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## Reevaluating City Speed Limits with Public Safety in Mind

A recent legislative change has given Minnesota cities greater authority in establishing lower speed limits on streets in their jurisdiction—a decision that could potentially have positive impacts on public safety, especially pedestrian and bicycle traffic. A recent analysis of speed-setting practices and the effectiveness of speed limit changes resulted in a decision-making process for changing speed limits and alternative strategies to improve pedestrian and bicycle safety.

### What Was the Need?

In August 2019, the Minnesota Legislature granted cities the authority to set speed limits on their roads without conducting road speed studies that were previously required. Legislators updated the state law in response to concerns from the general public, as well as from local transportation officials, safety advocates and political leaders, about public safety and the potential that lowering speed limits might have on improving pedestrian and bicycle safety.

To support officials in cities considering speed limit changes, the Local Road Research Board (LRRB) sought to inform decision-makers about current research on speed limit reduction and other road safety improvements. This effort would examine the effects of updated speed limits on driving speed, develop guidelines based on current tested practices for setting speed limits, and offer safety

strategies to effectively alter driver behavior and prevent collisions with pedestrians and bicyclists.

### What Did We Do?

To provide historical context, investigators began this study by delineating the speed-setting requirements that have been in place since the original 1937 Minnesota legislation, which established the statutory speed limits on most roadways and outlined the process for allowing city-specific speed zones. Working with federal and state counterparts, the state had adopted the Minnesota Manual on Uniform Traffic Control Devices, which sets the requirements for speed studies conducted to evaluate potential changes in speed limits. Speed limit calculations that follow these standards have created consistency across similar roadways statewide and have resulted in high driver compliance.

*“Community members understandably take an active interest in the speed of traffic on city roads. The guidelines developed through this study give city leaders helpful steps to decide when and how to change speed limits.”*

—WILL MANCHESTER, DIRECTOR, CITY OF MINNETONKA  
PUBLIC WORKS

Next, a broader national search was conducted for data on speed limit change and the subsequent effects on actual driving speeds. Investigators reviewed research results and guidance from the Federal Highway Administration, which collected data from over 100 sites across the country; National Cooperative Highway Research Program; National Transportation Safety Board; and the National Association of City Transportation Officials.

They probed further into data on collisions involving pedestrians and bicyclists to examine the real versus perceived need to address speed limits. This examination revealed that Minnesota’s rate of fatal pedestrian and bicycle collisions is lower than neighboring states even though its statutory speed limits are higher. Moreover, 92% of Minnesota communities experienced one or fewer serious pedestrian and bicycle events between 2011 and 2020. These statistics suggest a need to educate citizens on the frequency of significant collisions and their relative danger to public safety.

## What Did We Learn?

Using the findings of these efforts, investigators developed an eight-step decision-making process for communities considering speed limit changes. The steps include engaging different community stakeholder groups, considering pertinent road data,

documenting any statutory changes and developing a well-coordinated execution plan.

Also, practices were identified that address concerns expressed by Minnesota’s citizens, whose perceptions and opinions can drive the decisions to lower speed limits as a safety solution. Collecting speed data, installing a speed trailer and implementing other measures can make the public more aware of actual speed and safety.

Existing research revealed consistent evidence that reducing speed limits alone did not change driver behavior. However, by combining lowered speed limits with other mitigating strategies, cities were able to reduce driver speed. In one study, an increase in the frequency of speed limit signs from one every 1 to 1.5 miles to one every quarter mile resulted in a small reduction in speed. Another showed that the width of the roadway affected the speed of travel.

The cumulative data suggested that to lower driving speeds, a combination of physical, operational and regulatory measures is needed, such as:

- Sidewalk construction to decrease pedestrians walking in the road.
- Median crossing or refuge islands for pedestrians crossing multilane roads.

- Dynamic warning beacons at crosswalks when pedestrians are crossing.
- Countdown timers as replacements for traditional Walk/Don’t Walk signals.

## What’s Next?

Minnesota city officials now have tools to assess their city’s speed limits, educate their citizens and devise future strategies for keeping pedestrians and all roadway users safer. Many Minnesotans may view lowering speed limits as a relatively inexpensive strategy to achieve desired safety improvements. The research results present data that raise important questions about speed limit assumptions, while also offering specific strategies that have made a measurable difference in collision prevention.

## About This Project

### REPORT 2023RIC07

“Guidelines for Determining Speed Limits on Municipal Roadways.”  
Find it at [mdl.mndot.gov](http://mdl.mndot.gov).

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### LRRB PROJECT COST

\$76,981

[www.mndot.gov/research](http://www.mndot.gov/research)