

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

ROADWAY CLASSIFICATION	POSTED SPEED	SIGN SPACING [▲]	MAJOR CONSTRUCTION OR MAJOR MAINTENANCE APPROACH WARNING SIGNS CW 20 SERIES AND CW22-1 SIGN		MINOR CONSTRUCTION OR MAJOR MAINTENANCE APPROACH WARNING SIGNS CW 21 SERIES		OTHER WARNING SIGNS
			STANDARD	MINIMUM ⁴	STANDARD	MINIMUM ⁴	
	MPH	FT.(APPRX.)	INCHES	INCHES	INCHES ⁷	INCHES ⁷	INCHES ⁷
CONVEN.	30	80	48 X 48	36 X 36	30 X 30 OR 36 X 36	24 X 24 OR 36 X 36	30 X 30 OR 36 X 36
	35	120	↓	↓	↓	↓	↓
	40	160					
	45	240					
	50	320					
55	500 ²						
EXP OR FWY	55	500 ³			48 X 48*	48 X 48*	48 X 48*

▲ MINIMUM DISTANCE FROM WORK TO 1ST ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN EACH ADDITIONAL SIGN.
*SMALLER SIGN SIZES MAY BE USED WHERE SIGN DESIGNS HAVE NOT BEEN INCLUDED IN THE STANDARD TRAFFIC SIGNS DESIGN BOOKLET.

GENERAL NOTES:

1. SPECIAL OR LARGER SIZE SIGNS MAY BE USED AS MAY BE NECESSARY.
2. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE 1500' ADVANCED WARNING.
3. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE 1/2 MILE OR MORE ADVANCE WARNING.
4. FOR USE ON SECONDARY ROADS OR CITY STREETS WHERE SPEEDS ARE LOW.
5. ONLY DIAMOND SHAPED WARNING SIGN SIZES ARE INDICATED.
6. SEE SIGN SIZE LISTING IN APPENDIX A FOR COMPLETE LIST OF ALL AVAILABLE SIGN DESIGN SIZES.
7. WHERE TWO SIZES ARE LISTED. SEE SIGN SIZE LIST IN APPENDIX A FOR PROPER SIZE.

TYPICAL TRANSITION LENGTHS
AND
SUGGESTED MAXIMUM SPACING OF DEVICES

POSTED SPEED	FORMULA	MINIMUM DESIRABLE TAPER LENGTHS ^{1*}			SUGGESTED MAXIMUM SPACING OF DEVICE	
		10' OFFSET	11' OFFSET	12' OFFSET	ON A TAPER	ON A TANGENT
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'
35		205'	225'	245'	35'	70'-90'
40		265'	295'	320'	40'	80'-100'
45	L = WS	450'	495'	540'	45'	90'-110'
50		500'	550'	600'	50'	100'-125'
55		550'	605'	660'	55'	110'-140'
60		600'	660'	720'	60'	120'-150'

* 85TH PERCENTILE SPEED MAY BE USED ON ROADS WHERE TRAFFIC SPEEDS NORMALLY EXCEED THE POSTED SPEED LIMIT.
** TAPER LENGTHS HAVE BEEN ROUNDED OFF.

NOTES:

1. TAPER FORMULA
 $L = S \times W$ FOR SPEED OF 45 MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

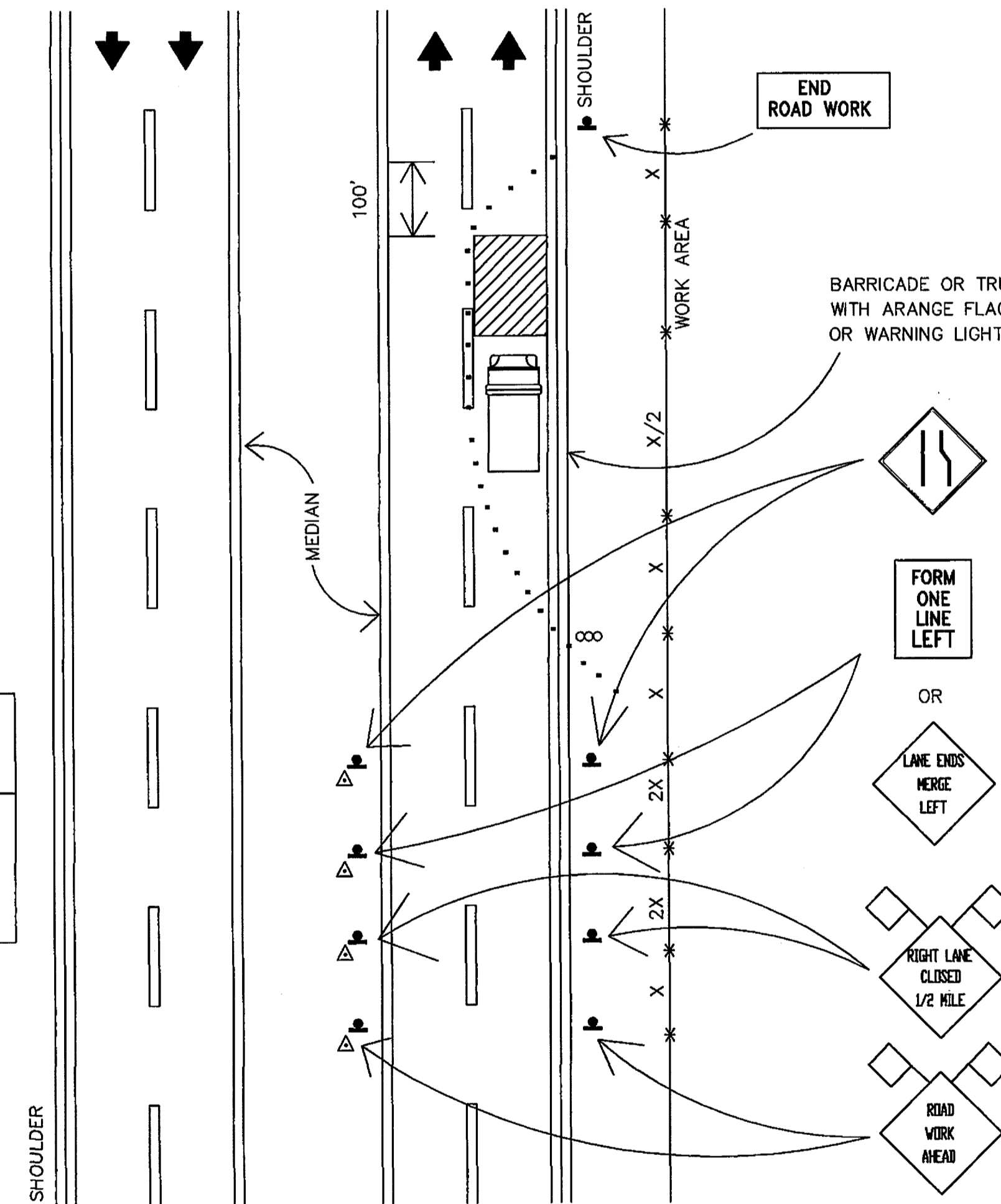
WHERE:

- L = MINIMUM LENGTH OF TAPER
- S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85 PERCENTILE SPEED
- W = WIDTH OF OFFSET
2. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT.
3. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS AND/OR EQUIPMENT.
4. ALL DISTANCES AND SPACINGS SHOWN ARE APPROXIMATE.
5. THE WORD UTILITY MAY BE SUBSTITUTED FOR ROAD IN ALL SIGNS WHERE APPLICABLE.
6. ONE OR MORE FLAGGER TO BE USED WHERE TRAFFIC, ROAD CONDITIONS, OR TERRAIN WARRANT THEIR USE.

POSTED SPEED OR 85% SPEED (MPH)	X MIN. DISTANCE (FEET)
30 OR LESS	80
35	120
40	160
45	240
50	320
55	500

KEY:

- ***CHANNELIZING DEVICES
- ◀◀◀ARROW PANNEL (OPTIONAL)
- ◀OPTIONAL
- ◀DIRECTION OF TRAFFIC



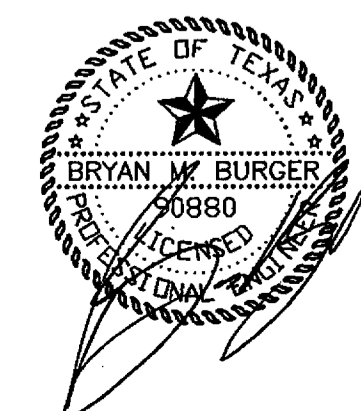
MINOR OPERATION ON 4-LANE DIVIDED ROADWAY WHERE ONE LANE IS CLOSED

GENERAL NOTES FOR TRAFFIC CONTROL

1. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS.
2. DEVICES USED IN A SERIES FOR CHANNELIZATION PURPOSE AT NIGHT SHOULD BE SUPPLEMENTED WITH STEADY BURN LIGHTS OR DELINEATORS AS NEEDED.
3. ALL DISTANCES AND SPACINGS SHOWN ARE APPROXIMATE.
4. ALL TRAFFIC CONTROL DEVICES USED AT NIGHT SHALL BE REFLECTORIZED OR ILLUMINATED.
5. THE WORD "AHEAD" MAY BE SUBSTITUTED FOR THE ACTUAL DISTANCES ON THE ADVANCE WARNING SIGNS WHERE APPLICABLE.
6. THE WORD UTILITY MAY BE SUBSTITUTED FOR ROAD IN ALL SIGNS WHERE APPLICABLE.
7. WHERE A TAPER IS USED THE TAPER FORMULA IS:
 $L = S \times W$ FOR SPEEDS OF 45 MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.
- WHERE : L = MINIMUM LENGTH OF TAPER
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85 PERCENTILE SPEED
 W = WIDTH OF OFFSET
8. WHERE CHANNELIZING DEVICES ARE USED THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT.
9. ONE OR MORE FLAGGERS TO BE USED WHERE TRAFFIC, ROAD CONDITIONS, OR TERRAIN WARRANT THEIR USE. IF FLAGGER IS USED TAPER MAY BE REDUCED TO 50' MINIMUM.
10. APPROPRIATE ADVISORY SPEED PLATES MAY BE USED IN CONJUNCTION WITH WARNING SIGNS WHEN NEEDED.

AS BUILT
DATE 3.17.06

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
BRYAN M. BURGER, P.E. 90880
ON 7/22/04



REV	DATE	REMARKS
TRAFFIC CONTROL		
STARBUCKS - ADDISON PLAZA ADDITION		
S.W.C. BELT LINE RD. & MIDWAY RD.		
CITY OF ADDISON, TEXAS		
LAWRENCE A. CATES & ASSOC., LLP		CONSULTING ENGINEERS
14800 QUORUM DRIVE, SUITE 200		DALLAS, TEXAS
DESIGN	DRAWN	DATE
BMB	CAC	6/04
SCALE	NOTES	FILE
N/S	D.P.	23113
		TAFFCTRL
		SD-2