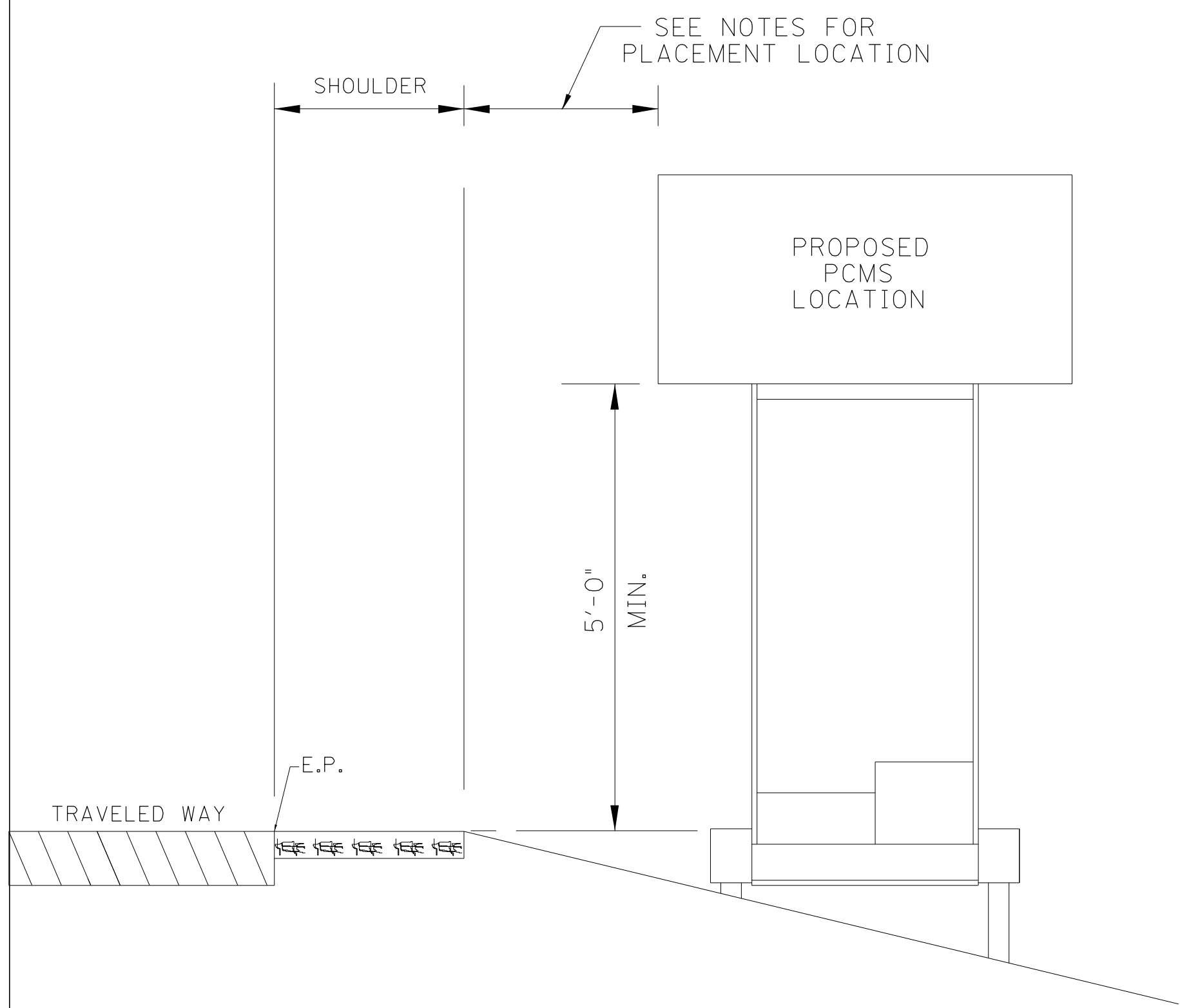
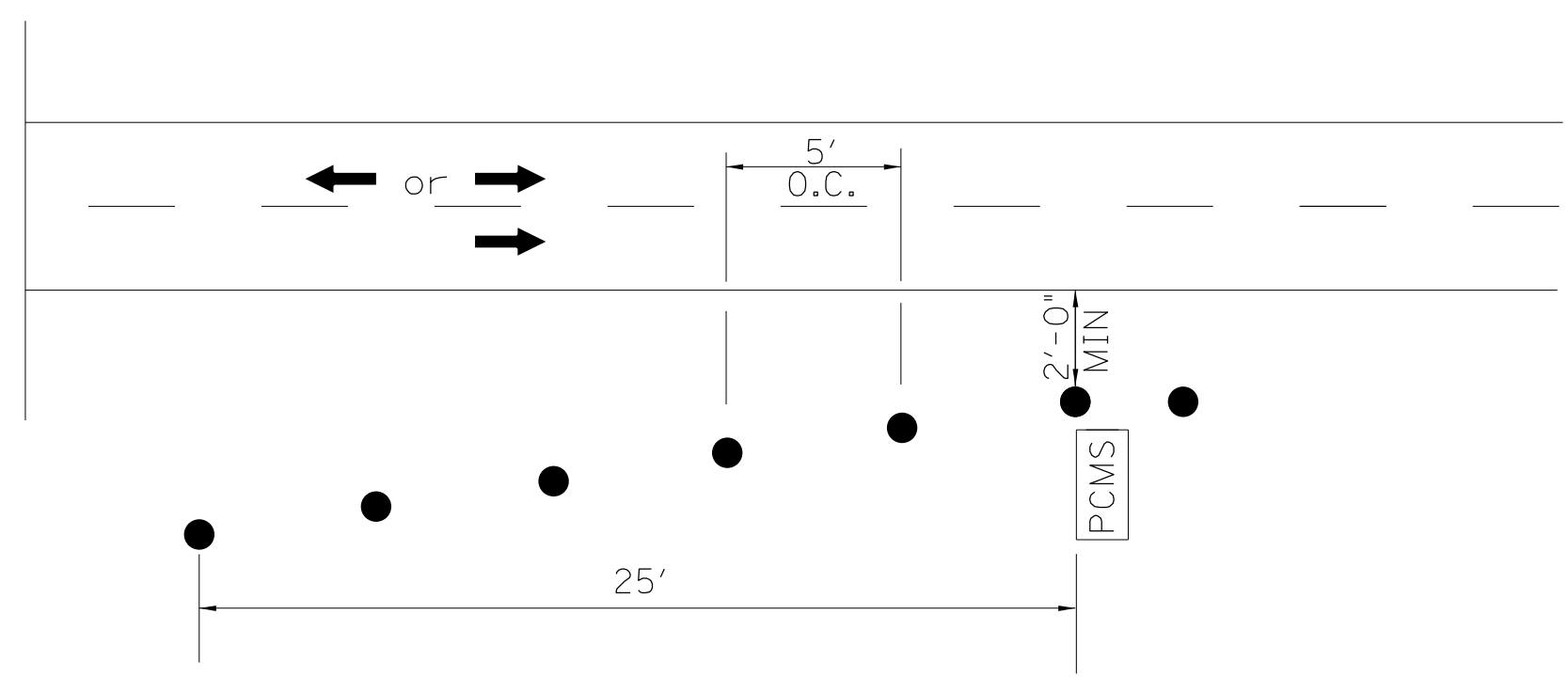


REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO

DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)  
(SHEET 1 OF 3)



MOUNTING HEIGHT AND TYPICAL PLACEMENT OF PCMS IN RURAL AREAS

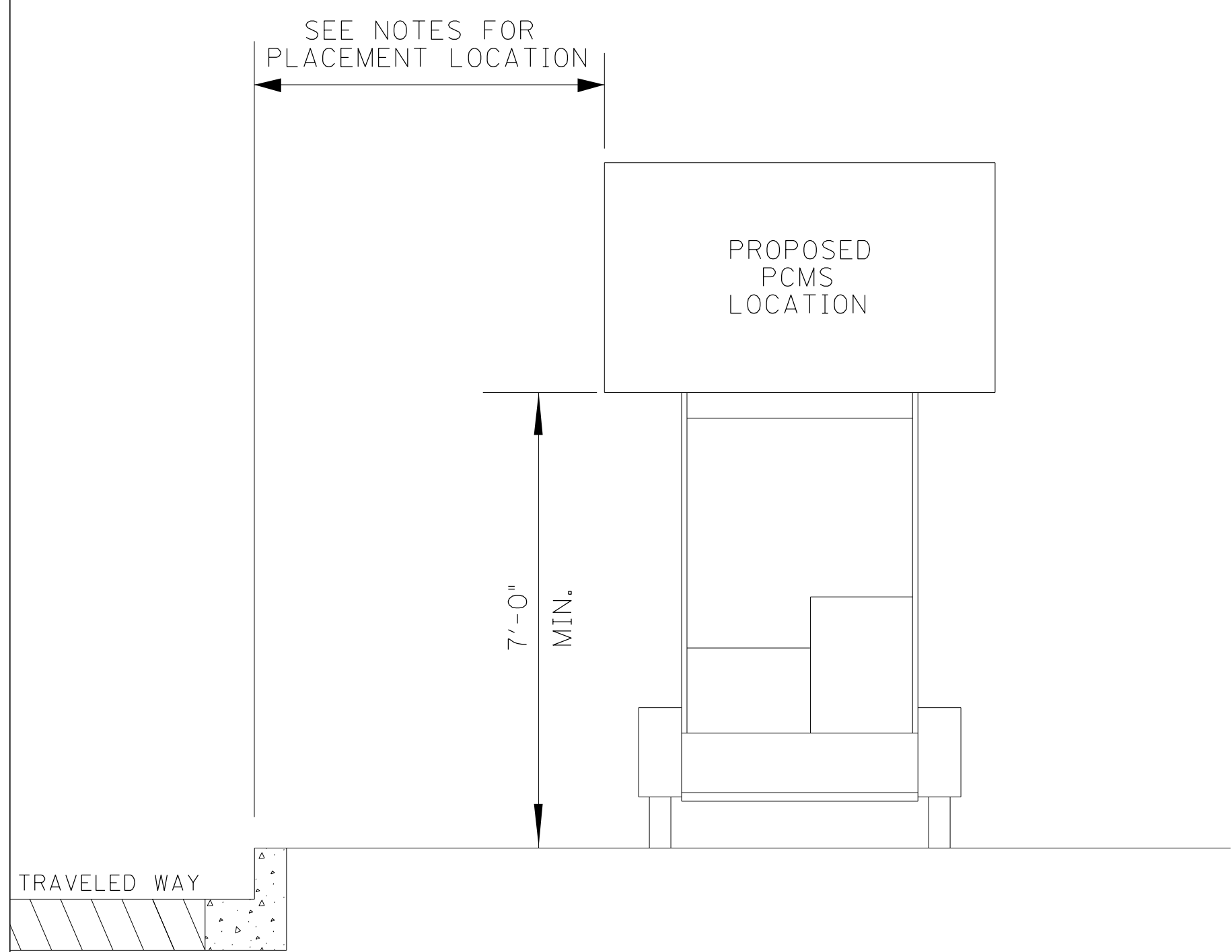


DELINEATION DRUM DETAIL FOR PCMS PLACED ON THE SHOULDER

NOTE: WHEN PAVED OR UNPAVED SHOULDERS ARE CLOSED FOR PCMS PLACEMENT, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE OF THE PCMS TO DIRECT TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.

NOTES:

- PORTABLE CHANGEABLE MESSAGE SIGNS SHOULD BE PLACED OFF THE SHOULDER OF THE ROADWAY AND BEHIND TRAFFIC BARRIER, IF PRACTICAL. WHERE A TRAFFIC BARRIER IS NOT AVAILABLE TO SHIELD THE PCMS, IT SHOULD BE PLACED OFF THE SHOULDER AND OUTSIDE OF THE CLEAR ZONE. IF A PCMS HAS TO BE PLACED ON THE SHOULDER OF THE ROADWAY OR WITHIN THE CLEAR ZONE, IT SHALL BE DELINEATED WITH RETROREFLECTIVE TEMPORARY TRAFFIC CONTROL DEVICES.
- WHEN MULTIPLE PCMS ARE REQUIRED, (SEE PCMS-710, SHEET 2 OF 3, MESSAGE DISPLAY NOTE NO. 4) THEY SHOULD BE PLACED ON THE SAME SIDE OF THE ROADWAY AND SEPARATED FROM EACH OTHER BY A DISTANCE OF AT LEAST 1000 FEET ON FREEWAYS & EXPRESSWAYS, AND BY AT LEAST 500 FEET ON OTHER TYPES OF HIGHWAYS. DO NOT INSTALL ANY TEMPORARY SIGNING BETWEEN THE TWO PCMS TO MAINTAIN THE INTEGRITY OF THE COMPLEX MESSAGE SEQUENCE.
- IF MORE THAN ONE PCMS IS VISIBLE TO ROAD USERS, THEN ONLY ONE SIGN SHALL DISPLAY A SEQUENTIAL MESSAGE AT ANY GIVEN TIME. PCMS SIGNS SHOULD NOT BE GATE POSTED, BUT IF THE NEED ARISES, ONE OF THE PCMSs SHALL HAVE A STATIC MESSAGE.
- WHEN PCMS ARE NOT BEING USED TO DISPLAY TEMPORARY TRAFFIC CONTROL MESSAGES, THEY SHOULD BE RELOCATED OUTSIDE OF THE CLEAR ZONE OR PROTECTED FROM TRAFFIC AND TURNED AWAY FROM TRAFFIC. IF RELOCATION OR SHIELDING IS NOT PRACTICAL, THEY SHALL BE DELINEATED WITH RETROREFLECTIVE TEMPORARY TRAFFIC CONTROL DEVICES.
- PCMS UNIT SHOULD BE VISIBLE FROM 1/2 MILE UNDER BOTH DAY AND NIGHT CONDITIONS, WHEN PRACTICAL.
- PCMS MESSAGE SHOULD BE LEGIBLE FROM A MINIMUM DISTANCE:  
NIGHTTIME CONDITIONS - 600 FEET  
DAYTIME CONDITIONS - 800 FEET  
  
IN ORDER TO MAINTAIN LEGIBILITY, PCMS SHALL AUTOMATICALLY ADJUST THE MESSAGE BRIGHTNESS UNDER VARYING LIGHT CONDITIONS.
- PCMS SHOULD BE PLACED APPROXIMATELY 500 TO 800 FEET IN ADVANCE OF THE WORK ZONE CONFLICTS OR 1.5 TO 2 MILES IN ADVANCE OF COMPLEX TRAFFIC CONTROL SCHEMES.
- ALL PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL CONFORM TO THE CURRENT ALDOT STANDARD SPECIFICATIONS, SECTION 742.
- ALL PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL HAVE AN IDENTIFICATION LABEL IMPRINTED OR PERMANENTLY MOUNTED TO THE DEVICE AND/OR TRAILER. THE LABEL SHALL BE EASILY VISIBLE AND A MINIMUM SIZE OF 2 SQUARE INCHES. THE LABEL SHALL SHOW THE MANUFACTURER NAME AND THE MODEL NUMBER OF THE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS).



MOUNTING HEIGHT AND TYPICAL PLACEMENT OF PCMS IN URBAN AREAS

--SPECIFICATIONS--  
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REVISIONS  
1. Drawing revised and adjusted  
Note number 4 on 08-05-19  
by J.F.T.

**ALABAMA DEPARTMENT OF TRANSPORTATION**  
1409 COLISEUM BOULEVARD  
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

SPECIAL DRAWING NO  
PCMS-710 (SHEET 1 OF 3)

INDEX NO  
74201

Bureau Std Engr: D.J.W.  
DRAWN BY: \_\_\_\_\_ DATE DRAWN: 08-20-14

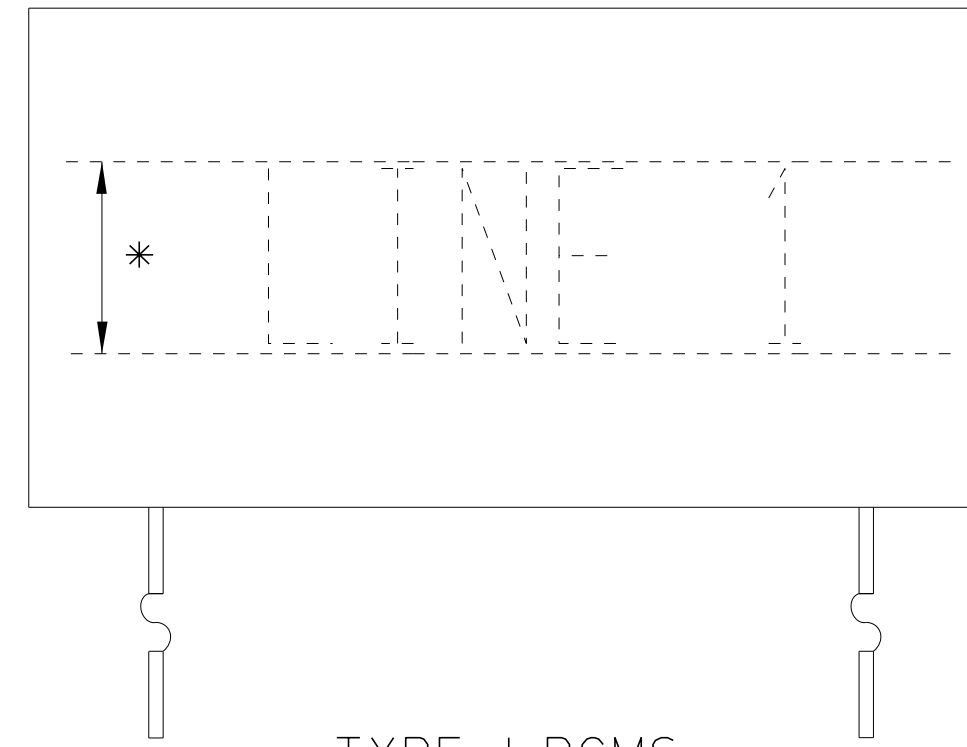
NOT TO SCALE

DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)  
(SHEET 2 OF 3)

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO

**NOTES:**

1. ALL PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL CONFORM TO THE CURRENT ALDOT STANDARD SPECIFICATIONS, SECTION 742.
2. THE PROJECT MANAGER SHALL APPROVE ALL MESSAGES USED ON PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS).



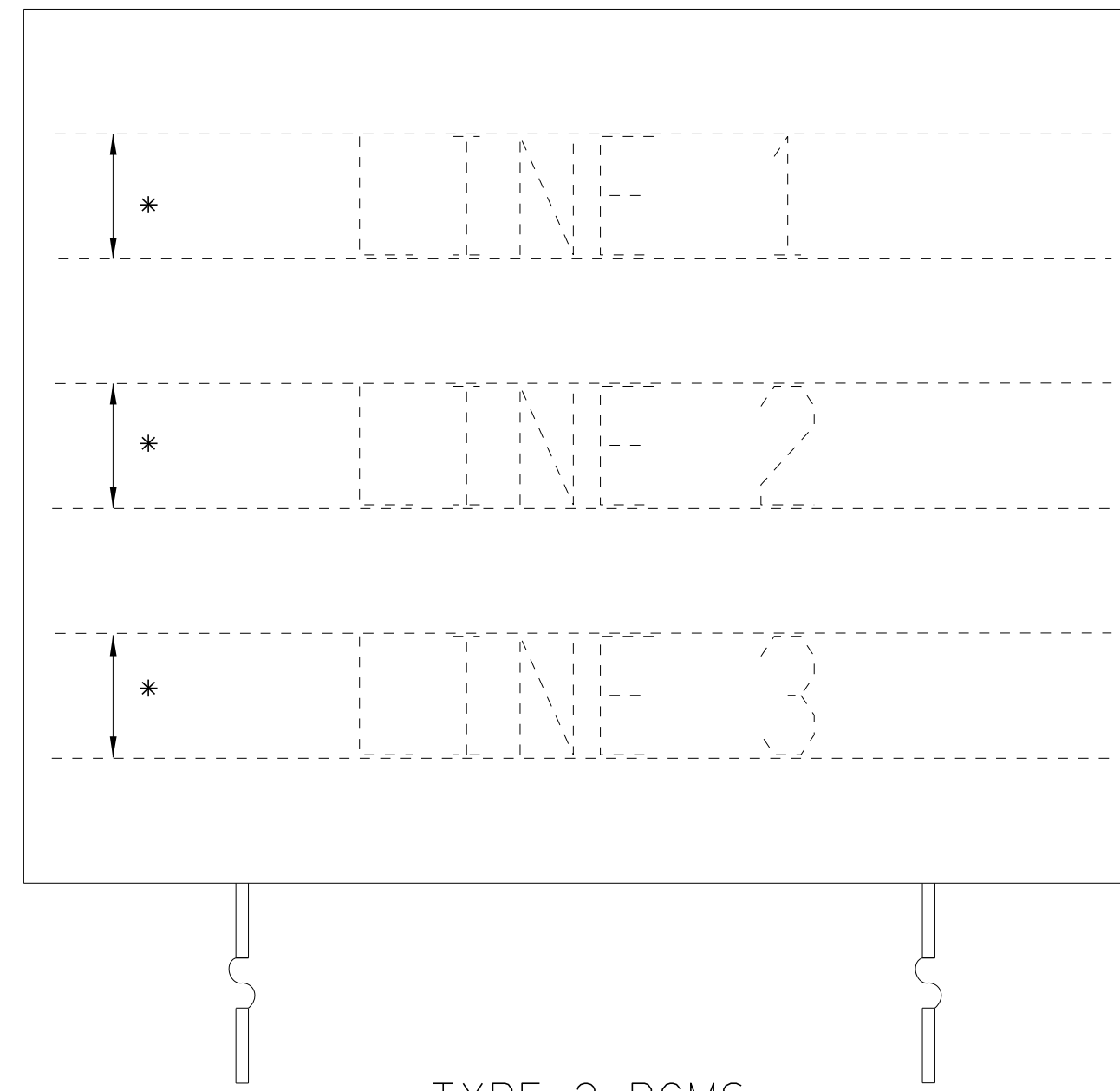
TYPE 1 PCMS

**MOUNT:**

TRUCK OR 2-WHEEL TRAILER

**CONSIST OF:**

- A SINGLE LINE SIGN PANEL ASSEMBLY
- CONTROLLER
- POWER SUPPLY
- STRUCTURAL SUPPORT SYSTEM
- ALL APPLICABLE SOFTWARE
- MANUALS



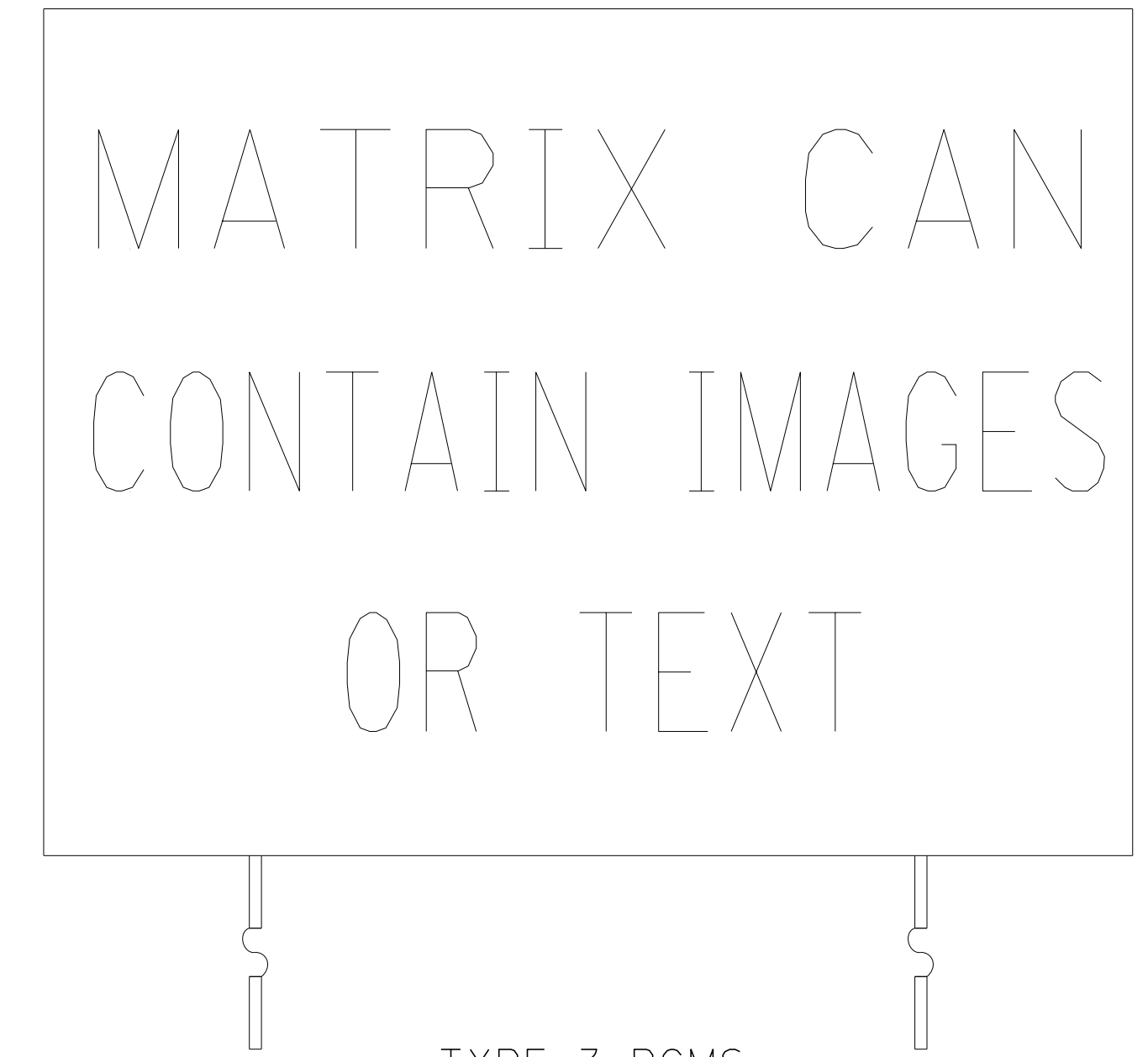
TYPE 2 PCMS

**MOUNT:**

2-WHEEL TRAILER W/POWER SOURCE

**CONSIST OF:**

- A THREE LINE SIGN PANEL ASSEMBLY
- CONTROLLER
- POWER SUPPLY
- STRUCTURAL SUPPORT SYSTEM
- MOUNTED ON A TWO WHEELED TRAILER
- SIGN UNIT FURNISHED W/ALL CABLING, SOFTWARE AND MANUALS



TYPE 3 PCMS

**MOUNT:**

SIGN AND POWER PLANT SHALL BE TRAILER MOUNTED

**CONSIST OF:**

- FULL MATRIX (VARIABLE LETTER, GRAPHIC AND SYMBOLS) PCMS
- A FULL MATRIX SIGN PANEL ASSEMBLY CAPABLE OF PRODUCING AN INVERSE DISPLAY W/A PROGRAMMABLE CONTROLLER CAPABLE OF DISPLAYING STANDARD TRAFFIC SAFETY AND CUSTOM SYMBOLS
- SIGN UNIT FURNISHED W/ALL NECESSARY CABLING, SOFTWARE AND MANUALS

**MESSAGE DISPLAY:**

1. A MESSAGE SHOULD BE SIMPLE, BRIEF, LEGIBLE, AND CLEAR AS POSSIBLE. A MESSAGE SHOULD ADDRESS THE FOLLOWING ITEMS:  
THE PROBLEM OR SITUATION THAT THE ROAD USER WILL ENCOUNTER AHEAD.  
THE LOCATION OF OR DISTANCE TO THE PROBLEM OR SITUATION.  
THE RECOMMENDED DRIVER ACTION.
2. MESSAGES SHOULD BE COMPOSED OF ALL UPPER-CASE LETTERS; CENTERED VERTICALLY AND HORIZONTALLY WITHIN EACH LINE SEGMENT.
3. A PCMS MESSAGE CAN USE ONE OR TWO PHASES IN WHICH TO RELAY ITS MESSAGE. A PHASE SHOULD CONSIST OF NO MORE THAN 3 LINES OF TEXT, 8 CHARACTERS PER LINE. EACH PHASE SHOULD BE CAPABLE OF BEING UNDERSTOOD BY ITSELF, REGARDLESS OF THE ORDER IN WHICH IT IS READ.
4. IF MORE THAN TWO PHASES ARE REQUIRED TO DISPLAY A MESSAGE, AN ADDITIONAL PCMS SHALL BE USED.
5. CARE MUST BE GIVEN TO AVOID REPEATING MESSAGES COVERED BY STATIC SIGNING. PCMS SHOULD BE USED AS A SUPPLEMENT TO AND NOT AS A SUBSTITUTE FOR CONVENTIONAL SIGNS AND PAVEMENT MARKINGS.
6. ANIMATION, RAPID FLASHING, SCROLLING, OR OTHER DYNAMIC ELEMENTS SHALL NOT BE USED TO DISPLAY MESSAGES.
7. WHEN PCMS ARE USED IN TEMPORARY TRAFFIC CONTROL ZONES, THEY SHOULD DISPLAY ONLY TEMPORARY TRAFFIC CONTROL MESSAGES.
8. IF DISABLED, THE PCMS SHOULD DEFAULT TO AN ILLEGIBLE DISPLAY THAT WILL NOT ALARM MOTORISTS AND WILL ONLY BE USED TO ALERT WORKERS THAT THE PCMS HAS MALFUNCTIONED. A PATTERN SUCH AS A SERIES OF HORIZONTAL SOLID BARS IS APPROPRIATE.
9. SEE PCMS-710 SHEET 3 OF 3 FOR PRE-APPROVED MESSAGES.

**MINIMUM LETTER HEIGHT:**

TRUCK MOUNTED PCMS - 10 INCHES  
TRAILER MOUNTED PCMS - 18 INCHES

**DISPLAY TIME:**

1. THE MINIMUM TIME THAT AN INDIVIDUAL PHASE IS DISPLAYED SHOULD BE BASED ON 1 SECOND PER WORD OR 2 SECONDS PER UNIT OF INFORMATION, WHICHEVER PRODUCES A LESSER VALUE. THE DISPLAY TIME FOR A PHASE SHOULD NEVER BE LESS THAN 2 SECONDS.
2. WHEN A PCMS MESSAGE IS DIVIDED INTO TWO PHASES, THE DISPLAY TIME FOR EACH PHASE SHOULD BE AT LEAST 2 SECONDS, AND THE SUM OF THE DISPLAY TIMES FOR BOTH OF THE PHASES SHOULD BE A MAXIMUM OF 8 SECONDS.
3. THE DURATION BETWEEN THE DISPLAY OF TWO PHASES SHOULD NOT EXCEED 0.3 SECONDS.

**DISPLAY RATE:**

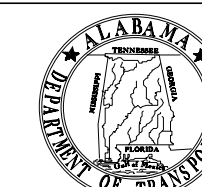
1. THE PCMS SHOULD HAVE ADJUSTABLE DISPLAY RATES SO THAT THE ENTIRE MESSAGE CAN BE READ AT LEAST TWICE AT THE POSTED SPEED.

--SPECIFICATIONS--

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REVISIONS  
1. Drawing Revised on 06-07-19 by J.F.T.



ALABAMA DEPARTMENT OF TRANSPORTATION  
1409 COLISEUM BOULEVARD  
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

Bureau Std Engr: D.J.W.  
DRAWN BY: \_\_\_\_\_ DATE DRAWN: 08-20-14

SPECIAL DRAWING NO  
PCMS-710 (SHEET 2 OF 3)

INDEX NO  
74202

NOT TO SCALE

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(SHEET 3 OF 3)

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO

Standard Abbreviations

Abbreviations may be used when creating or editing PCMS messages. Do not make up abbreviations; use the following list of standard abbreviations to ensure that the motorist does not misinterpret the message.

Acceptable Abbreviations

Word	Abbreviation	Word	Abbreviation
Alternate	ALT	Minor	MNR
Avenue	AVE	Normal	NORM
Boulevard	BLVD	North	N
Cannot	CANT	Northbound	NB
Center	CNTR	Parking	PKING
Do Not	DONT	Right	RHT
East	E	Road	RD
Eastbound	EB	Service	SERV
Emergency	EMER	Shoulder	SHLDR
Entrance	ENT	Slippery	SLIP
Enter	ENT	South	S
Expressway	EXPWY	Southbound	SB
Freeway	FRWY	Speed	SPD
Hazardous Material	HAZMAT	Street	ST
High-Occupancy Vehicle	HOV	Temporary	TEMP
Highway	HWY	Traffic	TRAF
Hour(s)	HR	Travelers	TRVLR
Information	INFO	Vehicle	VEH
It Is	ITS	Warning	WARN
Junction	JCT	West	W
Lane	LN	Westbound	WB
Left	LFT	Will Not	WONT
Maintenance	MAINT		
Major	MAJ		
Miles	MI		

Acceptable Abbreviations with Prompt Word

Word	Abbreviation	Prompt
Access	ACCS	Road
Ahead	AHD	Fog*
Blocked	BLKD	Lane*
Bridge	BRDG	(name)*
Condition	COND	Traffic*
Congestion	CONG	Traffic*
Construction	CONST	Ahead
Downtown	DWNTN	Traffic*
Exit	EX, EXT	Next*
Express	EXP	Lane
Hazardous	HAZ	Driving
Interstate	I	(followed by number)
Local	LOC	Traffic
Lower	LWR	Level
Major	MAJ	Crash
Minor	MNR	Crash
Oversized	QVRSZ	Load
Prepare	PREP	To Stop
Pavement	PVMT	Wet*
Roadwork	RD WK	Ahead
Route	RT	Best*
Turnpike	TRNPK	(name)*
Township	TWNSHP	Limits
Upper	UPR	Level

\*Prompt word goes before abbreviation.

Abbreviations That Are Not Acceptable

Abbreviation	Intended Word	Common Misinterpretation
ACC	Accident	Access (Road)
B4	Before	None
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (Merge)
LT	Light (Traffic)	Left
PARK	Parking	Park
POLL	Pollution (Index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
WRNG	Warning	Wrong

Phase 1:

* LEFT LN CLOSED XXX FT	STAY IN LANE	RAMP WORK AT EXIT XX	TWO-WAY TRAFFIC XX MILE
* LFT X LN CLOSED XXX FT	MERGING TRAFFIC XXX FT	ROAD CLOSED X MILES	
* LFT SHLDR CLOSED XXX FT	UNEVEN LANES XXXX FT	EXIT XX CLOSED	
* RIGHT LN CLOSED XXX FT	ROUGH ROAD XXXX FT	USE DETOUR SR XX	
* RHT X LN CLOSED XXX FT	BUMP XXXX FT	TRUCKS USE RHT LN XXX FT	
* RHT SHLDR CLOSED XXX FT	GROOVED PAVEMENT NEXT X MI	* TRUCKS ENTERING	
LANE CLOSURE XX PM-XX AM	NEW TRAFFIC PATTERN	ROADWORK	
LANE SHIFT XXX FT	* WORKERS PRESENT XXX FT		
LANE NARROWS XXX FT	SPEED REDUCED NEXT X MI		

Phase 2:

* MERGE RIGHT	STARTS MM-DD-20XX	TONIGHT XX PM-XX AM		
* MERGE LEFT	TUE-FRI XX AM-X PM	BE PREPARED TO STOP		
STAY IN LANE	APR XX-XX X PM-X AM			
NO LANE CHANGES	BEGINS MONDAY			
USE ALT EXIT XX	BEGINS MAY XX			
FOLLOW DETOUR SIGNS	MAY X-X XX PM - XX AM			
USE DETOUR	NEXT FRI-SUN			
* WATCH FOR WORKERS	XX AM TO XX PM			
* ROADWAY XXX FT	NEXT TUE AUG XX			

\* DENOTES THAT THIS MESSAGE SHALL BE CHANGED OR THE PCMS TURNED FROM THE VIEW OF MOTORIST WHEN THE MESSAGE IS EITHER NO LONGER APPLICABLE TO THE TRAFFIC PATTERN, THE OPERATION THAT WAS BEING PERFORMED HAS BEEN COMPLETED, OR AT THE END OF THE WORK SHIFT FOR THAT DAY.

Application Guidelines

- Only 1 or 2 phases are to be used on a PCMS.
- The words RIGHT, LEFT and ALL can be interchanged as appropriate.
- Roadway designations I, US, SR, and CR can be interchanged as appropriate.
- EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
- Highway names and numbers replaced as appropriate.
- ROAD, HIGHWAY and INTERSTATE can be interchanged as needed.
- FT and MI, MILE and MILES interchanged as appropriate.

THE FOLLOWING IS AN EXAMPLE OF A TWO-PHASE MESSAGE THAT COULD BE DEVELOPED WITH THE PRE-APPROVED MESSAGES FROM THE ABOVE TABLE.

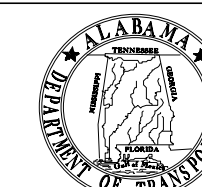


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REVISIONS



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DESIGN BUREAU SPECIAL DRAWING

DETAILS OF PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

Bureau Std Engr: D.J.W.  
DRAWN BY: \_\_\_\_\_ DATE DRAWN: 06-07-19

SPECIAL DRAWING NO  
PCMS-710 (SHEET 3 OF 3)

INDEX NO  
74203

NOT TO SCALE