ATTACHMENT B

Shared Active Transportation: Suggested Practices

OCTOBER 18, 2018

ORANGE COUNTY TRANSPORTATION AUTHORITY

Background

With an exemplary safety record and more than 123 million trips taken in 55 cities in the US since 2010, bikeshare has shown that it can help reshape urban transportation and make cities better, safer places for their residents. This success has been guided by hand-in-hand coordination between cities and operators sharing the same goals.

Starting in 2017, shared active transportation programs consisting of small vehicles such as bikeshare and electric scooters have launched; sometimes without public agency coordination. Operators have deployed small vehicles in the public right-of-way, where customers utilize a smartphone mobile application to gain access to the company's small vehicle network. At the conclusion of the trip using the small vehicles, the devices are parked at their destination free of parking racks. The ability to end a trip and park absent a parking rack is often referred to as dockless.

Shared active transportation networks are made up of rented small vehicles operating within the public right of way. The network allows users to travel without contributing to motor vehicle congestion. However, shared active transportation programs are so new that regulating the diverse business models in different communities has become increasingly difficult due to the varying technology, maintenance, equity, and blight issues associated with them. (UC Davis Transportation Services , 2018) (Abcarian, 2018) (Seattle Department of Transportation, n.d.).

Although shared active transportation has initial startup challenges, an opportunity exists to encourage active transportation, reduce vehicle miles travelled and greenhouse gases, and enhance first-last mile access to local transit systems. Local jurisdictions could collaborate at the regional level to proactively address this topic and establish policies and regulations based on the models and lessons learned from other cities with deployed shared active transportation programs to ensure a successful effort in Orange County.

This document has been prepared to support local agencies considering the challenges and opportunities of shared active transportation.

Existing Policy

AB 1096, passed in 2015, defines three classes of electric bikes in California and their use restrictions. Legislation allows a maximum speed of 20 miles per hour (mph) for pedal assist, or throttle-based bikes and 28 mph for the higher power pedelec type. The three classes of e-bikes are listed below:

1. Pedal Assist: The bicycle is equipped with a motor which provides assistance only when the rider is pedaling, and ceases to provide assistance when the bicycle reaches the speed of 20 mph.
2. Throttle: The bicycle is equipped with a throttle actuated motor which accelerates up to 20 mph.
3. Pedelec: This pedal assist bicycle is equipped with a motor which is capable of reaching speeds up to 28 mph.

The California Vehicle Code (CVC) refers to motorized scooters and is applicable to electric scooters. Use of electric scooters is treated similar to that of bicycles, with riding allowed on roadways and in bicycle lanes. The current law as documented in the CVC states the following regarding electric scooters (refer to CVC 21235 for additional requirements):

- All users, regardless of age, must possess a driver's license or instruction permit and wear a helmet while operating an electric scooter.
- Operation of a motorized scooter upon the sidewalk is prohibited.
- No person shall operate a motorized scooter at a speed in excess of 15 miles per hour (CVC 22411).
- Operation of a motorized scooter on a highway with a speed limit in excess of 25 miles per hour is prohibited unless operated within a Class II (on-street) bicycle lane.

Recently signed legislation (AB 2989, Flora), will change state law for electric scooters in the following ways:

- Only require users under the age of 18 to wear a helmet while operating an electric scooter.
- Reinforces the device speed limit of 15 mph regardless of the higher speed limit applicable to the highway.
- Requires use of electric scooters in a Class II or Class IV bikeway on roadways with a posted speed limit over 25 mph.
- Allows local authority to authorize operation of electric scooters outside of a Class II or Class IV bikeway on roadways up to 35 mph.

Currently small vehicle parking in public spaces such as sidewalks occurs within the "furniture zone" at designated areas. This zone includes public amenities and utilities such as light poles, bike racks, mailboxes, newspaper kiosks are located. Organized use of the furniture zone concept allows for a separation between obstacles and a clear pedestrian pathway.

Overview of Potential Concerns

Deployment of shared active transportation networks challenge cities in new ways related to infrastructure, permitting, and safe travel behavior. Most challenges stem from a lack of experience regulating the new device that operates differently than traditional travel modes due to linkage with technology. The following are key concerns that need to be addressed:

- **Parking*:*** Operation through a mobile application allows the device to be parked anywhere absent or regardless of nearby parking racks (dockless). Therefore, concerns have been raised that initial users park small vehicles in a disorganized manner along sidewalks, roadways, and other public spaces, sometimes blocking travel by people walking or using mobility assistance devices. Increased use of small vehicles will create increased demand for designated parking (similar to bike racks or bike corrals) and docking and charging stations at destinations.
- **Infrastructure:** Bicycle riding on the sidewalk is preferred by some for comfort and to avoid riding on the roadway adjacent car traffic. Shared active transportation users appear to prefer sidewalk riding for similar reasons despite regulations prohibiting electric scooters use on sidewalks. Sidewalk riding illustrates the need to improve the comfort level of users to allow for riding on the roadway and within bicycle lanes.
- **Safety:** Small vehicle networks are available for anyone to use regardless of experience or skill level. Novice users may be unfamiliar with the rules of the road, and appropriate behaviors when using a bike or scooter in mixed flow traffic on streets or sidewalks. Despite laws requiring helmet usage for youth (starting January 1, 2019), users under 18 years of age are not readily prepared with a helmet for riding small vehicles within a shared active transportation network.
- **Accessibility:** The concept of shared active transportation is intended to provide a low-cost, efficient transportation choice for people of all income levels. However, research has shown that traditional bikeshare programs are not as equitable as expected. The distribution of users of bikeshare systems in cities such as Minneapolis, Montreal, and Washington D.C. have been primarily white, middle-to-upper-middle class despite the overwhelming low-income and minority demographics of the respective cities.
- **Maintenance:** The shared resource and lack of personal ownership of a device can lead to maintenance challenges for the permitted operator and oversight by the local agency. The local permitting agency has a vested interest to ensure the operator adequately

maintains the small vehicles to provide a well running system with a system in place to address maintenance needs.

- **Rebalancing***:* Another issue arises when small vehicles are used quickly from high demand areas such as a bus stop or train station; this leads to inconsistent supply and demand for users and subsequently reliability concerns. The act of rebalancing is "moving inventory around to match demand and travel patterns." Given the current shared active transportation operation model, rebalancing continues to prove challenging to both operators and users.
- **Usage Data***:* Local agencies have an interest in better understanding the travel patterns of community members. Shared active transportation programs have a wide range of applicability in terms of micro mobility and first/last mile gaps. Data from permitted operators can better illustrate how the small vehicles can address transportation needs and enhance access to local destinations and transit. This information could be utilized to better understand these issues to ultimately design a more cohesive transportation network for residents.
- **Agency Permits & Costs:** Cities must determine appropriate permitting fees to cover the expected costs of hosting a shared active transportation network in their city. Public agency staff may need to remove small vehicles from the public right-of-way to help maintain access and order. When contributing to safety compliance, public agency staff may also be assigned to reviewing maintenance logs and crash data which should ultimately be covered in the permitting fees. Often the permitting has been developed after initial launch, forcing an agency to quickly act without typical processes to consider and develop a comprehensive program. Permitting fees developed by agency vary notably as shown in the table below. Additionally, liability coverage and indemnification requirements need to be determined and established in the permit terms.

City	Annual Permit Fee	Annual Vehicle Fee	Permit Review	Removal/Relocation of Bicycles	Performance Bond
Seattle	$146	$15/bike	$209/hr or $1,672/8 hr. shift	City Crew Hourly Rate + 15%	$80/bicycle - $10,000 max
Washington, DC	No Fees	No Fees	No Fees	No Fees	None
Palo Alto	No Fees	No Fees	No Fees	No Fees	None
San Francisco	$12,208-$19,558[a]	No Fees	No Fees	No Fees	None
Bellflower	No Fees	No Fees	No Fees	No Fees	None
St. Louis	$500	$10/bike	No Fees	No Fees	None
Durham, NC	$250	$10/bike	No Fees	No Fee	$80/bicycle - $10,000 max
Charlotte, NC	No Fees	No Fees	No Fees	No Fees	None
Chicago, IL	$250	$50 per bike	No Fees	No Fees	None
Plano, TX	$500	No Fees	No Fees	No Fees	$5,000 in escrow per 1,000 bikes[b]
Los Angeles, CA (Proposed)	**$500**	**$50 per vehicle**	**No Fees**	**Maintenance Laborer $28.32/hr**	**$80/bicycle**

Notes:

a. Fee range based on size of bicycle fleet.

b. City may use funds for removal or disposal of bikes in the event of default or termination. City will return any remaining funds to Permittee at end of permit period upon request.

Suggested Practices

A local jurisdiction may consider how a shared active transportation network can help address various city goals, such as reduced traffic congestion, reduced car parking demand, enhanced mobility, access to transit, linkage to major destinations, etc.. Since these concerns may vary by jurisdiction, cities should discuss how they foresee shared active transportation working within their city and apply requirements consistent with addressing key local agency goals.

The following suggested practices have been identified through review of peer agency efforts and may be considered by local agencies interested in issuing a permit with a small vehicle operator. The suggested practices continue to evolve concurrent with the rapid pace of deployment and development within industry.

These suggested practices are organized for two levels: baseline and optional. Baseline practices establish a starting point and are becoming industry norms, while the optional practices may not be required for successful operation but may be desired by the permitting agency.

Parking

Baseline

a) The operator shall prepare a long-range development plan that describes the goals for small vehicles parking infrastructure throughout the city.
b) The operator shall ensure their small vehicles are parked in appropriate areas such as bicycle racks, the furniture zone, docking stations, painted boxes, bike corrals, and e-scooter racks provided by the operator.
c) The operator shall ensure that users park the small vehicles upright at trip conclusion.
d) Provide feedback system to inform customers about areas or zones encouraged or restricted for use or parking.
e) The operator shall provide a program which educates users about appropriate parking practices.
f) The operator shall establish a plan and shall remove small vehicles from the public right of way within 3 hours of being notified of an obstruction and ensure that vehicles are not parked lying on their side on any sidewalk, or in any way that obstructs an adequate path for pedestrian traffic.
g) Any small vehicle that is parked in the same location for more than 72 hours consecutively may be removed by the city and impounded at the expense of the operator.

Optional

h) The operator shall coordinate with the city staff to develop a small vehicle parking rack development plan to address high demand areas based on use data.
i) Customers may be required to photograph the small vehicle when a ride is terminated to document appropriate placement.
j) The operator shall provide a mechanism to lock the small vehicle to a fixed object such as a bike rack, street sign, or other appropriate stationary object.
k) The operator shall include financial disincentives for illegal small vehicle parking.
l) Small vehicles are prohibited from parking in the following areas:
    - Transit stop loading areas
    - Loading zones
    - Red curb zones
    - Driveways
    - Entryways
    - Wheelchair ramps
    - Street corners
    - Private property

Infrastructure

Baseline

a) The operator shall develop a long-range infrastructure plan to describe elements such as; additional small vehicles and charging stations, utilizing a standardized ratio of charging docks per square mile of deployment area.
b) The operator shall only deploy additional small vehicles if permitted to do so by the local agency.
c) The operator shall work with the local agency to designate areas suited for small vehicle parking. This might include building small vehicle parking stations in high demand locations.
d) The operator shall develop a map illustrating restricted use areas based on applicable state law.

Optional

e) The operators shall work with local agency staff to increase the network of bicycle lanes and determine where illegal riding commonly occurs on higher speed roadways.

Safety

Baseline

a) The operators shall educate user on rules and laws upon registration including the use of safety devices (such as helmet usage, sidewalk riding prohibition, and higher speed restricted roadways).
b) The operator shall develop an ongoing campaign/plan to educate users on the rules of the road and best safety practices.
c) The operator shall provide instructions about appropriate riding behavior (riding with the flow of traffic, riding on the right, etc…) and how to make left- and right-turns safely.
d) The operator shall ensure essential safety information is clearly labeled on each small vehicle.
e) The operator shall repair inoperable small vehicles before returning it to service.
f) The operator shall hold public demonstrations during deployment and ongoing rental operations to educate the community on safety and how to operate the small vehicle.
g) The operators shall ensure all small vehicles follow safety standards established by the Consumer Product Safety Commission (CPSC) as well as all federal, state, and local safety standards.
h) The operator shall ensure small vehicles are provided lights and reflectors for night time operation as required by state law.

Optional

i) The operator shall provide helmet distribution stations where users can receive and rent helmets for their trips.
j) The operator may incentivize users to report broken small vehicles.

Accessibility

Baseline

a) The operator shall provide a multilingual smartphone application.
b) The operator is required to provide a non-smart phone option for users to access the shared active transportation network.
c) The operators shall provide a non-credit card/debit card option for users to access the shared active transportation network.
d) The operators shall offer an equitable payment plan that allows for all users to access the shared active transportation network.
e) The operators shall conduct public outreach to educate the community about the program, pricing, and safety in multiple languages (as appropriate).

Optional

f) The operator shall provide monthly payment options for users qualifying for discount programs.
g) The operator shall make available small vehicle education classes which are distributed equitably throughout the community.

Maintenance

Baseline

a) The operator shall complete a monthly maintenance log to keep track of small vehicles no longer acceptable for use. The maintenance logs shall be shared with the local permitting agency.
b) The operator shall submit a comprehensive plan to describe how they will ensure each small vehicle is working properly and satisfies applicable requirements.

Rebalancing

Baseline

a) The operator shall include a rebalancing plan when applying for a permit to operate.
b) The operator shall establish a plan to and remove depleted small vehicles daily to replenish the charge for the next day.

c) The operator shall employ staff to rebalance the small vehicle network to serve high demand areas.
d) The operator shall ensure high demand transit hubs are served and rebalanced when necessary.
e) The operator shall remove or rebalance any small vehicle parked in a restricted area within 3 hours of being notified.
f) The operator shall establish geo-fences to limit parking outside a permitted jurisdiction and to encourage users to stay within a specific region.

Optional

g) The operator shall encourage users by incentivizing users to rebalance small vehicles as they ride.
h) The operator shall incentivize users to return small vehicles to geofenced "hubs."
i) The operator may charge a fee for parking outside a "hub" to disincentivize leaving small vehicles in a place they will unlikely be used.
j) The operator may provide financial incentives to users to park the small vehicle at a charging station.

Agency Permits & Costs

Baseline

a) The operator shall pay an annual operation fee.
b) The operator shall pay an annual operation fee per small vehicle.
c) The operator shall be responsible for any costs incurred by the local jurisdiction regarding the small vehicles and infrastructure controlled by the operator.
d) The operator shall provide liability coverage as required by the local permitting agency and indemnify the local agency.

Data Recovery and Monitoring

Baseline

a) The operator shall include a plan to share data while not violating applicable State of California data privacy regulations such as personally identifiable information.
b) The operator shall provide the local permitting agency with monthly (or quarterly) geocoded usage data, including route and trip start/end locations.
c) The operator shall provide local agencies with data on inoperable small vehicles. They shall provide data on when broken small vehicles are reported, taken out-of-service, and returned to the network.
d) The operator shall provide local agencies with data on small vehicle crashes within their network, categorized by severity of injury.

Resources

The following resources are provided for further review and definition understanding:

- Guidelines for the Regulation and Management of Shared Active Transportation (National Association of City Transportation Officials, 2018)
  https://nacto.org/home/shared-active-transportation-guidelines/
- California Vehicle Code
  - Definition of: Bicycle Section 231, Electric Bicycle Section 312.5, Motorized Scooter Section 407.5
    http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=VEH&division=1.&title=&part=&chapter=&article
  - Operation of Bicycles: Section 21200-21213
    http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=VEH&division=11.&title=&part=&chapter=1.&article=4
  - Operation of Motorized Scooters: Section 21220-21235
    http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=VEH&division=11.&title=&part=&chapter=1.&article=5

References

Abcarian, R. (2018, February 6). *The Bird electric scooter conundrum: so fun, so exhilarating, so dangerous*. Retrieved from LA Times: http://www.latimes.com/local/abcarian/la-me-abcarian-bird-scooters-20180206-story.html

Carpenter, A. (2017, March 21). *Bikeshare operators addressing rebalancing and other fixes to maximize reliability*. Retrieved from Mobility Lab : https://mobilitylab.org/2017/03/21/bikeshare-techies-rebalancing-maximize-reliability/

Flora. (2018). *California Legislative Information*. Retrieved from AB - 2989 Motorized Scooter: Use of Helmet: Maximum Speed: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB2989

Jaffe, E. (2014, August 27). *Balancing Bike Share Stations has Become a Serious Scientific Endeavor.* . Retrieved from CityLab: https://www.citylab.com/transportation/2014/08/balancing-bike-share-stations-has-become-a-serious-scientific-endeavor/379188/

LaCivita, L. (2018, April 16). *New Legislarion Targets E-Bikes* . Retrieved from MRSC Local Government Success: http://mrsc.org/Home/Stay-Informed/MRSC-Insight/April-2018/New-Legislation-Targets-E-Bikes.aspx

Levine, K. K. (2013, July 7). *Rebalancing and Bikeshare*. Retrieved from ITS Berkeley: http://library.its.berkeley.edu/node/183

Linton, J. (2018, May 21). *L.A. City T-Committee to discuss Dockless Bike-Share Regulations This Wednesday* . Retrieved from StreetsBlog LA: https://la.streetsblog.org/2018/05/21/l-a-city-t-committee-to-discuss-dockless-bike-share-regulations-this-wednesday/

National Association of City Transportation Officials . (n.d.). *Urban Street Design Guide*. Retrieved from Sidewalks: https://nacto.org/publication/urban-street-design-guide/street-design-elements/sidewalks/

People for Bikes. (2018, July 27). *Californias E-Bike Laws.* Retrieved from People for Bikes: https://peopleforbikes.org/wp-content/uploads/2018/04/PFB-0529-E-Bike-Law-Handouts_CA_Edit_02132018.pdf

Pyzyk, K. (2018, January 31). *Florida Lawmakers consider statewide dockless bikeshare regulation*. Retrieved from SmartCities Dive: https://www.smartcitiesdive.com/news/florida-lawmakers-consider-statewide-dockless-bike-share-regulations/515946/

Seattle Department of Transportation. (n.d.). *Free-Floating Bike Share*. Retrieved from Seattle.gov: http://www.seattle.gov/transportation/projects-and-programs/programs/bike-program/bike-share

UC Davis Transportation Services . (2018). *Bike Share*. Retrieved from UC Davis Transportation Sevices : http://taps.ucdavis.edu/transportation/bikeshare