State Aid Rules Revision (Chapter 8820)

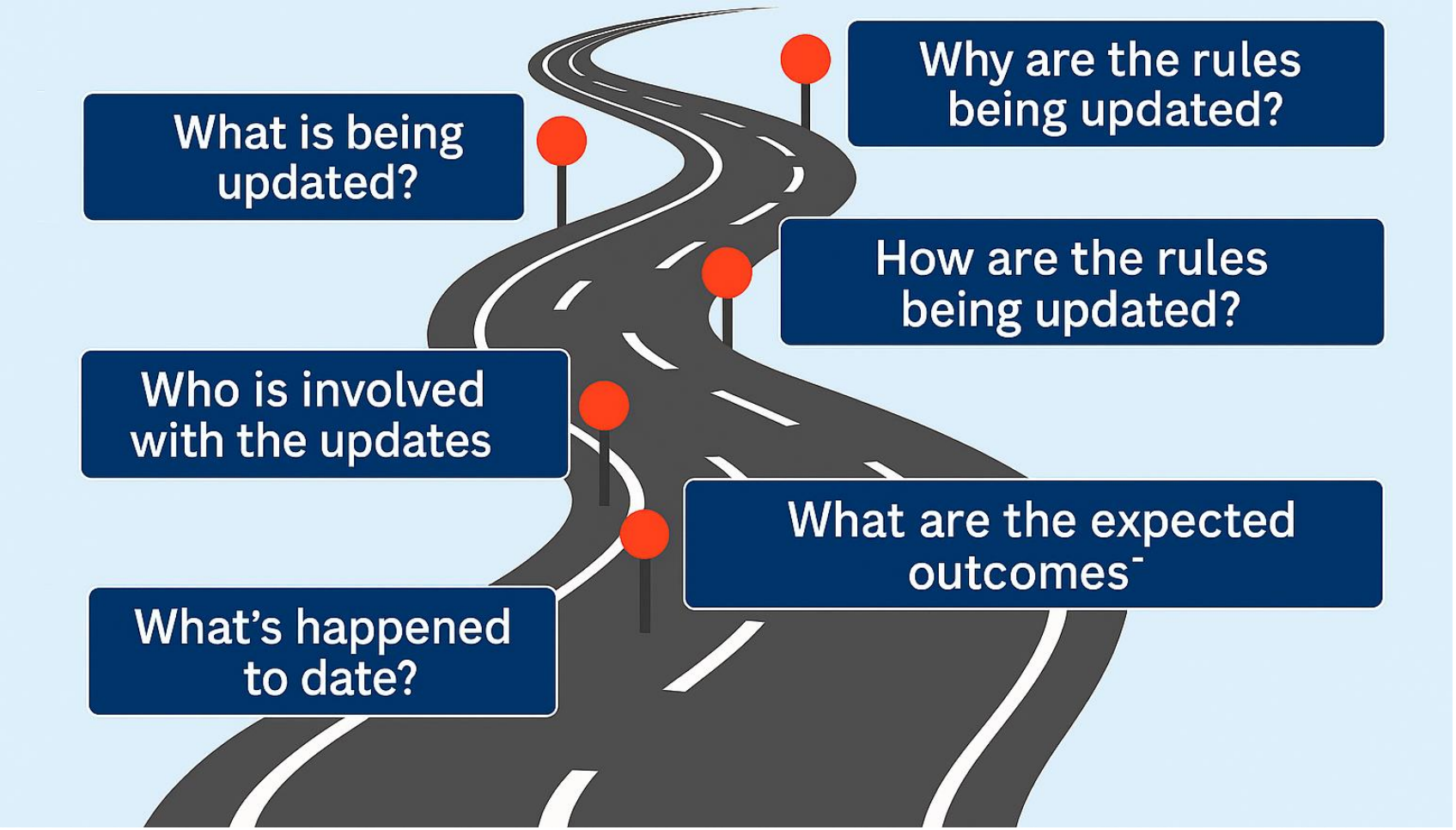
MCEA Summer Meeting – June 12, 2026

Meet our Presenters

Tim Becker
Sibley County Engineer

Chris Byrd
Stearns County Engineer

Our Presentation Roadmap



What is being updated?

What is the State Aid System

- Developed to provide vital, high-quality connections necessary for the overall state highway network to function well
- State aid system typically:
  - Carry heavier traffic volumes
  - Connect major points of interest
  - Provide an integrated and coordinated road system

Chapter 8820 Governs State Aid System

Chapter 8820 of Minnesota Rules carries the forces of law and sets the design standards and funding eligibility for Municipal State Aid Streets and County State Aid Highways across the state.

Minimum design standards for roads and bridges on state aid system which include, but are not limited to:

- Designation and revocation
- Contract/bidding requirements
- Variance from the standards
- Local road research
- Minimum maintenance requirements
- Geometric standards
- Pavement structural strength
- Natural preservation routes
- Bicycle path standards

8820.9941 MINIMUM DESIGN STANDARDS: ON-ROAD BICYCLE FACILITY FOR URBAN; NEW OR RECONSTRUCTION PROJECTS.

The bicycle facility design standard in this part applies when the road authority has determined that the roadway will be specifically designed to include an on-road bicycle facility.

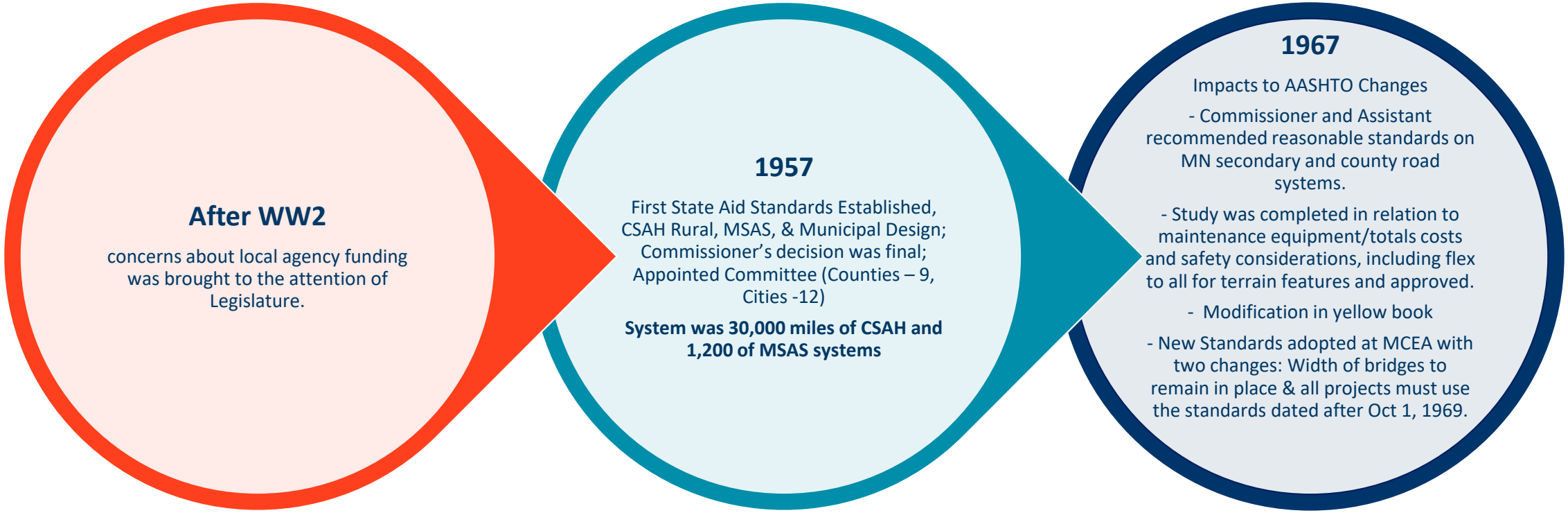
New or reconstruction projects for urban roadways must meet or exceed the dimensions indicated in the following design chart.

Projected Traffic Volume	Design Speed	Lane Width (a)	Curb Reaction Distance (c)	Parking Lane Width (e)	Bikeway Design Roadways with Two Travel Lanes		Bikeway Design Roadways with Four or more Travel Lanes Urban
	(mph)	(feet)	(feet)	(feet)	(ADT)	(feet)	(feet)
ADT <2,000	25-30	10-11 (b)	1-2 (d)	7-8	<500	SL	N/A
					500-2,000	WOL 14-16 or BL 5-6	
	35-45	10-11 (b)	1-2 (d)	7-8	<500	SL or BL 5	BL 5-6
					500-2,000	WOL 14-16 or BL 5-6	
	50 or over	11-12	2	8-10		BL 5-6	BL 5-6
ADT 2,000-5,000	25-30	10-11 (b)	1-2 (d)	7-8		WOL 14-16 or BL 5-6	WOL 14-16 or BL 5-6
	35-45	10-11 (b)	1-2 (d)	7-8		BL 5-6	BL 5-6
	50 or over	11-12	2	8-10		BL-6	BL 6
ADT 5,000-10,000	25-30	10-11 (b)	1-2 (d)	7-8		BL 5-6	WOL 14-16 or BL 5-6
	35-45	10-11 (b)	1-2 (d)	7-8		BL 5-6 or PS 8	BL 5-6
	50 or over	11-12	2	8-10		BL 6 or PS 8 or SUP	BL 6 or PS 8 or SUP
ADT >10,000	30-35	10-11 (b)	1-2 (d)	7-10		BL 6 or PS 8-10 or SUP	BL 6 or PS 8-10 or SUP
	40-45	11-12	1-4	7-10		BL 6 or PS 8-10 or SUP	BL 6 or PS 8-10 or SUP
	50 or over	11-12	2-4	Not allowed		BL 6 or PS 8-10 or SUP	BL 6 or PS 8-10 or SUP

(SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder; SUP = shared use path)

Example rule: 8820.9941

History of Chapter 8820



Timeline for Previous Rules Revisions (1969 -2013)

1969
County & State Aid Developed and Added a Separate Design Standards from AASHTO

1972
Special Resurfacing Standards Were Added

1975
Standards Changed to Accommodate Bicycle

1985
Standards for Forest Highways Within National Forests and State Park Access Roads Were Added

1991
Significant Revision and Reorganization of Standards

- Rural Undivided Geometric Standards

1993
Standards for National Preservation Routes were Added

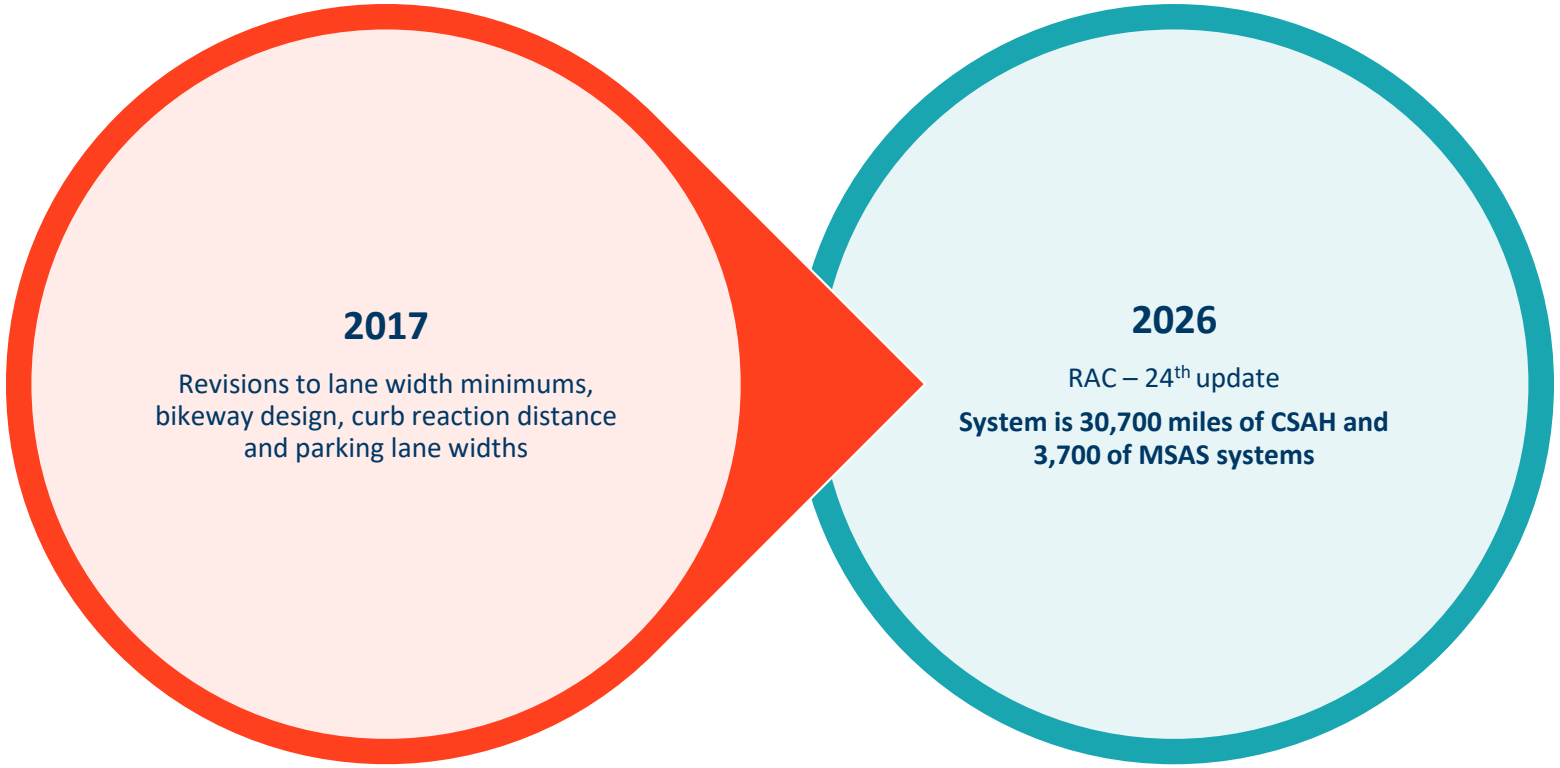
1995
Significant Revision and Reorganization of Standards; Standards for Bike Path Were Added

1999
Standards for Suburban; New or Reconstruction Were Removed

2004
Standards for Off-System Bridges and Approach Roadways Were Added

2013
Standards for Roadways With On-Road Bicycle Facility Were Added

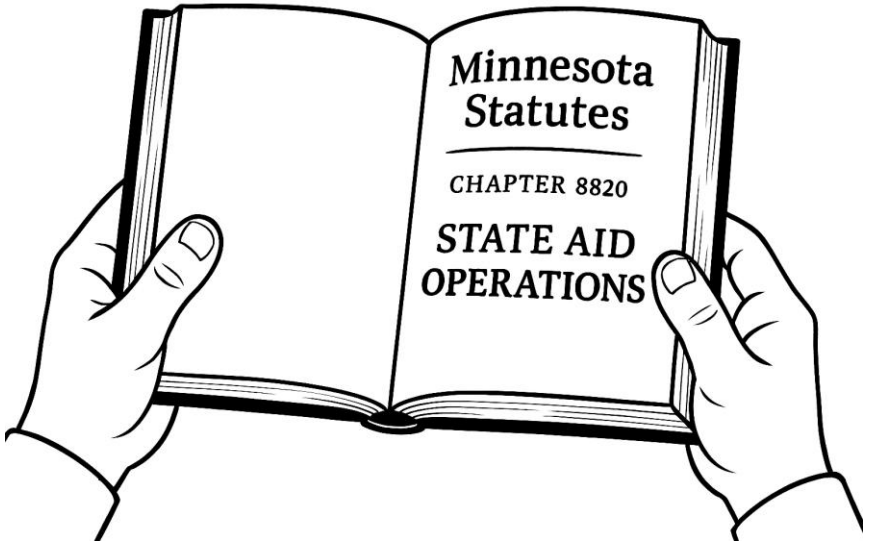
Timeline – (2017 - Now)



Why are the Rules being updated?

Importance of the Update

- To modernize rule and language and update minimum design standards for increased flexibility
- To align with current engineer practices, statutes, and safety practices
- To ensure the traveler's experience a transportation system that operates consistently no matter where they are in Minnesota
- To address emerging transportation needs and practices
- To evaluate variance trends and processes to reduce unnecessary exceptions
- To develop new rules where gaps are identified




Who is involved with the updates?

SADAC and RAC

State Aid Design Advisory Committee (SADAC)

Reviews revision requests, determines needed research, evaluates resources and provides recommendations to the RAC

Rules Advisory Committee (RAC)

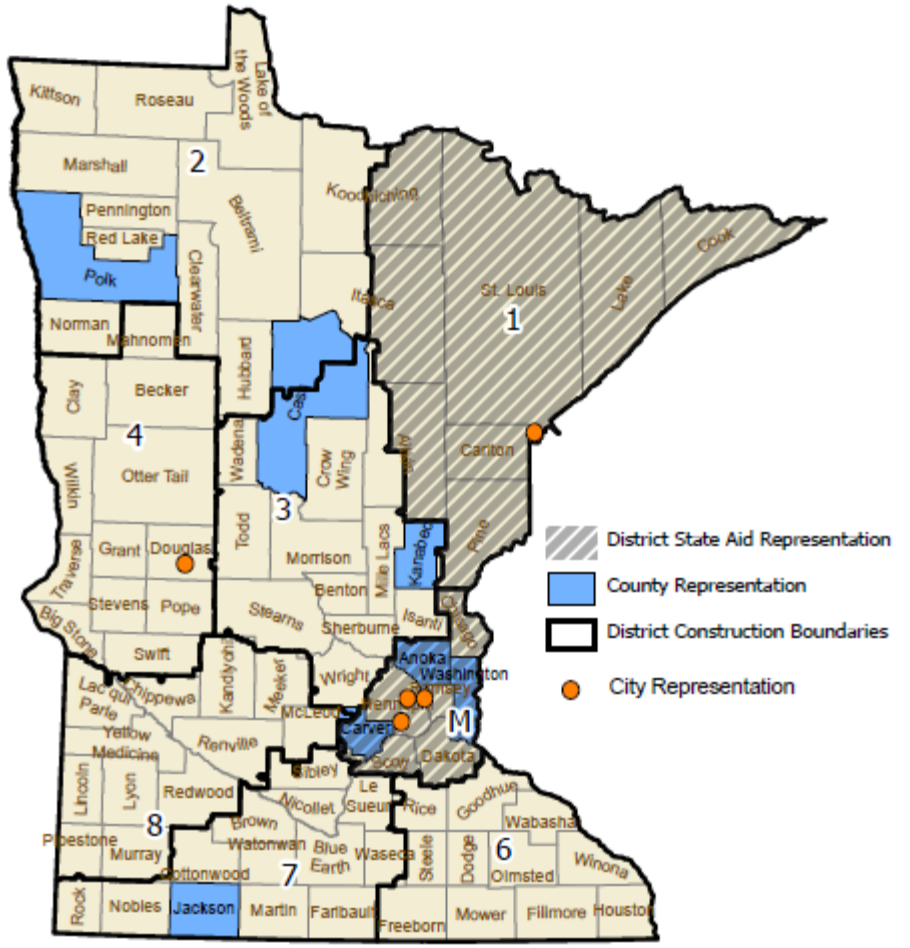
Reviews resources, builds consensus and advises the MnDOT Commissioner

Role & History of the SADAC

- As a result of the recent 2017 update, the State Aid Design Advisory Committee was established
  - To streamline and improve lead and response time to design revision requests and concerns from agencies.
  - Guide change through research. Not to directly make changes to rules.
- Committee started in 2020

SADAC Committee Representation

- Led by the MnDOT Division of SALT and supported by a consulting team
- Request for volunteers June 2020
  - 19 total members
  - 8 County, 5 City (1 City of the First Class), 5 State Aid, 1 Consultant
    - 9 rural and 4 urban members



SADAC Committee Members

District	City Representative	Title	Agency
4	Brian Yavarow, P.E.	City Engineer	City of Alexandria
Metro	Mark Hansen	City Engineer	City of Coon Rapids
1	Cindy Voigt	City Engineer	City of Duluth
Metro	Don Elwood	Director, Transportation Engineering & Design	City of Minneapolis
Metro	Jesse Freihammer	Public Works Director	City of Roseville
Metro	Debra Heiser	City Engineer	City of St Louis Park
Metro	Nick Preisler	City Engineer	City of St. Michael
District	**County Representative**	**Title**	**Agency**
Metro	Joe MacPherson	County Engineer	Anoka County
Metro	Lyndon Robjent	County Engineer	Carver County
2 and 3	Darrick Anderson	County Engineer	Cass County
3	Chris Byrd	County Engineer	Stearns
2	Rich Sanders	County Engineer	Polk County
Metro	Tony Winiecki	County Engineer	Scott County
7	David Kramer	County Engineer	Winona County
Metro	Joe Gustafson	County Traffic Engineer	Washington County
MnDOT Staff		**Title**	**Agency**
	Lucas Lortie	DSAA	State Aid - Metro District
	Daniel Erickson	DSAE	Metro District
	Andjela Tomovic	DSAE	State Aid - District 3
	Ron Dahlquist	Federal Aid Pre-Construction Coordinator	State Aid - Central Office
	Vizecky, Mark (DOT)	Operations Engineer	State Aid - Central Office
	Smith, Scott (DOT)	Assistant Projects Engineer	State Aid - Central Office

Role & History of the RAC

- Part of formal Minnesota Administrative Rules, Chapter 14.
- Last met in 2017, the RAC was re-established at the end of 2025
  - Members are an established statutory committee with 21 total members
    - 9 members selected by county boards - one from each state highway construction district; not more than 5 are county commissioners, the rest are county highway engineers.
    - 12 members selected by city governing bodies - one from each state highway construction district and one from each first-class city; not more than 6 are city elected officials, the rest are city engineers

Rules Advisory Committee Members – County

District	County Representative	Title	Agency
1	Rick Goutermont	County Commissioner	Lake County
2	Rich Sanders ★	County Engineer	Polk County
3	Chris Byrd ★	County Engineer	Stearns County
4	Brian Giese	County Engineer	Pope County
Metro	Julie Jeppson	County Commissioner	Anoka County
Metro	Kevin Peterson	County Project Engineer	Washington County
6	Dave Kramer ★	County Engineer	Winona County
7	Tim Becker	County Engineer	Sibley County
8	Roger Imdieke	County Commissioner	Kandiyohi County

★ = SADAC Member

Rules Advisory Committee Members – City

District	City Representative	Title	Agency
1	Rick Blake	City Council Member	Grand Rapids
1	Cindy Voigt ★	City Engineer	Duluth
2	Lynn Eaton	City Council Member	Bemidji
3	Nick Preisler ★	City Engineer	St. Michael
4	Tom Trowbridge	City Engineer	Moorhead
Metro	Jenifer Hager	City Engineer	Minneapolis
Metro	Joe Powers	City Engineer	Richfield
Metro	Nick Peterson	City Engineer	St Paul
6	Mark DuChene	City Engineer	Faribault
6	Sam Budzyna	Traffic Engineering and Operations Manager	Rochester
7	Joe Stadheim	City Engineer	New Ulm
8	Jason Anderson	City Engineer / Director of Public Works	Marshall

MnDOT/Consultant Team

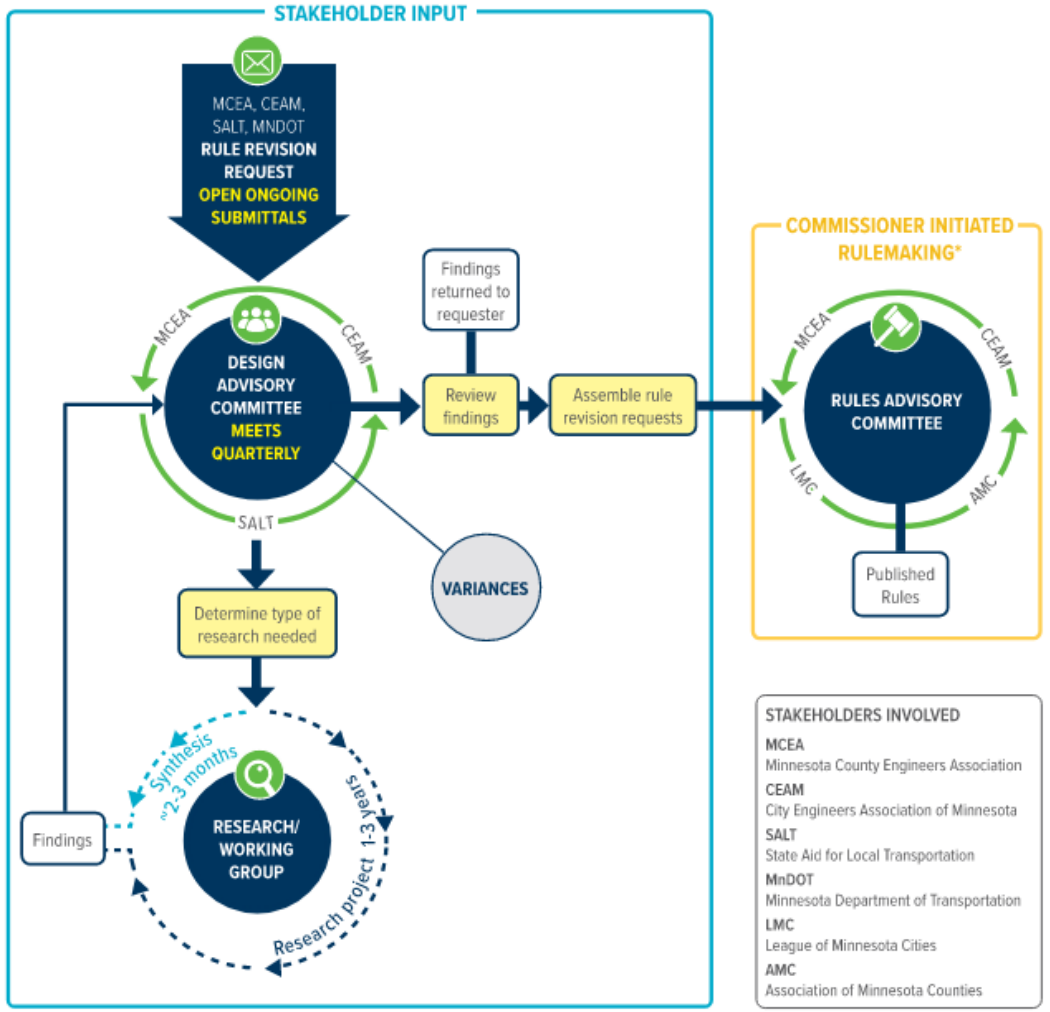
MnDOT Staff	Title
Kristine Elwood	Division Director
Ted Schoenecker	Assistant Division Director
Jay Owens	Office Director
Mark Vizecky ★	Operations Engineer
Scott Smith ★	Projects Engineer
Andi Barker	Office of Chief Counsel
Daniel Erickson ★	Metro DSAE
Derek Fredrickson	D1 DSAE

SRF Staff	Role
Sue Miller	Facilitator
Renae Kuehl	Director
Nicole Bitzan	Project Manager

How are the Rules being updated?

Design Standards' Review Process

- As outlined in Minnesota Administrative Rules, Chapter 14., the Rules Advisory Committee (RAC) meets monthly to review proposed rule language, provides technical and policy input, and ensures that rule changes are practical, implementable, and reflect the needs of both city and county jurisdictions.
- Includes engaging and coordinating with:
  - State Aid Design Advisory Committee
  - Association and district meetings
  - League of Minnesota Cities (LMC)
  - Association of Minnesota Counties (AMC)
  - Minnesota County Engineers Association (MCEA)
  - City Engineers Association of Minnesota (CEAM)
  - Minnesota State Legislature
  - Public

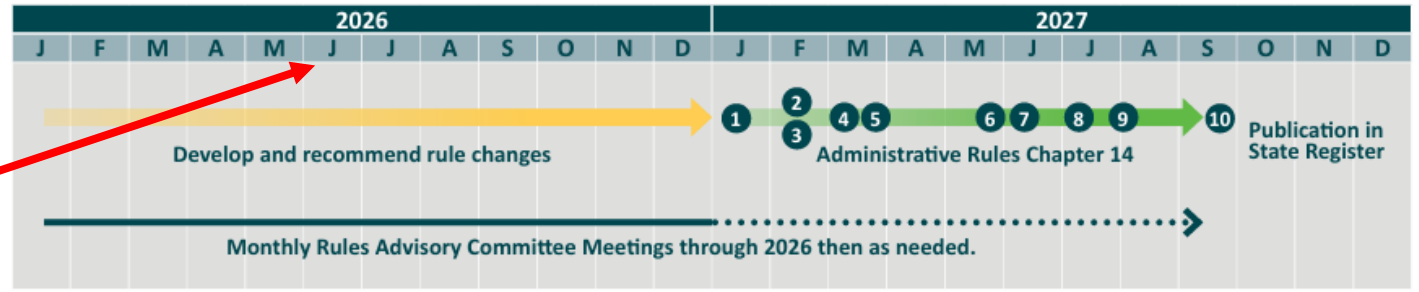


Rule Revision Timeline

Months 1–12: Rules Advisory Committee develops recommended rule changes (minimum one year timeframe required by MN Statutes, Chapter 14)

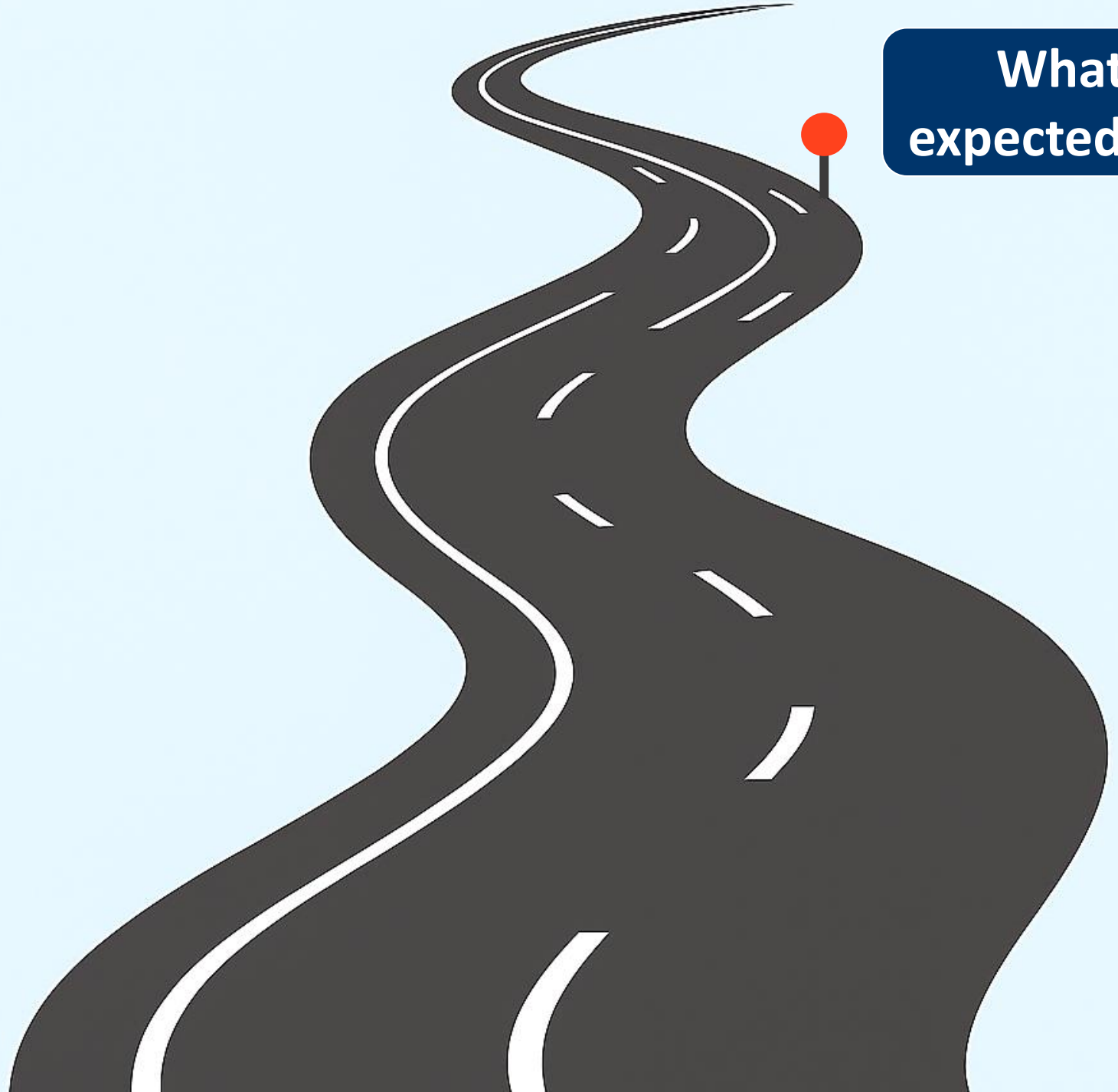
Months 13–21: Final rule preparation/publication (MN Statutes, Chapter 14)

We are here



Administrative Rules Chapter 14

Step	Action	Length of time
1	Request rule draft from Revisor's Office	4-6 weeks
2	Notify Governor's Office of rulemaking & Governor's Office Review	3-4 weeks
3	Prepare Order & Memo Adopting Rules for Commissioner review	2-3 weeks
4	Submit Rules for Court of Administrative Hearings review	14 days
5	Revise and resubmit disapproved rules (if needed)	4-8 weeks to revise, resubmit
6	Proposed rules authorized for publication in State Register for public comment	30 days minimum (Official public input period)
7	Agency reviews public comment (*may require new notification of Governor's Office, Court submittal, and publication for public comment- Return to Step 2)	*2-3 weeks
8	If no substantive changes result from public comment, finalize Order Adopting Rules and obtain Commissioner signature	3-5 days (Depends on Commissioner's availability)
9	File signed Order with Court of Administrative Hearings; Revisor's Office to file with the Secretary of State	2-4 weeks
10	Publish adopted rules in State Register (14 days after Secretary of State filing noted as Governor's veto period)	14 days (publication in State Register)



What are the expected outcomes?

Expected Outcomes of the Rules Revision

- Clearer, more flexible rule language
- Reduced need for variances
- Alignment with the MnDOT Facility Design Guide
- Continued consistency in how the State Aid System operates for travelers statewide

What's happened to date?

History of SADAC Work

- Since 2020, identified over 46 topics
  - Topics sourced from the SADAC, Board of Directors, variances, Rules Advisory Committee, Facility Design Guide (FDG) and MnDOT Memo updates, local inquiries, etc.
  - Topics prioritized by the SADAC via survey
- 17 topics completed to date
  - Addressed by the SADAC, SALT, LRRB, Other committees
  - Completed topics included the following final steps
    - No change/recommendation
    - Recommendation to the RAC
    - Supplemental resources

Topic Review Schedule

TOPIC REVIEW SCHEDULE

Rules Advisory Committee (RAC) | State Aid Design Advisory Committee (SADAC)

		Dec		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Jan		Feb		Mar		Apr		May		Jun	
		15	17	5	14	2	11	2	17	6	15	4	20	1	17	6	15	3	19	14	16	5	21	2	18	7	16	4	20	1		1		5		2		7	
		R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S	R	S
0	Topic Overviews	1-5		1-5								6-10																											
1	Back-In Angle Parking																																						
2	Side Slopes																																						
3	Natural Preservation Routes							I		F																													
4	Continuous left turn lanes									F																													
5	Allowed use of 10 feet lanes									I		D		D		F																							
6	Variance Process															D		F																					
7	Reconditioning Standards															D		F																					
8	Vertical Elements												I		D		F	D		F																			
9	Trail Reconditioning														I		D		F	D		F																	
10	Historic Downtown Areas									I									?			D		F															
?	FDG/ Rules Comparison																																						

Notes:

- September meeting moved form 9/7 to 9/14 due to holiday
- RAC meetings scheduled through June 2027
- SADAC meetings schedule through January 2027
- Historic Downtown - No SADAC review. Create a RAC subcommittee in April.
- Facility Design Guide (FDG)/Rules Comparison - not an official topic the RAC will review, but is a reference the RAC will use for various topics that the SADAC will finish

R	= RAC Meeting	I	Introduce Topic
S	= SADAC Meeting	D	Discuss Topic
		F	Final Topic Recommendation
		?	Discuss If Needed

RAC Topics and Status

- [x] **1.** Best Practices and Design for Back-In Angle Parking for the State Aid Rules
- [x] **2.** Rural and Suburban Side Slopes and Clear Zone Review Note (c) in 8820.9920
- [x] **3.** Review of 8820.9981 Minimum Design Standards: Natural Preservation Routes, Designated National Forest Highways Within National Forests, and State Park Access Roads within State Parks; New or Reconstruction Projects
- [x] **4.** Consider Clarifying widths required for continuous left turn lanes
- [ ] **5.** **Allowed use of 10 feet lanes with clarification and consistency across design tables.**
  (includes 2 additional voting topics: design speeds, on-road bicycle)
- [ ] **6.** **Variance Process**
- [ ] **7.** **Reconditioning Standards**
- [ ] **8.** **Vertical Elements**
- [ ] **9.** **Trail Reconditioning in 8820.9995** (includes 2 additional voting topics: Trail Rehabilitation/Reconditioning & New Construction)
- [ ] **10.** **Historic Downtown Areas Design Flexibility**

Topic Overview – Back-in and Pull-in Angle Parking

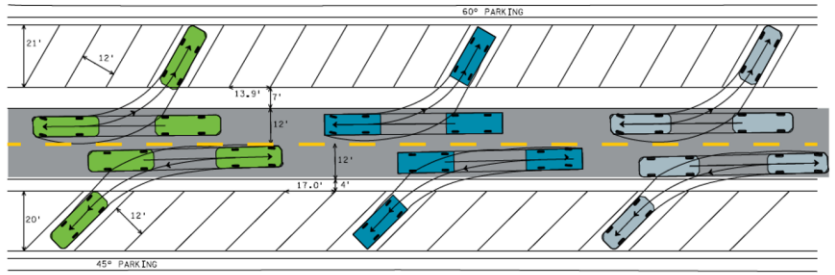
8820.9961 Minimum Design Standards for 45-Degree and 60-Degree Pull-in Diagonal Parking

- **Developed a new table combining Pull-In with Back-In Angle Parking.**
- **Added design minimums for 30-degree parking angle.**
- **Affirmed minimum nine-foot stall width.**
- **Increased Average Daily Traffic (ADT) threshold from 3,000 ADT to 5,000 ADT.**
- **Updated existing approach from the offset from the back of the stall to travel lane to distance from back of stall to centerline ensure design compliance with MN Statute 169.**

Back-in Angle Parking – Technical Information

Technical /Design - Turning Template

Turning radius templates were used to determine the minimum turning radius needed for back-in angle parking. Three different vehicle types were tested for 45 and 60-Degree angle parking, with 12 foot wide parking stalls. **The distance from the centerline of the roadway to the edge of the parking stalls is the critical minimum distance needed to avoid vehicles encroaching into opposing traffic.** If a bike lane is needed, reference the MnDOT Bicycle Facility Design Manual.

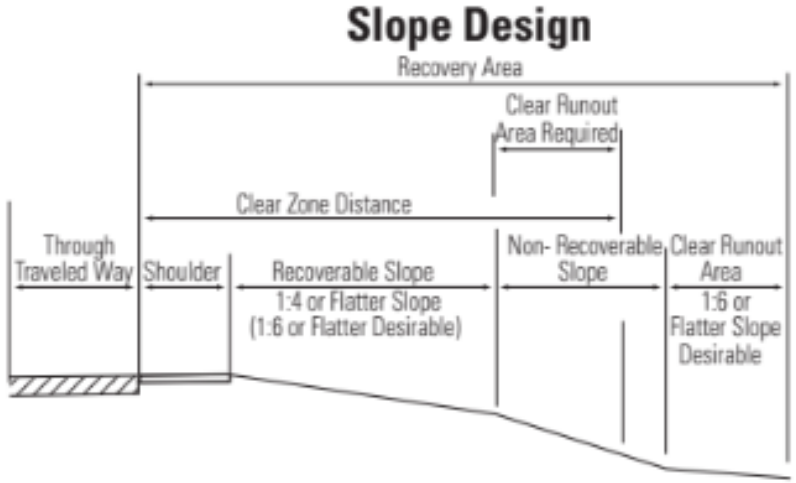


Vehicle Type	Height	Length	Width	Radius
Ford Transit 256 (2019)	9.12′	22.17′	6.98′	25.3′
Passenger Car (AASHTO)	4.30′	19.00′	7.00′	23.8′
Ford F-150 Crew Cab (2015)	6.44′	20.31′	6.66′	26.5′

Topic Overview – Side Slopes

Note (c) in 8820.9920 Minimum Design Standards; Rural and Suburban Undivided; New or Reconstruction Projects

- **Affirmed that the note applies to inslopes within the clear zone only.**
- **Amended the note to improve clarity on application and apply to "approach sideslopes in."**
- **Endorsed adding additional text stating that although 1:4 or flatter is the minimum; 1:6 or flatter is desirable.**
- **Amended note on the use of the Road Design Manual to "MnDOT Facility Design Guide clear zone slopes may be used in lieu of the values in the table in this part" matching other language in Chapter 8820.**



Topic Overview – Natural Preservation Routes

8820.9981 Minimum Design Standards; Natural Preservation Routes, Designated National Fores Highways within National Forests, and State Park Access Roads within State Parks; New or Reconstruction Projects

Type I Routes

- Affirmed that lane widths be reduced to a minimum of ten feet.
- Amended clear zone values to four feet for aggregate surfaces and eight feet for paved surfaces.
- Endorsed to remove the requirement for a “four-foot paved shoulder,” instead stating more generally that shoulders should be paved, and to clarify that a “popular bicycle route” refers specifically to a designated bicycle route

Type II Routes

- Affirmed reducing lane widths to ten feet when design speeds are 35 mph or less.
- Confirmed that the minimum total pavement width shall be 22 feet and minimum shoulder to shoulder width shall be 26 feet.
- Affirmed that note (c) be revised to remove the requirement for a “six-foot paved shoulder,” instead stating more generally that shoulders should be paved, and to clarify that a “popular bicycle route” refers specifically to a designated bicycle route without a separated path.

Type III Routes

- Affirmed all changes recommended for Type II Routes are recommended for Type III.

Topic Overview – Continuous Left Turn Lanes

8820.9941 Minimum Design Standards: On-Road Bicycle Facility for Urban; New or Reconstruction Projects (note a)

- **Agreed that Chapter 8820 note (a) remain as-is. Continuous left turn lanes must match the minimum values under lane width.**

Preliminary road layout (Layout made with Streetmix / CC BY-SA)

Next Steps for the RAC

- Discuss and finalize the remaining topic recommendations:
  - **Ten-foot lanes**
  - **Variance process**
  - **Reconditioning standards**
  - **Vertical elements**
  - **Trail reconditioning in 8820.9995**
  - **Historic downtown areas - design flexibility**
- Meetings are scheduled to occur through the remainder of 2026.
- Final goal: deliver recommendations to the MnDOT Commissioner and Minnesota State Legislature.

Thank You!