U.S.Department of Transportation
Federal Highway Administration

January 2017 Volume 5, Number 4
FHWA-HEP-17-026

FHWA's Fostering Livable Communities Newsletter

In This Issue

Introduction

The Federal Highway Administration's (FHWA's) Fostering Livable Communities Newsletter is intended to provide transportation professionals with real-world examples of ways that transportation investments promote livability, such as providing access to good jobs, affordable housing, quality schools, and safer roads. The FHWA Livable Communities Newsletter also includes topics related to Safe Routes to School (SRTS), Context Sensitive Solutions, and Environmental Justice. To access additional tools and resources, or to learn more about FHWA's Livability Initiative, please visit FHWA's Livability website or the interagency Partnership for Sustainable Communities (PSC) website. The PSC is a partnership of three Federal agencies: the U.S. Department of Transportation (USDOT), the U.S. Environmental Protection Agency (EPA), and U.S. Department of Housing and Urban Development (HUD). To read past issues of the newsletter, visit www.fhwa.dot.gov/livability/newsletter/. To subscribe to the newsletter, visit GovDelivery.

Want to continue the discussion? Have a question about one of the topics you read here? Visit the FHWA Livable Communities Discussion Board to join the conversation.

FHWA Updates for Greater Roadway Design Flexibility

Elizabeth Hilton, Geometric Design Engineer, FHWA Office of Infrastructure

Today more than ever, communities expect practitioners to deliver multimodal projects that take environmental and social impacts into account. Transportation professionals must also consider the economic aspects of their designs in the face of constrained transportation funding. Rather than simply following standards from a book, practitioners are developing unique solutions to address the specific circumstances of each project and achieve the best overall results, while also maximizing the return on investment. Flexibility is crucial in developing solutions that provide a connected network of both motorized and nonmotorized transportation infrastructure that enhances access to jobs, schools, and essential services in a cost-effective manner.

The Federal Highway Administration (FHWA) has been placing a greater emphasis on flexible street design policies so that design professionals can develop projects that address evolving transportation needs, promote livability, and provide benefits to communities. FHWA recently revised a key aspect of its design policy—the controlling criteria—making it easier for practitioners to develop designs that meet community needs.

FHWA regulations adopt geometric design standards for projects on the National Highway System (NHS). The standards are comprehensive, covering a broad range of design characteristics, while allowing for flexibility in their application. Since 1985, FHWA has emphasized a subset of the design criteria contained in adopted standards by designating them as controlling criteria. Design exceptions are required when any of the controlling criteria are not met. In 1985, 13 controlling criteria were set forth, all of which were applicable to projects on the NHS regardless of roadway type, surrounding land use, or other context. The applicability of the controlling criteria was expanded in 2012 when additional urban roadways were added to the NHS under the Moving Ahead for Progress in the 21st Century Act (MAP-21).

Table 1: Controlling Criteria for the National Highway System Before and After 2016 revisions.

13 Controlling Criteria Before	**10 Controlling Criteria After Revision**
*Applies to **all NHS roadways***	*Applies to **NHS freeways & roadways ≥ 50 mph***
1. Design speed	1. Design speed*
2. Lane width	2. Lane width
3. Shoulder width	3. Shoulder width
4. Bridge width	
5. Horizontal alignment	4. Horizontal curve radius
6. Superelevation rate	5. Superelevation rate
7. Vertical alignment	
8. Grade	6. Maximum grade
9. Stopping sight distance	7. Stopping sight distance
10. Cross slope	8. Cross slope
11. Vertical clearance	9. Vertical clearance
12. Horizontal Clearance	
13. Design loading structural capacity	10. Design loading structural capacity*

** Applies to all NHS roadways*

More recently, FHWA finalized policy changes to revise the list of controlling criteria and introduce context into the application of those criteria. Proposed changes were published in the Federal Register in October 2015 to give stakeholders an opportunity to comment on the proposed policy changes. FHWA received over 2,300 comments and published a final notice to implement the policy change on May 5, 2016. Three criteria were dropped from the list of 13, and most of the remaining criteria will only be considered as controlling for high-speed roadways (freeways and roads with a design speed greater than or equal to 50 mph). Only two controlling criteria remain for all NHS roadways (non-freeway) with a design

speed of less than 50 mph: design speed and design loading structural capacity. The memorandum on revisions to the controlling criteria outlines the new policy. When the controlling criteria cannot be met, design exceptions are still available as a tool that practitioners can use to help them provide the best overall design.

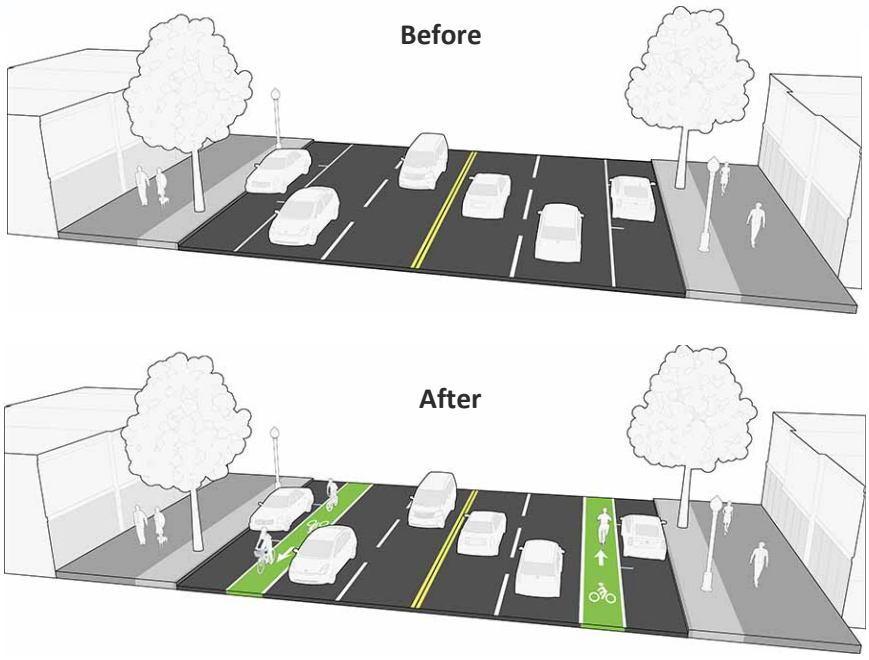


Figure 1: Roadway Reconfiguration: These illustrations show before and after cross sections of an urban street where narrowed lanes provide space for bike lanes. The recent revision to the controlling criteria enables engineers to make such decisions without requiring approval for a design exception from FHWA. (Image courtesy of Toole Design Group)

The significant reduction in the number of controlling criteria applicable to roadways with lower speeds will give practitioners the flexibility they need to design solutions that address project goals in a way that is more compatible with the community. For example, practitioners will have more flexibility to narrow vehicular lanes without needing Federal approval to do so.

FHWA also issued a clarifying memorandum with regard to Level of Service (LOS), a qualitative measure that reflects the relative ease of traffic flow on a roadway. While recommended LOS targets are included in the adopted design standards, LOS is not a controlling criteria. The memorandum clarifies that FHWA does not have regulations or policies that require specific minimum LOS values for projects on the NHS.

These changes represent a significant step in supporting FHWA's partners and stakeholders as they work to implement projects that result in better and more sustainable outcomes, such as improved connectivity and mobility for people of all ages and abilities; enhanced safety; and increased equity.

No Fare Transit Program in Longmont, Colorado

Scott McCarey, Multimodal Division Manager, Boulder County Transportation

For many years, ridership on the four local City of Longmont transit routes was very low and Boulder County transportation staff suspected that the $2.25 fare was suppressing transit ridership. Regional Transportation District (RTD), the transit service provider for Longmont, conducted surveys revealing that 62 percent of Longmont transit riders had total annual household incomes of less than $25,000 and that 79 percent had no access to a car. The survey findings indicated that, of the city's 89,000 residents, those who could most benefit from the transit system were the ones least able to afford it. In July 2014, Boulder County staff implemented the "Ride Free Longmont" program to make riding all local buses operating within the City of Longmont fare free.

A key tenet of the program was that RTD would maintain identical farebox revenues after program implementation. The project team determined the historical annual revenues for the local routes, which Boulder County now pays to RTD in a lump sum amount at the beginning of each year. Additionally, the agencies agreed that Boulder County would pay RTD any additional capital or operating expenses directly resulting from this program, such as adding more service due to overcrowding. Boulder County uses a sales tax measure passed by voters to pay for this program.

Since Ride Free Longmont's inception, ridership on all four local routes has increased dramatically. In the first month of the program, the number of people riding the bus system increased by over 70 percent. Having just completed two full years, the latest data from RTD show a *300 percent increase in ridership*—triple the number of trips made before the program started. Boulder County conducted a survey at the end of 2015 to analyze the ridership increase, and found that 43 percent of respondents ride the bus regularly now but did not use the system before the program began. Of those new riders, 45 percent would have driven alone rather than take the bus, if not for the Ride Free Longmont program. Figure 2 shows how riders say they would have traveled if not by bus.

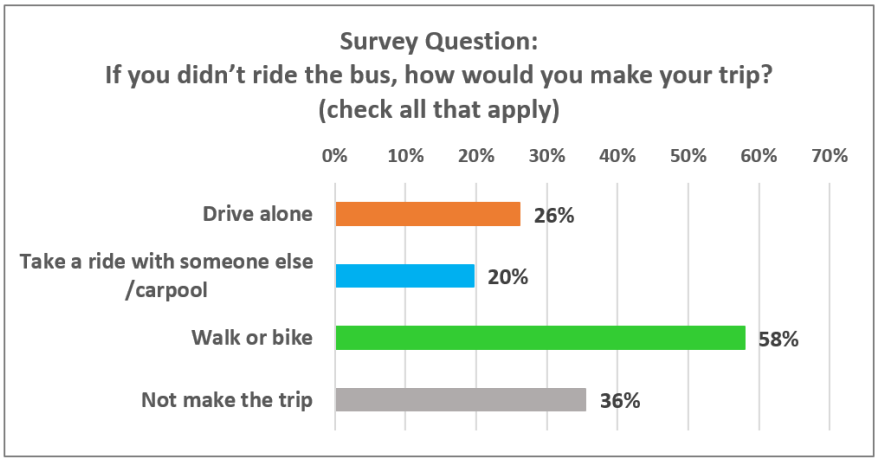


Figure 2: One question and responses from survey of Longmont, CO bus riders following implementation of Ride Free Longmont. Total number of respondents: 107. (Data courtesy of Boulder County Transportation)

Testimonials from Longmont residents have also been pouring in. Boulder County Transportation heard directly from residents that the program has provided them with a freedom they did not previously have. One resident explained, "With no local fare, my budget does not get raided just to get to where I need and want to go."

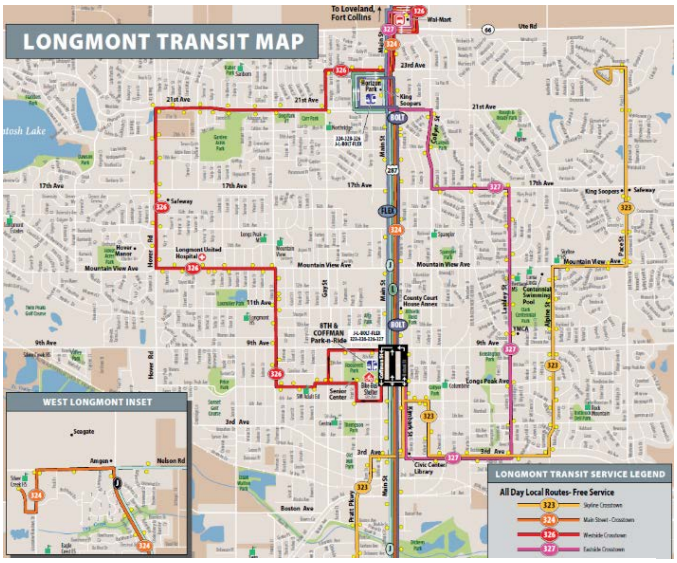


Figure 3: Longmont, CO transit map with free service local routes. (Image courtesy of Boulder County Transportation)

In addition to improving mobility for low-income residents, a second goal of this program was to improve transit service in Longmont. Previously, low ridership in Longmont led to repeated service cuts, leading to even lower ridership—the classic downward spiral. The Ride Free Longmont program has led to renewed excitement about transit and a new virtuous cycle: more ridership justifies more service, which will attract even more ridership. At the start of the program, Longmont City Council approved local matching funds for a grant to pay for one route to reduce its headways by half, from 30 down to 15 minutes. The program's success has also encouraged key elected officials to participate in a county-wide fare free effort; a long-term vision to extend similar programs across all of Boulder County.

Several decisions early in the development of the program have been likely drivers of its success. First, Boulder County

staff worked with RTD to make the service 'fare free'—a completely new model for RTD in which passengers can simply jump on and jump off as many times as they like. This simplicity has increased participation in the program. Rather than requiring riders to show a form of city identification, an alternative that was considered but ultimately rejected, the fare free approach also allows non-resident visitors to ride the Longmont transit system for free.

Secondly, the agencies involved made a concerted effort and successfully avoided a degradation in the quality of service from unruly passengers. According to the Transit Cooperative Research Program's 2011 report, *Implementation and Outcomes of Fare-Free Transit Systems*, a chief unintended negative consequence of fare free programs is disruptive passengers, often transients or unsupervised teens. During the program development, the agencies worked very closely with the Longmont Police Department and the transit agency's street supervisors to make sure any disturbance could immediately be addressed. Additionally, all passengers are required to get off at the end of the route. With these measures in place, reduced quality of service has not been an issue in Longmont.

Now in its third year, the innovative Ride Free Longmont program provides affordable public transportation so that people can more easily get to work, medical appointments, shopping, school, and recreation.

The Connection Between Workforce Development and Livability

Martha Kenley, Disadvantaged Business Enterprise and Contractor Compliance Team Program Manager, FHWA Office of Civil Rights

What influences someone to relocate? A job? Being close to family? Affordable housing? Most research on the subject finds that people generally move for a job, followed closely by family considerations and housing costs. While an initial decision to move is often driven by work, whether a person remains in an area largely depends upon livability–whether the area provides a good quality of life for its residents. For a community to thrive, it needs a strong workforce. To maintain that workforce, the community must develop and maintain the components of livability valued by its residents. Through various programs, the U.S. Department of Transportation (USDOT) and FHWA work to foster both livability and workforce development, especially for skilled work in the transportation industry.

Figure 4: FHWA overseeing civil rights compliance on the Kosciuszko Bridge Project in New York. (Image courtesy of FHWA)

The FHWA's Office of Innovative Program Delivery (OIPD) developed a new center in August 2016 called the Center for Transportation Workforce Development (the Center). The Center, which focuses on external workforce training programs, was developed to respond to the present and future need for skilled workers in the highway construction industry. With the current and upcoming retirement of baby boomers, gaps in the skilled workforce will only become more pressing. For example, according to the American Trucking Association, the ever increasing industry need far outweighs the number of persons with commercial driver's licenses. The objective of the Center is to facilitate workforce development at State and local levels by building strategic partnerships with other agencies and stakeholder groups with expertise in training, recruitment, and job placement. The Center also aims to direct funding streams from sources such as the

Department of Labor and the Department of Education to local workforce development initiatives. According to Tony Furst, Chief Innovation Officer for OIPD, "we want to provide individuals with the skills they need to be competitive in the highway construction job market; once someone has those skills they have relative freedom in determining where they live, based upon their individual definition of 'livability.'"

Workforce development often attracts nearby residents, helping to foster a strong, local labor force. In the spring of 2016, FHWA awarded nearly $3 million in discretionary grants to eight State departments of transportation (DOT) under a pilot on-the-job-training program as part of the Secretary of Transportation Anthony Foxx's Ladders of Opportunity initiative. Among other things, successful applicants described how they structured their training program to address current and anticipated highway construction-related skill gaps in their areas. As part of this pilot, FHWA awarded Virginia DOT a grant to expand a program that focuses on training in the asphalt technology sector of the State's transportation industry. Virginia's paving industry, both public and private, severely lacks qualified technicians to meet current and anticipated needs. The program plans to concentrate its recruitment efforts within the State. According to SalaryExpert.com, the average annual salary of an asphalt worker in Virginia is nearly $50,000. Such a salary would likely attract many graduates with Associates Degrees, and those who are unemployed or underemployed, to receive the necessary training to compete for job opportunities in the area. Whether or not workers remain in the community, however, largely depends upon how well the area meets the livability needs of its residents.

Figure 5: This $555 million project will create jobs and spur economic development while rebuilding infrastructure in New York State. (Image courtesy of FHWA)

Multimodal Catalog—A Tool for Federal Agencies and Partners to Plan for Multimodal Transportation to and Within Federal Lands

Haley Peckett, Community Planner, USDOT Volpe Center and Jaime Young, Community Planner, USDOT Volpe Center

Figure 6: South Rim Shuttle Bus at Grand Canyon National Park. (Image courtesy of NPS)

For the millions of visitors to Federal lands across the United States, multimodal transportation systems are not only a means of access but also an integral part of their recreation experience. Trails and transit systems help visitors get to and around parks, refuges, forests, and recreation areas, while also offering benefits such as reduced environmental impact and cost savings. However, with so many different agencies owning and maintaining these systems, there has never been a central database with information on all multimodal systems on Federal lands.

To address this data need, the Office of Federal Lands Highway (FLH) (part of the Federal Highway Administration) and the Federal Transit Administration (FTA) enlisted the Volpe National Transportation Systems Center (Volpe Center) to develop a tool that would help the USDOT, Federal Land Management Agencies (FLMAs), and partner agencies manage and communicate data for multimodal transportation systems providing access to or within Federal lands. The project team collected data by reaching out to FLMA contacts at the National, State, regional, and unit levels, including the National Park Service, National Forest Service, Army Corps of Engineers, Fish and Wildlife Service, and the Bureau of Land Management. Data also included multiple non-governmental sources, including transit agencies and trails that are not owned or managed by FLMAs.

The Multimodal Catalog data includes existing and currently programmed multimodal systems that provide access to or within FLMA lands. The Catalog establishes the first-of-its-kind dataset for transit and transportation trails. As a tool that helps FLMAs, States, regions, and counties plan for transportation needs, the Multimodal Catalog can:

1. Inventory and track condition information that can lead to the identification of high-priority multimodal systems and/or projects for each FLMA and for each State or region.
2. Identify defensible program-level multimodal investment needs to help with long-term planning, including planning for reauthorization of surface transportation legislation.
3. Establish baseline data for FLMAs to use in planning, performance management, and future reporting.

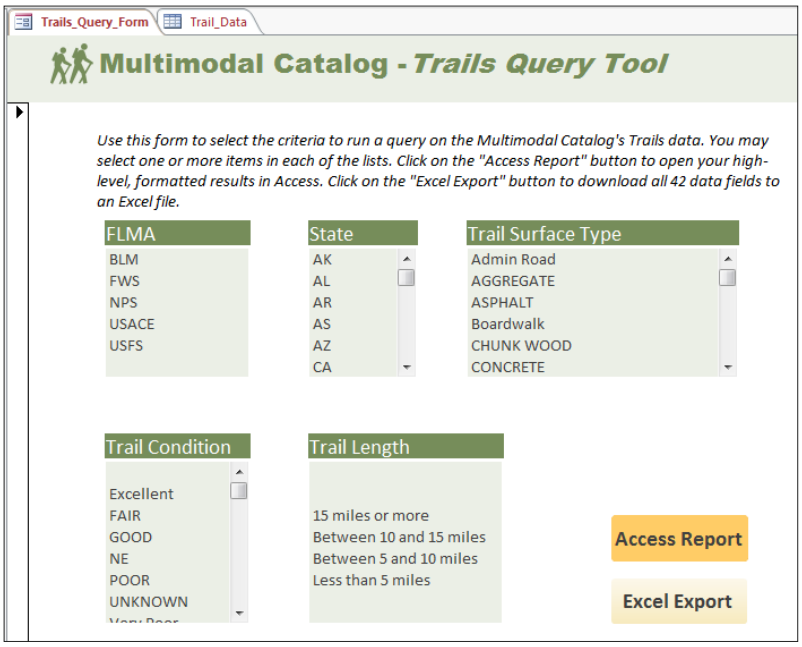


Figure 7: Multimodal Catalog Trails Query Tool. (Image courtesy of the Volpe Center)

The Catalog data is publicly accessible as a downloadable Access Database with pre-set queries that can help planners find the transportation systems in their areas. It includes data from all 50 States and five U.S. territories, for a total of 35,927 assets, which are owned and operated by both FLMAs as well as partner agencies. The Catalog is divided into two separate databases for trail and transit assets. For each, there is a query tool in which the user can filter for given characteristic(s). The current queries are generic but can be customized for each user group or FLMA. The fields in the Transit Query Tools are FLMA, State, transit mode, and fuel type. In the Trails Query Tool, the fields are FLMA, State, trail surface, trail length, and trail condition. In all, there are 42 data fields in the Catalog, such as closest city or county, owner, and operator to name a few. Any of these fields could be made to be part of a customized query tool. Data fields were determined based on FLMA input, data availability, and needs for cost estimates. The Multimodal Catalog can help agencies determine for what kind of funding a given asset is eligible, and enables preparation of cost estimates based on many of the other data fields such as condition and management information. The Catalog aims to help multimodal projects compete on a level playing field with road projects for planning and project funding, and expresses the importance of transit and trail systems on Federal lands, backed by data. With searchable features that can be used in connection with project selection and performance

management, the Multimodal Catalog communicates the importance of multimodal systems within regions and to transportation partners.

FHWA and the Volpe Center are working on a second phase of the Catalog to join the current tabular database with geospatial layers. This will allow users to find data by location using an interactive map. Spatial data should be available in the next few years, as technology and public-facing interactive mapping tools are further developed. For trails, the project team is working with the FLMAs as they update GIS data standards and unify their trails datasets. For transit, the team is using GTFS and other data sources to georeference the Catalog's current transit system information. Ultimately, the Multimodal Catalog will be a web-based database with a map component, owned by FHWA and updated automatically at regular intervals. It can currently be downloaded from the FWHA's Federal Lands Planning Program webpage. For any questions related to the Multimodal Catalog, please contact Aung Gye at aung.gye@dot.gov.

Southern California Association of Governments Go Human Campaign

David Leyzerovsky, Project Associate, Project for Public Spaces

The Southern California Association of Governments (SCAG) is the nation's largest Metropolitan Planning Organization, encompassing six counties and 191 cities and home to approximately 19 million people. The SCAG region has the reputation as being the car capital of the world. Unfortunately that designation has translated to significant safety issues for people who walk and bike. From 2003 to 2012, nearly 1,400 people were killed while walking and biking in the SCAG region and over 122,000 were injured.

Figure 8: Go Human Advertising Campaign. (Images courtesy of SCAG)

In 2015, SCAG launched the *Go Human* campaign to encourage residents to use human powered transportation: walking and biking. *Go Human* is both a community outreach and advertising campaign intended to promote traffic safety and develop resources and toolkits that communities may use to make their cities more amenable to active transportation. The program is funded by a $2.3 million grant from the 2014 California Active Transportation Program and $500,000 from the Mobile Source Air Pollution Reduction Review Committee. To date, the media campaign has left 500 million impressions via billboard signs, bus shelter advertising, radio spots, and social media outlets, and is slated to host 16 community engagement events between February 2016 and May 2017.

One such community event was held in Westminster, CA on May 21, 2016, on Hoover Street, one of its major streets. The event supported the city's concerted efforts to improve the street. According to Westminster Vice-Mayor, Sergio Contreras, Hoover Street used to look starkly different, "it was being used as a garbage dump, with large items, garbage bags, and clothing littered everywhere. Overgrown vegetation had begun to consume the bike trail with oleander branches and debris overtaking and obstructing the path, breaking up the asphalt and creating an uneven trail."

Figure 9: Temporary Roundabout on Westminster's Hoover Streets during the Experience Hoover event. (Images courtesy of SCAG)

Figure 10: A temporary cycle track on Westminster's Hoover Streets during the Experience Hoover event. (Image courtesy of SCAG)

Vice-Mayor Contreras wanted to do more than simply clear the trash from the streets; he envisioned creating an attractive walking and bicycling corridor for the community. With support from the City Council, the city resurfaced the two-mile-long path, installing new cement and striping; made landscaping improvements, such as planting 283 trees and new drought tolerant plants; and developed a new irrigation system. The city applied to SCAG's *Go Human* campaign to host a capacity-building demonstration event, in order to celebrate the new path and assess the possibilities for further improvements on the street.

The *Go Human* event, called Westminster: Experience Hoover, was filled with family-friendly activities and games, as well as temporary design modifications to the Hoover Street. These modifications included a cycle track, parklets, and a roundabout, all intended to showcase the street as a more walkable destination. The event was designed to inspire people to walk and bike, while educating the community and local businesses on the value of Complete Streets and active transportation.

As part of the event, SCAG asked participants to share their thoughts about the demonstrations. The temporary cycle track was accompanied by an idea board featuring a rendering of what a permanent solution could look like. Event participants provided their comments and had the opportunity to speak with SCAG staff about what changes might look like. The roundabout demonstration, in particular, was celebrated by the community as a modification that many hoped would be made permanent.

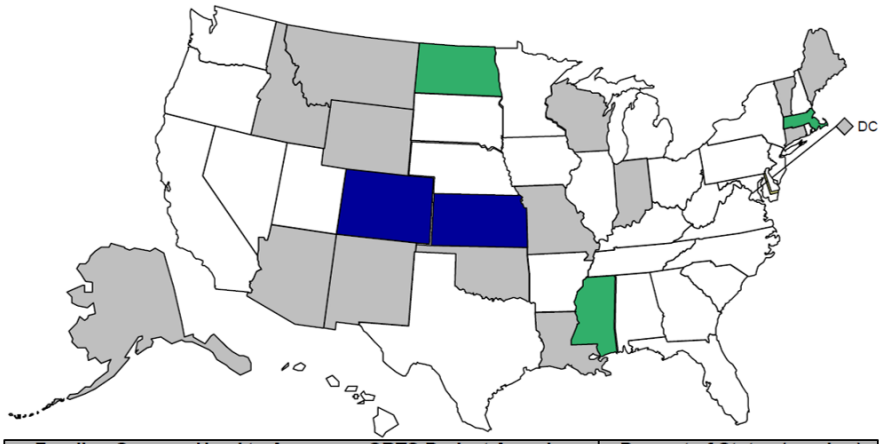
The Westminster *Go Human* event illustrated the benefits of pilot projects, not only for educating citizens about traffic calming and active transportation, but also to provide a path toward more permanent street modifications. The temporary installations demonstrate how improvements can be initiated without incurring the high costs of large-scale capital projects. Most significantly, the *Go Human* Hoover Street event shows how enabling community members to test out a concept—such as a cycle track or parklet—by seeing and experiencing it for themselves, and providing valuable feedback. Testing a concept first hand is a powerful tool for building early stakeholder buy-in for livable streets projects.

Demand for Safe Routes to School Fosters Funding Creativity and Flexibility

Colleen Oliver, Communications Manager, Safe Routes to School Programs, University of North Carolina Highway Safety Research Center

Following the establishment of the Federal Safe Routes to School (SRTS) program in 2005, SRTS initiatives continue to flourish. The success of the program generated local demand that has propelled SRTS through multiple transportation bills and funding changes.

With the 2005 Safe, Affordable, Flexible, Efficient Transportation Equity Act–A Legacy for Users (SAFETEA-LU), Congress established the Federal SRTS program to improve the safety and desirability of walking and bicycling to school. Inspired by the success of pilot programs in California and Massachusetts, and a growing grassroots movement, the Federal program brought SRTS to all 50 States and the District of Columbia. The law included dedicated funding, required a full time SRTS coordinator for each State and the District of Columbia, did not require a local match, and could be used for both infrastructure and non-infrastructure activities. Along with the rest of SAFETEA-LU, the program was extended from 2010 to 2012, resulting in more than $1 billion in funds for SRTS.



Funding Sources Used to Announce SRTS Project Awards	Percent of States (number)
MAP-21 ONLY	3.9% (2)
SAFETEA-LU ONLY	0.0% (0)
BOTH SAFETEA-LU and MAP-21	5.9% (3)
Reported no funding activity this quarter	60.8% (31)
Unknown	29.4% (15)

Figure 11: Safe Routes to School Funding Activity by State, April-June, 2016. (Image courtesy of the National Center for SRTS)

Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012 resulted in significant changes to the SRTS program. While all of the infrastructure and non-infrastructure programming that was eligible under SAFETEA-LU remained, SRTS activities began to compete for funds with other bicycle, pedestrian, and trail projects as part of the Transportation Alternatives Program (TAP). In addition, projects were no longer 100 percent Federally funded, but required a 20 percent local match, and less funding was available for TAP programming overall. While these changes affected the spending of MAP-21 funds for SRTS, State departments of transportation were still allowed to spend any of the original SRTS dollars that remained from SAFETEA-LU according to SAFETEA-LU rules.

As of December 2015, the Fixing America's Surface Transportation Act (FAST Act) replaced TAP with a set-aside of Surface Transportation Block Grant (STBG) program funding for Transportation Alternatives (TA Set-Aside). While the TAP program has a new name, it still operates similarly as under MAP-21, and SRTS remains an eligible funding activity requiring a match.

In response to the changes in SRTS legislation, States have developed creative solutions to fulfill the Federal matching requirements and enable local communities to compete for SRTS funding. In 2013, California passed State legislation that extended SRTS with funds from the State Highway Account. These funds serve as the local match requirement for California SRTS projects. Other States such as Florida and New Jersey provide matching funds for projects using State toll credits.

Many States and cities are exploring these options as well as ideas, such as local casino taxes, bonds, and other local funds that could serve as continuous sources of matching funds.

The National Center for Safe Routes to School estimates that more than 90 percent of the funds apportioned to the States under SAFETEA-LU have now been awarded and more than 16,000 schools have benefited or will benefit from original SRTS program funds. It is more difficult to track spending on SRTS under MAP-21 because funds are combined with other TAP activities. However as of June 2016, an estimated 2,200 schools in 24 out of 36 reporting States have benefited or will benefit from MAP-21 funds. Tracking of FAST Act funding has only just begun, but a growing number of States report using these funds to support SRTS projects.

The Federal SRTS Program has accomplished much over the past 10 years. SRTS practitioners and stakeholders have shown how SRTS strategies can act as tools for community-wide change, improving the safety and comfort of street crossings and helping to reduce speeding near schools and throughout communities. SRTS projects have also helped to establish cohesive street networks, connectivity, and access to essential services.

While there is much to celebrate, it is important to recognize that more needs to be done to create safe and vibrant communities for children. Cities and counties around the country are incorporating their SRTS efforts into broader roadway safety plans, such as Vision Zero. Future initiatives will require collaborative and comprehensive efforts to create communities where safe, secure, and comfortable travel by foot and bike is made possible for children of all backgrounds throughout their communities, not just the trip to school.

The National Safe Routes to School (SRTS) Data Collection System Helps SRTS Count

Colleen Oliver, Communications Manager, Safe Routes to School Programs, University of North Carolina Highway Safety Research Center

Evaluation is a key component of the Safe Routes to School (SRTS) program. In 2007, the National Center for Safe Routes to School created, and to this day maintains, a National Data Collection System that enables data-based evaluation and decisionmaking for State and local SRTS programs. As of October 2016, the data system contained 1.78 million student travel tally and parent survey questionnaires from over 14,000 schools located across the 50 States and Washington, DC. The database, unique among Federal pedestrian and bicycle programs, simultaneously provides meaningful information to help local SRTS programs evaluate the impacts of their efforts. It also allows regional, State, and Federal level stakeholders to assess broader trends in student travel.

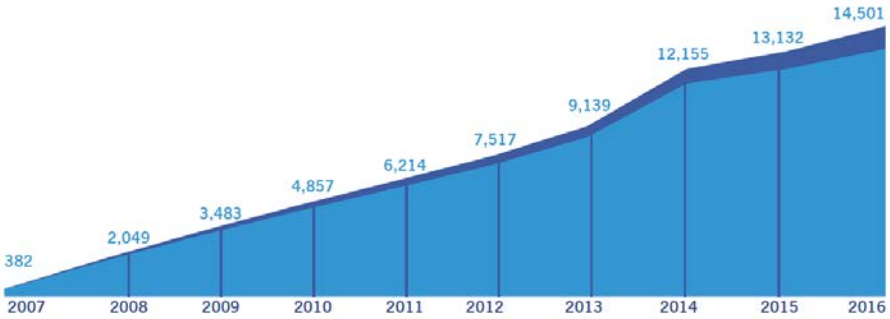


Figure 12: The cumulative number of schools that have used the National Center's Data System. (Image courtesy of the National Center for SRTS)

Locally, individual schools and school districts use the data system to plan their SRTS strategies and evaluate whether their SRTS efforts are leading to measurable changes in the number of students who walk and bicycle to school. Local programs also use the data to track changes in parent attitudes about walking and bicycling, allowing them to adjust SRTS strategies over time in response to newer data. If, for example, new survey data show that the largest barrier to walking and bicycling

to school is a lack of time, the program may consider instituting walking school buses or other strategies to support walking while saving parents' time. The SRTS data system leads to stronger and more responsive local programs.

In addition to supporting local SRTS programs, the SRTS data system is a valuable resource for research. A number of researchers have used data from the data collection system to study SRTS programs and their impacts. These studies have examined topics, such as how SRTS programs increase the number of students who walk and bicycle to school, and the concerns parents and caregivers identify as barriers to walking and bicycling to school. Some of the research studies have generated new data for the STRS database by collecting information from schools that have not participated in the SRTS program.

Quantifying school travel patterns at schools that have not participated in SRTS programs, and comparing these patterns with those at SRTS-participating schools, has allowed researchers to detect the unique impact of the SRTS program on students' walking and bicycling to school activity. Discovering the effects of SRTS on school travel patterns would prove difficult and cost-intensive without this centralized system for collecting school travel data.

Many States use the SRTS data collection system to establish a baseline for local projects. Once they have an established baseline, they use the system to help with local program and project planning and to help with post-project evaluation. At the Federal level, the SRTS data system created the ability to identify trends and to share SRTS successes. The National Center for SRTS has used the data from the system to report back to FHWA and Congress about the impacts of the Federal SRTS program.

The National Center for SRTS's data collection system has greatly contributed to the understanding of SRTS programs and their impacts. The system has informed decisions at the local, State, and Federal levels and has supported a number of research studies about walking and bicycling. Given the breadth and depth of the research that the data system has made possible, transportation and health researchers, practitioners, and stakeholders have greater knowledge of student travel patterns and parent opinions about walking and bicycling than ever before.

Announcements/New Resources

- The Federal Highway Administration (FHWA) recently released a new summary report on its "Bicycle-Pedestrian Count Technology Pilot Project." The purpose of the pilot project was to increase the organizational and technical capacity of metropolitan planning organizations to establish and operate effective bicycle and pedestrian count programs, and to provide lessons learned for peer agencies across the Country.
- The Federal Interagency Working Group (IWG) on Environmental Justice (EJ) completed the Access & Awareness Webinar Series in November 2016. Videos of the webinars are available under the EJ IWG Webinar tab on the webpage.
- The American Association of State Highway and Transportation Officials (AASHTO) Center for Environmental Excellence published the *Practitioners Peer Exchange Environmental Justice Roadmap* (PDF) in November 2016, following the Environmental Justice Peer Exchange co-hosted by AASHTO and FHWA. The roadmap includes key take-aways from the exchange, technical assistance needs, research gaps, and recommendations for FHWA and AASHTO.
- The Pedestrian and Bicycle Information Center released a white paper in November 2016 titled *Improving Pedestrian and Bicycle Connectivity During Rehabilitation of Existing Bridges* (PDF). The paper highlights opportunities for enhancing pedestrian and bicycle accommodations during rehabilitation of existing bridges, and includes case studies of completed projects.
- Federal Highway Administrator Greg Nadeau provided a post on the Fast Lane blog explaining how FHWA works to encourage flexible, multimodal roadway design. The post, titled Flexible Roadway Design Key to Safer Streets, also mentions the guide, *Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts*, which was published by FHWA in August 2016.
- A former freeway ramp between downtown Minneapolis and the Cedar-Riverside area will be converted in 2017 into a crossing for pedestrians and bicycles, providing a safe connection over Interstate 94 and Interstate 35 West.