

- 5.10 PVMS should be used if there is significant change in traffic patterns, unexpected road conditions, or safety concerns that may result in delays/queues and may require caution/diversion.
- 5.11 PVMS should not be used in place of an arrow panel. The PVMS should be visible from 0.5 mile under day and night conditions and should be legible from a minimum distance of 900 feet.
- 5.12 PVMS should be placed on the shoulder of the roadway or, if practical, farther from the traveled lane (Standard MD 104.01-22).
- 5.13 In order to reduce the effect of sun behind the PVMS, the PVMS should be placed so that the sun is not directly behind it (such as during sunrise or sunset).
- 5.14 The entire message should be readable at least twice at the off-peak 85th-percentile speed prior to work starting or the anticipated prevailing speed.

**6.0 ARROW PANELS**

- 6.1 Arrow panels that are installed along roadways with prevailing speeds greater than 40 mph shall be provided with a minimum shoulder closure taper of 1/3 the taper length, (see 7.0 Channelizing Devices). For all other roadways a 100-foot minimum shoulder closure taper shall be used.

**7.0 CHANNELIZING DEVICES**

7.1 Taper Formulas:

$L = WS$  for speeds greater than ( $>$ ) 40 mph

$L = WS^2 / 60$  for speeds equal to or less than ( $<$ ) 40 mph

Where: L = minimum length of taper (ft)

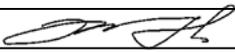
S = numerical value of prevailing travel speed or speed limit (MPH), whichever is higher, prior to work starting,

W = width of offset (ft)

7.2 Maximum spacing between channelizing devices:

Taper Channelization – Shall be equal in feet to the posted speed limit for posted speeds equal less than 40 mph and 40 feet for posted speeds greater than 40 mph.

Tangent Channelization – Shall be equal in feet to twice the posted speed limit in the buffer and equal in feet to the posted speed adjacent to the work area for posted speeds equal less than 40 MPH. Spacing shall be 80 feet in the buffer and 40 feet adjacent to the work area for posted speeds greater than 40 MPH.

SPECIFICATION	CATEGORY CODE ITEMS	<p><b>Maryland Department of Transportation</b>  <b>STATE HIGHWAY ADMINISTRATION</b>          STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES</p> <p><b>GENERAL NOTES</b></p> <p><b>STANDARD NO. MD 104.00-09</b></p>	
APPROVED	 DIRECTOR - OFFICE OF TRAFFIC AND SAFETY		
	APPROVAL • SHA		
	REVISIONS	HIGHWAY ADMINISTRATION	
	APPROVAL 7-1-09	APPROVAL 7-27-09	
	REVISED 8-11-10	REVISED 10-5-10	
	REVISED	REVISED	
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