- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:

  - A. TRUCK MOUNTED ADVANCE WARNING SIGNS
    B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
    C. GROUND MOUNTED ADVANCE WARNING SIGNS
    (MUST USE 'NEXT 10 MILES' AND CIRCLE TO
  - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE 'NEXT 10 MILES' AND CIRCLE TO PICK UP CMS)
- (2) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES. HOWEVER, THE FIRST VEHICLE MOTORISTS SEE SHOULD HAVE A TMIA.
- (3) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED TEN (10) MILES IN LENGTH.
- (4) SIGNS SHOULD BE ACTIVITY SPECIFIC i.e., PAINT CREW AHEAD (W21-001 C 48"X48")
- (5) DISTANCE BETWEEN APPLICATION VEHICLE AND PROTECTION VEHICLE WILL VARY AS DRYING TIMES VARY, HOWEVER, THE CRITICAL FACTOR IS PASSING MOTORISTS. IF THE GAP BETWEEN VEHICLES IS TOO GREAT, MOTORISTS WILL ATTEMPT TO PASS AND ULTIMATELY APPEAR IN THE WIDDLE OF THE OPERATION. THE MIDDLE OF THE OPERATION.
- (6) MOUNTING HEIGHT DIMENSIONS FROM ROADWAY TO SIGN SHOULD BE A MINIMUM OF FIVE (5) FEET FOR INTERSTATES, OTHER HIGH VOLUME ROADWAYS, OR ROADWAYS THAT MAY REQUIRE A MOUNTING HEIGHT OF FIVE (5) FEET FOR INCREASED VISIBILITY AND A MINIMUM OF ONE (1) FOOT FOR ALL OTHER ROADWAYS.
- (7) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.

- (8) USE AN ADVANCE WARNING VEHICLE(S) WITH FLASHING ARROW PANELS ON SHOULDERS TO SUPPLEMENT TRAFFIC SHIFTS. USE OF CMS ON THIS VEHICLE(S) IS OPTIONAL.
- (9) SIGN W20-5L SHOULD BE PLACED ON BACK OF PROTECTION VEHICLE AND SIGN W20-5LD ON BACK OF ADVANCE WARNING VEHICLE IN MULTILANE DIVIDED TRAFFIC SO VEHICLES APPROACHING FROM REAR ARE NOTIFIED OF OPERATION.
- (10) RADIO COMMUNICATION BETWEEN VEHICLES IS RECOMMENDED.
- (11) USE OF A LIGHT BAR ON THE ADVANCE WARNING VEHICLE IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (12) USE OF A CMS ON ADVANCED WARNING VEHICLES IS OPTIONAL.
- (13) IF WORK IS PERFORMED AT NIGHT, THE FOLLOWING PROVISIONS MUST BE MADE:

  - A. GROUND MOUNTED SIGNS MUST HAVE TYPE B FLASHING LIGHTS
    ATTACHED (TRUCK MOUNTED SIGNS DO NOT REQUIRE TYPE B
    FLASHING LIGHTS)
    B. OPERATION MUST INCLUDE A CHANGEABLE MESSAGE SIGN (CMS)
    C. WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER
    LIGHTS AS APPROVED BY THE ENGINEER.
- (14) USE A TYPE "B" FLASHING ARROW PANEL.

PANEL TYPE MIN. SIZE

## LEGEND

WAS ELEMENT 36765

36764 3CR.20651.4

3CR.2065IJI

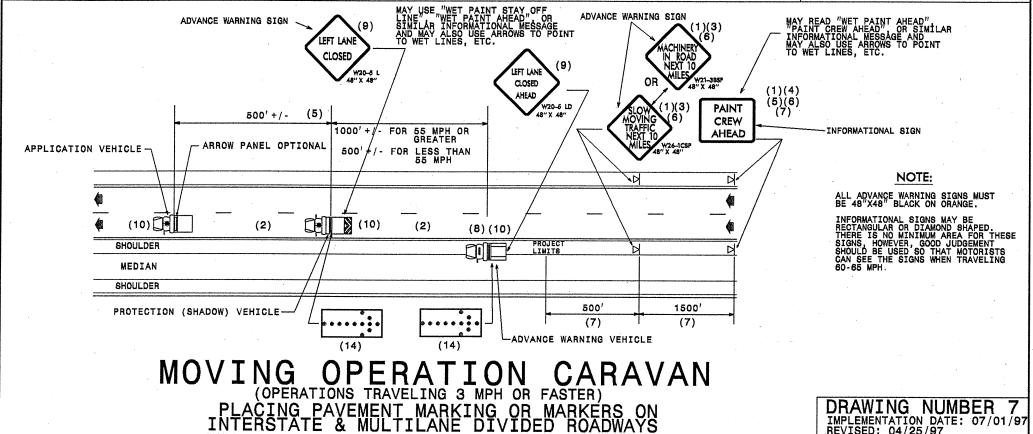
38225

36796 3CRJ0671.5

3CRJ0671J5

3CRJ07IIJ5 39251 39254

- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW
- APPLICATION VEHICLE WITH ROTATING BEACON
- OTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND ROTATING BEACON (SEE ROADWAY STANDARD NO. 1165.01
- ADVANCE WARNING VEHICLE 1.e. PICKUP TRUCK WITH MOUNTED SIGN
- ..... FLASHING ARROW PANEL, TYPE "B"
  APPROPRIATE DIRECTION INDICATED



IMPLEMENTATION DATE: 07/01/97 REVISED: 04/25/97