



**Carver County
Public Works**

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HIGHWAY SIGN POLICY

Adopted by the Carver County Board of Commissioners on April 12, 2022

PURPOSE

The purpose of this policy is to establish uniformity and consistency in the application, installation, and maintenance of traffic signs on Carver County's roadway system based upon a comprehensive set of available standards, guidelines, and warrant criteria.

Consistent with recommended standards and practice, it is in the interest of Carver County and the public to prevent the excessive use of traffic signs on the county roadway system. A conservative use of traffic signs reduces maintenance costs and improves the effectiveness of the remaining signs. Limiting the excessive use of traffic signs achieves the following:

- Fulfills demonstrated needs
- Champions a command of attention
- Reduces clutter that impedes the conveyance of a clear and simple meaning
- Fosters respect by road users, and reduces conflicts that may restrict time for a proper response that cumulatively improves traffic safety for all users
- Supports the goals of Minnesota best practices and safety programs, such as the Toward Zero Deaths partnership in Carver County

DEFINITIONS, REFERENCES

Traffic signs, such as speed limit signs, curve warning signs, and county route markers, are official traffic control devices and key part of the highway information system. Traffic signs regulate, warn, and guide motorists, pedestrians, and other traffic on all public roads. Along with pavement markings, traffic signals, and other control devices, traffic signs help provide motorists and other highway users guidance and information to travel safely and efficiently.

The Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD) is the standard for the design and application of all traffic control devices on all roads open to public travel in Minnesota. Therefore, all traffic control devices including traffic signs, must conform to its standards and specifications, as specified in Minnesota Statute 169.06 and related federal rules from the Federal Highway Administration (FHWA) and U.S. Department of Transportation (USDOT).

In addition to the MnMUTCD, there are several other recognized standards and guidelines for traffic signs from the Minnesota Department of Transportation (MnDOT) Traffic Engineering Traffic Signs Programs and State Aid for Local Transportation Program.

Further information, research, and guidelines are provided by the MnDOT Local Road Research Board (LRBB) in support of MnDOT and local agencies. These include, but are not limited to, such references as the *Minnesota's Best Practices and Policies for Safety Strategies on Highways and Local Roads*, (2011, LLRB, LTAP, et al) and *Minnesota's Best Practices for Traffic Sign Maintenance / Management Handbook* (2014, LLRB, LTAP, et al).

POLICY

All traffic signs on Carver County's highway system must conform to the MnMUTCD. Traffic signs not explicitly required to be installed by the MnMUTCD should not be installed on Carver County's highway system unless otherwise specified in this policy or authorized by the County Engineer.

This policy officially recognizes the rule in the MnMUTCD that establishes minimum retro-reflectivity levels for traffic signs and describes how Carver County achieves compliance.

POLICY CRITERIA

Installation/Use of Signs

Carver County will develop and maintain a sign inventory of all signs on the roadway system. Based on the inventory and level of funding available for sign maintenance, Carver County will determine the amount of inventory that can be supported by the current funding structure.

Carver County will maintain the determined amount of traffic control devices (signs, traffic signals, and pavement markings) to ensure safe and efficient operations. Based on the inventory and policy considerations, signs that are not consistent with policy, and signs that are not required or are determined by an engineering study to be unnecessary will be removed through attrition or other methods as determined by the County. The following best practices will be implemented to assist in determining the need for all traffic signs:

- Signs that are required by MnMUTCD will be installed. Signs that require engineering judgment will undergo an engineering study, the results of which will be on file documenting reason for installation.
- Traffic signs will not be used as a reactive response to traffic crashes.
- The application of warning signs will be based on system considerations; locations with similar characteristics will be proactively signed.

Regulatory Signs

Regulatory signs inform roadway users of traffic laws or regulations and indicate the applicability of legal requirements that would not otherwise be apparent. Carver County will utilize the guidance of the MnMUTCD regarding design and installation of regulatory signs.

Warning Signs

Warning signs are used to call attention to hazardous conditions, actual or potential, on or adjacent to a roadway that would not be readily apparent to the motorist. The only type of warning signs that have been proven effective are the Horizontal Alignment Series (but only in a fairly narrow range of curve radii). Static warning signs that warn drivers of hazardous conditions they rarely encounter quickly lose credibility and become part of the background noise that drivers tune out. Signs include but are not limited to deer crossing signs, children at play, blind approach/driveway. Carver County will not install these types of warning signs and will be removing existing signs through attrition.

Curve Warning Signs

Carver County will utilize horizontal curve warning signs and chevrons when an engineering study deems necessary. A ball bank analysis will be conducted, and signs will be installed based on the results according to the guidelines provided in the MnMUTCD.

Guide Signs

Guide signs are used to provide directions to motorists, informing them of intersecting routes, directing them to cities and other important destinations, and guiding them to available services, points of interest, and other geographical, recreational, or cultural sites. Primary guide signs consist of advance junction signing, destination, and distance signs. Supplemental guide signs further provide the driver geographic orientation and secondary destinations at certain interchanges. Destinations include cities, motorist services, or state parks.

Primary Guide Signs

Intersection Street Name Signing

Street name signs are installed and maintained at all public intersections with County roadways and are typically placed in a corner at the intersection. Signs on each side of the roadway are installed at wide (multi-lane or divided roadways) intersections. City logos on the street name sign will not be permitted due to consistency and County maintenance responsibilities. The County installs street name signs for all intersections, including new intersections that are constructed by permit.

Signal Mast Arm Signing

Street name signs are placed on the overhead mast arm at signalized intersections to provide better visibility at these higher volume locations. These signs are key to alerting motorists to the crossroad and are visible prior to crossing the intersection. Once the mast arm signing is in place, ground mounted street name signs may be removed.

Highway Route Marker and Auxiliary Signing

County highways intersecting a state or county highway route are identified by a route marker (highway number) with an auxiliary junction plaque in advance of the intersection.

Route marker signs with junction and directional sign plaques are installed in advanced of highway designation intersections in conformance with MnMUTCD standards. The route marker signs used are standard M1-X4 (square block on white) signs with corresponding junction and directional plaques. Pentagon (white and yellow on blue) route marker signs, M1-6, are not used in Carver County.

Street Name Signs in Advance of Intersections

Advanced street name signs with directional arrows are placed prior to intersections to alert motorists of the upcoming crossroad. The sign is intended to assist the motorist in preparing for action at the upcoming intersection.

Highways must be designated a principal or minor arterial in the Carver County Roadway Systems Plan. County highways with a collector road designation will not be eligible for advanced street name signs.

A roadway designated a principal arterial has the primary purpose of mobility; therefore, access is limited. The roadways that connect to the highway are intended to be public roads serving the collector function or greater. Public road intersections will qualify for advance signing with the following exceptions:

1. Minor public street connections that serve a very limited function (cul-de-sacs, right in/out only or other short roadway connections).
2. For segments with more than one roadway leading into an area (roadways closer than one-quarter mile apart), only one road (main connection) for the area may be selected.
3. Intersections with Trunk or County Highways will typically not receive advance street name signs because they are denoted by advanced route-marking signs. However, a location may receive advance street name signing in select locations if the street name is determined to have regional significance provided signing will not diminish the effectiveness of State or County highway advance signing.

Roadways designated as a minor arterial primarily serve traffic throughout the County. Installation of advance street name signs are typically installed along multi-lane divided highway or high-speed rural highways with a daily traffic volume exceeding 1000 vehicles and with a speed limit of 50 MPH or greater. The same conditions as stated under principal arterials will apply. Additionally, the following intersecting street eligibility must be met:

Highways within suburban area factors:

- Intersecting roadway serves to connect to other highway routes and the local city street system (typically intersecting street will be a MSAS route).
- Locations with all-way stops will not typically be considered for advanced signing. At all way stops, intersections signing will be placed at both near corners of the main line to provide intersection crossing recognition.
- Roadways with a high generator directly off the main highway that serves motorists unfamiliar with the area. High generators include high schools, industrial parks, churches, business districts, regional parks or community facilities located along a side road within one-half mile of the County highway intersections.
- Eligible locations will be a half-mile or further apart to ensure guidance signing provides information without overwhelming the regulatory and other warning signing along the corridor.

Highways within rural area factors:

- Roadways serve to connect to other highways with the town road system.
- For a segment with more than one roadway leading into an area, only the main road for the area would be selected. Preferably, a full intersection would be selected over T-intersections to provide guidance to the major access for the area.
- Eligible locations will be located 1 mile apart or further.

Adequate spacing of all signs is necessary to ensure that sign clutter does not diminish the visibility and message. While the criteria above may be met, the ability to install a sign without blocking other key signs will also be taken into consideration. Closely spaced intersections or lack of right of way width for sign placement may not allow for an advanced signing for a particular roadway. In areas with closely spaced intersections, motorists may see the directional sign and inadvertently be misdirected on to the wrong roadway. Location and placement of all signing is dependent on space, right-of-way availability and other signing. These issues can result in the inability to install a sign although qualifying criteria is met.

The municipality may be consulted to help determine the appropriate intersection to sign when a choice must be made between two or more intersections accessing the area.

Secondary

City Destination Signing

In rural areas, cities are typically isolated from each other and are often located off local or lower classification county highways. It may be desirable to supply the road user information concerning the destination in addition to the guidance provided from route markers and advanced street name signs. Guidance to specific cities off a highway route is done by means of Destination Signs (per the MnMUTCD).

In addition, all the following criteria must be met:

- Signing is permitted from the major county highway to a lower county highway or local road. Signing will not be permitted from the major county highway to another major county highway or directing to the trunk highway system.
- City must be located in an isolated rural area (this signing is not intended for cities that share borders with other cities).
- City must be located directly off the highway qualifying for signs and be no further than 6 miles from the qualifying highway where the sign would be placed. Trailblazing from the destination sign on the major highway or other highways or local routes will not be permitted.
- City will be permitted only one sign in each direction from the qualifying highway.

Destination signs are placed following any junction or advance route assemblies. Because the destination sign is of lesser importance than the Junction, Advance Route assemblies, the Destination sign may not be able to be accommodated where sign spacing is critical. Due to spacing, if a destination sign is at a location with a county highway, advanced street name signs may be eliminated to accommodate the city Destination sign. A judgment will be made by the County to determine which message (Street Name or Destination) will provide better overall guidance to the motorist.

Water Crossings

In Carver County highway crossings with the South Fork of the Crow River and the Minnesota River will be signed. All other water crossings are not eligible for signing.

Traffic Generator Signing

The street name sign and directional guidance signing is the primary traffic signing to help direct unfamiliar motorists to destinations along the County highway system. However, signing for a specific regional attraction or facility that generates significant volume of motorists unfamiliar with the local area can be beneficial. Guide and information signs are intended to provide notice to motorists unfamiliar with the area to better facilitate travel and turn maneuvers to the destination. Highway signing is not intended to be an advertising medium. The County will review each request to determine if permitting this signing would be the

appropriate method to aid traffic on the County system traveling to a specific facility.

This signing is meant for traffic generators that are major **public** regional attractions or facilities that draw motorists from beyond the local community. They are significant for the cultural, historical, or recreational experience and public appeal of the generator. Signing shall not be provided if the facility is readily visible or if effective off right-of-way directional signing is present or can be provided. Signing of this type is to help direct traffic and straight ahead signing will not be permitted. Predominantly retail, business, or manufacturing centers are not normally eligible for guide signing. In addition, either the following criteria 1 or criteria 2 (parts a through e) must be met to qualify for consideration for traffic generator signing:

1) Facilities that qualify for white on green or brown (depending on facility) signing on the state or interstate system under generator sign criteria in the MnDOT Traffic Engineering Manual, Chapter 6 that require supplemental signing on the County system to identify the route to the generator. OR

2) Facilities that generally attract non-local persons or groups unfamiliar with the location of the generator. Information regarding the generator will be used to determine the benefit of the signing to the motorists including the following:

- a. Public or private but open to the general public and provide a historical, cultural, or recreational experience. Retail, business, or manufacturing centers are not eligible uses.
- b. Generates approximately 250 vehicles daily (measured based on site information and traffic generation tools).
- c. Open a minimum of 5 days a week, during normal business hours (typically eight hours per day).
- d. Open at least 6 months of the year. (signing indicating seasonal operation may be required.)
- e. Generators with access directly to the County system are not eligible unless the access/facility signing for the generator is poorly visible to the motorists on the highway and on-site changes cannot be reasonable made to allow the generator's on-site signs to be more visible.

Examples of eligible and ineligible signs:

Typically, Eligible

Regional Park

Public Golf Course (Not driving ranges or miniature golf)

Zoos

Typically, Ineligible
City Park
Industrial Shops
Retail Shops/Private Businesses
School/Church

Fabrication, installation, and replacement costs will be the responsibility of the requestor at current County rates. Replacement will be every 15 years.

Community Recognition Signs

Incorporated cities/townships often request to have a sign placed along the highway at the city/township limit to advise motorists that they are entering this community. These signs can be permitted within the right of way provided the signs meet the following conditions:

1. Sign conveys city name and may contain city logo provided it is legible for the highway speed.
2. Standard signs are located at the city limit on main County routes.
3. Sign may utilize city logo and can have a maximum of three colors.
4. Additional city information such as parking regulations, drug free community or city awards may be posted on or beside the city sign. Standard signing should be utilized for ordinance information and installation criteria must be met.
5. No advertising will be permitted.

Costs to fabricate, install and replace the signs will be the responsibility of the city/township at current County rates. Replacement will be every 15 years.

Ordinance and Other Specialty Community Requested Signs

Incorporated cities/townships often request to have a sign placed along the highway at the city/township limit to advise motorists that they may need to comply with certain conditions and restrictions within the community.

Signs displaying County, Township or City ordinances shall only be installed and maintained when formally authorized by the local authority, approved by the County Engineer, and there is a written agreement with the local policing authority to enforce the signage. The ordinance displayed on the sign shall only apply to traffic operations.

Costs to fabricate, install and replace the signs will be the responsibility of the city/township at current County rates. Replacement will be every 15 years.

Vehicle Noise Laws Enforced Sign (R16-X13)

Independent Vehicle Noise Laws Enforced signs are discouraged and should not be permitted unless reviewed and approved by the County Engineer.

These signs may be permitted within the right of way provided the signs meet the following conditions:

1. Only one sign shall be allowed per approach to a community. Signs shall not be installed for isolated driveways in rural areas.
2. The sign shall be installed on an independent structure and should measure 36" x 42" in size.
3. The request for installation of a sign(s) shall be made through the community via a resolution.
4. It is the responsibility of the local law enforcement agency to enforce the sign(s).
5. The County requires that the community pass a resolution stating that it will enforce Minn. Stat. Sec. 169.69 (MUFFLER) and Minn. Stat. Sec. 169.693 (MOTOR VEHICLE NOISE LIMITS) prior to installing the sign(s).
6. Approval may be subject to a formal, written agreement between the parties.

Parking Restrictions

Parking restrictions may be required along County highways where there are traffic safety and operations conditions or as required by other rules and regulations determined by state and federal standards and requirements. Examples of common or potential situations where restrictions could be applied include intersection corner clearances for ingress and egress, road conditions where there is insufficient space and slope of shoulder or road edge, drop-offs, erosion, and clear zone or other conditions like high speeds and complex geometry (tight curves, hills, other).

General

Parking restriction signs shall only be installed and maintained when formally authorized by the local authority, approved by the County Engineer, and there is a written agreement with the local policing authority to enforce the signage. For these locations, the local governmental unit (LGU) affected will be required to pass a formal no parking resolution.

Public Water Access

Parking restriction signs will not be used to restrict available public lake water access if there are adequate conditions, space, shoulder and off-road right of way width and grades to park vehicles and trailers off-road and leave enough space for vehicular through lanes and pedestrian and bicycle traffic.

Trail Crossings

Parking restrictions may be installed at trail crossings of a County highway. Parking restrictions will be determined by the County Engineer based on engineering review and nominal 25-50-75-100-plus feet increments or by an intersection sight distance study using the typical trail user characteristics. For these locations, the local governmental unit (LGU) affected will be required to pass a formal no parking resolution.

Political and Private Signs or Memorialization, Commemorative, and Dedication Type Signs

Political and private signs will not be permitted within road right of way.

Memorialization, commemorative, dedication type signs are discouraged because they are not a primary traffic sign and not required by the MnMUTCD. These signs will not be permitted unless otherwise reviewed and approved by the County Board through a formal resolution with the following conditions:

1. A term or service life of the signs (1-yr; 3 yrs; 5 yrs) should be defined.
2. Use of the County highway right of way may be allowed but the preference is to use private property and other type off-public county right of way locations.
3. Such signs if approved should be limited in number to main highway or community entrances; and with locations to be determined by the County Engineer to minimize conflicts with other major traffic signs, clear zones areas for safety, and right of way appurtenances.
4. Signs must meet the requirements of the MnMUTCD related to size, color, shape, location, and allowable message on signs.
5. If a route is memorialized the organization or individuals requesting the designation shall pay for the design, fabrication, installation, and maintenance of the signs. Removal or replacement will be per the term of service defined or every 15 years.

Electronic Signs

Electronic signs will be utilized and installed only after an engineering study determines the need and effectiveness. Electronic signs include:

- Driver Feedback Signs (used in school zones and transition zones)
- Rapid Flashing Beacons at Pedestrian Crossings
- Blinking Signs (i.e., LED Stop Signs)
- Rural Intersection Conflict Warning System (RICWS)
- Other electronic signs that are proven by research

Maintenance of Signs

It shall be the Carver County engineer's responsibility to decide which signs under the County's jurisdiction that should be replaced by maintenance personnel or by contract. Compliance with MnMUTCD retroreflectivity requirements will be achieved using a management method using the expected sign life. Carver County adopts 15 years for the life of signs with ASTM Type XI sheeting material. Applicable sign life may be revisited to determine appropriate length based on the latest research. Maintenance personnel should replace signs according to the following guidelines:

1. All signs should be inspected annually for normal daytime visibility and legibility. Nighttime surveys may also be completed every few years to discover locations

of vandalism or other issues. All signs not performing their function shall be repaired or scheduled for replacement.

2. Before each year's replacement program, the sign crew should review all signs. Additional signing, relocation of signing, or removal of needless signing can be incorporated into the program at this time. The available sign budget and the current inventory will be reviewed to determine feasibility of maintaining the current inventory.
3. The replacement program should include the use of the latest applicable standards for sign design, dimensioning, mounting, and roadway location.
4. As each new sign is installed, the mounting should be checked for deterioration. Bent or excessively rusted posts should be replaced. All posts should comply with the latest applicable standards and practices for crashworthiness.

Sign Replacement Priority in Response to Incident / Damage

Sign maintenance staff will respond after receiving official, formal notification of a repair or damage need to determine appropriate action with the following general priorities, subject to available resources and other circumstances such as climate and weather conditions:

- Stop and Yield signs will be replaced as soon as possible once staff is notified and is the assigned sign technician's top priority, generally replaced as soon as practicable such as within 3-5 business days of official, formal notification.
 - Other Regulatory Signs will be replaced as soon as scheduling permits, generally replaced within 5-10 business days of official, formal notification.
 - Warning Signs will be replaced as soon as scheduling permits, generally replaced within 10-15 business days of official, formal notification.
 - Route markers, guide signs and all other signs will be replaced as scheduling permits, generally replaced within 2-3 scheduled work weeks of official, formal notification.
 - Response times may vary due to other competing priorities and other conditions like winter snow, ice and frozen ground. Temporary signs may be installed.
-