



# MINNESOTA STATEWIDE BICYCLE SYSTEM PLAN

## 2016 – 2020 Work Plan and Implementation Activities

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### INTRODUCTION

The [Minnesota Statewide Bicycle System Plan](#) presents nineteen strategies that articulate how MnDOT will achieve the plan's vision of creating a state where **bicycling is a safe, convenient, and comfortable transportation option for all people**. Some of these strategies describe activities MnDOT is already in process of completing and will continue. Other strategies will be implemented by initiating new activities or by revising existing processes. Together, the strategies documented in the statewide bicycle system plan define MnDOT's intended activities toward realizing the plan's vision.

In order to assist partners in understanding how MnDOT will advance all of the plan's nineteen strategies, this work plan provides an overview of actionable steps the agency will undertake to support each strategy. Each strategy is presented in this work plan with discrete actions that will be initiated within the next five years. Many strategies describe long-term or on-going efforts that cannot be "concluded" in a five-year timeframe; the implementation activities are intended to describe measurable and achievable actions that *can* be taken within this time period to forward long-term outcomes. This work plan is intended to be a living document that will be revised periodically before being updated in a future planning process.

### STRATEGY OVERVIEW

**STRATEGY 1.** Establish a local bicycle planning technical assistance program to advance collaboration toward a bicycle system that conveniently connects people to important destinations by bicycle.

**STRATEGY 2.** Coordinate and consider regional and local partner participation in MnDOT plans and projects to efficiently respond to critical local and regional bicycle connections.

**STRATEGY 3.** Continue supporting efforts to allow local jurisdictions flexibility in choosing road designs that support bicycle travel.

**STRATEGY 4.** Build bicycle facilities that have the appropriate amount of separation from motor vehicle traffic based on the local context.

**STRATEGY 5.** Develop a process to annually track bicycle infrastructure investments by MnDOT district and statewide.

**STRATEGY 6.** Include bicycling infrastructure as an asset in the formal Transportation Asset Management Plan process.

**STRATEGY 7.** Continue bi-annual data collection to update bicycle-related information available for state, county and local roadways.

**STRATEGY 8.** Develop a bicycle safety plan using a data-driven, interdisciplinary approach that targets areas for improvement and employs proven countermeasures to enhance bicycling safety.

**STRATEGY 9.** Using the State Bikeway Network as guidance, work with local agencies and partners to designate routes as state bikeways and as United States Bicycle Routes (e.g. Mississippi River Trail Bikeway/USBR 45).

**STRATEGY 10.** Work with partners to develop and evaluate/update route and promote designated routes.



**STRATEGY 11.** Work with partners to improve and sign designated state bicycle routes to enhance the convenience and comfort of these facilities.

**STRATEGY 12.** Maintain up-to-date information about implementation of the State Bikeway Network through consistent and centralized data collection.

**STRATEGY 13.** Promote safe driving/bicycling behaviors by developing educational materials and supporting partners in sharing these messages with bicyclists and drivers (e.g. Share the Road).

**STRATEGY 14.** Work directly with state, regional and local efforts to enforce laws that make bicycling safer.

**STRATEGY 15.** Create a statewide bicycle traffic monitoring program to count and estimate bicycle traffic volumes at selected locations throughout the state.

**STRATEGY 16.** Encourage bikeway system use by updating and publishing the Minnesota Bicycle Map every two years. *(NOTE: the statewide bicycle map collects data and information from local partners and is to be updated every other year.)*

**STRATEGY 17.** Share information about bicycling opportunities in Minnesota to encourage ridership.

**STRATEGY 18.** Update the Statewide Bicycle System Plan every five years.

**STRATEGY 19.** Review the Minnesota Bikeway Facility Design Manual every two years to ensure standards reflect current conditions and are consistent with other MnDOT policies. Full manual updates will be periodic and respond to industry innovations.

## MINNESOTA STATEWIDE BICYCLE SYSTEM PLAN IMPLEMENTATION ACTIVITIES

**STRATEGY 1: Establish a local bicycle planning technical assistance program to advance collaboration toward a bicycle system that conveniently connects people to important destinations by bike.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Develop a framework for supporting community active transportation plans; identify opportunities for improved mode coordination	<ul style="list-style-type: none"> <li>Past TIGER proposal framework</li> <li>Complete Streets scoping collection forms</li> <li>Capital Highway Investment Plan</li> </ul>	09/2016 – 12/2016	Framework developed Technical assistance and planning Program established. XX% of MnDOT district projects refer to community active transportation plans when scoping projects
Explore funding sources, including external	<ul style="list-style-type: none"> <li>Case studies</li> </ul>	02/2017 - 05/2017	Memo assessing potential funding sources
Pilot planning process with MnDOT district, and determine scope of work for local active transportation plans	<ul style="list-style-type: none"> <li>Communities identified</li> </ul>	12/2017	3-5 community level plans complete
Explore collaborating with Met Council staff to provide an expanded level of technical bicycle planning resources to assist local agencies in the region to plan and implement their local bikeway systems.	<ul style="list-style-type: none"> <li>2018 Comprehensive plan process</li> </ul>	01/2019 - 12/2020	Technical assistance structure and system identified

**STRATEGY 2: Coordinate and consider regional and local partner participation in MnDOT plans and projects to efficiently respond to critical local and regional bicycle connections.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Identify MnDOT District projects in the Capital Highway Investment Plan near or connecting into local bicycle networks or proposed state bicycle route corridors	<ul style="list-style-type: none"> <li>Capital Highway Investment Plan</li> </ul>	Ongoing	District projects identified
Coordinate with local and regional partners	<ul style="list-style-type: none"> <li>Regional Development Commissions</li> <li>Municipalities &amp; Counties</li> <li>Bicycle advocacy</li> <li>Local Public Health,</li> </ul>	Ongoing	Partners informed Bicycle network connections made

	Health Improvement Efforts		
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**STRATEGY 3: Continue supporting efforts to allow local jurisdictions flexibility in choosing road designs that support bicycle travel.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
State aid rule process review and update	<ul style="list-style-type: none"> <li>State Aid</li> <li>Office of Transit</li> </ul>	12/2016	Updated state aid rules increasing flexibility
Implementation of Complete Streets scoping worksheet	<ul style="list-style-type: none"> <li>Office of Transportation System Management</li> <li>Office of Transit</li> </ul>	12/2016	Increased understanding of how complete streets implementation is happening
Update MnDOT's Bicycle Design	<ul style="list-style-type: none"> <li>Office of Traffic Safety and Technology</li> <li>Office of Transit</li> </ul>	12/2016	Minnesota Department of Transportation Bicycle Design Manual adopted

**STRATEGY 4: Build bicycle facilities that have the appropriate amount of separation from motor vehicle traffic based on the local context.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Publish and put into practice the 5-step Design Process in the Bike Manual to assist designers in choosing the correct amount of separation based on context.	<ul style="list-style-type: none"> <li>Office of Traffic Safety and Technology</li> <li>Office of Transit</li> <li>District Offices</li> </ul>	2016-17	Bike Manual printed
Provide training on the Bike Manual and design criteria	<ul style="list-style-type: none"> <li>Office of Traffic Safety and Technology</li> <li>Office of Transit</li> </ul>	2017 - 2019	Training provided to MnDOT practitioners
Provide input into designs currently in progress to achieve this goal	<ul style="list-style-type: none"> <li>Office of Traffic Safety and Technology</li> <li>Office of Transit</li> <li>Districts Offices</li> </ul>	Ongoing	Identify the number of projects exploring separated facilities in the scoping process. XX% of projects scoped identify and carry out separated facilities. Establish a spreadsheet and include proposed, implemented, not-implemented; track district projects for bicycle investments

**STRATEGY 5: Develop a process to annually track bicycle infrastructure investments by MnDOT districts and**

statewide.

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Work with Office of Transportation System Management to establish a process	<ul style="list-style-type: none"> <li>Office of Transportation System Management – Investment Planning Unit</li> </ul>	03/2016 – 06/2016	Process documented
Meet with District Planners to undertake proposed process and develop subsequent report	<ul style="list-style-type: none"> <li>MnDOT District staff</li> </ul>	06/2016 – 12/2016	Report developed
Evaluate process and make modifications	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	12/2016 – 12/2017	Process recommendations made
Assign to staff and complete annually	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	03/2017 – 12/2020	Staff monitors progress with district planners

**STRATEGY 6: Include bicycling infrastructure as an asset in the formal Transportation Asset Management Plan process.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Coordinate with the Asset Management Planning Director to ensure consideration of inclusion of bicycle facilities in phase three of the Transportation Asset Management Plan	<ul style="list-style-type: none"> <li>Office of Transportation System Management</li> <li>Office of Transit</li> </ul>	2018 - 2019	Increased coordination and opportunities identified for tracking assets related to bicycling
Conduct a comprehensive Inventory of bicycle facilities and shared use paths	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management</li> <li>Operations Division: Americans with Disabilities Program</li> </ul>	2018 – 2019	Inventory of bicycle infrastructure and facilities completed
Identify assets for bicycle facilities, what is currently collected and what should be measured	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management</li> </ul>	2018 - 2019	Assets identified for bicycling facilities and measures established

**STRATEGY 7: Continue bi-annual data collection to update bicycle-related information available for state, county and local roadways.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
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Add an attribute to bicycle map status updates where city, county, state staff can submit bicycle data other than shoulder width and expand to include (bicycle lanes, separated facilities, trails)	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Counties</li> <li>• Office of Transit</li> <li>• Office of Transportation System Management – Geographic Info &amp; Mapping, Data Systems</li> </ul>	2017-2018	Develop a spreadsheet that tracks the number of print maps printed and where they are distributed
Input the data into Linear Referencing System (LRS)	<ul style="list-style-type: none"> <li>• Office of Transit</li> <li>• Office of Transportation System Management – Geographic Info &amp; Mapping, Data Systems</li> </ul>	9/2016-6/2017	Data entered into the Linear Referencing System
Develop a system (whether electronic or print) for collecting status updates from 87 counties every other year.	<ul style="list-style-type: none"> <li>• Office of Transit</li> </ul>	1/2017 – 7/2017	Data collected from counties consistently
Create county level maps	<ul style="list-style-type: none"> <li>• Office of Transit</li> <li>• County data</li> </ul>	2017 - 2019	County level bicycle maps created in 2017 County level bicycle maps updated 2019

**STRATEGY 8: Develop a bicycling safety plan using a data-drive, interdisciplinary approach that targets areas for improvement and employs proven countermeasures to enhance bicycling safety.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Develop a scope of work for a bicycle safety plan.	<ul style="list-style-type: none"> <li>• Office of Traffic Safety and Technology</li> <li>• Office of Transit</li> </ul>	2017-2019	Scope of work created
Identify interdisciplinary partners to support plan	<ul style="list-style-type: none"> <li>• Office of Traffic Safety and Technology</li> <li>• Office of Transit</li> </ul>	1/2017 – 3/2017	Partners identified and convened
Identify funding resources for plan		12/2017	Districts have resources to make decisions about bicycle improvements, and provide systemic solutions for safe bicycling facilities

**STRATEGY 9: Using the State Bicycle Network as guidance, work with local agencies and partners to designate routes as state bicycle routes and as United States Bicycle Routes (e.g., Mississippi River Trail Bicycle Route / USBR 45).**

Activity	Key Resources	Time Frame	Anticipated Outputs
Develop bicycle route planning guide (how, why, what)	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Adventure Cycling</li> </ul>	6/2016 – 9/2017	Planning guide developed
Establish USBR 41 (use the guide)	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Project Advisory Committee</li> </ul>	6/2016- 3/2017	USBR 41 identified
Determine criteria for prioritizing development of state bicycle route	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	6/2016- 9/2017	Criteria identified for priorities

**STRATEGY 10: Work with partners to develop and evaluate / update route and promote designated routes.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Coordinate with Explore Minnesota Tourism	<ul style="list-style-type: none"> <li>Explore MNTourism</li> </ul>	Ongoing	Routes promoted
Identify process for updating state bicycle routes	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	2018	Process identified and implemented

**STRATEGY 11: Work with partners to improve and sign designated state bicycle routes to enhance the convenience and comfort of these facilities.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Review Mississippi River Trail signage	<ul style="list-style-type: none"> <li>Manual on Uniform Traffic Control Devices</li> </ul>	Ongoing	Signage monitored and updated as needed
Identify opportunities beyond signage to promote and support state bicycle routes	<ul style="list-style-type: none"> <li>Office of transit</li> <li>Explore MN Tourism</li> </ul>	2018	Mapping and signage clarified for state bicycle routes

**STRATEGY 12: Maintain up-to-date information about implementation of the State Bicycle Network through consistent and centralized data collection.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Coordinate and align with Strategy 7 on data collection methods	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	2018 - 2019	State Bicycle Network information available in data collection system

**STRATEGY 13: Promote safe driving / bicycling behaviors by developing educational materials and supporting**

partners in sharing these messages with people bicycling and driving (e.g, Share the Road).

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Create a framework and process for developing comprehensive safety education	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> <li>Other safety education examples</li> </ul>	12/2016	Framework and scope of work developed
Identify partners to support development	<ul style="list-style-type: none"> <li>Office Transit</li> </ul>	9/2016 – 12/2016	Partners convened
Develop safety education and encouragement efforts	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> </ul>	6/2017 - 12/2018	Comprehensive safety education and encouragement developed & implemented
Integrate Safe Routes to School efforts with bicycle safety education	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	2017	Safe Routes to School curriculum integrated into bicycle safety education
Implement marketing and awareness campaign from Safe Routes to School	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Safe Routes to School Steering Committee</li> </ul>	2019-2020	Campaign implemented
Identify potential funding sources	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	2017-18	Funding identified

**STRATEGY 14: Work directly with state, regional and local efforts to enforce laws that make bicycling safer.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Coordinate with partners on enforcement of laws	<ul style="list-style-type: none"> <li>MN Department of Public Safety</li> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> </ul>	Ongoing	Clearly communicate state level laws for people bicycling, walking and driving
Monitor progress of Pedestrian Crossing Safety Evaluation	<ul style="list-style-type: none"> <li>MN Department of Public Safety</li> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> <li>Municipalities</li> </ul>	2017- 2018	Clarify effectiveness of enforcement in changing behavior of people using various modes

**STRATEGY 15: Create a statewide bicycle traffic monitoring program to count and estimate bicycle traffic volumes**



at selected locations throughout the state.

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Identify locations to install permanent automated counters	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management</li> </ul>	5/2016 – 12/2016	Permanent count locations identified
Install permanent automated counters throughout MN	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management</li> </ul>	5/2016 – 12/2017	Permanent counters installed
Create a database that pulls data in automatically from the permanent sites and can be updated with information from all short duration automated counts within Minnesota.	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management: Transportation – Transportation Data &amp; Analysis</li> </ul>	6/2016-10/2016	Database established for MnDOT practitioners
Use the permanent index sites to create adjustment factors to apply to short duration counts	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management: Transportation – Transportation Data &amp; Analysis</li> </ul>	12/2016	Adjustment factors determined and implemented
Release annual bike/ped count data evaluation report each January	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	1/2017 – 2/2017	Report released annually
Help partner agencies use the portable equipment and collect data at more than 25 locations in 2016	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Regional Planning Organizations</li> <li>District Offices</li> <li>Municipalities &amp; Counties</li> </ul>	5/2016- 2017	Technical Assistance provided to host agencies & partners
Encourage two or more agencies / organizations / governments to purchase their own equipment per year	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	2020	Additional equipment purchased for partner use
Establish a central repository for the count data (and GIS interface) to be housed	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Transportation System Management: Transportation – Transportation Data &amp; Analysis</li> </ul>	2017 – 2018	Database partners can access

	<ul style="list-style-type: none"> <li>• Software/database</li> </ul>		
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**STRATEGY 16: Encourage bicycle route system use by updating and publishing the Minnesota Bicycle Map every two years.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Advance electronic format of map and a county by county system.	<ul style="list-style-type: none"> <li>• Office of Transit</li> <li>• Office of Transportation System Management: Transportation – Transportation Data &amp; Analysis</li> </ul>	12/2017	Develop electronic maps for all 87 counties
Publish and print a statewide bicycle map	<ul style="list-style-type: none"> <li>• Office of Transit</li> <li>• Office of Transportation System Management: Transportation – Transportation Data &amp; Analysis</li> <li>• Explore MN Tourism</li> </ul>	5/2017	Printed statewide maps

**STRATEGY 17: Share information about bicycling opportunities in Minnesota to encourage ridership.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Identify the roles and responsibilities of partners in encouraging bicycling in MN.	<ul style="list-style-type: none"> <li>• State Non-motorized Transportation Committee</li> </ul>	2017	Partners identified and contacted
Coordinate with partners to encourage strategic events – e.g., Pedal MN and Walk/Bike to School Day, bicycle rides that highlight state routes	<ul style="list-style-type: none"> <li>• State Non-motorized Transportation Committee</li> <li>• Pedal MN</li> <li>• Safe Routes to School</li> </ul>	Ongoing	Events promoted and coordinated throughout MN
Identify opportunities to partner with priority populations (e.g., Cycles4Change, Women on Bikes, youth, etc.)	<ul style="list-style-type: none"> <li>• State Non-motorized Transportation Committee</li> <li>• Office of Transit</li> </ul>	2017 - 2018	Opportunities and efforts to partner and collaborate identified
Collaborate on projects, programs and events with partners to support bicycling	<ul style="list-style-type: none"> <li>• State Non-motorized Transportation Committee</li> </ul>	2018	Projects and programs implemented in collaboration with partners

**STRATEGY 18: Update the Statewide Bicycle System Plan every five years.**

Activity	Key Resources	Anticipated Completion	Anticipated Outputs
Develop district level bicycle system plans with identified networks	<ul style="list-style-type: none"> <li>Central Office support</li> <li>Operations Division</li> <li>Office of Transit</li> <li>Scope of work / framework</li> </ul>	01/2017 – 12/2017	Prioritized district plans developed
Document and identify emerging trends for future planning efforts	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	Ongoing	Emerging practices documented
Identify and convene Project Advisory Committee	<ul style="list-style-type: none"> <li>Office of Transit</li> </ul>	2018 – 2019	Project Advisory Committee identified and convened
Update Minnesota Statewide Bicycle System Plan	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Project Advisory Committee</li> </ul>	2020	Updated plan

**STRATEGY 19: Review the Minnesota Bicycle Facility Design Manual every two years to ensure standards reflect current conditions and are consistent with other MNDOT policies. Full manual updates will be periodic and respond to industry innovations.**

Activity	Key Resources	Time Frame	Anticipated Outputs
Review national guidance for bicycle design guidelines.	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> </ul>	Ongoing	National guidance and guidelines documented
Coordinate internally with MnDOT functional groups, related manuals and new technical memos	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> </ul>	Ongoing	Alignment and leverage opportunities with functional groups, related manuals and technical memos
Update manual for important updates as needed	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> </ul>	2016 - 2017	Manual updated
Develop and update training in relation to manual as needed	<ul style="list-style-type: none"> <li>Office of Transit</li> <li>Office of Traffic Safety &amp; Technology</li> </ul>	2017 – 2019	Training developed, implemented, and updated

