



FHWA Fostering Multimodal Connectivity Newsletter

The Federal Highway Administration’s (FHWA’s) *Fostering Multimodal Connectivity Newsletter* provides transportation professionals with real-world examples of how multimodal investments:

- Make our transportation system safer for all people
- Promote an inclusive and sustainable economy
- Reduce inequities across our transportation systems and the communities they affect
- Address the climate crisis by building more resilient transportation systems
- Support complete trips and mobility innovation.

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.

In This Issue:

Adopting Northern Virginia’s 2022 TransAction Plan Update.....	2
Creating a Successful Bikeshare Program in Meadville, Pennsylvania.....	4
Implementing the Tires to Trails Project in Memphis, Tennessee.....	6
Launching the Bicycle Facility Inventory System Portal for the Illinois Department of Transportation	8
Announcements/New Resources	10

The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers’ names appear in this newsletter only because they are considered essential to the objective of the newsletter. They are included for informational purposes only and are not intended to reflect a preference, approval, or endorsement of any one product or entity.

Interested in submitting an article for future Newsletters? Please send your article ideas to Bernadette.Dupont@dot.gov. Past issues of the newsletter can be found at the [FHWA Newsletter webpage](#).



Adopting Northern Virginia’s 2022 TransAction Plan Update

Keith Jasper, Principal, Transportation Planning and Programming, Northern Virginia Transportation Authority

In December 2022, the Northern Virginia Transportation Authority (NVTA) adopted the [updated TransAction Plan](#), the long-range multimodal transportation plan for the region. TransAction plans safe, equitable, and sustainable transportation projects over a 20-year timeframe and is updated every five years. Since NVTA was established in 2002, Northern Virginia has seen an increasing emphasis on moving people rather than vehicles, designing streets that are safer for pedestrians, and encouraging densification around major transit hubs. In addition to committing to traditional priorities of congestion reduction, accessibility, safety, economic vitality, and quality of life, TransAction has evolved to address active transportation and preparing the region for emerging transportation technologies such as vehicle electrification/decarbonization, shared/micro-mobility, first-/last-mile self-driving transit shuttles, and incentives/pricing policies. The 2022 TransAction update also focuses on:

- Impacts to traditional peak-period commuting from the COVID-19 pandemic while understanding that long-range implications are still uncertain.
- Formalizing its commitment to three core values: equity, safety, and sustainability. While the region’s vision and goals identify what Northern Virginia wants to accomplish, NVTA’s core values outline how these should be achieved.
- Adopting the [Transportation Technology Strategic Plan](#) as a tool for innovation which includes strategies for improving active transportation and pedestrian options.

NVTA funds projects across a range of modes, including bus, rail, bicycle, pedestrian, roadway, and technology. The results of TransAction are used to inform the NVTA’s Six Year Program for regional revenue funding, and guiding decisions about which transportation improvements the NVTA should prioritize for investment. The 2022 TransAction Update recommends 424 multimodal projects and programs. Out of this total, 50 are non-motorized projects which focus on bicycle and pedestrian improvements that provide connectivity in the region.

To date, NVTA has allocated more than 40 percent of its \$3.1 billion revenues to non-roadway projects, although even highway projects will typically include enhanced quality of life and active transportation components. One such example is the Route 9 traffic calming project through the town of Hillsboro in rural Loudoun County, featuring enhanced sidewalks, crosswalks, and roundabouts (see Figure 1). Another project went through the city of Falls Church and created “duals” on a busy segment of a regional trail to provide separate lanes



Figure 1: In rural Loudoun County, NVTA funded the Route 9 traffic calming project through the town of Hillsboro, featuring enhanced sidewalks, crosswalks, and roundabouts. Source: Town of Hillsboro, Virginia



Figure 2: On behalf of the Northern Virginia Regional Park Authority, NVTA funded a project through the city of Falls Church to create a “dual” on a busy segment of the Washington and Old Dominion regional trail, providing separate lanes for pedestrians and bicyclists. Source: NVTA

for pedestrians and bicyclists (see Figure 2). These examples follow [FHWA Bicycle and Pedestrian Planning, Program, and Project Development guidelines](#) for improving safety and increasing active transportation.

Recognizing the shift in regional transportation priorities, TransAction flags a regional Bus Rapid Transit (BRT) system as a new way forward if the region is to reduce its dependency on driving alone. Over the next two years, NVTA will be developing a preliminary deployment plan for this regional BRT system.

With NVTA at the helm, transit and other solutions to highway congestion are commonplace. NVTA has already funded several new Metrorail stations and invested nearly \$500 million in five BRT lines.

However, in some parts of the region with low transit coverage, targeted highway widenings and intersection improvements are still the preferred option, especially as they invariably lead to better or new bicycle and pedestrian facilities as well. Indeed, the number of lane miles for active transportation/dedicated transit infrastructure added by NVTA-funded projects is approximately equal to the number of added roadway lane miles.

Time, funding, and evolving with post-pandemic needs and other factors beyond NVTA’s control will determine how quickly regions like Northern Virginia, and regional government bodies such as NVTA, can address changing priorities. For Northern Virginia, BRT, technologies, and quality of life enhancements that support the region’s vision will increasingly become a part of the pathway forward.



Creating a Successful Bikeshare Program in Meadville, Pennsylvania

Tim Geibel, Executive Director, Crawford Area Transportation Authority

Well-positioned as a college town with abundant recreational opportunities, the city of Meadville, Pennsylvania became one of the first rural communities to host a citywide bikeshare program. Meadville is the county seat of Crawford County, with a population of approximately 13,000 residents and the administrative base of operations for [Crawford Area Transportation Authority \(CATA\)](#), the public transportation provider for Venango and Meadville's Crawford counties. The city is home to Allegheny College and is fortunate to have recreational trails throughout; one example is the completed 6.3-mile paved [Ernst Trail](#) along the French Creek. To improve connections and usage of existing trails, CATA established the Northwest Pennsylvania Mobility Alliance (NPMA), a 501(c)(3) non-profit organization, to advance locally driven mobility projects throughout the Crawford region and enhance the vibrancy of the community.

After reviewing feedback from community outreach efforts to understand mobility needs, NPMA confirmed a need for a bikeshare program to support active lifestyle goals and provide access to areas of the community that had not been previously available. To begin the process of creating a bikeshare program, the NPMA secured local funding from businesses, applied for local community foundation support, and established a program to acquire 20 used bicycles from an urban bikeshare program.

The [Meadville Bikeshare](#) launched in the spring of 2021, completing over 650 rental transactions in its first year. The Bikeshare operates seasonally from May to November as a smartphone based, dockless program that does not require parking stations and allows users to rent and return bicycles to predesignated locations through rear-tire locking using Bluetooth technology. The Bikeshare program initially offered rental locations at recreational areas, various downtown locations, and public transportation transfer points. With the success of the first year, NPMA was able to secure additional local funding to acquire new 3-speed belt drive bicycle and began to expand the program to more locations such as Allegheny College and the Arc of Crawford County community space on Market Street.



*Figure 3: Bikeshare station at the CATA transfer point in Meadville, PA.
Source: CATA*

Entering its third year, the Bikeshare program proved that alternative mobility options can add vibrancy to a community well-positioned with recreational and institutional opportunities. For example, residents have better opportunities to bike Ernst Trail and students at Allegheny College now have an active transportation option to access downtown Meadville. NPMA continues to work with CATA to identify locations to expand the bikeshare, along with building bicycle rack stations with new bus shelter projects in Meadville. In addition, NPMA also successfully established the first bikeshare program within a State park in Pennsylvania with "Lake Wilhelm Bikeshare" at the trailhead of Maurice K. Goddard State Park in Mercer County.



Figure 4: Bikeshare station at Ernst Trail. Source: CATA.

After a successful program in the first few years, the NPMA received an Act 13 Environmental Planning grant from Crawford County to expand the Bikeshare to the city of Titusville in the future. This grant aligns with the [FHWA Neighborhood Access and Equity Program](#) and [Low-Carbon Transportation Materials Grant programs](#) which aim to improve community connections, reduce environmental impacts, and increase walkability, safety, and affordable transportation access.

The Bikeshare program also supports [CATA's Climate Action Plan \(2022\)](#) as a strategy to help reduce greenhouse gas emissions. The Plan notes that the City of Meadville plans to expand trail and bike infrastructure in the future.

The vision of a coordinated network of mobility is taking shape in Northwest Pennsylvania. The NPMA aims to expand the program to over 200 bicycles within the communities of Crawford and Venango Counties along with bikeshare stations at various State parks and recreational trails in the region. What CATA and the NPMA have accomplished demonstrates that with local leaders, local vision, and full community support, active lifestyle mobility options can thrive in rural communities.



Implementing the Tires to Trails Project in Memphis, Tennessee

Alle Crampton, Environmental Scientist, Tennessee Department of Environment and Conservation; Michael Meister, Tennessee State Parks Trails & Vista Administrator

In Memphis, Tennessee, a community came together to implement the [Tires to Trails project](#), an effort to renovate a 2.9 mile hard surface pathway with recycled tires. The project not only found a positive use for illegally dumped scrap tires, but also revitalized a trail system in [T.O. Fuller State Park](#) that primarily benefits historically underserved populations. In 2018, a group of Tennessee State Park (TSP) staff met with local government and community members to discuss ways to transform former golfcart paths into inviting, native grassland trails. After discussing several solutions, flexible porous pavement implementation gathered the most interest. The surfacing type had many advantages over the typical concrete and asphalt, including aspects of recyclability, permeability, and resiliency that were inserted into the natural environment.

The process of implementation was divided into two parts. The first included the collection, recycling, and disposal of illegally dumped scrap tires that plagued the communities surrounding T.O. Fuller State Park. This was followed by the reconstruction of the hard surface path. The project allowed the community to repurpose 24,000 indiscriminately discarded waste tires, divert them from landfills, and create a new greenway trail that provides a safe recreation space for users to enjoy. The new trail system is equal parts accessible—incorporating Americans with Disabilities Act compliance where it previously was absent—and inspiring, demonstrating how important inviting recreational facilities are to any community.

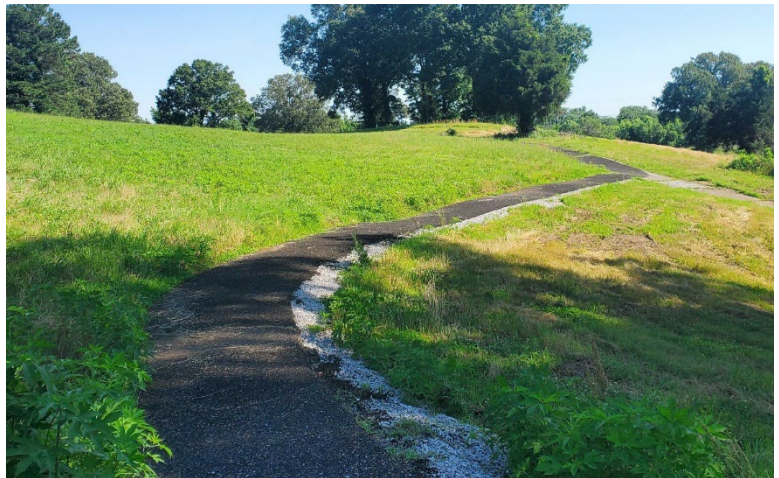


Figure 5: Greenway Trail. Source: TN Department of Environment and Conservation, TN State Parks

The project proposed \$730,000 be allotted to address the illegally dumped tire issue in and around the park. The project leveraged three grant funding sources, including the Tire Environmental Act Program grant from the Tennessee Department of Environment and Conservation Office of Sustainable Practices worth \$250,000 and the Recreational Trails Program grant from the Federal Highway Administration worth \$280,000. The third funding source, the Special Litter Grant worth \$200,000, funded the collection of illegally dumped tires in and around the park area. TSP partnered with the city of Memphis, Shelby County, and Memphis City Beautiful, to complete this portion of the project.

The first concerted litter pick-up took place on Dr. Martin Luther King Jr. Day in 2019. Several State and local officials attended to show their support and over 450 volunteers registered for the event. In four hours, volunteers collected the first 10,000 tires for the project. Over the next 18 months, volunteers gathered another 14,000 additional tires.

The Tires to Trails project serves as a blueprint for other parks not only in Tennessee, but across the nation. This project identified a community's blight and not only addressed it, but then turned it into a resource that positively impacts users



Figure 6: Volunteers removing dumped tires to use for the Tires to Trails project. Source: TN Department of Environment and Conservation, TTSP

physical and mental health. No one single government agency, non-profit, or otherwise could have completed this project independently. Though it took years of planning and group cooperation, this Tires to Trails project proudly showcases what can be achieved with determination, ingenuity, and collaboration.



Launching the Bicycle Facility Inventory System Portal for the Illinois Department of Transportation

Wendy Sheppard, Mapping and Information Systems Unit Chief, Illinois Department of Transportation

The Illinois Department of Transportation (IDOT) launched the [Bicycle Facility Inventory System \(BFIS\) portal](#) in May 2023 to provide Statewide bicycle facility data in a centralized database. This online, interactive map and database includes information about bicycle lanes, paths, trails, and their associated characteristics. BFIS serves a variety of needs and uses. It can support public bicycle enthusiasts and transportation professionals in prioritizing future bicycle facility projects. It can also assist in the planning of transportation projects, selecting design treatments, and identifying funding opportunities to improve Statewide planning and programming processes. As a centralized location for bicycle count data, BFIS can help identify facilities to showcase trails along Illinois bicycle routes, as well as pinpoint high crash and usage instances.

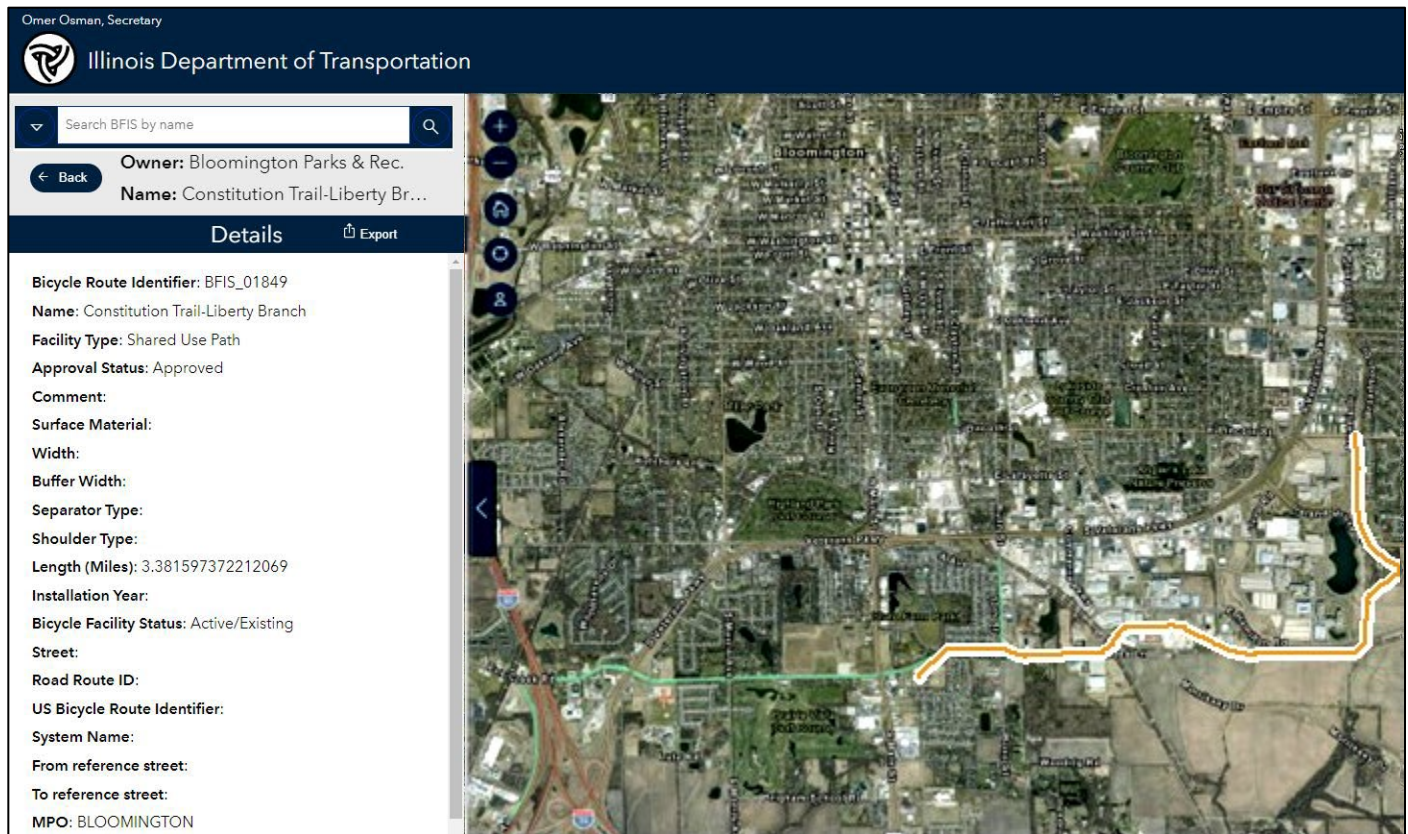


Figure 7: This is a screenshot example of the IDOT BFIS portal showing a selected facility in orange on the map and a sample of the selected facility information on the left. Source: IDOT.

The BFIS dataset contains existing/active, planned/proposed, programmed, construction, and inactive/decommissioned characteristics to help view the facility status. Users can search for facilities by BFIS ID, location, agency or spatially by navigating the interactive map. Bicycle facilities are displayed in conjunction with other map reference layers such as Illinois Counties, Political Townships, Metropolitan Planning Organization (MPO) boundaries, railroad lines, roads, transit stops, and IDOT Districts on aerial imagery. Users can select a facility to retrieve characteristic information. The interactive map allows users to zoom, pan, use a measuring tool, and add markups for reference. Additionally, the BFIS



includes tools to print and export facility data. Currently the BFIS portal is limited to facility owners to validate existing and add new facilities. A verification process reviews all edits to screen out false information.

In the past, bicycle facility data was housed locally within municipalities, townships, and counties in many different formats. This made it difficult for IDOT to include bicycle considerations in Statewide planning or project level prioritization. In a centralized system, data facility owners submit new facilities or make edits to existing systems to ensure the inventory continues to be maintained with the most current information. This centralized system approach also aims to improve collaboration among partner agencies by increasing awareness of other bicycle facility proposals or plans.

Some Illinois bicycle facility owners have begun using BFIS. However, IDOT is still working on an outreach process to increase participation. In addition, the BFIS is compatible with the FHWA National Bikeway Network Data Portal. To request access to the tool or inquire about the BFIS, email your request to DOT.BikePed@Illinois.gov.

Editor’s Note: The [FHWA National Bikeway Network \(NBN\) Data Portal](#) operated by the FHWA Office of Highway Policy Information and hosted at the Oak Ridge National Lab is ready for data input. Agencies are encouraged to put their GIS networks for bicycle facilities on the NBN. The NBN provides flexibility in what can be submitted by allowing either a detailed data set or a simplified data set. The simplified data set is used in cases when not all data has been obtained yet. Agencies can update their networks as more is known and when revisions are required. Currently, the portal has data from 32 states (may not be complete data). The Office of Highway Policy Information is planning to release its initial draft national network towards the end of this calendar year. Contact cwang@ornl.gov via email to register for the website.



Announcements/New Resources

The Federal Highway Administration released the following:

- A range of resources on [Electric Bicycle Research, Trends, Impacts, and Opportunities](#).
- A memorandum providing guidance to State and local governments to support [Bicycle, Pedestrian, and Micromobility Projects and Programs](#).
- Technical assistance, which provides a list of [resources to help support active transportation and disadvantaged communities](#).
- [FY22 National Scenic Byways Program awards announcement](#).
- [Providing a 5-Minute Pickup Priority for Ridehail Users Agreeing to Pool: Potential Impacts on Curtailing Bus Delays and Enhancing Equity, a study](#) that explores how shared ridehailing services affect the implementation of equity and local congestion.
- [Improving Pedestrian Safety on Urban Arterials: Learning from Australasia](#), a report that provides insight into effective approaches and innovations to reduce pedestrian injuries and fatalities on urban arterial roadways.
- An assessment of [National Complete Streets](#), which establishes a national baseline of Complete Streets, active transportation, and similar efforts.
- [Driver Yielding with LED-Embedded Pedestrian- and School-Crossing Signs](#), research that analyzes the effectiveness of warning signs placed at pedestrian crossings.
- Two micromobility activity bulletins: the [Federal Highway Administration Micromobility Activities](#) and the [U.S. Department of Transportation Micromobility Activities](#).

U.S. DOT released the following:

- [Notice of Funding Opportunity for FY23 Reconnecting Communities and Neighborhoods](#)
- [Recipients of \\$2.2 Billion RAISE Discretionary Grant Awards](#)
- A checklist for a competitive [Climate Change Mitigation, Adaption, and Resilience grant application](#).
- The [DOT Discretionary Grants Dashboard](#), which outlines discretionary grant opportunities to help meet transportation infrastructure needs.
- The [U.S. DOT Intersection Safety Challenge](#), which seeks to incentivize the use of emerging technologies as innovative solutions to unsafe conditions involving vehicles and vulnerable road users. Submissions are open until September 25, 2023.
- A toolkit addressing the implementation of [Rural Electric Mobility Infrastructure](#). The resource, which can speak to organizations or individuals, aims to help rural communities scope, plan, and identify ways to fund EV-charging infrastructure.

Upcoming Events:

- In fall 2023, FHWA will release a Notice of Funding Opportunity for the [Active Transportation Infrastructure Investment Program \(ATIIP\)](#). This is a new competitive grant program created under the Bipartisan Infrastructure Law to construct projects to provide safe and connected active transportation facilities in active transportation networks or active transportation spines.
- The [World Day of Remembrance for Road Traffic Victims in the U.S.](#) will be held on November 19, 2023. Communities across the globe are encouraged to gather and demand the improvement of roadway safety, championing effective strategies like redesigning hazardous roads and reducing speed limits.