243 Portable Changeable Message Signs

243.1 General

See ***FDM 240*** for additional information concerning the use of portable changeable message signs (PCMS).

A PCMS is required for nighttime work that takes place within 4 feet of the traveled way, and should be considered for the following conditions:

(1) Road closures

(2) Ramp closures

(3) Delays created by:

- (a) Congestion
- (b) Crashes
- (c) Lane closures
- (d) Two-way traffic on a divided highway
- (e) Multiple lane closures
- (f) Unexpected shifts in alignment

243.2 PCMS Placement

The message displayed must be visible and unobstructed to a motorist in accordance with ***Standard Specification 102***. The message displayed must be installed at the following minimum distances:

(1) 900 feet on approach to construction work areas to allow for two message cycles.

(2) 500 to 800 feet in advance of potential traffic problems.

(3) 0.5 to 2 miles in advance of complex traffic control schemes that require new or unusual traffic patterns.

243.3 PCMS Messages

Messages must be simple with a minimum number of words and lines and must include no more than two displays of no more than three lines each with 8 characters per line.

Provide the location and messages to be displayed in the Temporary Traffic Control Plan (TTCP).

Programmed messages must provide appropriate information for the conditions likely to be encountered. Place the programmed messages in the TTCP. Consider the following items in the development of a message:

(1) Message elements

- (a) Problem statement (where?)
- (b) Effect statement (what?)
- (c) Attention statement (who?)
- (d) Action statement (do?)

(2) Message format

- (a) Will vary depending on content
- (b) "Where" or "what" will generally lead
- (c) "Who" and "do" follow in that order
- (d) "Who" is often understood from "where"

(3) Display format

- (a) Discrete, with entire message displayed at once is most desirable
- (b) Sequential is OK, 2 parts maximum
- (c) Run-on moving displays are prohibited
- (d) One abbreviation per panel display is desirable, two abbreviations are the maximum. Route designation is considered as one abbreviation and one word. Guidelines for abbreviations are provided on the following pages. Refer to the ***Library of Approved Safety Messages for DMS***.

243.3.1 PCMS Worksheet

See ***Figure 243.3.1*** for an illustration on the development of a PCMS Worksheet.

See ***Form 243-A*** (located in ***FDM 103***) and ***FDM 921*** for instructions on showing the worksheet information in the plans set.

Figure 243.3.1 PCMS Worksheet

Financial Project No.: 123456-7-89-10

Location of board: Westbound Buck Lake Road – Station 100+00

Used: from 01 - 01 - 01 at 6 : 00 (am)/pm

to 02 - 02 - 02 at 6 : 00 am (pm)

Message programmed by: W. Giddens

MESSAGE 1

U	S	E					
C	A	U	T	I	O	N	

MESSAGE 2

T	R	U	C	K	S		
E	N	T	E	R	I	N	G
R	O	A	D	W	A	Y	

Timing:

Message 1 will run 10 . 00 seconds.

Message 2 will run 12 . 50 seconds.

STANDARD ABBREVIATIONS FOR USE ON PCMS

Standard abbreviations easily understood are:

WORD	ABBREVIATION	WORD	ABBREVIATION
Boulevard	BLVD	Normal	NORM
Center	CNTR	Parking	PKING
Crossing	XING	Pedestrian	PED
Crosswalk	XWALK	Road	RD
Emergency	EMER	Service	SERV
Entrance, Enter	ENT	Shoulder	SHLDR
Expressway	EXPWY	Slippery	SLIP
Freeway	FRWY, FWY	Speed	SPD
Highway	HWY	Traffic	TRAF
Information	INFO	Travelers	TRVLRS
Left	LFT	Warning	WARN
Maintenance	MAINT		

Other abbreviations are easily understood whenever they appear in conjunction with a particular word commonly associated with it. These words and abbreviations are as follows:

WORD	ABBREVIATION	PROMPT
Access	ACCS	Road
Ahead	AHD	Fog*
Blocked	BLKD	Lane*
Bridge	BRDG	[Name]*
Chemical	CHEM	Spill
Construction	CONST	Ahead
Exit	EX, EXT	Next*
Express	EXP	Lane
Hazardous	HAZ	Driving
Interstate	I	[Number]
Major	MAJ	Accident
Mile	MI	[Number]*
Minor	MNR	Accident
Minute(s)	MIN	[Number]*
Oversized	OVRSZ	Load
Prepare	PREP	To Stop
Pavement	PVMT	Wet*
Quality	QLTY	Air*
Route	RT	Best*
Turnpike	TRNPK	[Name]*
Vehicle	VEH	Stalled*
Cardinal Directions	N, E, S, W	[Number]
Upper, Lower	UPR, LWR	Level

* = Prompt word given first

The following abbreviations are understood with a prompt word by about 75% of the drivers. These abbreviations may require some public education prior to usage.

WORD	ABBREVIATION	PROMPT
Condition	COND	Traffic*
Congested	CONG	Traffic
Downtown	DWNTN	Traffic
Frontage	FRNTG	Road
Local	LOC	Traffic
Northbound	N-BND	Traffic
Roadwork	RDWK	Ahead [Distance]
Temporary	TEMP	Route
Township	TWNNSHP	Limits

* = Prompt word given first

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. Do not use these abbreviations:

ABBREVIATION	INTENDED WORD	WORD ERRONEOUSLY GIVEN
WRNG	Warning	Wrong
ACC	Accident	Access (Road)
DLY	Delay	Daily
LT	Light (Traffic)	Left
STAD	Stadium	Standard
L	Left	Lane (Merge)
PARK	Parking	Park
RED	Reduce	Red
POLL	Pollution (Index)	Poll
FDR	Feeder	Federal
LOC	Local	Location
TEMP	Temporary	Temperature
CLRS	Clears	Color