U.S.Department of Transportation
Federal Highway Administration

October 2018 Volume 7, Number 3
FHWA-HEP-19-001

FHWA's Fostering Multimodal Connectivity Newsletter

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Introduction

The Federal Highway Administration's (FHWA's) Fostering Multimodal Connectivity Newsletter is intended to provide transportation professionals with real-world examples of ways that multimodal transportation investments promote economic revitalization, provide access to jobs, and achieve safer communities through support of accelerated project delivery, technology and design innovation, and public/private partnerships. This newsletter communicates FHWA and partner efforts in support of the USDOT Strategic Plan by improving connectivity, accessibility, safety, and convenience for all users.

Want to access additional tools and resources? Please visit FHWA's website. Past issues of the newsletter are also available. To subscribe to the newsletter, visit GovDelivery.

Reno-Sparks Indian Colony Becomes First Reservation with Bike Share

Scott H. Carey, Planner, Reno-Sparks Indian Colony

Figure 1: LimeBike bicycles are available for use underneath a pedestrian walkway at the RSIC in Nevada. (Image courtesy of Reno-Sparks Indian Colony)

In May 2018, the Reno-Sparks Indian Colony (RSIC) in Nevada became the first Native American community in the country to launch a bike share system. The RSIC partnered with four local entities—the city of Reno, city of Sparks, University of Nevada, Reno, and Washoe County—to launch a regional pilot program to test dockless bike share throughout the Reno-Sparks metropolitan area. The Regional Transportation Commission of Washoe County was also an essential partner, bringing the entities together to explore bike share as a mobility solution to better serve citizens and visitors.

Bike share systems have become a significant addition to the active transportation options offered throughout the country. These systems improve connectivity to employment centers and amenities within a city, such as university campuses, restaurants, local retailers, and community events. Within a dockless bike share system, bicycles can be found near parks, government buildings, places of employment, transit stops, residences, and other places around the city. In the Reno system, riders are guided at the end of the ride to responsibly park their bicycles at designated areas, bike racks, or in the furniture zone on sidewalks.

Figure 2: LimeBike bicycles are available for use at the Reno-Sparks Tribal Health Center in Reno, NV. (Image courtesy of Reno-Sparks Indian Colony)

RSIC's involvement in the regional effort began when regional providers invited the tribe to participate in the regional pilot program. "The Reno-Sparks Indian Colony is pleased to work with all of the partners in the region to bring this innovative transportation option to the area," said RSIC Chairman Arlan D. Melendez. "Even though there are over 570 federally recognized tribes in the United States, all Native American communities are traditionally linked to our environment and caring for mother earth fits our tribal values." The Colony received Federal Lands Highway Tribal Transportation Program funds to support its transportation planning program, which aided in the coordination and implementation of this project.

Through a competitive procurement process, LimeBike, a leading U.S. smart mobility company, was selected as the dockless bike share equipment vendor and system operator for the Reno-Sparks metropolitan region. LimeBike currently operates in over 45 markets and has logged over 1.5 million trips worldwide since launching in June 2017.

"Not only are we excited to make our first launch in Nevada, we are thrilled that this has been a regional, collaborative effort to provide a new affordable, sustainable transportation solution to the Truckee Meadows community," said Gabriel Scheer, LimeBike Director of Strategic Development.

The year-long pilot program launched in the RSIC and Reno-Sparks metropolitan area in May 2018 during National Bike to Work Week, and launched on the University of Nevada, Reno campus later that month. All bicycles are GPS and 3G-enabled, making it simple for riders to find, unlock, and pick up a nearby bike using the iOS or Android smartphone app. The dockless regional bike share system allows riders to pick up and drop off bikes anywhere in the service area, providing access to reliable transportation. For a 30-minute time block, rides cost $1, or 50 cents for students, seniors, and low-income residents. After completing the ride, riders simply lock the bike's back wheel and responsibly park between the pedestrian-designated sidewalk and the street curb, or at a bike rack.

The goal of the RSIC's participation in the regional dockless bike share program is to reduce vehicle trips, promote multimodal transportation, improve air quality, and increase physical activity. On the reservation, bicycles have been placed at community and government facilities, Tribal enterprises, and along busy corridors that have connectivity to the regional transit system. The RSIC does not own the bicycles and did not have to provide any up front capital to start the service. LimeBike handles all operations, maintenance, customer service, and marketing for the bike share system.

The first several months of the pilot program have been successful, with significant ridership in the RSIC and metro region. As of mid-September, 2018, 49,943 individual riders in the Reno-Sparks metro region have logged over 93,098 miles on over 800 bicycles in service. The RSIC continues to work with its partners in the region and with LimeBike on the implementation of the dockless ride sharing program. Next year, the RSIC will look at expanding the program north of Reno to its Hungry Valley community, allowing the use of electronic scooters as part of the program, and possibly extending its partnership with LimeBike for an additional two years.

Boston Dedicated Bus and Bicycle Lane Improves Congestion along Major Corridor

Chris Osgood, Chief of Streets, City of Boston

Riding a bus at rush hour in Boston just got better. From January to June 2018, the Boston Transportation Department (BTD), with their partners at the Massachusetts Bay Transportation Authority (MBTA) Operations Division, tested, piloted, and made permanent a new dedicated bus lane on one of the most frequently traveled corridors in the city.

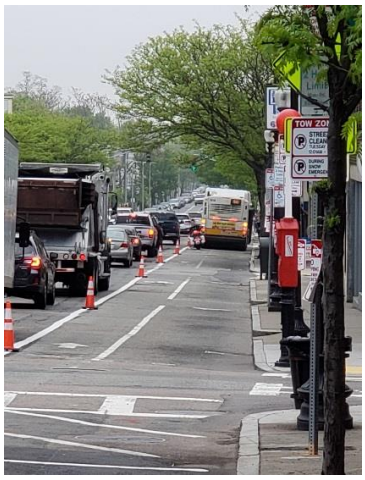

Figure 3: Traffic cones separated the designated bus and bicycle lane from general traffic. (Image courtesy of the city of Boston)

The new one-mile long bus lane on Washington Street replaces a parking lane from 5 a.m. to 9 a.m. on weekdays. It serves eight different bus lines and thousands of passengers daily, connecting the small business district in Boston's Roslindale neighborhood with the Forest Hills train station, the last stop on one of Boston's major subway lines. This bus lane is open for school buses, mass transit buses, and people on bicycles.

Improving bus service is a key goal of Boston Mayor Martin J. Walsh, BTD, and the MBTA, and is thus a central focus of Go Boston 2030, the city's long term mobility plan. Not only will better bus service make a difference for the riders who take 350,000 trips each day in Boston, but it will encourage more residents to hop on the bus, reducing congestion, lowering emissions, and affordably connecting residents to jobs and services throughout the region.

BTD and the MBTA identified this section of Washington Street as a place to start dedicated bus service operations for several reasons. There are 19,000 bus trips on

this corridor every work day, and a majority of the people on the corridor are traveling by bus, not by car. Moreover, despite limited road width on Washington Street, with just a travel lane, bike lane, and parking lane in each direction, the community strongly supported rethinking the roadway to improve transit.

To improve bus service, BTD led a sequential process to move from concept to permanent lane over the course of six months. Initially, BTD and the MBTA collaborated on a two-day test to understand operational needs. This helped identify several details that would help the pilot be a success, including:

- What is the best way to notify residents and businesses?
- How many cones are needed to mark out the lane?
- What level of signage and enforcement needs to be located in which areas?
- Can we collect the data needed for an evaluation?

The findings from this two-day test, completed in December 2017, led to a four-week pilot program in May 2018. Before the pilot, BTD conducted extensive outreach, including posting signage, employing variable message boards, publishing a press release, using social media, distributing flyers in multiple languages, and meeting with residents, business representatives, and other impacted parties. Based on the two-day test, the city also improved intersections along the route; made adjustments to construction and utility permitting; and trimmed trees.

Figure 4: Signs inform vehicles to avoid parking in the bus lane. (Image courtesy of the city of Boston)

The Results: Better Bus Service and Improved Mobility for All

BTD and the MBTA collected data during the four-week pilot program to inform whether the lane should be permitted long-term. The data was overwhelmingly positive:

- Bus travel time along the corridor dropped by 20 to 25 percent during the most congested time period.
- This improved travel time equated to 26 hours of passenger time saved on a typical day, and 38 hours saved on days when road congestion was significantly higher than normal.
- Ninety-four percent of surveyed bus riders and bicyclists supported a permanent bus and bicycle lane, with 92 percent of the bus riders perceiving that the bus lane decreased their travel time, and with 89 percent of the bicyclists feeling safer in the shared lane.

There were some initial challenges with morning peak short-term loading issues in the bus lanes, despite discussions with businesses along the corridor in advance of implementation. However, with buses no longer weaving in and out of a single general travel lane at each bus stop, cars seemed to flow better through the corridor. Based on these results, BTD announced on June 7 that the bus lane would be made permanent, and an interim bus lane opened on Monday, June 18. While the bus lane and bus lane markings are now permanent, some improvements remain, such as adding traffic cones to keep the lane clear. In addition, the bus shelter at the very beginning of the bus lane will be shifted to alleviate congestion.

This work is just the beginning. With dedicated funding in the city's recently approved budget, BTD will be launching a Transit Team. This team will focus on designing, implementing, and maintaining projects similar to this one on Washington Street.

For more information on this initiative and the range of mobility initiatives that BTD is leading, please see the Go Boston 2030 website. For more information on types of bus lanes and best practices, please visit the Federal Transit Administration website.

Pennsylvania Department of Transportation Implements Statewide Demand-Response Transportation Scheduling Software

Danielle Spila, Director, Bureau of Public Transportation, Pennsylvania Department of Transportation

For more than 30 years, the Pennsylvania Department of Transportation (PennDOT) has subsidized demand-response transportation (DRT) for vulnerable populations. DRT is a shared-ride form of public transport which has flexible scheduling and variable pick-up and drop-off locations depending on passenger needs. In Pennsylvania, this program is primarily subsidized with State funding, but is also supported by local and Federal Transit Administration (FTA) funds, predominantly sections 5307, 5310, and 5311. Populations served often include older adults and those with significant medical conditions. Many of the people who use these services have no other transportation options. Medical treatments such as dialysis and chemotherapy often further debilitate individuals. Since the timing of medical treatment can vary, the timing of public transportation is both crucial and difficult to predict. In some rural areas, centrally located medical facilities result in long distance travel and little opportunity to group trips. Given these challenges, DRT programs are complex to manage at the State and local level, because DRT changes daily, and service hours and delivery decisions are made at the local level. Shared-ride transportation providers have struggled to balance meeting passenger needs and expectations, fulfilling program requirements, maximizing productivity, keeping fares affordable, and balancing budgets. Emerging technology is an essential element in addressing these challenges.

PennDOT conducted a 2009 Human Services Transportation Coordination Study in coordination with other State agencies that helped begin the effort towards regionalization. The study evaluated the feasibility and benefit of converting the existing transportation landscape to one that is based on regional providers. Particularly in the paratransit segment, the goal was to create a more unified and efficient system across the State. The study concluded that regionalization would result in significant increases in service quality, efficiency, and effectiveness. Following this study, PennDOT sponsored more detailed studies focusing on estimating the cost savings of consolidation in specific regions and identifying next steps at the local level.

In 2009, PennDOT, in partnership with DRT providers and technology consultants, began developing specifications to address basic DRT software functions. A statewide technology procurement using these specifications would:

- Relieve individual transit systems of the administrative burden of procuring/managing a software vendor;
- Standardize software functions, facilitating consolidated management across multiple systems/counties; and
- Standardize data for State program management and compliance analysis.

In 2010, PennDOT applied for and received funding under FTA Section 5309 Bus and Bus Facilities Livability Initiative Program (now the Bus & Bus Facilities Infrastructure Investment Program) to implement statewide paratransit scheduling and reservation software. Using this grant and the matching State funding, PennDOT acquired Ecolane, paratransit software which offers real-time scheduling and mapping of vehicles; access to information online to help transit providers to oversee service; compatibility with interactive voice response systems for night before and imminent arrival reminder calls; and the

use of Android tablets as mobile data terminals, eliminating the need for paper versions. This $24 million project has saved millions of dollars and many hours of administrative time compared to individual transit system procurements. Maintenance savings are estimated at $600,000 annually. PennDOT, on behalf of Pennsylvania transit systems, has influenced support, continual improvements, and development. Between 2012 and 2018, service providers have gradually consolidated service in different parts of the State. For example, rabbittransit, a regional transit provider, has consolidated management of DRT in south central Pennsylvania, beginning with Northumberland County, and adding additional counties through 2016. PennDOT completed statewide software implementation in February 2018.

The widespread use of this DRT scheduling software allowed PennDOT to develop its web-based and mobile-friendly application called FindMyRidePA. This Pennsylvania-based service is designed to help the public view available travel options, as well as reserve or cancel shared-ride trips online, and is currently available in 22 counties. PennDOT supported these efforts through grant funding from the FTA Veterans Transportation and Community Living Initiative (VTCLI) in 2011.

The service scheduling and dispatch software helps providers improve on-time performance, collect data, and maximize the number of trips provided. To further improve customer service, the partnership is rolling out interactive voice response technology which automatically calls riders the night before their service to inform them of their scheduled trips, as well as just before the driver arrives at their location. The technology also allows cancellation through the system without having to call transit providers.

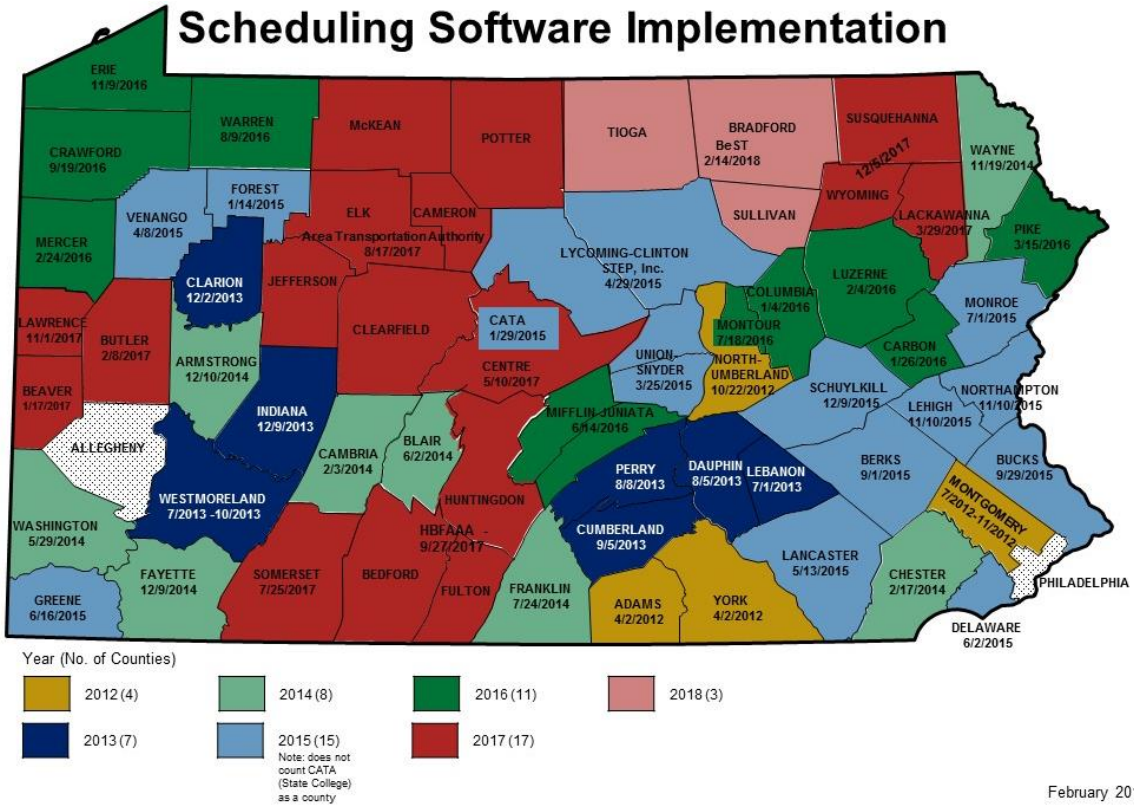

Figure 5: 51 implementations, covering 65 counties, are now live. This covers all counties except Allegheny and Philadelphia, where the shared-ride service providers have their own software in use. (Image courtesy of PennDOT)

PennDOT will soon begin formal evaluations on effectiveness and cost savings associated with the technology, but it has already facilitated efficiencies. Primarily, the widespread use of Ecolane has allowed several shared-ride providers to consolidate their organizations with PennDOT assistance. This allows for cost savings by eliminating duplicative administrative functions and standardizes shared-ride service levels within the affected service areas. The common software ensures seamless service cooperation or consolidation for riders. One example of a consolidation facilitated by the technology is rabbittransit's consolidation of shared-ride service for 10 counties in south central Pennsylvania by centralizing call taking, dispatching, and scheduling. rabbittransit's regionalized call center for shared-ride service takes all reservations for more than 300,000 shared-ride trips annually and covers a service area over 5,000 square miles in size. The implementation of the web-based scheduling software and the following regionalization allowed this call center to replace eight separate call centers, reducing the total number of customer service representatives needed to serve the region. Another example of achieving operational benefits is Blair Senior Services, Inc. in Blair County. After implementing Ecolane, Blair Senior Services used the data to reduce the number of vehicles it needed to provide their service while increasing the number of trips provided per service hour. Those changes help to control costs and delay fare increases.

This innovative system was recognized in 2018 with as a regional finalist for America's Transportation Award for Best Use of Technology & Innovation.

Resource Highlight: Public-Private Partnerships in Idaho and California Support Multimodal Transportation Projects

Rachel Galton, Community Planner, U.S. Department of Transportation Volpe Center, Cambridge, Massachusetts

Public-private partnerships (P3s) can provide a variety of benefits toward supporting multimodal activity, such as:

- Funding;
- Technical assistance and project management;
- Educational materials and outreach; and
- Input on and leadership in planning processes.

Figure 6: Volunteers and staff from local organizations teach kids about bike safety in Moscow, Idaho. (Image courtesy of the Officer Newbill Kids Safety Fair)

P3s can reduce costs borne by transportation agencies, accelerate project delivery, and encourage the use of innovative strategies for multimodal connectivity. This edition of Federal Highway Administration's (FHWA's) Fostering Multimodal Connectivity Newsletter highlights how P3s have supported the U.S. Department of Transportation (USDOT) priorities of increasing access and connectivity through emerging technologies such as dockless bike sharing and software for shared ride services. By working with private organizations to procure technology, government agencies have accelerated delivery of multimodal solutions.

The FHWA case studies provide a number of additional examples of how P3s can further livability goals. Below are a few examples of noteworthy practices from communities in Idaho and California.

Funding: In Moscow, Idaho, a grant from a nonprofit organization that supports initiatives across the State helped the small city of about 25,000 transform their active transportation planning approach. The grant supported the development of an Active Living Task Force, Complete Streets efforts, a bicycle and pedestrian count program, and recommendations for a bicycle-friendly greenway. For further details, see the Moscow, Idaho case study.

Technical assistance and project management: Lewiston, Idaho is a small city with a population of about 33,000. The city partnered with Beautiful Downtown Lewiston (BDL), a nonprofit downtown revitalization organization funded by downtown businesses, special events, and the city's community programs fund. BDL has a full-time manager who serves as a liaison between the business community and local government. BDL has managed projects including the installation of bicycle racks to support Lewiston's broader Complete Streets efforts. For further details, see the Lewiston, Idaho case study.

Educational materials and outreach: In Oakland, California, the city's Pedestrian Master Plan spurred a partnership between the Oakland Pedestrian Safety Project, the Oakland Chinatown Chamber of Commerce, and Asian Health Services to complete pedestrian safety educational programs and an environmental justice planning process funded by the California Department of Transportation. This partnership also provided the basis for a $2.2 million grant from the Bay Area's Metropolitan Transportation Commission Transportation for Livable Communities program for crosswalks, pedestrian lighting, wayfinding signage, and other improvements. For further details, see the Oakland, California case study.

Input on planning processes: The Unity Council, a community development corporation in the Fruitvale community district of Oakland, California leveraged community opposition to a transit parking facility to initiate a planning process for community development. The city of Oakland, FHWA, and the Federal Transit Administration funded the Unity Council to lead stakeholder engagement workshops and planning meetings, including a community design symposium in partnership with the University of California at Berkeley's National Transit Access Research Center. The Unity Council formally partnered with Bay Area Regional Transit and the city of Oakland on mixed-use development in what ultimately became the Fruitvale Transit Village. For further details, see the Oakland, California case study.

Regardless of the type of P3, a number of factors support effective P3s, including:

- Identifying or developing public sector leadership for programs supported by P3s (full-time manager, task forces, working groups, etc.);
- Leveraging private funding to demonstrate project viability and supporting additional public or private funding requests;
- Involving community-based organizations that have the resources and technical expertise to advance community priorities; and
- Thinking broadly and creatively about potential partnerships—partners can include local organizations and businesses, advocacy groups, nonprofits, research centers, and more.

For more examples of P3s, see the FHWA Livability case studies.

Announcements/New Resources

- The Federal Highway Administration (FHWA) Office of Human Environment released two reports on Context Sensitive Solutions and Design (CSS/D). The "Using Context Sensitive Solutions to Achieve Context Sensitive Design - State of the Practice Assessment" provides information on how CSS/D has evolved over time and highlights key takeaways from interviews and group discussions with 12 States, case studies, and a review of all State DOT websites for CSS/D content. The "Summary Report: Using Context Sensitive Solutions to Achieve Context Sensitive Design - Technical Assistance and Virtual Peer Exchanges" covers key takeaways from targeted technical assistance provided in six States and four virtual peer exchanges to better incorporate CSS/D in transportation decision making.
- FHWA posted the FY 2017 Transportation Alternatives Annual Report. Each State and the District of Columbia submitted a report detailing their transportation alternatives project applications and selections that will use FY 2016 and 2017 funds.
- FHWA recently released the "2017-18 Recreational Trails Program Annual Report," which highlights examples of trail construction, maintenance, assessment, and educational efforts supported by Recreational Trails Program (RTP) funding. The report also focuses on benefits communities have gained from RTP funding, including improved accessibility, active transportation opportunities, economic development, environmental protection, and opportunities for public-private partnerships. The report highlights program funding and administration, the RTP Database, and how States use funds. It illustrates eligible project types along with project examples.
- The Coalition for Recreational Trails (CRT) announced winners for its 2018 Annual Achievement Awards to recognize the outstanding use of Recreational Trails Program (RTP) funds across the country. The awards recognize projects that enhance safety and accessibility; connect communities with low-cost projects; promote rural economic development; enhance and increase access to public lands; provide youth workforce development; and enhance partnerships among Federal, State, local, and private entities.