

**MUTCD 11th edition, 2023
UPDATES
Local Roads Conference - 2024**

Cliff Reuer
Technical Assistance Provider
SDLTAP
605-773-5108
605-209-8932
cliff.reuer@state.sd.us



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MUTCD – 11th EDITION 2023



- National Standard
- Adopted December 19, 2023
- Effective January 18, 2024



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MUTCD 11th Edition

- **Website:**
 - <http://mutcd.fhwa.dot.gov>
 - https://mutcd.fhwa.dot.gov/pdfs/11th_Edition/mutcd11thedition.pdf

PURCHASE:
<https://www.atssa.com/resource/mutcd-11th-edition/>




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Future Updates

MUTCD 11th Edition Overview

Development of the MUTCD 11th Edition (2/2)

- ▶ The *Infrastructure Investment and Jobs Act*¹ (IIJA, or “Bipartisan Infrastructure Law”) set a minimum update cycle for the MUTCD of **every 4 years**
- ▶ More frequent updates allows the MUTCD to be **more responsive** to evolving trends and easier for States and practitioners





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Substantial Conformance

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State Adoption and Substantial Conformance

- ▶ **23 CFR 655 Subpart F [655.603(b)]**
- ▶ Federal Regulation:
 - ▷ **State and other Federal agency documents** that address TCDs must be in **substantial conformance** with the national MUTCD
- ▶ Timeline:
 - ▷ States and other Federal agencies **shall adopt changes** to the national MUTCD or its provisions **within 2 years** from the effective date of the final rule:
 - ▷ **By January 18, 2026**, for the MUTCD 11th Edition

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PROWAG

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Public Right-of-Way Accessibility Guidelines (PROWAG)

- ▶ PROWAG and the MUTCD
 - ▷ U. S. Access Board issued PROWAG Final Rule August 8, 2023
 - ▷ PROWAG and MUTCD 11th Edition rulemakings were done concurrently
 - ▷ Timing precluded inclusion of new PROWAG requirements in the new MUTCD
 - ▷ PROWAG is not a Federal standard
 - ▷ Not enforceable under the *Americans with Disabilities Act* ¹ until the U. S. Department of Justice (USDOJ) and the USDOT adopt it




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Compliance Dates

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Compliance Dates (1/6)

- ▶ Specific dates when provisions are required to be implemented:
 - ▷ Six compliance dates (including one retained from 2009 MUTCD, Revision 3)
- ▶ All other existing TCDs can be brought into compliance with the new MUTCD provisions as part of reconstruction or replacement, without a specified time limit (systematic upgrading provision)
- ▶ Compliance dates are summarized in **Table 1B-1**




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Compliance Dates – Table 1B-1

Table 1B-1. Target Compliance Dates Established by the FHWA

MUTCD Section(s)	Subject Area	Specific Provision	Compliance Date
2B.64	Weight Limit Signs	Paragraph 14 - requirement for additional Weight Limit sign with the advisory distance or directional legend in advance of applicable section of highway or structure	5 years from the effective date of this edition of the MUTCD
2C.25	Low Clearance Signs (W12-2)	Paragraph 1 - Required posting of the Low Clearance Advance (W12-2) sign in advance of the structure	5 years from the effective date of this edition of the MUTCD
2C.25	Low Clearance Signs (W12-2a, W12-2b)	Paragraph 8 - Recommended posting of Low Clearance Overhead (W12-2a or 12-2b) signs on an arch or other structure under which the clearance varies greatly	5 years from the effective date of this edition of the MUTCD
3A.05	Maintaining Minimum Retroreflectivity	Implementation and continued use of a method that is designed to maintain retroreflectivity of longitudinal pavement markings (see Paragraph 1 of Section 3A.05)	September 6, 2026
8B.16	High-Profile Grade Crossings	Paragraphs 3 and 7 - Recommended installation of Low Ground Clearance and/or Vehicle Exclusion signs and detour signs for vehicles with low ground clearances that might hang up on high-profile grade crossings at locations with a known history	5 years from the effective date of this edition of the MUTCD
8D.09 through 8D.12	Highway Traffic Signals at or Near Grade Crossings	Assessment and determination of appropriate treatment to achieve compliance (preemption, movement prohibition, pre-signals, queue cutter signals)	10 years from the effective date of this edition of the MUTCD

December 2023 Sect. 1B.03




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Speed Limits


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Speed Limits

- ▶ Provisions apply to **nonstatutory** speed limits only
- ▶ **Engineering study** still required¹
 - ▷ Emphasizes role of **site context, roadway type, and function**
 - ▷ Includes **range of recommended factors** in engineering study:
 - ▷ *Pedestrian and bicyclist activity, crash history, land use, intersection spacing, driveway density, roadway geometry, roadside conditions, roadway functional classification, traffic volume, observed speeds*
 - ▷ Use of 85th-percentile speed **not required**



¹ MUTCD 11th Edition, §2B.21.





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EV Charging Signs

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Electric Vehicles (EV) Charging Signs

- ▶ Drivers will see new blue signs for EV charging as well as EV Charging added to Food, Lodging, and other service signs



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Advance EV & Alternate Fuels

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Electric Vehicles and Alternative Fuels

- ▶ Adds several provisions to provide adequate flexibility to signs for EV charging services and alternative fuels corridors



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Changeable Message Signs

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Changeable Message Signs (CMS)

- ▶ CMS messages should be:
 - ▷ Simple, direct, brief, legible, and clearly understandable by all road users
 - ▷ Relevant to the roadway where they are displayed
 - ▷ Without statistical information




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Minimum Retro – Pavement Marking


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Minimum Retroreflectivity

- ▶ Incorporates Revision 3 of MUTCD 2009 Edition.¹
 - ▷ Longitudinal markings
 - ▷ Speed limits 35 mph or higher
 - ▷ Specific compliance date included in Table 1B-1

¹ 87 FR 47921.



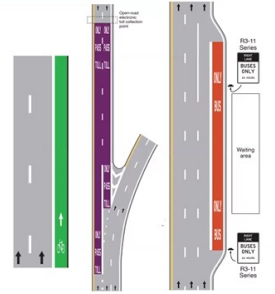
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Colored Pavements

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Colored Pavements

- ▶ New colored pavements for special-purpose lanes without provisional approval:
 - **GREEN**—Bicycle lanes
 - **RED**—Bus lanes
 - **PURPLE**—Electronic toll collection-only lanes





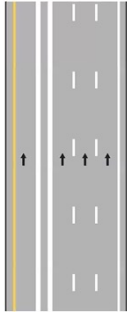
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Line Width

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Normal Line Width

- ▶ A **4-inch minimum** width is retained in final rule:
 - ▷ Increased minimum longitudinal line width in NPA is **not adopted**
 - ▷ Support provisions included that refer to the research on wider lines and to driving automation system need
- ▶ Guidance on width of the “discernible space” of a double line:
 - ▷ Recommended maximum space is twice the line width





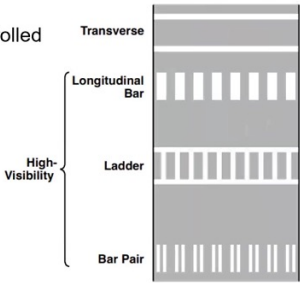
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Marked Crosswalks

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Marked Crosswalks

- ▶ **Recommended** at locations controlled by traffic control signals
- ▶ **Uncontrolled crosswalks:**
Revised criteria for engineering study





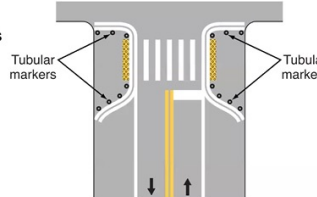
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Sidewalk Extensions - Markings

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Sidewalk Extensions Designated by Pavement Markings

- ▶ New provisions address sidewalk extensions created within the roadway pavement (not physical construction):
 - ▷ Designated by pavement markings and channelization
 - ▷ Reduces pedestrian crossing distance
 - ▷ Improves pedestrian safety



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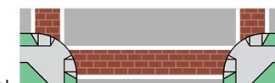
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Aesthetic Surface Treatment

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Aesthetic Surface Treatments

- ▶ Differs from colored pavement:
 - ▷ Aesthetic treatments serve no traffic control purpose, are not TCDs
 - ▷ Colored pavement serves a traffic control purpose (as specified in the MUTCD)
- ▶ MUTCD does not prohibit aesthetic surface treatments, but does limit how they interact with official TCDs:
 - ▷ Cannot mimic, obscure, or otherwise adversely impact the effectiveness of TCDs



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Vulnerable Road Users

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Vulnerable Road Users

- ▶ Improved focus on needs of vulnerable road users:
 - ▷ Bicyclists
 - ▷ Pedestrians and accessibility
 - ▷ Access to transit



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Accessibility (1 of 2)

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Accessibility (1/2)

- ▶ Clarifies and strengthens language on multiple accessibility items
- ▶ For pedestrians with ambulatory disabilities:
 - ▷ Improves guidance on pedestrian push button proximity to sidewalk curb ramps
- ▶ For pedestrians with vision disabilities:
 - ▷ Clarifies detectable edging standards to provide positive guidance through work areas
 - ▷ Improves guidance on audible information devices (AIDs) and accessible pedestrian signals (APS)



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Accessibility (2of 2)

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Accessibility (2/2)

- ▶ Recommends, rather than provides an option for, APS at all pedestrian signals and pedestrian hybrid beacons (PHBs)
- ▶ Recommends AIDs at rectangular rapid-flashing beacons, pedestrian-actuated warning beacons, and in-roadway warning lights at crosswalks




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Traffic Signal Warrants (1of 2)

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Traffic Signal Warrants (1/2)

- ▶ Reinforces that other factors, beyond the warrants, be considered as part of the engineering study to justify installation of traffic control signals
- ▶ Agencies have more flexibility to consider other relevant factors in addition to reliance on the numerical warrant analysis alone



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Traffic Signal Warrants (1of 2)

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Traffic Signal Warrants (2/2)

- ▶ Warrant 7 – Crash Warrant:
 - ▷ Updated criteria for 1-year and 3-year periods, crash type, and severity
 - ▷ Urban and rural contexts
 - ▷ Option for agencies to calibrate based on local safety performance functions

Table 4C-2

Number of through lanes on each approach		Total of angle and pedestrian crashes (all severities)*		Total of fatal-and-injury angle and pedestrian crashes*	
Major Street	Minor Street	Four Legs	Three Legs	Four Legs	Three Legs
1	1	5	4	3	3
2 or more	1	5	4	3	3
2 or more	2 or more	5	4	3	3
1	2 or more	5	4	3	3

* Angle crashes include all crashes that occur at an angle and involve one or more vehicles on the major street and one or more vehicles on the minor street.






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Pedestrian Hybrid Beacons

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Warrants for Pedestrian Hybrid Beacons

- ▶ New provisions to support expanded use:
 - ▷ Option to reduce vehicle and pedestrian thresholds by up to 50%
 - ▷ Option to separate application of the major-street traffic volumes criterion

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Pedestrian Signals

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Pedestrian Signals

- ▶ Recommended at all traffic control signals with marked crosswalks
- ▷ Previously, decision was based on engineering judgment



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Driving Automation Systems – Part 5



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Driving Automation Systems

- ▶ New part with new provisions:
 - ▷ For agencies that are preparing for driving automation systems
 - ▷ Promotes national uniformity
 - ▷ Provisions are optional; no requirement to fit roads for automation systems

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Diagnostic Team – Part 8

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Diagnostic Team

- ▶ New provisions consistent with 49 CFR Part 222 (a Federal Railroad Administration regulation)
- ▶ Defines diagnostic team and roles and responsibilities related to TCDs

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Bicycles



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Bicycles

- ▶ Expanded chapter significantly; many new options for agencies:
 - ▷ Green pavement in bike lanes
 - ▷ Easier left turns with two-stage turn boxes
 - ▷ Improved bicyclist visibility at intersections
 - ▷ Buffer-separated bike lanes
 - ▷ Bicycle-specific signal faces
- ▶ Improved safety and comfort

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REFERENCES:

- US Department of Transportation – Federal Highway Administration
- <http://mutcd.fhwa.dot.gov>
- https://mutcd.fhwa.dot.gov/mutcd_news.htm
- Executive Summary and General Overview (March 6, 2024)



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QUESTIONS ???



R1-1



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