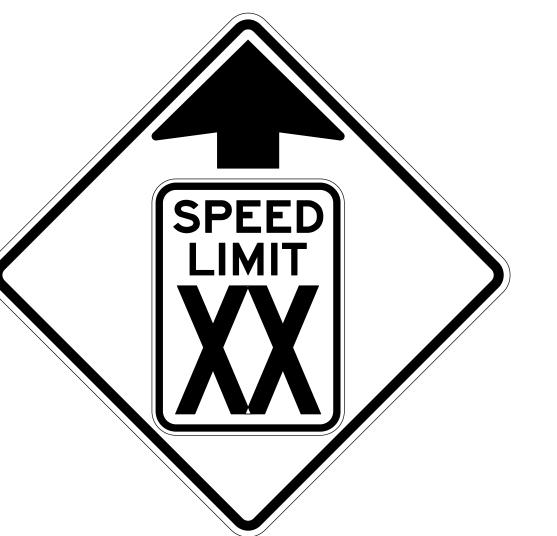


R2-1

S4-4P

8" (MIN.) FY



W3-5



WORK ZONE

SPEED

LIMIT

WHEN

Option A

**FLASHING** 

WORK G20-5aP ZONE

G20-5aP

**END** 

WORK

ZONE

SPEED

LIMIT

R2-12

R2-12

S4-4P

SPEED LIMIT

Option B

R2-1

MIN. SIZE BACKGROUND CONVENTIONAL EXPRESSWAY/ SIGN ROAD COLOR **FREEWAY** FLUORESCENT W3-5 36" x 36" 48" x 48" ORANGE FLUORESCENT 36" x 36" 48" x 48" W3-5b ORANGE FLUORESCENT G20-5aP 24" x 18" 36" x 24" **ORANGE** R2-1 WHITE 24" x 30" 36" x 48"

24" x 36"

24" x 10"

36" x 54"

36" x 18"

WHITE

WHITE

~ NOTES ~

- REDUCED SPEED LIMITS SHOULD BE USED ONLY IN SPECIFIC PORTIONS OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. LOWERING THE REGULATORY SPEED LIMIT SHOULD BE AVOIDED AS MUCH AS PRACTICAL BECAUSE DRIVERS REDUCE THEIR SPEEDS ONLY IF THEY CLEARLY PERCEIVE A NEED TO DO SO.
- 2. SPEED LIMIT MAY BE REDUCED BY 15 MPH WITHOUT A TRAFFIC ENGINEERING INVESTIGATION ON HIGHWAYS WHERE THE NORMAL POSTED SPEED LIMIT IS 70 MPH. THE SPEED LIMIT MAY BE REDUCED BY 10 MPH WITHOUT A TRAFFIC ENGINEERING INVESTIGATION ON OTHER HIGHWAYS. LARGER SPEED REDUCTIONS REQUIRE A TRAFFIC ENGINEERING INVESTIGATION AND APPROVAL OF THE SECRETARY OF TRANSPORTATION.
- 3. A REDUCED SPEED LIMIT AHEAD (W3-5) SIGN SHALL BE INSTALLED IN ADVANCE OF A WORK ZONE WITH A TEMPORARY WORK ZONE SPEED LIMIT. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD. THE SPEED LIMIT DISPLAYED ON THE SIGN SHALL MATCH THE DESIRED SPEED LIMIT THROUGH THE WORK ZONE.
- 4. IF THE END OF THE REDUCED SPEED ZONE DOES NOT COINCIDE WITH THE "END ROAD WORK" SIGN, AN "END WORK ZONE SPEED LIMIT" (R2-12) SIGN SHOULD BE INSTALLED AT THE END OF THE REDUCED SPEED ZONE.
- 5. SPEED LIMIT ASSEMBLIES MAY INCLUDE A "WHEN FLASHING" PLAQUE AND FLASHING BEACONS. BEACONS SHALL BE YELLOW, AT LEAST EIGHT (8) INCHES IN DIAMETER, AND MOUNTED VERTICALLY. BEACONS SHALL FLASH ALTERNATELY AND CONFORM TO PART 4S OF THE MUTCD.
- 6. IF A SPEED LIMIT IS TO APPLY TO THE ENTIRE LENGTH OF THE WORK ZONE, THE REDUCED SPEED LIMIT AHEAD (W3-5) SIGN AND THE SPEED LIMIT (R2-1) SIGN SHOULD BE INSTALLED BETWEEN THE FIRST AND SECOND ADVANCE WARNING SIGNS. IF A SPEED LIMIT ONLY APPLIES TO A SHORT SECTION OF A LONGER WORK ZONE, THE W3-5 SIGN SHOULD BE MOUNTED APPROXIMATELY 300 FEET IN ADVANCE OF THE SPEED LIMIT SIGN ASSEMBLY AND NO CLOSER THAN 200 FEET TO ANY OTHER SIGNS. REFER TO SHEET 004 FOR ADDITIONAL INFORMATION REGARDING RECOMMENDED LOCATIONS OF WORK ZONE SPEED LIMIT SIGNS IN RELATION TO OTHER WORK ZONE SIGNING.
- (7) A "VARIABLE SPEED ZONE AHEAD" (W3-5b) SIGN SHOULD ONLY BE USED INSTEAD OF A REDUCED SPEED LIMIT AHEAD (W3-5) SIGN IF THE ENGINEER HAS APPROVED THE USE OF VARIABLE WORK ZONE SPEED LIMITS, I.E. WHEN THE WORK ZONE ŚPEED LIMIT IS VARIED BY TIME OF DAY OR AS CONDITIONS CHANGE. VARIABLE WORK ZONE SPEED LIMITS WILL BE SIGNED WITH SPEED LIMIT ASSEMBLIES UTILIZING FLASHING BEACONS OR SPEED LIMIT SIGNS WITH A CHANGEABLE MESSAGE DISPLAY.

BID ITEMS AND UNITS TO BID

TEMPORARY SIGNS

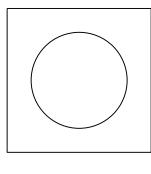
SQFT

WHEN APPLICABLE, USE WITH SHEETS 002, 003, AND 004.

COMMONWEALTH OF KENTUCKY TEAM KENTUCKY DEPARTMENT OF HIGHWAYS

# BEGIN HIGHER FINES ZONE

END HIGHER FINES ZONE



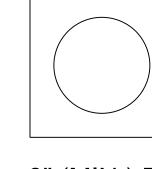
8" (MIN.) FY



WHEN

**FLASHING** 

S4-4P



8" (MIN.) FY

R2-11

# **APPLICATION**

IN ACCORDANCE WITH KRS 189.2327, IN ORDER FOR HIGHER FINES TO BE ESTABLISHED IN A HIGHWAY WORK ZONE, SIGNS INFORMING DRIVERS OF THE WORK ZONE AND THAT FINES ARE HIGHER MUST BE DISPLAYED AND AT LEAST ONE (1) BONA FIDE WORKER MUST BE PRESENT.

R2-10

THE ENGINEER MAY DETERMINE WHETHER TO ESTABLISH A HIGHER FINES ZONE WITHIN A HIGHWAY WORK ZONE BASED ON ENGINEERING JUDGMENT.

### ~ NOTES ~

- 1. THE BEGIN AND END HIGHER FINES ZONE SIGNS SHALL BE 36" X 48" FOR FREEWAYS AND EXPRESSWAYS AND 24" X 30" FOR OTHER ROADWAYS. "WHEN FLASHING" PLAQUES SHALL BE 36" X 18" FOR FREEWAYS EXPRESSWAYS AND 24" X 12" FOR OTHER ROADWAYS.
- 2. SIGNS SHALL HAVE A WHITE BACKGROUND WITH A BLACK LEGEND AND SHALL BE MOUNTED AT ELEVATIONS AND OFFSETS PRESCRIBED IN THE MUTCD.
- 3. USE ENGINEERING JUDGMENT WHEN DETERMINING THE LIMITS OF HIGHER FINES ZONES. FOR SHORTER LENGTH PROJECTS WHERE WORK WILL OCCUR THROUGHOUT THE PROJECT LIMITS, LOCATE "BEGIN HIGHER FINES ZONE" SIGN BETWEEN THE SECOND AND THIRD ADVANCE WARNING SIGN AND LOCATE THE "END HIGHER FINES ZONE" SIGN 250' IN ADVANCE OF THE "END ROAD WORK" SIGN. FOR LONGER LENGTH PROJECTS WHERE WORK WILL NOT OCCUR THROUGHOUT THE PROJECT LIMITS, CONSIDER PLACING SIGNS ONLY IN AREAS WHERE ACTIVITY IS OCCURRING. REFER TO SHEET 004 FOR ADDITIONAL INFROMATION REGARDING RECOMMENDED LOCATIONS OF HIGHER FINES IN RELATION TO OTHER WORK ZONE SIGNING.
- 4. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD. WHERE CONSTRUCTION ONLY AFFECTS ONE DIRECTION OF A DIVIDED HIGHWAY WITH A BARRIER OR WIDE MEDIAN, SIGNS SHALL NOT BE ERECTED FOR OPPOSING DIRECTION.
- 5. ADDITIONAL SIGNS MAY BE REQUIRED FOR LONG HIGHWAY WORK ZONES OR WHERE RAMPS OR INTERSECTING STREETS JUNCTION WITHIN THE PROJECT LIMITS.
- 6. "BEGIN HIGHER FINES ZONE" SIGN ASSEMBLIES MAY INCLUDE A "WHEN FLASHING" PLAQUE AND FLASHING BEACONS. BEACONS SHALL BE YELLOW, AT LEAST 8" IN DIAMETER, AND MOUNTED HORIZONTALLY NEAR THE TOP OF THE SIGN ASSEMBLY. BEACONS SHALL FLASH ALTERNATELY AND CONFORM TO PART 4S OF THE MUTCD.
- 7. HIGHER FINES ZONES SIGNS SHALL BE COVERED IF A BONA FIDE WORKER WILL NOT BE PRESENT FOR A SIGNIFICANT PERIOD OF TIME. IN SUCH CASES, ASSEMBLIES WITH FLASHING BEACONS SHALL BE TURNED OFF.

BID ITEMS AND UNITES TO BID

TEMPORARY SIGNS

SQFT

WHEN APPLICABLE, USE WITH SHEETS 001, 003, AND 004.

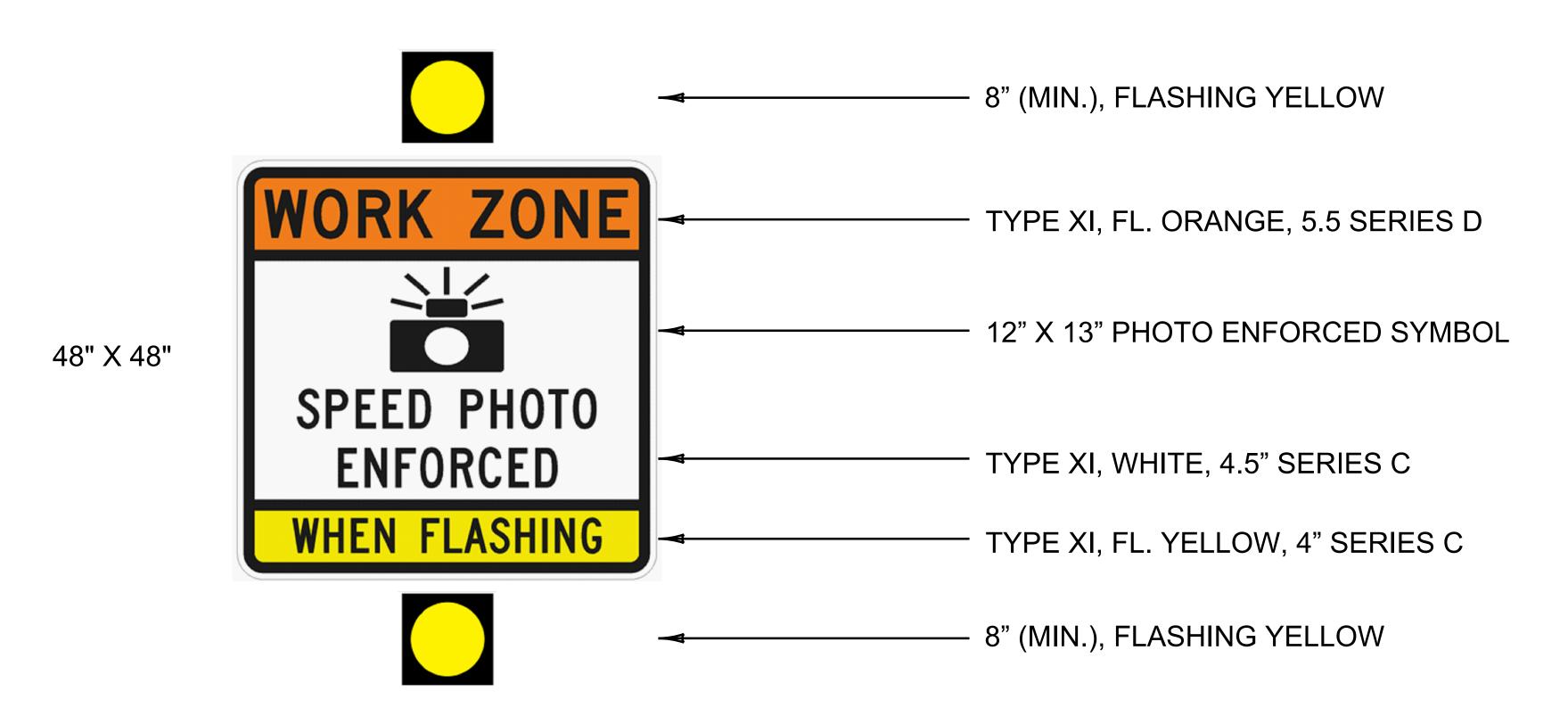


COMMONWEALTH OF KENTUCKY TEAM KENTUCKY DEPARTMENT OF HIGHWAYS

TEMPORARY TRAFFIC CONTROL - AUTOMATED ENFORCEMENT | SHEET 002: HIGHER FINES ZONE SIGN

SEPIA NUMBER

S-TTC-170



### **APPLICATION**

THE ENGINEER MAY DETERMINE WHETHER TO UTILIZE AUTOMATED ENFORCEMENT WITHIN A HIGHWAY WORK ZONE BASED ON ENGINEERING JUDGMENT. IN ACCORDANCE WITH KRS 189.2326, AUTOMATED SPEED ENFORCEMENT DEVICES MAY BE USED WITHIN A WORK ZONE TO TRANSMIT A VEHICLE'S SPEED AND AN IMAGE OF THE LICENSE PLATE TO SUPPORT ONSITE ENFORCEMENT. CITATIONS CAN BE ISSUED IF ALL OF THE FOLLOWING CONDITIONS APPLY:

- 1. MOTOR VEHICLES ARE TRAVELING IN EXCESS OF 10 MILES PER HOUR OVER THE SPEED LIMIT
- 2. AT LEAST ONE BONA FIDE WORKER IS PRESENT IN THE WORK ZONE
- 3. A PEACE OFFICER IS PRESENT IN OR NEAR THE END OF THE HIGHWAY WORK ZONE IN A MARKED VEHICLE
- 4. SIGNS WITH BEACONS ARE ACTIVATED WITHIN THE HIGHWAY WORK ZONE
- ~ NOTES ~
- 1. BEACONS SHALL BE FLASHED ALTERNATELY AND ONLY OPERATED WHEN SPEED LIMITS ARE BEING ENFORCED USING AUTOMATED SPEED ENFORCEMENT DEVICES.
- 2. BEACONS SHOULD INCLUDE AUTOMATIC DIMMING TO REDUCE THE BRILLIANCE OF FLASHING YELLOW INDICATIONS DURING NIGHT OPERATION.
- 3. BEACONS SHALL BE FLASHED AT A RATE OF NOT LESS THAN 50 OR MORE THAN 60 TIMES PER MINUTE. THE ILLUMINATED PERIOD OF EACH FLASH SHALL BE A MINIMUM OF ½ AND A MAXIMUM OF ¾ OF THE TOTAL CYCLE. 4. IF SPEEDS ARE TO BE ENFORCED USING AUTOMATED DEVICES THROUGH ENTIRE WORK ZONE, THE AUTOMATED ENFORCEMENT SIGN ASSEMBLY SHOULD BE LOCATED BETWEEN THE LAST ADVANCE WARNING SIGN AND
- THE WORK AREA. REFER TO SHEET 004 FOR ADDITIONAL INFORMATION REGARDING RECOMMENDED LOCATIONS OF AUTOMATED ENFORCEMENT SIGNS IN RELATION TO OTHER WORK ZONE SIGNING.

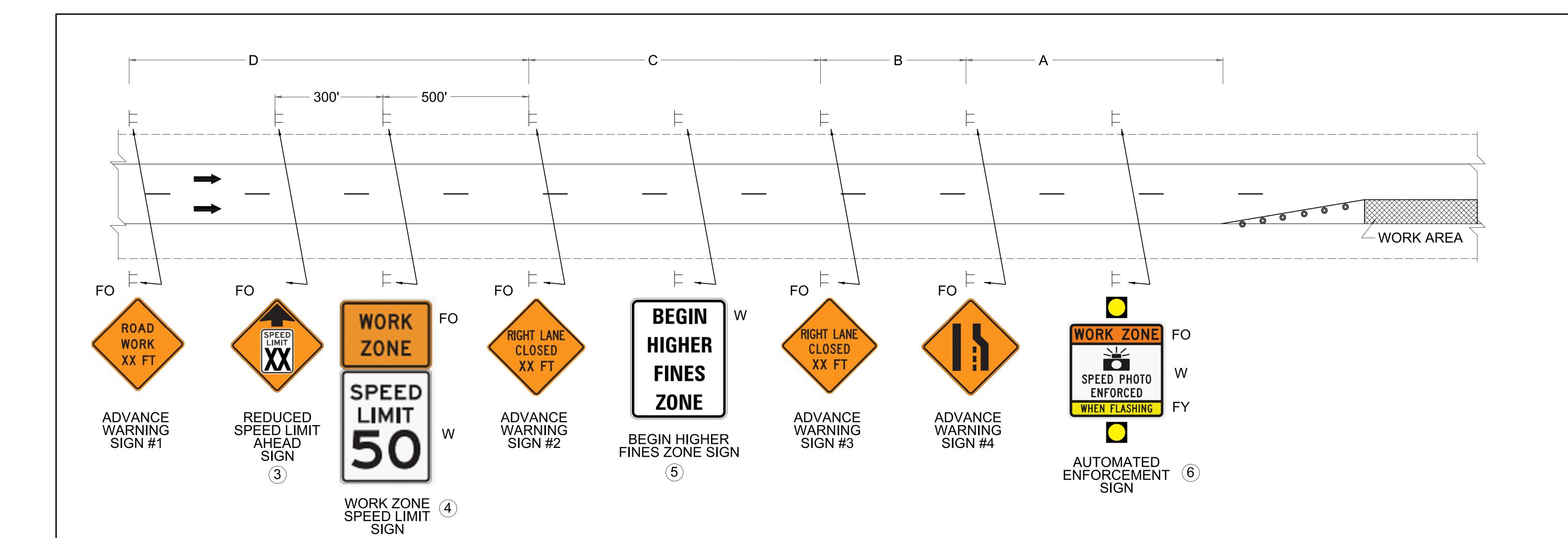
BID ITEM AND UNIT TO BID

TEMPORARY SIGNS

SQFT

WHEN APPLICABLE, USE WITH SHEETS 001, 002, AND 004.





~ NOTES ~

1. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD.

2. ADDITIONAL SIGNS MAY BE REQUIRED FOR LONGER HIGHWAY WORK ZONES OR WHERE RAMPS OR INTERSECTING STREETS JUNCTION WITHIN THE PROJECT LIMITS.

(3) THE REDUCED SPEED LIMIT AHEAD SIGN SHOULD BE LOCATED BETWEEN THE FIRST AND SECOND ADVANCE WARNING SIGNS AND 300' (MIN.) IN FRONT OF THE WORK ZONE SPEED LIMIT SIGN ASSEMBLY.

(4) THE WORK ZONE SPEED LIMIT SIGN ASSEMBLY SHOULD BE LOCATED 500' (MIN.) IN FRONT OF THE SECOND ADVANCE WARNING SIGN.

(5) THE "BEGIN HIGHER FINES ZONE" SIGN SHOULD BE LOCATED BETWEEN THE SECOND AND THIRD ADVANCE WARNING SIGNS.

LAST ADVANCE WARNING SIGN AND THE WORK AREA. 7. ADJUSTMENTS TO SIGN LOCATIONS AND SPACINGS MAY BE NECESSARY DUE TO SITE

(6) THE AUTOMATED ENFORCEMENT SIGN ASSEMBLY SHOULD BE LOCATED BETWEEN THE

CONDITIONS, ESPECIALLY ON LOWER SPEED HIGHWAYS. 8. A SPACING OF 200' (MIN.) SHOULD BE MAINTAINED BETWEEN SIGNS.

#### BID ITEM AND UNIT TO BID

TEMPORARY SIGNS

SQFT

WHEN APPLICABLE, USE WITH SHEETS 001, 002, AND 003.

#### **APPLICATION**

DRAWING SHOWS SUGGESTED LOCATIONS OF WORK ZONE SPEED LIMIT, HIGHER FINES, AND AUTOMATED SPEED ENFORCEMENT SIGNS IN RELATION TO THE ADVANCE WARNING SIGNS FOR A TYPICAL WORK ZONE WHEN THE REDUCED SPEED LIMIT, HIGHER FINES, AND AUTOMATED ENFORCEMENT APPLY TO THE ENTIRE WORK ZONE. SIMILAR LOCATIONS SHOULD BE USED WITHIN THE NORMAL SIGN SEQUENCE FOR OTHER TYPICAL APPLICATIONS. A SIMILAR ORDER OF SIGNING SHOULD BE USED WITHIN THE ACTIVITY AREA IF THE REGULATIONS ONLY APPLY TO A SHORT SECTION DOWNSTREAM IN A LONGER WORK ZONE. SIGNS ARE ONLY APPLICABLE IF THE REGULATIONS ARE UTILIZED IN A WORK ZONE.

## LEGEND

FO = FLUORESCENT ORANGE FY = FLUORESCENT YELLOW W = WHITE

SIGNING AND SPACING TABLE				
ROAD TYPE	Α	В	С	D
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'
SP. LT. = 45 MPH*	500'	500'	500'	1100'
SP. LT. ≦40 MPH*	250'	250'	500'	500'

\*NOTE: USE NORMAL POSTED SPEED LIMIT



COMMONWEALTH OF KENTUCKY TEAM KENTUCKY DEPARTMENT OF HIGHWAYS

TEMPORARY TRAFFIC CONTROL - AUTOMATED ENFORCEMENT | SHEET 004: LOCATIONS OF WORK ZONE SIGNING

SEPIA NUMBER S-TTC-170