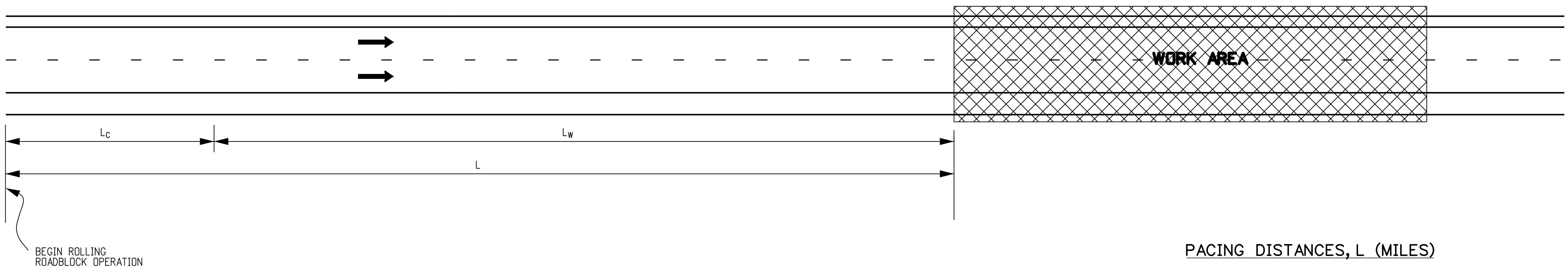

DESIGN NOTES:

1. THE DESIGN SHALL EVALUATE THE ACTUAL DISTANCE REQUIRED FOR THE ROLLING ROADBLOCK OPERATION BASED ON SITE-SPECIFIC FEATURES SUCH AS: ROADWAY GEOMETRICS, PACING SPEEDS, REGULATORY SPEEDS, INTERCHANGE SPACING, WORK DURATION, AVAILABILITY OF LAW ENFORCEMENT OFFICERS, TRAFFIC VOLUMES, AND MAXIMUM QUEUE LENGTH.
2. THE STARTING POINT OF A ROLLING ROADBLOCK OPERATION SHALL CONSIDER THE FOLLOWING FACTORS: THE SPEED OF THE PACING LAW ENFOCEMENT VEHICLES, THE LOCATION OF ENTRANCE RAMPS, HORIZONTAL AND VERTICAL ALIGNMENT OF THE FACILITY.
3. IN SOME INSTANCES, IT MAY BE NECESSARY TO CLOSE A LANE AT THE WORK SITE TO POSITION A CRANE(S) AND THE MATERIALS TO BE LIFTED.
4. ALL MATERIAL TO BE INSTALLED SHALL BE ON-SITE BEFORE THE ROLLING ROADBLOCK OPERATION BEGINS.
5. IT MAY BE NECESSARY TO INSTALL TEMPORARY BARRIER WALLS TO PROTECT PRE-POSITIONED AND ASSEMBLED MATERIALS IN THE RIGHT-OF-WAY.
6. THE MINIMUM SPEED ALLOWED FOR A PACING OPERATION IS 10 MPH.

S_R = REGULATORY SPEED, MPH

S_P = PACING SPEED, MPH

T_W = WORK DURATION, MINUTES

L = TOTAL PACING DISTANCE, MILES

$$= \frac{T_W}{60} S_P\left(\frac{S_P}{S_R - S_P} + 1\right)$$

$$= L_C + L_W$$

L_C = DISTANCE PACE-SETTING LAW ENFORCEMENT VEHICLES SHALL TRAVEL BEFORE THE VEHICLES AT REGULATORY SPEED HAVE CLEARED THE WORK AREA.

$$= \frac{\left(\frac{T_W}{60} \times S_P^2\right)}{S_R - S_P}$$

L_W = DISTANCE PACE-SETTING LAW ENFORCEMENT VEHICLES TRAVEL WHILE CONSTRUCTION WORK IS PERFORMED.

$$= \left(\frac{T_W}{60} \times S_P\right)$$

F_{HV} = HEAVY VEHICLE FACTOR

$$= 1 + \left(\frac{P_T}{100} \times 0.50\right)$$

P_T = % TRUCKS

PACING DISTANCES, L (MILES)

S_P = 20 MPH PCPHPL <= 1,750						
S_R	T_W (MIN.)					
	5	10	15	20	25	30
70	2.3	4.7	7.0	9.3	*	*
65	2.4	4.8	7.2	9.6	*	*
60	2.5	5.0	7.5	10.0	*	*
55	2.6	5.2	7.9	*	*	*
50	2.8	5.6	8.3	*	*	*

* SITE-SPECIFIC DESIGN REQUIRED

PACING DISTANCES NOTES:

Tw IS THE TOTAL TIME ALLOWED FOR WORK ACTIVITY, IN MINUTES. THIS TIME STARTS JUST AFTER THE LAST VEHICLE TRAVELING AT THE PRE-PACING REGULATORY SPEED CLEARS THE WORK AREA AND ENDS JUST AS THE ROLLING ROADBLOCK OPERATION REACHES THE WORK AREA. Tw MUST INCLUDE THE TIME REQUIRED TO CLEAR THE ROADWAY OF EQUIPMENT, MATERIALS, AND PERSONNEL.

DEMAND VOLUME MAY NOT EXCEED 1,750 PCPHPL WITHOUT A SITE-SPECIFIC DESIGN. TRAFFIC COUNTS CAN BE OBTAINED FROM THE REGION TRAFFIC ENGINEER, OR YOU MAY NEED TO COLLECT TRAFFIC COUNTS. HOURLY DIRECTIONAL TRAFFIC VOLUMES MUST BE CONVERTED TO PCPHPL USING THE FOLLOWING EQUATION:

PCPHPL = PASSENGER CARS PER HOUR PER LANE

$$= \frac{\text{HOURLY DIRECTIONAL VOLUME}}{\text{NO. OF LANES (EACH DIRECTION)}} \times \text{HEAVY VEHICLE FACTOR}$$

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ROLLING ROADBLOCKS FOR TRAFFIC CONTROL

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