



City of Missoula Complete Streets Progress Report

2023 Complete Streets Progress Report

The Complete Streets Progress Report serves as an overview of the advancements made in implementing the City of Missoula’s (the City) Complete Streets resolution update adopted in 2016. This document outlines the City’s commitment to creating a more inclusive, accessible, and safe transportation network that caters to all users, regardless of age, ability, or mode of travel. The report details the completed projects and plans influenced by the 2016 Complete Streets resolution.

The projects in this report are public and do not include those completed by private development. As such, this document is not a comprehensive review of all changes to Missoula’s built environment since 2016, but rather a review of methods and approaches taken to implement Complete Streets.

Introduction	4
Implementation	10
Major Construction Projects	12
Quick Build Projects	16
Maintenance Projects	16
Neighborhood Traffic Management	20
Transit	24
Looking Forward	26

INTRODUCTION

The projects described in this report represent the most significant improvements and applications of Complete Streets principles within Missoula. Included projects are those initiated by the City, where the City was a financial partner, or where the City had a substantial say in project design and implementation. The Missoula Redevelopment Agency (MRA) continues to fill gaps in the sidewalk network in urban renewal districts. However, these projects are not included in the total sidewalk miles reported here. Additionally, development in the private sector, or projects exclusively managed by the Montana Department of Transportation (MDT), such as interchange roundabouts and initiatives like the Mullan BUILD Grant, are also not included.

The BUILD Grant represents a significant investment in enhancing transportation infrastructure, and the collector roads showcase some of Missoula's best efforts in non-motorized infrastructure design. However, the completion of non-motorized facilities is contingent upon future development, which means early residents may not immediately benefit from the full spectrum of transportation options envisioned by the project.

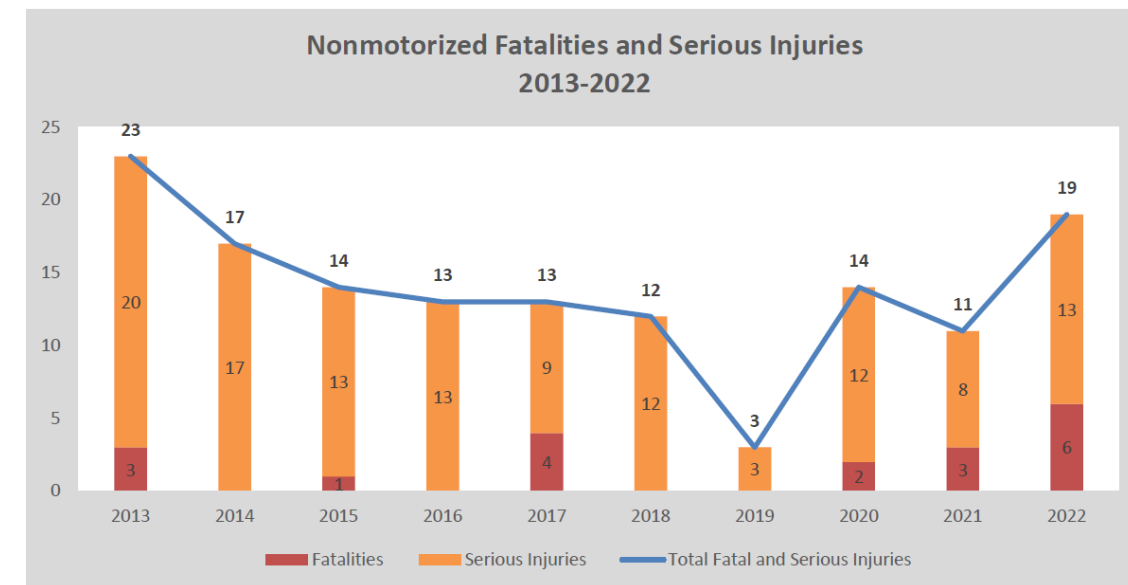
This report serves as a general overview of the progress made in advancing Complete Streets initiatives within Missoula while also acknowledging the complexities and nuances inherent in these projects.

Commitment to Public Safety

The number of fatal and serious injury pedestrian crashes in Missoula increased steadily from 2019 to 2022, with 2022 being the highest year for fatal and serious injury crashes in more than a decade. ¹ This surge under-scores the pressing need to improve pedestrian safety. Missoula is facing a critical challenge in ensuring the safety and well-being of all road users, particularly pedestrians. Complete street infrastructure represents a crucial solution to address the issue. ²

Historical approaches to street design often prioritized the swift movement of vehicles over the safety of all road users. This mindset led to the design of roadways that favored high speeds and convenience for motorists, often at the expense of pedestrian safety. In contrast, contemporary efforts to improve street safety recognize the importance of designing roadways to prioritize the safety of all road users, including non-motorized travel. Modern approaches to street design prioritize mobility, accessibility, and inclusivity, seeking to create streets that serve the needs of the entire community rather than prioritizing the efficient movement of vehicles alone.

The City has a responsibility to prioritize pedestrian safety and take proactive measures to mitigate the risks associated with road travel. With the steady increase in fatal and serious pedestrian crashes over previous years, traditional approaches to road design and infrastructure can be insufficient for safeguarding vulnerable road users. The adoption and implementation of Complete Streets principles offer a framework to create safer conditions for movement through Missoula.



Nonmotorized fatalities and serious injuries (pedestrian and bicycle) in the ten-year time frame.

Source: CTSP 2024 Annual Report

¹ 2024 Community Transportation Safety Plan Progress Report
² <https://smartgrowthamerica.org/what-are-complete-streets/>

2016 City of Missoula Complete Streets Resolution

In 2016 Missoula City Council adopted Resolution 8098, updating the Complete Streets policy that was first adopted in 2009. The policy directs the design and maintenance of streets that accommodate all modes of transportation for users of varying ages and abilities. It emphasizes safety, convenience, and accessibility for pedestrians, cyclists, public transit users, and motorists. The Complete Streets policy highlights benefits such as improved public health, safer routes to school, and the enhancement of public spaces through human-centered designs.¹

Vision, Users, and Modes

The resolution encourages the development of a safe, reliable, efficient, and connected multi-modal transportation system that serves people of all ages and abilities. This system is intended to prioritize the safety and convenience of pedestrians, bicyclists, public transit users, and motorists. When conflicts arise among users and modes, safety is the top priority, followed by mobility. Pedestrians are given the highest priority citywide, followed by other vulnerable users. The policy aims for balance among all modes while recognizing that not all modes can receive the same level of accommodation on every street. Flexibility is emphasized to allow for context-sensitive design that considers the surrounding community, buildings, land uses, and transportation needs, while balancing social, economic, and environmental objectives.

Inclusion and Exceptions

The resolution establishes that every phase of transportation projects should aim to create safer and more accessible streets for all users, including planning, design, construction, operation, and maintenance. Any exceptions to this policy, including for private projects, must be reviewed and approved by the City Council. Routine maintenance activities that do not alter roadway geometry are exempt from the policy.

¹ <https://www.ci.missoula.mt.us/DocumentCenter/View/40371/Resolution-8098-Corrected?bidId=>

Jurisdiction and Network Connectivity

The policy applies to all city-owned transportation facilities within the public right-of-way, such as streets, sidewalks, alleys, and bridges, with encouragement for adherence from owners and operators of private infrastructure. The City aims to collaborate with various entities, including state and local agencies, schools, universities, developers, and utilities, to develop a connected network. Additionally, the City plans to enhance connectivity through various means, including maintenance activities, addressing deficiencies at railroad crossings, filling gaps in the non-motorized network, repairing sidewalk segments, implementing existing transportation plans, and enforcing parking policies and sidewalk clearing ordinances.

Design Guidance and Performance Measures

The policy emphasizes the use of up-to-date design standards to maximize flexibility and innovation. Design criteria are not just prescriptive, but also based on thoughtful application of engineering, architectural, and urban design principles. Various resources are listed, including federal guidelines, city regulations, master plans, and manuals from professional associations.

Additional Elements

Storm Water Management: The City aims to incorporate the best management practices for stormwater runoff in street design and construction projects. Innovative and educational stormwater infrastructure will be integrated where possible to address runoff effectively.

Attention to Livability: Complete Streets in Missoula are envisioned as aesthetically pleasing, vibrant, and comfortable spaces for people. Streets will be designed to enhance urban design at a human scale, with a focus on creating attractive public spaces. City projects are opportunities to enhance the aesthetic qualities of Missoula through the incorporation of street trees, native plants, landscape architecture, public art, street furniture, pedestrian amenities, wayfinding signage, sidewalk cafes, and street-facing retail.

Influence on Local Planning

In Missoula, Complete Streets play a central role in shaping transportation planning and infrastructure development, as evidenced by integration into City and Missoula Metropolitan Planning Organization (MPO) planning documents. Each adopted plan serves as an additional blueprint and tool for implementing Complete Streets policies across different facets of the City's transportation network.

Bicycle Facilities Master Plan (2017)

This plan outlines strategies for enhancing bicycle infrastructure throughout Missoula, promoting cycling as a safe and viable transportation option. Complete Streets principles are central to the Bicycle Facilities Master Plan, which calls for the integration of bike lanes, shared-use paths, bike parking facilities, and other amenities to support cyclists of all ages and abilities. By incorporating bicycle infrastructure into street design, the plan contributes to the creation of more inclusive and multi-modal transportation networks.¹

Pedestrian Facilities Master Plan (2018)

The Pedestrian Facilities Master Plan prioritizes the needs of pedestrians by identifying opportunities to improve sidewalks, crossings, pedestrian amenities, and accessibility features. Complete Streets principles guide the design of pedestrian infrastructure, ensuring that sidewalks are wide, well-maintained, and accessible to individuals of all abilities. By enhancing pedestrian facilities, the plan promotes walking as a safe and convenient mode of transportation, aligning with the goals of Complete Streets.²

Community Transportation Safety Plan (2019)

The CTSP focuses on improving safety for all users of the transportation system, aligning closely with the safety objectives of Complete Streets and Vision Zero. The plan identifies safety strategies, which include addressing intersection crashes, safety of non-motorized users, and

¹ <https://www.ci.missoula.mt.us/DocumentCenter/View/39172/2016-Bicycle-Facilities-Master-Plan?bidId=>

² <https://www.ci.missoula.mt.us/DocumentCenter/View/48031/Pedestrian-Facilities-Master-Plan>

high-risk behavior. By identifying these strategies, the plan seeks to create safer streets aligned with Complete Streets principles.³

Missoula Connect 2050 Long Range Transportation Plan (2020)

The Long Range Transportation Plan (LRTP) is the City's long-range transportation vision, guiding investment priorities and infrastructure projects over several decades. Complete Streets principles are embedded throughout the plan, influencing decisions regarding roadway design, transit service, active transportation infrastructure, and land use policies. By prioritizing multi-modal transportation options and fostering connectivity between neighborhoods, the plan reflects a commitment to creating a transportation system aligned with Complete Streets principles.⁴

LRTP Goals aligned with Complete Streets:

- Expand mobility choices to improve efficiency and accessibility for people and goods.
- Build complete streets and increase access to multimodal options.



Vision Zero (2022)

The resolution establishes that every phase of transportation projects should aim to create safer and more accessible streets for all users, including planning, design, construction, operation, and maintenance. Any exceptions to this policy, including for private projects, must be reviewed and approved by the City Council. Routine maintenance activities that do not alter roadway geometry are exempt from the policy.⁵

³ https://www.ci.missoula.mt.us/DocumentCenter/View/49937/2019_CTSP_FINAL

⁴ https://www.missoulampo.com/_files/ugd/31250b_66ec0b40355843a4bdb608880f427245.pdf

⁵ <https://www.ci.missoula.mt.us/DocumentCenter/View/63338/Resolution-8633->

IMPLEMENTATION

Project Types

In Missoula, Complete Streets are built out through various approaches, each addressing different scales of infrastructure development and community needs. Here are three ways Complete Streets are implemented:

Major Construction Projects

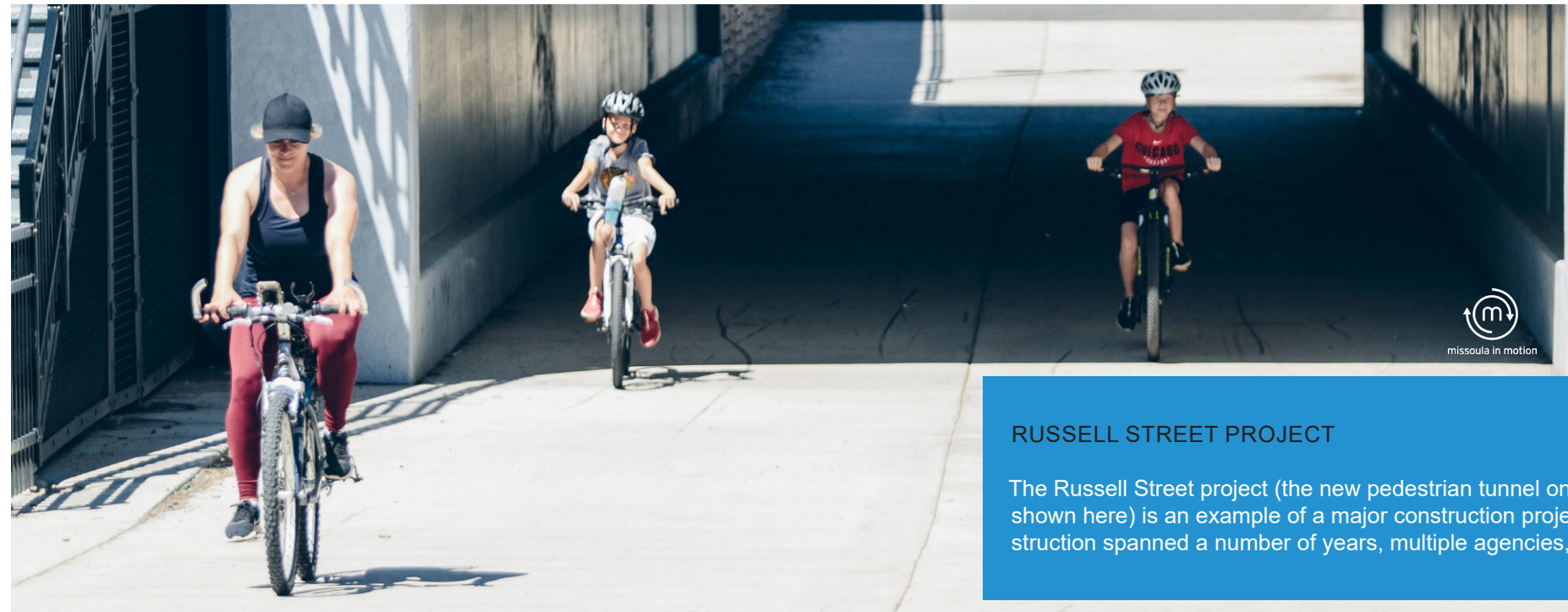
Major construction projects, such as the redevelopment of Russell Street, require significant funding, often sourced from federal grants or other large-scale financing mechanisms. These projects can be initiated by MDT or the city, and often involve extensive planning and redesign of major corridors to incorporate Complete Streets principles. Features such as widened sidewalks, dedicated bike lanes, improved crosswalks, and traffic calming measures are integrated to enhance safety and accessibility.

Regular Maintenance by Public Works

Public Works staff often implement Complete Streets principles through regular maintenance activities. Road resurfacing and pavement preservation projects offer opportunities to improve facilities for people biking and walking. These include striping new bike lanes and marking pedestrian crossings to ensure visibility and safety. These routine maintenance efforts are essential for sustaining the functionality and safety of Complete Streets infrastructure throughout the City, and the 2016 Complete Street policy update has helped staff integrate consideration for all users into every step of project delivery.

Neighborhood Traffic Management Program

The Missoula Neighborhood Traffic Management Program (NTMP) focuses on smaller-scale traffic calming and neighborhood improvements to enhance safety and livability in residential areas. Through this program, traffic calming measures such as traffic circles, speed humps, curb extensions, and pedestrian islands are implemented to reduce vehicle speeds and improve conditions for pedestrians and cyclists.



RUSSELL STREET PROJECT

The Russell Street project (the new pedestrian tunnel on the Milwaukee Trail is shown here) is an example of a major construction project; its planning and construction spanned a number of years, multiple agencies, and millions of dollars.

The process of prioritizing construction projects for Complete Street improvements is determined by funding, capacity, and project scoring. Securing resources for large-scale projects is challenging, leading to careful prioritization based on project impact and available funding. Safety and crash data, particularly non-motorized crash data, are essential in identifying high-risk areas and targeting interventions effectively. Additionally, the presence of gaps in existing infrastructure, such as sidewalks, serves as an indicator for prioritizing projects aimed at enhancing Complete Streets. The MPO and City utilize various criteria to score projects, determining their necessity and potential impact, thus ensuring resources are allocated where they are most needed.



Both MDT and the City undertake major construction projects to enhance corridors and intersections in Missoula, addressing safety, connectivity, and convenience for various modes of travel. These projects present the opportunity to integrate nonmotorized facilities such as wider sidewalks, protected bike lanes, marked and enhanced crosswalks, curb cuts, and pedestrian underpasses. Additionally, the implementation of traffic calming measures, such as traffic circles or roundabouts, helps to slow vehicular speeds, further enhancing pedestrian safety. The projects listed below are limited to those in which the City was the primary sponsor and/or a financial partner with MDT.

Major Construction Projects 2016 to 2022: Summary of Project Details

1	Hillview Way	2016
	Description: Complete reconstruction from 39th to 55th.	
	Accomplishments: 7,600 feet of 6-foot sidewalk, new pedestrian and wildlife undercrossing at Moose Can Gully, 12,700 feet of 6-foot striped bike lanes, and new street lighting.	
2	CDBG Sidewalks Project	2017
	Description: Construction of sidewalks on Cowper Street, from Stoddard Street to Sherwood Street, and Sherwood Street, from Cowper Street to Burton Street, connecting multifamily and mixed-use developments to Lowell Elementary School.	
	Accomplishments: 3,419 feet of sidewalk.	
3	Mary Avenue	2017
	Description: New street construction and reconstruction of existing section of Mary Avenue from Reserve Street to Brooks Street.	
	Accomplishments: New RR crossing, 7,535 feet of sidewalk, 4 roundabouts, and 18 marked crosswalks.	
4	Russell Street (Phase I)	2019
	Description: Complete reconstruction of corridor from Dakota Street to West Broadway	
	Accomplishments: 5,600 feet of sidewalk, 3 shared use path underpasses, 5,720 feet of raised bike lanes, and 5 ADA-compliant, wrap-around bus stops with shelters.	
5	Beartracks Bridge (Higgins Avenue)	2022
	Description: Extended bridge deck with protected bike and pedestrian facilities.	
	Accomplishments: 2,140 feet of protected sidewalk, and 2,140 feet of protected bike lane.	
6	Eaton Street	2022
	Description: Sidewalk project from 7th to 13th.	
	Accomplishments: 2,285 feet of sidewalk, and ADA-compliant bus stops.	

Construction Project Impacts and Challenges

Complete Streets Accomplishments

Completed Through Major Construction	2016 to 2022
Linear Feet of New Pedestrian Accommodation:	28,579 ft. (5 Miles)
Crosswalk and Intersection Improvements:	4 Roundabouts, 18 Crosswalks, and 4 Pedestrian Underpasses
Total miles of Dedicated Bike Facilities Built or Striped:	20,560 ft. (4 Miles)*
Number of New Curb Ramps:	109 Curb Ramps
Number of New Street Trees Planted:	168 Trees
ADA Compliant Bus Stops:	6 Bus Stops

*Does not include bike lane striping through the maintenance program detailed in Section 4

Impact on Non-motorized Safety and Accessibility

Major construction projects offer opportunities to close major gaps in nonmotorized networks, establish roadway designs that are safer for all users, and address additional yet related right-of-way deficiencies such as stormwater management, pavement preservation, and urban forest expansion. These projects typically were prioritized through long range planning processes, costing significant amounts of money. They require close collaboration among multiple agencies and across jurisdictions, and often involve a lengthy planning, design, and construction process. These qualities mean that the projects have been considered from many perspectives, usually adhere to best design practices at the time, and generally have broad public support.

The major construction projects undertaken in Missoula since 2016 have all enhanced pedestrian safety and accessibility in specific targeted corridors. Most of them also improved conditions for bicyclists and transit riders. These projects have incorporated various Complete Street features, such as extended bridge decks, protected bike and pedestrian facilities, sidewalks, marked crosswalks, roundabouts, and pedestrian underpasses. The result is that key locations all over town now have more convenient routes and safer, more comfortable environments for people walking, biking, and using transit. These infrastructure improvements align closely with the goals of the Complete Streets resolution adopted by the City.¹

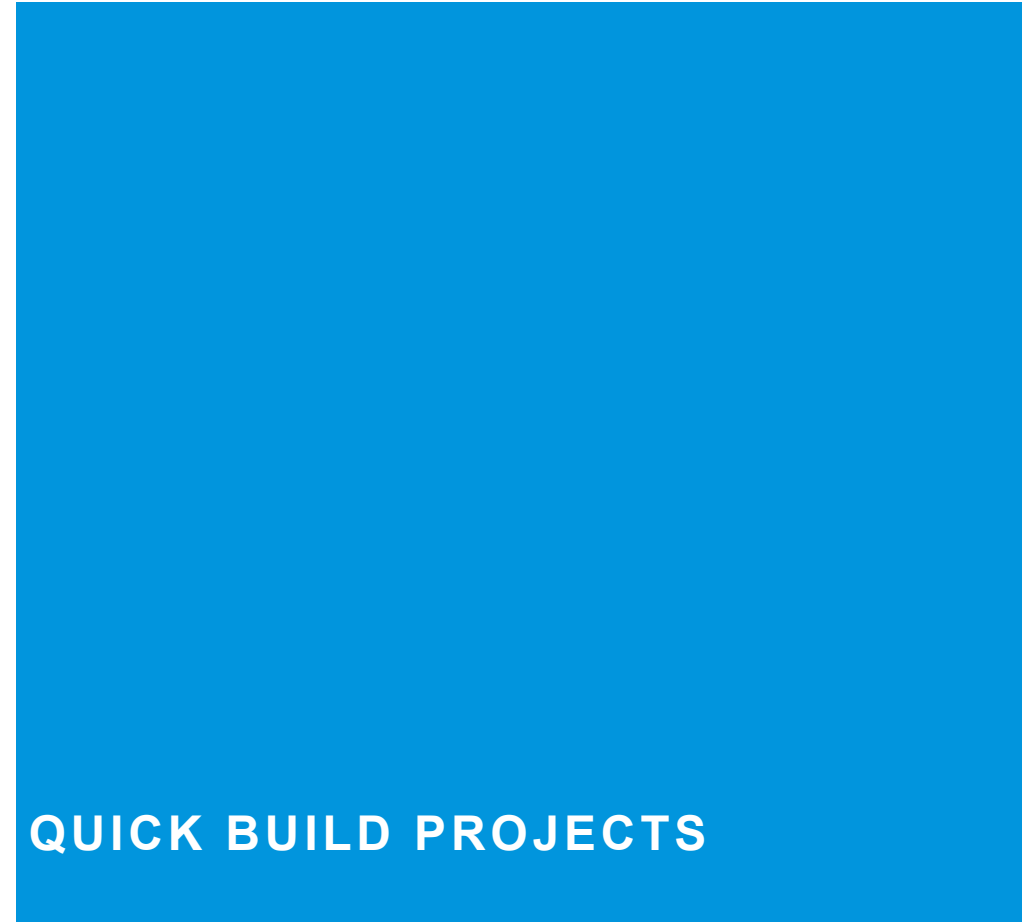
Challenges of Major Construction Projects

These types of projects have many benefits, and the major construction projects completed since 2016 have certainly improved overall safety, mobility, and accessibility for all users in Missoula. However, there are drawbacks and limitations in the delivery of major construction projects. Since pedestrian and bicyclist safety is often a matter of inches, the devil is often in the details, which were compromised to varying degrees in almost every project.

One project did not include curb cuts and a crosswalk along the prominent desire line nearest to the bus stops. Another project installed a narrower-than-standard curbside sidewalk along a high-speed curvilinear roadway. Other projects installed bike facilities that did not meet recommendations in adopted planning documents or created otherwise less-than-ideal conditions for one or more nonmotorized user groups. Major intersections that often present the largest safety and accessibility barriers were left out of some projects, and in the case of Broadway/Russell, they were made less bike- and ped-friendly.

All of these specific individual compromises have rational explanations, and each project adhered to the letter of the Complete Streets resolution. However, they all also point to larger issues and limitations in the project delivery process. The largest limitation to truly getting to the intent of Complete Streets—prioritizing safety, comfort, and convenience for vulnerable road users of all ages and abilities—is funding, both in the amount of money available and the way in which it is committed. With so much missing and substandard infrastructure, there is pressure to spread limited funding to multiple projects in order to get more of the network completed. This can lead the City to choose not to pursue additional right-of-way needed for boulevards, for example. Also, project budgets are often set before projects have been fully scoped, meaning that some challenges that come to light later in the scoping process are not able to be addressed. The perfect should not be the enemy of the good. But achieving the adopted mode split and safety goals requires exceptional infrastructure. Critically reviewing recently completed projects helps improve each subsequent project.

¹ NACTO (2014). Urban Bikeway Design Guide, Second Edition. Island Press.



Maintenance Projects

Routine pavement maintenance provides an excellent opportunity to implement Complete Streets principles and may be responsible for more expansion of Missoula’s bike network than major construction projects. These maintenance projects include milling and filling, pavement overlays, and chip sealing the asphalt. To varying degrees, these projects create “blank canvases” on the roadway surface, allowing for new striping patterns and pavement markings. The City has added miles of painted bike lanes, newer and higher visibility marked crosswalks, and various types of traffic calming features following pavement maintenance projects. The projects listed below represent the greatest improvements to nonmotorized safety, comfort, and convenience through maintenance projects between 2018 and 2022.

Maintenance Projects 2018 to 2023: Summary of Project Details

<p>South Avenue 2018</p> <p>Description: Brooks Street to Holborn Street</p> <p>Accomplishments: 3,200 ft. of Striped Bike Lane, 2 piano key crosswalks</p>	<p>Union Pacific 2020</p> <p>Description: Great Northern Avenue to Reserve Street</p> <p>Accomplishments: 1,720 ft. of Striped Bike Lane</p>
<p>Dore Lane 2019</p> <p>Description: Brooks Street to 39th</p> <p>Accomplishments: 2,290 ft. of Striped Bike Lane</p>	<p>Dore Lane 2021</p> <p>Description: Brooks Street to McDonald Avenue</p> <p>Accomplishments: 1,040 ft. of Striped Bike Lane</p>
<p>Expressway 2019</p> <p>Description: Reserve Street to Airway Boulevard</p> <p>Accomplishments: 20,000 ft. of Striped Bike Lane, some of which is buffered</p>	<p>High Park Way 2021</p> <p>Description: 39th to Whitaker Drive</p> <p>Accomplishments: 5,650 ft. of Striped Bike Lane</p>
<p>Great Northern Avenue 2019</p> <p>Description: Broadway to Mullan Road</p> <p>Accomplishments: Approx 8,900 ft. of Striped Bike Lane</p>	<p>Rattlesnake Drive 2021</p> <p>Description: Missoula Avenue to Creek Crossing Road</p> <p>17,280 ft. of Striped Bike Lane, 2 piano key crosswalks</p>
<p>Mount Avenue 2019</p> <p>Description: Eaton Street to Reserve Street (2019), Brooks Street to Russell Street (2022)</p> <p>Accomplishments: 2,660 ft. of Striped Bike Lane (2019), 5,300 ft. of Striped Buffered Bike Lane (2022)</p>	<p>Russell Street 2021</p> <p>Description: Broadway to Howell Street</p> <p>Accomplishments: 2,760 ft. of Striped Buffered Bike Lane</p>
<p>Scott Street 2019</p> <p>Description: Cooley Street to Rodgers Street</p> <p>Accomplishments: 3,180 ft. of Striped Bike Lane, 1 piano key crosswalk</p>	<p>Spruce Street 2022</p> <p>Description: Orange Street to Toole Avenue</p> <p>4,530 ft. of Striped Bike Lane, 6 piano key crosswalks</p>
<p>South Avenue 2019</p> <p>Description: Cooley Street to Rodgers Street</p> <p>Accomplishments: 3,180 ft. of Striped Bike Lane, 1 piano key crosswalk</p>	<p>Union Pacific Street 2023</p> <p>Description: Reserve Street to Connery Circle</p> <p>Accomplishments: 3,730 ft. of Striped Bike Lane</p>
<p>S 5th St W and S 6th St W 2019</p> <p>Description: Cooley Street to Rodgers Street</p> <p>Accomplishments: 3,180 ft. of Striped Bike Lane, 1 piano key crosswalk</p>	

Maintenance Project Impacts and Challenges

Complete Streets Accomplishments

Completed Through Maintenance	2017 to 2023
Total miles of Dedicated Bike Facilities Built or Striped:	88,600 ft. (17 Miles)
New Piano Key (High Visibility) Crosswalks:	13 Crosswalks*
Narrowed Travel Lanes:	Reduces Vehicle speeds and crossing distances
	*100 others were upgraded to piano key style with durable pavement markings (not just paint).

Impact on Cyclist Safety and Accessibility

Missoula has used street maintenance projects to improve nonmotorized safety and accessibility in line with the City’s objective to promote multimodal transportation as outlined in the 2016 Complete Streets resolution. Dedicated striped bike lanes offer several key benefits, including enhancing bicyclists’ comfort and confidence on busier streets, providing a visible separation between cyclists’ and drivers’ space, and reminding drivers to expect bicyclists even when none are present.

Striped bike lanes are most effective on streets that carry between 4,000 and 15,000 vehicle trips per day, or have posted speeds between 20 and 30 mph. The addition of striped bike lanes on appropriate streets has established safer conditions for cyclists throughout the City. These roadway enhancements are intended to encourage cycling as a mode of transportation and contribute to Missoula’s broader goals of fostering a sustainable transportation network.

High visibility, piano key style marked crosswalks can draw driver attention to the presence of and/or potential for pedestrians crossing the street. Though state law considers all intersections to be legal crosswalks requiring motorists to yield to people walking, crosswalks are marked in high use locations and serve to remind drivers to yield to people using them.

By using the opportunity provided by routine maintenance to modify pavement markings, the City of Missoula has incrementally, though significantly, expanded the nonmotorized network and improved safety for all users.

Challenges of Maintenance Projects

Though responsible for many successes, the approach of implementing Complete Streets through routine maintenance projects also comes with challenges. Though challenges can manifest differently depending on the project, the limitation of implementing Complete Streets through pavement maintenance is primarily one of scale.

Maintenance work can be limited to especially degraded pavement areas and not alter enough of the surface to completely erase existing striping, rendering new striping infeasible. When maintenance projects do extend the full width of the pavement, they sometimes improve short sections of streets, so added bike facilities can be left incomplete or disconnected. Maintenance projects do not typically include any work behind the curb, meaning missing sidewalks and curb ramps stay missing and accessibility and mobility for stroller users, wheelchair users, and other people with disabilities does not improve. Aside from not delivering the benefits of complete connections, this piecemeal approach can also make it challenging to communicate the project benefits it does deliver to people primed to disagree with any striping changes.

Maintenance projects work within existing curb lines, so trade-offs between users need to be made – usually swapping parking for bike lanes. This can lead to installation of bike facilities that do not provide enough separation to meet adopted goals, anger from adjacent property owners, or both. Staff conducts outreach and opportunities for public comment for all changes to how right-of-way is being used. However, the compressed timeline and relatively small-scale public process has led to some people feeling unprepared for the changes to the street in front of their house or business, sometimes even elevating opposition to these projects to City Council or the mayor’s office.

Despite the challenges and limitations described here, routine pavement maintenance remains a crucial opportunity for Missoula to implement Complete Streets principles.

Neighborhood Traffic Management Program (NTMP)

Established in 2020, the NTMP plays an important role in promoting Complete Streets goals through targeted traffic calming measures. The program focuses on enhancing safety, improving walkability, and creating more livable neighborhoods by addressing traffic-related issues at the neighborhood level through the use of “quick-build” interventions such as traffic circles, bulb outs, and at-grade pedestrian walkways made of striping, signage, and plastic delineators, as well as asphalt speed humps.

Project Impacts and Challenges

Impact on Safety and Connectivity

The NTMP in Missoula is aimed at enhancing safety and optimizing traffic conditions across the City’s neighborhoods. Though often not directly adding new bike and walk facilities, the NTMP has significantly mitigated risks and improved conditions for pedestrians and cyclists through various strategic interventions. The program has completed safety enhancements on 26 streets and over 65 intersections within Missoula.

One of the primary benefits of the NTMP is the substantial improvement in safety along designated streets and intersections. Through measures such as speed reduction initiatives and traffic calming techniques, the program has effectively reduced the likelihood of accidents and collisions involving pedestrians and cyclists, often on streets without separate space for doing so.

Measures such as enhanced sight lines at intersections and reduced crossing distances have made navigating roadways safer and more accessible for pedestrians and cyclists. Additionally, the implementation of traffic calming measures has facilitated a more pedestrian-friendly environment by discouraging high-speed traffic and promoting shared road spaces.

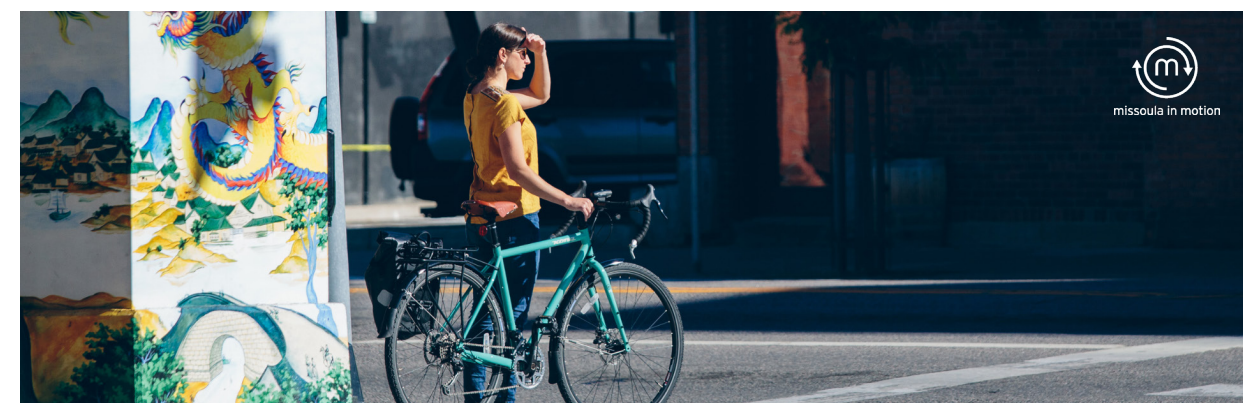
The NTMP is also successful in reducing vehicle speeds and cut-through volumes along residential streets. By implementing traffic calming measures such as speed humps, traffic circles, and chicanes, the program has effectively slowed down vehicular traffic, making streets safer

for pedestrians and cyclists. Moreover, the reduction in cut-through volumes has minimized the potential conflicts between vehicles and vulnerable road users, thereby enhancing overall safety and promoting active transportation modes.

Challenges of NTMP Projects

While the NTMP has shown significant benefits in improving safety and traffic conditions within residential areas, several limitations and challenges exist. One of the primary challenges facing the NTMP is the limited financial resources available for implementation. Funding can constrain the scale and scope of the program, limiting the implementation of infrastructure improvements. There have been frequent complaints about the aesthetics of the quick build features, even from program/project supporters.

Additionally, the lack of a clear public process for community input poses a challenge. Despite the fact that many of the projects implemented through the NTMP were requested by community members, and that staff conducted targeted outreach prior to all project implementation, the absence of a structured public engagement process has led to some community resistance to proposed traffic management interventions. The NTMP’s focus on local streets and intersections has also prompted questions and concerns regarding its prioritization of resources. Some members of the community have raised concerns about the program’s limited emphasis on addressing traffic issues on busier arterial roads and thoroughfares, which they view as larger problems. Finally, NTMP projects often must work within existing conditions, and projects have been therefore modified and/or delayed due to poor pavement condition, lack of curbs, steep roadway crowns, and impending water and sewer projects, leading to the persistence of unsafe conditions or compromised efficacy of the treatments installed.



NTMP Projects 2020 to 2023: Summary of Project Details

Year	Street	Extent	Need for Project	Solutions	Speed Reduction	Volume Reduction	Summary
2020	Franklin	Ivy to Brooks	Speeding, cut through, crashes	Calming Circles (3), Stops Signs on Alternating Side Streets	50th percentile speeds range from 1% increase to 21% reduction	Traffic volume increased by 1 to 22%	Volumes saw a slight increase, but improvements in both speed percentiles and a reduction in percentage exceeding speed limits.
2020	Maurice	Beckwith to South	Speeding, crashes	Calming Circles (3), Stops Signs an Alternating Side Streets	50th percentile speed reduction ranging from 4 to 8%	Traffic volume increased by 45 to 71% (School in on post data)	Reduction in speeds, increase in volume as second dataset was recorded while school was in.
2020	Schilling	3rd to South	Establish NG, not moving Kemp problems over	Calming Circles (4), Bulb Outs (3)			
2020	Kemp	3rd to South	Speeding, cut through, crashes	Calming Circles (4), 4 Way Stops (2)	50th percentile speed reduction ranging from 12 to 19%	Traffic volume decreased by 24 to 75%	Significant reductions in traffic volumes and speeds.
2021	Missoula	Rattlesnake to Lolo	Speeding, cut through, bi-directional bike traffic and 1-way car lane, no ped space	Create Makeshift Sup On One Side Of Street, Speed Humps (4)	50th percentile speed reduction of 11%	Traffic volume decreased by 22 to 26%	Significant reductions in traffic volumes and speeds.
2021	Livingston	Bancroft to Park	Speeding, cut through, crashes - related to Sentinel	Alternating Calming Circle (1) and Stop Signs			
2021	Dearborn	Bancroft to Park	Speeding, cut through, crashes - related to Sentinel	Alternating Calming Circle (1) and Stop Signs			
2021	Fairview	Bancroft to Park	Speeding, cut through, crashes - related to Sentinel	Alternating Calming Circle (1) and Stop Signs			
2021	S 3rd St W	Myrtle Intersection	Speeding, pedestrian safety, intersection visibility	Bulb outs (4), parklets (2), crosswalks			
2022	Alder	Orange to Toole	Speeding, cut through, crashes	Change Stop Direction, Bulb Outs (4), Angled Parking	50th percentile speed reduction ranging from 15 to 26%	Traffic volume ranged from 1% increase to 12% reduction	Traffic volumes remained stable or decreased. Consistent reduction of speeds and percentage exceeding speed limits.
2022	Simons	High Park to Hillview	Speeding, crashes	Speed Humps (3)			
2022	Normans	Crestview to High Park	Speeding, crashes	Speed Humps (2)			
2022	Holmes	Defoe intersection	Establish NG, placemaking	Calming Circle			
2023	N 3rd	Grand intersection	Cut through, crashes, highway traffic getting lost	Interstate Wayfinding Signs, Bulb Outs (1)			
2023	Park	Mount to Benton	Speeding, crashes, establish NG	Calming Circles (4), Bulb Outs (1) at Ng Intersection (Kent)			
2023	Kent	Gerald to Bancroft	Speeding, crashes, establish NG	Calming Circles (2), Bulb Outs (1) at Ng Intersection (Gerald)			
2023	Central	Higgins to Bancroft	Crashes, school, not exacerbate issues from Kent	Alternating Calming Circles (2) and Stop Signs			
2023	Sussex	Higgins to Bancroft	School, not exacerbate issues from Kent, Central	Alternating Calming Circle (1) and Stop Signs			
2023	North	Higgins to Bancroft	Crashes, off set intersections	Stop Signs			
2023	Thames	Mount to North	Sight triangles, inconsistency within neighborhood	Stop Signs			
2023	Hollis	Mount to North	Sight triangles, inconsistency within neighborhood	Stop Signs			
2023	Livingston	Higgins to Park	Crashes, sight triangles, consistency	Calming Circle (1)			
2023	Dearborn	Higgins to Park	Crashes, sight triangles, consistency	Calming Circle (1), Stop Signs			
2023	Fairview	Higgins to Park	Crashes, sight triangles, consistency	Calming Circle (1), Stop Signs			
2023	Benton	Higgins to Bancroft	Speeding, elementary school, establish NG	Speed Humps (1), Calming Circle (1)			
2023	McDonald	Russell to Paxson	Speeding, crashes	Speed Hump, Bulbouts, Calming Circle			

NTMP POST PROJECT DATA

Since 2020, the NTMP has implemented projects at 26 locations, ranging from single intersections to mile-plus-long corridors. The impacts listed here represent differences in vehicle speeds and volumes following project implementation. Post-project data is typically more reliable when collected at least one year post installation, giving time for people and traffic patterns to adjust to the modifications. Data is therefore unavailable for some 2022 and all 2023 projects. NTMP projects are too recent to draw definitive conclusions about impacts on crash trends; however, anecdotal evidence suggests crash frequency has been reduced or eliminated at all project locations.

TRANSIT

Street-level improvements have been implemented to enhance access to transit stops, facilitating more convenient transportation options. These enhancements are intended to prioritize pedestrian and transit user safety, improve connectivity, and promote the use of public transportation within Missoula.

Russell Street (Phase I)

The first phase of the Russell Street project incorporated a number of enhancements to improve public transit accessibility. Four covered bus shelters were installed along the route to provide protection from the elements for waiting passengers. Additionally, accessible boarding and alighting areas were constructed to facilitate ease of access for individuals with mobility challenges. Upgraded seating was also installed at these stops. The addition of a trash receptacle helps to maintain cleanliness and tidiness at the bus stops. The in-lane stop and wrap-around bike lane design of the stops maximized bus efficiency and minimize conflicts between buses and bicyclists.

Bus Stop Master Plan (Phase I and II)

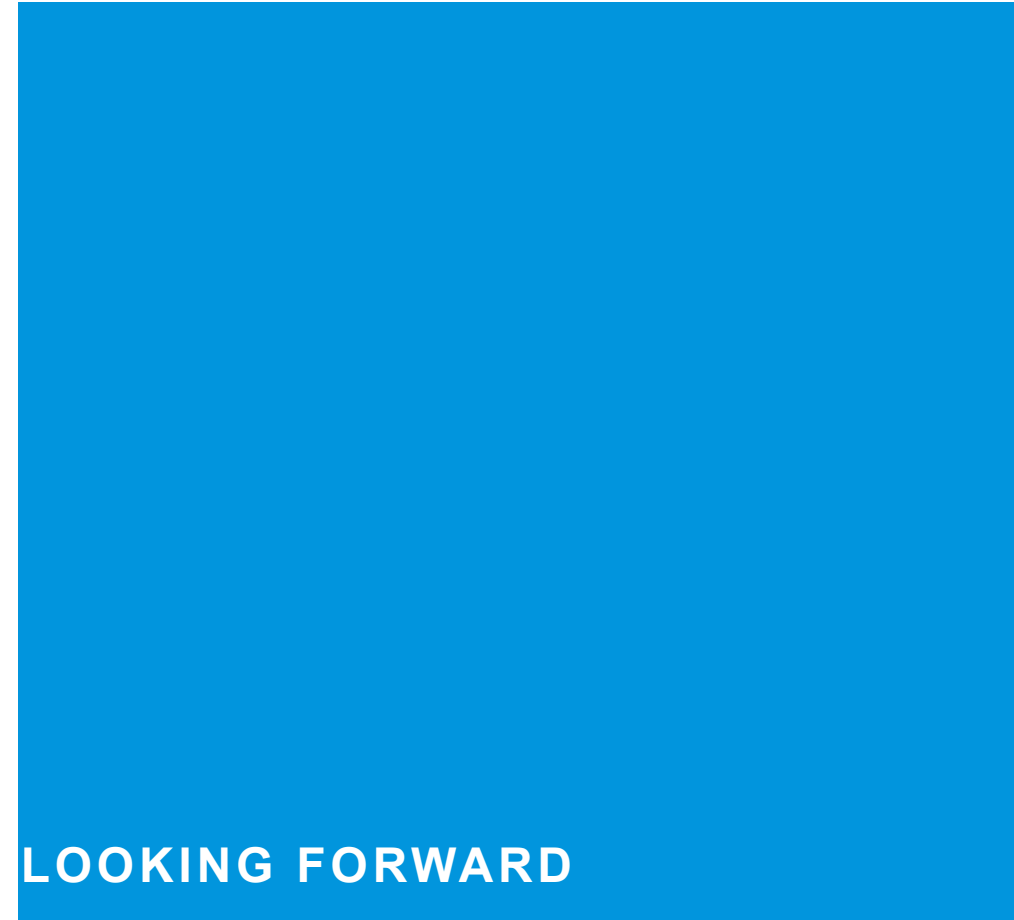
In 2018, Mountain Line secured a \$2.7 million federal Bus and Bus Facilities grant to fund its Bus Stop Master Plan. The plan entails updating signage at all bus stops district-wide and enhancing passenger amenities. The plan aims to improve safety by relocating bus stops to the far-side of intersections, reducing conflicts between vehicles and pedestrians. The plan also focuses on increasing accessibility to bus stops, enhancing transit accessibility and seeks to maximize service efficiency by consolidating under-utilized bus stops. The facilities grant provided for the sign updates and stop consolidation components of the plan, as well as accessibility and safety improvements to all stops. ¹

¹ <https://mountainline.com/wp-content/uploads/2020/02/Bus-Stop-Master-Plan-2020-Update.pdf>



MOAB TRANSIT CENTER

Mountain Line's proposal for a new Maintenance, Operations, and Administration Base (MOAB) was chosen by the Federal Transit Administration for federal infrastructure funding. The project will address the need for a new facility to accommodate Missoula's growing population and demand for public transit. The facility will support Mountain Line's transition to a more sustainable transit system and facilitate future growth, including planned projects such as Bus Rapid Transit along the Brooks Street corridor.



Trending Towards Better Transportation Infrastructure

Over the past decade, Missoula’s leaders, planners, and engineers, guided by the 2016 update of the Complete Street policy, have emphasized the development of streets that are safe, accessible, and accommodating for all users. City planning efforts have increasingly incorporated Complete Streets principles, guiding projects to achieve more balanced and inclusive transportation infrastructure.

Adopting Complete Streets policy has resulted in the integration of pedestrian, cyclist, and transit infrastructure into street design and development plans. City planners prioritize the creation of sidewalks, bike lanes, crosswalks, and transit stops that cater to the needs of all users, promoting multimodal transportation and reducing reliance on single-occupancy vehicles. Additionally, the adoption

of Complete Streets has led to the implementation of traffic calming measures, such as traffic circles, speed humps, and curb extensions, which enhance safety and improve street-level connectivity for pedestrians and cyclists. By prioritizing pedestrian accessibility and multimodal connectivity, the city continues to work towards creating a safer, more connected community.

Accomplished Complete Street Projects

Project Metrics	2016 to 2023
Linear Feet of New Pedestrian Accommodation:	28,579 ft. (5 Miles)
Total miles of Dedicated Bike Facilities Built or Striped:	109,160 ft. (21 Miles)
Number of new curb ramps installed along city streets:	109 curb ramps
Number of new street trees planted:	168 trees
Pedestrian Underpasses:	4 Underpasses
Crosswalks:	31 Crosswalks
Roundabouts:	4 Roundabouts
Calming Circles:	32 Circles
Bulb Outs:	14 Bulb Outs
Speed Humps:	12 Speed Humps
Four Way Stops:	2 Four Way Stops
Parklets:	2 Parklets
Additional Features Include:	Angled Parking Conversion, Shared Lane Markings (Sharrows), Interstate Wayfinding Signs, and Dozens of Stop Signs.
ADA Bus Stops:	Over 80 bus stops upgraded to meet ADA standards, including a range of amenities per the Mtn Line Bus Stop Master Plan.

The development of Complete Streets is one aspect of broader efforts in Missoula aimed at establishing a comprehensive multimodal transportation network. Complemented by greenways and pedestrian trails, today’s approach to transportation reflects a commitment to enhancing connectivity, promoting active transportation, and accommodating diverse mobility needs throughout Missoula. This work will continue into the future.

Future Projects

Planned projects in Missoula continue to commit to Complete Street policies, striving to create safe transportation networks across the City. These projects illustrate the continuing trend in Missoula towards more accessible and sustainable transportation.

Downtown Safety–Access–Mobility (DowntownSAM)

The DowntownSAM project encompasses several initiatives aimed at improving transportation infrastructure and safety in downtown Missoula. Higgins Avenue will be reconfigured from four lanes to three, allowing for dedicated left turn lanes, protected bike lanes, wider sidewalks, and other enhancements while reducing crashes by up to 50%. Front and Main Streets will be converted to two-way traffic, with intersection improvements and a protected bicycle loop. Riverfront Trail connections will widen pathways and create ADA-accessible routes, improving connectivity between the Central Business District and the Riverfront Trail system. Additionally, downtown signal optimization will upgrade signal hardware and improve traffic flow. ¹



Ivy/Franklin and Turner/Worden Complete Streets

2024 will see the construction of two city-initiated projects aimed at improving safety, accessibility, and mobility for all users. Ivy/Franklin is a key link in the Neighborhood Greenway network and this project will complete the sidewalks and make the quick-build traffic calming features permanent along the route. Turner/Worden are local collectors traversing the Northside neighborhood, and this project implements Complete Streets principles with the addition of sidewalks, bike lanes, and accessible bus stops. Both projects have awarded bids to qualified contractors and construction is slated to begin this spring.

Transform Brooks – Connect Midtown

To address the demand for inward growth and enhance transportation along Brooks Street and the broader Midtown area, the City initiated the Transform Brooks – Connect Midtown Detailed Planning Study. The study builds upon previous community-engaged efforts in 2016 and 2020, which recommended bus-rapid transit (BRT) and transit-oriented development (TOD). The current study aims to define safety and mobility improvements along Brooks Street from Reserve Street to Mount Avenue, developing concept-level designs for transit, walking, biking, and roadway enhancements. ²

Reserve Street Community Input/Safety Study

The Reserve Street Community Input Project, led by the MPO, aims to enhance the experience of individuals using Reserve Street through a community-driven approach. The project seeks to identify factors impacting safety, accessibility, comfort, and livability along Reserve Street. By gathering input from residents, shoppers, employees, and other users of Reserve Street, the project aims to understand current experiences and expectations, informing future planning and improvements for the area. Additionally, the Reserve Street Safety Study focuses on identifying and implementing safety improvements along Reserve Street. ³



¹ <https://www.engagemissoula.com/downtown-safety-access-mobility-project>

² <https://www.engagemissoula.com/transform-brooks-connect-midtown>

³ <https://www.missoulampo.com/reserve-street-community-input>

City of Missoula
Complete Streets Progress Report
March, 2024
Missoula MPO

