

Intersection traffic control

All-way stops are used for

- Moderate traffic volumes.
- Balanced traffic.
- > Speed limits of 40 mph or less.



Drawbacks

- Inefficient and cause delay.
- > Multiple lanes can increase crash risk.
- > Increased crash risk when disregarded.
- Constant stopping/acceleration is noisy.

Traffic signals are used for

- Consistently high volume of traffic.
- > Collector or arterial corridor intersections.

Drawbacks

- > Introduces additional decision making.
- Increased crash risk when disregarded.
- Increased risk of fatal or serious injury crashes.
- Creates delay, particularly for higher volume movements.



Roundabouts are used for

- Moderate to high traffic volumes.
- > Improving traffic flow.

Drawbacks

- May have higher construction cost and right-of-way needs.
- > Potential for more property damage crashes.
- Not suitable for six-lane or principal arterial roadways.





Traffic signals

Traffic signals are effective because they

- Manage high volumes of traffic conflicts.
- Provide crossing opportunities.
- > Can improve intersection efficiency.



> Can reduce right-angle crashes.

New signals are added with caution because

- Crashes often increase, especially rear-end crashes.
- > Crashes at signals are typically more severe.
- > They typically result in higher delays throughout the day.

The decision to install signals is based on





- Traffic volumes.
- > Vehicle delays.
- Crash history.

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> Anticipated crash rate.

In Dakota County

- > Approximately 10% of intersections are signalized.
- > 47% of fatal and serious injury crashes occur at signalized intersections.

Crash rate - crashes per one million vehicles entering the intersection.

Severity rate – weighted rate with injury and fatal crashes given more weight.





Speed limits

Speed limits are important because they

- Make roads safer by reducing variability in vehicle speeds.
- > Help unfamiliar drivers know the appropriate speed.
- > Help law enforcement curb dangerous behavior.



Speed limits are established through Minnesota Statute 169.14. The statute

- > Defines speeds for certain roadway types.
- Establishes a process for the State to determine speeds.

Speed studies examine

- > Actual speeds of vehicles using the roadway.
- Roadway type, condition and length.
- Location of intersections and driveways.
- Traffic volume and crash history.
- > Sight distance limitations caused by curves or hills.

After a speed study is conducted, a speed limit is set by the State. Posted limits reflect speeds for ideal road and weather conditions.



Speed limit facts

- Lowering the posted speed limit will not slow traffic.
- Most people drive what is comfortable and safe to them regardless of posted speeds.
- Lowering a posted speed limit does not reduce crashes.
- Improperly set speed limits decrease safety.

