North Dakota Department of Transportation

Speed Limit Guidelines

September 2015

These guidelines outline when to change posted speed limits and what speed to set as the posted speed. These guidelines do not apply to major cities; major cities should be handled on a case-by-case basis. These guidelines also do not apply to construction zones, school zones, temporary special events (such as fairs), weather events (such as flooding), or warning sign advisory speeds (such as for curves or bumps).

Reduced Speed Zones and Statutory Maximum Speed Limits

A "speed zone" is a speed limit that is less than the statutory maximum speed limit set by law. North Dakota's current statutory maximum speed limits are listed in **Table 1**, and **Figure 1** shows a brief history of changes to North Dakota's statutory maximum speed limits over time.

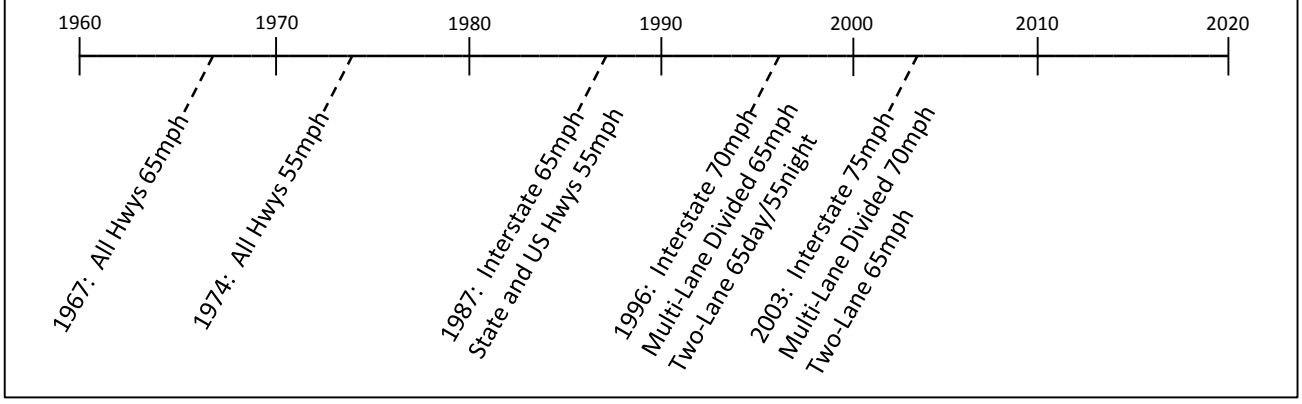
Table 1 - ND Statutory Maximum Speed Limits

Speed	Road Classification
75mph	Interstate
70mph	Multi-Lane Divided Hwy
65mph	Paved Two-Lane Hwy
55mph	Paved Two-Lane County or Township Hwys, or Gravel Roads

-From ND Century Code section 39-09-02.01.

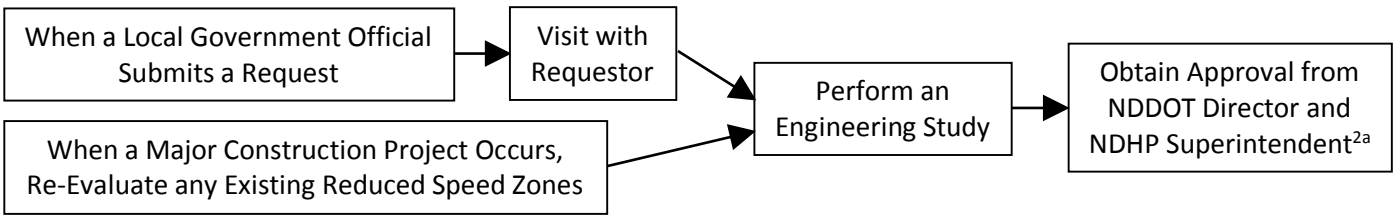
-Statutory speed limits of 25mph or less are not listed.

Figure 1 – A Brief History of North Dakota's Statutory Maximum Speed Limits over Time



Typical Process for Installing/Revising Speed Zones

In accordance with the federal Manual on Uniform Traffic Control Devices (MUTCD)[1a] and state law[2a], an engineering study **shall** be the basis for installing or revising speed zones. The MUTCD also adds that "The engineering study **shall** include an analysis of the current speed distribution of free-flowing vehicles."



What Speed to Set as the Posted Speed

Ideal Speed Limits

The primary purpose of the speed limit is to advise drivers of the maximum reasonable and safe operating speed under favorable conditions.[3a]

Speed limits should be accepted as reasonable by most drivers. Not all drivers will conform to reasonable speed limits. In essence, speed limits separate high-risk and reasonable behavior.[4a]

Polarizing Issue for Communities

Selecting an appropriate speed limit can be a polarizing issue for a community. Residents and vulnerable road users generally seek lower speeds to promote quality of life for the community and increased security for pedestrians and cyclists; motorists seek higher speeds that minimize travel time. Despite the controversy surrounding maximum speed limits, it is clear that the overall goal of setting the speed limit is to increase safety within the context of retaining reasonable mobility.[3b]

Theory of the 85th Percentile Speed

The 85th percentile speed is the speed 85% of free-flowing vehicles are traveling at or below. The use of the 85th percentile speed as the primary criterion for selecting a suitable speed limit is founded on the following fundamental concepts deeply rooted in government and law:[3c]

-Driver behavior is an extension of social attitude, and the majority of drivers respond in a safe and reasonable manner as demonstrated by their consistently favorable driving records.
-The normally careful and competent actions of a reasonable person should be considered legal.
-Laws are established for the protection of the public and the regulation of unreasonable behavior on the part of individuals.
-Laws cannot be effectively enforced without the consent and voluntary compliance of the public majority.

Setting the Posted Speed

The posted speed limit **shall not** exceed the statutory maximum speed limit set by state law.[2b]

The posted speed limit should be within 5mph of the 85th percentile speed of free-flowing traffic.[1b]

If the posted speed is set lower than the 85th percentile speed, it **shall not** be set less than the 50th percentile speed.[5]

The maximum posted speed when approaching a traffic signal should be ≤ 55mph, based on NDDOT's standard practice.

The posted speed should not be established based on an isolated restrictive feature (e.g. sharp curve) within a segment. The use of an advisory speed should be considered at these locations.[4b]

Why Not Set Speed Limits Lower than the 85th Percentile Speed?

Setting speed limits lower than the 85th percentile speed can have several negative effects, including:[6]

-Need for increased enforcement to ensure driver compliance.
-Potential for increased crashes due to larger variability in vehicle speeds.
-Mistrust of highway and enforcement officials and potential disregard for other speed limits, because motorists do not readily perceive the need for lower speeds.

Research has repeatedly shown that changes in posted speeds have little effect on operating speeds.[4c] Many drivers will continue driving the speed they are comfortable with, regardless of the posted speed.

Speed Limit Transitions

Except for construction zones, speed limits **shall not** be reduced by more than 20mph at one time.[2c]

When a speed limit is reduced by more than 10mph, a reduced speed limit ahead (W3-5) sign should be used.[1c]

When there are multiple successive speed reductions, refer to NDDOT's Design Manual (page 22, Table III-09.09) for the required minimum spacing between speed limit signs.
http://www.dot.nd.gov/manuals/design/designmanual/chapter3/DM-3-09_tag.pdf

Possible Countermeasures to Reduce Speeding

Some possible countermeasures to reduce speeding are:

-Increase the presence/visibility of law enforcement.
-Install dynamic speed display signs in accordance with NDDOT's Guidelines for the Use of Dynamic Speed Display Signs.
-Implement traffic calming.
-Perform a speed study and raise the posted speed limit if appropriate.

References

1. Federal Highway Administration, *Manual on Uniform Traffic Control Devices for Streets and Highways*, 2009 Edition. http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm
    a. Section 2B.13.01.
    b. Section 2B.13.12.
    c. Section 2C.38.01.
2. State of North Dakota, *North Dakota Century Code*, as of 7/23/2015. http://www.legis.nd.gov/cencode/t39c09.pdf?20150723143902
    a. Section 39-09-07.
    b. Section 39-09-02.1.
    c. Section 39-09-07.1.
3. Federal Highway Administration, Report FHWA-SA-12-004, *Methods and Practices for Setting Speed Limits: An Informational Report*, April 2012. http://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa12004/
    a. Page 9, 3rd paragraph.
    b. Page 1, 5th paragraph.
    c. Page 13, bottom paragraph. Page 14, top bullets.
4. Federal Highway Administration, Report FHWA-SA-10-001, *Speed Concepts: Informational Guide*, December 2009. http://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa10001/
    a. Page 34, 2nd paragraph.
    b. Page 43, 11th bullet.
    c. Page 27, 1st paragraph.
5. Missouri Department of Transportation, Engineering Policy Guide, *949.2 Speed Limit Guidelines*, as of 7/23/2015, section 949.2.2 Prevailing Speed Determination. http://epg.modot.mo.gov/index.php?title=949.2_Speed_Limit_Guidelines
6. Wisconsin Department of Transportation, *Wisconsin Statewide Speed Management Guidelines*, June 2009, 1st full paragraph. http://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/speed/speed-guide.pdf