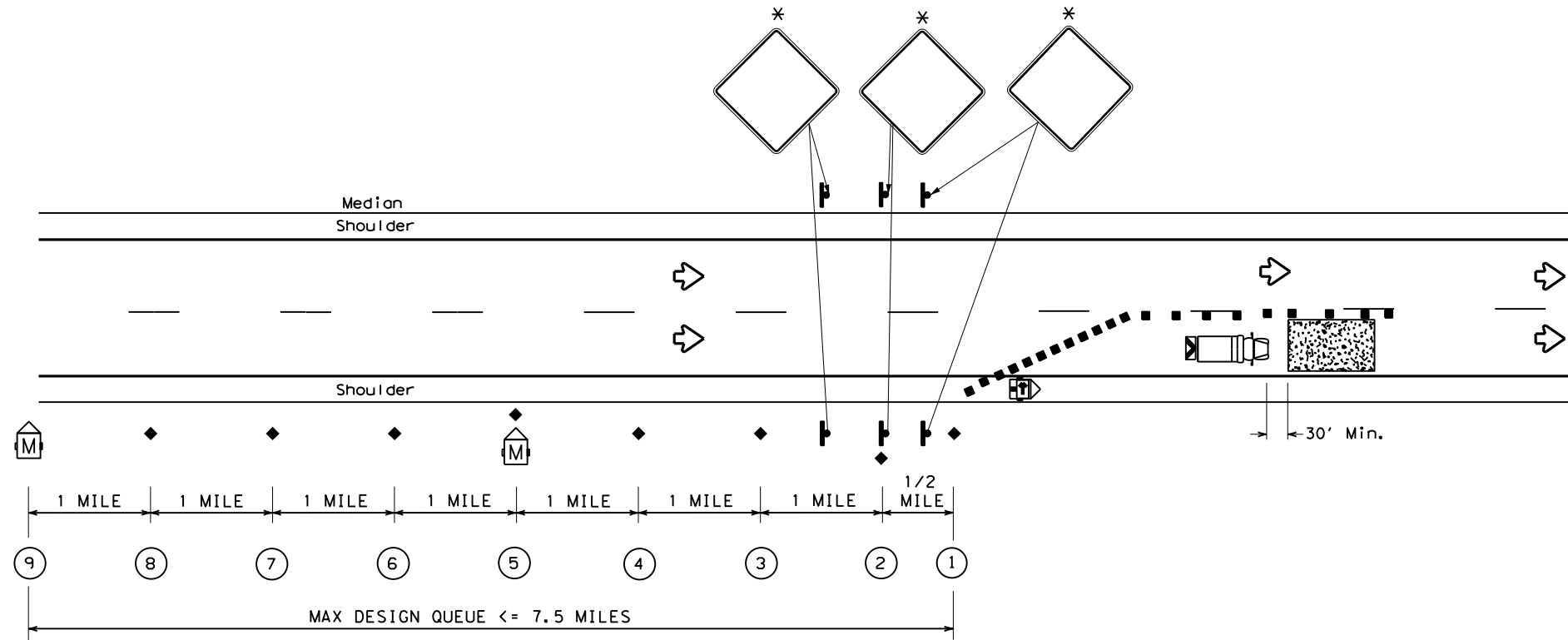


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* Signs are for illustrative purposes only. Signs type and placement will vary depending on the TCP, TMUTCD Typical Application, or project specific details for the project.

LEGEND			
	Work Area		Traffic Flow
	Sign		Portable Traffic Sensor
	Channelizing Devices		Truck Mounted Attenuator (TMA)
	Location		Flag
	Heavy Work Vehicle		Trailer Mounted Flashing Arrow Board
	Portable Changeable Message Sign (PCMS)		



Type I - QUEUE DETECTION SYSTEM
(Max Design Queue \leq 7.5 Miles)

GENERAL NOTES

1. Unless project conditions and manufacturer's specifications dictate otherwise, the number of PCMS, static signs and spacing of sensors will be as shown in the plans.
2. Temporary Queue Detection System devices shall be operational only while work is actually in progress or a definite need exists.
3. Refer to TCP and BC Traffic Engineering Standard sheets for additional information regarding the type and placement of temporary traffic control devices.
4. The viewing angle of the sensors should not be blocked.
5. Sensor at location ① may be mounted on the Flashing Arrow Board Trailer in the taper if spacing is adequate.
6. Pay item should be paid under Special Specification "Temporary Queue Detection System".
7. See Standard sheet WZ-ITS(2) for operational guidelines for PCMS messages.

SHEET 1 OF 2



TEMPORARY QUEUE DETECTION SYSTEM TYPE 1
(Queue \leq 7.5 Miles)
WZ-ITS(1)-19

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OPERATIONAL GUIDELINES FOR PCMS MESSAGES

Message at ⑨	Last 5 MIN Speed Averages V (MPH)				Message at ⑤	Last 5 MIN Speed Averages V (MPH)			
	Sensor at ⑧	Sensor at ⑦	Sensor at ⑥	Sensor at ⑤		Sensor at ④	Sensor at ③	Sensor at ②	Sensor at ①
ROAD WORK AHEAD	> 45	> 45	> 45	> 45	ROAD WORK AHEAD	> 45	> 45	> 45	> 45
ROAD WORK AHEAD	> 45	> 45	> 45	> 45	SLOW TRAFFIC 3 MILES	> 45	> 45	> 45	25 < V < 45
ROAD WORK AHEAD	> 45	> 45	> 45	> 45	SLOW TRAFFIC 2 MILES	> 45	> 45	25 < V < 45	25 < V < 45
ROAD WORK AHEAD	> 45	> 45	> 45	> 45	SLOW TRAFFIC 1 MILE	> 45	25 < V < 45	25 < V < 45	25 < V < 45
ROAD WORK AHEAD	> 45	> 45	> 45	> 45	SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC 3 MILES	> 45	> 45	> 45	25 < V < 45	SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC 2 MILES	> 45	> 45	25 < V < 45	25 < V < 45	SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC 1 MILE	> 45	25 < V < 45	25 < V < 45	25 < V < 45	SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45	SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC AHEAD	> 25	> 25	> 25	> 25	STOPPED TRAFFIC 3 MILES	> 25	> 25	> 25	<= 25
SLOW TRAFFIC AHEAD	> 25	> 25	> 25	> 25	STOPPED TRAFFIC 2 MILES	> 25	> 25	<= 25	<= 25
SLOW TRAFFIC AHEAD	> 25	> 25	> 25	> 25	STOPPED TRAFFIC 1 MILE	> 25	<= 25	<= 25	<= 25
SLOW TRAFFIC AHEAD	> 25	> 25	> 25	> 25	STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25
STOPPED TRAFFIC 3 MILES	> 25	> 25	> 25	<= 25	STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25
STOPPED TRAFFIC 2 MILES	> 25	> 25	<= 25	<= 25	STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25
STOPPED TRAFFIC 1 MILE	> 25	<= 25	<= 25	<= 25	STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25
STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25	STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25

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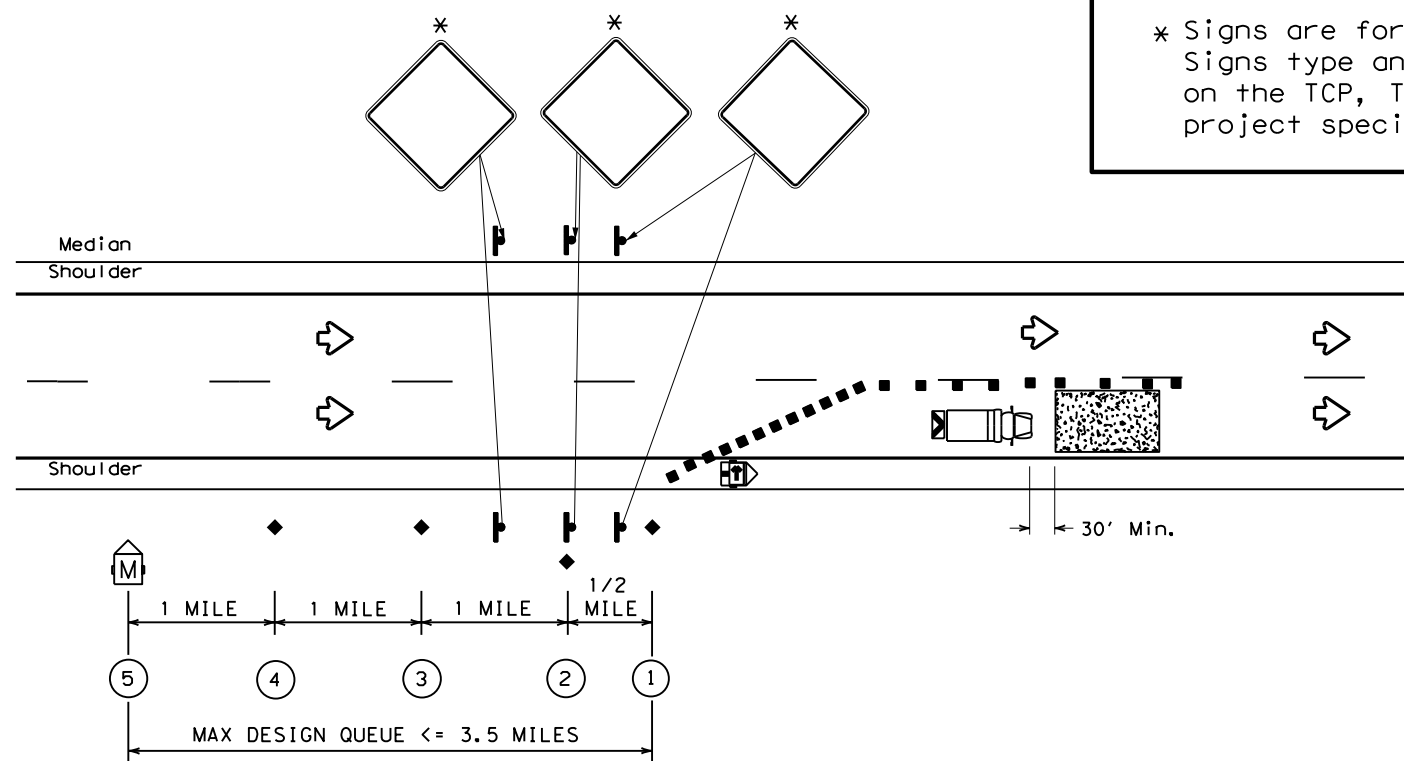
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SHEET 2 OF 2

Texas Department of Transportation		Traffic Safety Division Standard	
<h3 style="margin: 0;">TEMPORARY QUEUE DETECTION SYSTEM TYPE 1</h3> <p style="margin: 0;">(Queue <= 7.5 Miles)</p> <h2 style="margin: 0;">WZ-ITS(2)-19</h2>			
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Type 2 - QUEUE DETECTION SYSTEM (Max Design Queue <= 3.5 Miles)

OPERATIONAL GUIDELINE FOR PCMS MESSAGES				
Message at ⑤	Last 5 MIN Speed Averages V (MPH)			
	Sensor at ④	Sensor at ③	Sensor at ②	Sensor at ①
ROAD WORK AHEAD	> 45	> 45	> 45	> 45
SLOW TRAFFIC 3 MILES	> 45	> 45	> 45	25 < V < 45
SLOW TRAFFIC 2 MILES	> 45	> 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC 1 MILE	> 45	25 < V < 45	25 < V < 45	25 < V < 45
SLOW TRAFFIC AHEAD	25 < V < 45	25 < V < 45	25 < V < 45	25 < V < 45
STOPPED TRAFFIC 3 MILES	> 25	> 25	> 25	<= 25
STOPPED TRAFFIC 2 MILES	> 25	> 25	<= 25	<= 25
STOPPED TRAFFIC 1 MILE	> 25	<= 25	<= 25	<= 25
STOPPED TRAFFIC AHEAD	<= 25	<= 25	<= 25	<= 25

LEGEND			
	Work Area		Traffic Flow
	Sign		Portable Traffic Sensor
	Channelizing Devices		Truck Mounted Attenuator (TMA)
	Location		Flag
	Heavy Work Vehicle		Trailer Mounted Flashing Arrow Board
	Portable Changeable Message Sign (PCMS)		

GENERAL NOTES

1. Unless project conditions and manufacturer's specifications dictate otherwise, the number of PCMS, static signs and spacing of sensors will be as shown in the plans.
2. Temporary Queue Detection System devices shall be operational only while work is actually in progress or a definite need exists.
3. Refer to TCP and BC Traffic Engineering Standard sheets for additional information regarding the type and placement of temporary traffic control devices.
4. The viewing angle of the sensors should not be blocked.
5. Sensor at location ① may be mounted on the Flashing Arrow Board Trailer in the taper if spacing is adequate.
6. Pay item should be paid under Special Specification "Temporary Queue Detection System".

Traffic Safety Division Standard

TEMPORARY QUEUE DETECTION SYSTEM TYPE 2 (Queue <= 3.5 Miles) WZ-ITS(3)-19

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