3rd Avenue station and MLK Jr. Way East station both received the highest number of total votes, indicating strong preference for ensuring Madison BRT provides easy transfer opportunities to the 3rd Avenue Transit. There was also significant support for extending the corridor past 23rd Avenue to MLK Jr. Way.

The station receiving the lowest support was the station located on 7th Avenue. The comments in this area (detailed further in the following section) suggest that many survey respondents would like a station at 5th or 6th Avenue downtown, and/or a station at 8th or 9th Avenue.

Although 78% of respondents liked the Terry station location, suggestions for stations at 8th, 9th, and Boren avenues were also popular, indicating that some would prefer these locations to Terry. Several other stations had less than 90% agreement (Boylston & Summit, 25th Avenue, and 22nd Avenue), although this does not represent significant disagreement with these station locations.

Figure 3-2 Proposed Station Voting Summary



Suggested Stations

A total of 174 points were provided as suggested stations. A total of 260 likes and comments were made on points further than a half mile from the study corridor, compared to 1,050 within a half mile. Other streets that attracted a significant number of suggested stations included Seneca downtown and in First Hill, E Union to Madrona Beach, and Broadway north of Madison. These stations included locations in Lower Queen Anne, Belltown, South Lake Union, Capitol Hill, SODO, and the Central District.

There were over 250 likes and comments related to improving transfer opportunities. This input suggests that many survey respondents do not envision making trips that start and end on Madison, but rather using the line to reach other transit routes. There appears to be a preference to locate stations as close as possible to major intersections and north-south corridors, regardless of whether there is current transit service.

Top station suggestions and their relation to planned stations are summarized below and are shown in Figure 3-3.

- **Broadway & Madison (related to the proposed Boylston & Summit station).** A significant number of respondents supported moving the proposed Boylston & Summit station closer to Broadway (211 votes and comments). Respondents noted that Broadway serves Seattle University and Central Seattle students as well as a planned Whole Foods development. However, the primary component of support for a Broadway station is the transfer opportunities provided at Broadway, with over 100 comments and “I agree” votes for a Broadway station. The First Hill Streetcar, which has a planned station at Broadway and Marion, was mentioned by numerous survey respondents, although Routes 9, 60, and a variant of Route 43 also serve Broadway. (It should be noted that Boylston provides a shorter and flatter connection to the streetcar and bus stops).
- **23rd & Madison (related to the proposed 21st & Madison station).** Several station locations were suggested east of the proposed 21st & Madison station. There were 80 total comments and “I agree” votes in support. Many comments indicated that transfer activity at this location is very important, particularly to Route 48, but also to Routes 43 and 8.
- **5th & Madison (related to the proposed 7th Avenue/1-5 station).** There were 63 total comments and “I agree” votes for station at 5th and Madison. While the primary attraction is the Seattle Central Library, a stop at 5th Avenue would also serve other downtown destinations uphill from 3rd Avenue; there is an approximately 70ft elevation gain between 3rd and 5th.
- **Boren & Madison (related to the proposed Terry Avenue station).** There were 73 comments and votes in favor of a station at Boren instead of Terry. Comments emphasized that this location seems

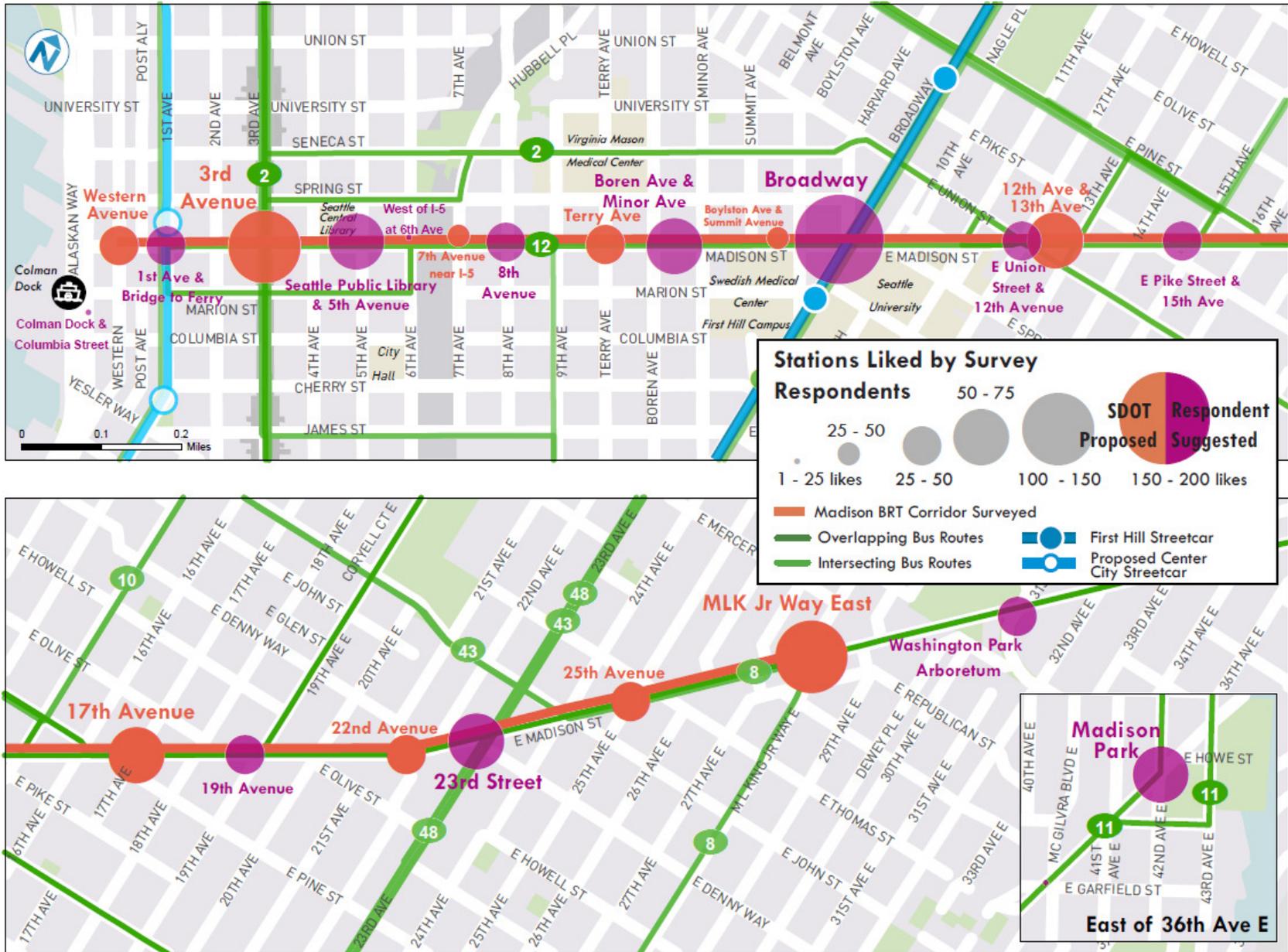
like a more intuitive station location. Commenters stated that this station location serves more destinations and bus transfers and better positions passengers to make the hill connection to Swedish Hospital.

- **Arboretum Station.** There were 70 votes in favor of a station near the Arboretum at Lake Washington Boulevard and E Madison.

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Figure 3-3 Proposed and Suggested Stations Input Map



Corridor Destinations

Respondents who participated in the mapping exercise were also asked to indicate the places they regularly visit along the Madison corridor. A total of 400 destinations were added to the map, with nearly 600 additional comments and likes. Destinations pinpointed by respondents are mapped in Figure 3-4.

Destinations in downtown were concentrated heavily along Madison Street, with smaller concentrations north along 1st and 3rd Avenues and south of Madison where a number of office towers are concentrated. In comments, a number of people indicated destinations along 1st Avenue, such as the Seattle Art Museum, and Pike Place Market (30 votes), and along 3rd Ave including the Downtown Seattle Transit Tunnel. Colman Dock drew 20 votes.

First Hill destinations fell mostly south of the corridor, with the exception of Virginia Mason. Other notable destinations included the Polyclinic (15 votes), Town Hall (10 votes), Horizon House, and several destinations on Cherry Street.

Capitol Hill destinations were most concentrated on the corridor with the highest number of votes at proposed station locations. Other significant vote areas were north of Madison along Broadway, Pike, and Pine (80 votes) with many smaller destinations such as bars and restaurants in the Pike/Pine area several blocks from Madison Street. There were two large clusters of destinations around the grocery stores at 17th and Madison, specifically at the Central Co-op (40 votes) and Traders Joes (50 votes).

In the eastern portion of the corridor, destinations were much more closely clustered, with pockets on E. Union between 20th and 23rd (53 votes) composed primarily of small businesses including several bars, shops, a post office, and movie theater. Around 22nd and Madison where there is a Safeway grocery store with apartments and several other services (46 votes), and around MLK and Madison where this also a concentration of small businesses (64 votes).

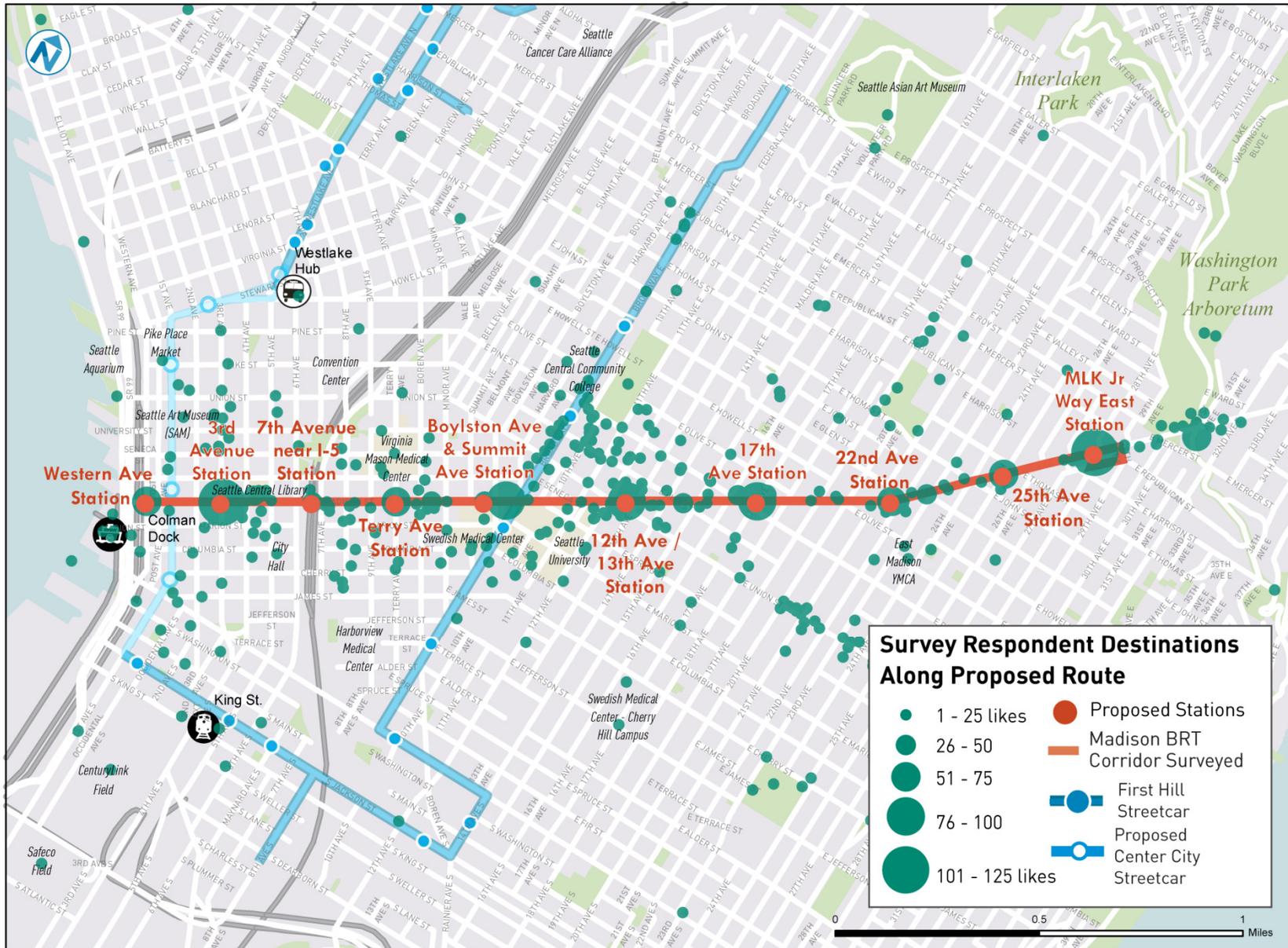
The area at the southern tip of the Arboretum, just beyond the potential MLK terminus, also attracted 50 votes.

Respondents also added numerous destinations outside of the corridor, particularly to the east along Madison in the Madison Park area (40 votes) and north on 19th Avenue (30 votes).

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Figure 3-4 Destinations Input Map



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