Road Commission of Kalamazoo County
Sign Policy

January 2018

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1. PURPOSE AND BACKGROUND

The purpose of this policy is to establish uniformity in the installation and maintenance of signs. This policy recognizes that the Michigan Manual on Uniform Traffic Control Devices (MMUTCD) is the standard for all traffic control devices on all public roads in Michigan, and therefore all traffic control devices on the roadway/street system/public right-of-way shall conform to its standards and specifications as outlined in Section 257.608 of the Michigan Vehicle Code (MVC). This policy describes typical applications and procedures related to placement of signs on roadways/streets for the safety of the users.

Enactment of the Highway Advertising Act of 1972 and its subsequent amendments have placed severe restrictions on billboard advertising, thus increasing the demand to place additional directional information signs within road right-of-way. In order to respond to all sign requests in a fair and consistent manner, we recognize the need to establish signing guidelines that will address aspects of roadway/street signing while maintaining a safe and logical sequence of informational displays along roadways/streets.

Although the aforementioned MMUTCD contains standards for design and application of traffic control devices, it does not contain specific criteria on the following subjects for all signs: (1) allowable sign messages, (2) qualifications which allow placement of signs for various facilities and/or activities, or (3) priority or ranking of the various sign groups on the basis of roadway/street user needs which, in turn, should determine the selection process for sign installations.

It is in the best interest of the public and the RCKC to prevent the excessive use of traffic signs on the roadway/street system. Traffic sign effectiveness can be severely diminished by improper or over use. Regulatory and warning signs are installed when warranted for safety. An appropriate use of traffic signs improves the effectiveness of signs and reduces maintenance costs. It is a goal of the RCKC to limit the use of traffic signs to those that:

1. *fulfill a need,*
2. *command attention,*
3. *convey a clear, simple meaning,*
4. *command respect from road users, and*
5. *give adequate time for proper response.*

Eliminating unnecessary signage improves traffic safety for all users, reduces sign clutter/pollution, standardizes implementation, and lowers maintenance costs.

It is not the intent of this policy to arbitrarily delete or eliminate specific traffic signs, but rather in the best interest of all roadway/street users, to establish criteria to install and maintain traffic signs in the public right-of-way. It is understood that many traffic signs have been installed over the years throughout the road/street network which are either obsolete or have very limited influence on the road users. These signs, along with others that are no longer used

by this agency have been identified in this policy and may still be installed through the variance process.

The guidelines set forth in this policy address these subjects and provide criteria by which to evaluate all signing requests consistently and equitably and to ensure that information displayed has value to road users.

HUMAN FACTORS

As vehicles move along a roadway/street each user is confronted with many elements competing for attention; e.g., presence of other users, roadway/street alignment and other design features, billboards, traffic signs, traffic signals, pavement markings, commercial development, rural and urban environs, different levels of lighting, and adverse weather conditions. Any or all of these factors may affect road/street safety, as well as the user's ability to see, assimilate, and react to pertinent road/street sign messages.

Studies of human behavior have shown that a user can focus attention on only one thing at a time, but can respond rapidly to several stimuli. However, receiving too much information in a short time can adversely affect the user's ability to process the information effectively, causing information overload. Information overload is a condition where the user is unable to perceive and/or use the information displayed. When this condition occurs, the user will shift attention from one source of information to another and may miss critical sign messages.

Considering the large number of road/street elements and complexities confronting each user, it is apparent that the amount of information which can be effectively conveyed by traffic signs is limited. For this reason it is necessary to have guidelines for signs and sign group priorities to avoid information overload and to ensure that essential signs are in place for the general user.

SIGNING PRIORITIES

Basic concepts of traffic engineering recognize that the primary functions of traffic control signs are to warn, regulate, and guide users. Sign spacing and the amount of information displayed have an impact on the user's ability to read and respond to sign messages in an expected, predictable manner.

Accordingly, the primary function of traffic control signs is to enable users to react promptly, naturally, and safely to the traffic and design conditions encountered, to inform on the regulations and use of roads and streets, to warn of unexpected roadway/street conditions which require extra care in driving, and to provide guidance to major destinations.

Secondary functions of traffic control signs are to advise users of various services normally required to complete an extended journey (emergency services, motorist services,

public transportation), and of supplemental services such as recreational facilities, places of interest, and attractions.

In general, guide signs along a road/street are necessary for users who are unfamiliar with the route and need guidance to reach their destinations. The most important guide signs are those which provide direction to major metropolitan areas, road/street routes, or places of national prominence.

Traffic control signs can be classified into eight basic sign groups. Listed below is the order of priorities adopted by the national committees of the American Association of State Highway and Transportation Officials (AASHTO) and Institute of Transportation Engineers (ITE) for these sign groups, and a brief description of the function of each sign group:

Group
No. Sign Type

1. REGULATORY SIGNS - Inform the user of traffic or regulations concerning vehicle operation on the road/street (i.e., stop, yield, speed limit signs, etc.).

2. WARNING SIGNS - Advise the user of unexpected road/street conditions which require extra care in driving (i.e., curve, stop ahead, chevron signs, etc.).

3. NAVIGATIONAL GUIDE SIGNS - Identify the route or routes that the user may follow to complete a trip, including directions and distances to cities and other destinations (standard guide signs, i.e., route markers, distance and destination, exit direction, etc.). Advise the user of destinations accessible other than those shown on standard guide signing (i.e., township supplemental freeway signing).

4. EMERGENCY SERVICES SIGNS - Advise and direct the user to facilities providing emergency services or assistance. Such facilities include hospitals providing emergency medical treatment and state, county, or local enforcement agencies.

5. USER SERVICES SIGNS - Advise and direct the user to basic services normally needed to complete a long trip (i.e., gas, food, lodging and camping, tourist information centers, welcome centers, and rest areas).

6. PUBLIC TRANSPORTATION SIGNS - Advise and direct the user to facilities that provide commercial and public passenger travel service (i.e., airports, train stations, bus stations, and vehicle ferry docks).

7. TRAFFIC GENERATOR SIGNS - Advise and direct the user to activities, facilities, or special points of interest which attract a significant number of people who are unfamiliar with the local area and/or access routes.

8. GENERAL INFORMATION SIGNS - Advise the user of information that may be of interest and—although not directly necessary for travel—in most instances include a geographic reference(i.e., political boundary limits, landmarks, Historic Site, Adopt-A-Highway, Heritage Routes, Memorial Signing, Tourist Oriented Directional Signs (TODS), Community Wayfinding Signing, etc.).

SIGNING PRINCIPLES

The design (shape, size, and color) of traffic signs used in Michigan shall conform to national sign standards. Uniform use and standardization of traffic signs are desirable to ensure instant recognition and uniform interpretation by all users.

A traffic sign should be installed only if it fulfills a specific need based on engineering judgment. In order to be effective, a sign should command attention, contain a clear simple message, be well maintained, and be located such that users have adequate time to see, comprehend, and respond appropriately.

Information overload may result from too many signs, nonessential signs, insufficient spacing between signs, excessive lines of legend, inadequate conspicuity or legibility, or a combination of these factors.

Regulatory and warning signs should be installed only where mandated or warranted so that their effectiveness will not be diminished by excessive use.

Guide signs should be installed when they are essential to the user or are beneficial to a significant number of users.

Within a certain distance in advance of an interchange or intersection, signing needs will be evaluated and signs installed in descending priority providing that a minimum standard spacing between signs is maintained, thus avoiding informational overload and potential user confusion.

Signs serving other destinations (excluding cities, villages, routes, etc.) are classified as supplemental guide signs. Sign priority groups 4 through 8 are considered supplemental guide signs. Supplemental guide signs are secondary to principal signing needs (groups 1 through 3) and should be used sparingly. Supplemental guide signs are used to guide users who are seeking a specific destination. Installation of supplemental signs may be justified when visitation or attendance volumes are high and a significant percentage of users seeking a destination are unfamiliar with its location and access routes. Supplemental guide signs are not intended to advertise or to promote a facility, or to increase its visitation or attendance volumes. The Federal Manual on Uniform Traffic Control Devices states that, both Specific Service (Logo) Signs and TODS provide business identification and directional information for essential user services and for businesses deriving a major portion of income and/or visitors from users not residing in the immediate area respectively. Both sign

programs are also mandated by Michigan statute.

Supplemental guide signs can reduce the effectiveness of other essential signing. For this reason, we have established guidelines for such signing.

NON-CONFORMING SIGNS

Signs already installed which are not in compliance with these guidelines or provisions contained in the MMUTCD shall be removed when they are damaged, in need of maintenance, or if the intended purpose is no longer present in the engineering judgment of the traffic engineer, or designee. The affected person or agency will be notified, if possible, of the intent at least thirty (30) days prior to sign removal. If any non-conforming sign is a safety hazard, it shall be removed immediately.

UNAUTHORIZED SIGNS

All signs installed without the approval of the RCKC's representative as per polices, guidelines and Section 257.610 of the MVC will be considered unauthorized and therefore shall be removed immediately without prior notice.

TEMPORARY SIGNS

Signs of various types such as political candidate, open house, garage sale, or real estate signs are sometimes placed within the public right-of-way. These types of signs are temporary, but are still encroachments and *may* be a safety hazard to users and therefore may be removed at the discretion of the RCKC without notification.

2. TRAFFIC SIGN STANDARDS AND GUIDANCE

Regulatory Signs

Information about Regulatory signs is provided in Chapter 2B of the MMUTCD.

STOP Sign (R1-1)

The stop sign configuration shall be approved in the engineering judgment of the traffic engineer. Stop signs shall generally be installed on the minor street of an intersection in accordance with the MMUTCD. The stop sign shall not be installed for any private roadway/street.

A multi-way stop installation shall be based upon an engineering study and meet warrants as set by the MMUTCD. Stop signs shall not be used for speed control.

YIELD Sign (R1-2)

The yield sign shall be installed and maintained when approved in the engineering judgment of the traffic engineer. Yield signs shall not be used for speed control.

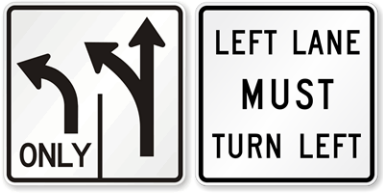
ALL WAY Plaque (R1-3P)

The ALL WAY plaque sign shall be installed and maintained for every all-way stop intersection. Note: The 3 WAY and 4 WAY plaques are no longer allowed in the current MMUTCD.

SPEED LIMIT Sign (R2-1)

The speed limit sign shall only be installed and maintained for authorized speed zones having an approved Traffic Control Order (TCO) approved by the RCKC board. Speed limit signs shall not be installed for statutory speed limits unless authorized in the engineering judgment of the traffic engineer (as set forth in Section 257.629 of the MVC). A speed limit sign shall be installed whenever the speed limit changes, including when entering a statutory (i.e. general speed limit) speed limit area. Where the speed limit transitions, only one speed limit sign shall be installed.

Advance Intersection Lane Control Sign (R3 Series)



The advance intersection lane control sign shall be installed and maintained at all signalized intersections when approved in the engineering judgment of the traffic engineer.

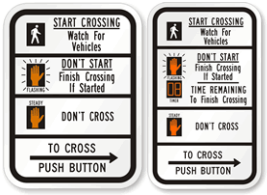
Traffic Movement Prohibition Signs (R4-1, R4-2 and W14-3)

These signs shall not be installed and maintained unless approved in the engineering judgment of the traffic engineer.

PARKING Sign (R7 and R8 Series)

The parking sign shall only be installed and maintained for zones where parking has been restricted by a TCO issued by the RCKC board.

Traffic Signal Sign (R10 Series)



The traffic signal sign shall be installed and maintained in the engineering judgment of the traffic engineer.

ROAD CLOSED Sign (R11 Series)

The road closed sign shall be used when a road is closed to all traffic except authorized vehicles (i.e. construction equipment). The road closed to thru traffic sign shall be used when through traffic is not permitted or where local traffic is permitted for some distance beyond the sign until the point of closure. Emergency road closures shall use a road closed sign placed upon a Type III barricade.

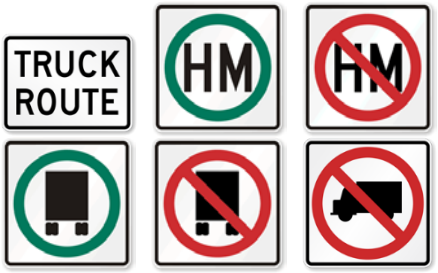
WEIGHT LIMIT Sign (R12-1 through R12-5)

The weight limit sign shall be installed and maintained when approved in the engineering judgment of the traffic engineer.

BRIDGE and STRUCTURE WEIGHT, WIDTH AND HEIGHT RESTRICTION Sign (R12 Series)

The bridge and structure WEIGHT LIMIT sign shall be installed and maintained for all restricted bridges, as close to the restricted bridge or structure as possible. The ON BRIDGE AHEAD sign shall be installed with the WEIGHT LIMIT sign, in advance of the restricted bridge or structure, at the nearest intersections approaching the restriction in accordance with the established Michigan Department of Transportation (MDOT) requirements.

Truck Signs



The truck route signs shall be installed and maintained for all roads restricting through traffic by commercial vehicles by the agency's public governing body procedures.

SEASONAL LOAD AND SPEED RESTRICTION Sign (i.e. Frost Laws)

The SEASONAL LOAD AND SPEED RESTRICTIONS IN EFFECT sign shall be installed and maintained when seasonal load and speed restrictions (i.e. frost laws) are in effect. Placement of these signs shall be determined by the traffic engineer. A map and list showing all-weather and seasonally restricted roads is available at the RCKC web site.

Grade Crossing (Crossbuck) Sign (R15-1)

The grade crossing sign is the responsibility of the railroad authority for the installation and maintenance of the crossbuck sign at signalized grade crossings. At unsignalized grade crossings all grade crossing signage will be maintained by RCKC.

Ordinance Sign

The public governing body requesting the ordinance sign displaying an ordinance shall be installed when approved in the engineering judgment of the traffic engineer. The ordinance displayed on the sign shall only apply to traffic operations. The requesting entity shall be responsible for the cost of material to fabricate, install and maintain an ordinance sign. When the sign is due for maintenance/replacement or is damaged, as determined by the RCKC, the requesting entity shall be responsible for the cost of material and labor to fabricate and install the new sign.

In-Street Pedestrian Crossing Sign (R1-6 Series)

The in-street pedestrian crossing sign shall only be used where the law (local regulation or ordinance) specifically requires that a driver yield or stop. Where the STATE LAW is noted, the legend may be revised to LOCAL LAW displayed at the top of the signs as applicable and where yield or stop lines are used in advance of a marked crosswalk. This sign shall be installed only after the conclusion of a traffic study warrants its installation and in the engineering judgment of the traffic engineer.

A requesting entity shall be responsible for the traffic study as well as the cost of material to fabricate, install, and maintain the sign and painted crossing. When the sign or painted crossing is due for

maintenance/replacement or is damaged, as determined by the RCKC, the requesting entity shall be responsible for the cost of material and labor to fabricate and install the new sign and painted crossing.

Other Regulatory Signs

All other regulatory signs not required to be installed by the MMUTCD, authorized by this policy, or in the engineering judgment of the traffic engineer shall not be installed or maintained within the public right-of-way.

Warning Signs

Information about warning signs is provided in Chapter 2C of the MMUTCD.

Horizontal Alignment Signs (W1-1 through W1-5, and W1-10 Series)

The horizontal alignment signs shall be installed according to the MMUTCD.

One-Direction Large Arrow Sign (W1-6)

The one-direction large arrow sign shall be installed and maintained when a turn sign (W1-1) or reverse turn sign (W1-3) is installed. This sign may also be installed when a curve sign (W1-2), reverse curve sign (W1-4), or winding road sign (W1-5) is installed. Installation will be based on recent crash history and traffic volume or in the engineering judgment of the traffic engineer.

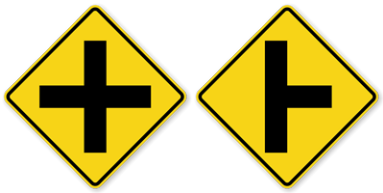
Two-Direction Large Arrow Sign (W1-7)

The two-direction large arrow sign may be installed and maintained at a "T" intersection when approved in the engineering judgment of the traffic engineer. Recent crash history is one factor used in determining when this sign is needed.

Chevron Alignment Sign (W1-8)

The chevron alignment sign may be installed when approved in the engineering judgment of the traffic engineer. Typical installation occurs if crash history indicates a need for additional signage or if space does not allow the installation of a W1-6 sign. Spacing of chevron signs shall follow Table 2C-6 from the MMUTCD. Chevron signs are typically not installed on gravel or dead-end roads unless necessary for safety in the engineering judgement of the traffic engineer.

Intersection Warning Signs (W2-1 and W2-2)



The cross road and side road sign should be used in advance of an uncontrolled intersection approach to indicate the presence of an intersection and the possibility of turning or entering traffic. An advance name panel should be used if possible. These signs should be used on Primary or Local roads and are typically not used on gravel roads, in subdivisions, or in plats unless necessary for safety in the engineering judgement of the traffic engineer.

Advance Traffic Control Signs (W3-1, W3-2, W3-3)

The advance traffic control signs may be installed and maintained in advance of any such traffic control devices on Primary or Local roads. These signs are typically not used on gravel roads, in subdivisions, or in plats unless necessary for safety in the engineering judgement of the traffic engineer.

Reduced Speed Limit Ahead Sign (W3-5)

The speed reduction sign shall be installed and maintained when the following criteria are satisfied:

Condition A

The W3-5 sign shall be used in advance of an authorized speed zone of 45 mph or less if leaving a segment with the statutory speed limit (See Sections 257.627 and 257.628 of the MVC for information on statutory speed limits).

Condition B

The W3-5 sign shall be used in advance of a lower authorized speed zone when leaving a segment with a higher authorized speed limit that is at least 15 mph greater than the lower speed zone or when approved in the engineering judgment of the traffic engineer.

Lane Ends Signs (W4-2 and W9-2)

The lane ends symbol and merge signs shall be installed and maintained when there is a reduction in the number of traffic lanes in the same direction of travel.

CROSS TRAFFIC DOES NOT STOP Plaque (W4-4P Series)

The CROSS TRAFFIC DOES NOT STOP plaque shall not be installed and maintained unless approved in the engineering judgment of the traffic engineer. Recent crash history and other traffic related factors shall be used to determining when this sign is warranted.

ROAD NARROWS and NARROW ROADWAY Signs (W5-1)

The ROAD NARROWS and NARROW ROADSWAY sign shall be installed and maintained where road pavement width (including paved shoulders) significantly changes along a road segment. The narrow road sign may be used when approved in the engineering judgment of the traffic engineer. A speed advisory plaque may also be used.

NARROW BRIDGE Sign (W5-2)

The NARROW BRIDGE sign shall be installed and maintained in advance of all bridges or culverts having a two-way roadway/street clearance width less than 19 feet but more than 17 feet as per Section 254.20 of Bridges and Culverts Act.

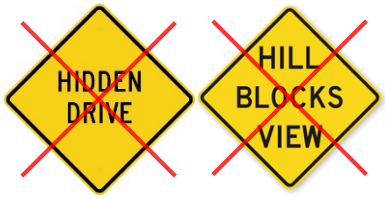
ONE LANE BRIDGE Sign (W5-3)

The ONE LANE BRIDGE sign shall be installed and maintained in advance of all bridges or culverts having a two-way roadway/street clearance width of 17 feet or less as per Section 254.20 of Bridges and Culverts Act.

Hill Signs (W7-1 and W7-1a)

The hill signs shall be installed and maintained when approved in the engineering judgment of the traffic engineer.

HIDDEN DRIVE and HILL BLOCKS VIEW Signs (W7-6)



The HIDDEN DRIVE and the HILL BLOCKS VIEW signs shall not be used. The HIDDEN DRIVE sign is not in the MMUTCD and no guidelines exist for their installation.

PAVEMENT ENDS Sign (W8-3)

The PAVEMENT ENDS sign shall be used to warn users where the road transitions from a paved surface to a gravel surface in the engineering judgement of the traffic engineer.

ROUGH ROAD Sign (W8-8)

The ROUGH ROAD sign shall be used to warn users of an approaching rough section of roadway/street as approved in the engineering judgment of the traffic engineer. No speed advisory plaque (W13-1P) will be posted since conditions may vary widely.

Grade Crossing Advance Warning Signs (W10 Series)

Grade crossing advance warning signs shall be installed according to the MMUTCD and in the engineering judgement of the traffic engineer.

The RCKC will install and maintain all grade crossing advance warning signs at any signalized or unsignalized grade crossing.

Pedestrian Sign (W11-2)

or

The pedestrian warning sign shall be installed and maintained when approved in the engineering judgment of the traffic engineer. An engineering study shall be completed to determine if a pedestrian crosswalk is warranted prior to consideration. When used at a crossing, the pedestrian warning sign shall be supplemented with a diagonal downward pointing arrow (W16-7P) plaque showing the location of the crossing, in conjunction with the presence of crosswalk markings. The crossing location shall be preceded by a pedestrian warning sign supplemented with an AHEAD plaque (W16-9P). A fluorescent yellow-green background color may be used for this sign or plaques.

Animal Signs (W11 Series)

The RCKC recognizes the significant danger that animals pose to the traveling public on roads. However, due to the random nature of animal behavior and changing crossing locations, the RCKC shall not install or maintain animal signs.

Farm Vehicle Signs (W11-5 and W11-5a)

The RCKC shall not install or maintain farm equipment signs.

Handicap Pedestrian Sign (W11-9)

The RCKC will not install or maintain handicap pedestrian signs.

Horse-Drawn Vehicle Sign (W11-14)

The RCKC shall not install or maintain horse-drawn vehicle signs.

Emergency Vehicle Sign (W11-8)

The emergency vehicle sign shall be installed in advance of an official Fire Station as approved in the engineering judgment of the traffic engineer. A Department wishing to install additional traffic control devices for the sign shall be responsible for the purchase, installation and maintenance costs of the additional devices. A formal letter of agreement between the RCKC and the Department shall be executed prior to the installation of the additional devices.

Truck Sign (W11-10)

The RCKC shall not install or maintain truck signs.

Golf Cart Sign (W11-11)

The golf cart sign shall be installed and maintained when approved in the engineering judgment of the traffic engineer. This sign shall only be installed when a painted crossing is present and at an active golf course. The requesting entity shall be responsible for the cost of material to fabricate, install and maintain the sign and painted crossing. When the sign or painted crossing is due for maintenance/replacement or is damaged, as determined by the RCKC, the requesting entity shall be responsible for the cost of material and labor to fabricate and install the new sign and painted crossing.

Bicycle / Pedestrian and TRAIL CROSSING Signs (W11-15 and W11-15a)

The bicycle/pedestrian and TRAIL CROSSING sign shall be installed and maintained when approved in the engineering judgment of the traffic engineer at established non-motorized trail locations. This sign should only be installed when a painted crossing is present as part of an official non-motorized trail network.

Playground Sign (W15-1)

The RCKC shall not install or maintain playground signs.

Low Clearance Signs (W12-2 and W12-3)

The low clearance sign (W12-2) shall be installed and maintained where the clearance of a bridge or structure is less than 13 feet 6 inches. The rectangular shape Low Clearance sign (W12-3) may be installed on any over passing structure. When used, the rectangular sign should be installed and maintained where the clearance of a structure over the roadway is 14 feet 6 inches or less.

Advisory Speed Plaque (W13-1P)

The advisory speed plaque shall be installed and maintained when specified by this policy, the MMUTCD, or when approved in the engineering judgment of the traffic engineer.

NO OUTLET Signs (W14-2)

The NO OUTLET sign shall be installed and maintained at the entrance to a road or road network from which there is no other exit.

ROAD ENDS Signs (W14-2b and OM4-3)

The ROAD ENDS and end of road sign shall be installed and maintained at the termination of a road as determined in the engineering judgment of the traffic engineer.

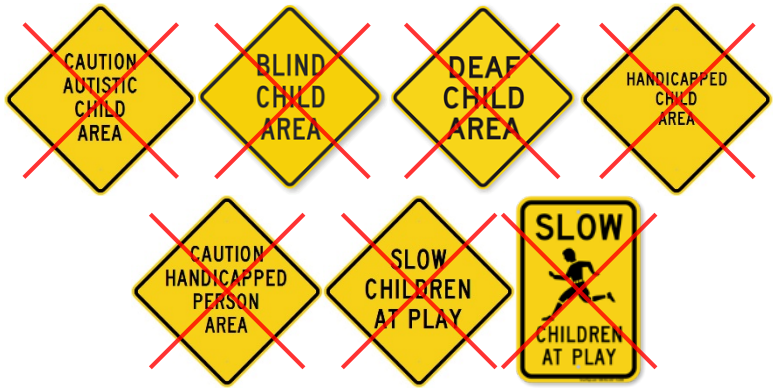
Advance Warning Plaques (W16-2, W16-3 and W16-8 Series)

The advance warning plaques shall be installed and maintained when specified by this policy, the MMUTCD, or when approved in the engineering judgment of the traffic engineer.

Supplemental Warning Plaques (W16-6, W16-7 and W16-9 Series)

The supplemental warning plaques shall be installed and maintained when specified by this policy, the MMUTCD, or when approved in the engineering judgment of the traffic engineer.

Other Warning Signs



Warning signs that notify users of a nearby resident or child with a medical condition shall not be used. Signs such as these are not found in the MMUTCD.

Warning signs for businesses shall not be used. Signs such as these are not found in the MMUTCD.

All other warning signs not required to be installed by the MMUTCD, or authorized by this policy, shall not be installed or maintained unless specifically approved by the RCKC board.

Guide Signs

Information about guide signs is provided in Chapter 2D of the MMUTCD.

Destination Signs (D1 Series)

Upon request, destination signs shall only be installed if the following criteria are satisfied and when approved in the engineering judgment of the traffic engineer.

- Destination signs shall only be installed for cities, townships, or villages included on the recognized list of cities, townships, and villages as shown on the Public Act 51 Certification maps.

If a destination sign is placed by request then any cost to install and maintain the sign shall be paid by the requesting entity, city, or village.

Street Name Signs (D3-1 Series)

The street name sign shall be installed at all roadway/street intersections, when authorized by the traffic engineer. The street name sign shall be black text on a white background for all RCKC public roads/streets. The City of Kalamazoo and the City of Portage use white text on blue background and white text on a green background, respectively. All street names should include a designator such as Road, Avenue, Street, etc. and may be abbreviated as necessary. The letter size shall be in accordance with the MMUTCD.

The private street name sign shall be used at intersections of public and private streets to designate the private street status of the side street. The RCKC shall not install or maintain private street name signs at the intersection of two private roadways/streets.

All other guide signs not required to be installed by the MMUTCD, authorized by this policy, or in the engineering judgment of the traffic engineer shall not be installed or maintained within the public right-of-way.

Other Signs

There are other signs listed in other chapters of Part 2 of the MMUTCD that require attention by this policy.

General Information Signs (I Series, M5 and M6 Series)

The general information sign shall be installed and maintained upon request by an official representative of a Township or other public entity. The request shall be made in writing on official letterhead. The requestor shall be responsible for the cost of material to fabricate and install the sign. When the sign is due for replacement or is damaged, as determined in the engineering judgment of the traffic engineer, the requestor shall be responsible for the cost of material to fabricate the new sign as well as the cost to install the sign.

General Service Signs (D9-2, M5 and M6 Series)

Hospital general service signs are installed and maintained by the RCKC.

Recreational and Cultural Interest Area Guide Signs

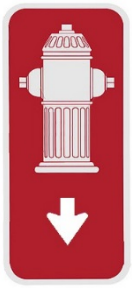
A municipal park department may request park signs and shall be responsible for the cost of material to fabricate, install and maintain the sign. When the sign is due for maintenance/replacement or is damaged, as determined by the RCKC, the requesting entity shall be responsible for the cost of material and labor to fabricate and install the new sign.

All other information/service signs not authorized by this policy or in the engineering judgment of the traffic engineer shall not be installed or maintained.

Neighborhood Watch Signs

The neighborhood watch signs may be installed at the request of the appropriate law enforcement agency and the requesting entity. The requesting neighborhood shall be enrolled in the official National Neighborhood Watch program; http://www.nnw.org/. To ensure the effectiveness of these signs enrollment must be renewed bi-annually by the appropriate law enforcement agency with updated contacts in the official program. The requesting entity shall be responsible for the cost of material to fabricate, install and maintain the sign. When the sign is due for maintenance/replacement or is damaged, as determined in the engineering judgment of the traffic engineer, the requesting entity shall be responsible for the cost of material and labor to fabricate and install the new sign. Sign placement shall be limited to only one sign at entry point(s) into the neighborhood watch area.

Hydrant Sign



The hydrant sign shall be installed and maintained upon request by an official utility representative. The requesting utility shall be responsible for the cost of material to fabricate and install the sign. When the sign is due for replacement or is damaged, as determined in the engineering judgment of the traffic engineer, the utility shall be responsible for the cost of material to fabricate the new sign as well as the cost to install the sign.

Water Valve Sign

The RCKC shall not install or maintain water valve signs.

Transit / BUS STOP Sign

The transit/BUS STOP sign shall be installed and maintained upon request by an official representative of Public Transit. Public Transit shall be responsible for the cost of material to fabricate, install and maintain the sign. When the sign is due for maintenance/replacement or is damaged, as determined in the engineering judgment of the traffic engineer, Public Transit shall be responsible for the cost of material and labor to fabricate and install the new sign. Sign placement shall be limited to one sign at each designated transit route stop. The sign shall not be combined with any other sign and be on a separate post.

SHARE THE ROAD Sign (W16-1p)

The share the road sign shall be installed in conjunction with the bicycle symbol sign (W11-1) and shared lane pavement marking (sharrow) only when there are gaps, of less than 1 mile, in the non-motorized network and where the following conditions exist:

If:

- Significant bike use is observed (minimum of 100 cyclists in a season or bicycle activity four days of the week for three consecutive weeks) and
- Paved shoulders are 4 foot or less.

And two of the following conditions are present:

- On street parking is allowed and bikes are prohibited on sidewalks
- Posted speed limit of 40 mph or less
- School or college area
- ADT greater than 2,000 or commercial ADT greater than 300
- 5 or more bicycle crashes in a three year period
- Where vertical or horizontal sight distance is limited
- Bike lanes are present, but terminate offering bicyclist no alternative route
- Guardrail in place (no escape route):
    - Face of Rail to Edge Line is less than 6 feet
    - 5 or more guardrail runs in a mile
    - Guardrail runs longer than 1,000 feet

The bicycle warning sign and the share the road plaque should be placed where the above condition begins, and after major

intersections.

The bicycle warning sign and share the road plaque are not permitted at the following locations:

- On routes with 4 foot or wider paved shoulders unless the designated bike lane ends at the beginning of a 4 foot or wider paved shoulder.
- On routes where a separate path is available.

Guide Signs and Plaques for Bicycle Facilities (D11, M1, M4, M5 and M6 Series)

The Bike Route (D11-1) guide signs and plaques for bicycle facilities shall be installed only on an official non-motorized network. The requesting entity shall be responsible for the cost of material to fabricate, install and maintain the sign. When the sign is due for maintenance/replacement or is damaged, as determined in the engineering judgment of the traffic engineer the requesting entity shall be responsible for the cost of material and labor to fabricate and install the new sign.

The Bike Route (D11-1c) guide sign and plaques for commuter bike facilities (as identified in the Kalamazoo Area Transportation Study 2045 Metropolitan Transportation Plan, Map 7 document) will be installed and maintained by the RCKC. These signs shall feature a white legend on a green background with the Route name text of “Southwest Michigan Bikeway” in place of “BIKE ROUTE”. These signs shall be installed only where a corridor level assessment has been completed by the traffic engineer to fully investigate the appropriateness of the proposed facility. Directional arrows (M series) will accompany these signs to guide cyclists along the routes.

School Sign (S1-1) and Plaques (W16-7p and W16-9p)

The school sign shall be installed in advance of a school as determined in the engineering judgment of the traffic engineer. The AHEAD (W16-9p) and down arrow (W16-7p) plaques shall be used in conjunction when a painted crosswalk is present. A fluorescent yellow-green background color may be used for this sign or plaques.

Reduced School Speed Limit Ahead Sign (S4-5)

The reduced school speed limit ahead sign shall be used in advance of a school zone speed limit and shall designate the new speed limit in effect during times shown on school times plaque (S4-1P)

School Speed Limit Assembly (S4-1P, S4-3P, R2-1) and END SCHOOL SPEED LIMIT Sign (S5-3)

The school speed limit assembly and end school speed limit sign shall be installed and maintained as determined in the engineering judgment of the traffic engineer. The speed limit listed must follow the guidelines set forth in Section 257.627a of the MVC.

Any school wishing to install additional traffic control devices, as approved by the traffic engineer, shall be responsible for the purchase and maintenance costs of the additional devices. A formal letter of agreement between the RCKC and the school shall be executed prior to the installation of the additional devices.

SCHOOL BUS STOP Sign

School bus stops shall not be signed. Section 257.1855 of The Pupil Transportation Acts sets distance requirements for bus stops to ensure the minimum stopping distance is available on non-freeways posted up to 55mph. The act does not legally allow school bus stops with inadequate visibility in place. School bus stop warning signs shall not be used to address violators of the school bus flashing red lights.

Electronic Traffic Control Devices for Signs

Electronic traffic control devices may be added to a sign for additional emphasis or safety benefit. This may include, but is not limited to, beacons, flashers, and LED flashing signs. Such devices are not typical and shall be reserved for use in the most extreme circumstances. These devices shall not be installed and maintained unless approved in the engineering judgment of the traffic engineer. Recent crash history and other traffic related factors shall be used to determining when these devices are warranted.

3. SPECIAL EVENT SIGNING

The RCKC shall not provide or install any special event signing unless authorized in the engineering judgment of the traffic engineer.

4. POLICY IMPLEMENTATION

Upon the adoption of this policy, implementation shall occur as signs are replaced or requested. Signs may also be removed or replaced under the following conditions:

- Signs have reached the end of their service life,
- Retro reflectivity requirements not met,
- Damage,
- Maintenance and/or when identified within a construction project,
- Or when in conflict and/or pose a safety concern in the engineering judgement of the traffic engineer.

5. MISSING AND DAMAGED SIGNS

The RCKC, or requesting entity, may seek recovery of damages for their signs damaged by users. Typically in case for RCKC signs, a recent crash report must be issued stating that RCKC property (i.e. a road sign) was damaged in the crash. The at-fault user's insurance company will then be contacted and a bill for sign replacement cost and installation will be issued. If the at-fault user has no insurance then a bill will be sent directly to that user.

Critical Signs

Upon notification to the RCKC the following signs are given highest priority for sign replacement or temporary sign placement:

- STOP sign, YIELD sign, One or Two Direction Large Arrow signs.

The following signs shall be given the next highest priority and are replaced as soon as possible:

- Horizontal alignment signs, railroad crossing warning signs, and advanced traffic control signs.

6. REQUEST AND DEVIATION FROM POLICY AND STANDARDS

This policy does not supersede the MMUTCD, AASHTO, or MDOT guidelines, manuals (i.e., MVC), and other RCKC policies (i.e., non-motorized, encroachment, right-of-way, etc.).

This policy provides standards, guidance, and options for design and application of traffic control devices. The RCKC reserves the right to supersede any or all of this policy when safety concerns require.

All sign requests and deviations should be routed through the RCKC's process (i.e., service request) or traffic engineer.

The traffic engineer shall review the proposed requests or deviations. If the traffic engineer approves the requests or deviations, the sign(s) may be installed. If the traffic engineer denies the request(s) or deviation(s), the requests or deviations may be presented to the board for review.

7. REVIEW AND MODIFICATION OF POLICY

This policy shall incorporate by reference the most current revisions of the MMUTCD, MVC, AASHTO, guidelines, manuals, and other traffic related policies. Review and modifications to the policy, including supplements, may be adopted as necessary.

SUPPLEMENTS

It is the intent of this document to standardize the use and style of signs for instant recognition and uniform interpretation by all users. It is also acknowledged that RCKC may also have the need to establish and use special signs to meet the specific needs. Any special signs necessary for use may be included in the supplement.

The following pages outline the supplements.

SUPPLEMENTS – RCKC

(This space is reserved for future use.)

REFERENCES

The following references were used to draft this sign policy:

Policy Team Websites:

Road Commission of Kalamazoo County
https://www.kalamazoocountyroads.com/

Statutes:

Bridges and Culverts, 1925 PA 354. MCL 254.1 – 254.32
http://legislature.mi.gov/doc.aspx?mcl-Act-354-of-1925

Michigan Vehicle Code, 1949 PA 300, MCL 257.1 – 257.923
http://legislature.mi.gov/doc.aspx?mcl-Act-300-of-1949

State Trunk Line Highway System, 1951 PA 51, MCL 247.651 – 247.675
http://legislature.mi.gov/doc.aspx?mcl-Act-51-of-1951

Highway Advertising Act, 1972 PA 106, MCL 252.301 – 252.325
http://legislature.mi.gov/doc.aspx?mcl-Act-106-of-1972

The Pupil Transportation Act, 1990 PA 187, MCL 257.1801 – 257.1877
http://legislature.mi.gov/doc.aspx?mcl-Act-187-of-1990

Federal and State Manuals and Guides:

A Policy on Geometric Design of Highways and Streets (Green Book). American Association of State Highway Officials, 2011.
https://bookstore.transportation.org/collection_detail.aspx?ID=110

Michigan Manual of Uniform Traffic Control Devices (MMUTCD). Michigan Department of Transportation, 2011.
http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdcompleteinteractive_2017.pdf

Traffic Sign Design, Placement, and Application Guidelines. Michigan Department of Transportation, 2017.
http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_signing_design_placement_application_guidelines.pdf

Other Local Policies:

Road Commission of Kalamazoo County Non-Motorized Facilities Policy. Road Commission of Kalamazoo County, 2015.
https://www.kalamazoocountyroads.com/userfiles/kcrc/file/Engineering/Non%20Motorized%20Policy%20Approved%20%2011-3-15.pdf

Berrien County Road Commission Traffic Sign Policy. Berrien County Road Commission, 2015.
http://bcroad.org/OP-2%20Sign%20Policy.pdf

St. Louis County Traffic Sign Policy. St. Louis County Public Works Department, 2014.
http://www.stlouiscountymn.gov/Portals/0/departments/publicworks/KA_Uploads/StLouisCountySignPolicyDRAFT.pdf

Technical Papers and Articles*:
**The listing is not an all-inclusive list related to sign and driver behavior research.*

Technical Update: Children at Play and Hidden Drive Signs. Ohio LTAP Center, 2013.
http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/LTAP/Documents/RON_Update_Hidden_Drive_and_Children_at_Play_Signs.pdf

Transportation Research Synthesis: Effectiveness of Traffic Signs on Local Roads. Minnesota Department of Transportation, 2010.
http://www.dot.state.mn.us/research/TRS/2010/TRS1002.pdf

T*ransportation Synthesis Report: Effectiveness of "Children at Play" Warning Signs*. Wisconsin Department of Transportation, 2007.
http://54.172.27.91/transportation/signs/childrenwarningsigns_tsr_2007.pdf

Sauerburger, Dona, Eugene Bourquin, and Jomania Sauerburger. "The Effectiveness of Deaf-Blind Pedestrians Warning Signage on Drivers' Behaviour." *International Journal of Orientation & Mobility* 5.1 (2013): 11-15.
http://www.sauerburger.org/dona/DBsignIJOM.html

Fisher, James. "Testing the Effect of Road Traffic Signs' Informational Value on Driver Behavior." *Human Factors: The Journal of the Human Factors and Ergonomics Society* 34.2 (1992): 231-237.
http://journals.sagepub.com/doi/pdf/10.1177/001872089203400208

McNichol, Tom. "Roads Gone Wild." *WIRED* 01 Dec. 2004
https://www.wired.com/2004/12/traffic/

FREQUENTLY ASKED QUESTIONS AND ANSWERS

Q: Does this sign policy interfere with the efforts of complete streets and non-motorized facilities?

A: This sign policy does not interfere with the considerations, potential projects, and/or efforts of non-motorized facilities. Rather it provides a consistent application for users on sign expectations.

Q: What is the purpose of this sign policy?

A: This sign policy provides consistency in sign use for the RCKC. The purpose of providing a uniform traffic sign approach (where possible) will minimize the confusion of when and where signs are used and assist staff and the public in establishing safe traffic signing.

Q: What does the MMUTCD state about installing more than one sign on the same post?

A: Per the MMUTCD: "…Signs should be individually installed on separate posts or mountings except where: A.) One sign supplements another; B.) Route or directional signs are grouped to clarify information to motorists; C.) Regulatory signs that do not conflict with each other are grouped, such as turn prohibition signs posted with one way signs or a parking regulation sign posted with a speed limit sign; or D.) Street name signs are posted with a stop or yield sign…"

Q: How will this sign policy reserve all rights/authorities for the RCKC?

A: Policies may be adopted, reviewed and revised in order to meet legislatively mandated responsibilities. The policies provide guidance to the public and to the RCKC governing body and its staff. This policy does not supersede the MMUTCD, AASHTO, or MDOT guidelines, manuals (i.e., MVC), and RCKC's policies (i.e., non-motorized, encroachment, right-of-way, zoning, etc.). This policy provides standards, guidance, and options for design and application of traffic control devices. The RCKC reserves the right to supersede any or all of this policy when safety concerns require.

Q: How will requests for a variance to this sign policy be handled?

A: The traffic engineer shall review the proposed requests or deviations. If the traffic engineer approves the requests or deviations, the sign(s) may be installed. If the traffic engineer denies the requests or deviations the requests or deviations may be presented to the board for review.

Q: How and when may the policy be updated?

A: The policy is a fluid document and may be updated as variances, supplements, guidelines or legislative changes dictate they be incorporated.

Q: Why are some of the signs in the MMUTCD allowed, while others are not?

A: The MMUTCD is a broad document and not all areas are applicable to our region. The MMUTCD allows for engineering judgement as to what signs may be considered.

Q: Who will determine how many signs of any type are allowed?

A: The traffic engineer, or RCKC designee, shall determine how many signs and spacing of signs based upon guidance in the MMUTCD.

Q: How many signs does RCKC have?

A: Currently, there are approximately 22,800 signs managed by RCKC.

Q: Why are signing priorities necessary?

A: Signing priorities are necessary to recognize the primary functions of signs are to warn, regulate and guide users. Sign spacing and the amount of information displayed have an impact on users and the ability to read and respond to sign messages in an expected, predictable manner.

Q: Does this sign policy regulate private property signage?

A: This policy addresses the public right-of-way and not private property. Cities or Townships should be contacted for any other ordinance and/or policy requirements.

Q: How are sign installations to be requested?

A: Requests may be submitted by a city, village, MDOT or township. Resident requests seeking installation may be considered depending on the type of sign requested.

Q: What other requirements are necessary with a sign placement?

A: RCKC should be contacted for any permit and/or policy requirements prior to any installation.