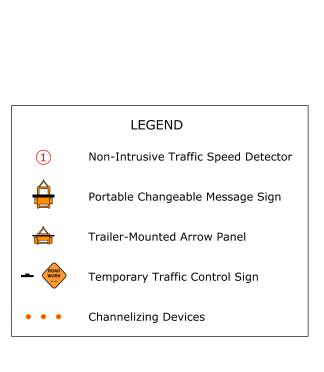
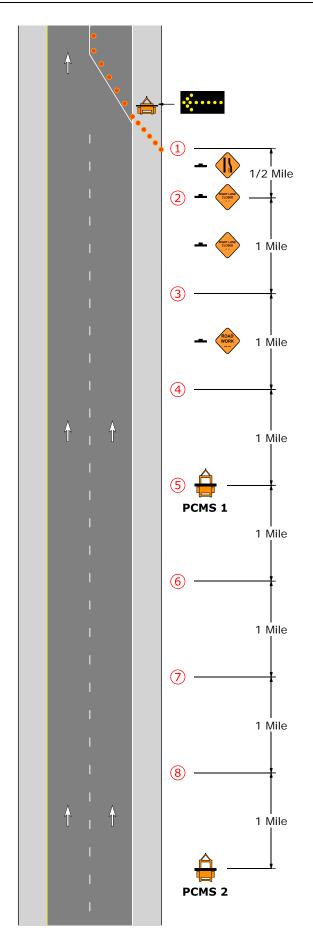
### Queue Detection System With Two PCMS Boards Deployment Plan 1 (Max Design Queue ≤ 7.5 Miles)

### **General Notes**

- 1. Location of speed detectors and PCMS can be adjusted slightly based upon site conditions.
- 2. Refer to PennDOT Publication 213 for guidance in placing and delineating trailer-mounted equipment.







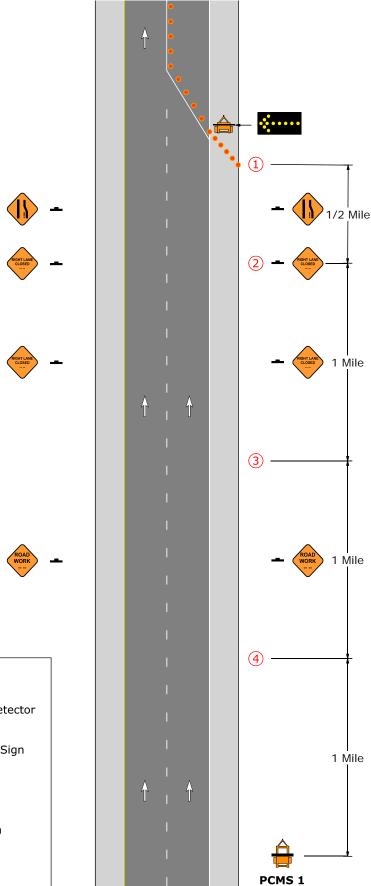
## Queue Detection System With Two PCMS Boards Deployment Plan 1 (Max Design Queue ≤ 7.5 Miles)

PCMS 2	PCMS 1 Message	Last 5-Minute Average Speed V (MPH)								
Message		8	7	6	5	4	3	2	1	
WATCH	ROAD	V > 55	V > 55	V > 55	V > 55	V > 55	V > 55	V > 55	V > 55	
YOUR	WORK	OR	OR	OR	OR	OR	OR	OR	OR	
SPEED	AHEAD	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	
WATCH	SLOW	V > 55	V > 55	V > 55	V > 55	V > 55	V > 55	V > 55	40 ≤ V < 55	
YOUR	TRAFFIC	OR	OR	OR	OR	OR	OR	OR		
SPEED	3 MILES	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0		
WATCH	SLOW	V > 55	V > 55	V > 55	V > 55	V > 55	V > 55	40 ≤ V < 55	V > 40	
YOUR	TRAFFIC	OR	OR	OR	OR	OR	OR		OR	
SPEED	2 MILES	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0		V = 0.0	
WATCH	SLOW	V > 55	V > 55	V > 55	V > 55	V > 55	40 ≤ V < 55	V > 40	V > 40	
YOUR	TRAFFIC	OR	OR	OR	OR	OR		OR	OR	
SPEED	1 MILE	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0		V = 0.0	V = 0.0	
WATCH	SLOW	V > 55	V > 55	V > 55	V > 55	40 ≤ V < 55	V > 40	V > 40	V > 40	
YOUR	TRAFFIC	OR	OR	OR	OR		OR	OR	OR	
SPEED	AHEAD	V = 0.0	V = 0.0	V = 0.0	V = 0.0		V = 0.0	V = 0.0	V = 0.0	
WATCH	STOPPED	V > 40	V > 40	V > 40	V > 40	V > 40	V > 40	V > 40	0.0 ≤ V < 40	
YOUR	TRAFFIC	OR	OR	OR	OR	OR	OR	OR		
SPEED	3 MILES	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0		
WATCH YOUR SPEED	STOPPED TRAFFIC 2 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	
WATCH YOUR SPEED	STOPPED TRAFFIC 1 MILE	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	Any Value	
WATCH YOUR SPEED	STOPPED TRAFFIC AHEAD	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	Any Value	Any Value	
SLOW	LANE	V > 55	V > 55	V > 55	40 ≤ V < 55	V > 40	V > 40	V > 40	V > 40	
TRAFFIC	CLOSED	OR	OR	OR		OR	OR	OR	OR	
3 MILES	3 MILES	V = 0.0	V = 0.0	V = 0.0		V = 0.0	V = 0.0	V = 0.0	V = 0.0	
SLOW	LANE	V > 55	V > 55	40 ≤ V < 55	V > 40	V > 40	V > 40	V > 40	V > 40	
TRAFFIC	CLOSED	OR	OR		OR	OR	OR	OR	OR	
2 MILES	3 MILES	V = 0.0	V = 0.0		V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	
SLOW	LANE	V > 55	40 ≤ V < 55	V > 40	V > 40	V > 40	V > 40	V > 40	V > 40	
TRAFFIC	CLOSED	OR		OR	OR	OR	OR	OR	OR	
1 MILE	3 MILES	V = 0.0		V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	V = 0.0	
SLOW	LANE	40 ≤ V < 55	V > 40	V > 40	V > 40					
TRAFFIC	CLOSED		OR	OR	OR	OR	OR	OR	OR	
AHEAD	3 MILES		V = 0.0	V = 0.0	V = 0.0					
STOPPED TRAFFIC 3 MILES	LANE CLOSED 3 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	Any Value	Any Value	Any Value	
STOPPED TRAFFIC 2 MILES	LANE CLOSED 3 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	Any Value	Any Value	Any Value	Any Value	
STOPPED TRAFFIC 1 MILE	LANE CLOSED 3 MILES	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	Any Value	Any Value	Any Value	Any Value	Any Value	
STOPPED TRAFFIC AHEAD	LANE CLOSED 3 MILES	0.0 ≤ V < 40	Any Value	Any Value	Any Value					

# Queue Detection System With One PCMS Board Deployment Plan 2 (Max Design Queue ≤ 3.5 Miles)

### **General Notes**

- 1. Location of speed detectors and PCMS can be adjusted slightly based upon site conditions.
- 2. Refer to PennDOT Publication 213 for guidance in placing and delineating trailer-mounted equipment.





## Queue Detection System With Two PCMS Boards Deployment Plan 2 (Max Design Queue ≤ 3.5 Miles)

PCMS 1	Last 5-Minute Average Speed V (MPH)							
Message	4	3	2	1				
ROAD	V > 55	V > 55	V > 55	V > 55				
WORK	OR	OR	OR	OR				
AHEAD	V = 0.0	V = 0.0	V = 0.0	V = 0.0				
SLOW	V > 55	V > 55	V > 55	40 ≤ V < 55				
TRAFFIC	OR	OR	OR					
3 MILES	V = 0.0	V = 0.0	V = 0.0					
SLOW	V > 55	V > 55	40 ≤ V < 55	V > 40				
TRAFFIC	OR	OR		OR				
2 MILES	V = 0.0	V = 0.0		V = 0.0				
SLOW	V > 55	40 ≤ V < 55	V > 40	V > 40				
TRAFFIC	OR		OR	OR				
1 MILE	V = 0.0		V = 0.0	V = 0.0				
SLOW	40 ≤ V < 55	V > 40	V > 40	V > 40				
TRAFFIC		OR	OR	OR				
AHEAD		V = 0.0	V = 0.0	V = 0.0				
STOPPED	V > 40	V > 40	V > 40	0.0 ≤ V < 40				
TRAFFIC	OR	OR	OR					
3 MILES	V = 0.0	V = 0.0	V = 0.0					
STOPPED TRAFFIC 2 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value				
STOPPED TRAFFIC 1 MILE	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any Value	Any Value				
STOPPED TRAFFIC AHEAD	0.0 ≤ V < 40	Any Value	Any Value	Any Value				