



# FHWA's Fostering Multimodal Connectivity Newsletter

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### Introduction

The Federal Highway Administration's (FHWA's) *Fostering Multimodal Connectivity Newsletter* provides transportation professionals with real-world examples of how multimodal transportation investments promote economic revitalization, achieve safer communities, support complete trips and mobility innovation, and enhance network resiliency. This newsletter also showcases how FHWA and its partners are improving connectivity, accessibility, equity, safety, and convenience for all transportation users, including equitable transportation options for traditionally underserved communities.

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## Honolulu Supports Pedestrian Mobility and Local Businesses with Parklet Program

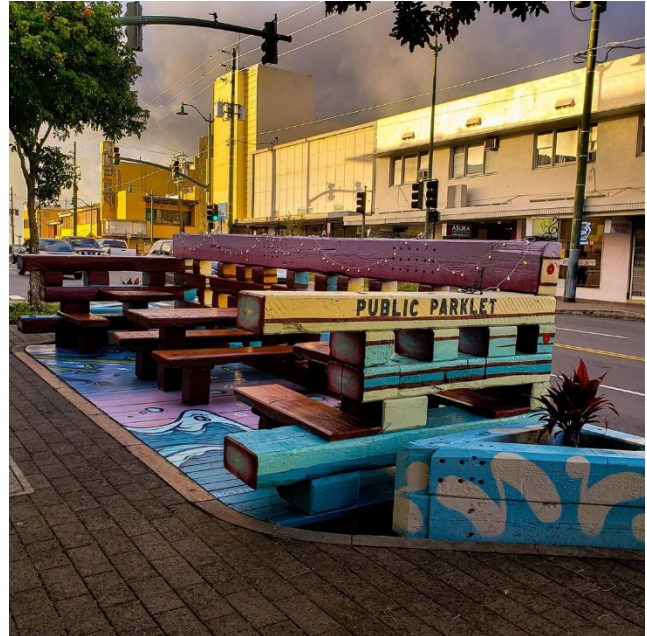
Renee Espiau, Complete Streets Administrator; Justin Menina, Complete Streets Transportation Program Specialist, both with the City and County of Honolulu Department of Transportation Services

In support of pedestrian mobility and local businesses, the City and County of Honolulu Department of Transportation Services' (DTS) Parklet Program helps site and permit parklets on city-owned streets on the island of O'ahu. The [City and County of Honolulu established a Parklet Program](#) in 2016 due to private interest and City Council Resolution 13-290, which encouraged the establishment of the program. A parklet transforms an on-street parking spot into a public space that may feature benches, tables, chairs, planters and landscaping, shared mobility parking (e.g., for electric scooters and bicycles), and other amenities. Parklets are temporary installations adjacent to businesses that provide free and comfortable outdoor space along sidewalks for safer, socially distanced interactions, and can also support local economic development.

Under this program, [Honolulu launched three new parklets in the Kaimuki neighborhood](#) between January-July 2021. The COVID-19 pandemic resulted in significantly reduced pedestrian traffic for businesses along Kaimuki's major commercial corridor – Wai'ala'e Avenue. Wai'ala'e Avenue is a four-lane urban arterial carrying roughly 18,000 vehicles per day along its busiest segments, with a speed limit of 25 miles per hour. As a main street with commercial destinations, it usually experiences higher-than-average pedestrian traffic, which has fostered a variety of small businesses, restaurants, and cafes. However, many restaurants and cafes along the corridor closed indoor dining and seating in 2020. To promote safe pedestrian activities, businesses partnered with Better Block Hawai'i, a community development organization that facilitates placemaking interventions, to transform three separate on-street parking spots into parklets. They also worked closely with Re-Use Hawai'i, a nonprofit construction material reclamation business, and the parklets featured art by local artists and locally appropriate plants that provided shade donated by Trees for Honolulu's Future.

Prior to COVID-19, the parklets permitted under this program primarily included one-day pop-ups on [international Park\(ing\) Day in September each year](#) and two heavily used semi-permanent installations in the Kaka'ako neighborhood, which have been positive influences on overall road safety and economic vitality. Parklets are well suited to Honolulu's climate, as long as shade is provided, and can be enjoyed year-round. The COVID-19 pandemic has amplified their importance even further.

DTS reviewed existing parklet-related resources from peers including [Seattle](#), [San Francisco](#), [Los Angeles](#), and others to inform the development of the [Honolulu Complete Streets Parklet Program Guide](#), which conveys eligibility requirements to interested community organizations and businesses. The Honolulu Parklet Program Guide provides considerations on designing, constructing, and maintaining parklets, including the following technical requirements:



*Figure 1: Constructed by Re-Use Hawai'i and Kupu Hawai'i, a non-profit organization, this parklet was entirely constructed out of reclaimed wood, with artwork completed by a local artist MelonJames. The artwork was inspired by the nearby vista, with waves on both sides. (Image courtesy of City and County of Honolulu Department of Transportation Services)*





- Parklets are generally suitable and encouraged in business districts and work best at locations with frequent pedestrian activity. Nearby land uses such as food service, retail, transit facilities, and cultural institutions are great anchors for selecting a parklet site.
- Parklets are semi-permanent structures that must withstand the rigors of everyday outdoor use. Materials and design should be durable and low-maintenance, and seating should be durable and comfortable for individuals and groups of all ages and abilities. Designs that encourage use in various weather conditions should be considered.
- Applicants are required to keep the parklet in safe and usable condition and clear of litter, grime, and graffiti.
- Parklets should respond to surrounding conditions. For example, a parklet could create more space to walk on a particularly narrow or congested sidewalk or provide a place to sit and eat where there are many takeout restaurants. The design should consider travel patterns and the behavior of people walking and bicycling to minimize potential conflicts and maximize contribution to street life and the public realm.
- Parklet should be easily installed and removed if necessary, such as for periodic roadway maintenance. The design should not impact stormwater flow along the street.
- Parklets are free and open to all members of the public to use.

The City and County of Honolulu is dedicated to creating safe streets for all roadway users, with [recent Complete Streets projects](#) that include shared-use paths, [pedestrian crossing improvements](#), [bikeway improvements](#), and a new [Downtown bus-only lane](#). The City and County of Honolulu Complete Streets Program and [Safe Routes to School Program](#) also provide assistance and resources to communities interested in improving local streets and neighborhoods, such as through parklets and curb extensions at school crossings.



*Figure 2: Supported by the Honolulu Complete Streets and Safe Routes to School Programs, Blue Zones Project Hawai'i partnered with the Stevenson Middle School leadership class to design and construct low-cost decorative curb extensions to enhance pedestrian safety by shortening the crosswalk distance, reduce illegal left turns out of the school's driveway, and slow the speed of vehicles. Blue Zones Project Hawai'i is a community-led initiative to improve health and wellness. (Image courtesy of City and County of Honolulu Department of Transportation Services)*



## Measuring Multimodal Level of Service in Southwest Idaho

Carl Miller, Principal Planner, Community Planning Association of Southwest Idaho

Traffic congestion, measured using vehicle speed and overall reliability, is a key indicator of roadway performance for vehicles. Transportation planners and engineers seek to develop similar measures to evaluate facility performance for alternative modes, including pedestrians, bicyclists, and transit users. The Community Planning Association of Southwest Idaho (COMPASS) developed a Multimodal Level of Service (MMLOS) framework to help evaluate performance for all transportation modes (including nonmotorized modes) to support Complete Streets planning. COMPASS is the metropolitan planning organization for the Boise and Nampa, Idaho urban areas also known as the Treasure Valley. The region is rapidly growing, partly due to active transportation opportunities and access to outdoor spaces across Treasure Valley. [COMPASS adopted a Complete Streets policy in 2009](#) and uses the MMLOS to measure progress toward providing quality infrastructure and service for all users.

### How Do We Measure Completeness? Model Factors

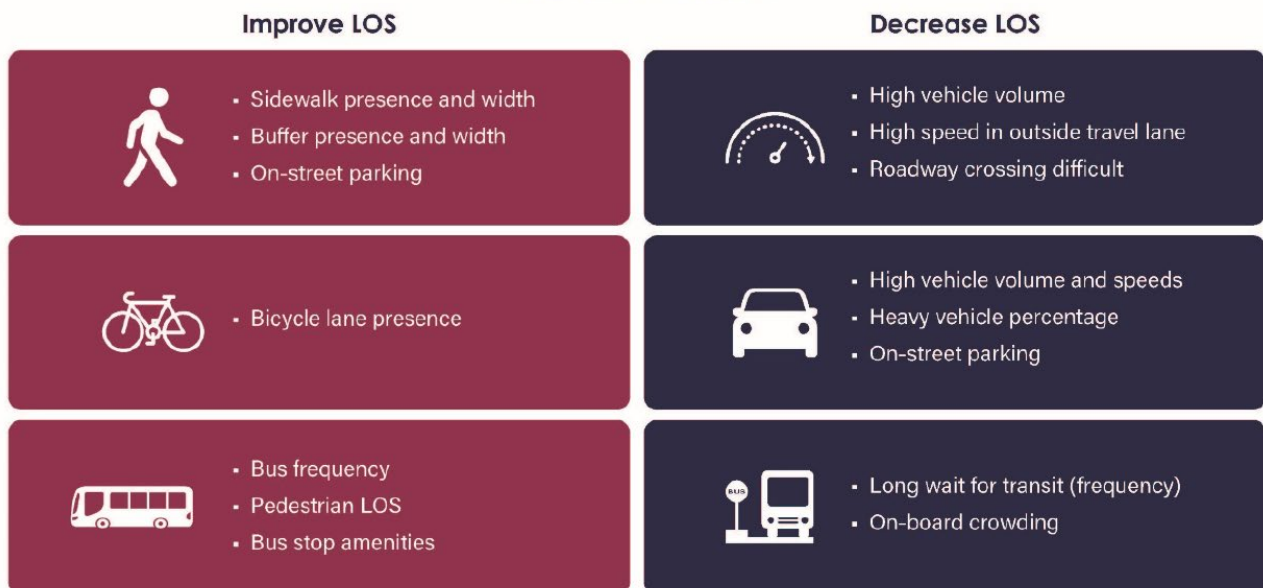


Figure 3: Relationship of Roadway Characteristics to LOS Measures. (Image courtesy of COMPASS MPO)

The COMPASS MMLOS framework considers service quality as a means to measure performance since congestion is not typically a problem for pedestrians, bicyclists, and transit users in the Treasure Valley. The National Cooperative Highway Research Program developed MMLOS software by using research from its video laboratory and field surveys to evaluate the safety and comfort of roadways. COMPASS used this research as the foundation for evaluating Treasure Valley roadways for pedestrians, bicyclists, and transit users. The variables used in the model for each of these users are described below. The [FHWA Guidebook for Measuring Multimodal Network Connectivity](#) and [FHWA Measuring Multimodal Network Connectivity](#)



[Pilot Grant Program Final Report](#) provide further guidance and case studies for communities working to measure and improve multimodal travel.

The pedestrian level of service (LOS) model is based on five primary variables: sidewalk existence and width, sidewalk- roadway separation, motorized vehicle volumes, motorized vehicle speeds, and roadway crossing difficulty. Bicycle LOS is based on five primary variables: bicycle lane existence and width, motorized vehicle speeds, motorized vehicle volume, use of on-street parking, and truck volume. Transit LOS can be based on a variety of variables, including: service frequency, pedestrian and bicycle LOS, station amenities and Americans with Disabilities Act accessibility, and on-board crowding. COMPASS focused its assessment on service frequency and the pedestrian LOS near transit stops, since the other variables were not practical to measure at a regional level.

COMPASS initially used the MMLOS evaluation to support the planning of a bus rapid transit (BRT) route along State Street/Highway 44 (see figure 4). As bicycle and pedestrian access to bus stops are a key to ridership and overall success of BRT, this analysis helped identify problematic areas for non-motorized access to the future route.

Complete Streets are an integral component of any transportation system, and the use of multimodal assessment methods aids the evaluation, prioritization, and design of roadways. However, there are limits to MMLOS.

- MMLOS is best used for evaluating specific intersections or corridors and providing alternative scenarios for traffic speeds, congestion, or infrastructure improvements. The level of effort to evaluate every corridor or all transit amenities for an entire region can be arduous.
- Pavement condition, such as roughness, is not included in the MMLOS measure.
- While the A-F grading system helps users to understand LOS, it can also be misleading as it evaluates all roads using the same rubric, regardless of land use context or intended use. Similarly, without flexibility to consider certain factors (e.g., slope) or evaluate scores for specific groups (e.g., children or older adults), the one-size-fits-all scoring can be misleading or not provide sufficient information for decision making.

To be treated with equal consideration with auto traffic, other transportation modes need to be similarly measured and evaluated. The MMLOS approach helped COMPASS see the regional transportation system with a fresh perspective and move toward an approach that considers all road users.





## Coordinating with Local Partners for Enhanced Public Engagement in Kentucky

Kristina Heggedal, Transportation Analyst, ICF; Les Brown, Senior Managing Consultant, ICF; Hannah Twaddell, Principal Transportation Planner, ICF; Anne Morris, Principal, Anne Morris and Associates; Alex Wilkerson, Policy Analyst, U.S. Department of Transportation Volpe Center

During the 2006 update of Kentucky's Long Range Statewide Transportation Plan (LRSTP), the Kentucky Transportation Cabinet (KYTC) received only 60 comments, almost all of which were from urban areas in the northern part of the State. By working with local agency partners through the [Your Turn public engagement campaign](#), KYTC increased participation, especially among minority and rural low-income Appalachian residents, in a survey supporting development of the [2014-2035 LRSTP](#).

Funded by the Commonwealth of Kentucky, KYTC assumes roles and responsibilities similar to those of other State departments of transportation. The Cabinet builds and maintains Federal and State highways and supports economic development opportunities to improve quality of life in Kentucky. In developing the 2014-2035 LRSTP, KYTC aimed for broader and more diverse participation from residents across the State, including rural low-income populations and urban minority populations. To that end, KYTC spearheaded a multi-pronged public involvement approach, including demographic analysis, targeted outreach, two public comment periods, three focus groups, and partnerships with local organizations.



Figure 5: KYTC "Your Turn" public engagement campaign logo (Image courtesy of Kentucky Transportation Cabinet)

To inform outreach needs, KYTC performed a demographic analysis of the State's population identifying geographic focus areas with environmental justice (EJ) populations, including minority and low-income populations, as well as other demographic, underserved groups that face barriers to transportation such as children, older adults, limited English proficiency populations, and people with disabilities. KYTC's targeted outreach approaches included development of Spanish language materials, outreach through English language learner services, radio stations, and newspapers, as well as distribution of materials to rural low-income individuals through public libraries. KYTC's partnership with Area Development Districts (ADDs), Highway District Offices (HDOs), and metropolitan planning organizations (MPOs) enabled the agency to better reach EJ populations. These partner organizations distributed information to local officials and citizen groups, helped advertise the survey, and captured results of the survey efforts. Two public comment periods gathered [community](#)



Figure 6: The "Destination Postcard" image created for the promotion of the 2014-2035 LRSTP Vision. (Image courtesy of Kentucky Transportation Cabinet)

[perspectives on needs and concerns](#) regarding the State's transportation system users and solicited feedback on the draft LRSTP. Using the results of the demographic analysis, KYTC identified underserved and disadvantaged populations and counties among survey respondents, and addressed the lack of representation through targeted outreach at libraries, festivals, and picnics. Finally, KYTC convened three focus groups to provide additional input on transportation conditions and issues; including 1) current and former KYTC leadership; 2) ADD, HDO, and MPO staff; and 3) cross-section of stakeholders representing transportation modes, economic development, military affairs, and social service organizations, providing additional voice for EJ populations.

KYTC documented their flexible yet systematic public engagement approach to the 2014-2035 LRSTP in the [2014 LRSTP Public Involvement \(PI\) Notebook](#); and



captured their approaches in the agency's [2016 Public Involvement Process \(PIP\) Plan](#). As part of developing the LRSTP and Statewide Transportation Improvement Plan, KYTC updated its PIP Plan to support the development and delivery of transportation improvements. KYTC's PIP Plan guides future planning efforts to ensure continued geographic and demographic representation in the State's efforts through meaningful engagement with all citizens of Kentucky in transportation decision making.

[KYTC's public involvement process for the 2014-2035 LRSTP](#) provided opportunities for residents to meaningfully contribute to the vision for the State's transportation priorities. The public engagement effort collected nearly 17,000 survey responses with over 5,000 comments from residents in all 120 of Kentucky's counties, with representative feedback across race, age, and income demographics. Based on public input, KYTC strengthened the LRSTP sections on human and natural environment to address how KYTC identifies and mitigates potential adverse impacts of transportation actions on environmental resources. Residents called for clearer representation of the relationship between health and transportation, and KYTC revised the plan accordingly, adding a description of how transportation choices have health impacts in the domains of safety, physical activity, air quality, and access.

KYTC continues to refine its public engagement approaches and leverage opportunities for public input throughout the transportation project development and delivery process; KYTC completed a [2020 PIP Plan Update](#) and is working on the [2022-2045 LRSTP](#) update, which will be developed through three phases. As part of Phase 1 of the 2022-2045 LRSTP update, KYTC will conduct a statewide demographic analysis with a focus on underserved populations to better engage their participation in the plan development. The process will involve two public surveys using an interactive online survey platform; the first survey will examine trends to inform the investment and policy decisions to be included in the 2022-2045 LRSTP. These trends may include system age and condition; equity; financial resource challenges; shared mobility; connected and automated vehicles; employment and land use trends (e.g., virtual work); rural connectivity issues; and urban congestion issues. Phase 2 will involve scenario planning and risk assessment activities, and Phase 3 will involve a second survey, implementation plan, and finalizing the LRSTP and PI Notebook. KYTC will provide opportunities for public involvement through the LRSTP story map and an interactive virtual town hall.



Figure 7: Excerpt from the 2014-2035 LRSTP illustrating the nexus between health and transportation. (Image courtesy of Kentucky Transportation Cabinet)



## Announcements/New Resources

The Federal Highway Administration released the following resources:

- The [Measuring Multimodal Connectivity Pilot Grant Program Final Report](#) provides an overview of current practices in multimodal network analysis and summaries of grantees' experiences and lessons learned. By demonstrating the methods and results of multimodal network analysis at a variety of scales, the featured projects provide examples for other transportation agencies in measuring various aspects of their walking and bicycling networks. The report also includes a discussion of future next steps needed to encourage broader use of multimodal network connectivity analysis.
- The [Sharing Spaces with Robots: The Basics of Personal Delivery Devices](#) report, published in coordination with Pedestrian and Bicycle Information Center, highlights how innovations in autonomous technologies are making it possible to expand the use of robotic vehicles into multimodal environments. It provides examples of personal delivery devices sharing curb and street space with pedestrians and bicyclists to deliver goods.
- The [Curbside Inventory Report](#), published in coordination with the Institute of Transportation Engineers, outlines approaches to help communities assess, gather, and analyze data to better understand existing curbside conditions and activities, and performance measurement. It describes strategies and tools for data-driven prioritization of curbside management projects, such as surveying delivery drivers and evaluating transit patterns.
- A [pedestrian safety report describes a pedestrian count model used to predict pedestrian volumes at locations without existing counts](#). Using Charlotte, North Carolina as a case study, the report analyzes pedestrian crash severity and probability with integrated geospatial data from the [Highway Safety Information System](#). The findings highlight several factors that increased probabilities of a pedestrian crash resulting in a fatality or serious injury, including higher speeds, higher traffic volumes, larger vehicles striking the pedestrian, pedestrian impairment, and older age
- A [guidebook on establishing transportation liaison programs in State departments of transportation \(DOTs\) and other public agencies](#) explains how transportation liaisons help State DOTs and their partners expedite environmental reviews of transportation projects, accelerating project delivery. Benefits of liaison programs include improvements in predictability, work processes, and coordination between agencies while achieving reduced timeframes. The guidebook covers every stage of establishing a transportation liaison program, from assessing needs to evaluating program outcomes.

