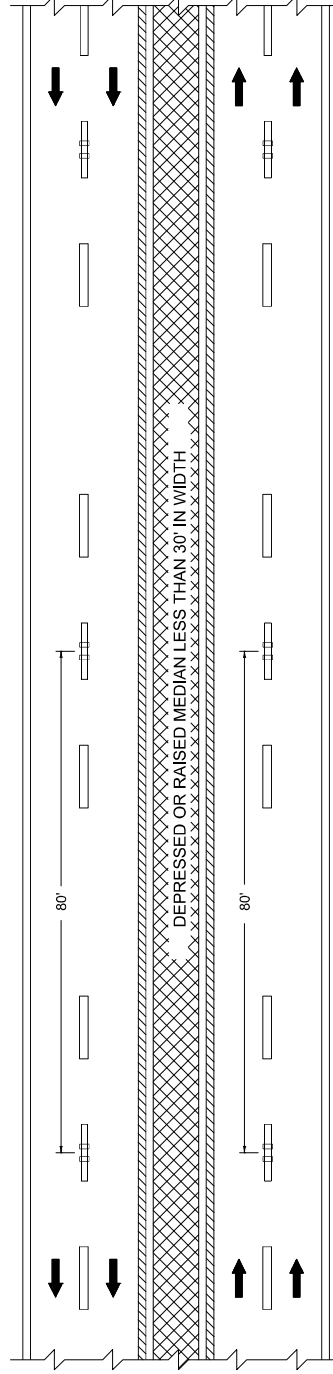


ARRANGEMENT "A" (UNDIVIDED HIGHWAY)

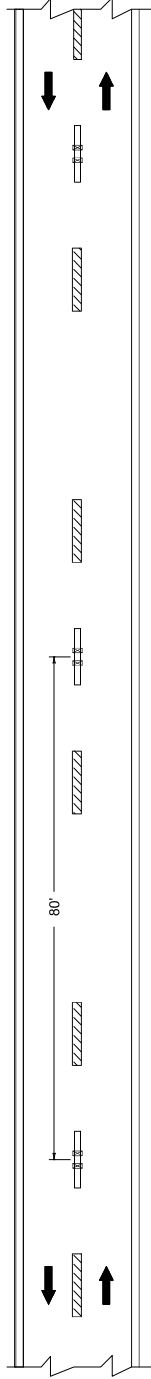


ARRANGEMENT "B" (DIVIDED HIGHWAY WITH DEPRESSED OR RAISED MEDIAN LESS THAN 30' IN WIDTH)

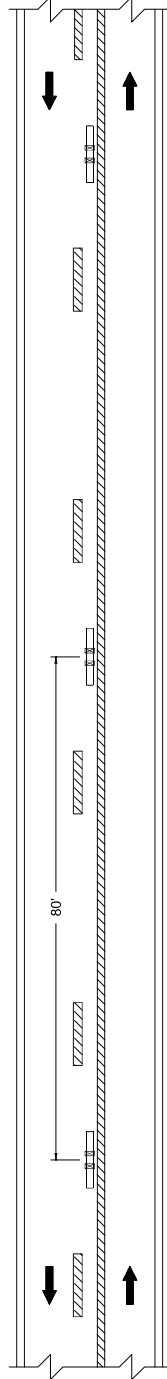
- ~ NOTES ~
1. MARKERS INSTALLED WITH DOUBLE YELLOW CENTERLINES SHOULD BE PLACED BETWEEN THE TWO LINES.
 2. MARKERS INSTALLED ALONG LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
 3. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.
 4. MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES.
- BID ITEMS AND UNIT TO BID
- | | |
|--------------------------------------|------|
| 06610 - IN-LAID PAVEMENT MARKER - MW | EACH |
| 06612 - IN-LAID PAVEMENT MARKER - BY | EACH |

LEGEND	
	BI-DIRECTIONAL PAVEMENT MARKER (YELLOW)
	MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
	MARKINGS (YELLOW)
	MARKINGS (WHITE)
	DEPRESSED OR RAISED MEDIAN

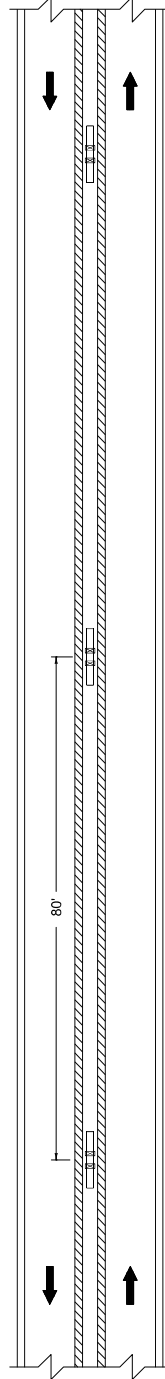
DRAWING NOT TO SCALE



ARRANGEMENT "A" (PASSING PERMITTED FOR BOTH DIRECTIONS OF TRAVEL)



ARRANGEMENT "B" (PASSING PERMITTED FOR ONE DIRECTION OF TRAVEL)



ARRANGEMENT "C" (PASSING PROHIBITED FOR BOTH DIRECTIONS OF TRAVEL)

~ NOTES ~

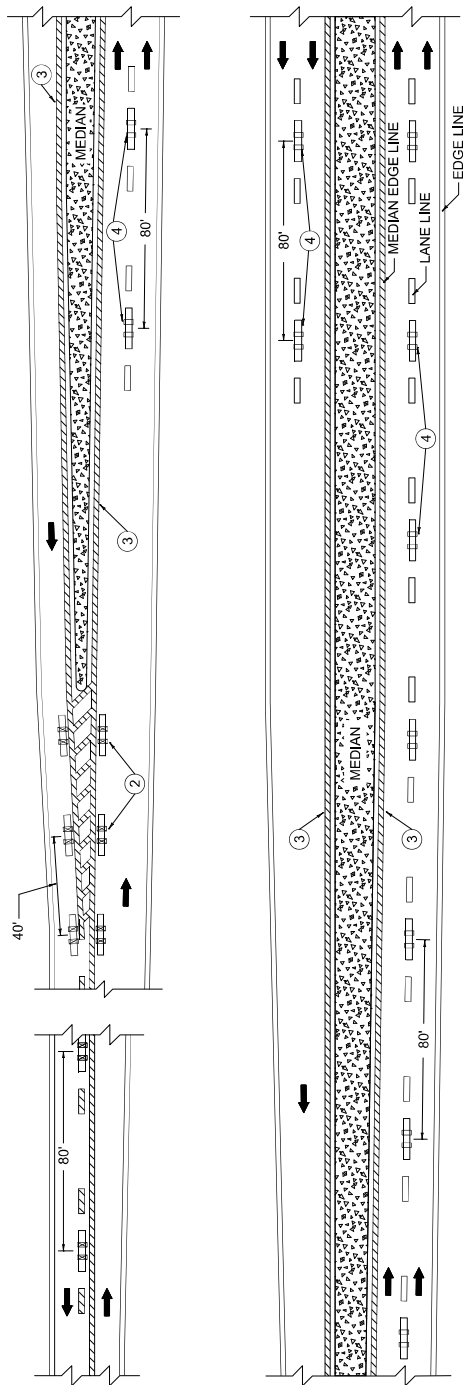
1. MARKERS INSTALLED ALONG DASHED YELLOW CENTERLINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE DASHES.
2. MARKERS INSTALLED WITH DOUBLE YELLOW CENTERLINES SHALL BE PLACED BETWEEN THE TWO LINES.
3. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

BID ITEMS AND UNIT TO BID
06612 - INLAID PAVEMENT MARKER - BY

EACH

LEGEND

-  BI-DIRECTIONAL PAVEMENT MARKER (YELLOW)
 MARKINGS (YELLOW)
 MARKINGS (WHITE)



TWO LANE TO FOUR LANE PAVEMENT TRANSITIONS

- ④

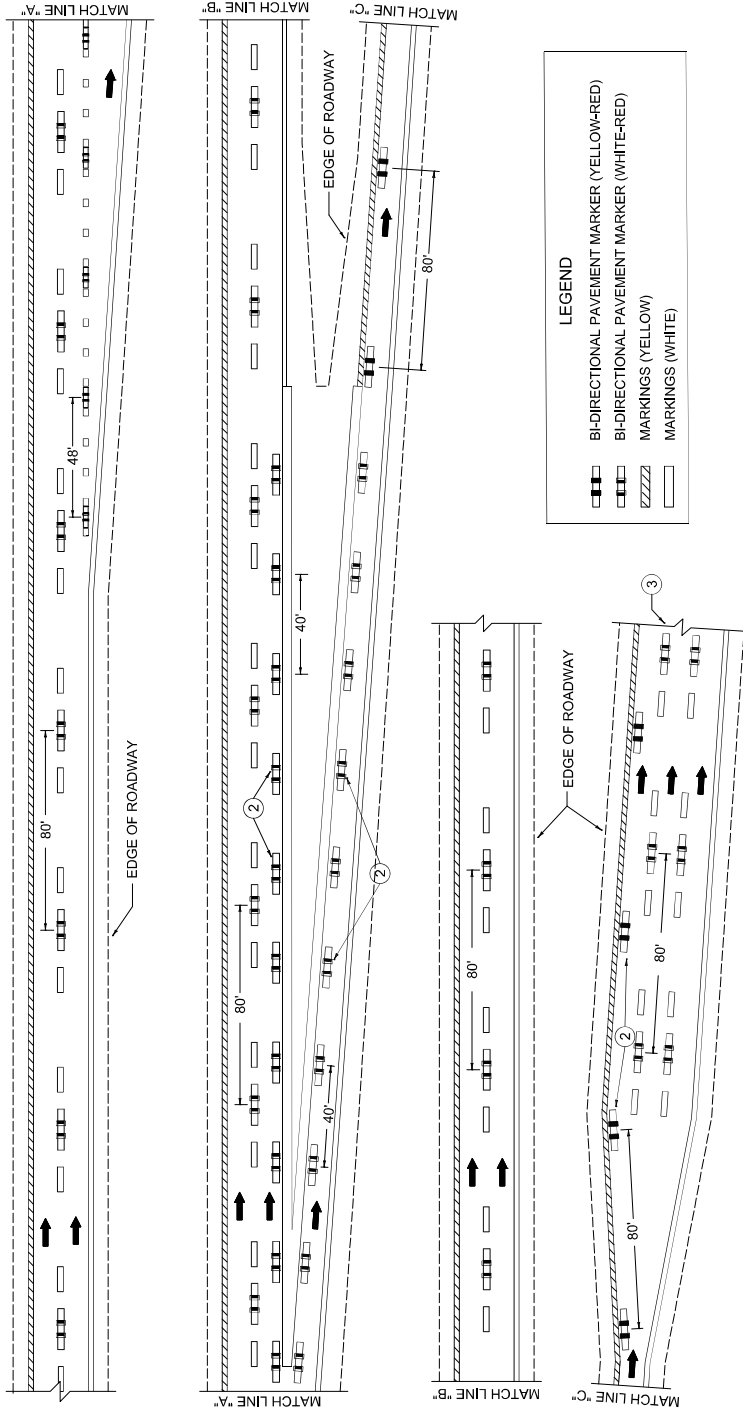
LEGEND

 -  BIDIRECTIONAL PAVEMENT MARKER (YELLOW)
 -  MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
 -  MARKINGS (YELLOW)
 -  MARKINGS (WHITE)

NOTES ~

- | | | |
|----|--|------|
| 1. | MARKERS INSTALLED ALONG LANE LINES OR DASHED YELLOW CENTERLINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE DASHES. | |
| 2. | MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" | |
| 3. | MARKERS MAY BE REQUIRED ALONG THE MEDIAN EDGE LINES DEPENDING ON TYPE AND WIDTH OF MEDIAN. SEE TPM-100, TPM-105, AND TPM-110 FOR GUIDANCE. | |
| 4. | IF MEDIAN WIDTH IS GREATER THAN OR EQUAL TO 30', BI-DIRECTIONAL (WHITE-RED) MARKERS SHALL BE USED ALONG THE LANE LINES IN LIEU OF MONO-DIRECTIONAL (WHITE) MARKERS. | |
| 5. | MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT, ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED AT THE DISCRETION OF THE ENGINEER. | |
| | BID ITEMS AND UNIT TO BID | |
| | 06610 - IN-LAID PAVEMENT MARKER - MW | EACH |
| | 06612 - IN-LAID PAVEMENT MARKER - BY | EACH |

DRAWING NOT TO SCALE



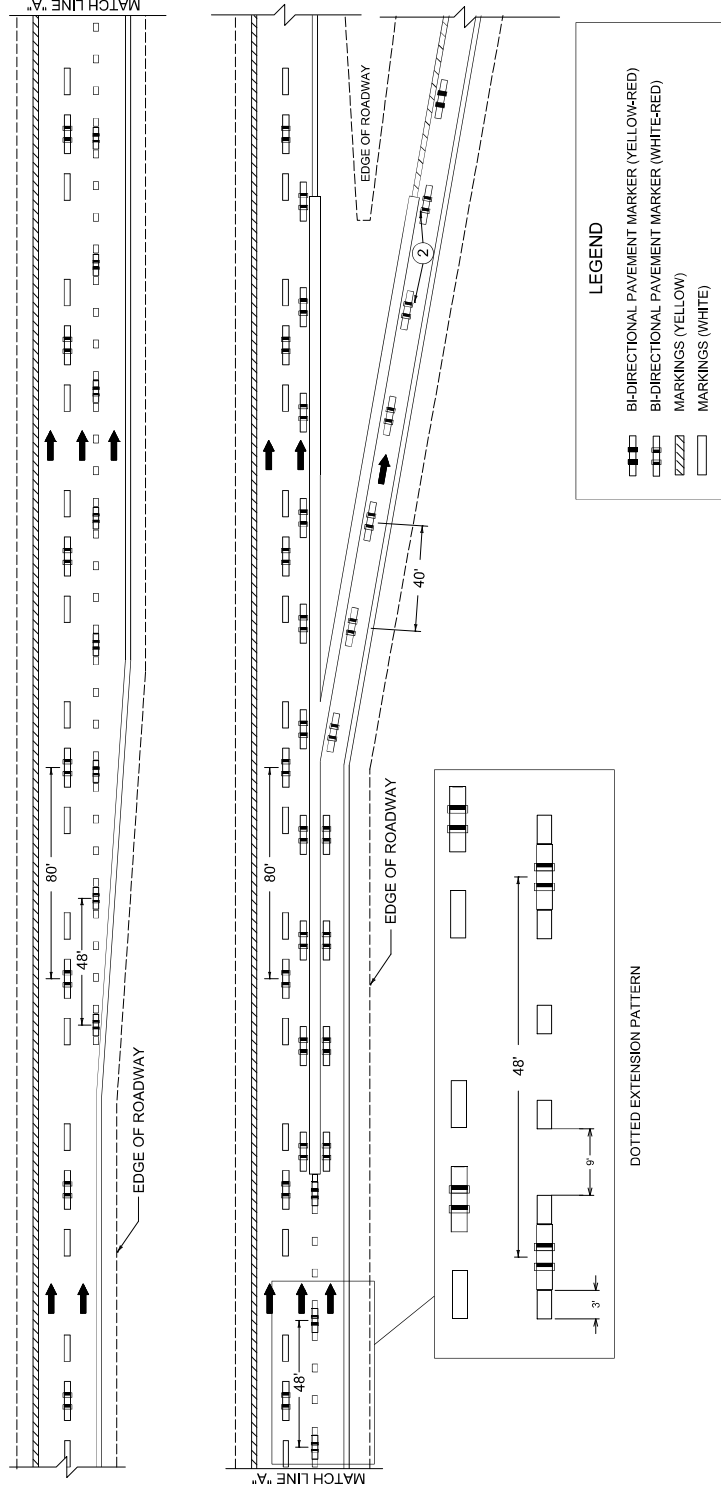
- ~ NOTES ~
1. MARKERS INSTALLED ALONG LANE LINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
 2. MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
 3. MARKERS SHALL BE CONTINUED ALONG THE ENTIRE LENGTH OF THE RAMP UNTIL THE INTERSECTION WITH THE CROSS-STREET.
 4. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

DRAWING NOT TO SCALE
USE WITH CUR. STD. DWG.
TPM-201

BID ITEMS AND UNIT TO BID
06613 - INLAID PAVEMENT MARKER - B-W/R
06614 - INLAID PAVEMENT MARKER - B-Y/R
EACH
EACH

PERMANENT

STANDARD DRAWING NUMBER
TPM-126-01



~NOTES~

1. MARKERS INSTALLED ALONG LANE LINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
2. MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
3. MARKERS SHALL BE CONTINUED ALONG THE ENTIRE LENGTH OF THE RAMP UNTIL THE INTERSECTION WITH THE CROSS-STREET.
4. ON TWO-LANE, TWO-WAY HIGHWAYS, MARKERS INSTALLED ALONG GORE MARKINGS SHALL BE MONO-DIRECTIONAL (WHITE).
5. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED AT THE DISCRETION OF THE ENGINEER.
6. MARKERS INSTALLED ALONG THE RAMP EDGELINE SHALL BE SPACED AT 80' INTERVALS.

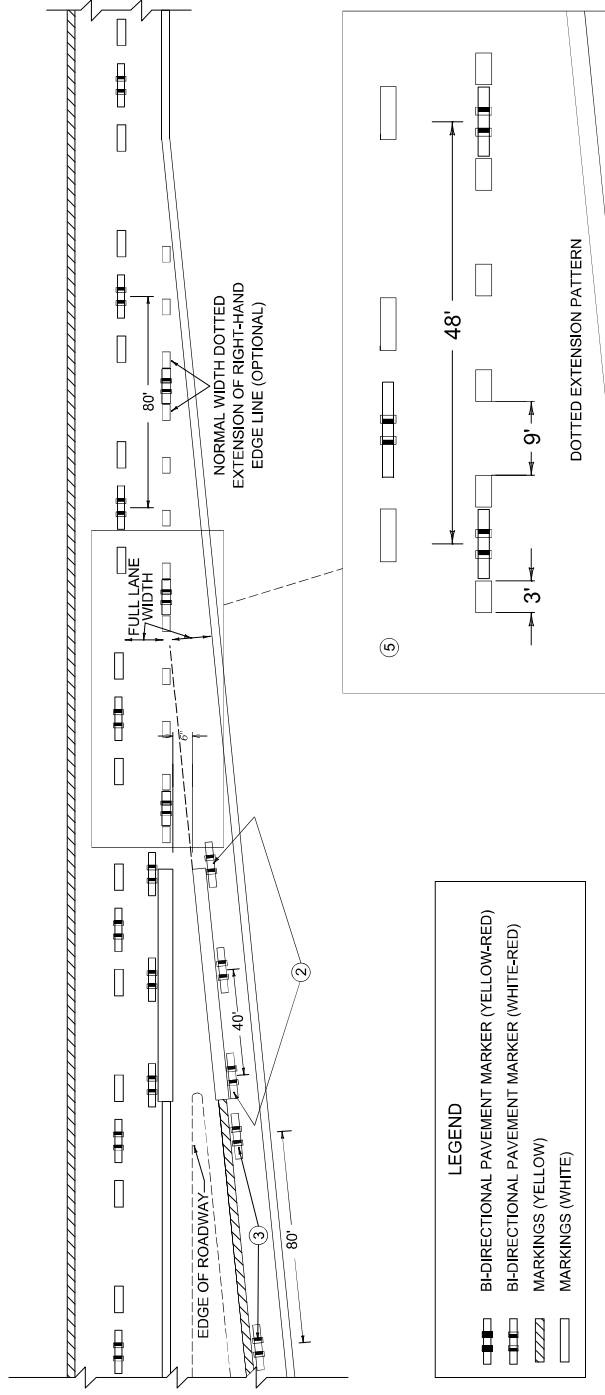
BID ITEMS AND UNITS TO BID
06613 - INLAID PAVEMENT MARKER - B-W/R
06614 - INLAID PAVEMENT MARKER - B-Y/R

DRAWING NOT TO SCALE

EACH
EACH

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

INLAID PAVEMENT MARKER ARRANGEMENT FOR PARALLEL DECELERATION LANE



PERMANENT

REVISION DATE: 08/11/2025
REVISION NUMBER: 0

APPROVED *[Signature]* STATE HIGHWAY ENGINEER
08-11-2025 DATE

SUBMITTED *[Signature]* DIVISION DIRECTOR
08-11-2025 DATE

NOTES

1. MARKERS INSTALLED ALONG LANE LINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
2. MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
3. BI-DIRECTIONAL (YELLOW-RED) MARKERS ARE TO BE PLACED ALONG THE ENTIRE LENGTH OF THE YELLOW EDGE LINE FROM THE INTERSECTION OF THE CROSS-STREET TO THE BEGINNING OF THE GORE AREA.
4. ON TWO-LANE, TWO-WAY HIGHWAYS, MARKERS INSTALLED ALONG GORE MARKINGS SHALL BE MONO-DIRECTIONAL (WHITE).
5. IF DOTTED EXTENSIONS ARE USED IN THE TAPERED ACCELERATION LANE, MARKERS SHALL BE INSTALLED AS DEPICTED.
6. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2' FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

BID ITEMS AND UNIT TO BID
06613 - INLAID PAVEMENT MARKER - B-W/R
06614 - INLAID PAVEMENT MARKER - B-Y/R

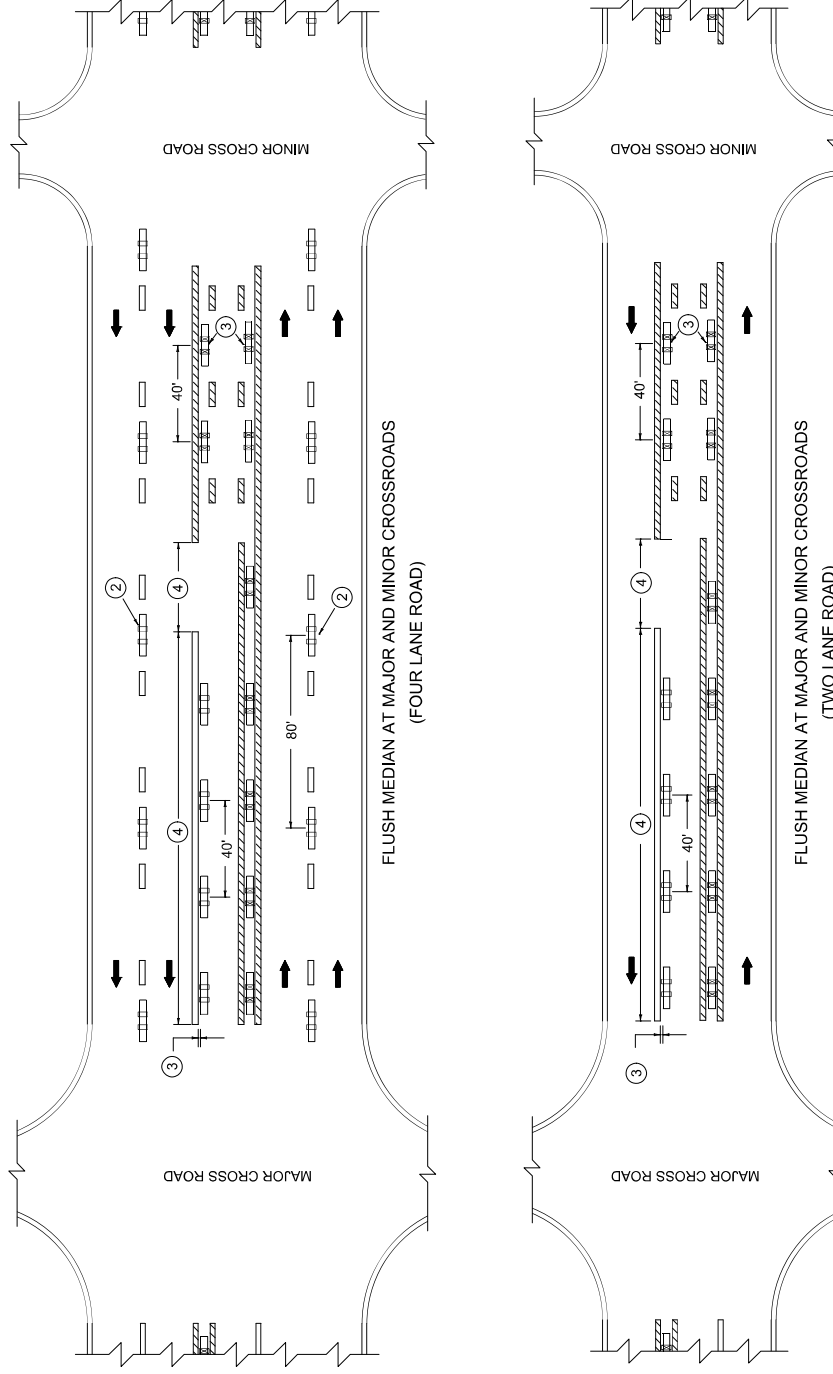
EACH
EACH

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

INLAID PAVEMENT MARKER ARRANGEMENT ON RAMP WITH TAPERED ACCELERATION LANE

STANDARD DRAWING NUMBER
TPM-130-04

PERMANENT

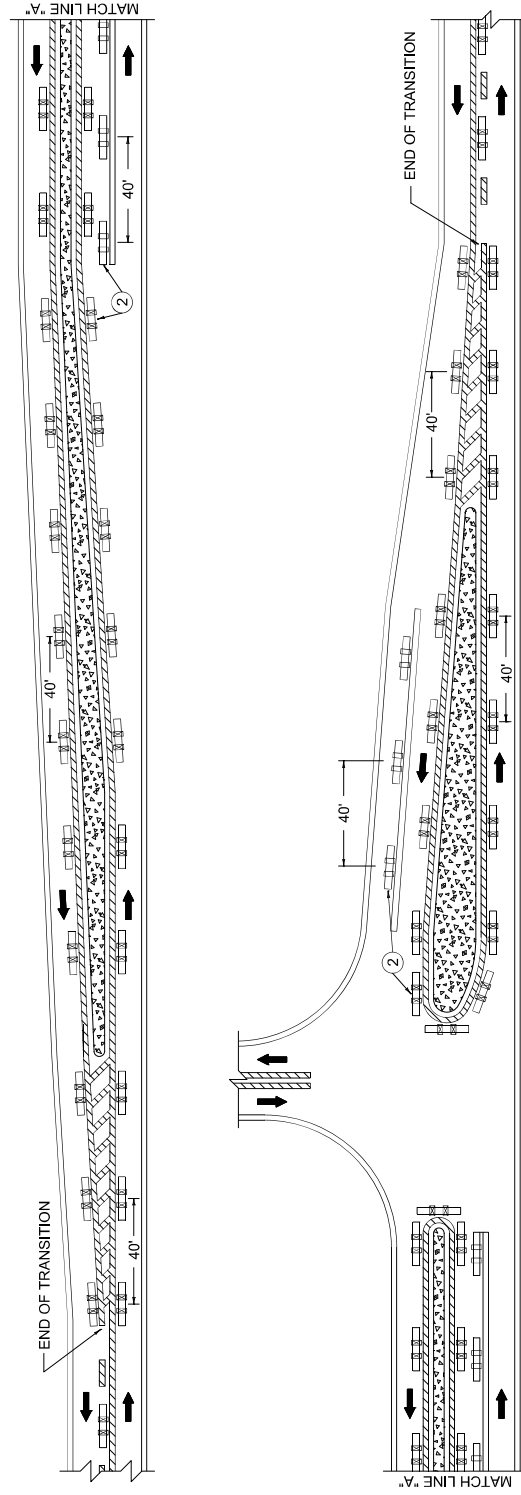


- ~ NOTES ~
1. MARKERS INSTALLED AT DOUBLE YELLOW CENTERLINES SHALL BE PLACED BETWEEN THE TWO LINES.
 2. MARKERS INSTALLED ALONG BROKEN LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
 3. MARKERS INSTALLED ALONG WHITE EDGE LINES OF TURN LANES AND WITHIN THE TWO-WAY LEFT-TURN LANE SECTION SHOULD BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE SOLID LINE.
 4. LENGTH TO BE DETERMINED ON A PROJECT BY PROJECT BASIS.
 5. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

BID ITEMS AND UNITS TO BID
06610 - INLAID PAVEMENT MARKER - MW
06612 - INLAID PAVEMENT MARKER - BY

DRAWING NOT TO SCALE
USE WITH CUR. STD. DWG. TPM-207

LEGEND	
	BIDIRECTIONAL PAVEMENT MARKER (YELLOW)
	MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
	MARKINGS (YELLOW)
	MARKINGS (WHITE)



CHANNELIZED INTERSECTION ON A TWO DIRECTIONAL TWO LANE FACILITY

- LEGEND**
- | | |
|---|--|
|  | BIDIRECTIONAL PAVEMENT MARKER (YELLOW) |
|  | MONO-DIRECTIONAL PAVEMENT MARKER (WHITE) |
|  | CURBED OR FLUSH MEDIAN |
|  | MARKINGS (YELLOW) |
|  | MARKINGS (WHITE) |

NOTES

1. MARKERS INSTALLED ALONG DASHED YELLOW CENTERLINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
2. MARKERS INSTALLED ALONG EDGE LINES OR CHANNELIZING LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
3. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2' FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

BID ITEMS AND UNITS TO BID
06610 - INLAID PAVEMENT MARKER - MW
06612 - INLAID PAVEMENT MARKER - BY



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

INLAID PAVEMENT MARKER ARRANGEMENT CHANNELIZED INTERSECTION

STANDARD DRAWING NUMBER
TPM-145-04

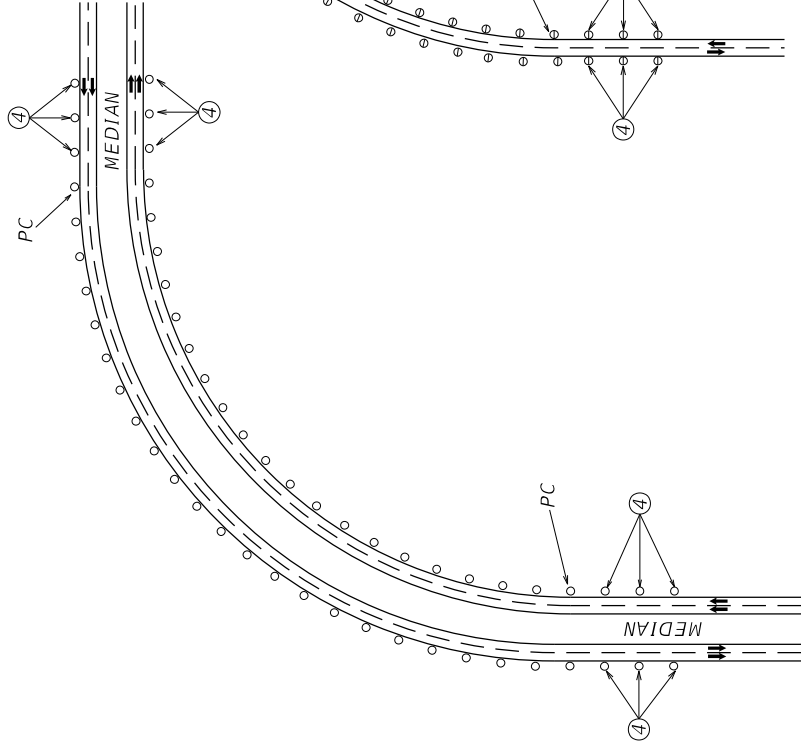
PERMANENT

APPROVED for Bollinger STATE HIGHWAY ENGINEER
DATE 08-11-2025

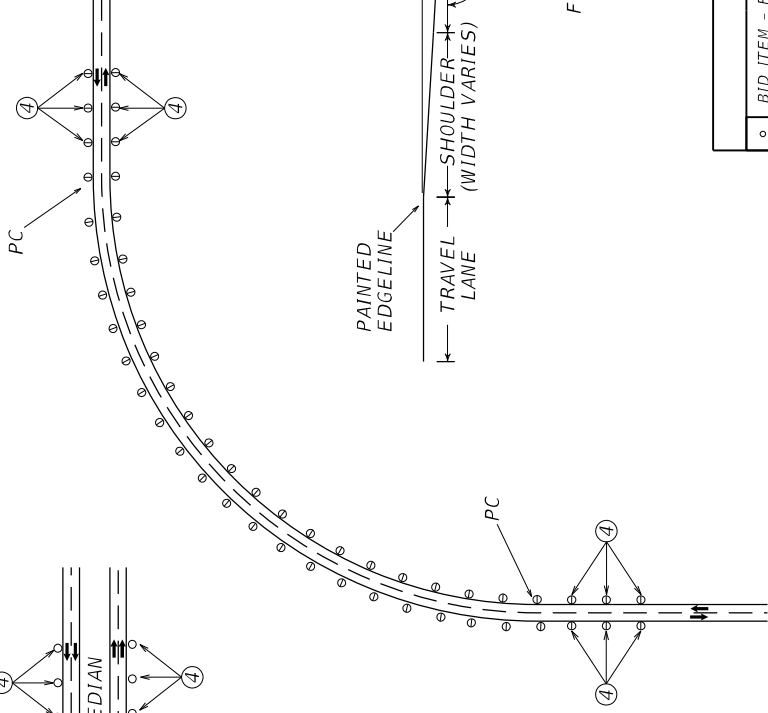
SUBMITTED Jim D. DIVISION DIRECTOR
DATE 08-11-2025

REVISION DATE: 08/11/2025
REVISION NUMBER: 0

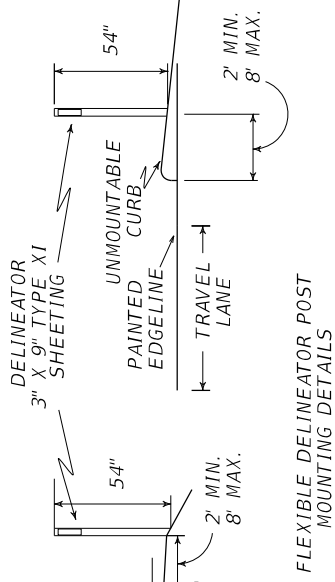
APPROVED  STATE HIGHWAY ENGINEER
DATE 08-11-2025



DELINEATION FOR HORIZONTAL CURVES
ON MULTI-LANE EXPRESSWAYS/FREEWAYS



DELINEATION FOR HORIZONTAL CURVES
ON TWO-LANE EXPRESSWAYS/FREEWAYS



FLEXIBLE DELINEATOR POST
MOUNTING DETAILS

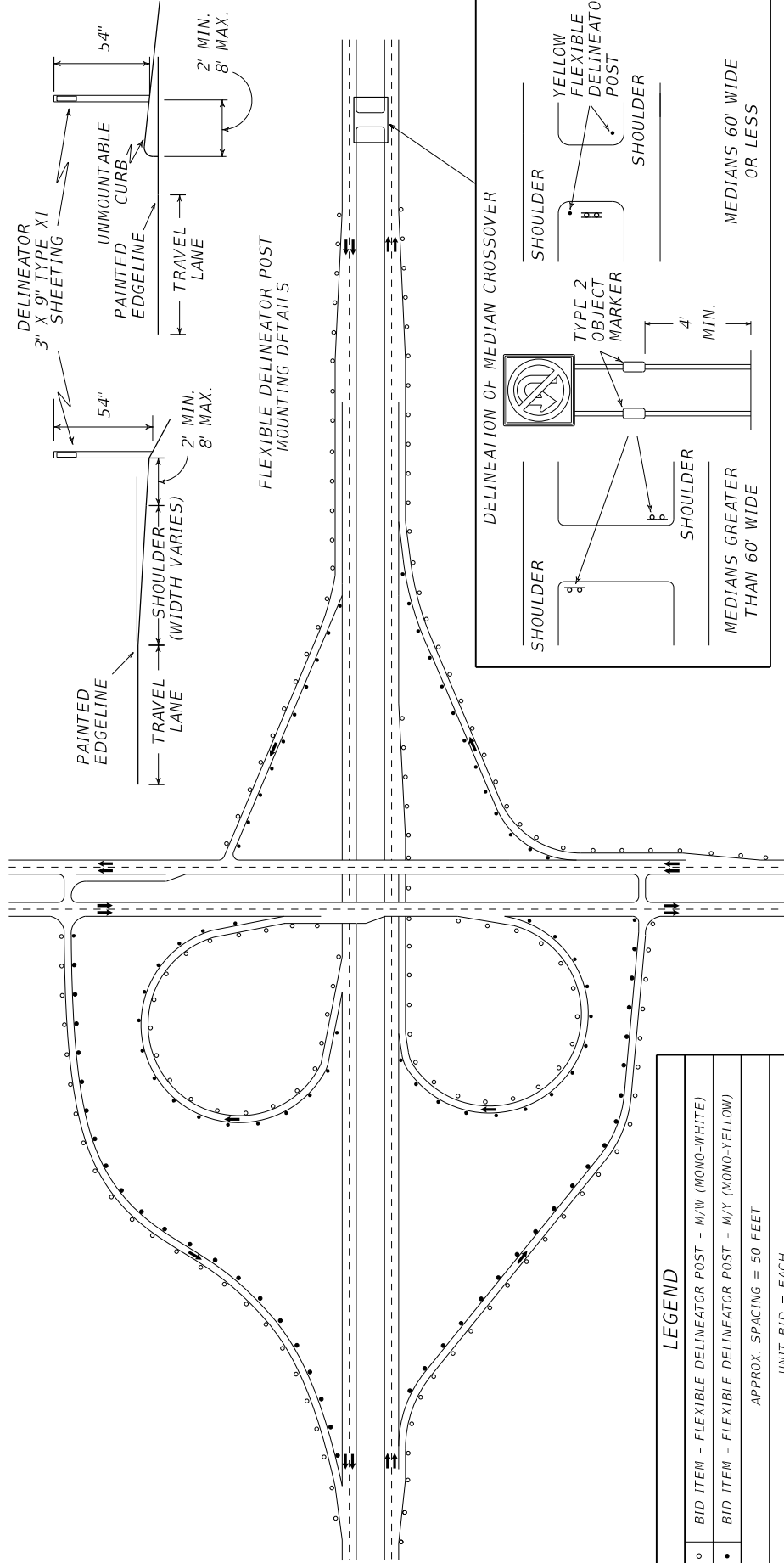
LEGEND	
o	BID ITEM - FLEXIBLE DELINEATOR POST - M/W (MONO-WHITE)
o	BID ITEM - FLEXIBLE DELINEATOR POST - B/W (BI-WHITE)
APPROX. SPACING = 50 FEET	
UNIT BID = EACH	

~ NOTES ~

1. DELINEATORS SHALL BE FROM THE LIST OF APPROVED MATERIALS AND SHALL BE IN ACCORDANCE WITH SECTION 838 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. THE DELINEATOR POST AND RETROREFLECTIVE SHEETING SHALL BE THE SAME COLOR AND SHALL MATCH THE COLOR OF THE EDGELINES THEY SUPPLEMENT.
- ④ THREE DELINEATORS SHALL BE INSTALLED IN ADVANCE OF THE BEGINNING AND PROCEEDING AWAY FROM THE END OF THE CURVE AT A SPACING OF APPROXIMATELY 50 FEET.
5. DELINEATORS SHALL BE PROVIDED ON THE RIGHT-HAND SIDE OF HORIZONTAL CURVES ON EXPRESSWAYS AND FREEWAYS. DELINEATORS ARE NOT REQUIRED ON TANGENT SECTIONS OF EXPRESSWAYS AND FREEWAYS.
6. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
7. DELINEATORS SHOULD BE PLACED AT A CONSTANT DISTANCE FROM THE ROADWAY EDGE. WHEN AN OBSTRUCTION EXISTS NEAR THE PAVEMENT EDGE, THE LINE OF DELINEATORS SHOULD BE TRANSITIONED TO THE INSIDE OF THE OBSTRUCTION OR TO THE BARRIER DELINEATION IF THE OBSTRUCTION IS GUARDRAIL OR BARRIER WALL. SUCH TRANSITIONS SHOULD BEGIN APPROXIMATELY 200 FT IN ADVANCE OF THE OBSTRUCTION/BARRIER.
8. DELINEATORS SHOULD BE INSTALLED AT AN APPROXIMATE RIGHT ANGLE TO APPROACHING TRAFFIC.
9. DELINEATORS MAY BE DISCONTINUED ALONG SECTIONS WITH BARRIER WALL OR GUARDRAIL DELINEATION.
10. SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS
FLEXIBLE DELINEATOR POST ARRANGEMENTS FOR HORIZONTAL CURVES
STANDARD DRAWING NO. TPM-170-01
SUBMITTED BY <i>B. M. W. J.</i> 02-26-20
APPROVED BY <i>[Signature]</i> 02-26-20
DIRECTOR OF TRANSPORTATION
ENGINEER



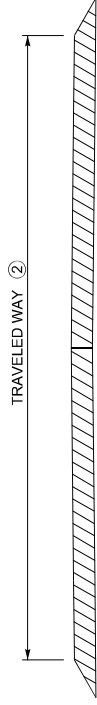
LEGEND	
○	BID ITEM - FLEXIBLE DELINEATOR POST - M/W (MONO-WHITE)
●	BID ITEM - FLEXIBLE DELINEATOR POST - M/Y (MONO-YELLOW)
APPROX. SPACING = 50 FEET	
UNIT BID = EACH	

~ NOTES ~

1. DELINEATORS SHALL BE FROM THE LIST OF APPROVED MATERIALS AND SHALL BE IN ACCORDANCE WITH SECTION 838 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. THE DELINEATOR POST AND RETROREFLECTIVE SHEETING SHALL BE THE SAME COLOR AND SHALL MATCH THE COLOR OF THE EDGELINES THEY SUPPLEMENT.
4. DELINEATORS SHALL BE PROVIDED ON BOTH SIDES OF INTERCHANGE RAMPS. DELINEATORS SHOULD BE ERRECTED AT APPROXIMATELY 50 FOOT INTERVALS ALONG RAMPS AND ACCELERATION AND DECELERATION LANES ON THE MAINLINE AND CROSSROAD.
5. DELINEATORS SHOULD BE PLACED AT A CONSTANT DISTANCE FROM THE ROADWAY EDGE. WHEN AN OBSTRUCTION EXISTS NEAR THE PAVEMENT EDGE, THE LINE OF DELINEATORS SHOULD BE TRANSITIONED TO THE INSIDE OF THE OBSTRUCTION OR TO THE BARRIER DELINEATION IF THE OBSTRUCTION IS GUARDRAIL OR BARRIER WALL. SUCH TRANSITIONS SHOULD BEGIN APPROXIMATELY 200 FEET IN ADVANCE OF THE OBSTRUCTION/BARRIER.
6. DELINEATORS SHOULD BE INSTALLED AT AN APPROXIMATE RIGHT ANGLE TO APPROACHING TRAFFIC.
7. DELINEATORS MAY BE DISCONTINUED ALONG SECTIONS WITH BARRIER WALL OR GUARDRAIL DELINEATION.
8. SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

DRAWING NOT TO SCALE

KENTUCKY	
DEPARTMENT OF HIGHWAYS	
FLEXIBLE DELINEATOR	
POST ARRANGEMENTS FOR INTERCHANGE RAMPS AND CROSSOVERS	
STANDARD DRAWING NO. TPM-171-01	02-26-20
SUBMITTED BY <i>B. G. W.</i>	DIRECTOR OF TRANSPORTATION
APPROVED BY <i>[Signature]</i>	02-26-20
SHEET NO. 1 OF 1	



TWO LANE ROADWAY PAVEMENT CROSS-SECTION

TRAVELED WAY	TYPE OF PAVEMENT STRIPING	NON-STATE PRIMARY ROUTES				STATE PRIMARY ROUTES		
		< 1000 ADT		>= 1000 ADT		ANY ADT		
		WIDTH	MATERIAL	WIDTH	MATERIAL	WIDTH	MATERIAL*	
②								
< 16'	④		4"	PAINT	4"	PAINT	6"	THERMO (ASPHALT) TYPE I TAPE (CONCRETE)
16' TO < 20'			4"	PAINT	4"	PAINT	6"	THERMO (ASPHALT) TYPE I TAPE (CONCRETE)
>20'	③	CENTERLINE AND EDGELINE STRIPES	4"	⑤ PAINT	6"	PAINT	6"	THERMO (ASPHALT) TYPE I TAPE (CONCRETE)

*OTHER DURABLE NON-WATERBORNE MARKINGS MAY BE USED WITH APPROVAL FROM THE DIVISION OF TRAFFIC OPERATIONS.

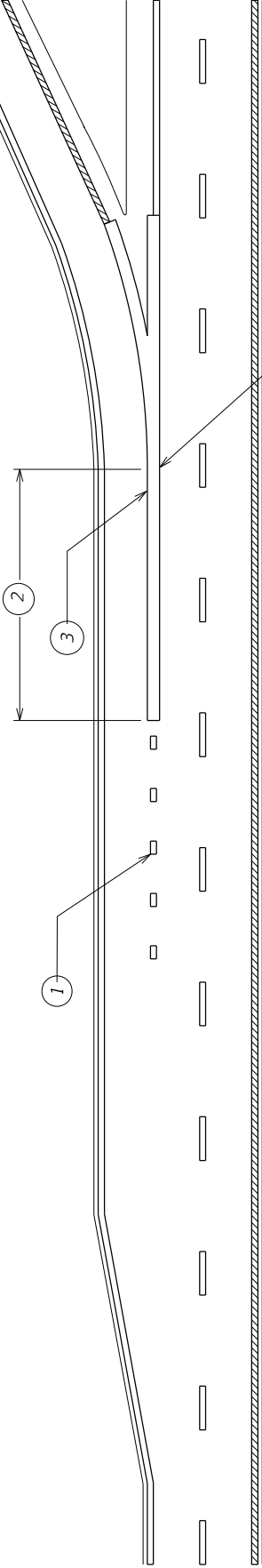
NOTES

1. INSTALL PAVEMENT STRIPING ON TWO LANE, TWO WAY ROADWAYS AS DETAILED IN THE ABOVE TABLE AND IN ACCORDANCE WITH THE PAVEMENT MARKINGS AND DELINEATION CHAPTER OF THE TRAFFIC OPERATIONS GUIDANCE MANUAL. CONTACT THE DIVISION OF TRAFFIC OPERATIONS FOR ADDITIONAL GUIDANCE IF NECESSARY.
2. THE TRAVELED WAY IS THE PORTION OF ROADWAY FOR THE MOVEMENT OF VEHICLES, EXCLUSIVE OF THE SHOULDERS.
3. ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 20 FT OR GREATER, BUT LESS THAN 22 FT., EDGELINE RUMBLE STRIPS ARE AN OPTIONAL APPLICATION. THE DIVISION OF TRAFFIC OPERATIONS IS AVAILABLE TO ASSIST WITH THE DETERMINATION OF WHETHER OR NOT TO INSTALL EDGELINE RUMBLE STRIPS ON PAVEMENT WIDTHS LESS THAN 22 FT.
4. ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 22 FT OR GREATER, INSTALL PAVEMENT STRIPING AS DETAILED IN THE ABOVE TABLE AND IN CONJUNCTION WITH THE RUMBLE STRIPS AS DETAILED ON TPR-120 AND TPR-120N.
5. EDGE LINES MAY BE OMITTED FROM ROADWAYS WITH A TRAVELED WAY WIDTH LESS THAN 16 FEET WITH THE APPROVAL OF THE DIVISION OF TRAFFIC OPERATIONS.
6. EDGE LINES MAY BE OMITTED ON NON-STATE PRIMARY ROUTES WITH A TRAVELED WAY WIDTH GREATER THAN OR EQUAL TO 20 FEET AND AN ADT LESS THAN 1,000.
7. EDGE LINES MAY BE OMITTED, BASED ON ENGINEERING JUDGMENT, IN AREAS WHERE THE PAVEMENT EDGE IS DELINEATED BY PHYSICAL OBJECTS SUCH AS CURBS, PARKING SPACES, OR OTHER MARKINGS. EDGE LINES SHOULD BE INSTALLED ON ROADWAYS WITH CURB AND GUTTER IF THE POSTED SPEED LIMIT IS 45 MPH OR GREATER.

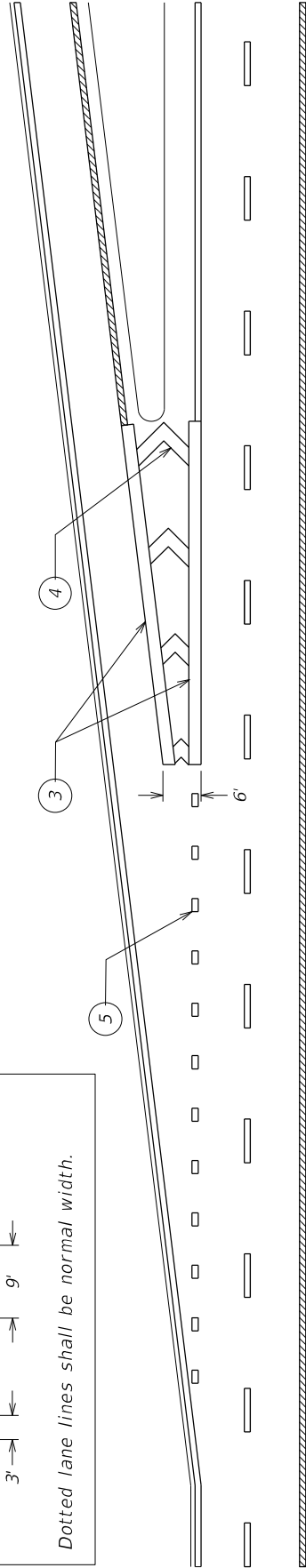
DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS.
TPR-120 & TPR-120N

PARALLEL ACCELERATION LANE



TAPERED ACCELERATION LANE



DOTTED LANE LINE DIMENSIONS:

3' → | ← 9' → | ←

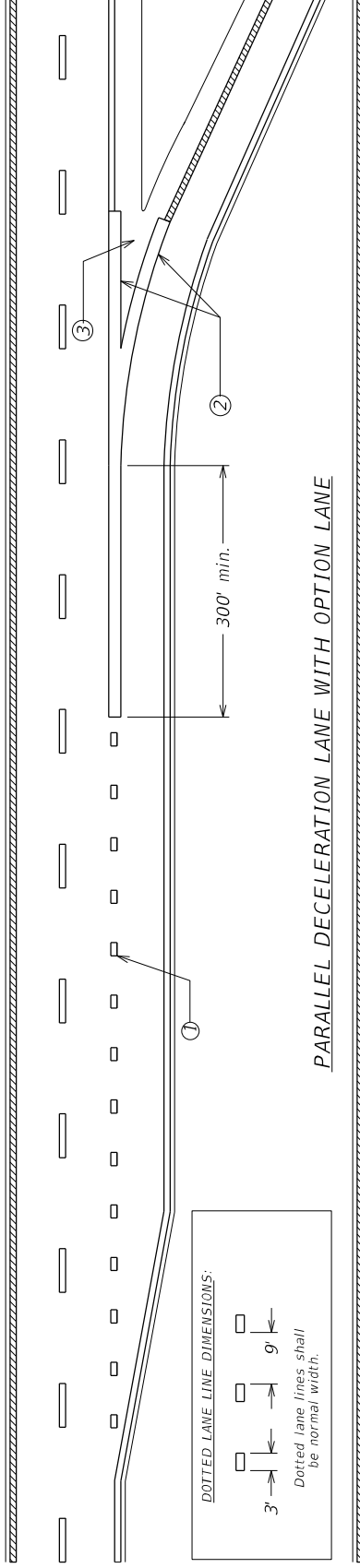
Dotted lane lines shall be normal width.

- 1 IN A PARALLEL ACCELERATION LANE, DOTTED LANE LINES SHALL BE INSTALLED FOR AT LEAST HALF THE LENGTH OF THE FULL-WIDTH ACCELERATION LANE PLUS TAPER MEASURED FROM THE THEORETICAL GORE. DOTTED EXTENSIONS MAY BE INSTALLED THROUGH THE TAPER IF DESIRED.
- 2 WIDE SOLID LINE SHALL EXTEND DOWNSTREAM FROM THE THEORETICAL GORE FOR AT LEAST 1/4 THE LENGTH OF THE FULL-WIDTH ACCELERATION LANE PLUS TAPER.
- 3 12" WIDE SOLID WHITE CHANNELIZATION LINES.
- 4 GORE AREA CHEVRON MARKINGS ARE OPTIONAL ON ENTRANCE RAMPS. SEE [TPM-204](#) FOR DETAILS ON CHEVRON MARKINGS.
- 5 IN A TAPERED ACCELERATION LANE, DOTTED EXTENSIONS MAY BE INSTALLED AS SHOWN.

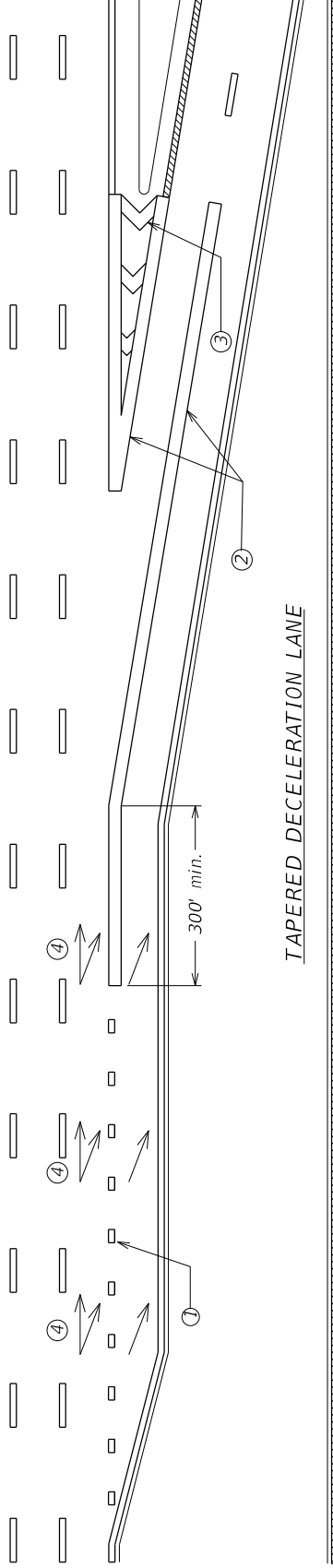
DRAWING NOT TO SCALE.

LEGEND	
MARKINGS	
	WHITE
	YELLOW

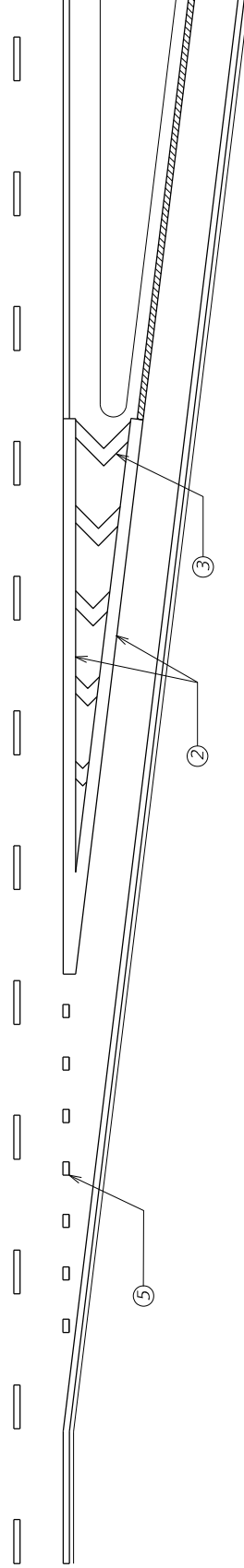
PARALLEL DECELERATION LANE



PARALLEL DECELERATION LANE WITH OPTION LANE



TAPERED DECELERATION LANE



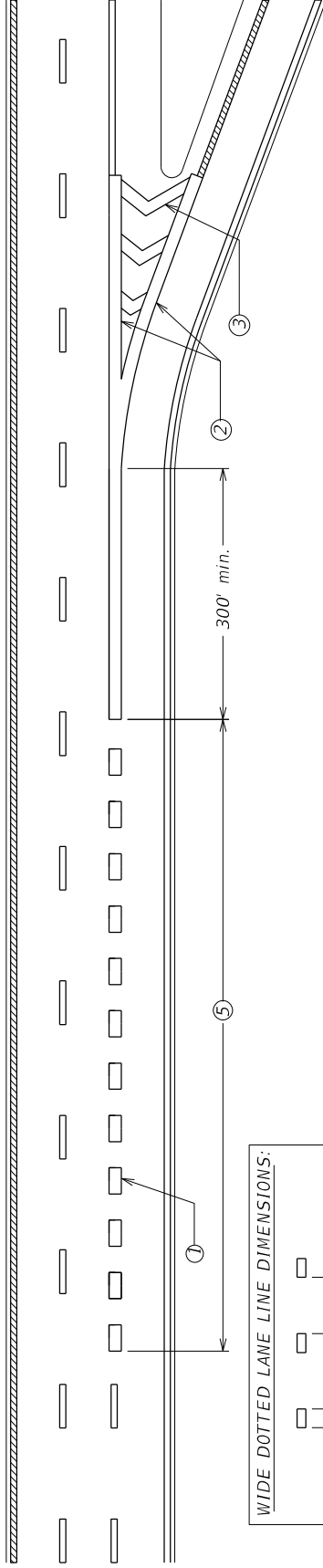
- ① NORMAL WIDTH DOTTED LANE LINES SHALL BE USED ALONG THE TAPER AND FULL-WIDTH SECTION OF A PARALLEL DECELERATION LANE.
- ② 12" WIDE SOLID CHANNELIZATION LINE.
- ③ GORE AREA CHEVRON MARKINGS SHOULD BE USED IN ACCORDANCE WITH [TPM-204](#).
- ④ LANE USE ARROWS MAY BE USED WHEN THERE IS AN OPTION LANE. IF USED, A MINIMUM OF THREE ARROWS PER LANE SHOULD BE PLACED AS SHOWN AND SPACED AT APPROXIMATELY 1/4 MILE.
- ⑤ FOR TAPERED DECELERATION LANES, NORMAL WIDTH DOTTED EXTENSIONS SHALL BE INSTALLED AS SHOWN.

Page 1 of 2

DRAWING NOT TO SCALE

LEGEND	
MARKINGS	
	WHITE
	YELLOW

SINGLE-LANE LANE DROP

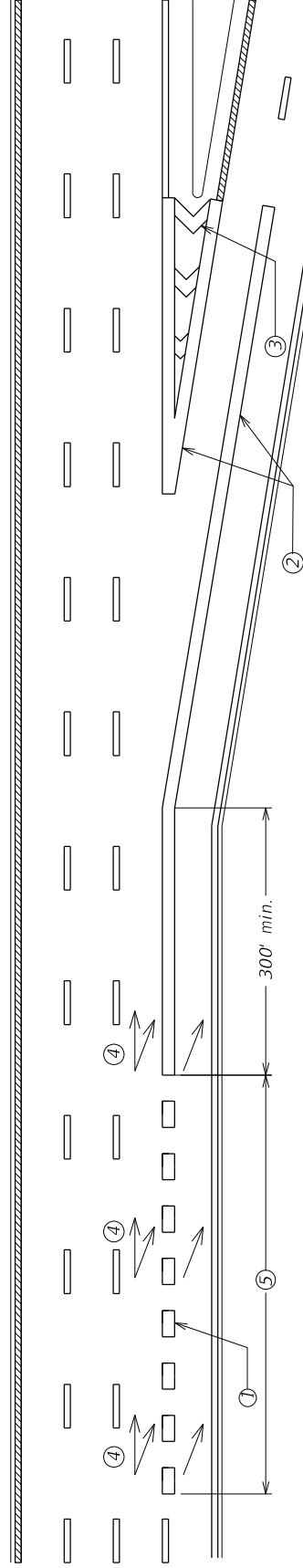


WIDE DOTTED LANE LINE DIMENSIONS:

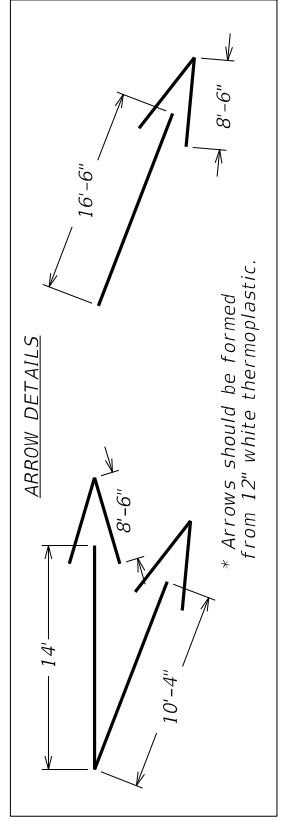
3' → | ← 9' | ←

Dotted lane lines shall be twice the normal width in lane drop scenarios.

LANE DROP WITH AN OPTION LANE



- 1 IN SITUATIONS WHERE A THROUGH LANE BECOMES A MANDATORY EXIT LANE, A WIDE WHITE DOTTED LANE LINE SHALL BE INSTALLED.
- 2 12" WIDE SOLID CHANNELIZATION LINE.
- 3 GORE AREA CHEVRON MARKINGS SHALL BE USED IN LANE DROP SCENARIOS AND WHERE AN INTERSTATE OR PARKWAY SPLITS. SEE [TPM-204](#) FOR DETAILS ON GORE AREA CHEVRON MARKINGS.
- 4 LANE USE ARROWS MAY BE USED WHEN THERE IS AN OPTION LANE. A MINIMUM OF THREE ARROWS PER LANE SHOULD BE PLACED AS SHOWN AND SPACED AT APPROXIMATELY $\frac{1}{4}$ MILE.
- 5 DOTTED LANE LINES SHOULD EXTEND BACK AN APPROXIMATE DISTANCE OF $\frac{1}{2}$ MILE FROM THE THEORETICAL GORE.



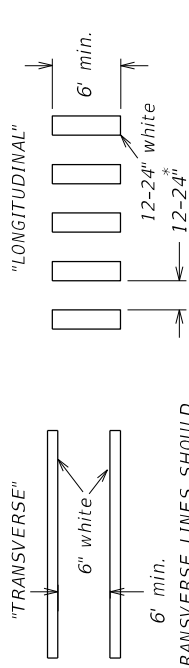
Page 2 of 2
DRAWING NOT TO SCALE

LEGEND	
MARKINGS	WHITE
	YELLOW

STOP LINE NOTES

1. STOP LINES SHALL BE 24" WHITE AND SHALL EXTEND ACROSS ALL APPROACH LANES.
2. STOP LINES SHOULD BE PLACED A MINIMUM OF 4' IN ADVANCE OF THE NEAREST EDGE OF A MARKED CROSSWALK. IN THE ABSENCE OF A MARKED CROSSWALK, STOP LINES SHOULD BE PLACED NO MORE THAN 30' OR NO LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.
3. STOP LINES IN LEFT TURN LANES MAY BE PULLED BACK 50' AS NOT TO INTERFERE WITH THE WHEEL PATH OF TURNING VEHICLES.

CROSSWALK DETAIL

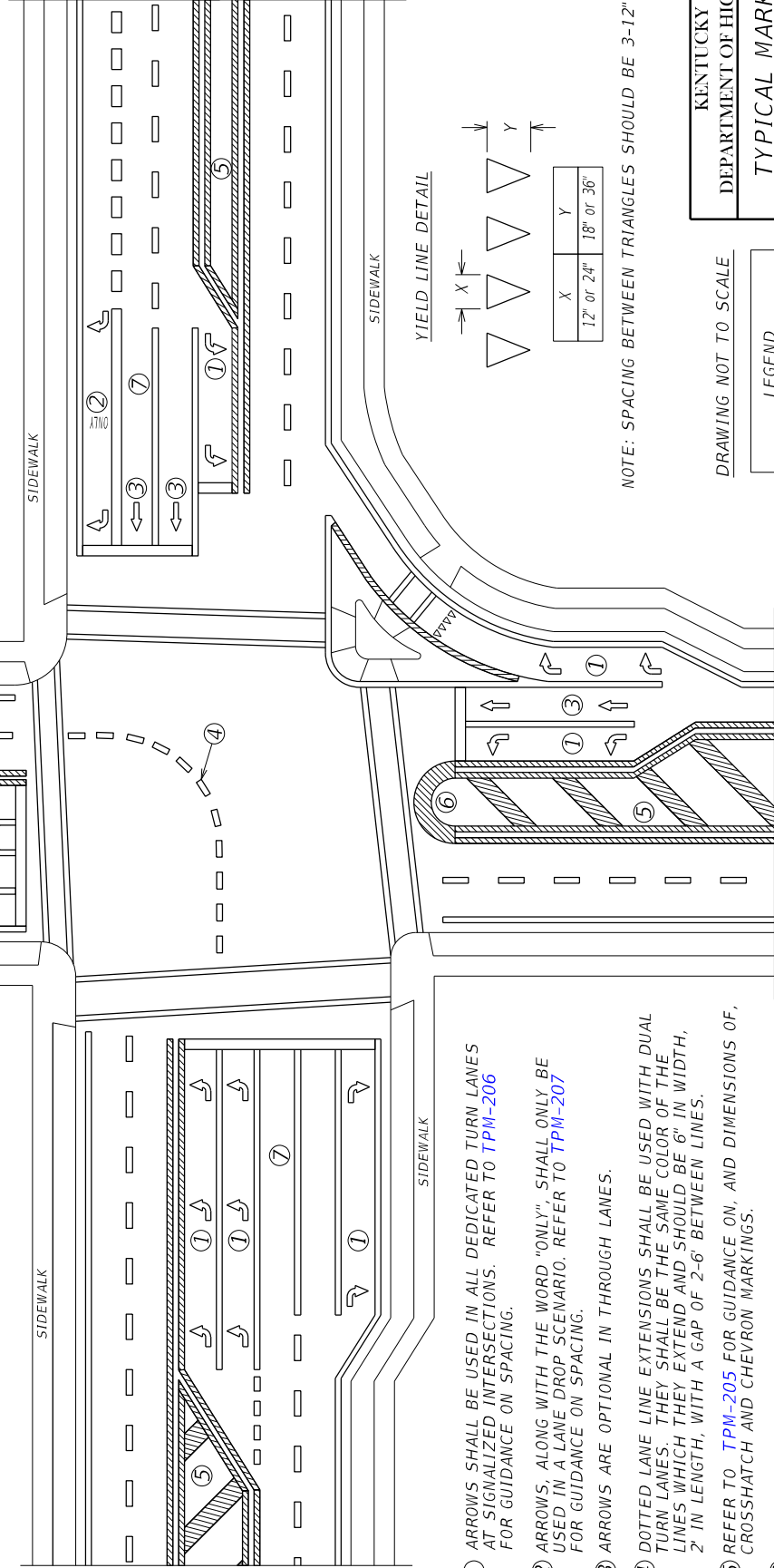


TRANSVERSE LINES SHOULD EXTEND ACROSS THE FULL WIDTH OF THE APPROACH PAVEMENT.

TRANSVERSE LINES MAY BE COMBINED WITH LONGITUDINAL LINES TO FORM A "LADDER-STYLE" CROSSWALK.

CROSSWALK BARS SHALL BE INSTALLED PARALLEL WITH ONCOMING TRAFFIC.

*SPACING OF BARS SHOULD BE MODIFIED SO AS TO AVOID TIRE PATHS OF APPROACHING VEHICLES.



SIDEWALK

SIDEWALK

SIDEWALK

YIELD LINE DETAIL

NOTE: SPACING BETWEEN TRIANGLES SHOULD BE 3-12"

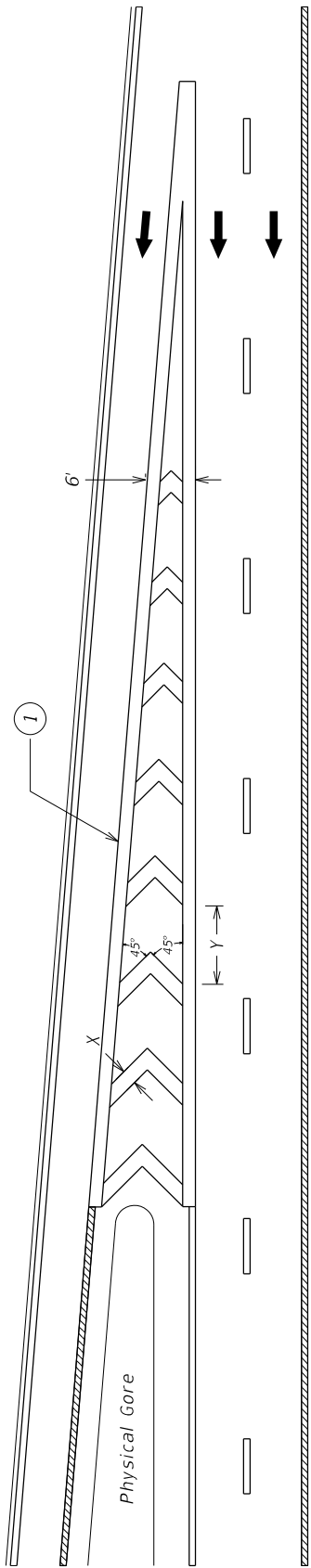
- ① ARROWS SHALL BE USED IN ALL DEDICATED TURN LANES AT SIGNALIZED INTERSECTIONS. REFER TO [TPM-206](#) FOR GUIDANCE ON SPACING.
- ② ARROWS, ALONG WITH THE WORD "ONLY", SHALL ONLY BE USED IN A LANE DROP SCENARIO. REFER TO [TPM-207](#) FOR GUIDANCE ON SPACING.
- ③ ARROWS ARE OPTIONAL IN THROUGH LANES.
- ④ DOTTED LANE LINE EXTENSIONS SHALL BE USED WITH DUAL TURN LANES. THEY SHALL BE THE SAME COLOR OF THE LINES WHICH THEY EXTEND AND SHOULD BE 6" IN WIDTH, 2' IN LENGTH, WITH A GAP OF 2-6" BETWEEN LINES.
- ⑤ REFER TO [TPM-205](#) FOR GUIDANCE ON, AND DIMENSIONS OF, CROSSHATCH AND CHEVRON MARKINGS.
- ⑥ REFER TO [TPM-205](#) FOR GUIDANCE ON MEDIAN NOSES.
- ⑦ SOLID LINE SEPARATING THROUGH LANES SHOULD EXTEND BACK A MINIMUM OF 50' FROM THE STOP BAR.

*NOTE: OTHER THAN LONGITUDINAL STRIPING, ALL MARKINGS SHOWN ON THIS DRAWING SHOULD BE THERMOPLASTIC.

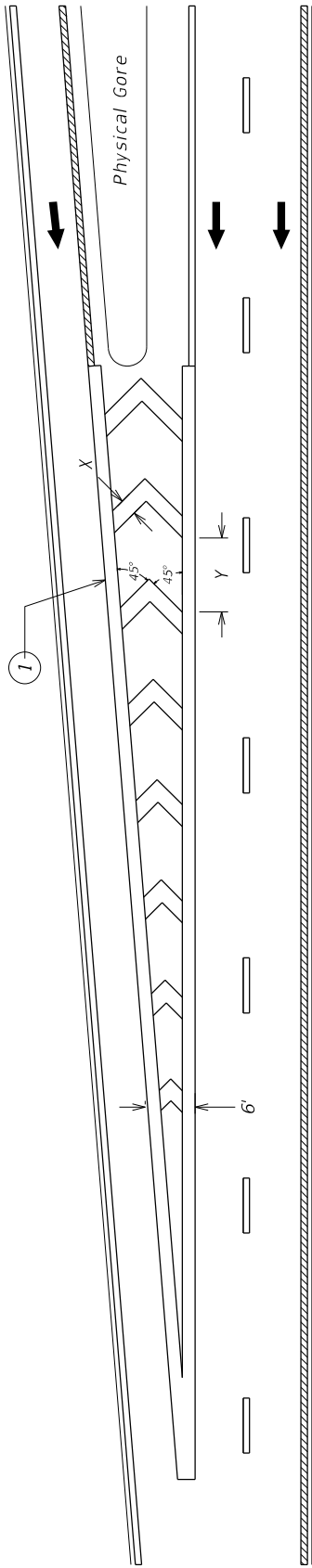
DRAWING NOT TO SCALE

LEGEND	
MARKINGS	
	WHITE
	YELLOW

TYPICAL EXIT RAMP GORE MARKINGS



TYPICAL ENTRANCE RAMP GORE MARKINGS

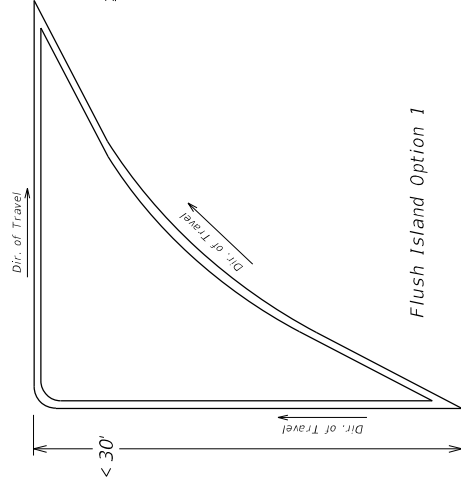


- 1 12" SOLID WHITE LINE TO BE INSTALLED AS SHOWN. THIS LINE SHOULD TERMINATE AT THE PHYSICAL GORE.
- 2 CHEVRON MARKINGS SHOULD BEGIN WHEN THE 12" WHITE CHANNELIZING LINES ARE APPROXIMATELY 6' APART.
- 3 A MINIMUM OF THREE CHEVRON MARKINGS SHOULD BE USED. IF AT LEAST THREE MARKINGS WILL NOT FIT INTO THE GORE AREA, NO CHEVRON MARKINGS SHOULD BE PLACED.
- 4 THE MINIMUM CHEVRON MARKING WIDTH (X) SHOULD BE 2'. THE MINIMUM SPACING BETWEEN CHEVRON MARKINGS (Y) SHOULD BE 20'. THESE DIMENSIONS MAY BE INCREASED. FOR EACH ADDITIONAL 1' OF WIDTH (X), INCREASE THE SPACING (Y) BY 10'.
- 5 GORE AREA CHEVRON MARKINGS SHALL BE THERMOPLASTIC.

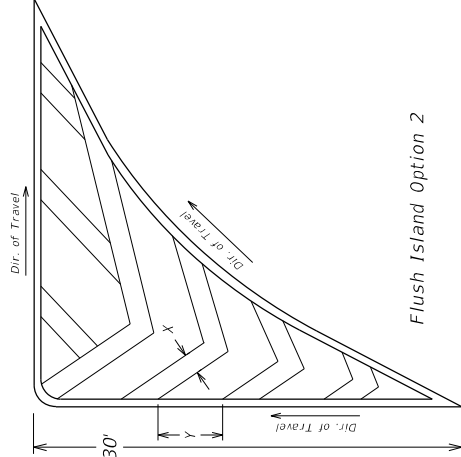
DRAWING NOT TO SCALE

LEGEND	
MARKINGS	
	WHITE
	YELLOW

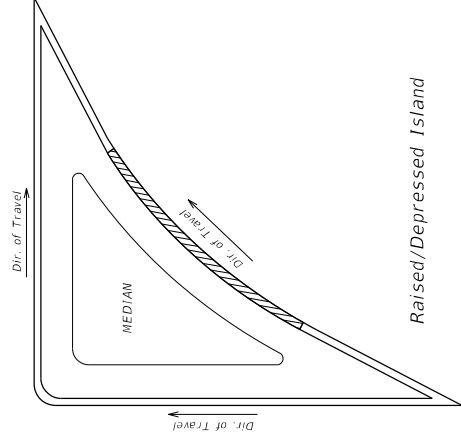
TYPICAL RIGHT-TURN CHANNELIZING ISLAND MARKINGS



Flush Island Option 1



Flush Island Option 2

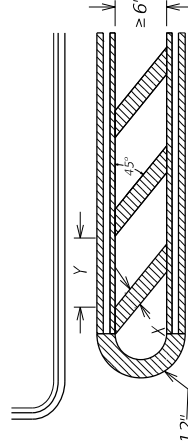
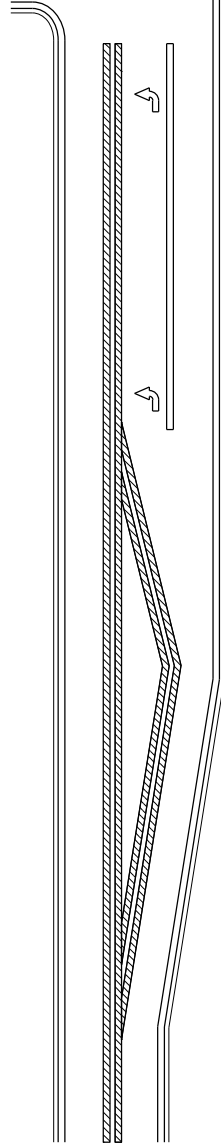


Raised/Depressed Island

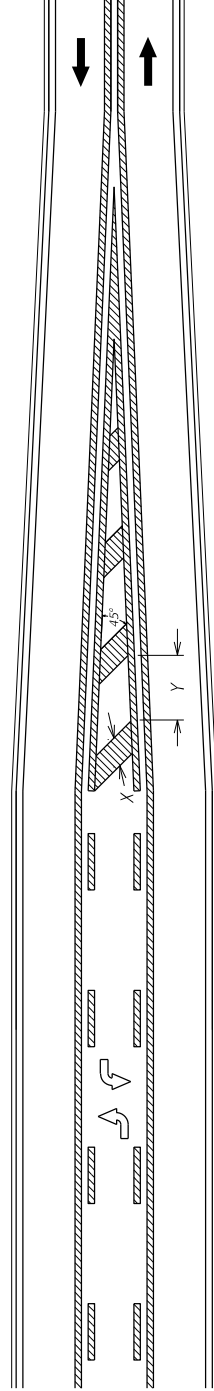
GENERAL NOTES

- THE MINIMUM WIDTH (X) OF CROSSHATCH MARKINGS IS 12" FOR LOW SPEED ROADS (< 45 MPH) AND 24" FOR HIGH SPEED ROADS (≥ 45 MPH).
- THE SPACE BETWEEN ADJACENT CROSSHATCH MARKINGS (Y) SHOULD BE SET AT 10 TIMES THE WIDTH (X) OF THE CROSSHATCH MARKINGS.
- CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN A MEDIAN LESS THAN 6' IN WIDTH.
- CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN AND ISLAND IF ANY SIDE OF AN ISLAND IS LESS THAN 30' IN LENGTH.
- THE OUTLINE OF AN ISLAND SHOULD BE EITHER 8" OR 12".
- MEDIAN NOSES MAY BE EITHER A SINGLE 12" LINE OR A SOLID SEMI-CIRCLE.
- CROSSHATCH AND CHEVRON MARKINGS SHOULD BE THERMOPLASTIC.

TYPICAL LEFT-TURN LANE / FLUSH MEDIAN CROSSHATCH MARKINGS



TYPICAL TWO-WAY LEFT-TURN LANE (TWLTL) TRANSITION MARKINGS



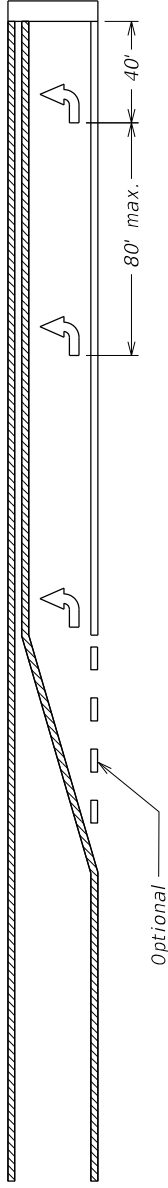
Note: Crosshatch markings shall be placed in the transition area of a TWLTL.

DRAWING NOT TO SCALE

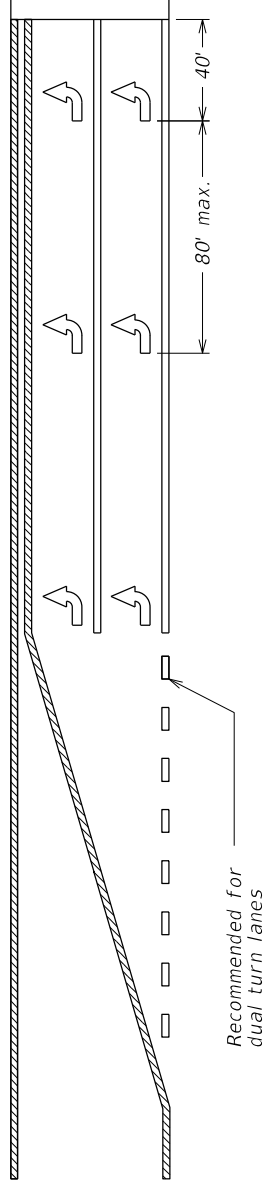
LEGEND	
MARKINGS	
	WHITE
	YELLOW

KENTUCKY DEPARTMENT OF HIGHWAYS	
TYPICAL MARKINGS FOR ISLANDS AND MEDIANS	
STANDARD DRAWING NO. TPM-205	
SUBMITTED B. J. J. J.	02-26-20
DIRECTOR, DIVISION OF TRANSPORTATION	02-26-20
APPROVED B. J. J. J.	02-26-20
SINCE B. J. J. J.	02-26-20

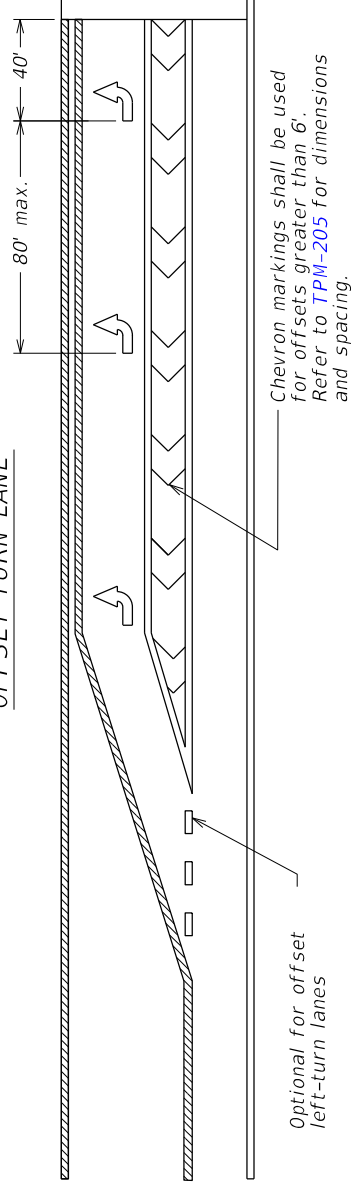
SINGLE TURN LANE



DUAL TURN LANE



OFFSET TURN LANE



STRIPING NOTES:

- ARROWS SHALL BE USED IN ANY EXCLUSIVE TURN LANES.
- IN A SINGLE TURN LANE, DOTTED WHITE LINE EXTENSIONS MAY BE USED THROUGH THE TAPER OF THE TURN LANE.
- IF USED, DOTTED WHITE LINE EXTENSIONS SHALL BE NORMAL WIDTH, AND SHOULD BE 2' LONG, WITH A GAP OF 2-6' BETWEEN EACH LINE.
- IN DUAL TURN LANES, DOTTED WHITE LINE EXTENSIONS SHOULD BE USED THROUGH THE TAPER OF THE TURN LANE. BOTH SOLID LINES FORMING THE TURN LANES SHALL BEGIN AT THE DOWNSTREAM END OF THE TAPER.

ARROW SPACING NOTES:

- IN SINGLE-DIRECTION TURN LANES, ARROWS SHOULD BE SPACED AS FOLLOWS:
- AT LEAST TWO ARROWS SHOULD BE USED IN EACH TURN LANE. HOWEVER, IF A TURN LANE IS LESS THAN 80' IN LENGTH, THE DOWNSTREAM ARROW MAY BE ELIMINATED.
- THE FIRST UPSTREAM ARROW SHALL BE PLACED AT THE BEGINNING OF THE SOLID LINE FOR THE TURN LANE.
- THE LAST DOWNSTREAM ARROW SHOULD BE PLACED 40' FROM THE STOP BAR.
- ANY ADDITIONAL ARROWS SHOULD BE EVENLY SPACED. SPACING SHOULD NOT EXCEED 80'.
- ARROW SPACING AND NUMBER OF ARROWS MAY VARY BASED ON SITE CONDITIONS.

DOTTED EXTENSION DIMENSIONS:



Dotted extensions shall be normal width.

DRAWING NOT TO SCALE

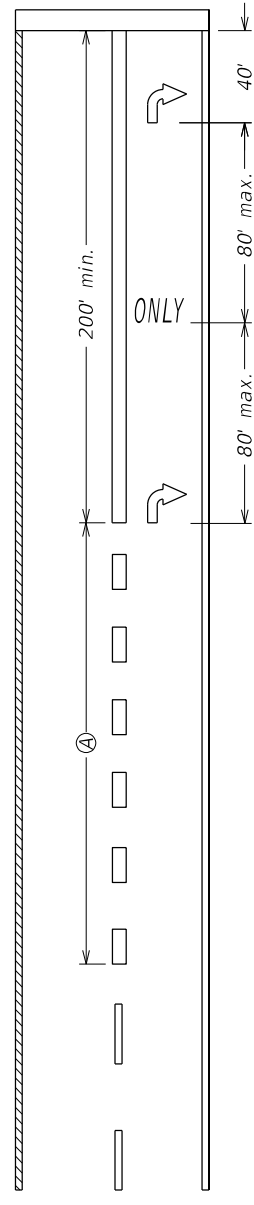
LEGEND

MARKINGS

WHITE

YELLOW

LANE DROP SCENARIO

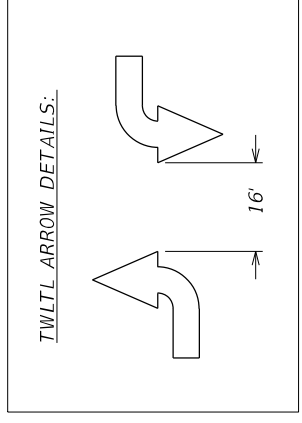
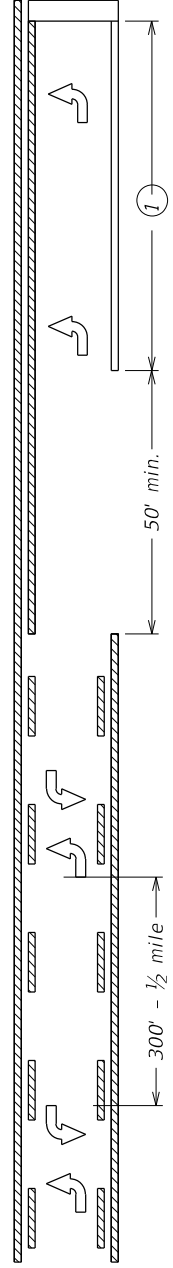


WIDE DOTTED LANE LINE DIMENSIONS:

Dotted lane lines shall be twice the normal width in lane drop scenarios.

Speed Limit	④
25	min. 125'
35	min. 245'
45	min. 540'
55	min. 660'
65	min. 780'

TWO-WAY LEFT-TURN LANE



LANE DROP MARKINGS NOTES:

IN SITUATIONS WHERE A THROUGH LANE BECOMES A MANDATORY TURN LANE, THE FOLLOWING GUIDELINES APPLY:

- A WIDE SOLID LINE SHOULD EXTEND BACK A MINIMUM OF 200' FROM THE STOP BAR.
- A WIDE, DOTTED LINE SHALL EXTEND FROM THE END OF THE SOLID LINE BACK A MINIMUM OF THE DISTANCE SHOWN IN THE CHART (A). THESE LINES SHALL BE 3' LONG, WITH A SPACE OF 9' BETWEEN LINES.
- ALTERNATING ARROWS AND "ONLY" WORD MESSAGES SHALL BE USED, WITH THE FIRST AND LAST MARKING BEING AN ARROW.
- ALTERNATING ARROWS AND "ONLY" WORD MESSAGES SHOULD BE SPACED EVENLY.
- FOLLOWING GUIDELINES FOR ARROW SPACING. THESE SYMBOLS SHALL EXTEND BACK AT LEAST TO THE END OF THE SOLID STRIPE, BUT MAY BE EXTENDED BACK FARTHER IF ADDITIONAL GUIDANCE IS NEEDED.

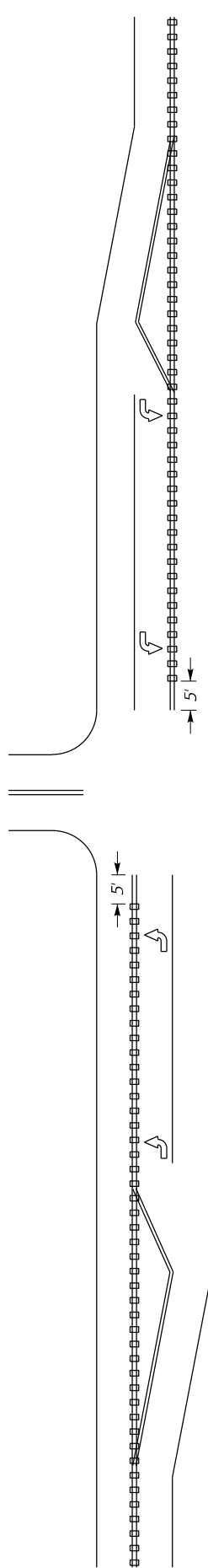
TWO-WAY LEFT-TURN LANE NOTES:

IN A TWO-WAY LEFT-TURN LANE, THE FOLLOWING GUIDELINES APPLY:

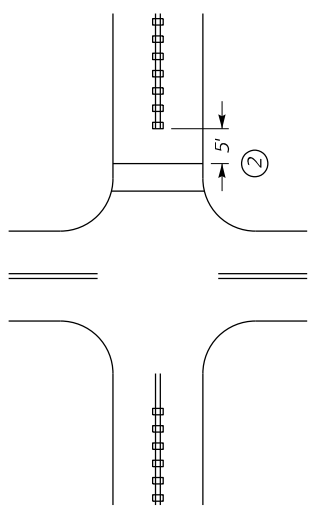
1. CONTACT TRAFFIC ENGINEER FOR RECOMMENDED DISTANCE FOR LEFT TURN STORAGE AT INTERSECTIONS.
- ONE SET OF ARROWS SHOULD BE PLACED AT OR NEAR THE BEGINNING OF THE TWO-WAY LEFT-TURN LANE.
- ADDITIONAL SETS OF ARROWS SHOULD BE PLACED THROUGHOUT THE TWO-WAY LEFT-TURN LANE IF LEFT TURN MOVEMENTS ARE EXPECTED. THEY SHOULD BE SPACED NO LESS THAN 300' AND NO MORE THAN 1/2 MILE.
- THE SPACING BETWEEN EACH ARROW IN A SINGLE ARROW SET SHOULD BE 16 FEET.
- TWO-WAY LEFT-TURN LANES SHALL TERMINATE IN A DEDICATED LEFT-TURN LANE AT A SIGNALIZED INTERSECTION. THEY MAY TERMINATE IN A DEDICATED LEFT-TURN LANE AT OTHER LOCATIONS IF DEEMED NECESSARY.
- REFER TO THE TRAFFIC OPERATIONS GUIDANCE MANUAL SECTION T0-504 FOR MORE GUIDANCE ON TWO-WAY LEFT-TURN LANES.

DRAWING NOT TO SCALE

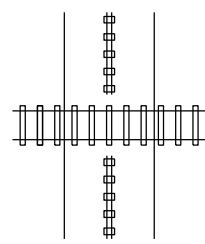
LEGEND	
MARKINGS	
WHITE	
YELLOW	



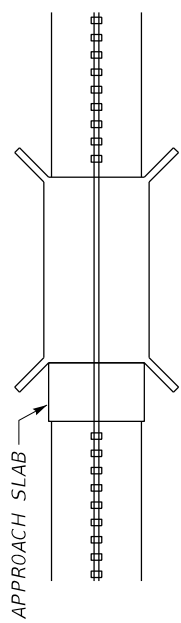
INTERSECTIONS WITH LEFT-TURN LANES ①



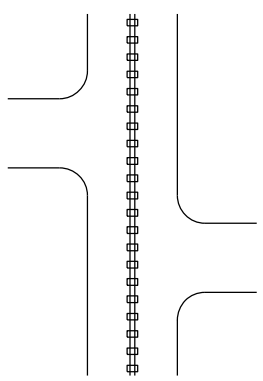
INTERSECTIONS WITHOUT LEFT-TURN LANES ②



HIGHWAY-RAIL GRADE CROSSINGS ③



BRIDGE DECK/APPROACH SLAB ④



DRIVEWAYS/MINOR COMMERCIAL ENTRANCES ⑤

~ NOTES ~

- ① CENTERLINE RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, LEFT-TURN LANES. OMIT THE CENTERLINE RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE THE CENTERLINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).
- ② CENTERLINE RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT THE CENTERLINE RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF MARKED CROSSWALKS.
- ③ CENTERLINE RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.
- ④ CENTERLINE RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.
- ⑤ CENTERLINE RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.
6. CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHERE LANE WIDTHS ARE LESS THAN 11 FT.

DRAWING NOT TO SCALE

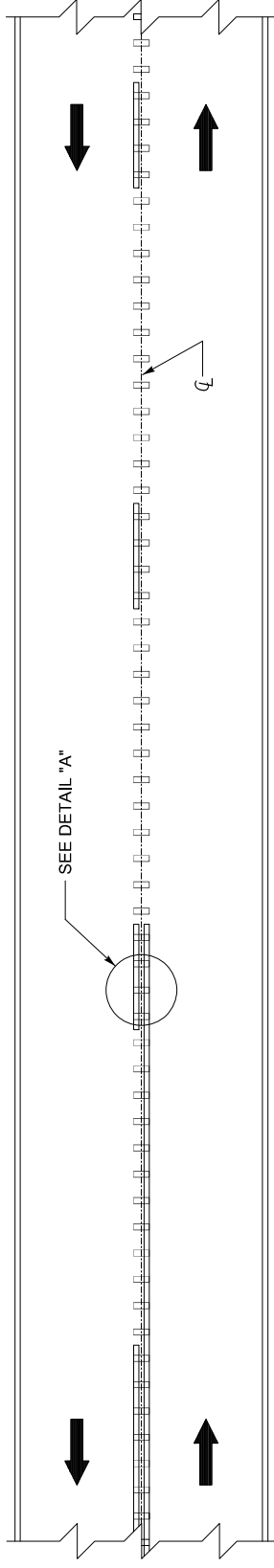
USE WITH CUR. STD. DWGS.
 TPR-105, TPR-110, TPR-120,
 AND TPR-125

KENTUCKY
DEPARTMENT OF HIGHWAYS
CENTERLINE RUMBLE STRIPS PLACEMENT DETAILS
STANDARD DRAWING NO. TPR-100
SUBMITTED BY <i>R. G. W.</i> 02-26-20
APPROVED BY <i>[Signature]</i> 02-26-20
DIRECTOR OF TRANSPORTATION
SUPV. OF ENGINEERS

BID ITEM AND UNIT TO BID
 CENTERLINE RUMBLE STRIPS

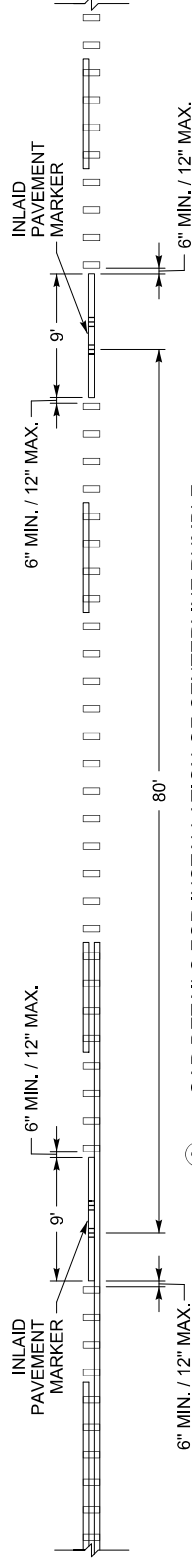
LF

PLAN VIEW



SECTION A-A

DETAIL "A"



③ GAP DETAILS FOR INSTALLATION OF CENTERLINE RUMBLE STRIPS IN CONJUNCTION WITH INLAID PAVEMENT MARKERS

~ NOTES ~

1. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE.
2. CENTERLINE RUMBLE STRIPS SHALL BE INSTALLED IN LINE WITH THE CENTER OF THE ROADWAY AS MUCH AS POSSIBLE.
- ③ FOR ROADWAYS WHERE BOTH INLAID PAVEMENT MARKERS AND CENTERLINE RUMBLE STRIPS ARE TO BE INSTALLED, DISCONTINUE THE CENTERLINE RUMBLE STRIPS 6" MIN. / 12" MAX. BEFORE AND AFTER THE GROOVE FOR EACH INLAID PAVEMENT MARKER. INSTALL AS MANY RUMBLE STRIPS AS POSSIBLE BETWEEN ADJACENT PAVEMENT MARKERS WHILE MAINTAINING THE 24" CYCLE.
4. DO NOT INSTALL CENTERLINE RUMBLE STRIPS IN AREAS INDICATED ON TPR-100.
5. CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHERE LANE WIDTHS ARE LESS THAN 11 FT.

BID ITEM AND UNIT TO BID
CENTERLINE RUMBLE STRIPS

LF

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

CENTERLINE RUMBLE STRIPS 4 INCH SPACING

STANDARD DRAWING NUMBER
TPR-105-01

PERMANENT

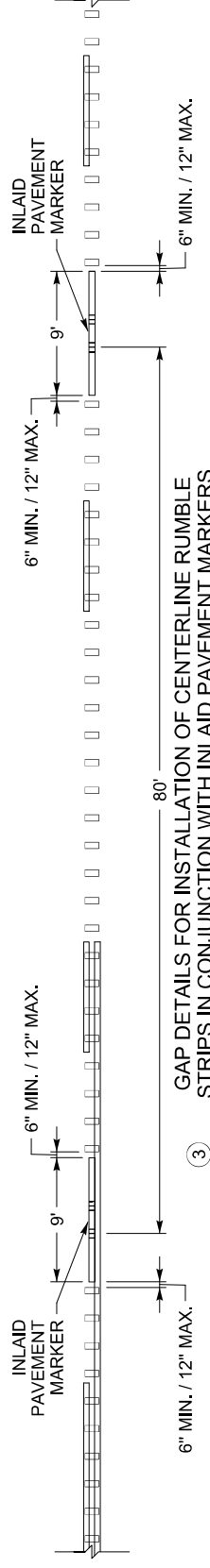
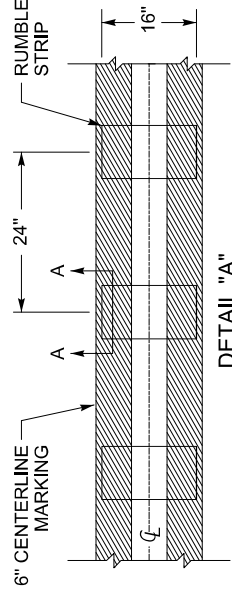
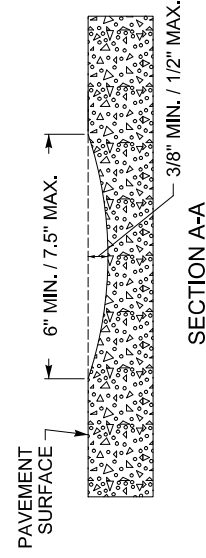
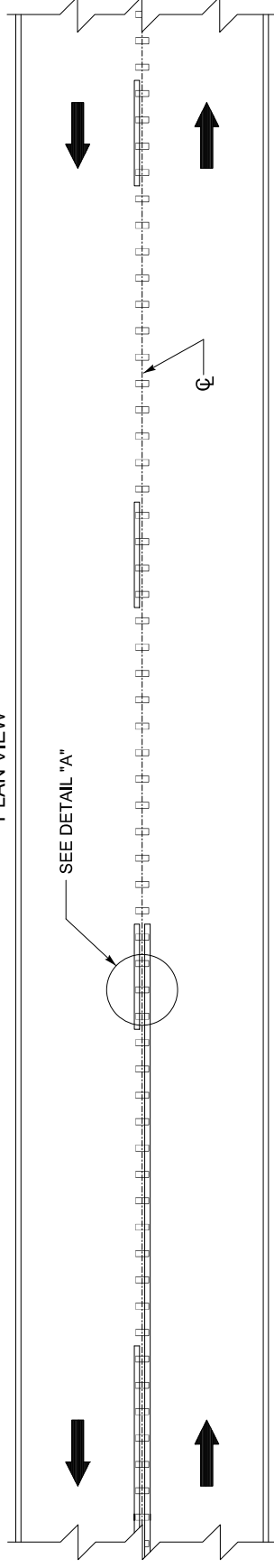
REVISION DATE: 08/11/2025
REVISION NUMBER: 0

SUBMITTED: 08-11-2025
APPROVED: 08-11-2025
DATE: 08-11-2025
DATE: 08-11-2025



OpenRoads Designer v23.09.01.11

PLAN VIEW



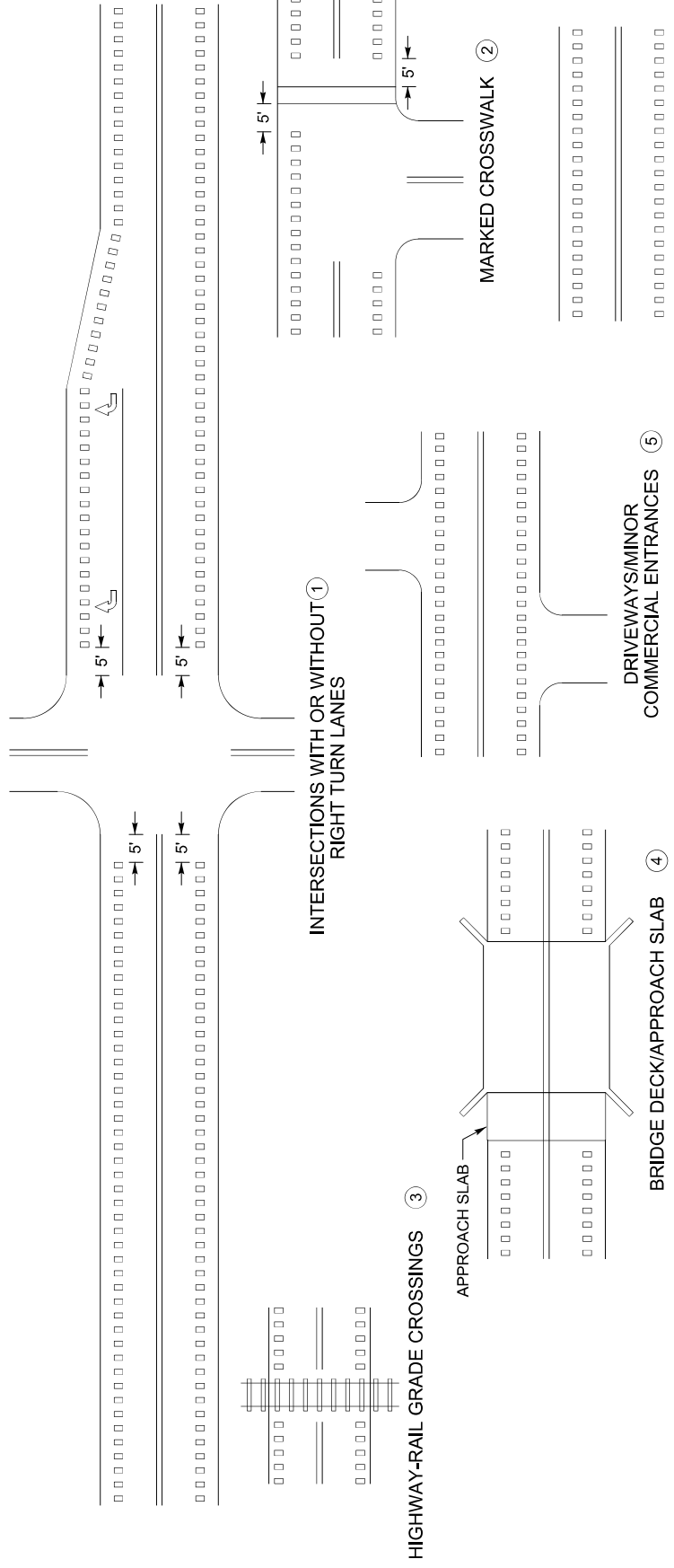
~ NOTES ~

1. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE.
2. CENTERLINE RUMBLE STRIPS SHALL BE INSTALLED IN LINE WITH THE CENTER OF THE ROADWAY AS MUCH AS POSSIBLE.
3. FOR ROADWAYS WHERE BOTH INLAID PAVEMENT MARKERS AND CENTERLINE RUMBLE STRIPS ARE TO BE INSTALLED, DISCONTINUE THE CENTERLINE RUMBLE STRIPS 6" MIN. / 12" MAX. BEFORE AND AFTER THE GROOVE FOR EACH INLAID PAVEMENT MARKER. INSTALL AS MANY RUMBLE STRIPS AS POSSIBLE BETWEEN ADJACENT PAVEMENT MARKERS WHILE MAINTAINING THE 24" CYCLE.
4. DO NOT INSTALL CENTERLINE RUMBLE STRIPS IN AREAS INDICATED ON TPR-100.
5. CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHERE LANE WIDTHS ARE LESS THAN 11 FT.

BID ITEM AND UNIT TO BID
CENTERLINE RUMBLE STRIPS

LF

DRAWING NOT TO SCALE
USE WITH CUR. STD. DWGS.
TPR-100, TPR-120, AND
TPR-125



NOTES

- ① EDGELINE RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT EDGELINE RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE THE SIDE STREET RADIUS INTERSECTS THE MAINLINE).
- ② EDGELINE RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT EDGELINE RUMBLE STRIPS APPROXIMATELY 5 FT IN ADVANCE OF MARKED CROSSWALKS.
- ③ EDGELINE RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.
- ④ EDGELINE RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.
- ⑤ EDGELINE RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.
- ⑥ EDGELINE RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.
- ⑦ EDGELINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEMS AND UNIT TO BID
EDGE LINE RUMBLE STRIPS

37

DRAWING NOT TO SCALE
USE WITH CUR. STD. DWGS.
TPR-120, TPR-125, AND
TPR-130

PAVEMENT WIDTH (W) ③	TYPES OF RUMBLE STRIPS TO INSTALL	LANE WIDTH (Y) ⑤	SHOULDER WIDTH (Z) ⑥	LENGTH OF EDGELINE RUMBLE (X) ⑦
20'	④ OPTIONAL: EDGELINE RUMBLE STRIPS	9'	1'	8"
21'		9.5'	1'	8"
22'		10'	1'	8"
23'		10'	1.5'	8"
24'		10.5'	1.5'	8"
25'	STANDARD: INSTALL ONLY EDGELINE RUMBLE STRIPS	11'	1.5'	8"
26'		11'	2'	8"
27'		11'	2.5'	8"
28'		11'	3'	8"
29'		11'	3.5'	8"
30'	STANDARD: INSTALL BOTH EDGELINE AND CENTERLINE RUMBLE STRIPS	11'	4'	8"
31'		11'	4.5'	8"
32'		11'	5'	8"
33'		11'	5.5'	8"
34'		11'	6'	8"
35'		11.5'	6'	8"
36'		12'	6'	8"
37'		12'	6.5'	12"
38'		12'	7'	12"
39'		12'	7.5'	12"
>=40'		12'	>=8'	16"

~ NOTES ~

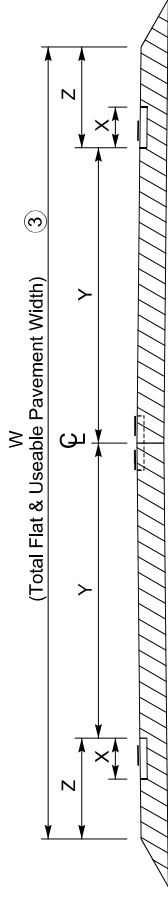
APPLICATION OF THE TABLE ABOVE: THE TOTAL PAVEMENT WIDTH (W) IS THE STARTING POINT IN USING THE TABLE. THE TOTAL PAVEMENT WIDTH (W) IS THE TOTAL PAVEMENT THAT IS FLAT AND USEABLE FOR DRIVING. WHEN MEASURING THE TOTAL PAVEMENT WIDTH (W) DO NOT INCLUDE THE WIDTH OF ANY PAVEMENT THAT IS NOT FLAT AND USEABLE FOR DRIVING, SUCH AS PAVEMENT WEDGES. ONCE THE TOTAL PAVEMENT WIDTH (W) IS DETERMINED, USE THIS VALUE AND THE TABLE ABOVE TO DETERMINE THE TYPE(S) OF RUMBLE STRIPS TO INSTALL AND THE RECOMMENDED LANE WIDTH (Y) AND SHOULDER WIDTH (Z).

BID ITEM AND UNIT TO BID
EDGELINE RUMBLE STRIPS
CENTERLINE RUMBLE STRIPS

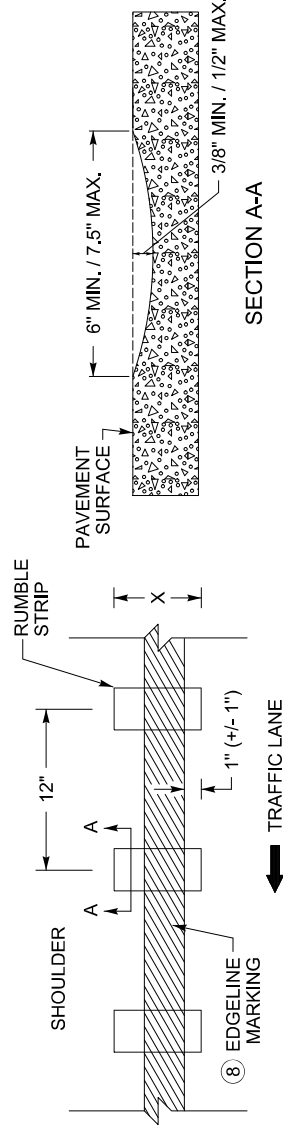
LF
LF

DRAWING NOT TO SCALE
USE WITH CUR. STD. DWGS.
TPR-100, TPR-105, TPR-110,
TPR-115 AND TPR-120N

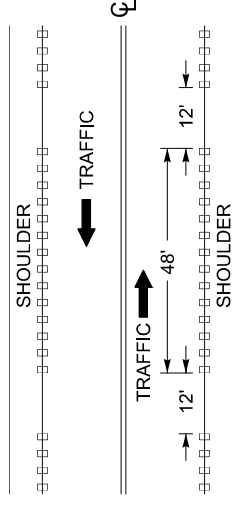
SEE CURRENT STANDARD DRAWING NUMBER TPR-120N FOR ALL NOTES.



PAVEMENT CROSS-SECTION



SECTION A-A



BICYCLE GAPS ⑨

PERMANENT

REVISION DATE: 08/11/2025
REVISION NUMBER: 0

SUBMITTED DATE: 08-11-2025
APPROVED DATE: 08-11-2025

EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS

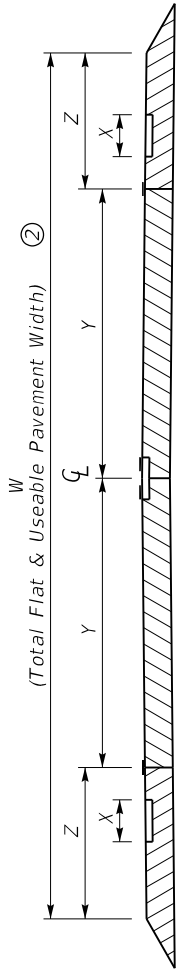
STANDARD DRAWING NUMBER
TPR-120-01

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

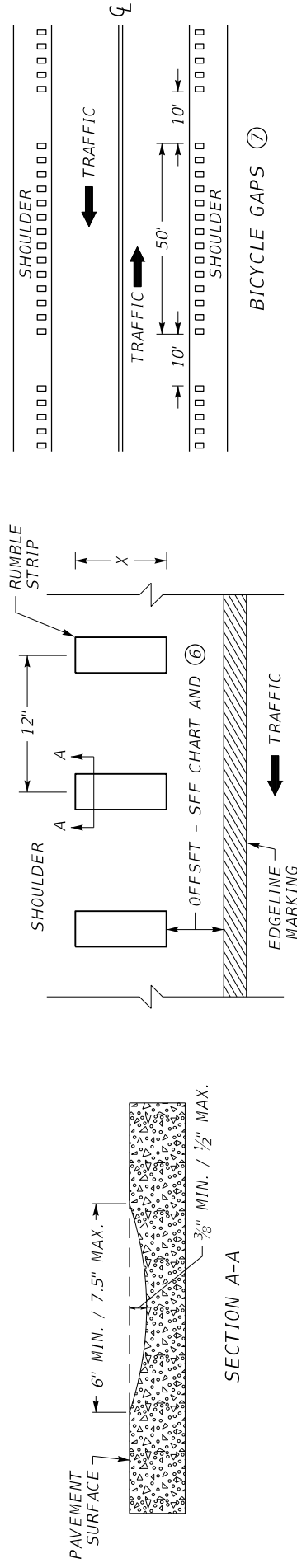
OpenRoads Designer v23.09.01.11

~ NOTES ~ 1. EDGELINE RUMBLE STRIPS, AND CENTERLINE RUMBLE STRIPS WHEN APPLICABLE, SHOULD BE INSTALLED TO CREATE THE LANE WIDTHS (Y) AND SHOULDER WIDTHS (Z) SHOWN IN THE TABLE ON TPR-120 UNLESS THERE IS A REASON THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED ON TPR-120 AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE AND SHOULDER WIDTHS SHOULD BE USED INSTEAD OF THE LANE AND SHOULDER WIDTHS PROPOSED ON TPR-120. 2. THE DIMENSIONS SHOWN IN THE TABLE ON TPR-120 ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED ON TPR-120, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION. NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED IF THE DECISION IS TO INSTALL A LANE WIDTH (Y) THAT IS LESS THAN 11 FT. 3. PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF PAVEMENT THAT IS FLAT AND USEABLE FOR DRIVING. WHEN MEASURING THE PAVEMENT WIDTH (W), DO NOT INCLUDE THE WIDTH OF ANY PAVEMENT THAT IS NOT FLAT AND USEABLE, SUCH AS PAVEMENT WEDGES. 4. ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) OF 20 FT OR GREATER, BUT LESS THAN 22 FT, EDGELINE RUMBLE STRIPS ARE AN OPTIONAL APPLICATION. CONTACT THE TRAFFIC SAFETY BRANCH IN THE DIVISION OF TRAFFIC OPERATIONS FOR GUIDANCE WHEN CONSIDERING THE INSTALLATION OF EDGELINE RUMBLE STRIPS ALONG ROADWAYS WITH A TOTAL PAVEMENT WIDTH (W) THAT IS 20 FT OR GREATER, BUT LESS THAN 22 FT. 5. THE LANE WIDTH (Y) IS TO BE MEASURED FROM THE CENTER OF THE ROAD TO THE LANE SIDE EDGE OF THE EDGELINE RUMBLE STRIP. 6. THE PAVED SHOULDER WIDTH (Z) IS TO BE MEASURED FROM THE LANE SIDE EDGE OF THE EDGELINE RUMBLE STRIP TO THE OUTSIDE EDGE OF FLAT & USEABLE PAVEMENT. 7. THE RUMBLE LENGTH (X) MAY BE MODIFIED AS DIRECTED BY THE ENGINEER. 8. PLACE THE EDGELINE MARKING SO THAT THE LANE SIDE EDGE OF THE MARKING GENERALLY FOLLOWS THE LANE SIDE EDGE OF THE RUMBLE STRIP. THE TARGET IS FOR THE LANE SIDE EDGE OF THE MARKING TO BE 1" BEYOND THE LANE SIDE EDGE OF THE RUMBLE STRIP WITH AN ACCEPTABLE VARIANCE OF +/- 1". ON NON-STATE PRIMARY ROUTES WITH LESS THAN 1000 ADT, THE EDGELINE MARKING MAY BE OMITTED, LEAVING THE RUMBLE STRIP AS THE ONLY COMPONENT INSTALLED. 9. ALL EDGELINE RUMBLE STRIPS ALONG SHOULDERS THAT ARE 3 FT OR WIDER SHALL INCLUDE BICYCLE GAPS AS DETAILED. 10. RUMBLE STRIPS SHOULD TYPICALLY BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS. BID ITEM AND UNIT TO BID EDGELINE RUMBLE STRIPS CENTERLINE RUMBLE STRIPS LF LF		EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS NOTES	STANDARD DRAWING NUMBER TPR-120N
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS PERMANENT 08-11-2025 DATE			

PAVEMENT WIDTH (W) ②	TYPES OF RUMBLE STRIPS TO INSTALL	LANE WIDTH (Y) ③	SHOULDER WIDTH (Z) ④	SHOULDER RUMBLE LENGTH (X) ⑤	SHOULDER RUMBLE OFFSET ⑥
<34'	REFER TO TPR-120				
34'	INSTALL BOTH SHOULDER AND CENTERLINE RUMBLE STRIPS	12"	5'	8"	6"
35'		12"	5.5'	8"	6"
36'		12"	6'	8"	6"
37'		12"	6.5'	12"	12"
38'		12"	7'	12"	12"
39'		12"	7.5'	12"	12"
>=40'		12"	>=8'	16"	12"



PAVEMENT CROSS-SECTION



~ NOTES ~

APPLICATION OF THE TABLE ABOVE: THE TOTAL PAVEMENT WIDTH (W) IS THE STARTING POINT IN USING THE TABLE. THE TOTAL PAVEMENT WIDTH IS TO BE USED TO DETERMINE THE TYPE(S) OF RUMBLE STRIPS TO INSTALL AND THE RECOMMENDED LANE WIDTH (Y) AND SHOULDER WIDTH (Z).

1. SHOULDER AND CENTERLINE RUMBLE STRIPS SHOULD BE INSTALLED TO CREATE THE LANE AND SHOULDER WIDTHS SHOWN ABOVE, UNLESS THERE IS A REASON THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED IN THIS DRAWING AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE AND SHOULDER WIDTHS SHOULD BE USED INSTEAD OF THE LANE AND SHOULDER WIDTHS PROPOSED IN THIS DRAWING.

② PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF PAVEMENT THAT IS FLAT AND USEABLE FOR DRIVING. WHEN MEASURING THE PAVEMENT WIDTH (W) DO NOT INCLUDE THE WIDTH OF ANY PAVEMENT THAT IS NOT FLAT AND USEABLE, SUCH AS PAVEMENT WEDGES.

③ LANE WIDTH (Y) TO BE MEASURED FROM CENTER OF ROAD TO CENTER OF EDGELINE STRIPE.

④ PAVED SHOULDER WIDTH (Z) TO BE MEASURED FROM CENTER OF EDGELINE STRIPE TO OUTSIDE EDGE OF FLAT & USEABLE PAVEMENT.

5. DIMENSIONS SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.

NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED IF THE DECISION IS TO INSTALL A LANE WIDTH (Y) THAT IS LESS THAN 11 FT.

⑥ RUMBLE LENGTH (X) AND/OR OFFSET DISTANCE MAY BE MODIFIED AS THE ENGINEER DIRECTS.

⑦ ALL SHOULDER RUMBLE STRIPS SHOULD INCLUDE BICYCLE GAPS AS DETAILED.

8. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

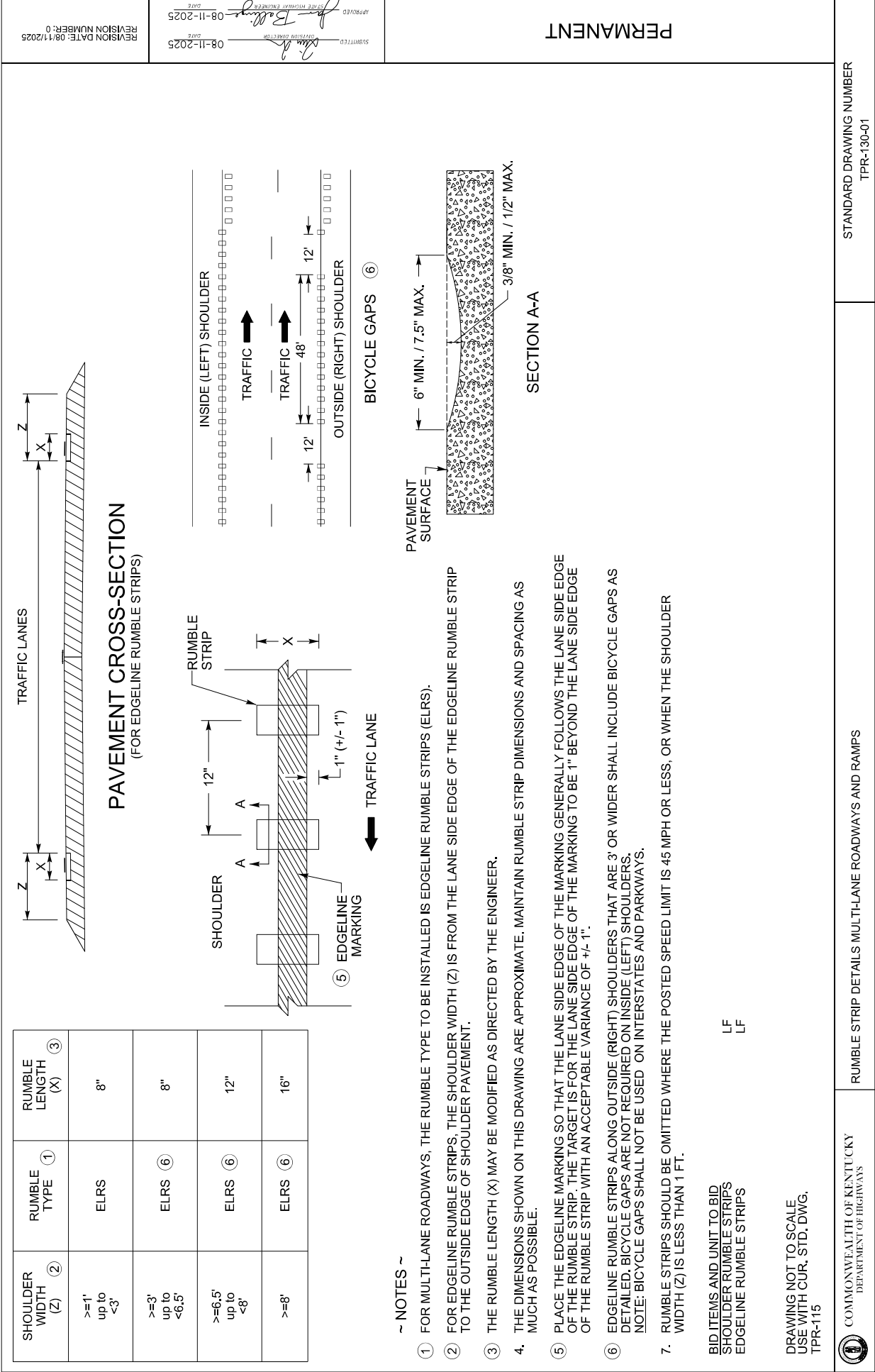
BID ITEM AND UNIT TO BID
SHOULDER RUMBLE STRIPS

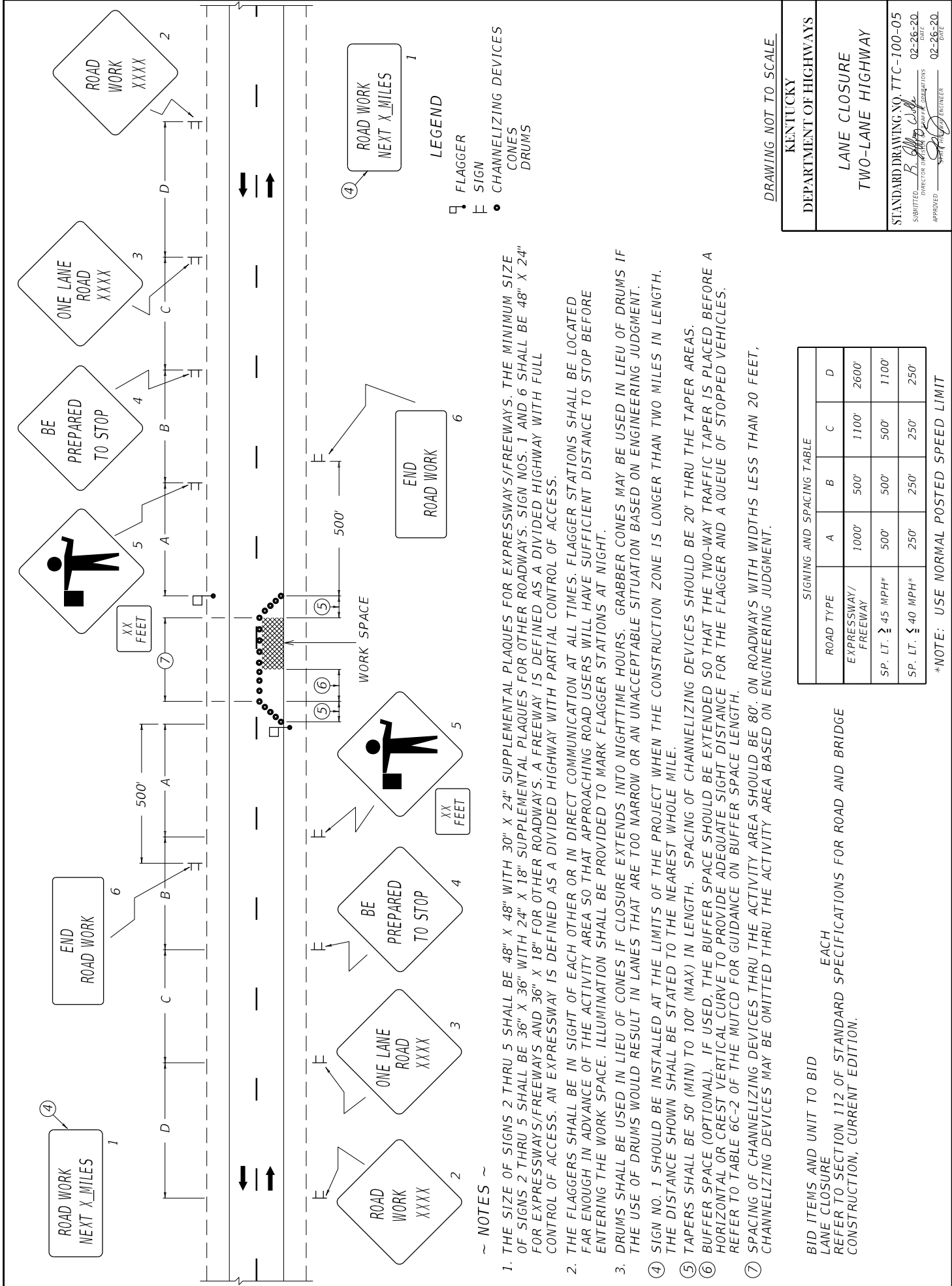
LF

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS.
TPR-100, TPR-105, TPR-110,
AND TPR-115

KENTUCKY
DEPARTMENT OF HIGHWAYS
SHOULDER RUMBLE STRIP DETAILS TWO LANE ROADWAYS
STANDARD DRAWING NO. TPR-125 SUBMITTED BY R. M. W. J. A. 02-26-20 CHECKED BY R. M. W. J. A. 02-26-20 APPROVED R. M. W. J. A. 02-26-20 DATE





~ NOTES ~

1. THE SIZE OF SIGNS 2 THRU 5 SHALL BE 48" X 48" WITH 30" X 24" SUPPLEMENTAL PLAQUES FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 2 THRU 5 SHALL BE 36" X 36" WITH 24" X 18" SUPPLEMENTAL PLAQUES FOR OTHER ROADWAYS. SIGN NOS. 1 AND 6 SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS; AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
2. THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. FLAGGER STATIONS SHALL BE LOCATED FAR ENOUGH IN ADVANCE OF THE ACTIVITY AREA SO THAT APPROACHING ROAD USERS WILL HAVE SUFFICIENT DISTANCE TO STOP BEFORE ENTERING THE WORK SPACE. ILLUMINATION SHALL BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT.
3. DRUMS SHALL BE USED IN LIEU OF CONES IF CLOSURE EXTENDS INTO NIGHTTIME HOURS. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
4. SIGN NO. 1 SHOULD BE INSTALLED AT THE LIMITS OF THE PROJECT WHEN THE CONSTRUCTION ZONE IS LONGER THAN TWO MILES IN LENGTH. THE DISTANCE SHOWN SHALL BE STATED TO THE NEAREST WHOLE MILE.
5. TAPERS SHALL BE 50' (MIN) TO 100' (MAX) IN LENGTH. SPACING OF CHANNELIZING DEVICES SHOULD BE 20' THRU THE TAPER AREAS.
6. BUFFER SPACE (OPTIONAL). IF USED, THE BUFFER SPACE SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL OR CREST VERTICAL CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES. REFER TO TABLE 6C-2 OF THE MUTCD FOR GUIDANCE ON BUFFER SPACE LENGTH.
7. SPACING OF CHANNELIZING DEVICES THRU THE ACTIVITY AREA SHOULD BE 80' ON ROADWAYS WITH WIDTHS LESS THAN 20 FEET, CHANNELIZING DEVICES MAY BE OMITTED THRU THE ACTIVITY AREA BASED ON ENGINEERING JUDGMENT.

BID ITEMS AND UNIT TO BID

EACH

LANE CLOSURE
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION, CURRENT EDITION.

SIGNING AND SPACING TABLE				
ROAD TYPE	A	B	C	D
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	1100'
SP. LT. $\leq$ 40 MPH*	250'	250'	250'	250'

*NOTE: USE NORMAL POSTED SPEED LIMIT

KENTUCKY

DEPARTMENT OF HIGHWAYS

LANE CLOSURE
TWO-LANE HIGHWAY

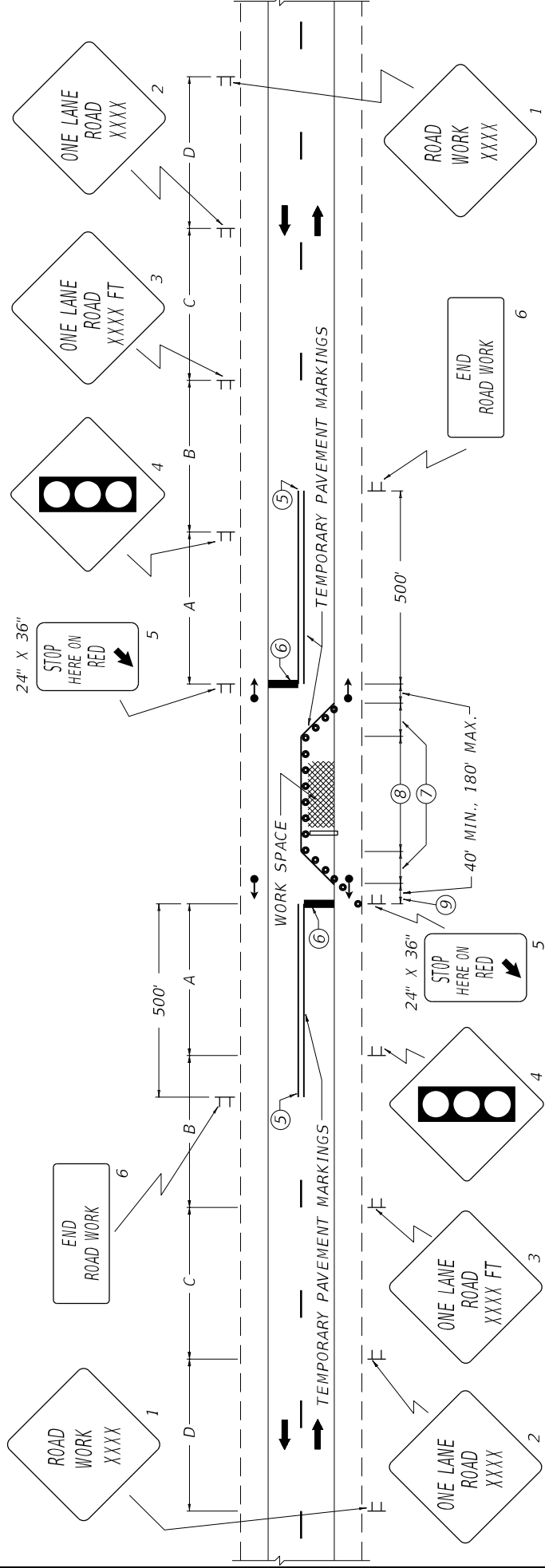
STANDARD DRAWING NO. TTC-100-05

SUBMITTED *B. G. W.* 02-26-20

DIRECTOR OF TRANSPORTATION

APPROVED *B. G. W.* 02-26-20

STATE HIGHWAY ENGINEER



~ NOTES ~

1. THE SIZE OF SIGNS 2 THRU 5 SHALL BE 48" X 48" FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 2 THRU 5 SHALL BE 36" X 36" FOR OTHER ROADWAYS. SIGN NOS. 1 AND 6 SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
2. TEMPORARY TRAFFIC SIGNALS SHALL BE INSTALLED AND OPERATED IN ACCORDANCE WITH THE PROVISIONS OF PART 4 OF THE MUTCD.
3. ALL SHOULDER MOUNTED SIGNAL HEADS SHALL BE A MINIMUM HEIGHT OF 12 FEET. ANY SIGNAL HEADS OR OTHER DEVICES MOUNTED OVER THE ROADWAY SHALL HAVE A MINIMUM UNDERCLEARANCE OF 17 FEET.
4. ALL CONFLICTING PAVEMENT MARKINGS BETWEEN THE STOP BARS SHALL BE OBLITERATED BY AN APPROVED METHOD.
5. "NO PASSING" ZONES (500' MIN.) SHALL BE INSTALLED ON THE APPROACHES TO THE CLOSURE.
6. STOP BARS SHALL HAVE A WIDTH OF 24".
7. TAPERS SHALL BE 50' (MIN) TO 100' (MAX) IN LENGTH. SPACING OF CHANNELIZING DEVICES SHOULD BE 20' THRU THE TAPER AREAS.
8. SPACING OF CHANNELIZING DEVICES THROUGH THE ACTIVITY AREA SHOULD BE 80'.
9. SPACING OF CHANNELIZING DEVICES THROUGH SHOULDER TAPER SHOULD BE 20'.
10. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
11. TEMPORARY TRAFFIC CONTROL SIGNAL TIMING, INCLUDING CLEARANCE INTERVALS, SHALL BE VERIFIED BY DISTRICT TRAFFIC.

BID ITEMS AND UNIT TO BID
 EACH LANE CLOSURE
 EACH TEMP SIGNAL
 EACH BARRICADE TYPE-III
 REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

- LEGEND
- TYPE III BARRICADE
 - SIGN
 - TRAFFIC SIGNAL
 - CHANNELIZING DEVICES
 - DRUMS

DRAWING NOT TO SCALE

SIGNING AND SPACING TABLE				
ROAD TYPE	A	B	C	D
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	1100'
SP. LT. $\leq$ 40 MPH*	250'	250'	500'	500'

*NOTE: USE NORMAL POSTED SPEED LIMIT

KENTUCKY

DEPARTMENT OF HIGHWAYS

LANE CLOSURE

USING TRAFFIC SIGNALS

STANDARD DRAWING NO. TTC-110-04

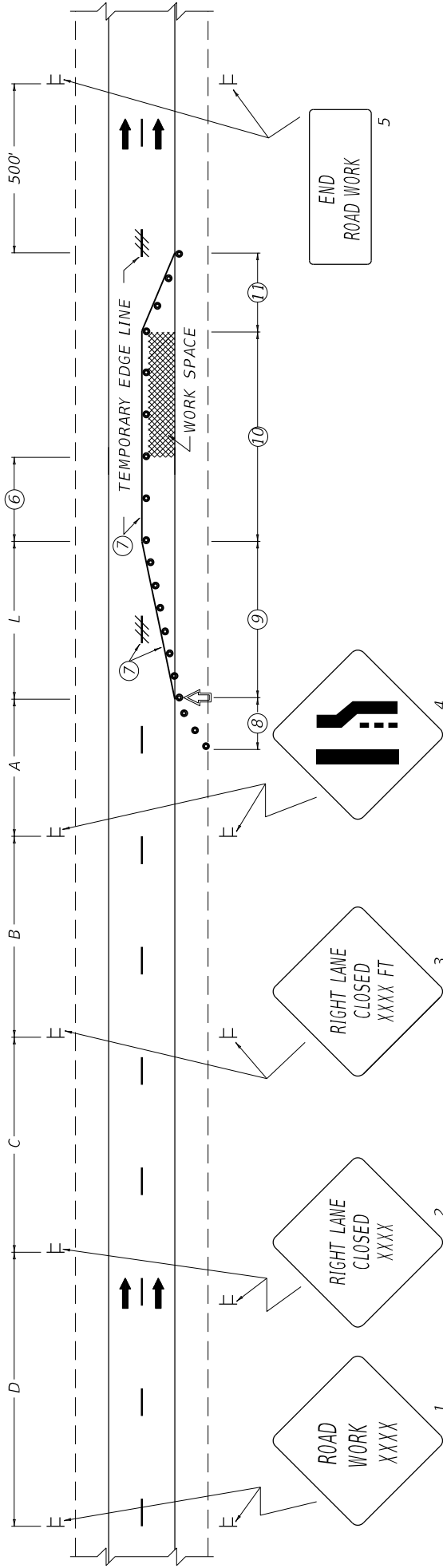
SUBMITTED BY *B. Smith* DATE 02-26-20

DIRECTOR OF TRANSPORTATION

APPROVED BY *[Signature]* DATE 02-26-20

SUPV. OF ENGINEERING

002



~ NOTES ~

1. IF MEDIAN IS NOT WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES SHOWN IN MUTCD, SIGNS 1 THRU 5 SHALL NOT BE DUAL MOUNTED.
2. THE SIZE OF SIGNS 1 THRU 4 SHALL BE 48" X 48" FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 1 THRU 4 SHALL BE 36" X 36" FOR OTHER ROADWAYS. SIGN NO. 5 SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
3. AN ARROW PANEL SHALL BE LOCATED ON THE SHOULDER AT THE BEGINNING OF THE MERGING TAPER OR LOCATED IN THE CLOSED LANE WHEN THE SHOULDER IS NARROW.
4. ALL VEHICLES, EQUIPMENT, WORKERS, AND THEIR ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
5. DRUMS SHALL BE USED IN LIEU OF CONES IF CLOSURE EXTENDS INTO NIGHTTIME HOURS. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
6. BUFFER SPACE (OPTIONAL). REFER TO TABLE 6C-2 OF THE MUTCD FOR GUIDANCE ON BUFFER SPACE LENGTH.
7. IF DURATION OF LANE CLOSURE EXCEEDS THREE DAYS, TEMPORARY EDGE LINE SHALL BE REQUIRED AND SKIP LINES SHALL BE OBLITERATED BY APPROVED METHOD THRU LENGTH OF TAPER. ANY OTHER CONFLICTING PAVEMENT MARKINGS SHALL BE OBLITERATED.
8. IF AN ARROW PANEL IS INSTALLED ON THE SHOULDER OR WITHIN THE CLEAR ZONE, A SHOULDER TAPER SHALL BE REQUIRED. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8' OR MORE ARE CLOSED, A SHOULDER TAPER SHALL BE REQUIRED. TAPER LENGTH SHALL BE 0.33 L. SPACING OF CHANNELIZING DEVICES THRU THE SHOULDER TAPER SHOULD BE 40'.
9. SPACING OF CHANNELIZING DEVICES THRU THE MERGING TAPER SHOULD BE 40'.
10. SPACING OF CHANNELIZING DEVICES THRU THE ACTIVITY AREA SHOULD BE 80'.
11. DOWNSTREAM TAPER SHALL HAVE A MINIMUM LENGTH OF 50' AND A MAXIMUM LENGTH OF 100'. SPACING OF CHANNELIZING DEVICES THRU THE DOWNSTREAM TAPER SHOULD BE 20'.

BID ITEM AND UNIT TO BID
EACH
LANE CLOSURE
EACH
ARROW PANEL
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION, CURRENT EDITION.

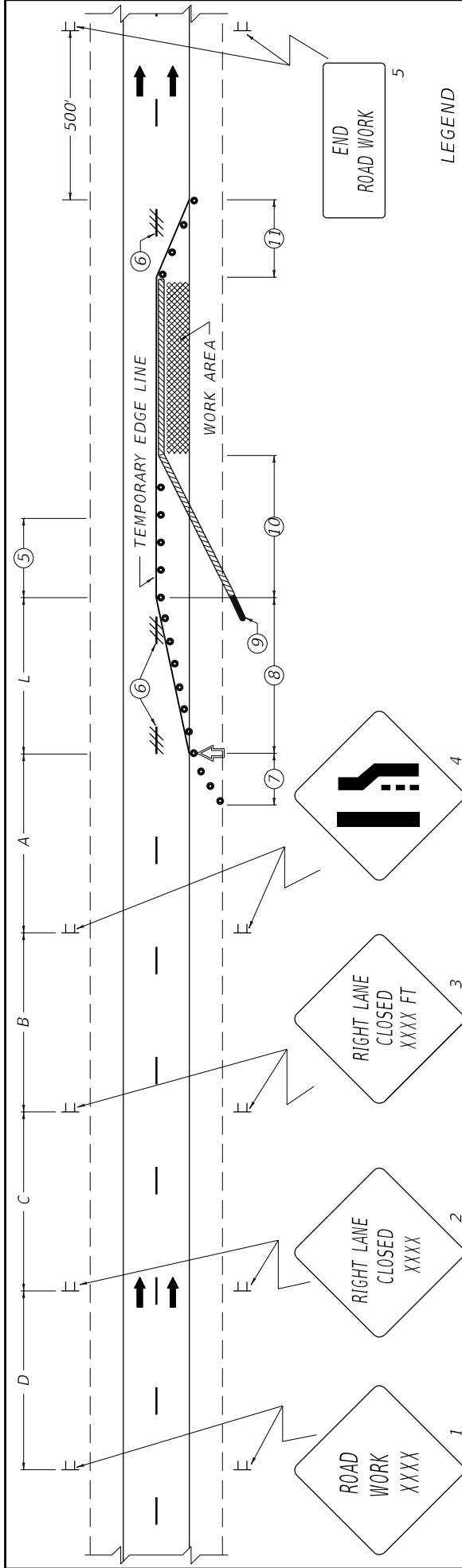
DRAWING NOT TO SCALE
USE WITH CUR. STD. DWG.
TTC-160

SIGNING AND SPACING TABLE					
ROAD TYPE	A	B	C	D	L
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'	840'
SP. LT. ≥ 45 MPH*	500'	500'	500'	1100'	680'
SP. LT. ≤ 40 MPH*	250'	250'	500'	500'	320'

*NOTE: USE NORMAL POSTED SPEED LIMIT

KENTUCKY
DEPARTMENT OF HIGHWAYS
LANE CLOSURE
MULTI-LANE HIGHWAY
CASE I

STANDARD DRAWING NO. TTC-115-04
SUBMITTED BY *B. M. W.* 02-26-20
DIRECTOR OF HIGHWAYS
APPROVED *[Signature]* 02-26-20
ENGINEER



APPLICATION

THIS DRAWING APPLIES TO LANE CLOSURES OF LEFT OR RIGHT LANES USING TEMPORARY TRAFFIC BARRIER ON TWO-DIRECTION, MULTI-LANE HIGHWAYS. IF TEMPORARY TRAFFIC BARRIER IS NOT USED, REFER TO CURRENT STANDARD DRAWING [TTC-115](#).

~ NOTES ~

1. IF MEDIAN IS NOT WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES SHOWN IN THE MUTCD, SIGNS 1 THRU 5 SHALL NOT BE DUAL MOUNTED.
2. THE SIZE OF SIGNS 1 THRU 4 SHALL BE 48" X 48" FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 1 THRU 4 SHALL BE 36" X 36" FOR OTHER ROADWAYS. SIGN NO. 5 SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
3. AN ARROW PANEL SHALL BE REQUIRED. IT SHALL BE LOCATED ON THE SHOULDER AT THE BEGINNING OF THE MERGING TAPER OR LOCATED IN THE CLOSED LANE WHEN THE SHOULDER IS NARROW.
4. THE BARRIER SHALL NOT BE PLACED ALONG THE MERGING TAPER. THE LANE SHALL FIRST BE CLOSED USING CHANNELIZING DEVICES AND PAVEMENT MARKINGS.
5. BUFFER SPACE (OPTIONAL). REFER TO TABLE 6C-2 OF THE MUTCD FOR GUIDANCE ON BUFFER SPACE LENGTH.
6. SKIP LINES SHALL BE OBLITERATED BY AN APPROVED METHOD THRU LENGTH OF TAPERS. OTHER CONFLICTING PAVEMENT MARKINGS SHALL BE OBLITERATED.
7. IF AN ARROW PANEL IS INSTALLED ON THE SHOULDER OR WITHIN THE CLEAR ZONE, A SHOULDER TAPER SHALL BE REQUIRED. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8' OR MORE ARE CLOSED, A SHOULDER TAPER SHALL BE REQUIRED. TAPER LENGTH SHALL BE 0.33 L. SPACING OF CHANNELIZING DEVICES THRU THE SHOULDER TAPER SHOULD BE 40'.
8. SPACING OF CHANNELIZING DEVICES THRU THE MERGING TAPER SHOULD BE 40'.
9. IN ORDER TO MITIGATE THE EFFECT OF STRIKING THE END OF A TEMPORARY TRAFFIC BARRIER, THE END SHALL BE INSTALLED IN ACCORDANCE WITH THE ROADSIDE DESIGN GUIDE BY FLARING (SEE TABLE) UNTIL THE END IS OUTSIDE THE ACCEPTABLE CLEAR ZONE OR BY PROVIDING CRASHWORTHY END TREATMENTS. FLATTER FLARE RATES MAY BE USED.
10. SPACING OF CHANNELIZING DEVICES THRU THIS AREA SHOULD BE 80'.
11. DOWNSTREAM TAPER SHALL HAVE A MINIMUM LENGTH OF 50' AND A MAXIMUM LENGTH OF 100'. SPACING OF CHANNELIZING DEVICES THRU THE DOWNSTREAM TAPER SHOULD BE 20'.
12. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
13. THE COLOR OF BARRIER WALL DELINEATORS SHALL MATCH THE COLOR OF THE EDGE LINE THAT THEY SUPPLEMENT.

BID ITEMS AND UNIT TO BID
ARROW PANEL - EACH; LANE CLOSURE - EACH
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

MAXIMUM FLARE RATES FOR TEMPORARY TRAFFIC BARRIER				
DESIGN SPEED	70 MPH	60 MPH	50 MPH	
FLARE RATE	15:1	14:1	14:1	11:1

DRAWING NOT TO SCALE

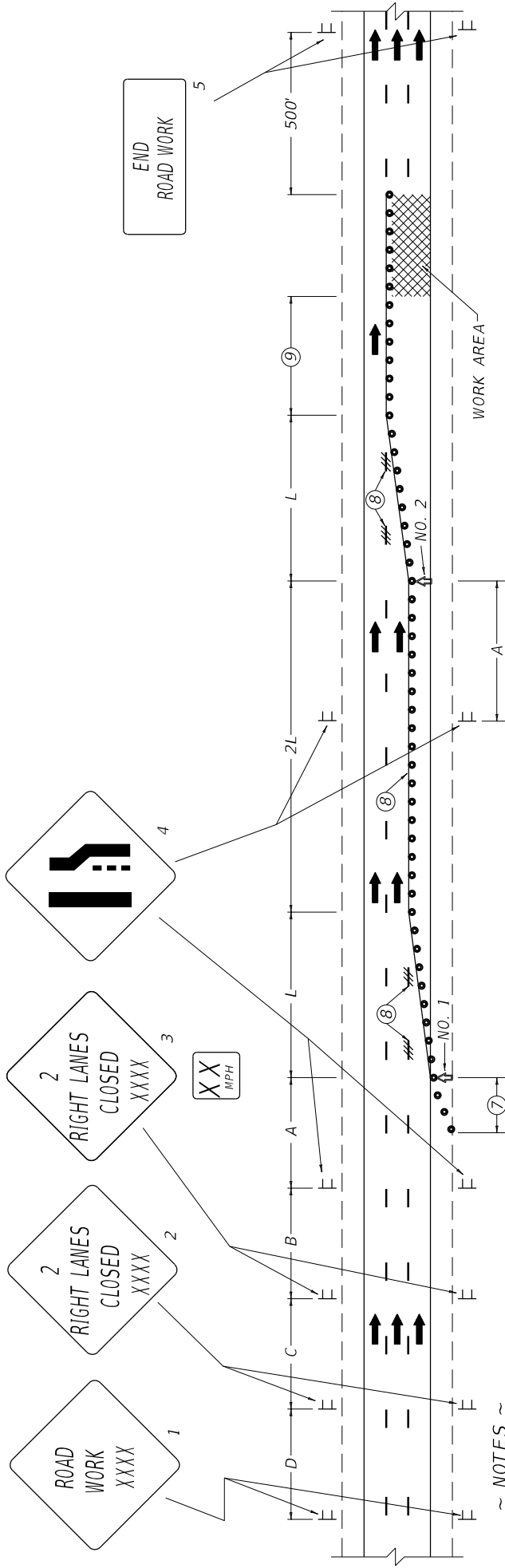
USE WITH CUR. STD. DWGS.
[RBM-020](#) AND [TTC-160](#)

SIGNING AND SPACING TABLE				
ROAD TYPE	A	B	C	D
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	1100'
SP. LT. $\leq$ 40 MPH*	250'	250'	500'	500'

*NOTE: USE NORMAL POSTED SPEED LIMIT

KENTUCKY	DEPARTMENT OF HIGHWAYS
LANE CLOSURE	
MULTI-LANE HIGHWAY	
CASE II	

STANDARD DRAWING NO. TTC-120-04	DATE 02-26-20
SUBMITTED BY RBM	DATE 02-26-20
DIRECTOR OF TRANSPORTATION	DATE 02-26-20
APPROVED [Signature]	DATE 02-26-20



DRAWING NOT TO SCALE
USE WITH CUR. STD. DWGS.
TTC-160 and TTC-110

KENTUCKY
DEPARTMENT OF HIGHWAYS

DOUBLE
LANE CLOSURE

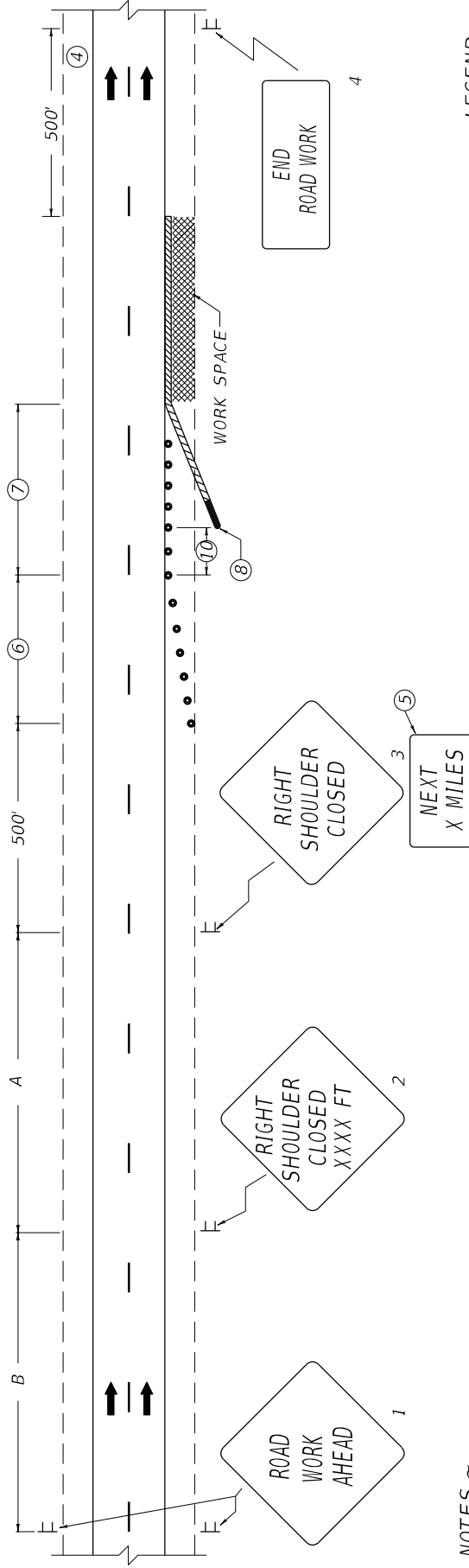
STANDARD DRAWING NO. TTC-125-04
SUBMITTED BY *R. M. W.* 02-26-20
DIRECTOR OF HIGHWAYS
APPROVED *[Signature]* 02-26-20
ENGINEER

SIGNING AND SPACING TABLE					
ROAD TYPE	A	B	C	D	L
EXPRESSWAY / FREEWAY	1000'	500'	1100'	2600'	840'
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	1100'	680'
SP. LT. $\leq$ 40 MPH*	250'	250'	500'	500'	320'

*NOTE: USE NORMAL POSTED SPEED LIMIT

BID ITEMS AND UNIT TO BID
LANE CLOSURE EACH
ARROW PANEL EACH
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
APPLICATION

THIS DRAWING DEPICTS THE MIDDLE AND OUTSIDE LANES CLOSED ON A MULTI-LANE HIGHWAY. THE SAME PRINCIPLES APPLY WHEN THE MIDDLE AND INSIDE LANES ARE CLOSED. WHEN MORE THAN TWO LANES ARE CLOSED, REFER TO NOTE 2.



~ NOTES ~

1. THE SIZE OF SIGNS 1 THRU 3 SHALL BE 48" X 48" WITH 30" X 24" SUPPLEMENTAL PLAQUES FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 1 THRU 3 SHALL BE 36" X 36" WITH 24" X 18" SUPPLEMENTAL PLAQUES FOR OTHER ROADWAYS. SIGN NO. 4 SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS. A FREEWAY IS AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS, AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
2. SIGN 1 SHALL NOT BE DUAL-MOUNTED ON TWO-LANE, TWO-DIRECTION HIGHWAYS OR ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS NOT WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES SHOWN IN THE MUTCD. SIGNS 2 AND 3 SHALL BE INSTALLED ONLY ON THE SIDE OF THE AFFECTED SHOULDER.
3. DRUMS SHALL BE USED IN LIEU OF CONES IF CLOSURE EXTENDS INTO NIGHTTIME HOURS. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
4. ON TWO-LANE TWO-DIRECTION HIGHWAYS, SIGNS 1 THRU 3 SHALL BE INSTALLED ON THE APPROACH WITH THE RIGHT SHOULDER CLOSED. A "ROAD WORK AHEAD" AND "SHOULDER WORK" SIGN SHALL BE INSTALLED ON THE OPPOSITE APPROACH. THE "SHOULDER WORK" SIGN SHALL BE MOUNTED IN ADVANCE OF THE CLOSURE AT A SPACING OF "A" (SEE SIGNING AND SPACING TABLE). AN ADDITIONAL "ROAD WORK AHEAD" SIGN SHALL BE INSTALLED IN ADVANCE OF THE "SHOULDER WORK" SIGN AT A SPACING OF "B".
5. WHEN THE END OF THE CLOSURE CANNOT BE SEEN BY ROAD USERS, A "NEXT X MILES" PLAQUE SHALL BE INSTALLED BELOW THE "SHOULDER CLOSED" SIGN. THE PLAQUE SHALL BE 36" X 30" FOR EXPRESSWAYS/FREEWAYS AND 24" X 18" FOR OTHER ROADWAYS.
6. TAPER LENGTH SHALL BE 0.33 L. SPACING OF CHANNELIZING DEVICES THROUGH THE SHOULDER TAPER SHOULD BE 40'.
7. SPACING OF CHANNELIZING DEVICES THROUGH THE REMAINDER OF THE CLOSURE SHOULD BE 80'.
8. TEMPORARY TRAFFIC BARRIER SHALL BE REQUIRED ONLY IF DESIGNATED ELSEWHERE IN THE PLANS. IN ORDER TO MITIGATE THE EFFECT OF STRIKING THE END OF A TEMPORARY TRAFFIC BARRIER, THE END SHALL BE INSTALLED IN ACCORDANCE WITH THE ROADSIDE DESIGN GUIDE BY FLARING (SEE TABLE) UNTIL THE END IS OUTSIDE THE ACCEPTABLE CLEAR ZONE OR BY PROVIDING CRASHWORTHY END TREATMENTS. FLATTER FLARE RATES MAY BE USED.
9. THE COLOR OF BARRIER WALL DELINEATORS SHALL MATCH THE COLOR OF THE EDGE LINE THAT THEY SUPPLEMENT.
10. BUFFER SPACE (OPTIONAL). REFER TO TABLE 6C-2 OF THE MUTCD FOR GUIDANCE ON BUFFER SPACE LENGTH.

BID ITEMS AND UNIT TO BID

REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

MAXIMUM FLARE RATES FOR TEMPORARY TRAFFIC BARRIER			
DESIGN SPEED	70 MPH	60 MPH	50 MPH
FLARE RATE	15:1	14:1	11:1

SIGNING AND SPACING TABLE			
ROAD TYPE	A	B	L
EXPRESSWAY/FREEWAY	1000'	1600'	840'
SP. LT. $\geq$ 45 MPH*	500'	500'	680'
SP. LT. $\leq$ 40 MPH*	500'	500'	320'

*NOTE: USE NORMAL POSTED SPEED LIMIT

DRAWING NOT TO SCALE

KENTUCKY

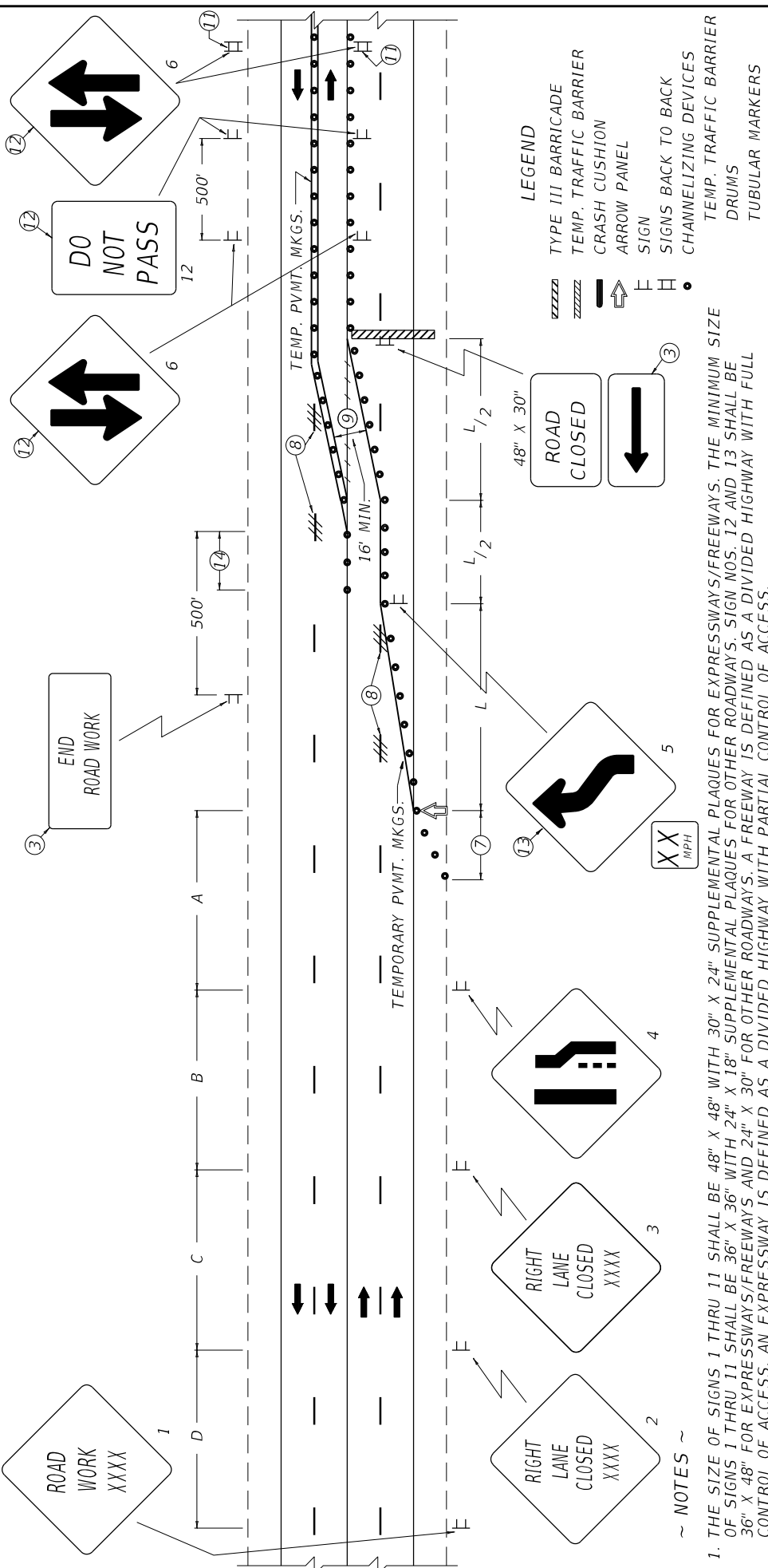
DEPARTMENT OF HIGHWAYS

SHOULDER CLOSURE

STANDARD DRAWING NO. TTC-135-03

SUBMITTED BY *R. M. W.* 02-26-20

APPROVED *[Signature]* 02-26-20



- ~ NOTES ~
- 1. THE SIZE OF SIGNS 1 THRU 11 SHALL BE 48" X 48" WITH 30" X 24" SUPPLEMENTAL PLAQUES FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 1 THRU 11 SHALL BE 36" X 36" WITH 24" X 18" SUPPLEMENTAL PLAQUES FOR OTHER ROADWAYS. SIGN NOS. 12 AND 13 SHALL BE 36" X 48" FOR EXPRESSWAYS/FREEWAYS AND 24" X 30" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
 - 2. THE ADVISORY SPEED LIMIT ON SIGNS 5 AND 7 SHALL BE DETERMINED BY THE ENGINEER. THE SIZE OF SIGN PLAQUE SHALL BE 30" X 30" IF THE NORMAL POSTED SPEED LIMIT IS 45 MPH OR GREATER, OTHERWISE, 24" X 24" MAY BE USED.
 - 3. THE ONE DIRECTION LARGE ARROW SIGN SHALL BE 60" X 30" FOR EXPRESSWAYS/FREEWAYS AND 48" X 24" FOR OTHER ROADWAYS. THE "END ROAD WORK" SIGN SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS.
 - 4. SPACING OF CHANNELIZING DEVICES THRU THE TAPER AREAS SHOULD BE 40'. SPACING OF DEVICES THRU THE REMAINDER OF THE CLOSURE SHOULD BE 80'.
 - 5. ARROW PANELS SHALL BE LOCATED ON SHOULDERS AT THE BEGINNING OF MERGING TAPERS OR LOCATED IN CLOSED LANES BEHIND CHANNELIZING DEVICES WHEN THE SHOULDER IS NARROW.
 - 6. TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED AND MAINTAINED ON THE ROADWAY THROUGHOUT THE LIMITS OF THE CROSSOVER.

(NOTES CONTINUED ON CURRENT STD. DWG. [TTC-141](#))

THIS DRAWING APPLIES TO A MEDIAN CROSSOVER ON MULTI-LANE HIGHWAYS WITH A MEDIAN WIDTH OF 10' OR LESS.

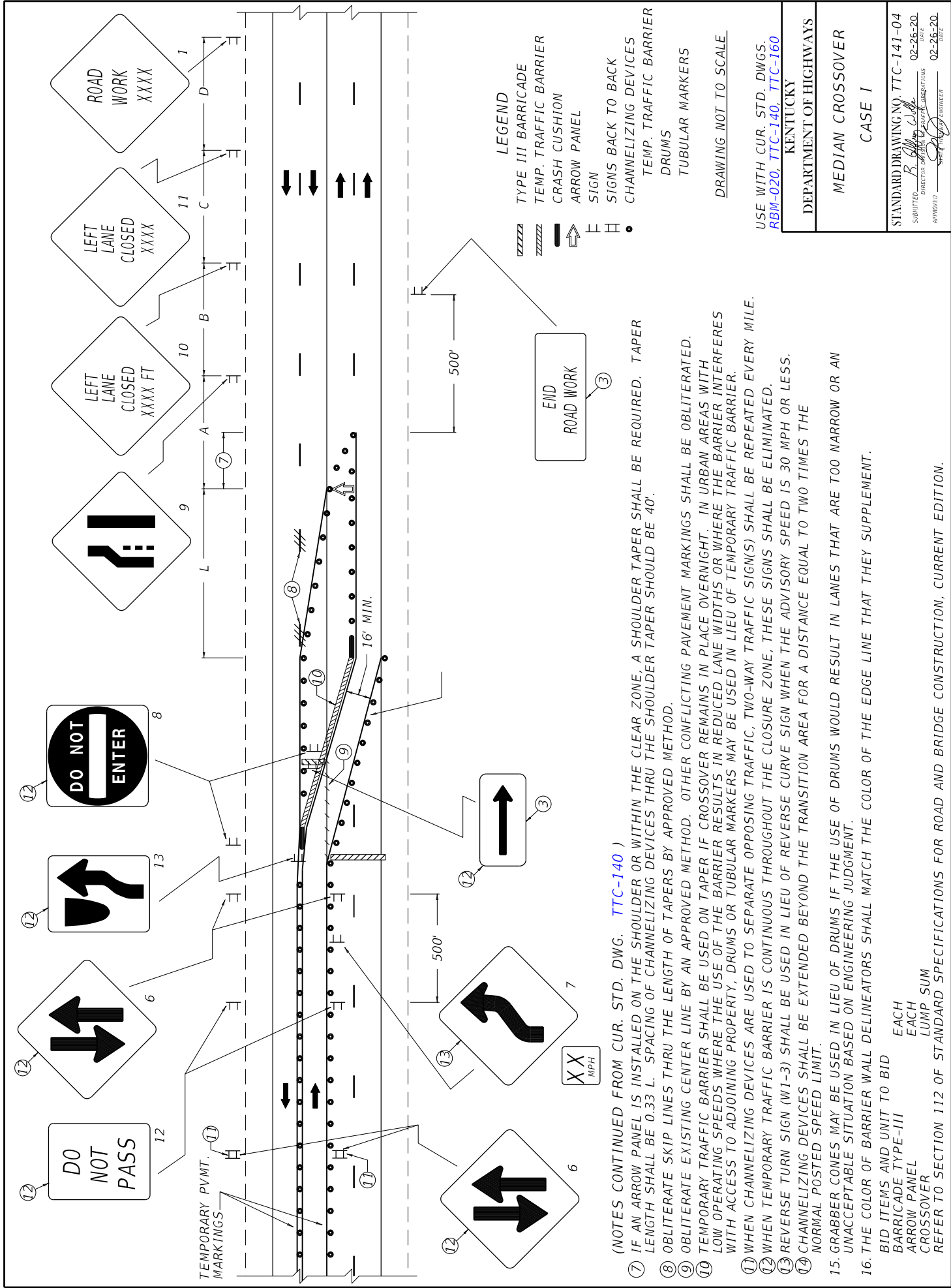
SIGNING AND SPACING TABLE					
ROAD TYPE	A	B	C	D	L
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'	840'
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	1100'	680'
SP. LT. $\leq$ 40 MPH*	250'	250'	500'	500'	320'

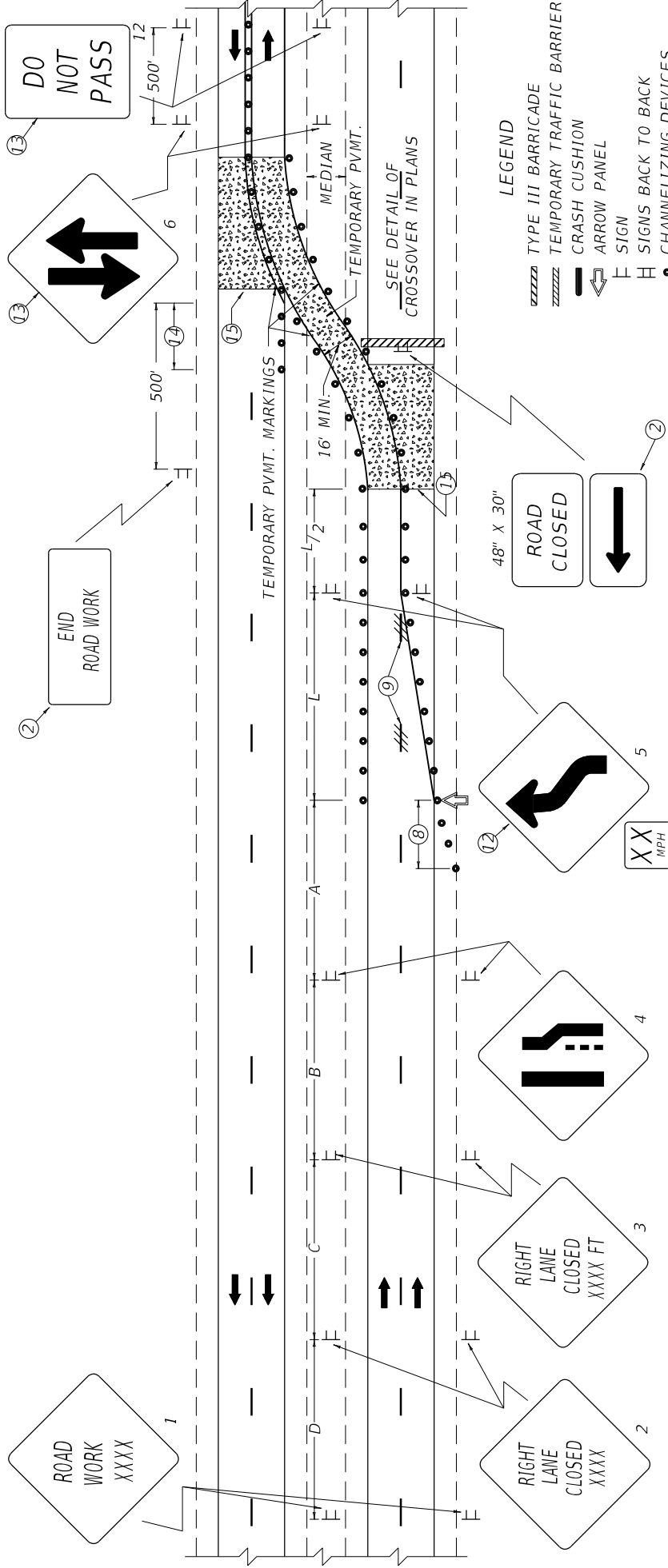
*NOTE: USE NORMAL POSTED SPEED LIMIT

USE WITH CUR. STD. DWGS.
[TTC-141](#) AND [TTC-160](#)

KENTUCKY
DEPARTMENT OF HIGHWAYS
MEDIAN CROSSOVER
CASE I

STANDARD DRAWING NO. [TTC-140-04](#)
SUBMITTED *R. G. [Signature]* 02-26-20
DIRECTOR OF TRANSPORTATION
APPROVED *[Signature]* 02-26-20
STATE HIGHWAY ENGINEER





~ NOTES ~

1. THE SIZE OF SIGNS 1 THRU 11 SHALL BE 48" X 48" WITH 30" X 24" SUPPLEMENTAL PLAQUES FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 1 THRU 11 SHALL BE 36" X 36" WITH 24" X 18" SUPPLEMENTAL PLAQUES FOR OTHER ROADWAYS. SIGN NOS. 12 AND 13 SHALL BE 36" X 48" FOR EXPRESSWAYS/FREEWAYS AND 24" X 30" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
2. THE ONE DIRECTION LARGE ARROW SIGN SHALL BE 60" X 30" FOR EXPRESSWAYS/FREEWAYS AND 48" X 24" FOR OTHER ROADWAYS. THE "END ROAD WORK" SIGN SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS.
3. THE ADVISORY SPEED LIMIT ON SIGNS 5 AND 7 SHALL BE DETERMINED BY THE ENGINEER. THE SIZE OF SIGN PLAQUE SHALL BE 30" X 30" FOR EXPRESSWAYS/FREEWAYS AND 24" X 24" FOR OTHER ROADWAYS.
4. SPACING OF CHANNELIZING DEVICES THRU THE TAPER AREAS SHOULD BE 40'. SPACING OF DEVICES THRU THE REMAINDER OF THE CLOSURE SHOULD BE 80'.
5. ARROW PANELS SHALL BE LOCATED ON THE SHOULDERS AT THE BEGINNING OF THE MERGING TAPERS OR LOCATED IN THE CLOSED LANE BEHIND CHANNELIZING DEVICES WHEN SHOULDERS ARE NARROW.
6. TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED AND MAINTAINED ON THE ROADWAY THROUGHOUT THE LIMITS OF THE CROSSOVER.

(NOTES CONTINUED ON CURRENT STD. DWG. [TTC-146](#))

APPLICATION

THIS DRAWING APPLIES TO A MEDIAN CROSSOVER ON MULTI-LANE HIGHWAYS WITH A MEDIAN WIDTH GREATER THAN 10 FEET.

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS. [TTC-146](#) AND [TTC-160](#)

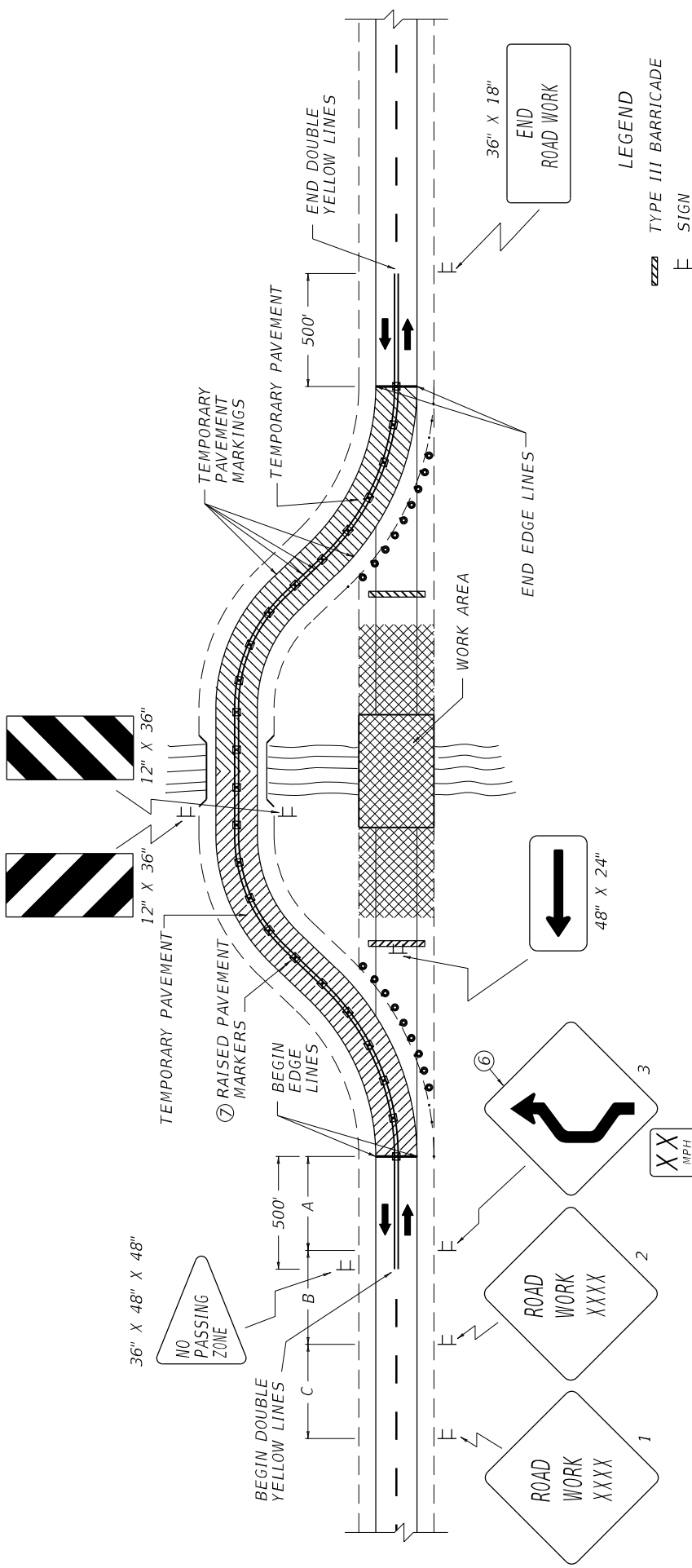
KENTUCKY
DEPARTMENT OF HIGHWAYS

MEDIAN CROSSOVER
CASE II

STANDARD DRAWING NO. [TTC-145-04](#)
SUBMITTED BY *R. M. W.* DATE 02-26-20
DIRECTOR OF TRANSPORTATION
APPROVED *[Signature]* DATE 02-26-20
CHIEF ENGINEER

SIGNING AND SPACING TABLE					
ROAD TYPE	A	B	C	D	L
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'	840'
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	1100'	680'
SP. LT. $\leq$ 40 MPH*	250'	250'	500'	500'	320'

*NOTE: USE NORMAL POSTED SPEED LIMIT



~ NOTES ~

1. DEVICES SIMILAR TO THOSE DEPICTED SHALL BE PLACED FOR OPPOSITE DIRECTION OF TRAVEL.
2. THE SIZE OF SIGNS 1 THRU 3 SHALL BE 48" X 48" IF THE SPEED LIMIT IS 45 MPH OR GREATER. OTHERWISE, 36" X 36" SIGNS MAY BE USED.
3. THE ADVISORY SPEED LIMIT ON SIGN 3 SHALL BE DETERMINED BY THE ENGINEER.
4. PAVEMENT MARKINGS WHICH ARE NO LONGER APPLICABLE SHALL BE OBLITERATED BY AN APPROVED METHOD.
5. SPACING OF CHANNELIZING DEVICES SHOULD NOT EXCEED 20'.
6. IF THE TANGENT DISTANCE ALONG THE TEMPORARY DIVERSION IS MORE THAN 600 FEET, A REVERSE CURVE SIGN, LEFT FIRST, SHOULD BE USED INSTEAD OF THE DOUBLE REVERSE CURVE SIGN, AND A SECOND REVERSE CURVE SIGN, RIGHT FIRST, SHOULD BE PLACED IN ADVANCE OF THE SECOND REVERSE CURVE BACK TO THE ORIGINAL ALIGNMENT. WHEN THE TANGENT SECTION OF THE DIVERSION IS MORE THAN 600 FEET, AND THE DIVERSION HAS SHARP CURVES WITH RECOMMENDED SPEEDS OF 30 MPH OR LESS, REVERSE TURN SIGNS SHOULD BE USED.
7. RAISED PAVEMENT MARKERS ARE REQUIRED ONLY FOR HARD SURFACE ROADWAYS. TYPE IVA MARKERS SHALL BE MAINTAINED THROUGHOUT THE ENTIRE LIMITS OF THE DIVERSION AT A SPACING OF 20'.

BID ITEMS AND UNIT TO BID EACH LUMP SUM
 BARRICADE TYPE-III DIVERSION
 REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

SIGNING AND SPACING TABLE				
ROAD TYPE	A	B	C	
EXPRESSWAY / FREEWAY	1000'	1600'	2600'	
SP. LT. $\geq$ 45 MPH*	500'	500'	500'	
SP. LT. $\leq$ 40 MPH*	250'	250'	500'	

*NOTE: USE NORMAL POSTED SPEED LIMIT

LEGEND

- TYPE III BARRICADE
- SIGN
- CHANNELIZING DEVICES
- DRUMS
- PAVEMENT MARKERS
- TYPE IVA (BI-DIRECTIONAL YELLOW)

DRAWING NOT TO SCALE

KENTUCKY

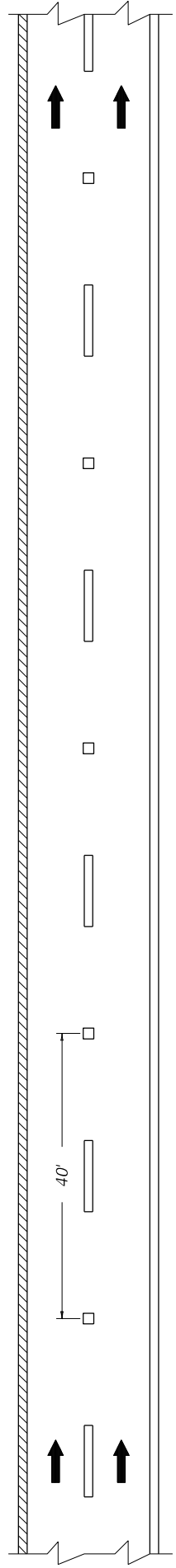
DEPARTMENT OF HIGHWAYS

ROAD CLOSURE WITH DIVERSION

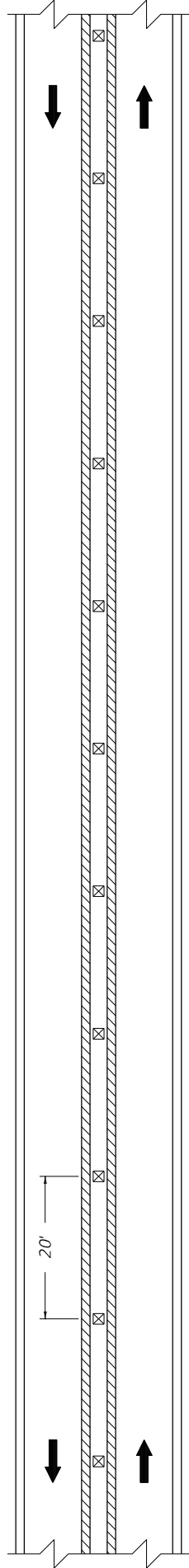
STANDARD DRAWING NO. TTC-150-04

SUBMITTED BY *R. M. W.* DATE 02-26-20

APPROVED BY *R. M. W.* DATE 02-26-20



ARRANGEMENT "A" (WHITE LANE LINES)



ARRANGEMENT "B" (DOUBLE YELLOW CENTER LINES)

LEGEND

BI-DIRECTIONAL (YELLOW)

MONO-DIRECTIONAL (WHITE)

MARKINGS (YELLOW)

MARKINGS (WHITE)

~ NOTES ~

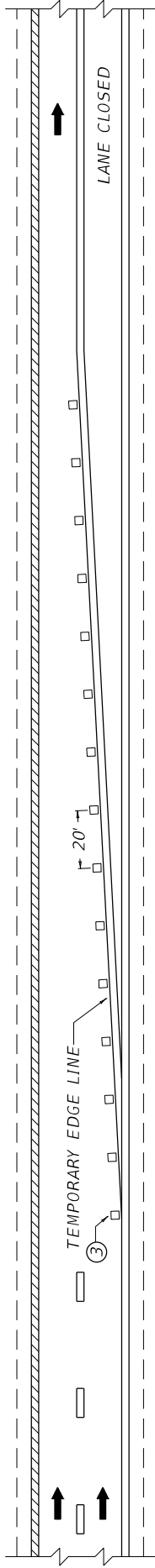
1. TEMPORARY PAVEMENT MARKERS SHALL BE APPLIED AS DIRECTED BY THE ENGINEER.
2. BI-DIRECTIONAL MARKERS, (WHITE-RED) OR (YELLOW-RED), MAY BE USED IN LIEU OF MONO-DIRECTIONAL MARKERS IF RED FACE WILL NOT BE VISIBLE TO OPPOSING TRAFFIC IN THEIR NORMAL TRAVEL LANE.
3. MARKERS INSTALLED AT DOUBLE YELLOW CENTERLINES SHALL BE PLACED BETWEEN THE TWO LINES.
4. MARKERS INSTALLED ALONG LANE LINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
5. MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE MARKER IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.

BID ITEMS AND UNIT TO BID
PAVEMENT MARKER TY IVA (BW, BY, MW, MY) TEMP

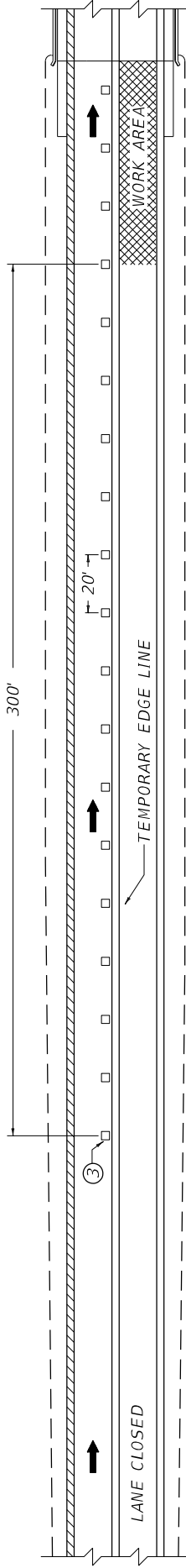
EACH

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR CONSTRUCTION ZONES
STANDARD DRAWING NO. TTC-155-02
SUBMITTED <i>R. G. W.</i> 12-01-15
DIRECTOR OF TRANSPORTATION
APPROVED <i>[Signature]</i> 12-01-15
DATE



ARRANGEMENT "A" ①



ARRANGEMENT "B" ②

LEGEND	
□	MONO-DIRECTIONAL (WHITE)
▤	MARKINGS (YELLOW)
▭	MARKINGS (WHITE)

APPLICATION

THIS DRAWING APPLIES TO LANE CLOSURE TRANSITIONS OR CASES WHERE DELINEATION IS DESIRABLE WITHIN LANE CLOSURES ON MULTI-LANE HIGHWAYS. THE DRAWINGS DEPICT LANE CLOSURES IN THE OUTSIDE LANE. WHEN THE INSIDE LANE IS CLOSED, THE SAME PRINCIPLES APPLY, EXCEPT MONO-DIRECTIONAL (YELLOW) MARKERS SHALL BE USED. BI-DIRECTIONAL MARKERS, (WHITE-RED) OR (YELLOW-RED), MAY BE USED IN LIEU OF MONO-DIRECTIONAL MARKERS IF RED FACE WILL NOT BE VISIBLE TO OPPOSING TRAFFIC IN THEIR NORMAL TRAVEL LANE.

THIS STANDARD DRAWING SHALL BE USED IN CONJUNCTION WITH THE APPROPRIATE STANDARD DRAWING FOR THE LANE CLOSURE.

~ NOTES ~

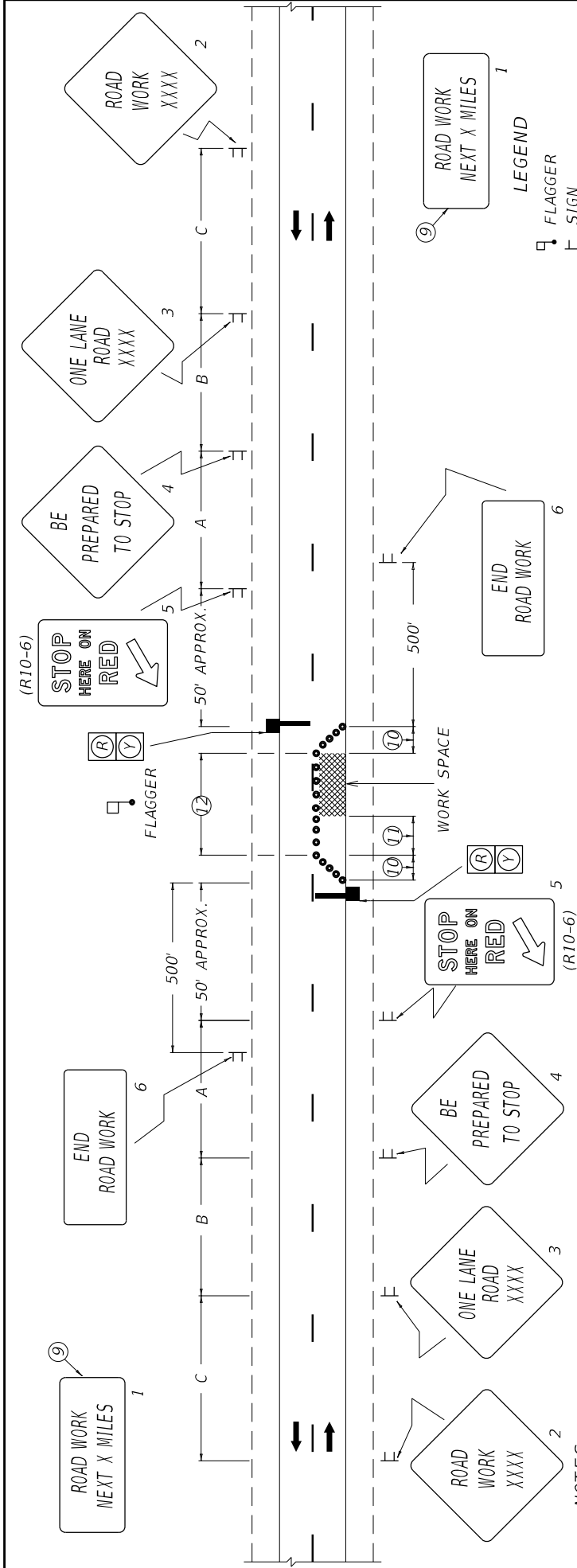
- ARRANGEMENT "A" SHALL BE APPLIED WHEN THE LANE CLOSURE IS TO BE IN EFFECT AT THE SAME LOCATION FOR FOUR (4) DAYS OR GREATER AND THE EXISTING ADT IS 5,000 OR GREATER.
- ARRANGEMENT "B" SHALL BE APPLIED WHEN THE EXISTING PAVEMENT HAS BEEN REMOVED ADJACENT TO TRAFFIC (INCLUDING BRIDGE ENDS AND OTHER SPOT IMPROVEMENTS).
- MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE CASTING IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.

BID ITEMS AND UNIT TO BID
PAVEMENT MARKER TY IVA (BW, BY, MW, MY) TEMP

EACH

DRAWING NOT TO SCALE

KENTUCKY	
DEPARTMENT OF HIGHWAYS	
TEMPORARY PAVEMENT	
MARKER ARRANGEMENTS	
FOR LANE CLOSURES	
STANDARD DRAWING NO. TTC-160-02	
SUBMITTED BY <i>R. G. G. G.</i>	12-01-15
DIRECTOR OF TRANSPORTATION	
APPROVED BY <i>R. G. G. G.</i>	12-01-15
ENGINEER	DATE



~ NOTES ~

1. AUTOMATED FLAGGER ASSISTANCE DEVICES (AFADS) SHALL CONFORM TO CHAPTER 6E OF THE MUTCD.
2. AFADS SHALL BE OPERATED BY A SINGLE FLAGGER IF THE FLAGGER HAS AN UNOBSTRUCTED VIEW OF BOTH AFADS AND APPROACHING TRAFFIC IN BOTH DIRECTIONS OR BY SEPARATE FLAGGERS NEAR EACH DEVICE'S LOCATION. FLAGGER(S) OPERATING AFADS SHALL NOT LEAVE THEM UNATTENDED AT ANY TIME WHILE AFADS ARE BEING USED.
3. WHEN AFADS ARE USED AT NIGHT, THEIR LOCATION SHALL BE ILLUMINATED IN ACCORDANCE WITH SECTION 6E.08 OF THE MUTCD.
4. WHEN THE AFAD IS NOT IN USE, THE SIGNS ASSOCIATED WITH THE AFAD, BOTH AT THE AFAD LOCATION AND IN ADVANCE, SHALL BE REMOVED OR COVERED.
5. FOR AFADS THAT ARE POST-MOUNTED, THE BOTTOM OF THE SIGNAL HOUSING SHALL BE AT LEAST 7 FEET ABOVE THE PAVEMENT. FOR OVERHEAD INSTALLATIONS, THE BOTTOM OF THE SIGNAL HOUSING SHALL BE AT LEAST 15 FEET ABOVE THE PAVEMENT.
6. WHEN THE ARM OF THE AFAD IS IN THE DOWN POSITION BLOCKING THE APPROACH LANE, THE ARM SHALL REACH AT LEAST TO THE CENTER OF THE LANE BEING CONTROLLED.
7. THE STEADY CIRCULAR YELLOW CHANGE INTERVAL SHOULD HAVE A DURATION OF AT LEAST 5 SECONDS.
8. DRUMS SHALL BE USED IN LIEU OF CONES IF CLOSURE EXTENDS INTO NIGHTTIME HOURS. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
9. SIGN NO. 1 SHOULD BE INSTALLED AT THE LIMITS OF THE PROJECT WHEN THE CONSTRUCTION ZONE IS LONGER THAN TWO MILES IN LENGTH. THE DISTANCE SHOWN SHALL BE STATED TO THE NEAREST WHOLE MILE.
10. TAPERS SHALL BE 50' (MIN) TO 100' (MAX) IN LENGTH. SPACING OF CHANNELIZING DEVICES SHOULD BE 20' THRU THE TAPER AREAS.
11. BUFFER SPACE (OPTIONAL). IF USED, THE BUFFER SPACE SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL OR CREST VERTICAL CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE AFAD AND A QUEUE OF STOPPED VEHICLES. REFER TO TABLE 6C-2 OF THE MUTCD FOR GUIDANCE ON BUFFER SPACE LENGTH.
12. SPACING OF CHANNELIZING DEVICES THRU THE ACTIVITY AREA SHOULD BE 80' ON ROADWAYS WITH WIDTHS LESS THAN 20 FEET, CHANNELIZING DEVICES MAY BE OMITTED THRU THE ACTIVITY AREA BASED ON ENGINEERING JUDGMENT.

BID ITEMS AND UNIT TO BID

AFAD	LANE CLOSURE	EACH
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.		

SIGNING AND SPACING TABLE			
ROAD TYPE	A	B	C
SP. LT. ≥ 45 MPH*	500'	500'	500'
SP. LT. ≤ 40 MPH*	250'	250'	250'

*NOTE: USE NORMAL POSTED SPEED LIMIT

SIGN SIZES		
SIGN	CONVENTIONAL	EXPRESSWAY/FREEWAY
2, 3, AND 4	36" X 36"	48" X 48"
1 AND 6	36" X 18"	48" X 24"
5	24" X 36"	36" X 48"

DRAWING NOT TO SCALE

KENTUCKY
 DEPARTMENT OF HIGHWAYS
 AUTOMATED FLAGGING
 ASSISTANCE DEVICES
 RED/YELLOW LENS

STANDARD DRAWING NO. TTC-165
 SUBMITTED BY *R. M. W.* 02-26-20
 DIRECTOR OF TRANSPORTATION
 APPROVED BY *[Signature]* 02-26-20
 STATE HIGHWAY ENGINEER



R2-10



R2-11



8" (MIN.) EY



8" (MIN.) F.Y.



S4-4P

APPLICATION

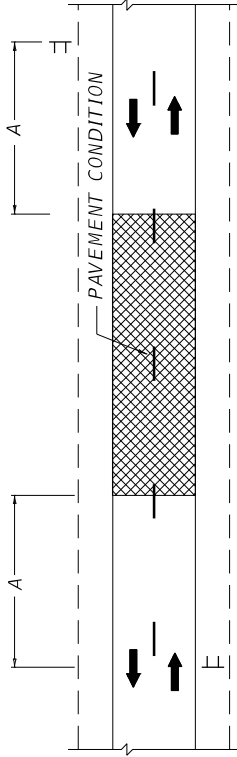
IN ACCORDANCE WITH KRS 189.2327, IN ORDER FOR HIGHER FINES TO BE ESTABLISHED IN A HIGHWAY WORK ZONE, SIGNS INFORMING DRIVERS OF THE WORK ZONE AND THAT FINES ARE HIGHER MUST BE DISPLAYED AND AT LEAST ONE (1) BONA FIDE WORKER MUST BE PRESENT.

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 SHORT LENGTH PROJECTS WHERE WORK WILL OCCUR THROUGHOUT THE PROJECT LIMITS, LOCATE "BEGIN HIGHER FINES ZONE" SIGN ASSEMBLY BETWEEN THE LAST ADVANCE WARNING SIGN AND THE BEGINNING OF THE ACTIVITY AREA AND LOCATE THE "END HIGHER FINES ZONE" SIGN 250' IN ADVANCE OF THE "END ROAD WORK" SIGN. FOR LONG LENGTH PROJECTS WHERE WORK WILL NOT OCCUR THROUGHOUT THE PROJECT LIMITS, CONSIDER PLACING SIGNS ONLY IN AREAS WHERE ACTIVITY IS OCCURRING.
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 ERCTED 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.

<u>BID ITEMS AND UNIT TO BID</u>	SQFT
<u>TEMPORARY SIGNS</u>	



APPLICATION

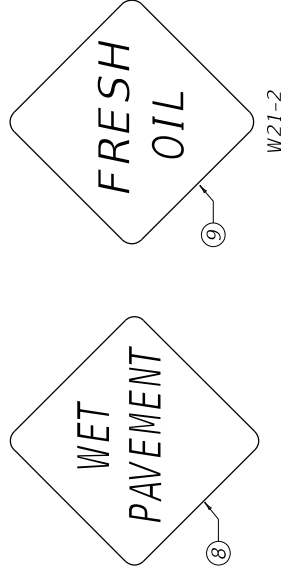
PAVEMENT CONDITION SIGNS GIVE MOTORISTS ADVANCE WARNING OF TEMPORARY IMPACTS TO PAVEMENT CONDITIONS WITHIN WORK ZONES. SUCH ADVANCE WARNING IS PARTICULARLY CRITICAL FOR MOTORCYCLISTS. THIS DRAWING IS INTENDED TO BE USED IN CONJUNCTION WITH OTHER APPLICABLE TEMPORARY TRAFFIC CONTROL STANDARD DRAWINGS.

~ NOTES ~

1. SIGNS SHALL HAVE A BLACK LEGEND ON A FLUORESCENT ORANGE BACKGROUND.
 2. THE SIZE OF ABOVE SIGNS SHALL BE 48" X 48" FOR EXPRESSWAYS/FREEWAYS AND 36" X 36" FOR OTHER ROADWAYS. A FREEWAY SHALL BE DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY SHALL BE DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
 3. SIGNS SHALL BE MOUNTED AT ELEVATIONS AND OFFSETS PRESCRIBED IN THE MUTCD.
 4. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD.
 5. ADDITIONAL SIGNS MAY BE REQUIRED FOR LONG CONSTRUCTION ZONES OR WHERE RAMPS OR INTERSECTING STREETS JUNCTION WITHIN THE PROJECT LIMITS.
 6. SIGNS SHOULD BE INSTALLED IN ACCORDANCE WITH SPACING IN SIGN SPACING TABLE AND NO CLOSER THAN 250' TO ANY OTHER REQUIRED WORK ZONE SIGNING.
 7. IF A PAVEMENT CONDITION EXISTS OVER A LONG STRETCH OF ROADWAY, PAVEMENT CONDITION WARNING SIGNS MAY BE USED IN COMBINATION WITH A SUPPLEMENTARY DISTANCE PLAQUE (W7-3A).
 8. "WET PAVEMENT" SIGNS SHOULD BE INSTALLED IN ADVANCE OF LOCATIONS WHERE WATER IS APPLIED TO THE PAVEMENT TO CONTROL DUST IN A WORK ZONE.
 9. "FRESH OIL" SIGNS SHOULD BE INSTALLED WHERE PAVING OPERATIONS RESULT IN A SLIPPERY PAVEMENT SURFACE AND/OR WHERE SPLASHING MAY OCCUR.
 10. "ROUGH ROAD" OR "GROOVED PAVEMENT" SIGNS SHOULD BE INSTALLED IN ADVANCE OF ANY TEMPORARILY TEXTURED/MILLED PAVEMENT SURFACES. PERMANENT SIGNS MAY BE INSTALLED IF ENGINEERING JUDGMENT DETERMINES THAT WARNING FOR A NON-TEMPORARY TEXTURED SURFACE (I.E. DIAMOND GRINDED PAVEMENT) IS NECESSARY.
 11. "UNEVEN LANES" SIGNS SHOULD BE INSTALLED IN ADVANCE OF LOCATIONS WHERE THERE IS A SUBSTANTIAL DIFFERENCE IN ELEVATION BETWEEN ADJACENT LANES THAT ARE OPEN TO TRAVEL.
 12. "LOOSE GRAVEL" SIGNS SHOULD BE INSTALLED WHERE WORK ZONE OPERATIONS FREQUENTLY RESULT IN ROCK DEBRIS IN THE ROADWAY.
 13. "STEEL PLATE AHEAD" SIGNS WITH SUPPLEMENTAL "STEEL PLATE" PLAQUES SHOULD BE INSTALLED IN ADVANCE OF LOCATIONS WHERE STEEL PLATES ARE USED TO BRIDGE OPEN CUTS IN THE ROADWAY.
 14. A MOTORCYCLE (W8-15P) PLAQUE MAY BE MOUNTED BELOW OR ABOVE ANY OF THE PRESCRIBED SIGNS IN THIS DRAWING IF THE WARNING IS INTENDED TO BE DIRECTED PRIMARILY TO MOTORCYCLISTS.
- BID ITEMS AND UNIT TO BID
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

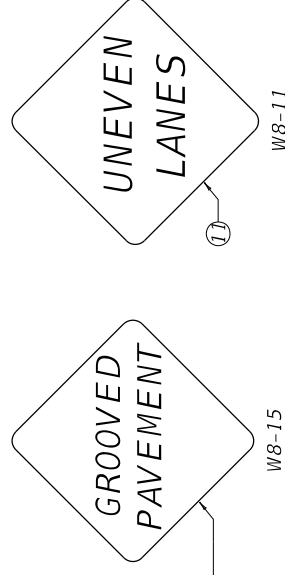
SIGN SPACING TABLE	
ROAD TYPE	A
EXPRESSWAY/ FREEWAY	750'
RURAL/URBAN SP. LT. $\geq$ 45 MPH*	500'
URBAN SP. LT. $\leq$ 40 MPH*	250'

*NOTE: USE NORMAL POSTED SPEED LIMIT



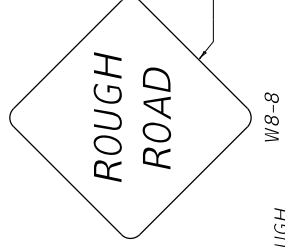
8

W21-2



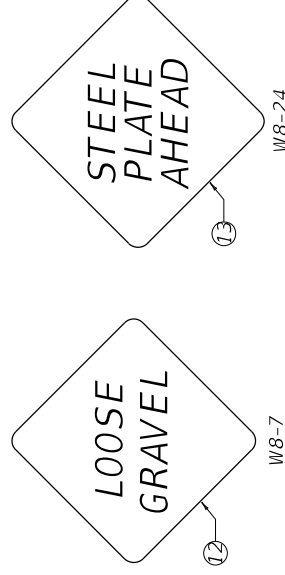
10

W8-15



11

W8-11



12

W8-7



13

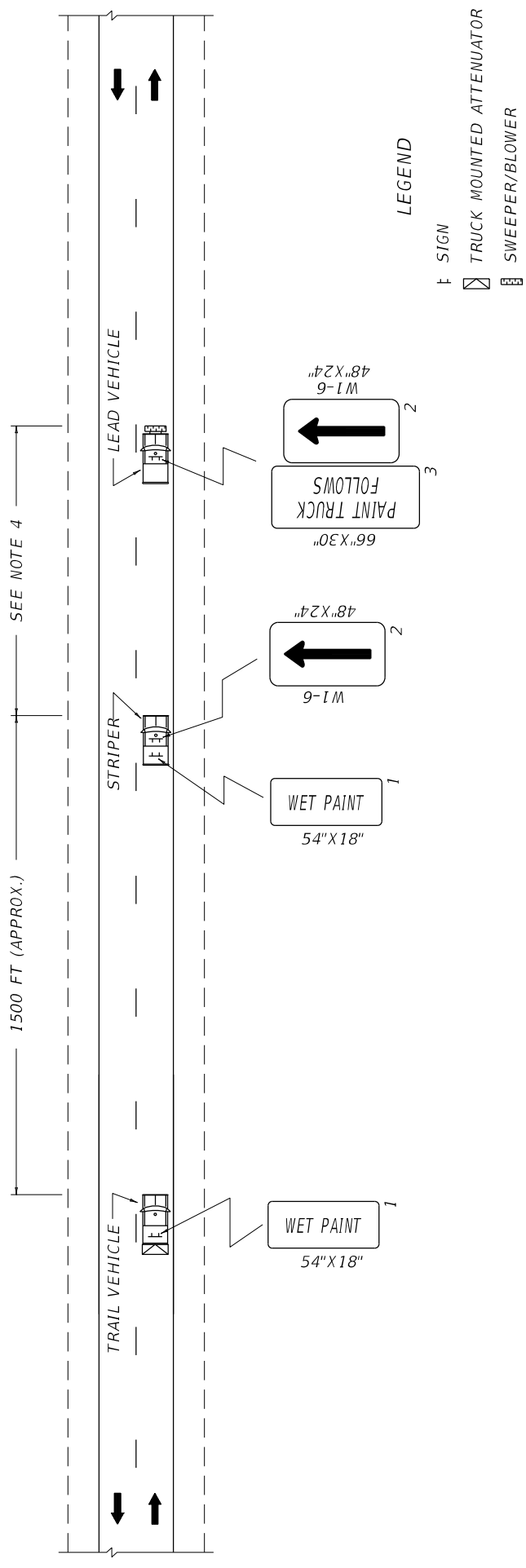
W8-24



14

W8-15P

KENTUCKY DEPARTMENT OF HIGHWAYS
PAVEMENT CONDITION WARNING SIGNS
STANDARD DRAWING NO. TTD-125-03 SUBMITTED <u>B. M. C. C.</u> DATE <u>02-26-20</u> APPROVED <u>[Signature]</u> DATE <u>02-26-20</u>



~ NOTES ~

1. SIGNS 1 THRU 3 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLOURESCENT ORANGE SHEETING.
2. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
3. THE LAST TRAIL VEHICLE IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
4. THE LEAD VEHICLE SHALL MAINTAIN VISUAL CONTACT WITH THE STRIPER WHENEVER POSSIBLE TO COORDINATE ON AND OFF THE ROAD MANEUVERS. THE STRIPING TRAIN SHALL BE REQUIRED TO PULL OFF THE ROADWAY PERIODICALLY TO ALLEVIATE TRAFFIC CONGESTION.
5. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE STRIPING TRAIN.
6. ADDITIONAL VEHICLES MAY BE ADDED TO THE STRIPING TRAIN AS NEEDED TO PROTECT THE FRESHLY PAINTED LINE.
7. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
8. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS. IF AN ARROW PANEL IS USED, IT SHALL BE USED IN THE CAUTION MODE.

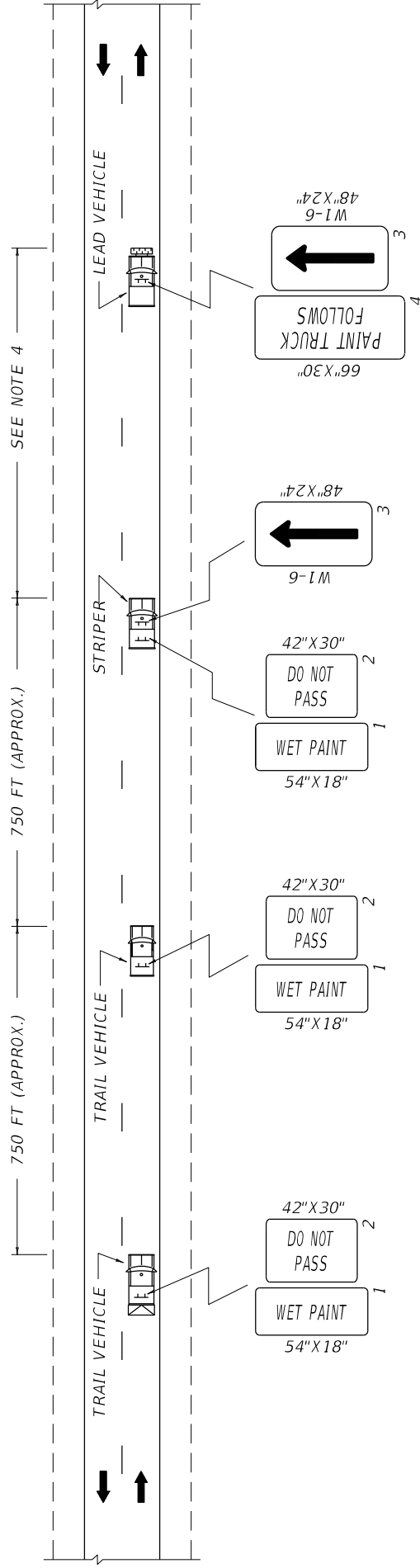
DRAWING NOT TO SCALE

BID ITEMS AND UNIT TO BID
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

APPLICATION

THIS DRAWING APPLIES TO STRIPING OPERATIONS ON TWO-LANE, TWO-WAY ROADWAYS INVOLVING THE PLACEMENT OF EDGE LINES ONLY.

KENTUCKY DEPARTMENT OF HIGHWAYS	STANDARD DRAWING NO. TTS-100-02
MOBILE OPERATION FOR PAINT STRIPING CASE I	SUBMITTED BY <i>R. G. W. J. J.</i> 12-01-15 DIRECTOR OF TRANSPORTATION
	APPROVED BY <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER



LEGEND

- ⊢ SIGN
- ☒ TRUCK MOUNTED ATTENUATOR
- ☐ SWEEPER/BLOWER

~ NOTES ~

1. SIGNS 1, 3, AND 4 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLUORESCENT ORANGE SHEETING. SIGN 2 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF REFLECTIVE WHITE SHEETING.
2. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
3. THE LAST TRAIL VEHICLE IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
4. THE LEAD VEHICLE SHALL MAINTAIN VISUAL CONTACT WITH THE STRIPER WHENEVER POSSIBLE TO COORDINATE ON AND OFF THE ROAD MANEUVERS. THE STRIPING TRAIN SHALL BE REQUIRED TO PULL OFF THE ROADWAY PERIODICALLY TO ALLEVIATE TRAFFIC CONGESTION.
5. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE STRIPING TRAIN.
6. ADDITIONAL VEHICLES MAY BE ADDED TO THE STRIPING TRAIN AS NEEDED TO PROTECT THE FRESHLY PAINTED LINE.
7. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
8. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS. IF AN ARROW PANEL IS USED, IT SHALL BE USED IN THE CAUTION MODE.

BID ITEMS AND UNIT TO BID

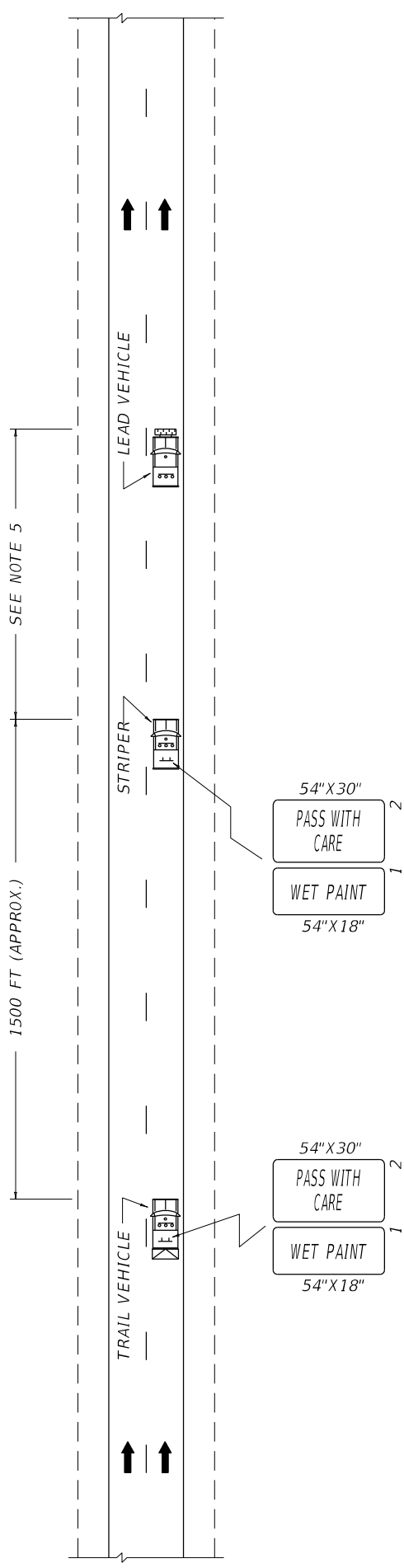
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

APPLICATION

THIS DRAWING APPLIES TO STRIPING OPERATIONS ON TWO-LANE, TWO-WAY ROADWAYS INVOLVING THE PLACEMENT OF EITHER THE CENTERLINE ONLY OR A COMBINATION OF THE CENTERLINE AND EDGE LINE.

KENTUCKY DEPARTMENT OF HIGHWAYS	STANDARD DRAWING NO. TTS-105-02
MOBILE OPERATION FOR PAINT STRIPING CASE II	SUBMITTED BY <i>R. G. W. J.</i> 12-01-15 DIRECTOR OF TRANSPORTATION OPERATIONS
	APPROVED BY <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER

DRAWING NOT TO SCALE



~ NOTES ~

1. FLASH ARROW PANELS TO DIRECT TRAFFIC RIGHT OR LEFT AS APPROPRIATE. FLASHING ARROW PANELS SHALL BE TYPE B (60"X30") OR LARGER.
 2. SIGN 1 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLOURESCENT ORANGE SHEETING. SIGN 2 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF REFLECTIVE WHITE SHEETING.
 3. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
 4. THE LAST TRAIL VEHICLE IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
 5. THE LEAD VEHICLE SHALL MAINTAIN VISUAL CONTACT WITH THE STRIPER.
 6. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE STRIPING TRAIN.
 7. ADDITIONAL VEHICLES MAY BE ADDED TO THE STRIPING TRAIN AS NEEDED TO PROTECT THE FRESHLY PAINTED LINE.
 8. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
 9. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
- BID ITEMS AND UNIT TO BID
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

APPLICATION

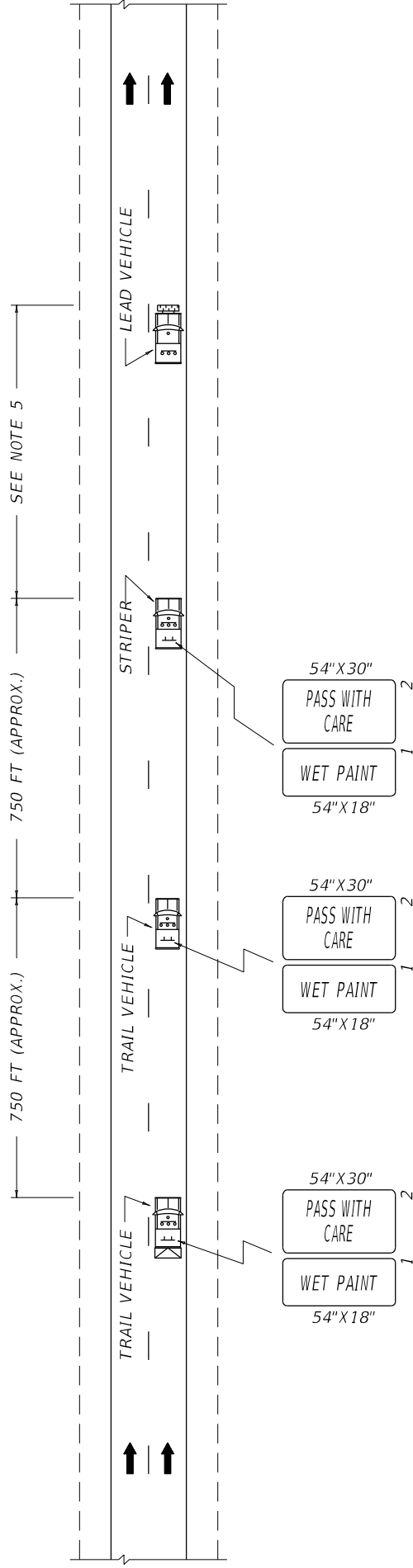
THIS DRAWING APPLIES TO PAINT STRIPING OPERATIONS ON MULTI-LANE ROADWAYS INVOLVING THE PLACEMENT OF EDGE LINES ONLY.

LEGEND

- FLASHING ARROW PANELS
- SIGN
- TRUCK MOUNTED ATTENUATOR
- SWEEPER/BLOWER

DRAWING NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS	STANDARD DRAWING NO. TTS-110-02
MOBILE OPERATION FOR PAINT STRIPING CASE III	SUBMITTED <i>B. Allen</i> 12-01-15 DIRECTOR OF OPERATIONS
	APPROVED <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER DATE



LEGEND

- FLASHING ARROW PANELS
- SIGN
- TRUCK MOUNTED ATTENUATOR
- SWEEPER/BLOWER

~ NOTES ~

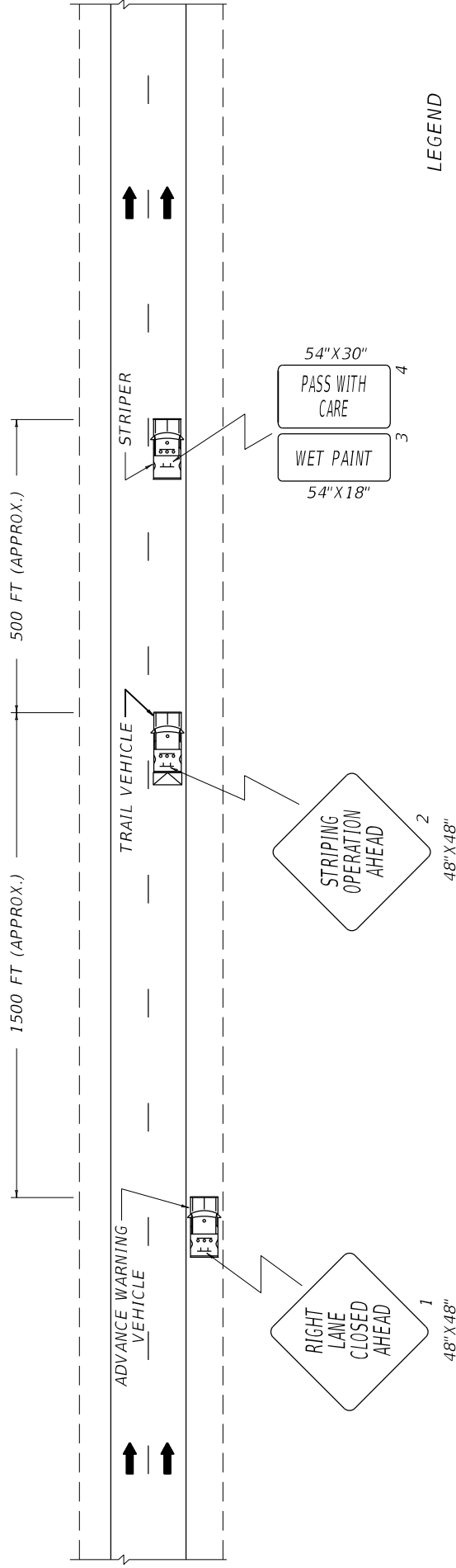
- FLASH ARROW PANELS TO DIRECT TRAFFIC RIGHT OR LEFT AS APPROPRIATE. FLASHING ARROW PANELS SHALL BE TYPE B (60"X30") OR LARGER.
 - SIGN 1 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLUORESCENT ORANGE SHEETING. SIGN 2 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF REFLECTIVE WHITE SHEETING.
 - ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
 - THE LAST TRAIL VEHICLE IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
 - THE LEAD VEHICLE SHALL MAINTAIN VISUAL CONTACT WITH THE STRIPER.
 - TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE STRIPING TRAIN.
 - ADDITIONAL VEHICLES MAY BE ADDED TO THE STRIPING TRAIN AS NEEDED TO PROTECT THE FRESHLY PAINTED LINE.
 - THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
 - VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
- BID ITEMS AND UNIT TO BID
REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

DRAWING NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS	STANDARD DRAWING NO. TTS-115-02
MOBILE OPERATION FOR PAINT STRIPING CASE IV	SUBMITTED <i>R. G. W.</i> 12-01-15 DIRECTOR OF OPERATIONS
	APPROVED <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER DATE

APPLICATION

THIS DRAWING APPLIES TO PAINT STRIPING OPERATIONS ON MULTI-LANE ROADWAYS INVOLVING EITHER THE PLACEMENT OF LANE LINES ONLY OR A COMBINATION OF LANE LINES AND EDGE LINES.



~ NOTES ~

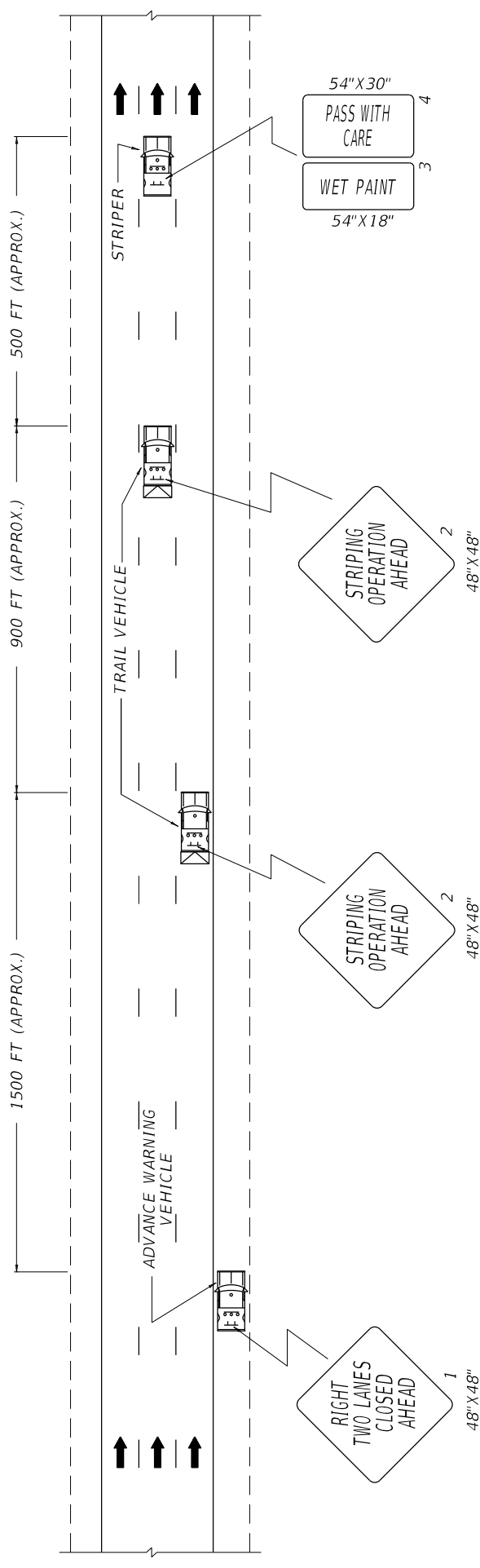
1. FLASH ARROW PANELS TO DIRECT TRAFFIC RIGHT OR LEFT AS APPROPRIATE. FLASHING ARROW PANELS SHALL BE TYPE B (60"X30") OR LARGER.
2. SIGNS 1 THRU 3 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLUORESCENT ORANGE SHEETING. SIGN 4 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF REFLECTIVE WHITE SHEETING.
3. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
4. THE LAST TRAIL VEHICLE IN THE WORK TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
5. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE WORK TRAIN.
6. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
7. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS. BID ITEMS AND UNIT TO BID REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

DRAWING NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS	
MOBILE OPERATION FOR DURABLE STRIPING CASE I	
STANDARD DRAWING NO. TTS-120-02 SUBMITTED BY <i>B. G. W. J. W.</i> 12-01-15 DIRECTOR OF TRANSPORTATION OPERATIONS APPROVED <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER DATE	

APPLICATION

THIS DRAWING APPLIES TO DURABLE STRIPING OPERATIONS ON MULTI-LANE ROADWAYS INVOLVING THE CLOSURE OF ONE LANE ONLY.



~ NOTES ~

1. FLASH ARROW PANELS TO DIRECT TRAFFIC RIGHT OR LEFT AS APPROPRIATE. FLASHING ARROW PANELS SHALL BE TYPE B (60"X30") OR LARGER.
2. SIGNS 1 THRU 3 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLUORESCENT ORANGE SHEETING. SIGN 4 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF REFLECTIVE WHITE SHEETING.
3. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
4. THE LAST TRAIL VEHICLE IN THE WORK TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
5. WHEN MORE THAN TWO LANES ARE TO BE CLOSED, SIGN 1 SHALL AGREE WITH THE NUMBER OF LANES CLOSED AND ADDITIONAL TRAIL VEHICLES SHALL BE USED.
6. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE WORK TRAIN.
7. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
8. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS. BID ITEMS AND UNIT TO BID REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

LEGEND

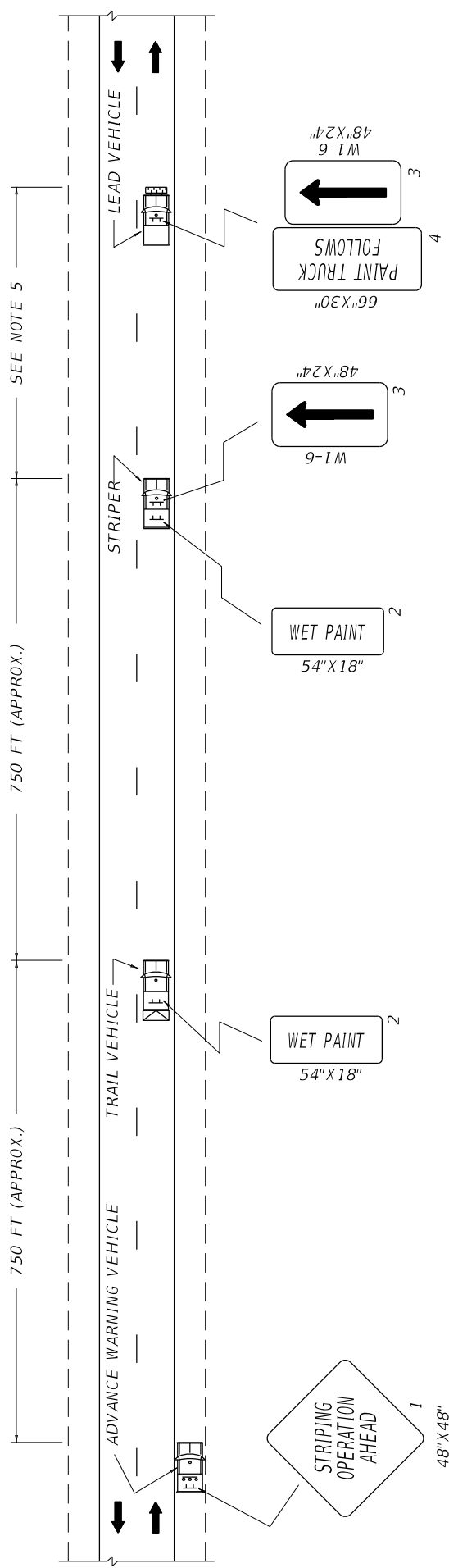
- 3 FLASHING ARROW PANEL
- 1 SIGN
- 2 TRUCK MOUNTED ATTENUATOR

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS
MOBILE OPERATION FOR DURABLE STRIPING CASE II
STANDARD DRAWING NO. TTS-125-02
SUBMITTED BY <i>R. G. W. J.</i> 12-01-15
DIRECTOR OF TRANSPORTATION OPERATIONS
APPROVED <i>[Signature]</i> 12-01-15
DATE

APPLICATION

THIS DRAWING APPLIES TO DURABLE STRIPING OPERATIONS INVOLVING MULTIPLE LANE CLOSURES ON MULTI-LANE ROADWAYS.



LEGEND

- ⊢ SIGN
- ⊠ TRUCK MOUNTED ATTENUATOR
- ⊡ SWEEPER/BLOWER
- ⊢ FLASHING ARROW PANEL

~ NOTES ~

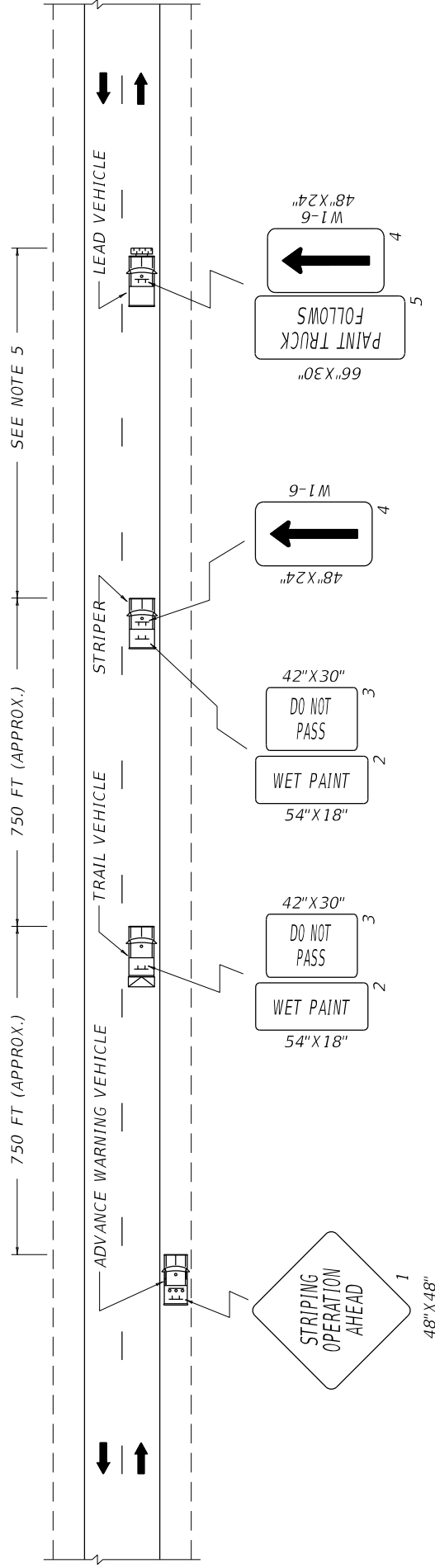
1. OPERATE FLASHING ARROW PANEL IN CAUTION MODE. THE ARROW PANEL SHALL BE TYPE B (60"X30") OR LARGER.
2. SIGNS 1 THRU 4 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLUORESCENT ORANGE SHEETING.
3. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
4. THE LAST TRAIL VEHICLE IN THE WORK TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
5. THE LEAD VEHICLE SHALL MAINTAIN VISUAL CONTACT WITH THE STRIPER WHENEVER POSSIBLE TO COORDINATE ON AND OFF THE ROAD MANEUVERS. THE WORK TRAIN SHALL BE REQUIRED TO PULL OFF THE ROADWAY PERIODICALLY TO ALLEVIATE TRAFFIC CONGESTION.
6. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE WORK TRAIN.
7. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
8. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

DRAWING NOT TO SCALE

APPLICATION

THIS DRAWING APPLIES TO DURABLE STRIPING OPERATIONS ON TWO-LANE, TWO-WAY ROADWAYS INVOLVING THE PLACEMENT OF EDGE LINES ONLY.

KENTUCKY DEPARTMENT OF HIGHWAYS	STANDARD DRAWING NO. TTS-130-02
MOBILE OPERATION FOR DURABLE STRIPING CASE III	SUBMITTED BY <i>R. G. W. J. J.</i> 12-01-15 DIRECTOR OF TRANSPORTATION OPERATIONS
	APPROVED BY <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER



LEGEND

- 1 SIGN
- 2 TRUCK MOUNTED ATTENUATOR
- 3 SWEEPER/BLOWER
- 4 FLASHING ARROW PANEL

~ NOTES ~

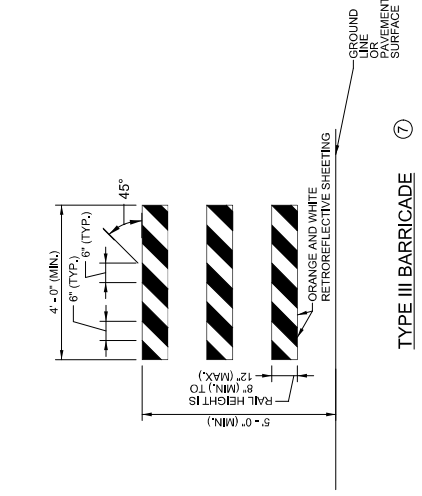
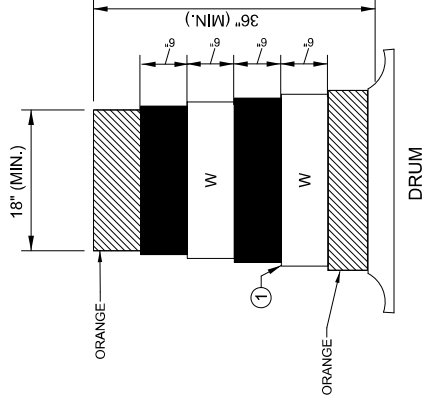
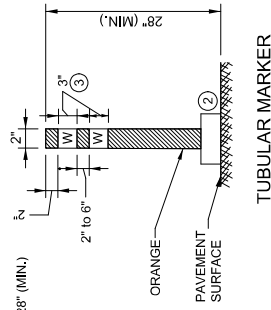
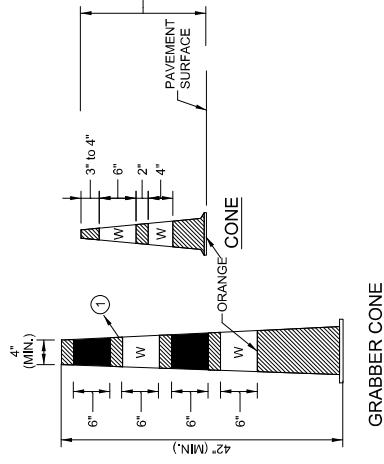
1. OPERATE FLASHING ARROW PANEL IN CAUTION MODE. THE ARROW PANEL SHALL BE TYPE B (60"X30") OR LARGER.
2. SIGNS 1, 2, 4, AND 5 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF FLUORESCENT ORANGE SHEETING. SIGN 3 SHALL HAVE A BLACK BORDER AND LEGEND ON A BACKGROUND OF REFLECTIVE WHITE SHEETING.
3. ALL VEHICLES IN THE STRIPING TRAIN SHALL BE EQUIPPED WITH HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON THE CAB.
4. THE LAST TRAIL VEHICLE IN THE WORK TRAIN SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR (T.M.A.) IF LANES ARE 10' WIDE OR GREATER.
5. THE LEAD VEHICLE SHALL MAINTAIN VISUAL CONTACT WITH THE STRIPER WHENEVER POSSIBLE TO COORDINATE ON AND OFF THE ROAD MANEUVERS. THE WORK TRAIN SHALL BE REQUIRED TO PULL OFF THE ROADWAY PERIODICALLY TO ALLEVIATE TRAFFIC CONGESTION.
6. TWO-WAY RADIO COMMUNICATION SHALL BE MAINTAINED BETWEEN ALL VEHICLES IN THE WORK TRAIN.
7. THE SPACING BETWEEN VEHICLES IN THE WORK TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY APPLIED LINE.
8. VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS. BID ITEMS AND UNIT TO BID REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

APPLICATION

THIS DRAWING APPLIES TO DURABLE STRIPING OPERATIONS ON TWO-LANE, TWO-WAY ROADWAYS INVOLVING THE PLACEMENT OF EITHER THE CENTERLINE ONLY OR A COMBINATION OF THE CENTERLINE AND EDGE LINE.

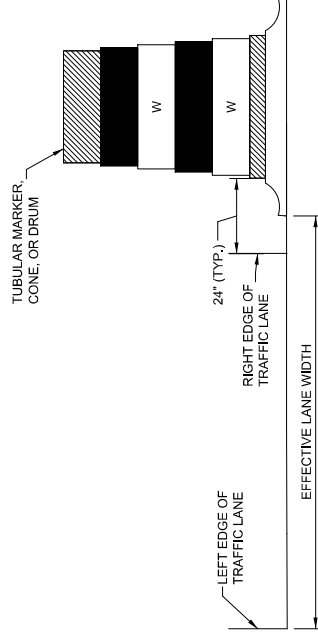
KENTUCKY DEPARTMENT OF HIGHWAYS	STANDARD DRAWING NO. TTS-135-02
MOBILE OPERATION FOR DURABLE STRIPING CASE IV	SUBMITTED BY <i>R. G. G. G.</i> 12-01-15 DIRECTOR OF OPERATIONS
	APPROVED <i>[Signature]</i> 12-01-15 STATE HIGHWAY ENGINEER

DRAWING NOT TO SCALE



~NOTES~

- ① THE MAXIMUM DISTANCE BETWEEN THE EDGES OF ADJACENT RETROREFLECTIVE SHEETING STRIPS SHALL BE 3 INCHES.
- ② KEEP BALLAST TO A MINIMUM BASE AREA NEEDED THAT WILL NOT IMPEDE THE TRAVEL LANE.
- ③ FOR TUBULAR MARKERS 42" OR TALLER, USE 6" ALTERNATING ORANGE AND WHITE STRIPES WITH THE TOP STRIPE BEING ORANGE.
4. RETROREFLECTIVE SHEETING FOR CHANNELIZING DEVICES UTILIZED IN HIGHWAY WORK ZONES SHALL BE TYPE IV OR HIGHER.
5. CHANNELIZING DEVICES SHALL SATISFY MASH CRASH EVALUATION CRITERIA.
6. THE NAME AND PHONE NUMBER OF THE CONTRACTOR OR SUPPLIER MAY BE DISPLAYED ON THE NON-REFLECTIVE SURFACE OF CHANNELIZING DEVICES. THE LETTERS AND NUMBERS SHALL BE NON-REFLECTIVE AND NOT OVER 2 INCHES IN HEIGHT.
7. WHERE BARRICADES EXTEND ENTIRELY ACROSS A ROADWAY, THE STRIPS SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH ROAD USERS MUST TURN, WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE BARRICADE STRIPS SHOULD SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE ROAD. WHERE ONLY ONE TURN IS INTENDED, THE STRIPS SHOULD BE ORIENTED TO SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.



~LEGEND~

W = WHITE RETROREFLECTIVE SHEETING
FO = FLUORESCENT ORANGE RETROREFLECTIVE SHEETING