

Tribal Development of Trails and Other Dedicated Pedestrian and Bicycle Infrastructure

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13. ABSTRACT (Maximum 200 words) Federally recognized Tribes receive Federal funding for transportation planning and projects through the Federal Highway Administration (FHWA) Tribal Transportation Program (TTP). Dedicated pedestrian and bicycle infrastructure networks, such as trails, sidewalks, and shared-use paths, are eligible for this funding. Tribal communities face challenges that, in part, can be addressed by providing or improving safe, accessible, equitable, and comfortable pedestrian and bicycle infrastructure. These challenges include safety for all users, public health issues, and access to jobs. This white paper summarizes findings from a literature review and discussions with representatives from five Tribes and staff at the FHWA Office of Federal Lands Highway involved in the TTP. The trail projects featured in this white paper outline noteworthy practices that Tribes and their partners use to support the planning and development of trails in Tribal communities. The research provides information and resources for Tribes and Tribal trails champions interested in planning and building dedicated pedestrian and bicycle infrastructure.			
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Executive Summary

Federally recognized Tribes receive Federal funding for transportation planning and projects through the Federal Highway Administration (FHWA) Tribal Transportation Program (TTP).¹ Tribes also may partner with Federal Land Management Agencies, State departments of transportation (State DOTs) and natural resource agencies, metropolitan planning organization (MPOs), and county and local governments using other Federal and non-Federal funding to deliver transportation and trail projects. Dedicated pedestrian and bicycle infrastructure or complete streets networks, such as shared-use paths and other trails, sidewalks, and bicycle facilities, are eligible for this funding. Tribes also face challenges that, in part, can be addressed by providing or improving safe, accessible, equitable, and comfortable pedestrian and bicycle infrastructure. These challenges include safety for all users (including people walking, bicycling, using assistive devices, and people using micromobility conveyances), obesity and related health problems, and access to jobs.

This white paper provides information and resources for Tribes, Tribal trails and active transportation advocates, and agencies that may partner with Tribes on trail projects including Federal and State agencies, MPOs, county and local governments, and community organizations. It includes information on the health and economic benefits of trails, funding opportunities, partnership opportunities, and resources for trail planning. It also highlights examples of successful trail plans and projects implemented by Tribes and their partners.

The development of this white paper included a literature review on the health and economic benefits of dedicated bicycle and pedestrian infrastructure, funding opportunities, partnership opportunities, and resources for trail planning, both within and outside of Tribal communities. The research team also identified trails and dedicated pedestrian and bicycle infrastructure projects developed by and involving Tribal governments. The research team facilitated discussions with representatives from five Tribes and staff at the FHWA Office of Federal Lands Highway involved in the TTP. The white paper includes case studies and summaries on how the Tribes planned and implemented pedestrian and bicycle infrastructure to address challenges faced by Tribal members. The synthesis of these discussions and related findings informed the development of this white paper.

The projects featured in this research highlight practices that have led to successful planning outcomes across nine categories including coordination, funding, jobs and training, community engagement, road safety audit, Tribal history and culture, planning, and health and active transportation. Table 1 summarizes noteworthy practices featured in this research that Tribes use to support the planning and development of trails and dedicated bicycle and pedestrian infrastructure. Tribal governments, Tribal trails and active transportation advocates, and partner agencies may use these examples to support planning and coordination of trail projects in other Tribal communities.

¹ <https://highways.dot.gov/federal-lands/programs-tribal/program-overview>

Table 1: Summary of noteworthy practices in Tribal trails projects

Noteworthy Practice Category	Example Activities
Coordination	<p>Project agreements with other government entities can document coordination processes and protect Tribal sovereignty.</p> <p>Tribal transportation departments can coordinate with other Tribal departments (e.g., housing, social services, health, library) in the planning process to gather data and information, and during design to ensure the trail meets community needs.</p>
Funding	<p>Intergovernmental Fund Transfer Agreements (IFTAs) under 23 U.S.C. 202(a)(9) agreements enable Tribes to use Federal-aid funding under the TTP process. The TTP process may be more familiar to Tribes, and the IFTA process facilitates the transfer of Federal-aid funds to Tribes in the same manner as the TTP funds. Through IFTA, projects are implemented in accordance with TTP provisions and the match requirements of the original Federal-aid funding.</p> <p>TTP and TTP Safety Funds can be available for Tribes’ trail planning activities and trail projects to supplement TTP formula funding and local match funding.</p> <p>Tribes are eligible to receive Federal-aid funding administered by State DOTs, including programs such as the Transportation Alternatives (TA) Set-Aside, to implement trail projects.</p>
Jobs and Training	<p>The construction of trail projects can provide employment and job training opportunities to Tribal members through Tribal training and employment centers.</p>
Community Engagement	<p>A successful trail project can garner support for future trail planning and projects in Tribal communities.</p> <p>Trails committees consisting of community members with diverse backgrounds can help champion trail network development.</p>
Road Safety Audit	<p>Road Safety Audits (RSAs) can highlight roadway safety issues that trails or sidewalks can address. RSAs can also gather necessary data and information to justify funding requests for trails and dedicated bicycle and pedestrian infrastructure.</p>
Tribal History and Culture	<p>Trails can be designed and named to reflect and celebrate a Tribe’s history and culture.</p>
Planning	<p>Bicycle and pedestrian master plans can build community support for trails and lay out a comprehensive network of walking, bicycling, and rolling infrastructure.</p> <p>Building trail segments in phases can make it easier to design and fund a future comprehensive and connected trail network.</p>
Health and Active Transportation	<p>Trails increase access to safe, active transportation, helping Tribes address common public health issues such as obesity and diabetes.</p>

Introduction

Many Tribes face challenges that, in part, can be addressed by providing or improving pedestrian and bicycle infrastructure: pedestrian and bicyclist injuries and fatalities, obesity and related health problems, and limited options to safely and comfortably walk, bike, and roll to jobs and destinations. Federally recognized Tribes receive Federal funding for transportation planning and projects through the Tribal Transportation Program (TTP), which the Federal Highway Administration (FHWA) and the Bureau of Indian Affairs (BIA) jointly administer. Dedicated pedestrian and bicycle infrastructure networks, such as trails, sidewalks, and shared-use paths, are eligible for this funding. In addition, Tribes may partner with State departments of transportation (State DOTs), metropolitan planning organization (MPOs), and county and local governments using other Federal and non-Federal funding to deliver transportation projects.

The white paper describes the Federal regulations and policies related to trails, key concepts in active transportation and trails planning, benefits of active transportation and trails, and funding and partnership opportunities. The paper identifies resources and tools that are available to support Tribes in their planning and development of trail networks through the [U.S. DOT Rebuilding American Infrastructure with Sustainability and Equity \(RAISE\) discretionary grants program](#), [Federal Lands Highway TTP](#), and FHWA programs that support [bicycle and pedestrian activities](#), including the [Recreational Trails Program](#), [Surface Transportation Block Grant Program TA Set-Aside](#), [Highway Safety Improvement Program](#), [Congestion Mitigation and Air Quality Improvement Program](#), and other funding programs. It highlights examples of trail plans and construction projects implemented by Tribes and their partners to address community challenges and goals related to safety, mobility, public health, connectivity, and quality of life.

The intended audience for this white paper includes Tribal governments, Tribal trails and active transportation advocates, and agencies that partner with Tribes on trail projects. Tribes and trails advocates may use the examples to inform the development of trails in other Tribal communities. Federal and State agencies may use the examples to support planning and coordination with Tribes on dedicated pedestrian and bicycle infrastructure projects.

Methodology

The development of this white paper began with a literature review on the health and economic benefits of dedicated bicycle and pedestrian infrastructure, funding opportunities, partnership opportunities, and resources for trail planning, both within and outside of Tribal communities. The research team identified trails projects developed by and involving Tribal governments through review of current Federal funding programs, national publications, research reports, planning documents from Tribal governments and State agencies, and other resources. The research team also held discussions with representatives from five Tribes and staff at the FHWA Office of Federal Lands Highway involved in the TTP. The research team developed case studies and summaries on how the Tribes planned and implemented their trail projects and programs to address challenges faced within their communities. Table 2 lists the 12 Tribes and trails projects featured in the white paper. The synthesis of these discussions and related findings informed the development of this white paper.

Table 2: Tribes and trail projects featured as case studies in the white paper

Tribe	Trail Project/Initiative Case Studies	Page
Bay Mills Indian Community	Spirit Stone Trail	17
Jamestown S’Klallam Tribe	Olympic Discovery Trail	20
Oglala Sioux Tribe	Kyle Pathway	23
Pueblo of Jemez	Hemish Path to Wellness	26
Seneca Nation of Indians	Pennsy Trail	30

Table 3: Tribes and trail projects featured as a brief highlight in the white paper

Tribe	Trail Project/Initiative Brief Highlights	Page
Mentasta Traditional Council	Mentasta Pedestrian Path	9
Pascua Yaqui Tribe	Ignacio M. Baumea Roadway Improvement Project	10
Lumbee Tribe of North Carolina	Pembroke Transportation Investment for Revitalization	12
Karuk Tribe	Red Cap Road Project	14
Northern Cheyenne Tribe	Busby Pathway	35
Navajo Nation	Navajo Youth Empowerment Services Trails Initiatives	36
Muscogee (Creek) Nation	Eufaula Walking Trail	38

Literature Review

The research team conducted a literature review on the general benefits of trails and how Tribes develop and implement trails. General benefits include improved safety (especially for pedestrians and bicyclists), improved health outcomes due to increased physical activity, opportunities for economic development, and improved access to jobs and schools. Tribes that successfully develop dedicated pedestrian and bicycle infrastructure take advantage of funding opportunities, engage in partnerships, and access resources for trail planning.

Funding Opportunities to Support Tribal Trail Planning and Development

The research involves a review of current Federal funding programs and how they could be applied to Tribal trail projects, including Tribal Transportation Program (TTP) funds, Federal-Aid funds, and discretionary grant programs. The review identified several resources on pedestrian and bicycle funding opportunities supported by U.S. DOT, which include the surface transportation funding programs such as the Recreational Trails Program, Highway Safety

Improvement Program, Congestion Mitigation and Air Quality Improvement Program, National Highway Performance Program, Surface Transportation Block Grant Program, and Transportation Alternatives Set-Aside. Note that HSIP, STBG, and TA Set-Aside can fund Safe Routes to School activities. See FHWA's [Pedestrian and Bicycle Funding Opportunities](#) table.

The Federal Lands Highway (FLH) Office of Tribal Transportation [TTP Delivery Guide](#) provides guidance and technical program information for Tribes entering into or coordinating existing TTP Agreements with FHWA. The TTP is funded in the same way State Federal-aid is funded, through the Highway Trust Fund. Highway-user taxes, which includes taxes on gasoline, tire, and heavy vehicle use is deposited into the trust fund. Of the funds allocated to Tribes, 88 percent of them are allocated using a statutory formula based on Tribal population, road mileage, and Tribal shares of the former Tribal Transportation Allocation Methodology formula used from 2005 to 2011.² The TTP Delivery Guide provides information on allowable uses of TTP funds, which include planning, design, construction, and maintenance activities. The Guide lists eligible activities under each of these categories.

The Guide also describes the spending limits that Tribes must adhere to for each category of spending. For example, Tribes can spend up to 100 percent of their TTP funds on planning activities if planning is identified as a priority on the FHWA-approved Tribal Transportation Improvement Program (TTIP). Tribes may propose to FHWA or the Bureau of Indian Affairs (BIA) a new use of TTP funds that is not listed in 25 CFR 170 (referring to a process outlined in 25 CFR 170.113). The Guide also lays out the steps for obligation and payment of TTP (and other) funds to Tribes with an approved TTPA through Referenced Funding Agreements (RFAs).

The TTP Delivery Guide explains the 25 CFR 170 requirement that each Tribe develops an LRTP, which is a long-range (20+ year) strategy and capital improvement program that guides the investment of funds in multimodal transportation facilities. LRTPs are a critical decision-making tool that prioritizes transportation investments, capturing current and future growth patterns related to land use, economic development, environment, traffic demand, and public health and safety. Tribes review and update their LRTPs every five years and amend them as needed.

The TTP Delivery Guide explains that a Tribe develops a TTIP, which is a list of transportation projects and activities eligible for TTP funding covering a period of four years. FHWA approves all TTIP funding, to include funds from BIA, and authorizes Tribes to spend TTP funds on the activities included in the TTIP.

The FHWA Tribal Transportation Planning Module titled [Developing the Tribal Transportation Improvement Program](#) includes a focus on the different types of Federal transportation funding sources available to Tribes and related TTIP funding relationships.

The [Infrastructure Investment and Jobs Act \(IIJA\) \(Public Law 117-58, or Bipartisan Infrastructure Law\)](#) identifies new Federal initiatives and funding sources to improve pedestrian and bicycle infrastructure including:

² [U.S. DOT, 2021. Tribal Transportation Program. FHWA.](#)

- [Safe Streets and Roads for All \(SS4A\) Grant Program](#) funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Supplemental Action Plan activities that support or enhance an existing Action Plan could include complementary planning efforts such as speed management plans, accessibility and transition plans, racial and health equity plans, and lighting management plans.
- [TA Set-Aside](#) funds smaller-scale transportation projects such as pedestrian and bicycle facilities; construction of turnouts, overlooks, and viewing areas; community improvements such as historic preservation and vegetation management; environmental mitigation related to stormwater and habitat connectivity; safe routes to school projects; recreational trails; shared micromobility; and vulnerable road user safety assessments.
- [Reconnecting Communities Pilot Program \(RCP\)](#) supports planning, capital construction, and technical assistance to equitably and safely restore community connectivity through the removal, retrofit, mitigation, or replacement of eligible transportation infrastructure facilities that create barriers to mobility, access, or economic development. The [RCP Notice of Funding Opportunity \(NOFO\)](#) states “the variety of transformative solutions to knit communities back together can include linear parks and trails.”
- [Increasing Safe and Accessible Transportation Options Set-Aside from the Metropolitan Planning \(PL\) Funds](#) promotes the adoption of the Complete Street standards and policies to improve safety, mobility, and accessibility of streets.
- The Active Transportation Infrastructure Investment Program (ATIIP) provides funds to provide safe and connected active transportation facilities in an active transportation network or active transportation spine (subject to annual appropriations).
- The Neighborhood Access and Equity Program is a program under the Inflation Reduction Act (IRA) which provides funding opportunities to improve mobility options, such as active transportation, recreational trails, and Complete Streets infrastructure. The program aims to provide affordable access to essential destinations, public spaces, or transportation links and hubs by building or improving complete streets, multiuse trails, regional greenways, or active transportation networks and spines. This program includes Tribal eligibility.

Benefits of Trails

Safety

Limited transportation infrastructure for walking, bicycling, and rolling can result in pedestrians and bicyclists making risky or unsafe travel choices. Trails and other infrastructure dedicated to walking, bicycling, and rolling improves safety for all users including people walking, bicycling, or using assistive devices, and people using micromobility conveyances. Addressing safety includes reducing injuries and fatalities, supporting user comfort related to quality of infrastructure and perception of safety, and ensuring personal security related to crime, violence, harassment, and trafficking. A review of bicycling safety literature concluded that complex transportation infrastructure, such as intersections and roundabouts, posed a significant risk of fatality or severe injury to bicyclists. The study also concluded that off-road bike paths were associated with the lowest risk to riders.³ Trails and other pedestrian and bicycle facilities provide opportunities for nonmotorized transportation and recreation away from vehicular traffic

³ [The impact of transportation infrastructure on bicycling injuries and crashes: a review of the literature](#)

and reduce conflicts between pedestrians/bicyclists and motor vehicles. Trails offer more comfortable transportation access for bicyclists with less experience and without a desire to ride alongside motor vehicles, as well as providing a safe travel route for users to make utilitarian trips.

Some Tribal communities lack active transportation infrastructure and/or have high-volume or high-speed highways that traverse the community. This can result in pedestrians and bicyclists traveling on highway shoulders or walkways that are not separated from travel lanes. The National Highway Traffic Safety Administration reported that in 2020, around 6,516 pedestrians were killed in traffic crashes with motor vehicles in the United States and an estimated 54,769 pedestrians were injured during that same year.⁴ Pedestrians killed while walking along a road shoulder account for almost 8 percent of these deaths.⁵ Providing separated pathways from the travel lanes could help to prevent up to 88 percent of crashes involving pedestrians traveling on road shoulders.⁶ In 2021, there was a 13 percent increase in pedestrian fatalities from 2020 totaling around 7,342 deaths. There was also a 5 percent increase in Pedalcyclist fatalities with deaths estimated at 938 in 2020 and 985 in 2021.

Studies show that Native Americans have a disproportionately higher rate of pedestrian injuries and fatalities. The Centers for Disease Control and Prevention (CDC) analyzed 2001–2010 data from the National Vital Statistics System (NVSS) to determine traffic-related pedestrian death rates per 100,000 by sex, age group and race/ethnicity. Among the results, the CDC found that American Indian/Alaskan Native populations had the highest annualized, age-adjusted traffic-related pedestrian death rates of all races/ethnicities.⁷ That same study noted that Native American Indian/Alaskan Native females also had higher death rates than other ethnicities. According to Smart Growth America, this trend continued into 2020 with Native Americans continuing to experience the highest rate of pedestrian fatalities, at 4.8 pedestrian deaths per 100,000, among races/ethnicities from 2016 to 2020.⁸ Möller et al. found that the incidence rate of pedestrian injuries among Native Americans and Alaskan Native children was 1.2 to 2.3 times higher than the incidence among white children.⁹ FHWA is researching the causes, and potential solutions, for pedestrian fatalities on Tribal lands and expect to finalize the report in late 2024.¹⁰

Dedicated pedestrian and bicycle infrastructure networks can provide safety benefits and can promote safe and livable communities. Several studies found that crime is infrequent on trails. An FHWA study found that, between 1995 and 1996, out of 372 designated rail trails covering nearly 7,000 miles, only 11 rail trails had experienced an instance of mugging, assault, rape, or murder.¹¹ This same study found only one fourth of the surveyed trails experienced property damage, littering, unauthorized motor vehicle use, trespassing, or break-ins to adjacent

⁴ NHTSA, Traffic Safety Facts 2020 Pedestrians, NHTSA, Washington, D.C., 2022.

⁵ FHWA, Pedestrian and Bicycle Crashes of the Early 1990's. Publication No. FHWA-RD-95-163, FHWA, 1995.

⁶ FHWA, An Analysis of Factors Contributing to "Walking Along Roadway" Crashes: Research Study and Guidelines for Sidewalks and Walkways. Report No. FHWA-RD-01-101, FHWA, Washington D.C., 2001.

⁷ Governors Highway Safety Association, An Analysis of Traffic Fatalities by Race and Ethnicity. 2021.

⁸ Smart Growth America, Dangerous by Design, 2022.

⁹ Möller H, Falster K, Ivers R, Jorm L. Inequalities in unintentional injuries between indigenous and nonindigenous children: a systematic review. National Library of Medicine. 2015.

¹⁰ [Pedestrian Safety on Tribal Lands | FHWA \(dot.gov\)](#)

¹¹ FHWA, Rail-Trails and Safe Communities. The Experience on 372 Trails, FHWA, 1998.

properties. The research showed that crime rates are lower on trail networks than the overall crime rate for the region. Similarly, a 2022 study conducted in Atlanta, GA reported that areas with trails and green spaces have lower crime rates. The study examined crime reports from the City of Atlanta covering homicide, rape, and assault. During the study period, between 2021-2022, a geographic analysis of point locations showed that 15.5 percent of all crimes occurred within 300 feet of parks and established trails. The report concludes that because 18.8 percent of Atlanta is greenspace, there appears to be a lower rate of criminal activity associated with parks and trails.¹²

Mentasta Traditional Council: Mentasta Pedestrian Path Project

The Mentasta Traditional Council is located near the Copper and Nebesna Rivers and Mentasta Lake in the Ahtna region of Alaska. Alaska Highway 1 functions as the main road, and Tribal members primarily travel on this road to access community facilities such as the post office, clinic, Tribal community center, and school. Pedestrian conflicts with vehicles on this roadway are common and have resulted in injuries. In Fiscal Years 2017-2018, the Mentasta Traditional Council received funding through the FHWA TTP Safety Fund for the Mentasta Pedestrian Path Project along Alaska Highway 1. The 1,000-foot pathway project included the construction of an asphalt pedestrian and bicycle path to improve safety and eliminate conflicts with vehicles. The Mentasta Traditional Council coordinated with Red Plains Professionals to deliver the pathway project, which was completed in summer 2019.

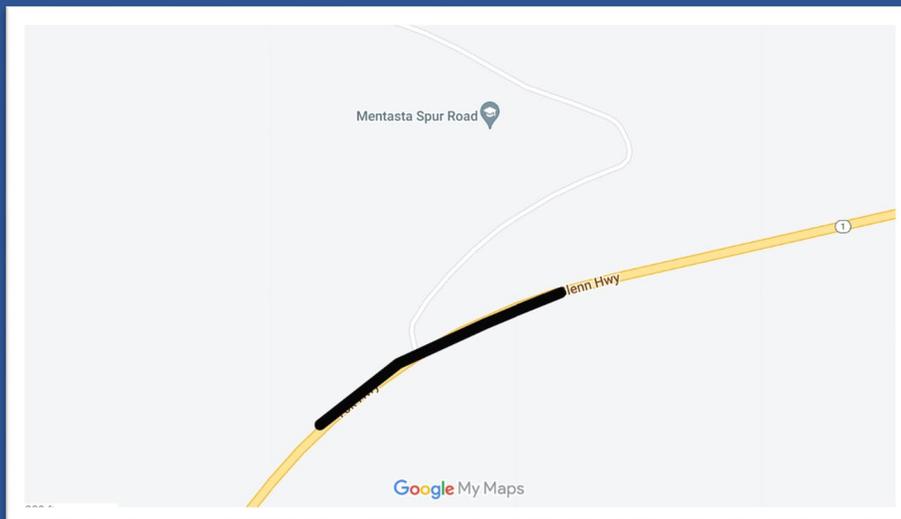


Figure 1: Map showing the location of the Mentasta Pedestrian Path along Alaska Highway 1. Map Data: ©2023 Google.

¹² Northen, Shannon and Oetter, Doug (2023) "Crime Rates Near Running Trails and Parks in Atlanta, Georgia," Georgia Journal of Science, Vol. 81, No. 1, Article 123.

The literature also notes that limited pedestrian facilities on Tribal Lands are a social determinant or risk factor in the prevalence of human trafficking and missing and murdered Indigenous women and girls.¹³

Health and Physical Activity

Trail advocacy sources and peer-reviewed articles indicate that physical activity from hiking or bicycling can lower blood pressure, help maintain a healthy body weight, reduce the amount of insulin a Type I diabetic may need, as well as many other positive health outcomes. A 2014 study found a significant correlation between how close people live to pedestrian and bicycle infrastructure and the amount of weekly exercise they get.¹⁴ The study monitored three

Pascua Yaqui Tribe: Ignacio M. Baumea Roadway Improvement Project

In 2016, the Pascua Yaqui Tribe's Health Department initiated an effort to improve community health through the development of a Community Health Assessment (CHA), Community Health Improvement Plan (CHIP), and Strategic Plan. The plans provide data on the Tribe's health status, identify community assets and resources that improve the health of Tribal members, and outline strategies to support health-related priorities. The CHA and CHIP identified a half-mile roadway extension project along Ignacio Baumea Road from Los Reales Road to Valencia Road, which improves health, access, mobility, and safety for vehicular, bicycle, and pedestrian traffic. The Tribe received funding through the FHWA TTP Safety Fund, TTP Tribal Shares, and Regional Highway User Revenue Funds from the Pima Association of Governments to support the development of the Ignacio M. Baumea Roadway Improvement Project. The project includes a 10-foot-wide multiuse path, bicycle lanes, sidewalk improvements and installations, retaining wall reconstruction, and other safety upgrades such as handrails, improved curb space, and lighting.

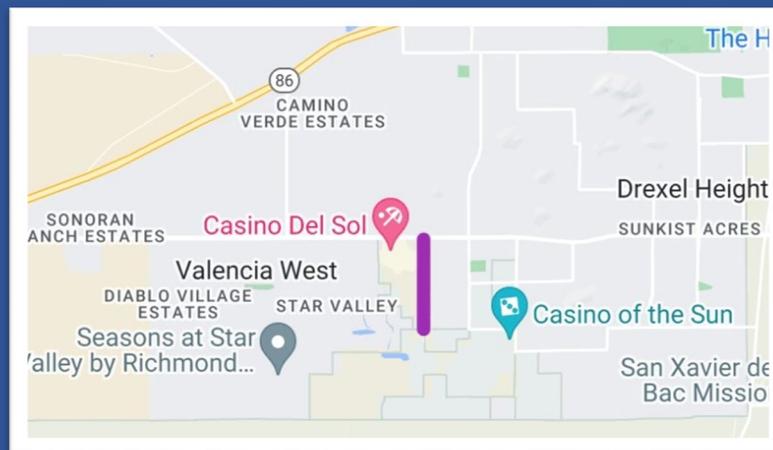


Figure 2: Map showing the location of the Ignacio M. Baumea roadway improvement. Map Data: ©2023 Google.

¹³ [Transportation Helps Fight Back Against Human Trafficking](#)

¹⁴ <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2014.302059>

communities who were upgrading their pedestrian and bicycle facilities. Researchers measured the exercise habits of residents both before and after the trails were installed. The study concluded that after the trails were built, the residents living within a mile of the new trails got 45 minutes more exercise a week on average. Those living farther away exercised less; however, increased exercise was found in residents living as far as 2.5 miles from the facility.

A paper from the Scandinavian Journal of Medicine and Science in Sports reviewed 16 studies on bicycling. The researchers concluded that there is a positive relationship between bicycling and health through improvements in cardio-respiratory fitness and reductions in disease risk factors, as well as risk reduction for cardiovascular, cancer, and obesity morbidity in middle-aged and elderly individuals.¹⁵ Literature also indicates that physical activity such as hiking or bicycling help reduce stress and release endorphins, which assist in promoting mental wellness.^{16,17} FHWA provides a [framework for better integrating health into transportation corridor planning](#) to provide action-oriented information that can assist transportation practitioner incorporate health into their corridor planning process. Planners can use this framework to leverage the positive health implications of bike and pedestrian infrastructure.

Economic Development

The literature indicates that trails and other dedicated pedestrian and bicycle facilities can provide a variety of economic benefits to communities. Trails generate business activity and tourism opportunities that boost spending at local businesses. Studies show that the presence of trails can increase tax revenues due to the increase in business brought in from trail infrastructure. On average, trail users contribute over \$8.2 billion dollars annually to the State of Washington's economy and support over 81,000 jobs.¹⁸ Also, a study of Maryland's Northern Central Rail Trail found the State received \$303,000 a year in trail-related tax income.¹⁹ Another example of trail infrastructure encouraging economic activity was found in Virginia. An estimated 1.7 million annual users of the Washington and Old Dominion Trail spent around \$12 million annually at businesses in the community related to their recreational use of the trail.²⁰ Another case study on the rural community of St. Tammany Parish, Louisiana demonstrates that trail infrastructure can help bolster economic activity. The Tammany Trace Rail Trail, a 27-mile-long rail-to-trail conversion, connects several small communities ranging in population from 2,352 (Abita Springs) to 27,526 (Slidell). In 2013, it was estimated that 426,000 visitors stayed in hotels along the trail route. On average, visitors spend about \$2,816,924 every year on amenities (e.g., food, retail, hotels) along the trail corridor with an estimated \$108,278 spent per year by non-local trail users.²¹

¹⁵ https://www.researchgate.net/publication/51054095_Health_benefits_of_cycling_A_systematic_review

¹⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1470658/>

¹⁷ <https://www.health.harvard.edu/mind-and-mood/exercise-is-an-all-natural-treatment-to-fight-depression>

¹⁸ Washington State Recreation and Conservation Office. Economic, Environmental and Social Benefits of Recreational Trails in Washington State. 2020.

¹⁹ Maryland Greenways Commission. 1994. Analysis of economic impacts of the Northern Central Rail Trail. National Transportation Library.

²⁰ USDA. 2004. The W&OD Trail: An Assessment of User Demographics, Preferences, and Economics.

²¹ University of Oregon. Assessing the Economic and Livability Value of Multi-Use Trails: A Case Study into the Tammy Trace Rail Trail in St. Tammany Parish, Louisiana. 2015

Lumbee Tribe of North Carolina: Complete Streets Network

The Lumbee Tribe of North Carolina is partnering with the Town of Pembroke to develop a network of Complete Streets to improve safety and make the community more pedestrian-friendly. Pembroke is the social, cultural, and commercial center of the Lumbee Tribe. The new Complete Streets network will include bicycle and pedestrian pathways connecting the downtown area to the University of North Carolina at Pembroke to the west and the Lumbee Tribe's headquarters to the east.

The project is currently in development and will include several multimodal features with approximately 2.3 miles of bicycle and pedestrian pathways. The primary pathway will extend 1.2 miles through the center of the historic downtown. The North Carolina Department of Transportation (NCDOT) anticipates that the Complete streets Project will provide safer alternatives to walking and bicycling on streets. The project is estimated to reduce bicycle and pedestrian injuries by as much as 50 percent. The project's estimated cost is \$6.69 million; a U.S. Department of Transportation's Better Utilizing Investments to Leverage Development (BUILD) grant (now known as RAISE) provided \$5.2 million, with the remaining funding provided by the Town of Pembroke, the Lumbee Tribe, and NCDOT. The final phase of the project, funded by the BUILD Grant and community contributions, will be the construction of a 1.9-mile sidewalk extending from the downtown to the Lumbee Tribe headquarters.

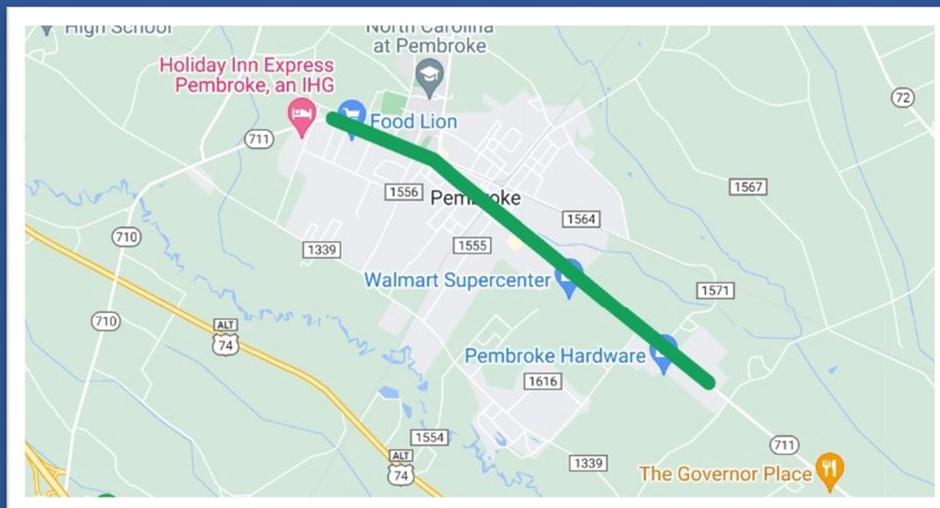


Figure 3: Map of the location of the Complete Streets improvements in Pembroke, NC. Map Data: ©2023 Google.

Construction and maintenance of trails and dedicated bicycle and pedestrian infrastructure not only provides opportunities for people to get to work or school, but they also create jobs as well. According to the Political Economy Research Institute, pedestrian-only projects create an

average of about 10 jobs per \$1 million spent, and multiuse trails create 9.6 jobs per \$1 million spent.²²

Trail infrastructure can increase the value of home prices. The Macrothink Institute cites several examples of housing prices in communities located closely to dedicated bicycle and pedestrian facilities increasing in value by 2 to 11 percent.²³ Parent and Hofe concluded that multipurpose trails influence the price of houses when they lie within proximity to the trail. In their study they estimated the influence of the Little Miami Scenic Trail in Hamilton County, Ohio on nearby housing prices. It was estimated that, on average, the price of a house devalued by \$8,960 when moving away from the trail by 1,000 feet.²⁴ However, the economic influence of trails may be dependent on geographic area. In 1992, the National Park Service studied the impacts of three trails: the rural 26-mile Heritage Trail in Iowa from Dubuque to Dyersville; the primarily rural 16-mile Tallahassee to St. Marks Historic Railroad State Trail in Florida; and the suburban seven-mile Lafayette-Moraga Trail. Researchers surveyed the property owners living adjacent to their respective trails on the impacts of their property values. Their responses indicated that there was relatively little difference in the trails' perceived impacts on property values between properties along the trail and those residing nearby. At the Heritage and St. Marks trails, generally rural areas, between 73 percent and 90 percent of respondents reported that the trails had no impact on their property values.²⁵ However, in 2020 the National Recreation and Park Association reported that that a small positive premium of between 3 percent and 5 percent was the most widespread outcome for a single-family home located next to a trail.

Access to Essential Trips

In addition to being corridors for recreation, trails and dedicated bicycle and pedestrian infrastructure can improve access to essential trips, including trips to jobs, schools, groceries, and medical appointments. The Maryland Transportation Institute and Center for Advanced Transportation Technology Laboratory reports that in 2021, 52 percent of all trips (including all modes) were less than three miles, and 28 percent of trips were less than one mile.²⁶ For school trips that are one mile or less, only 31 percent are made by walking; within two miles, only 2 percent of school trips are made by bike.

Trail Planning and Development Resources

The research team reviewed publications, research reports, and other resources that address trails, dedicated pedestrian and bicycle infrastructure, and/or Tribal experiences related to trails or dedicated pedestrian and bicycle infrastructure. This included a review of various Federal

²² Garrett-Peltier, H. 2011. Pedestrian and Bicycle Infrastructure. A National Study of Employment Impacts. Political Economy Research Institute of the University of Massachusetts.

²³ Kalyan Chakraborty, 2019. "Economic Benefits from Biking Trails and Greenways," Business and Economic Research, Macrothink Institute, vol. 9(2), pages 199-206, June.

²⁴ Parent, O., Hofe, R. 2012. Understanding the impact of trails on residential property values in the presence of spatial dependence. The Annals of Regional Science

²⁵ Crompton, J. Perceptions of How the Presence of Greenway Trails Affects the Value of Proximate Properties. Texas A&M University. 2001.

²⁶ Bureau of Transportation Statistics by the Maryland Transportation Institute and Center for Advanced Transportation Technology Laboratory at the University of Maryland. 2021

programs and offices and resources from national organizations, including the [FHWA Bicycle and Pedestrian Program](#), which promotes safe, comfortable, and convenient walking, bicycling and rolling for people of all ages and abilities. The program website provides resources on funding, project development, and traffic management as well as linking State bicycle and pedestrian coordinators, who may be able to discuss partnering opportunities with Tribes.

[FHWA's Recreational Trails Program](#) (RTP) provides funds to States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. These Federal transportation funds benefit a variety of recreational uses to include hiking, bicycling, equestrian use, snowmobiling, as well as many other uses which could be used to augment connectivity to Tribal infrastructure. Another Federal resource that provides information on bicycle and pedestrian activities is the [FHWA Office of Safety's Pedestrian and Bicycle Safety web page](#). The FHWA Office of Safety develops projects, programs, and materials for use in reducing pedestrian and bicyclist fatalities and injuries. The program website lists many different resources that highlighting resources for use in reducing pedestrian and bicyclist safety issues. Appendix A includes a list of resources to support trail planning and development.

There are several guides and best practices for developing bicycle and pedestrian trail facilities. The [RTP State Practices web page](#) outlines guidance to assist States and project sponsors in meeting RTP requirements. It provides best practices for trail accessibility, and trail design, construction, and maintenance. This resource may help Tribes better understand the resources at the disposal of States to potentially leverage in coordination with Tribal projects. Another useful resource is the [Rails with Trails: Best Practices and Lessons Learned](#) report. This report outlines the state of the practice for rails with trails and how the development of these facilities has evolved since 2002. It describes noteworthy practices in rail with trail development, design, construction, operation, and maintenance.

For additional information on trail design practices, trail developers can reference the [Manuals and Guides for Trail Design, Construction, Maintenance, and Operation, and for Signs web page](#). It catalogs manuals and best practices guides and resources from government agencies or nonprofit organizations to support trail planning, design, construction, maintenance, operation, and signage. An additional resource for trail and pathway standards is the [Designing Sidewalks and Trails for Access: Review of Existing Guidelines and Practices guide](#). This guide, developed by practitioners for FHWA, covers general designs for sidewalks and trails, incorporating Americans with Disabilities Act (ADA) compliance, designing for universal access. Finally, the [Pedestrian and Bicyclist Road Safety Audit \(RSA\) Guide and Prompt List](#) outlines key concepts and information to support agencies conducting pedestrian-and bicycle-focused RSAs along pedestrian and bicycle facilities, including shared-use paths and trails. It describes safety risks for both modes and includes updated prompt lists to be used in the field by RSA teams.

Overall, the resources provide information that may be relevant to Tribes on related Federal bicycle and pedestrian regulations and policies, key concepts in active transportation and trails planning, the benefits of active transportation and trails, and funding opportunities that help Tribes build trails and dedicated pedestrian and bicycle infrastructure. The information in these programs and publications may be useful for Tribal governments that are planning and

developing trail networks. However, the reviewed documents do not contain information specific to Tribal contexts of trails planning and development and lack tools and resources specifically for Tribal communities.

Karuk Tribe: Red Cap Road Project

The Karuk Tribe constructed an active transportation bike- and pedestrian-way along Red Cap Road, in Humboldt County, California, to provide safe bicycling and walking access for community members. The wide shoulder/bicycle and pedestrian lane begins at the intersection of State Route 96 and Red Cap Road and follows the winding two-lane road over 1.5 miles to its intersection with Shivshaneen Road. The route connects noncontiguous lands of the Karuk Tribe and the small unincorporated town of Orleans. Before the installation, the roadway was narrow with little to no shoulders and poor sight lines, making walking and biking in the area hazardous. Planning for the bike- and pedestrian-way began in 2011 and construction was completed in 2015.

The Karuk Tribe received an FHWA TTP Safety Fund grant to develop a Tribal Transportation Safety Plan, which identified bicycle and pedestrian improvements to Red Cap Road as a priority. An environmental review and design of the bicycle and pedestrian lanes were funded by \$460,000 in California Department of Transportation (Caltrans) and Karuk Tribe TTP Annual Allocation funds. The identification of the Red Cap Road project as a regional priority in the Tribal Transportation Safety Plan allowed the Tribe to apply for a TTP Safety Fund grant totaling \$872,000 to complete construction, which included replacement of a bridge.

The Red Cap Road project included striping and signage intended to calm traffic, widen shoulders, and construct over 1.5 miles of five-foot-wide paved bike- and pedestrian-way. The Red Cap Road project provides residents with safe bicycle and pedestrian access to community services such as medical, dental, Temporary Assistance for Needy Families (TANF), and other services provided by the Tribal government.

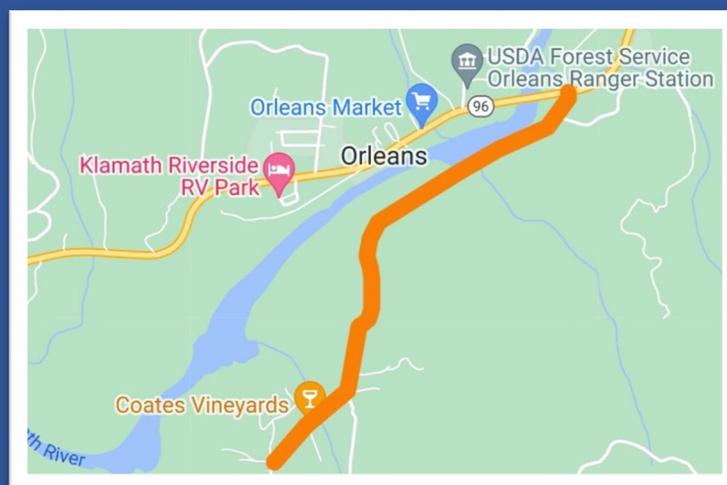


Figure 4: Map location of the bike and pedestrian path along Red Cap Road. Map Data: ©2023 Google.

Tribal Transportation Planning Resources

The research team analyzed the literature review appendix developed for the [Transportation Planning in Tribal Communities](#) research study led by the FHWA Western Federal Lands Highway Division and the FHWA Office of Tribal Transportation. Based on that analysis, the research team identified 26 resources with connections to trails, dedicated pedestrian and bicycle infrastructure, and/or Tribal experiences related to trails or dedicated pedestrian and bicycle infrastructure. These resources include publications, research reports, and other resources from the FHWA Office of Tribal Transportation, FHWA Office of Planning, Environment, and Realty; Transportation Research Board; National Cooperative Highway Research Program; National Congress of American Indians Policy and Research Center; and Safe Routes to School National Partnership, as well as planning documents from Tribal governments and State agencies.

[Tribal transportation planning modules](#), published by FHWA, provide overview of the transportation planning process that are useful for planning trail infrastructure. There are twelve modules across four focus areas (planning, Tribal intergovernmental relations, programming, and other elements). A few topics covered in detail include data collection, public involvement, as well as partnering and leveraging strategic relationships. Appendix A provides a list of resources that support transportation planning in Tribal communities.

Case Studies

The research team conducted interviews with staff at five Tribes to inform case studies about trail projects that the Tribes completed. The five Tribes and trail projects are:

- Bay Mills Indian Community – Spirit Stone Trail
- Jamestown S'Klallam Tribe – Olympic Discovery Trail
- Oglala Sioux Tribe – Kyle Pathway
- Pueblo of Jemez – Hemish Path to Wellness
- Seneca Nation of Indians – Pennsy Trail

Bay Mills Indian Community – Spirit Stone Trail

Project Overview

The Bay Mills Indian Community is developing the Spirit Stone Trail (Shingabawassin), a multiuse bicycle and pedestrian trail system, that links community amenities along Lake Superior. The nine-mile trail system has been in development over the last 20 years to provide safe recreational and commuter connectivity near the Whitefish Bay Scenic Byway between Point Iroquois Lighthouse and Brimley State Park in Michigan’s Upper Peninsula. In 2019, the Tribe and the Chippewa County Road Commission completed the paving of a two-mile separated section of the Spirit Stone Trail that runs parallel to the Byway. Another proposed 2.5-mile hard surface portion of the 9-mile trail system in the Hiawatha National Forest is in the planning stage of development and will complete the trail system.

The Bay Mills Indian Community is a sovereign Tribal Nation located in the Upper Peninsula of Michigan. In the indigenous language, Ojibwe, the Bay Mills Indian Community is known as “Gnoozhekaaning,” which translates to “Place of the Pike.”

Project Motivations

The Whitefish Bay Scenic Byway, also known as West Lakeshore Drive, passes through two major portions of the Bay Mills Indian Community’s land, which are separated by wetlands. Community members have had to walk along the Scenic Byway to get from one side of the reservation to the other, leading to several injuries and one pedestrian fatality over the last 20 years. The Spirit Stone Trail project aims to provide physical separation between vehicular traffic and pedestrians and bicyclists to avoid crashes leading to pedestrian and bicyclist fatalities. Another motivation for building the trail system is to encourage physical activity in all aspects of life from recreation to commuting for work.



Figure 5: Spirit Stone Trail sign next to the separated portion of the trail. (Image courtesy of the Bay Mills Indian Community Trail Committee)

Planning Process

The Bay Mills Indian Community’s Trail committee has been advocating for trail development opportunities in the community since the 1990s. The first paved portions of trail were installed when the Chippewa County Road Commission began development of a resurfacing project for West Lakeshore Drive. The resurfacing presented the opportunity to make use of road construction equipment to simultaneously install a bike lane. Initial designs suggested installing a standard three- or four-foot-wide paved shoulder, but at the request of the Trail committee, the Road Commission implemented the Trail committee’s design to expand the road shoulder width to eight feet, including a bike lane. The section of trail extends 6.3 miles from the intersection of West Lakeshore Drive and West Spectacle Lake Road to Brimley State Park entrance.

Some areas of West Lakeshore Drive have a 55 mph speed limit making pedestrian and bicyclist travel dangerous on the shoulder. The Bay Mills Indian Community sought funding for a

separated trail segment to provide users safe continuous access on the Spirit Stone Trail. The BIA conducted a Road Safety Audit (RSA) for the area with the Bay Mills Indian Community, which highlighted the need to safety improvements along the roadway. In 2016, the BIA provided \$400,000 in TTP Safety Funds for the construction of the off-road trail segment.

Implementation

The development of the initial six miles of the Spirit Stone Trail required coordination among several community stakeholders, including the Bay Mills Indian Community, the Bay Mills and Superior townships, the Chippewa County Road Commission, Hiawatha National Forest, and the Michigan Department of Natural Resources. The Road Commission completed the paving of the two miles of separated multimodal trail section in spring 2020. BIA funding paid for much of the surfacing while 98 percent of the funding for trail amenities, such as benches and recycling bins, came from the Bay Mills Indian Community TTP funding and from the Bay Mills township. There are several accessible entry and exit points throughout the trail. Trail users can also access other off-road trails as well as water trails for kayaking from the Spirit Stone Trail. Amenities such as benches, picnic tables, and bathrooms can be found along the trail.

The Spirit Stone Trail follows the Whitefish Bay Scenic Byway along Lake Superior and features:

- *Over two miles of asphalt surface*
- *Two miles of separated multimodal pathway*
- *Crosswalks*
- *Bike lane markings*
- *Culverts*
- *Accessible ramps*
- *Access to off-road trails leading to water trails with kayak access*
- *Benches, picnic tables, and bathrooms*

The maintenance of the Spirit Stone Trail relies on collaboration among community partners. The Bay Mills Indian Community takes on primary trail maintenance responsibility and receives help and funding from local agencies. The OUT House Consortium, a nonprofit trail advocacy group that participated in the planning of the Spirit Stone Trail, helps to construct and maintain trails in the area. The Bay Mills Indian Community recently completed a five-year recreation plan (2019-2023) estimating maintenance costs. The plan also highlights the need for lifecycle maintenance and replacement costs for all associated recreation facilities.²⁷ Since the publication of the recreation plan, the Bay Mills Indian Community has developed an Operations and Maintenance (O&M) plan for the Spirit Stone trail, which outlines intended scheduled maintenance operations, responsibilities, and funding methods.

The Bay Mills Indian Community Spirit Stone Trail Committee is working with the Hiawatha National Forest in planning the final segment of the trail. This final portion, about 1 mile, will span from Monocle Lake to the Point Iroquois Lighthouse using internal National Forest funding. In addition to completing the trail, the Bay Mills Indian Community intends to install more kayak access points and rest stops along the trail. There are also plans to construct an

²⁷ Bay Mills Indian Community. 2021. Spirit Stone Trail Operations and Maintenance Manual.

interpretive trail behind the Bay Mills Health Center, which will showcase local plants and flowers that are important to the community.

Impact

The Spirit Stone Trail provides a safe walking and bicycling route that connects the Bay Mills Indian Community together while offering recreational opportunities for healthy physical activity. After the two-mile trail segment was paved, members of the community celebrated with a 5K fundraising race to demonstrate to the public the recreational potential the trail can provide. The trail provides access to



Figure 6: Spirit Stone Trail leading up to the Point Iroquois Light House. (Image courtesy of the Bay Mills Indian Community Trail Committee)

local businesses and community centers along the shoreline. The presence of the trail is also inspiring additional development. The Bay Mills Indian Health Center is building a new facility closer to community destinations near the Spirit Stone Trail. Furthermore, residential properties are planned for development with the trail acting as a safe connection from the subdivision to essential services like a grocery store.

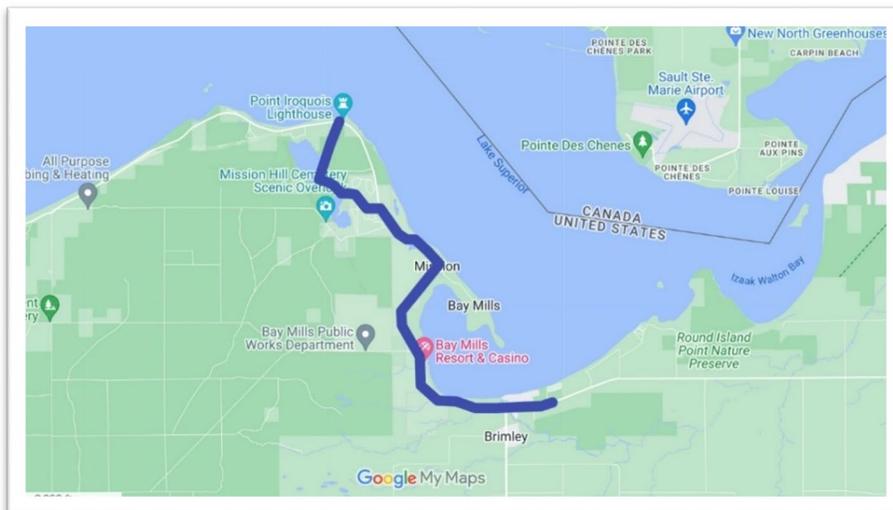


Figure 7: Map location of the Spirit Stone Trail. Map Data: ©2023 Google.

Jamestown S’Klallam Tribe – Olympic Discovery Trail

Project Overview

The Jamestown S’Klallam Tribe is connecting portions of the [Olympic Discovery Trail](#) (ODT) to provide improved bicycle and pedestrian access for Tribal members and non-Tribal members. Much of the ODT was built, approximately 120 miles, on abandoned railroad corridor that once connected population centers within the Olympic Peninsula. However, some sections of the ODT remain undeveloped creating gaps in the overall trail system making it difficult for pedestrians and bicyclists to use. The Tribe continues to purchase land along the corridor to develop a connected trail system within the Tribe’s jurisdiction. Three of these gap sections of the ODT are on lands within the Jamestown S’Klallam Tribe’s lands. In the last three years, the Tribe constructed two segments of the ODT and are actively working on designing and procuring funding for the third.

The Jamestown S’Klallam Tribe is a federally recognized Tribe located near Sequim Bay on the northern Olympic Peninsula of Washington State. “S’Klallam” is a Salish term for “The Strong People.” After receiving Federal recognition in 1855, the Tribe purchased 210 acres of land along the Strait of Juan de Fuca, which would be named Jamestown.

Project Motivations

Since the 1990s, the Jamestown S’Klallam Tribe has developed portions of the ODT that cross through their territory. Tribal staff and partners identify trail gaps and potential funding sources to fund projects to fill those gaps. To ensure that the ODT system connects seamlessly across Tribal and non-Tribal jurisdictions, the Jamestown S’Klallam Tribe partners with Clallam County and the Peninsula Trails Coalition (PTC), a local trail advocacy group. These partners develop the trail portions connecting to the segments on Jamestown S’Klallam Tribal land.

The first gap in the ODT addressed by the Jamestown S’Klallam Tribe was a defunct railroad bridge and trestle over the Dungeness River, cutting through land known as Railroad Bridge Park, managed by the Clallam County Recreation District #1.



Figure 8: View of Tribal Dance Plaza and Welcome Totems from the Olympic Discovery Trail with Sequim Bay in the background. (Image courtesy of Jamestown S’Klallam Tribe)

In 1993, the Recreation District no longer had the resources to maintain the park. The Park included a historic howe truss bridge crossing the Dungeness River needing significant maintenance. The park needed another government entity to assume sponsorship of the State grant funding. The Tribe was asked to assume sponsorship which involved taking ownership of the land and facilities and guaranteeing public access to this land in perpetuity.

The Jamestown S’Klallam Tribe has historic ties to the Dungeness River and saw the request as an opportunity to reconnect with this land and their traditional river. The river is significant to the Tribe’s salmon fishing activities.

Planning Process

The Jamestown S’Klallam Tribe used several funding sources to pay the construction costs of each of its ODT segments including the recent section along U.S. Highway 101. Tribal staff identified several funding opportunities with the Washington State Department of Transportation. To date the Tribe has been awarded WSDOT’s Pedestrian Bike Program funding as well as [TA Set-Aside funding](#) to fund trail projects. The Tribe also programmed a portion of its TTP funding for ODT design, engineering, and construction. The Jamestown S’Klallam Tribe established an IFTA under 23 U.S.C. Sections 104(f)(3)(A)²⁸ and 202 (A)(9)²⁹ authorizing the transfer of Federal-aid funds appropriated to the State back to FHWA to be administered through the TTP.

Implementation

When developing sections of the ODT, the Jamestown S’Klallam Tribe exercises jurisdiction over its lands through implementation of Title 27 of the Tribal Code, the Tribal Environmental Policy Act (TEPA) and Title 29, Building and Development Code. This process identifies possible impacts to the environment prior to development activities along with any mitigation actions needed to avoid damage to the area. TEPA includes identifying permitting requirements with other government agencies, which can take several months to complete. In the case of the Diamond Point Road trail section, the U.S. Army Corps of Engineers granted a permit that subjects the Tribe to a wetland mitigation and monitoring plan for the next five years.

The most recent section developed by the Jamestown S’Klallam Tribe, finished during the summer of 2018, stretches along U.S. Highway 101 from Knapp Road to the Clallam County

Since the early 1990s, Jamestown S’Klallam has worked to connect the ODT through their lands east of Sequim. The sections of trail within their lands include these features:

- *Total of 3.5 miles of trail constructed throughout six different Tribal sections*
- *Trail sections include hard surface dirt paths and asphalt*
- *A bus stop is adjacent to trail at Tribal campus*
- *Bus stop access and Diamond Point Road trailhead are accessible*
- *Nonmotorized bridge over the Dungeness River receives over 200,000 crossings a year to include hikers and bicycles*
- *Provides access to Dungeness River and Sequim Bay for recreation and fishing*

²⁸ 23 U.S.C. Section 104(f)(3)(A) states “Subject to subparagraph (B), the Secretary may, at the request of a State, transfer amounts apportioned or allocated under this title to the State to another State, or to the Federal Highway Administration, for the purpose of funding 1 or more projects that are eligible for assistance with amounts so apportioned or allocated.”

²⁹ 23 U.S.C. Section 202(a)(9) states “The cooperation of States, counties, or other local subdivisions may be accepted in construction and improvement.”

line at Diamond Point Road. The segment, 0.7 miles long, filled one of the remaining gaps of the ODT within the Jamestown S’Klallam Tribal jurisdiction. The construction of this section also required special permitting from the U.S. Army Corps of Engineers and from the State of Washington because it runs through wetlands.

The trail construction is often completed by a Tribal contractor, that provides job opportunities to the Tribal community. Qualified Tribal citizens have access to jobs ranging from project management to equipment operators.

Impact

The Jamestown S’Klallam Tribe learned valuable lessons as they developed their portions of the ODT. The Tribe faced challenges from neighbors expressing concern about trash accumulation and attraction to illegal activity. However, after witnessing the Tribe’s commitment to maintaining other trail portions, private property owners were satisfied with the trail sections near their homes.

The ODT is a destination for cycling enthusiasts. In fact, the Jamestown S’Klallam Tribe was designated as [first Tribe in the nation to be awarded bike friendly community status](#) by the League of American Bicyclists in 2015.³⁰ The Tribes ODT segments offer recreational opportunities and access to businesses and other destinations on the Olympic Peninsula. In addition, the Tribe’s summer youth bike camp, a week-long day camp providing young riders basic bike handling and safety skills, uses the ODT for their rides near Railroad Bridge Park. There are several amenities that support biking and offer long distance traveling services within the Tribal jurisdiction. The hotel affiliated with the local Tribal casino offers conventional and electric bicycle rentals.

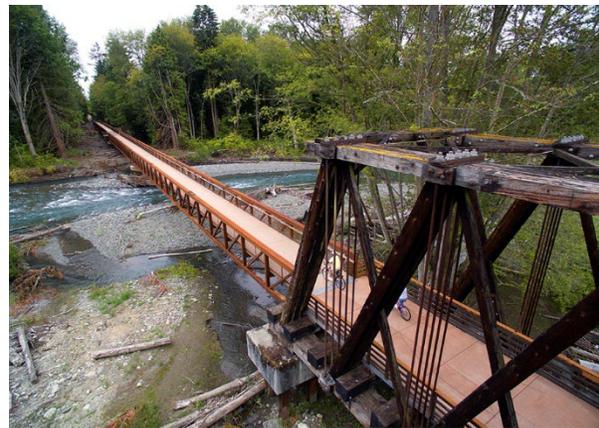


Figure 9: Dungeness River Bridge along the ODT. (Image from Rails Trails by John Gussman)

There are two remaining undeveloped portions of the ODT within the Jamestown S’Klallam tribal lands. One section is funded and scheduled for completion in summer 2023. The Tribe already has design funding for the final section and will begin to seek construction funding once a cost estimate is in hand.

³⁰ <https://bikeleague.org/content/first-tribe-receive-bfc-designation-jamestown-sklallam>

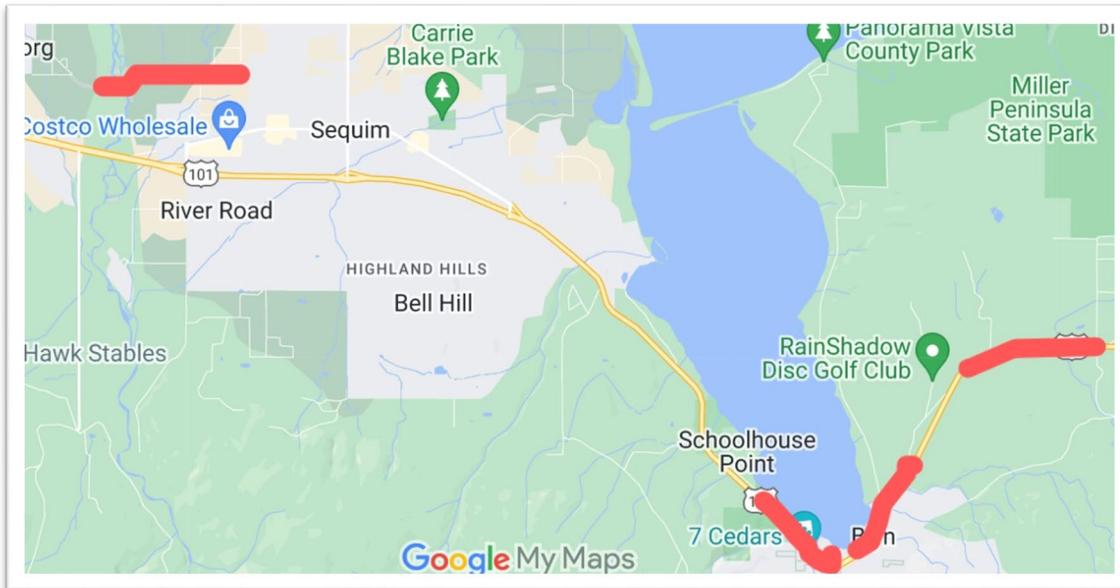


Figure 10: Map locations of Jamestown S’Klallam Tribe’s portions of the ODT (in red highlight).
 Map Data: ©2023 Google.

Oglala Sioux – Kyle Pathway

Project Overview

The Oglala Sioux Tribe, located in Kyle, South Dakota, is connecting residents to critical community amenities with a multimodal trail that is separated from vehicular traffic. BIA Route 2, an arterial highway, runs through Kyle. Residents walk along BIA Route 2 to access critical services such as Kyle Hospital, Oglala Lakota College, a transit bus stop, the post office, Little Wound School, Lakota Bank, and Kyle Grocery.

The Oglala Sioux Tribe is one of the seven bands of the Titowan (Lakota) division of the Great Sioux Nation. Located in the Pine Ridge Reservation, Kyle is home of the Oglala Sioux in southwestern South Dakota.

Project Motivations

Oglala Sioux leaders sought to ensure that residents have safe access to services without needing to walk on the highway. Increasing physical activity is also a priority for the Oglala Sioux, as over 50 percent of adults on the reservation over the age of 40 are diabetic.³¹ A separated multimodal trail, the Kyle Pathway, is being constructed parallel to BIA Route 2 to provide pedestrians and bicyclists with safe access to these services. The trail refurbishes an older disconnected pathway sections and will provide additional recreational opportunities to encourage physical activity among Tribal members.

Planning Process

In 2018, the Oglala Sioux Tribe conducted an RSA on the portion of BIA Route 2 that passes through Kyle. The recommendations that resulted from the RSA included a pedestrian and

³¹ 2015. <https://www.truesiouxhope.org/single-post/2015/02/10/the-lakota-sioux-tribe-a-look-at-the-statistics>

bicyclist pathway along BIA Route 2. The RSA helped the Oglala Sioux Tribe pursue funding opportunities and identify destinations to be linked by the trail.

When fully constructed, the Kyle Pathway will extend from the Kyle Hospital to Kyle Grocery. The pathway will connect about two miles of disjointed pathways throughout the community along BIA Route 2 using newly



Figure 11: BIA Route 2 and a portion of the Kyle Pathway. (Image courtesy of the Oglala Sioux Tribe)

constructed and refurbished sidewalks. Prior to this project, the pathway was in poor condition and did not connect many of the local points of interest. The project also includes a new parking lot to increase parking capacity in the commercial area.

The Kyle Pathway will meet ADA Standards for Accessible Design, including accessible ramps at street crossings. Transit stops along BIA Route 2 and adjacent to the trail will provide access to existing Tribal transit service. The trail project will also include cattle guards to prevent livestock from wandering onto the trail, into traffic, and into commercial areas. To stretch the limited funding available for the project, the Tribe is designating existing sidewalks that are accessible and in good condition as portions of the trail wherever possible and adding newly constructed trail sections as needed.

In addition to the Kyle Pathway project, the Little Wound School received funding for installing crosswalks, which will be closely coordinated with the Kyle Pathway to further improve pedestrian safety in the area of the Pathway.

Implementation

In 2021, the Oglala Sioux Tribe received a \$1.8 million U.S. DOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary planning grant to fund planning and preconstruction activities for 20.7 miles of BIA Route 2. RAISE grants are competitive discretionary grants for investments in surface transportation infrastructure that will have a significant local or regional impact. These planning activities included the RSA, which identified the need for the Kyle Pathway. The estimated cost of the Kyle Pathway project is \$595,000. These costs cover construction of approximately 0.4 miles of new pathway and repair widening, and modifications of existing sidewalk to ensure the pathway is accessible. The Oglala

Stretching along BIA Route 2 through Kyle, SD the Kyle Pathway features include:

- *Two miles long, 10 feet wide continuous pathway*
- *Accessible to pedestrians and bicyclists*
- *Crosswalks in the Little Wound School area*
- *Drainage improvements*
- *Retrofits newly constructed Pathway infrastructure with accessible older trail materials*

Sioux Tribe applied for and received \$400,000 in Federal TAP funding from the South Dakota DOT (SDDOT). The Tribe used its TTP funds to provide the required local match.

The Oglala Sioux Tribe faced obstacles in seeking funding for the entire Kyle Pathway project. The TAP funding awarded to the Oglala Sioux Tribe (plus the required local match) can only fund about a half mile of the trail at a time. Applicants can only apply for an SDDOT TAP grant once a year. To strategically make use of available funding, the Oglala Sioux Tribe divided the project into two phases.

Impact

Work on the Kyle Pathway's full two-mile length is expected to be completed in early 2023. The pathway will provide a safe nonmotorized transportation route to key community services. Tribal and project leaders are optimistic about the benefits the Kyle Pathway can offer to community members. The Oglala Sioux Tribe is hoping to make additional trail enhancements after the Kyle Pathway is completed, including adding lighting.



Figure 12: Map of the Kyle Pathway along BIA Rt 2 in Kyle, SD. (Image courtesy of the Oglala Sioux Tribe)

Pueblo of Jemez – Hemish Path to Wellness

Project Overview

In 2019, the [Pueblo of Jemez](#) received [RTP](#) and [CMAQ](#) funds to plan, design, and construct the [Hemish Path to Wellness](#), a paved two-mile multiuse trail located along New Mexico State Highway 4 (NM 4). Developed in coordination with the New Mexico Department of Transportation (NMDOT), the Hemish Path to Wellness is the result of various transportation planning initiatives that identified a need for pedestrian safety improvements, expanded active transportation options, enhanced connectivity, and increased physical activity through transportation.

As part of planning for the Hemish Path to Wellness, the Pueblo’s Department of Planning, Development and Transportation and their Pedestrian Facilities Planning Committee identified a series of new trails to establish an integrated trail network to provide access to key destinations within the community. In 2020, the Pueblo of Jemez completed their Pedestrian Trails and Bikeways Master Plan which addresses transportation challenges and recommends pedestrian and bicycle routes and facility types for the Walatowa Village Area.

Project Motivations

Trails have a long history in the Pueblo of Jemez and serve as significant spiritual places for the Hemish people. [Running is a centuries long practice in the Pueblo of Jemez.](#) Over the generations, Pueblo members of all ages have run for religious purposes, communication, health, travel, sport, war, hunting, and to build relationships between villages.

Within the Pueblo, pedestrians and bicyclists generally travel on segmented foot trails throughout the community and along narrow or nonexistent roadway shoulders. NM 4 bisects the Pueblo of Jemez and lacks designated pedestrian crossings, creating barriers to key destinations and services including schools, the library, and the health clinic. Heavy traffic and speeding along NM 4 create dangerous conditions for all roadway users. School buses use the route for student pick-up and drop-off, and there is a regional transit bus service along the roadway. Because of the lack of pedestrian infrastructure, near misses are common. The State highway is a popular route for long-distance bicyclists including Pueblo residents and visitors.

Another motivation for this trail project is concerns about public health. The Pueblo’s Public Health Department

The Pueblo of Jemez is a federally recognized Tribe located northwest of Albuquerque, New Mexico. Traditionally known as the Hemish people, the Jemez Pueblo is one of the remaining 19 Pueblos of New Mexico. The Pueblo of Jemez encompasses 90,000 acres of noncontiguous land and has approximately 3,900 Tribal members. Most members reside in the Walatowa Village Area, located on New Mexico State Highway 4



Figure 13: Students, people walking, and runners travelling on the NM 4 shoulders. (Images courtesy of Pueblo of Jemez Department of Planning, Development and Transportation)

reports that approximately 50 percent of Jemez Pueblo children and 89 percent of Jemez Pueblo adults are either overweight or obese. The Pueblo of Jemez sees the Hemish Path to Wellness as an opportunity to improve pedestrian and bicyclist safety and encourage healthy behaviors and lifestyles.

Planning Process

The Pueblo of Jemez Department of Planning, Development and Transportation conducted several assessments to examine NM 4 road safety challenges and address the community’s desire for active transportation facilities. The [NM 4 RSA \(2007\)](#) evaluated the corridor’s overall safety performance and identified speeding as the highest risk safety issue. Other issues identified include lack of dedicated space for pedestrians, deterioration of shoulders where pedestrians and bicyclists may travel, and limited sight distance at intersections. The RSA proposed a separated bicycle and pedestrian facility along NM 4, among other recommendations, to address these issues. In 2018, the Pueblo received Tribal Transportation Program Safety Funds to complete a Transportation Safety Plan that identifies safety challenges in the Pueblo of Jemez and strategies for improvement, such as installing traffic control devices and traffic calming measures and adding signs at bus stops. The Pueblo of Jemez’s 2018 Long Range Transportation Plan prioritized improving safety and reducing travel speeds along NM 4 and recommended the development of a pedestrian and bicycle plan to identify active transportation improvements.

Community support was initially challenging, and some Tribal members expressed a desire to maintain the Pueblo’s cultural integrity by preserving its terrain and landscapes, and limiting projects that add pavement to a few strategic opportunities. To address community concerns, the Pueblo of Jemez Department of Planning, Development and Transportation aims to maintain a balance among changing the natural environment, not impacting the Pueblo’s history and cultural integrity, and supporting community health and wellness. The Tribal Council supported the development of a separated trail facility on NM 4 to make the corridor safer, more accessible, and more comfortable for the Jemez people.

The Pueblo of Jemez Department of Planning, Development and Transportation led the planning process for the Pedestrian Trails and Bikeways Master Plan with support from Tribal Council, Pedestrian Facilities Planning Committee, Indian Health Service, a private consulting firm, and community members. Public engagement involved in-person and virtual stakeholder and community outreach, such as focus groups with Tribal youth and elders, to better understand barriers to walking and bicycling. The plan identified the Hemish Path to Wellness as a high-priority facility to provide access to schools, the library, canal trails, and shared roads in the Village Area. The plan describes shared roads as paved or unpaved roadways in which vehicles and non-auto users share the public right-of-way; these facilities may be applied before a formal trail is constructed.

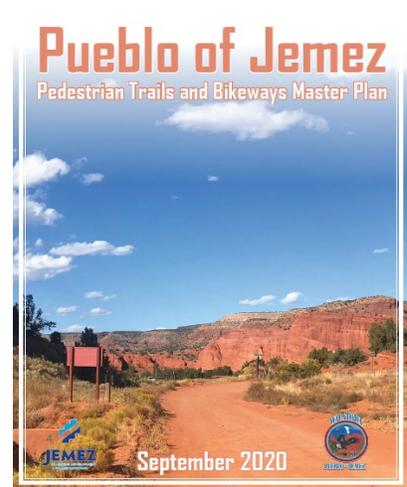


Figure 14: Pueblo of Jemez Pedestrian Trails and Bikeways Master Plan Cover. (Image courtesy of Pueblo of Jemez Department of Planning, Development and Transportation)

The Pueblo coordinated with NMDOT on the project and received CMAQ program and RTP funds in 2019 for the planning, design, and construction of a two-mile multiuse trail. The \$5.5 million trail project is funded by nearly \$4.7 million in Federal funding and approximately \$800,000 in local matching funds. The Pueblo used its allocation of FHWA Tribal Transportation Program funds across multiple years to provide the local match.

Implementation

The Pueblo of Jemez conducted engineering, design, and right-of-way for the Hemish Path to Wellness in 2020-2022 and construction is scheduled to complete in 2023. The project will involve construction of a two-mile-long, 10-foot-wide asphalt trail to accommodate two-way travel, including 5-foot buffers between the road and trail edge and designated pedestrian crossings at key locations. Since there are major waterways that cross NM 4, the design phase addressed drainage to mitigate potential stormwater impacts through two bridges at arroyo (i.e., gully) crossings. There are four cultural sites nearby the project area, but no relocations are required, and the trail will maintain distance from these sites. The project will include the closure of seven roadways that intersect with the trail alignment. This will further improve safety by reducing conflicts between pedestrians and vehicles and limiting turning movements across the trail. The Pueblo of Jemez temporarily closed roads during the COVID-19 pandemic since access to the community was closed, placing temporary barricades at intersections with NM 4. The closures led to increased pedestrian and biking activity, and community members voiced support for permanent closures to enhance safety and traffic flow. The Pedestrian Trails and Bikeways Master Plan notes opportunities to convert closed roads to formalized trails to improve pedestrian connections. It identifies the importance of future assessments of road closure impacts on the Tribal transportation network as other roads may need to be improved to support more traffic.

Located along New Mexico State Highway 4 in the Walatowa Village Area, the Hemish Path to Wellness features include:

- *Asphalt surface*
- *Two miles long, 10 feet wide*
- *Separated facility with five-foot buffers*
- *Two pedestrian bridges at arroyo crossings*
- *Crosswalks*
- *Closures of intersecting residential roadways*

Once construction is complete in 2023, the Pueblo of Jemez Department of Planning, Development and Transportation will be responsible for a majority of trail maintenance through a Maintenance Agreement with NMDOT; the Pueblo of Jemez will purchase specialized equipment for maintenance. During the community outreach process, Tribal members identified a desire for a 1.5-mile trail extension from the Pueblo Place Subdivision to the Pueblo of Jemez ballfields. The Pueblo has not yet identified funding for this segment. Future trail development may prioritize this Hemish Path to Wellness trail extension to increase access to local destinations and services, creating an integrated trail network.

Impact

Once completed, the Hemish Path to Wellness will provide safe and improved access to community destinations, improve opportunities for active transportation, and address health and wellness challenges including obesity and diabetes. The Pueblo of Jemez Department of Planning, Development and Transportation will collaborate with the Indian Health Service, the Pueblo’s Historic Preservation Office, and the Pueblo’s Department of Education to install kiosks and signage along the trail with historic, environmental, health-related, and motivational messaging in the Jemez Pueblo native language.



Figure 15: Road Closure at Bluebird Mesa Road. (Image courtesy of Pueblo of Jemez 2020 Pedestrian Trails and Bikeways Master Plan)

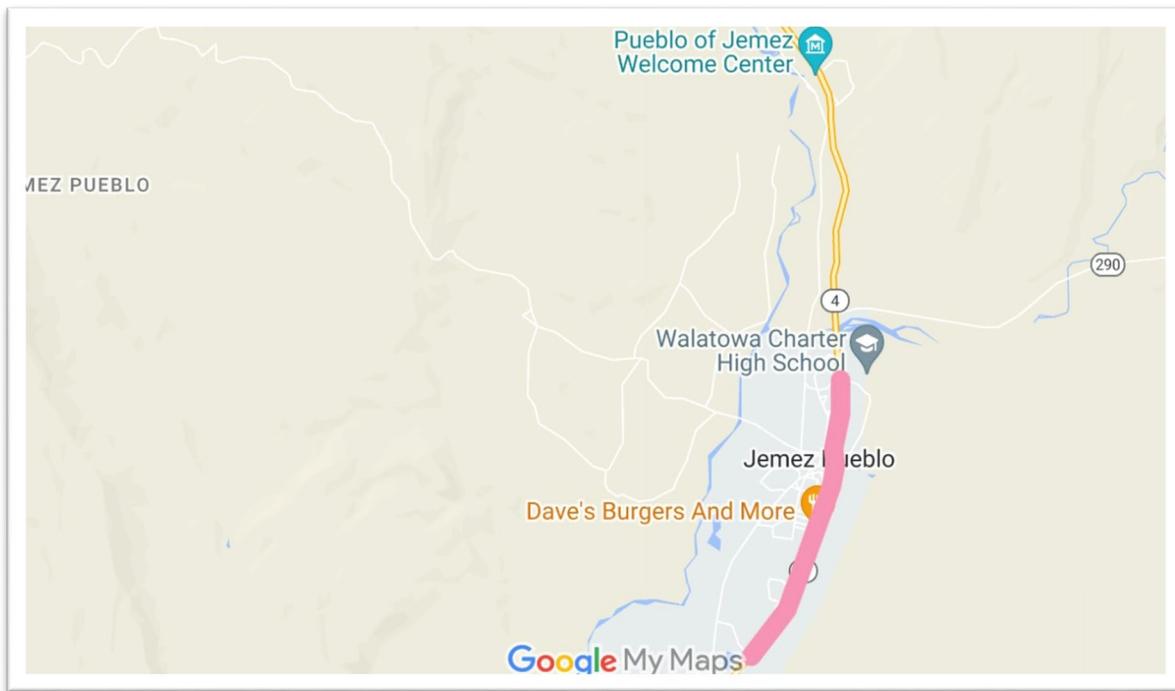


Figure 16: Map of the location of Pueblo of Jemez’s Hemish Path along Route 4. Map Data: ©2023 Google.

Seneca Nation of Indians – Pennsy Trail

Project Overview

In 2020, the [Seneca Nation Department of Transportation \(Seneca Nation DOT\)](#) completed construction of the [Pennsy Trail](#), a paved three-mile multiuse trail that improves quality of life by providing a safe, multimodal pedestrian path for community members and visitors. Located along a portion of the abandoned New York and Pennsylvania (NY-PA) rail line corridor, the Pennsy Trail is an eight-foot-wide facility that stretches from the Ohi:yo’ Gateway Trail at Broad Street Extension to Parkway Drive, connecting both ends of Salamanca. The project involved extensive coordination among the Seneca Nation, New York State DOT, and FHWA through an IFTA.

Project Motivations

The former NY-PA railroad corridor was used as an undesignated trail for over two decades. However, community use was limited, and the trail was viewed negatively and presented safety challenges due to a lack of lighting, areas of inaccessibility, and overgrown vegetation. The Seneca Nation DOT aimed to improve the safety and accessibility of the trail, encourage healthier lifestyles, and enhance multimodal network connectivity to neighboring towns, educational facilities, local businesses, the Seneca Allegany Casino, the Seneca Culture Center, and other community services. In 2013, the Seneca Nation DOT applied for Federal-aid funds to reconstruct and extend the trail under the [Transportation Enhancements Program \(TEP\)](#) (now known as the [TA Set-Aside](#)).

Planning Process

In 2014, the New York State Department of Transportation (NYSDOT) awarded \$482,206 in Federal TEP funds to the Seneca Nation to rebuild the Pennsy Trail. The funding required the Seneca Nation to provide a required 20 percent local match. Over the next three years, the Seneca Nation worked with NYSDOT, the FHWA New York Division Office, and the FHWA Office of Tribal Transportation (“project partners”) to develop two project agreements: a local agreement to draw down the Federal funds from the State and the IFTA agreement. The agreements formalized the transfer of Federal funds between the State and the Nation and maintained Tribal sovereignty.

The Seneca Nation of Indians (the Nation) is a federally recognized Tribe located adjacent to New York. Traditionally known as the Onondowagah or “Great Hill People,” the Seneca Nation is one of the six Nations of the Iroquois Confederacy. The Seneca Nation has over 7,800 members and holds title to five noncontiguous territories including Cattaraugus, Allegany, Oil Spring, Niagara Falls, and Buffalo Creek. Seneca Nation’s five territories are located within the formal boundary of New York and the State maintains State routes and other infrastructure on Seneca lands, however the Seneca Nation is not a part of New York.



Figure 17: Completed Pennsy Trail with paved asphalt surface, lighting, and cleared vegetation. (Image courtesy of the Seneca Nation DOT)

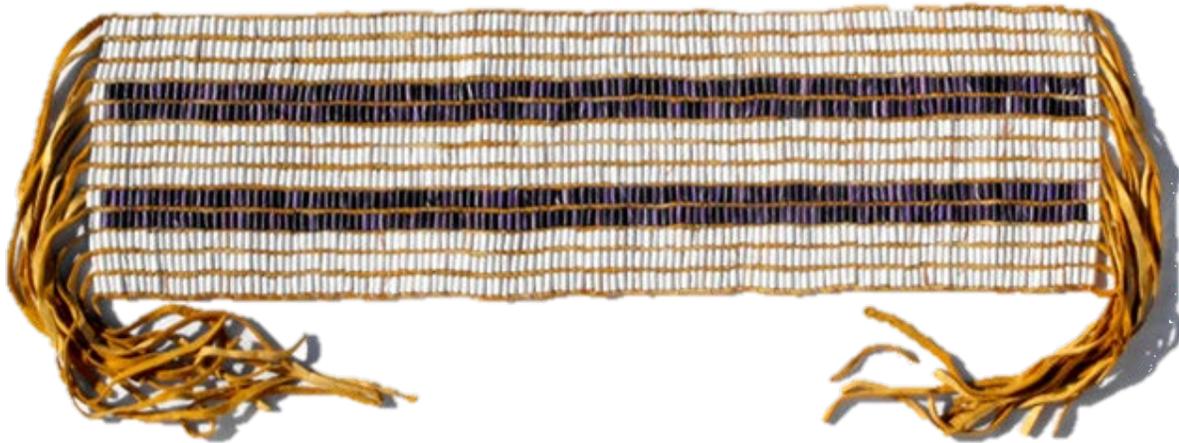


Figure 18: “Two Row Wampum Belt” symbolizing how the Seneca Nation of Indians proceeded with the project and engaged partners throughout the Pennsy Trail project planning process. The three rows of white beads symbolize peace, friendship, and respect, which separate the two purple rows. The two purple rows symbolize two paths or two vessels travelling down the same river but not interfering with each other. (Image courtesy of the Seneca Nation DOT)

The State required a local project agreement to release the Federal TEP funds from the State to be used by the Seneca Nation. The Nation and the State held discussions to ensure that the Nation maintained Tribal sovereignty and self-determination through the local agreement. The Seneca Nation and the project partners then developed a project implementation summary and agreed to advance the project through the FHWA TTP by transferring Federal-aid funds apportioned to the State directly to the Nation. The project implementation summary outlined the project’s terms and conditions, which determined that work would take place entirely on the Nation’s lands and not involve any State funding. It also required a collaborative approach to design and construction, including compliance with required standards and specifications. The project team coordinated throughout design development and construction to avoid potential impacts.

The Seneca Nation coordinated with the project partners to establish an IFTA under Section 23 U.S.C. Sections 104(f)(3)(A)³² and 202(a)(9).³³ The agreement authorized the transfer of Federal-aid funds appropriated to the State back to FHWA to be administered through the TTP. The Seneca Nation, NYSDOT, and FHWA Office of Tribal Transportation entered into an IFTA agreement detailing the IFTA and the transfer process. The IFTA was fully executed in April 2017. Through the IFTA, the Seneca Nation received funds in the same manner that it receives TTP funding and implemented the Pennsy Trail project in accordance with TTP provisions and the match requirements of the original Federal-aid funding (i.e., TAP/TEP).

³² 23 U.S.C Section 104(f)(3)(A) states “Subject to subparagraph (B), the Secretary may, at the request of a State, transfer amounts apportioned or allocated under this title to the State to another State, or to the Federal Highway Administration, for the purpose of funding 1 or more projects that are eligible for assistance with amounts so apportioned or allocated.”

³³ 23 U.S.C Section 202(a)(9) states “The cooperation of States, counties, or other local subdivisions may be accepted in construction and improvement.”

Implementation

The implementation of the Pennsy Trail project involved support from adjacent communities, as well as the Nation’s internal resources. Given the unique geographical context, the city of Salamanca and the Seneca Nation continuously coordinate activities that serve the broader community. The Seneca Nation and the city of Salamanca entered into a Memorandum of Agreement, which stated that the city would assist with developing portions of the trail and provide ongoing maintenance. Trail construction began in 2018 and lasted approximately two construction years. The Seneca Nation DOT coordinated with the [Seneca Nation Training and Employment Resource Center](#) for in-kind work related to the trail. The Training and Employment Resource Center provides workforce development assistance and related services to youth and adult Seneca members. Members of the program learned how to build and install swings and benches along the trail. The [Clearview Disability Resource Center](#) in Oregon gifted the Seneca Nation DOT with wheelchair charging stations to acknowledge the Nation’s efforts to improve walkability in the community. The Nation also increased law enforcement presence and installed cameras to help address vandalism and drug use along the trail.

Located along the former Western New York and Pennsylvania Railway, the Pennsy Trail features include:

- Asphalt surface
- Crosswalks
- Accessible ramps
- Pedestrian scale lighting
- Fluorescent warning signage
- Wheelchair charging stations
- Video surveillance cameras and emergency call boxes
- Culvert at Titus Creek
- Bicycle racks, bench swings, and garbage cans

Impact

The improved [Pennsy Trail](#) ignited community use and support with a renewed vision for trail expansion throughout the New York State Park’s Allegany region. The Seneca Nation DOT continues to improve the Pennsy Trail through the installation of amenities such as painted crosswalks and dog waste bins. Building upon the success of the Pennsy Trail, the Seneca Nation established a Seneca Nation Trails Committee to help steer future trail work, develop a trails master plan, and identify locations for all types of trails, including those for bicycling, hiking, snowmobile, all-terrain vehicles, horseback, and other greenway trails as well as blue trails.

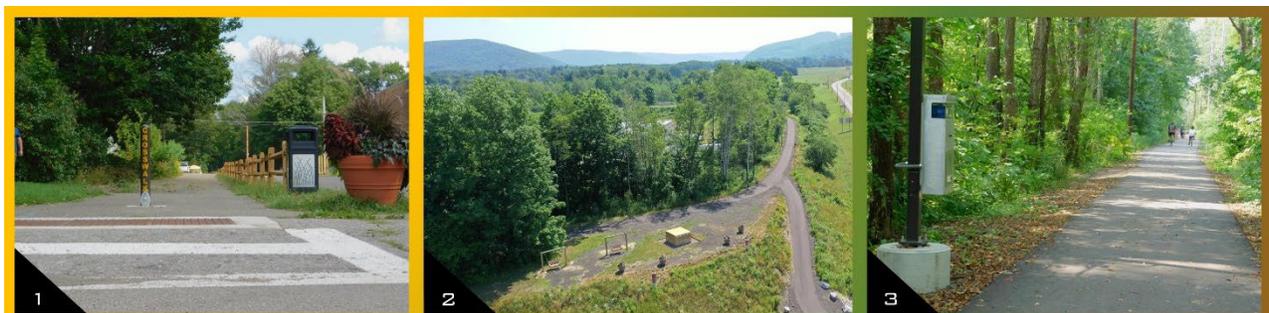


Figure 19: Pedestrian safety improvements on the Pennsy Trail including pavement striping and split rail fence separating trail from parking lot (left); aerial view of trail's west end with swings from SNI Workforce Training Program (middle); and emergency call box for trail (right). (Images courtesy of the Seneca Nation DOT)

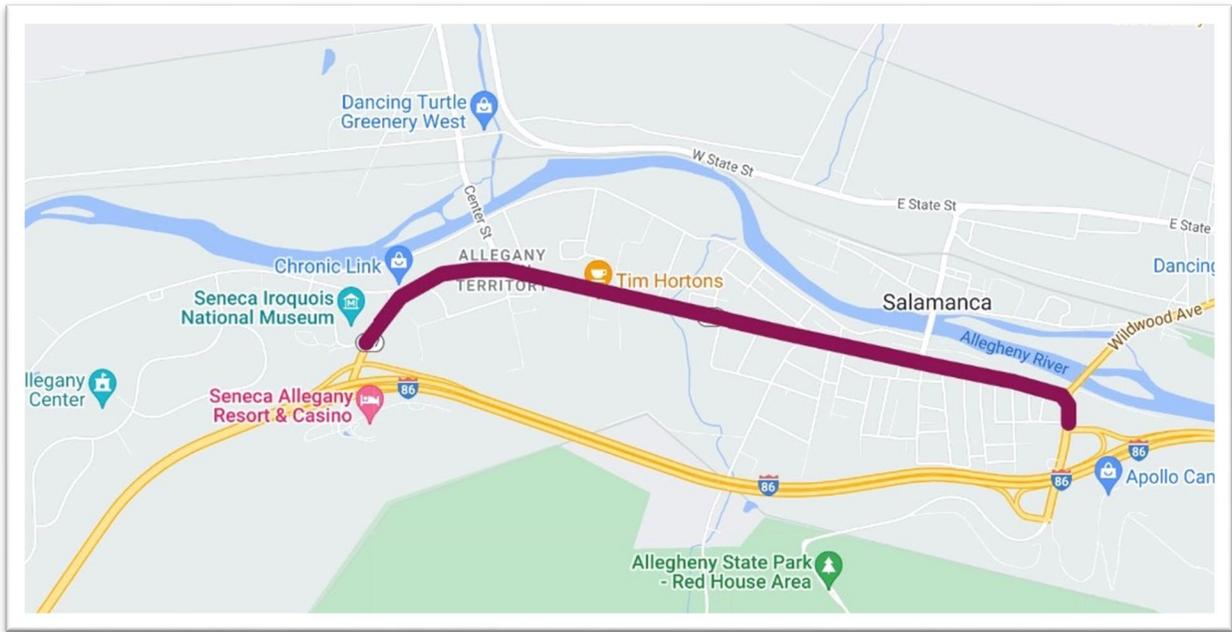


Figure 20: Map location of the Pennsy Trail. Map Data: ©2023 Google.

Tribal Trail Development Noteworthy Practices

Based on the literature review and case study interviews, the research team developed a list of noteworthy practices for Tribal development of trails and dedicated pedestrian and bicycle infrastructure. These are described below.

Coordination

Project agreements with other government entities can document coordination processes and protect Tribal sovereignty. The Pueblo of Jemez plans to enter into an agreement with the New Mexico DOT that lays out roles and responsibilities for maintaining the Hemish Path to Wellness once it is complete. The Seneca Nation worked with the New York State DOT, the FHWA New York Division Office, and the FHWA Office of Tribal Transportation to develop two project agreements that formalized the transfer of Federal funds between New York State and the Nation and maintained Tribal sovereignty.

Tribal transportation departments can coordinate with other Tribal departments (e.g., housing, social services, health, library) in the planning process to gather data and information and during design to ensure the trail meets community needs. The Bay Mills Indian Community, Oglala Sioux Tribe, and the Pueblo of Jemez transportation departments coordinated with Tribal law enforcement and other Tribal departments to conduct RSAs, which led to recommendations for trails and other bicycle and pedestrian infrastructure. The Pueblo of Jemez Department of Planning, Development and Transportation plans to coordinate with the Indian Health Service, the Pueblo's Historic Preservation Office, and the Pueblo's Department of Education to install kiosks and signage along the trail that will display historic, environmental, health-related, and motivational messaging in the Jemez Pueblo native language.

Funding

Intergovernmental Fund Transfer Agreements (IFTAs) under 23 U.S. Code (U.S.C.) 202(a)(9) agreements enable Tribes to use Federal-aid funding under the TTP process, which may be more familiar to Tribes. The Jamestown S’Klallam Tribe and Seneca Nation each entered into IFTAs with their respective State DOTs to allow Federal-aid funds to be transferred from the State DOT to the Tribe to be administered through the TTP. Through IFTAs, Tribes receive identified Federal-aid funds in the same manner that they receive TTP funds. Tribes then implement the identified projects in accordance with TTP provisions and the match requirements of the original Federal-aid funding.

TTP and TTP Safety Funds can be available for Tribes’ trail planning activities and trail projects to supplement TTP formula funding and provide local match funding across multiple years. The Pueblo of Jemez received TTP Safety Funds to complete a Transportation Safety Plan, which identified safety challenges in the Pueblo and strategies for improvement, such as installing traffic control devices and traffic calming measures and adding signs at bus stops. The Pueblo of Jemez used its allocation of TTP funds across multiple years to provide the local match. The BIA allocated \$400,000 in TTP Safety Funds to the Bay Mills Indian Community to fund a segment of the Spirit Stone Trail.

Tribes are eligible to receive TA Set-Aside funding, which is Federal-aid funding administered by State DOTs, to implement trail projects. The Jamestown S’Klallam Tribe, Oglala Sioux Tribe, Pueblo of Jemez, and Seneca Nation all applied for and were granted TAP funding through their respective State DOTs for their trail projects. The RTP is a set-aside within the TAP that can also fund trail projects. TAP funding requires a 20 percent local match. Section 120(k) of title 23, U.S.C. authorizes funds to carry out the Tribal Transportation Program under 23 U.S.C. 202 and funds to carry out the Federal Lands Transportation Program under 23 U.S.C. 203 to pay the non-Federal share of the cost of any project that is funded under title 23, or under chapter 53 of title 49, U.S.C., that provides access to or within Federal or Tribal land.³⁴

Jobs and Training

The construction of trail projects provides employment and job training opportunities to Tribal members through Tribal training and employment centers. The Seneca Nation Training and Employment Resource Center provides workforce development assistance and related services to youth and adult Seneca members. The Seneca Nation DOT coordinated with the Training and Employment Resource Center for in-kind work related to the Pennsy Trail, providing members of the program with opportunities to learn how to build and install swings and benches along the trail.

Tribes can reach out to youth service and conservations corps for workforce development. [The Corps Network](#) published [Affinity and Identity-Based Crews and Programs](#) to highlight the work of service and conservation corps that have experience managing affinity and identity-based crews and programs. The Corp Network maintains a [list](#) of qualified corps organizations. One Corps program listed is the Ancestral Lands Conservation Corps, which focuses on Tribal and

³⁴ FHWA Transportation Alternatives Set-Aside Implementation Guidance
https://www.fhwa.dot.gov/environment/transportation_alternatives/guidance/ta_guidance_2022.pdf

Indigenous youth.

Northern Cheyenne Tribe: Busby Pathway

U.S. Route 212 bisects the Northern Cheyenne Reservation in Montana. Pedestrians commonly walk on this heavily traveled roadway due to a lack of sidewalks, resulting in pedestrian injuries and fatalities. The Northern Cheyenne Tribe developed a [Transportation Safety Plan \(TSP\)](#) in 2015, outlining recommendations to improve roadway safety within its Reservation. The TSP highlights the development of separated multiuse paths to protect active transportation users from vehicle collisions.

The TSP proposed a one-mile multiuse path along U.S. Route 212 in a residential area containing a U.S. Post Office, Trading Post, school, churches, historical Tribal site, court, ranch, and convenience store. The Tribe received \$498,028 in FHWA TTP Safety Funds in Fiscal Year 2015 for the Busby Pathway Project to provide safe pedestrian and bicycle access throughout town. The total project estimate was \$838,028. The Montana Department of Transportation (MDT) provided street lighting along the pathway to further improve safety, which was recommended as part of a road safety audit that MDT previously conducted on U.S. Route 212. Tribal members have responded positively to the Busby Pathway; as reported in the Tribe's 2018 [Community Health Assessment](#), the Busby Pathway is improving safety, promoting active transportation, and supporting spiritual healing.

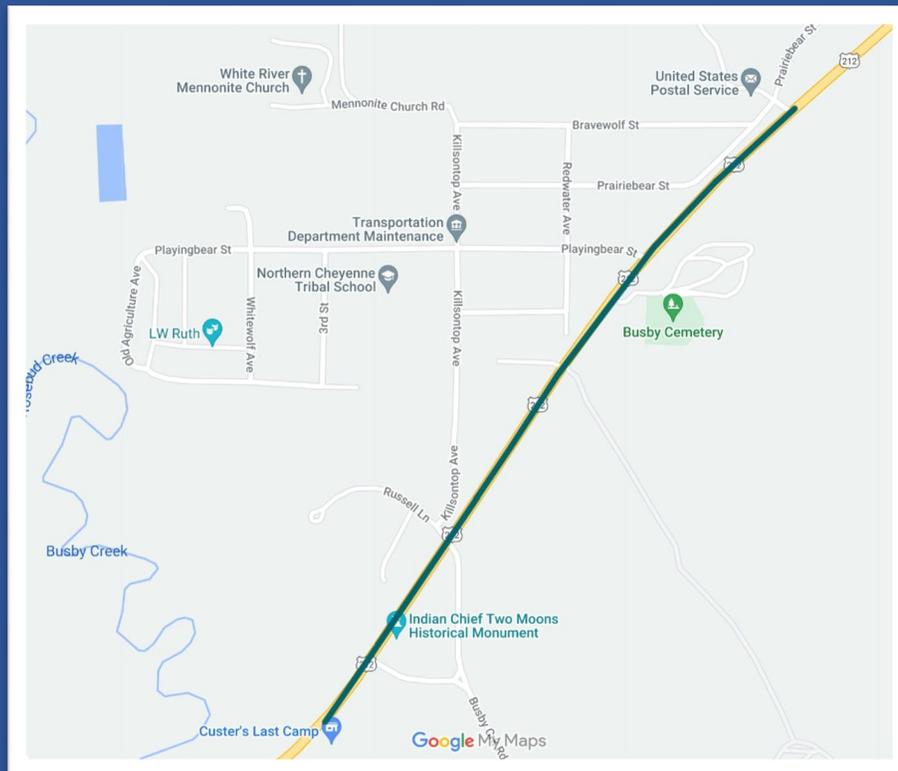


Figure 21: Map location of the Busby Pathway. Map Data: ©2023 Google.

Community Engagement

A successful trail project can garner support for future trail planning and projects in a community. Following the successful development of six miles of the Spirit Stone Trail, the Bay Mills Indian Community is planning a 2.5-mile extension of the trail in coordination with the Hiawatha National Forest. In the Seneca Nation, an undeveloped trail along an abandoned railroad was viewed negatively by the community and presented safety challenges due to a lack of lighting, areas of inaccessibility, and overgrown vegetation. The improved Pennsy Trail ignited community use and support with a renewed vision for trail expansion throughout the region.

Navajo Nation: NavajoYES

Navajo Youth Empowerment Services (NavajoYES) is a nonprofit organization dedicated to promoting active lifestyles in the Navajo Nation by hosting outdoor activities, including trail development and trail-based activities. NavajoYES has been involved with trail restoration and promotion since the 1990s. Through its Trails Initiative, NavajoYES has youth trail teams that provide ongoing maintenance, restoration, and trash abatement along many Navajo Nation trails.

NavajoYES is also engaged in trails planning activities and coordination. NavajoYES led the creation of the Navajo Trail Task Force with support from the Office of Navajo President and Vice President, Navajo Nation Parks & Recreation Division of Natural Resources, National Parks Service, International Mountain Bicycling Association, as well as other Tribal governments and partners. Launched in 2015, the Task Force coordinates and promotes trail projects on the reservation and supports communities, chapters, and parks through technical assistance, resource development, facilitating partnerships, and other activities. In 2020, the Task Force published the Navajo Nation Trail Guide, which provides information on trail rules and regulations, various trail routes, National Park sites, local events, and other community trails. The Task Force also worked to build and acquire trail infrastructure for new and existing trail routes, including items such as ramadas, interpretive signage, picnic tables, trail posts, compost toilets, and benches.

Trails committees consisting of community members with diverse backgrounds can help champion trail network development. The Seneca Nation established the Seneca Nation Trails Committee to help steer future trail work, identify locations for new trails, and develop a trails master plan. The Pueblo of Jemez Department of Planning, Development and Transportation led the planning process for its Pedestrian Trails and Bikeways Master Plan with support from the Pedestrian Facility Planning Committee. This committee consisted of representatives of Tribal offices such as health and human services and historic preservation, among other partners. The Bay Mills Indian Community formed the Spirit Stone Trail Committee to help steer the improvement of trails and pathways in Bay Mills, including safe accommodations for pedestrians and bicyclists. Convening diverse groups to inform trails activities supports a more robust planning process by considering multiple perspectives on improving safety, mobility, and access through trails.

Road Safety Audit

Road Safety Audits (RSAs) can highlight roadway safety issues that trails or sidewalks can address. RSAs can also gather necessary data and information to justify funding requests for trails and dedicated bicycle and pedestrian infrastructure. In 2018, the Oglala Sioux Tribe conducted an RSA on the portion of BIA Route 2 that passes through Kyle, South Dakota. The BIA Route 2 RSA recommendations included a pedestrian and bicyclist pathway along BIA Route 2, and as a result the Kyle Pathway is being constructed parallel to BIA Route 2 to support safe travel separated from vehicular traffic. The RSA also helped the Oglala Sioux Tribe pursue funding opportunities and identify destinations to be linked by the trail. The Pueblo of Jemez Department of Planning, Development and Transportation coordinated an RSA on New Mexico State Highway 4 in 2007, which identified speeding as the highest risk safety issue, in addition to lack of dedicated space for pedestrians, deterioration of shoulders where pedestrians and bicyclists may travel, and limited sight distance at intersections. The RSA recommended a separated bicycle and pedestrian facility along the route to address these issues. The construction of the Hemish Path to Wellness directly the recommendation in the RSA. In the Bay Mills Indian Community, some areas of West Lakeshore Drive have a 55 mph speed limit, making pedestrian and bicyclist travel dangerous on the roadway shoulder. The BIA conducted an RSA for the area, which highlighted the need to safety improvements along the roadway. The Bay Mills Indian Community sought funding for a separated trail segment to provide users safe continuous access on the Spirit Stone Trail.

Tribal History and Culture

Trails can be designed and named to reflect and celebrate a Tribe's history and culture.

Trails have a long history in the Pueblo of Jemez and serve as significant spiritual places for the Jemez people, traditionally known as the Hemish people. Over the generations, Pueblo members of all ages have run for religious purposes, communication, health, travel, sport, war, hunting, and to build relationships between villages. The Hemish Path to Wellness refers to the Jemez people and symbolizes the Tribe's goals to increase physical activity and public health outcomes through transportation. The Bay Mills Indian Community coordinated with its trail committee to name the trail near the Whitefish Bay Scenic Byway the Spirit Stone Trail. The trail name is a translation of the name Shingabawassin, who was a local Ojibwe Chief from the Crane Clan and played a significant role in the history of the Bay Mills community.

Planning

Bicycle and pedestrian master plans can lay out a comprehensive network of walking and bicycling infrastructure that can be funded and built incrementally. In 2020, the Pueblo of Jemez completed its Pedestrian Trails and Bikeways Master Plan which addresses transportation challenges and recommends pedestrian and bicycle routes and facility types for the Walatowa Village Area. Following the completion of the master plan, the Pueblo of Jemez conducted engineering, design, and right-of-way for the Hemish Path to Wellness in 2020-2022 and construction is scheduled to finish in 2023.

Muscogee (Creek) Nation: Eufaula Walking Trail

Since 2013, the Muscogee (Creek) Nation, headquartered south of Tulsa, Oklahoma, has built a network of trails throughout its Tribal communities to provide opportunities for recreation and physical activity for local residents. Eight walking trails connect residents to health clinics, schools, and open space. The Muscogee Nation funded the construction of many of these trails with TTP funds.

The Eufaula Walking Trail, a recent addition to the Muscogee Nation trail network, is a paved half-mile path. The Muscogee Nation began designing the trail in 2013 and finished constructing it in 2016. The Tribe funded the design and construction of the pathway at a cost of \$187,500. Most of the trail follows along Lake Eufaula. Several Muscogee Nation health and recreational programs use the Eufaula Walking Trail for outdoor activities as part of their Muscogee Nation Diabetes Program walking program. The walking program aims to improve health by providing opportunities for Tribal members to walk regularly over long periods of time while also fostering community participation within the five Muscogee Nation health care clinic regions.

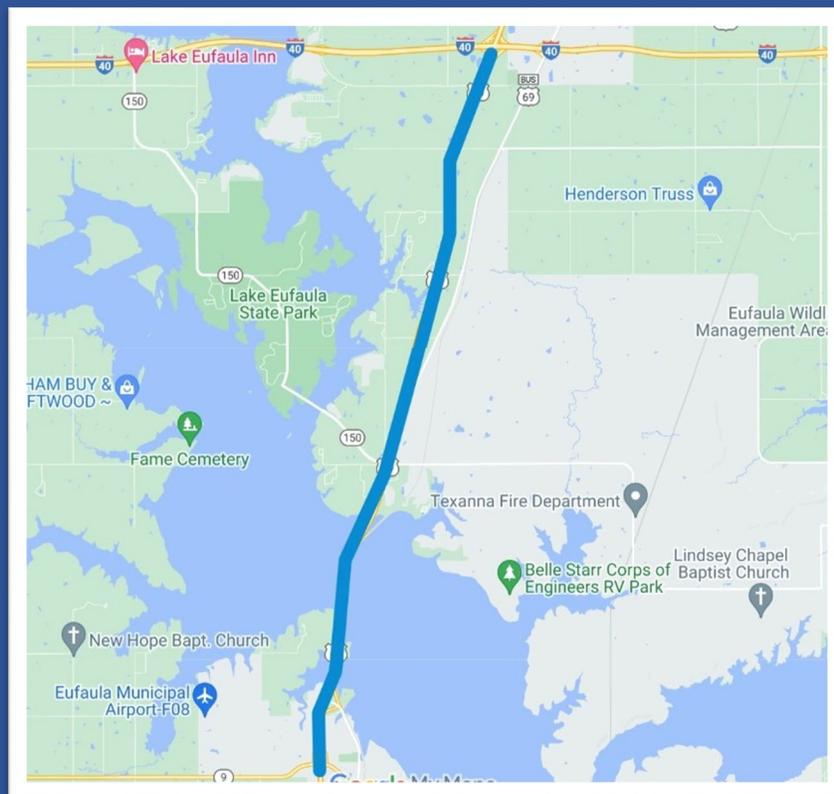


Figure 22: Map location of the Eufaula Walking Trail. Map Data: ©2023 Google.

Building trail segments in phases can make it easier to design and fund a future comprehensive and connected trail network. A majority of the Olympic Discovery Trail (ODT) was built on abandoned railroad corridor that once connected population centers within the Olympic Peninsula. However, some sections of the ODT remain undeveloped, creating gaps in the overall trail system making it difficult for pedestrians and bicyclists to use. Three of these gap sections of the ODT are on lands within the Jamestown S’Klallam Tribe’s lands. The Tribe is purchasing land along the corridor to close gaps in the ODT. The Tribe constructed two segments of the ODT and is currently working on designing and procuring funding for a third segment. The Kyle Pathway in the Oglala Sioux community will connect nearly two miles of disjointed pathways throughout the community along BIA Route 2 using newly constructed and refurbished sidewalks. The Oglala Sioux Tribe faced challenges in seeking funding for the entire Kyle Pathway project. To strategically make use of available funding, the Oglala Sioux Tribe divided the project into two phases. To stretch the limited funding available for the project, the Tribe is designating existing sidewalks that are accessible and in good condition as portions of the trail wherever possible and adding newly constructed trail sections as needed.

Health and Active Transportation

Trails increase access to safe, active transportation, helping Tribes address common health issues such as obesity and diabetes. Oglala Sioux leaders sought to ensure that Tribal members have safe access to services without needing to walk on busy BIA Route 2. Increasing physical activity is also a priority for the Oglala Sioux, as over 50 percent of adults on the reservation over the age of 40 are diabetic.³⁵ The Kyle Pathway will provide recreational opportunities to encourage physical activity. The Pueblo of Jemez’s Public Health Department reports that approximately 50 percent of Jemez Pueblo children and 89 percent of Jemez Pueblo adults are either overweight or obese. The Pueblo of Jemez sees the Hemish Path to Wellness as an opportunity to improve pedestrian and bicyclist safety and encourage healthy behaviors and lifestyles. The Bay Mills Indian Community aimed to build the Spirit Stone Trail to encourage physical activity. The Spirit Stone Trail provides a safe walking and bicycling route that connects the Bay Mills Indian Community together while offering recreational opportunities for healthy physical activity.

Conclusion

Tribes of varying sizes have planned and implemented trails projects to address common challenges and goals related to safety, mobility, public health, connectivity, and quality of life. The case studies and project summaries developed for this research demonstrate noteworthy practices that have led to successful planning outcomes. These practices address common themes in the planning and development of trails including stakeholder coordination, grant funding, trail-related jobs/training, community engagement, integrating Tribal history and culture, and active transportation. This white paper identifies resources and tools available to support Tribes in their planning and development of trail networks.

³⁵ 2015. <https://www.truesiouxhope.org/single-post/2015/02/10/the-lakota-sioux-tribe-a-look-at-the-statistics>

Appendix A: Resources

Trail Planning and Development Resources

The following resources information that may be relevant to Tribes on related Federal regulations and policies, key concepts in active transportation and trails planning, related benefits of active transportation and trails, and funding opportunities that address dedicated pedestrian and bicycle infrastructure. The information in these programs and publications may be useful for Tribal governments that are planning and developing trail networks.

- [FHWA Transportation Alternatives Set-Aside](#)
- [FHWA Recreational Trails Program](#)
- [FHWA Recreational Trails Program State Practices](#)
- [FHWA and Federal Railroad Administration Rails with Trails: Best Practices and Lessons Learned](#)
- [FHWA Manuals and Guides for Trail Design, Construction, Maintenance, and Operation, and for Signs](#)
- [FHWA Pedestrian and Bicyclist Road Safety Audit \(RSA\) Guide and Prompt List](#)
- [FHWA Bicycle and Pedestrian Program](#)
- [FHWA Pedestrian and Bicycle Funding Opportunities](#)
- [FHWA Office of Safety Pedestrian and Bicycle Safety](#)
- [National Association of City Transportation Officials Designing Sidewalks and Trails for Access, Part I: Review of Existing Guidelines and Part II: Best Practices Design Guide](#)
- [Complete Streets & Tribal Transportation Story Map \(arcgis.com\)](#)
- [Complete Streets Webinar for Federal Land Management Agencies and Tribes](#)

Tribal Transportation Planning Resources

The following resources provide information to support Tribes in their transportation planning process. The TTP Delivery Guide includes guidance and technical program information for Tribes entering into or coordinating existing TTP Agreements with FHWA. The series of FHWA planning modules outline the transportation planning process with technical tools and resources for Tribal communities; the modules summarize elements of planning and key products that support effective decision making. The information in these resources may be useful for Tribal governments that are planning and developing trail networks.

- [Tribal Transportation Program \(TTP\) Delivery Guide](#)
- [FHWA Intergovernmental Fund Transfer Agreement Template for 202\(a\)\(9\)](#)
- [Tribal Transportation Planning Module: Developing a Long Range Transportation Plan](#)
- [Tribal Transportation Planning Module: Data Collection and Use](#)
- [Tribal Transportation Planning Module: Public Involvement](#)
- [Tribal Transportation Planning Module: Partnering and Leveraging](#)
- [Tribal Transportation Planning Module: Financial Planning](#)
- [Tribal Transportation Planning Module: Funding Resources](#)
- [Tribal Transportation Planning Module: Project Prioritization](#)

- [Tribal Transportation Planning Module: Asset Management](#)
- [Tribal Transportation Planning Module: Developing a Transportation Safety Plan](#)

Trail Funding Resources

The following funding resources may be useful for Tribal governments that are funding the planning and/or construction of trail networks.

- [Bipartisan Infrastructure Law](#)
- [U.S. DOT Rebuilding American Infrastructure with Sustainability and Equity \(RAISE\) discretionary grants program](#)
- [U.S. DOT Safe Streets and Roads for All \(SS4A\) discretionary grants program](#)
- [U.S. DOT Reconnecting Communities Program discretionary grants program](#)
- [U.S. DOT Safe Routes to School Program](#)
- [U.S. DOT Increasing Safe and Accessible Transportation Options Set-Aside from the Metropolitan Planning Program \(MPP\)](#)
- [U.S. DOT Federal Lands Highway Tribal Transportation Program](#)
- [FHWA Highway Safety Improvement Program](#)
- [FHWA Bicycle and Pedestrian Program](#)
- [FHWA Recreational Trails Program](#)
- [FHWA Transportation Alternatives Set-Aside from the Surface Transportation Block Grant Program](#)
- [FHWA Congestion Mitigation and Air Quality Improvement Program](#)
- [Land and Water Conservation Fund](#)

Technical Assistance Resources

The following technical assistance resources may be useful for Tribal governments when planning and building transportation infrastructure.

- [Tribal Technical Assistance Program](#)
- [Technical Assistance Master List](#)