Seattle Department of Transportation

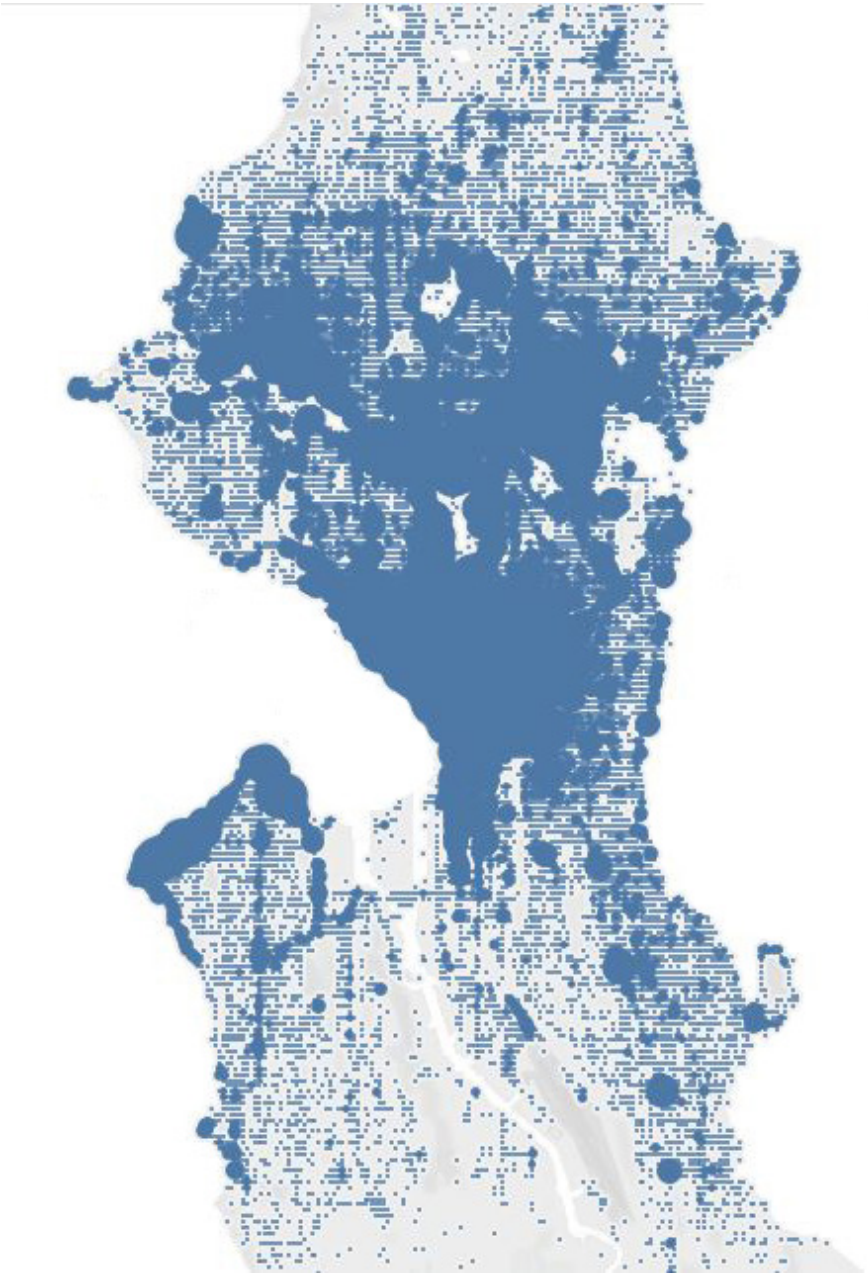
2019 QUARTER 3
BIKE SHARE SUMMARY REPORT

Seattle
Department of
Transportation

INTRODUCTION

Seattle's free-floating bike share permit allows area residents and visitors to easily access a bicycle – for a quick errand, a commute trip to Link light rail, or an all-day adventure. Users can find and rent the closest bike share bicycle, ride the bike to their destination, and leave the bike appropriately parked for the next user.

To track ongoing issues, data, and program accomplishments, SDOT regularly publishes monthly and quarterly bike share reports. The monthly reports summarize key data points and have been published since December 2018. This quarterly report follows the Q1 and Q2 reports and is meant to summarize performance and compliance data from July through September 2019.



This map shows where bike share trips started across Seattle in Q3. The larger, more dense blue dots represent more trip starts. The map shows that bike share continues to serve the entire city, but rides are concentrated in the Center City area, the University District, and neighborhoods just north of the Ship Canal. There is less ridership in the far northern and southern portions of Seattle.

BIKE SHARE Q3 DATA RESULTS

FLEET SIZE

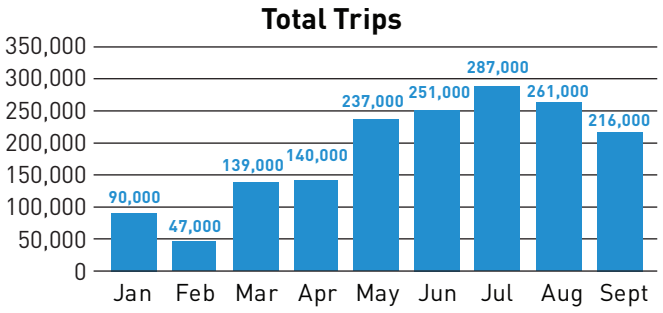
Lime and Jump continued as the only bike share operators in Seattle. Lyft, although permitted, has not yet launched service in the City. The total number of devices fluctuated between 6,800 and 7,300 devices throughout Q3. The fleet remained smaller than the 10,000 bikes that were operating on Seattle's streets in Q3 2018. SDOT will continue to keep a close eye on fleet size with a goal that bike share provide a readily-available transportation option throughout the city.

Quarter 3 2019 saw continued growth in the warm weather months, peaking at over 287,000 trips in July and breaking the record for most quarterly trips for Seattle bike share. Overall, riders took over 750,000 trips in Q3 and over 1.6 million trips year-to-date. If bike share were a King County Metro bus route, these Q3 trip totals would place it in the top ten King County bus lines for ridership during that period.

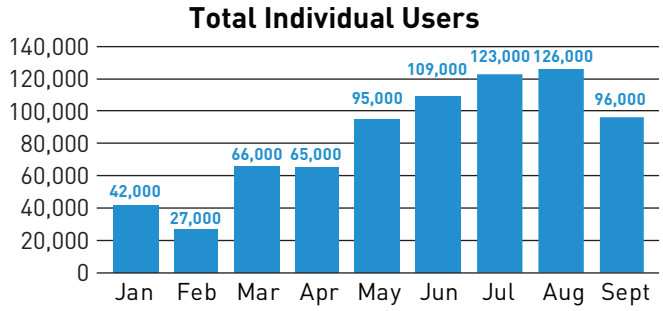
The total number of individual users also grew as the weather improved each month, topping more than 126,000 individual users in August 2019. In all of Q3, there were almost 300,000 unique riders between the two vendors.

Number of Trips

Total Trips (rounded to the nearest thousand)[1]



Total Individual Users[2]



[1]SDOT defines a trip to be any bike share trip record where the distance is greater than 0 meters and the duration is greater than 30 seconds.
[2]This value is the sum of each vendor's unique user totals and does not account for users that are registered with both companies. This is because each vendor reports its total unique users separately to decouple rider information from trip information.

PERMIT COMPLIANCE

In addition to providing a healthy, efficient, and low-carbon mobility option in Seattle, it is important that bike share vendors are held to clear, consistent permit standards related to fleet parking and maintenance. This gives bike share vendors a level playing field and helps SDOT proactively manage the system. It also ensures that bike share bikes are parked according to the terms of the permit and are not posing blocking hazards to pedestrians, people who are blind or have low vision, and people living with disabilities.

To meet this goal, SDOT worked with key stakeholders and bike share vendors to develop free floating bike share permit requirements that set clear standards with defined compliance thresholds and fleet-reduction enforcement actions. In applying for and receiving a permit, each vendor agreed to abide by these standards. The standards are written to compel the bike share vendors to meet desired outcomes while avoiding prescriptive management approaches that might stifle innovation. Those goals are:

1. No audited bikes (0%) can present blockages to a clear pedestrian pathway that violates the standards set forth in the Americans with Disabilities Act (ADA).
2. No more than 3% of audited bikes can present obstruction hazards to pedestrians and people living with disabilities, as defined in Permit Section P1.6.
3. No more than 30% of audited bikes can be incorrectly parked at all, which includes all obstruction hazards and ADA-prohibited obstruction hazards in addition to parking on an unpaved surface, tipped bikes, and other non-blocking violations (Permit Section P1.5).
4. No more than 10% of audited bikes can be deemed unsafe to operate (Permit Section ES4).
5. At least 70% of the audited sample is in good working order and available for rental (Permit Section ES4).

To determine whether vendors are meeting these standards, SDOT has developed a first-of-its-kind bike share auditing program to verify compliance. Working collaboratively with our third-party auditor, bike share staff completed the second full quarter of audits in Q3 2019, examining bikes in 13 audit-focus areas citywide while also auditing complaint report and response logs submitted by each vendor.

COMPLIANCE AUDITS

Methodology

Compliance audits conducted in Q2 and Q3 2019 are based on the following methodology:

1. Select audit areas using a **stratified random selection process:** SDOT and consultant staff collected data from thirteen audit focus areas across Seattle throughout the quarter. Based on bike parking data, the 162 areas were split into four tiers, with Tier 1 having the most trip ends and Tier 4 the least. We randomly selected from each tier the following number of audits:
    a. Tier 1: 6 audits
    b. Tier 2: 4 audits
    c. Tier 3: 2 audits
    d. Tier 4: 1 audit

2. Conduct **field audits:** In field audits, staff visually inspect every publicly accessible bike in the audit focus area. These audits judge how each bike is parked and visually inspect every bike for visible maintenance issues, including damage to the frame, wheels, brakes, handlebars, seat, pedals. These inspections also test brakes to check engagement and catalog if all required signage is posted on each bike. Additionally, in Q3, auditors attempted to rent a random selection of bikes to measure the percentage of bikes that were available for rental. This analysis also included testing brakes while riding and that bike lights illuminate once a ride begins.

Location of Audits Performed in Q3[3]

Date	Neighborhood	Tier
7/16/2019	Adams	1
7/18/2019	West Woodland	2
7/18/2019	Haller Lake	4
7/23/2019	Lower Queen Anne N	1
8/6/2019	South Lake Union	1
8/8/2019	Wallingford	2
8/8/2019	N College Park	3
8/19/2019	Lower Queen Anne S	1
8/27/2019	West Queen Anne	2
9/13/2019	Belltown	1
9/18/2019	CID / Pioneer Square	1
9/23/2019	Yesler Terrace	2
9/25/2019	Mann	3

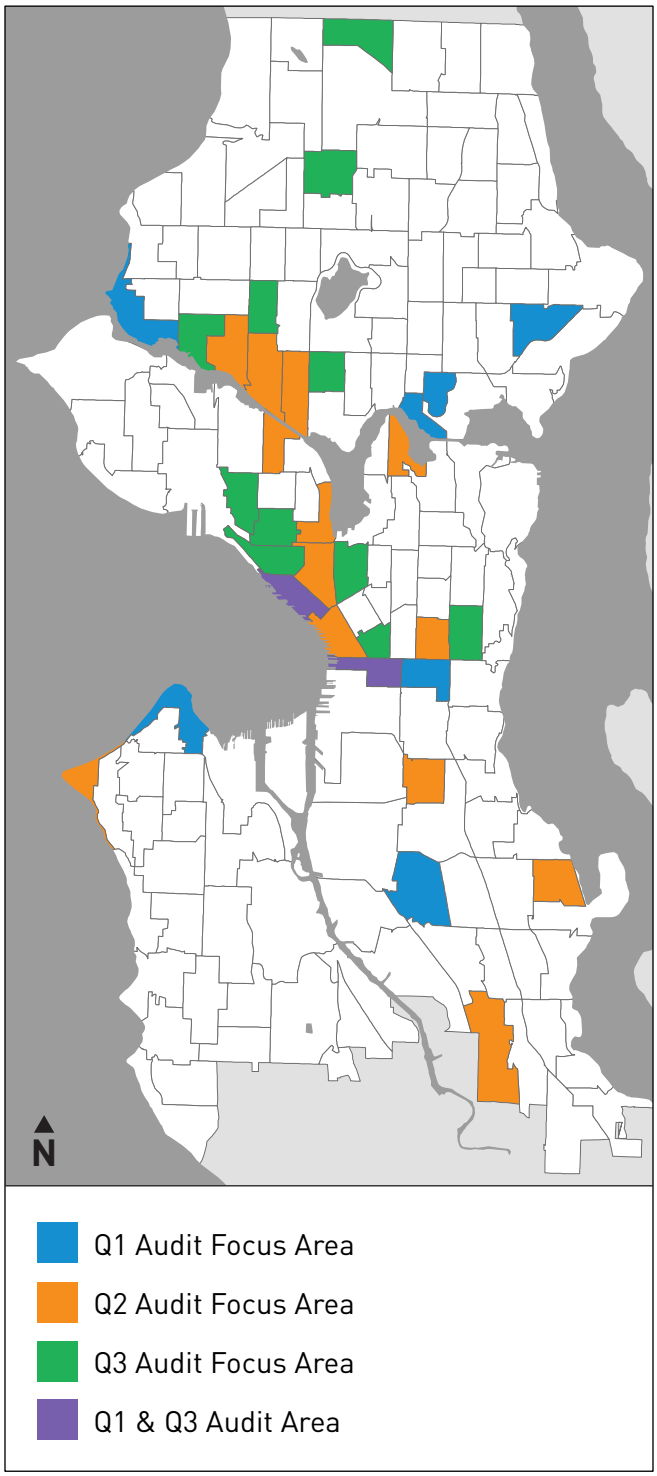


Figure 1: Map depicting Seattle's 162 audit focus areas, including areas audited in Q1, Q2, and Q3 2019.

[3]Although randomly selected, the audit areas were assigned dates based on proximity to each other to reduce travel time and gain efficiencies.

Q3 Audit Results

Total Bikes Audited Q3[4]	756
Lime Bikes Audited	387
Jump Bikes Audited	367

Bikes parked as ADA-prohibited obstruction hazards: All bikes parked that leave less than four feet of clear pedestrian passage.

Target	0%
Number and percent ADA-prohibited obstruction hazards - Total	1 bike (0.1%)
Number and percent ADA-prohibited obstruction hazards – Lime	1 bike (.3%)
Number and percent ADA-prohibited obstruction hazards – Jump	0 bikes (0%)

Bikes parked as obstruction hazards: All bikes parked blocking the sidewalk, curb ramps, and building access (see Figure 3). This also includes bikes left on the corners of a block, bikes left in bus zones, and bikes left in continuous building frontage zones.

Target	< 3%
Percent obstruction hazards – Total	5.3%
Percent obstruction hazards – Lime	3.6%
Percent obstruction hazards – Jump	7.1%

Bikes parked incorrectly: All bikes that were incorrectly parked. These include all bikes that were judged to be "obstruction hazards," all bikes that were judged to be ADA-prohibited obstructions, as well as bikes left on unpaved surfaces, tipped, or otherwise incorrectly parked.

Target	< 30%
Percent incorrectly parked – Total	13.9%
Percent incorrectly parked – Lime	12.1%
Percent incorrectly parked – Jump	15.8%

Figure 2: This bicycle blocks the sidewalk and is categorized as an obstruction hazard. It does leave over 4' of passage so is not an ADA-prohibited obstruction hazard.

Bike maintenance - safety: All bikes that were found to have visible safety issues, including issues with brakes, handlebars, frame, wheels, or pedals.

Target	< 10%
Percent with safety maintenance issues – Total	5.3%
Percent with safety maintenance issues – Lime	8.0%
Percent with safety maintenance issues – Jump	2.5%

[4]Proportion of the number of bikes audited per vendor roughly matched each vendors respective fleet sizes in Q3.

Bike maintenance – not in good working order: All bikes found to have non-safety related maintenance issues, including bikes missing required signage, bikes in maintenance mode and not available for rental, and bikes with broken kickstands. This number is inclusive of the non-rentable subset below.

Target	< 30%
Percent not in good working order – Total	18.4%
Percent not in good working order - Lime	23.8%
Percent not in good working order – Jump	12.8%

Bike maintenance – not in good working order, non-rentable subset: In September 2019 audits, staff attempted to rent a randomly selected subset of 147 bikes to better determine the percent of parked bikes that are available for rental. This data shows the percent of those bikes that were not rentable. This could be due to issues such as a low-battery or a mechanical unlocking error.

Target	< 30%
Percent not rentable – Total	51.0%
Percent not rentable - Lime	63.4%
Percent not rentable – Jump	35.3%

Response time regarding improperly parked devices

The bike share permit (section CE3) also requires vendors to respond to reports of improperly parked devices and devices needing maintenance within the following time periods:

- **2 hours** for reports of obstruction hazards made between 6:00 AM and 11:59 PM.
- **4 hours** for reports of obstruction hazards made between 12:00 AM and 5:59 AM.
- **24 hours** for reports of improperly parked devices that are not obstruction hazards, and for reports of devices needing maintenance.

Q3 showed ongoing improvement in vendor's reported response times, with both Lime and Jump responding "in time" to over 75% of reported complaints. However, the vendor-submitted logs did not include all known reports, and therefore SDOT cannot make a fully accurate assessment of vendors' report response times.

AUDIT RESULT SUMMARY

The Q3 compliance audit showed an improvement in parking from Q2 audit results. All aspects of parking improved, with a 92% reduction in ADA-prohibited obstruction hazards (12 bikes in Q2, 1 bike in Q3), a 12.1% reduction in obstruction hazards, and an 18.6% reduction in incorrect parking overall. However, despite this improvement, both Lime and Jump remain over the threshold for bikes parked as obstruction hazards and are non-compliant with the permit. It should also be noted that these parking audit improvements may be partially attributable the amount of available bike parking in the audited areas. While Q2 audits included many areas that have narrow sidewalks and unpaved furniture zones such as Ballard and Fremont, randomly selected Q3 audits included more areas with wider sidewalks and paved furniture zones which may have attributed to the increase in appropriate parking.

The audits also showed that 5.3% of the bike share fleet was deemed unsafe to operate and 18.4% was not in good working order. This was a 3.8% and 13.6% increase from Q2, respectively, yet remains compliant with the permit. This increase may be at least partially due to our change in methodology detailed above. That change in methodology also allowed SDOT to more accurately audit the percent of parked bikes available for rental. The results showed a large difference between Lime and Jump performance, with 63.4% of audited Lime bikes not rentable and 35.3% of audited Jump bikes not rentable. This resulted in a fleet reduction for Lime, detailed below.

ENFORCEMENT ACTIONS

Enforcement actions can occur on either a **monthly** or **quarterly** cadence. Monthly enforcement actions happen when **per-instance** infractions occur. Infractions could be conditions such as ADA-prohibited obstruction hazards as well as inaccurate or incomplete reports and logs sent to SDOT. SDOT imposes enforcement actions on a quarterly cadence on issues that involve compliance percentage thresholds. These include parking obstruction hazards and maintenance concerns and are limited to the quarterly cadence to ensure that SDOT has a robust sample size per-company before issuing any potential penalties. Due to the above issues of Q2 permit non-compliance, SDOT took fleet-reduction enforcement actions this quarter on both a monthly and quarterly basis.

MONTHLY ENFORCEMENT ACTIONS

In April 2019, SDOT reduced each vendor's maximum allowed fleet size 1,000 devices for incomplete and inaccurate report-response logs. These monthly logs continued to be incomplete in Q3, therefore the previous fleet reduction will remain in effect through Q4 2019. As vendors continue to work in good faith with SDOT to improve these reports, SDOT elected to not initiate further fleet reductions at this time.

For one instance of ADA-prohibited obstruction hazard by Lime in July 2019 and following the recommended enforcement action specified in Permit Section CE4.2(c), SDOT reduced Lime's maximum allowed fleet by a further 20 devices.

QUARTERLY ENFORCEMENT ACTIONS

In Q2, SDOT reduced each vendor's maximum allowed fleet size by 1,000 devices for failed parking audits. The Q3 parking audits showed significant improvement from Q2 across all metrics. Due to these improvements, SDOT did not enact any further enforcement actions against either vendor. However, as vendors remain above the compliance threshold for obstruction hazards, SDOT did not reinstate fleet maximums that had been previously reduced due to this infraction.

Q3 maintenance audits showed that the bike share fleets continue to meet compliance thresholds for safety standards. Visual audits also showed that the bike share fleet meets compliance thresholds for being in good working order. However, a more in-depth audit where auditors attempted to rent a subset of bikes showed that both vendor's fleets did not meet the permit compliance threshold of 30%[5].

[5]Permit section CE4.3 states that 70% of the bike share fleet must be in good working order and available for rental. For clarity and consistency with other compliance thresholds, we've adjusted how we write about this metric. Although the meaning is the same, we focus on "exceeding 30%" rather than "falling below 70%" as a failed audit.

In the audit of 82 Lime bikes, 63.4% of parked bikes that staff attempted to rent were not rentable. Of 65 Jump bikes audited, 36.6% were not rentable. As a response to Lime's infraction and following the recommended enforcement action specified in permit section CE4.3, SDOT is reducing Lime's maximum allowed fleet by 500 devices. SDOT elected to not issue that fleet-reduction penalty to Jump as their performance was dramatically better than Lime's and it is within SDOT's mobility and performance interests to allow the better-performing vendor a larger fleet.

Table 1 shows the above enforcement action taken to-date in 2019 and the resultant maximum-allowed fleet sizes. As vendor fleets continue to fluctuate, Lime's deployed fleet remains below their newly reduced maximum-allowed fleet and Lime will not be forced to remove active devices.

Table 1. Fleet Adjustments

	Lime	Jump
2019 Fleet Allotment	**6,667**	**6,667**
Q2 Actions		
Inaccurate/incomplete complaint logs	-1,000	-1,000
Parking: ADA-prohibited obstruction hazards	-160	-100
Parking: Obstruction hazard failed audit	-1,000	-1,000
Q3 Maximum Allowed Fleet Size	**4,507**	**4,567**
Q3 Actions		
Parking: ADA-prohibited obstruction hazards	-20	
Maintenance: Bike availability for rental	-500	
Q4 Maximum Allowed Fleet Size	**3,987**	**4,567**

BIKE PARKING INSTALLATION

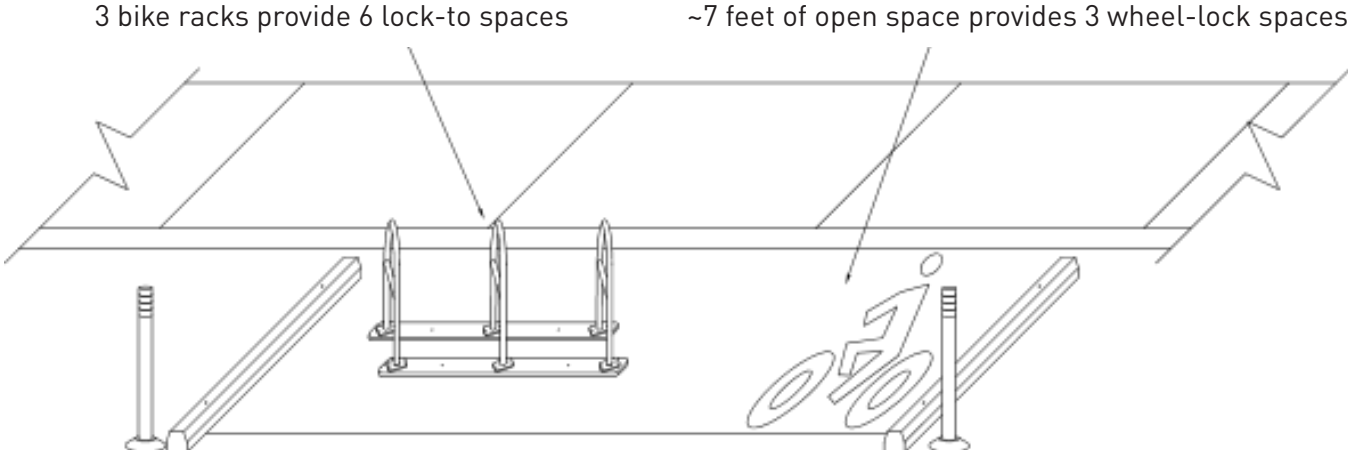
The Seattle Department of Transportation's (SDOT's) bike share program is committed to expanding bike parking by 15% throughout the City of Seattle during the 2019 Permit Cycle. This translates to an increase of 1,500 bike parking spaces. This report builds on the Q1 and Q2 reports submitted earlier this year and summarizes SDOT efforts to install bike parking in the city to date.

SDOT is installing parking for both lock-to bikes (bike racks) as well as open free-standing space for the wheel-lock bikes (corrals). Those two different types are represented in our bike parking tallies shown in Table 1, and are defined as follows:

- Lock-to: A single bike rack allows space for two lock-to bikes
- Wheel-lock: A wheel-lock bike space is roughly six feet long by two feet wide

Funding for the materials and installation of these bike parking spaces comes from a portion of the permit fees that each bike share vendor pays to operate their business in the public right-of-way.

Typical On-Street Corral Design



Q3 SUMMARY

In Q3, SDOT installed 15 on-street corrals and 2 standard bike racks, totaling 84 lock-to spaces and 51 wheel-lock spaces (see Table 1 for yearly total). These installations were primarily in Northwest Seattle (Ballard) and Southwest Seattle (Roxhill), with some others in South Park, Queen Anne, the Central District, and Fremont. In addition to completion of these installations, other locations were put into the delivery process in Interbay, Queen Anne, Belltown, and South Lake Union.

As of the end of Q3, SDOT delivered a total of 60 on-street corrals, 16 sidewalk corrals, and 9 rack-only installations to-date. SDOT prioritized delivering bike share parking via on-street spaces over sidewalk spaces. To that end, Q3 brought bikeshare installation ratio of approximately 75% on-street spaces and 25% sidewalk spaces, respectively. The bike share team prioritized delivering on-street installations as a key strategy to reduce the impacts of improperly parked bikes on sidewalk users.

Please see the Table, Figures, and Maps below for more information on our current delivery status.

Table 2. Bike share parking installations[6]
January 1, 2019 to September 30, 2019

Installed		Awaiting Installation		Pending Approval		In Outreach[7]	
Lock-to	Wheel-lock	Lock-to	Wheel-lock	Lock-to	Wheel-lock	Lock-to	Wheel-lock
546	297	138	75	12	3	44	25
843 Spaces		213 Spaces		15 Spaces		69 Spaces	

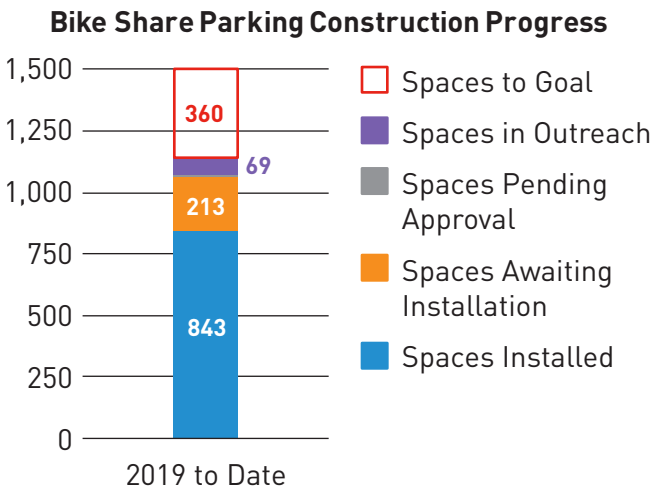


Figure 3. Bike share parking construction progress
January 1, 2019 to September 30, 2019

Table 3: Spaces installed on-street vs on sidewalk
January 1, 2019 to September 30, 2019

Installation Location	Number of Spaces	Percent of Installed Spaces
Sidewalk	204	24%
On-street	639	76%

[6]In addition to the spaces listed in Table 1, staff have a list of 30+ potential installation locations in the queue. Each installation location could be as few as 2 lock-to spaces, or as many as 6 lock-to spaces and 6 wheel-lock spaces. Data for all categories reflects status as of September 30, 2019. These numbers also reflect removals of existing racks and adjustments of completed installations required to appropriately manage impacts to the right-of-way.
[7]Outreach Phase means that a site has been selected for installation and doorhangers have been placed at the necessary adjacent businesses/residences; the outreach period is 1 week long for sidewalk installations and 2 weeks long for on-street installations.

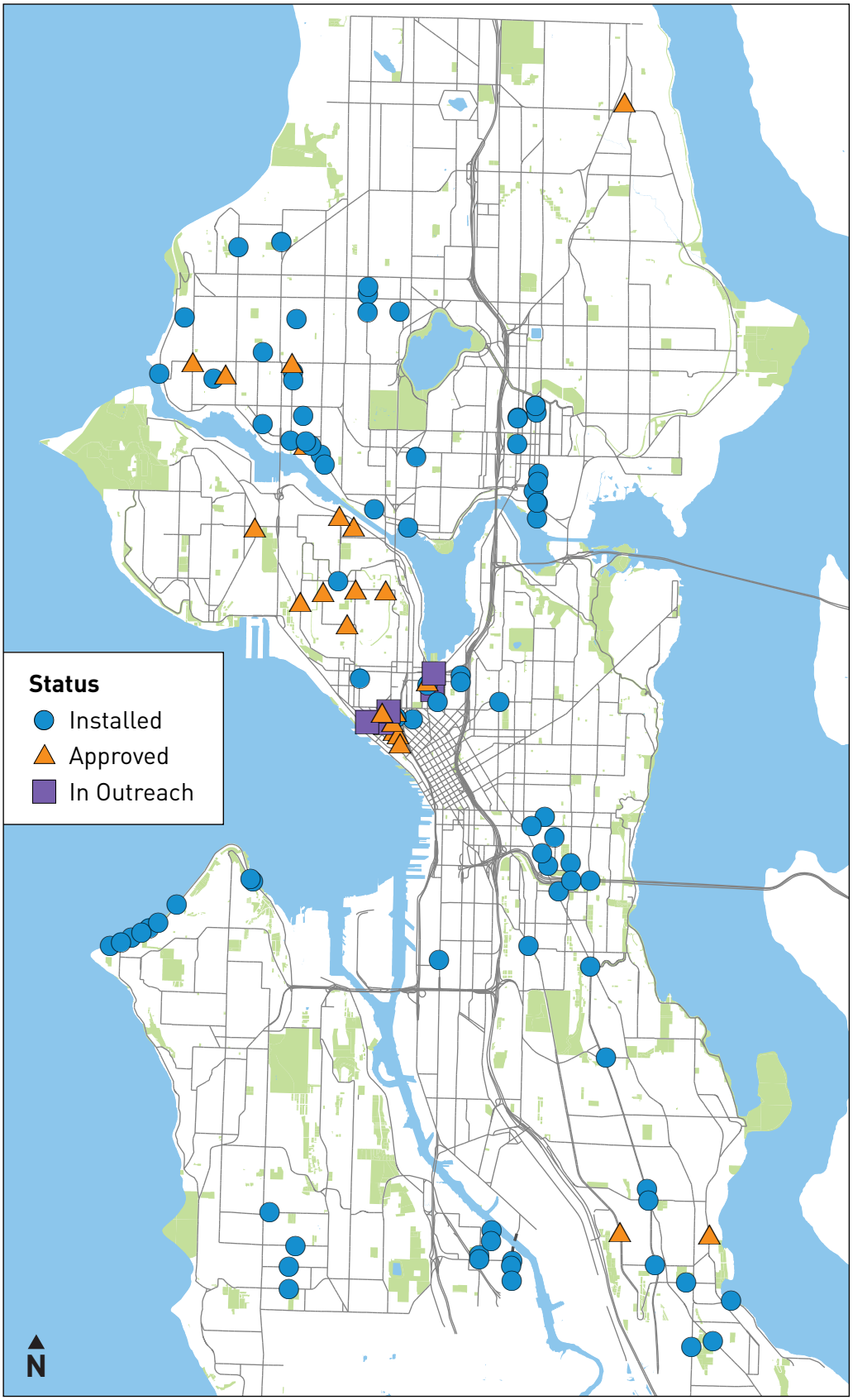


Figure 4: Bike parking installation locations, total progress to date
January 1, 2019 to September 30, 2019