

**State of Maine DOT
Department of Transportation
Memorandum**

Bureau of Maintenance and Operations
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DATE: 2/21/07
TO: David A. Cole, Commissioner
FROM: Bruce Ibarguen, State Traffic Engineer
SUBJECT: Changeable Message Signs — Procedures and User Guideline

Subject to your approval the following items are submitted for the Commission Record:

ITEM: Acting on the recommendation of the State Traffic Engineer, the Commissioner approved the *Standard Operating Procedures for the use of Changeable Message Signs* and the *Changeable Message Sign-User Guideline* as attached hereto and made a part of this record.

signed:
Bruce A. Ibarguen
State Traffic Engineer

Comments: The Department has deployed portable Changeable Message Signs (CMS) and will soon be implementing the installation of permanent CMS for the purpose of providing road users with information that is critical to the safe and efficient completion of their trip. These documents contain information on the administration and operation of these devices. The “procedures” contain information on the types of information that may be displayed on CMS, as well as messages that are unacceptable. The “guideline” is intended for the users and provides them information on who may make a decision on the message to be displayed, while again referring to the types of information that may or may not be displayed.

signed:
Bruce A. Ibarguen A
State Traffic Engineer

BAI/sas
APPROVED BY
Commissioner of Transportation
3/07/07

STANDARD OPERATING PROCEDURES FOR THE USE OF CHANGEABLE MESSAGE SIGNS (CMS)

Objective: The Maine Department of Transportation shall activate permanent and deploy portable Changeable Message Signs (CMS) at those locations determined by the Department to be critical for the safe and efficient operation of the highway system, and where motorists need information regarding traffic incidents, congestion, or other emergency situations.

Introduction: Drivers need accurate, timely and reliable information concerning roadway conditions or incidents on their intended route of travel in order to make informed decisions regarding a safe and efficient completion of their trip. These procedures describe the use of Changeable Message Signs (CMS) as a means to convey that information to drivers. This document provides guidance for those who will operate CMS on state maintained highways. The intent of this policy is to provide uniformity in the deployment and operation of both permanent and portable CMS.

Authority: The Maine Department of Transportation has the legal authority to implement this policy under the following provisions in law:
Title 23, Article 5, Traffic Control §135 1. Installation of signals, devices and signs.

Definitions:

Traffic incident — Any unexpected situation that restricts the capacity of a roadway as to cause unacceptable delays or detour due to the roadway being closed.

Construction Activity — Any roadway work that restricts capacity or causes rerouting of traffic due to the highway being rebuilt or maintained.

Traveler Information — The information needed by a driver to make an informed decision regarding the completion of their trip.

Emergency Messages — Those messages specifically related to transportation conditions that require motorist attention and response to an emergency.

Unacceptable Messages — Those messages that may not be displayed on CMS.

Procedures: CMS may be used to display motorist information to assist drivers in making decisions regarding traffic incidents, construction activity or emergency situations along the highway. When a traffic incident impacts the safe and efficient operation of the highway system, a CMS may display a message to advise drivers of the appropriate action to take in order to lessen delays or to provide safe routing. The message should relate to the anticipated length of the delay and/or to the alternate route to take to avoid the incident. No message should be displayed at locations that are so far from the incident that the condition would not exist when the incident site is reached. If an incident impacts motorists on an adjoining or parallel route, then a message should be displayed until such time as full capacity is restored on the adjoining route. Depending upon the severity, location and direction of an incident, it may be necessary to display messages miles in advance in order to provide diversion opportunity to drivers. CMS may also be deployed when highway construction affects capacity or causes re-routing of traffic. Messages related to the construction activity itself shall be in conformance with the Manual on Uniform Traffic Control Devices. The display of traveler information related to actions to be taken to avoid the construction site or to direct motorists around the site is acceptable. Notification of future re-routing or anticipated roadwork affecting the roadway capacity is also permissible.

CMS may be used to display emergency messages that are transportation related or convey emergency conditions that require driver attention and response. The Department will coordinate the display of emergency messages with the agency seeking the display, and will determine where to place the message and for how long. Priority and message text will be determined by the Department who will coordinate with the appropriate emergency agency as deemed necessary for the level of emergency. “Amber Alert” messages will be coordinated with the appropriate state agency. Homeland security messages will be displayed by the Department working with the appropriate Federal and State Emergency Management Agencies.

Traveler Information: The following types of information may be displayed on CMS:

1. Weather/Road conditions — to advise motorists of adverse weather and roadway conditions that would impact their safety or restrict traffic flow. These messages should be location specific, verified by personnel on the scene and coordinated with enforcement personnel as needed. Weather and roadway conditions that may be displayed include, but are not necessarily limited to, the following:

- Blowing Snow (“whiteout”)
- Fog
- Heavy Rain

- Icy Road
- High Winds
- Flooded Road

2. Special Events — to advise motorists of impacts on travel due to major events (fairs, concerts, air shows, etc.). No reference to the specific event shall be permitted on the CMS, as this would be considered advertising. Messages shall be restricted to information that assists drivers in making decisions on how to avoid the potential traffic impacts.

Examples of acceptable messages are:

- Time of anticipated delay
- Alternate routes
- Availability of parking (shuttles)
- Travel lane selection
- Time of day that event will impact traffic

3. Travel Time — to assist drivers in making decisions on potential route of travel based on measured trip durations. These messages will have a lower priority than those which affect safety on the system. They will be based on real-time measurements or calculations from data obtained from roadway sensors, toll tags, cell phone communications or other ITS technologies.

4. Enforcement Actions — to alert drivers to checkpoints for sobriety or border security, traffic incidents that require roadblocks, lane closures or other enforcement activity.

5. Congestion Management — to inform drivers of times when significant queuing of vehicles is occurring on specific segments of the highway system. These messages are particularly time sensitive and must be extremely reliable before they are displayed.

Note: All messages should be removed from the CMS as soon as conditions return the system to normal operation.

Unacceptable Messages: The following categories of information shall not be displayed on CMS.

1. Advertising -- Messages promoting any product, service, event (non-incident) or political party are prohibited. Special Events, mentioned previously, shall not be advertised but may be signed for their specific impacts to the traffic flow.
2. Public Service Announcements — Messages intended to convey general public service announcements shall be prohibited.

3. Generic Messages — Message, with slogans, greetings, holiday wishes, etc. (e.g. “have a nice day”, “Merry Christmas”) shall be prohibited.
4. Date/Time/Temperature — Messages giving date, time, or temperature are prohibited.
5. Normal static signing — Messages that are intended for long-term display (weeks, months) shall not be placed on CMS (e.g. “Work Area”, “Stop Ahead”, etc.).

Note: All graphic displays used on CMS shall be in conformance with the Manual on Uniform Traffic Control Devices (MUTCD). CMS shall remain blank when no message is to be displayed. CMS messages should be removed as soon as conditions on the highway segment return to normal operations. For more information concerning the use of CMS, see Portable Changeable Message Sign Handbook at: <http://www.tfrc.gov/pavement/ltpp/reports/03066/>.

Changeable Message Signs — User Guideline

The Maine Department of Transportation has deployed portable and installed permanent changeable message signs at various locations throughout the state where it is felt that motorists need information regarding traffic incidents, congestion, construction or other emergency situations. These devices will be operated by personnel in the Bureau of Maintenance and Operations or Bureau of Project Development and by contractors working for those bureaus. This guide provides information to those operators to assist them in making decisions on what message may be displayed when to use them, who to contact to determine a variation of message, and who has authority to authorize that variation.

CMS Operators:

Radio room staff in the Bureau of M & O shall be able to communicate with CMS via phone modem or internet link. These personnel only have authority to display those messages that are pre-programmed in the system.

The following personnel may authorize a message variation:

- Chief Engineer
- Director, Bureau of Maintenance & Operations
- Traffic Engineer
- Assistant Traffic Engineer
- Region Traffic Engineer
- Duty Officer

Project Residents utilize CMS for some construction activities. These personnel only have authority to display those messages that have been pre-programmed or are authorized for use in the contract documents. The same personnel listed above may be consulted when a variation is suggested on a project.

The CMS operator should consult with the Region Traffic Engineer, Assistant State Traffic Engineer, etc. up the list of personnel to determine the text of a message.

Using CMS:

Changeable Message Signs may be used to provide motorists information regarding weather related traffic conditions (snow, ice, flood); construction activity (e.g. detour, delay); highway incident (e.g. crash, fire, delay); maintenance activity (lane closure, etc.); congestion (delay, alt route); special events impacting traffic (e.g. fairs, concerts, air shows). In the case of a "Special Event", no event name may be used, only the traffic input may be displayed (e.g. delay; stoppage, lane closure, etc.)

- Special Events — those functions, such as a fair, concert, or trade show, that may impact traffic flow. NOTE: The specific name of the event must NOT appear on the message. Only the specific traffic impact (anticipated delay, alternate route, lane closure, etc.) may be displayed.

Unacceptable Messages:

- Advertising — messages promoting any product, service, business, event or political party.
- Public Service Announcement — PSA's unrelated to traffic or the driving task. There are occasions, such as holidays, when messages, such as "Use Your Seat Belt". Will be acceptable.
- Greetings Messages conveying holiday greetings, slogans, etc.
- Date/Time/Temperature
- Normal State signing — messages intended to be displayed for long periods of time (e.g. "Work Area", "Stop Ahead") which could also be done with a static sign.
- Signs should remain blank at all times other than when they are being used for an acceptable condition. This is to reinforce the drivers' awareness that a displayed message is to be observed and followed.