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.

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**SIGNING AND SPACING TABLE**

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
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<tbody>
<tr>
<td>Expressway/Freeway</td>
<td>1000’</td>
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<td>1100’</td>
<td>2600’</td>
</tr>
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<td>Sp. Lt. 45 MPH*</td>
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</tbody>
</table>

*Note: Use normal posted speed limit

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**NOTES**

- Refer to Section 112 of Standard Specifications for Road and Bridge Construction, current edition.
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
- Lane closure: Each
- Temp signal: Each
- Barricade type-III: Each

Refer to section 112 of standard specifications for road and bridge construction, current edition.

**NOTE:** Use normal posted speed limit

**Table:**

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<th>C</th>
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<td>250'</td>
<td>500'</td>
<td>500'</td>
</tr>
</tbody>
</table>
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 lane closure each.

Refer to section 112 of standard specifications for road and bridge construction, current edition.

--- NOTES ---

*NOTE: USE NORMAL POSTED SPEED LIMIT
ROAD LEFT LANE CLOSED


drawings not to scale

signs and spacing table

road type:

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>l</th>
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</thead>
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<tr>
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<td>1000'</td>
<td>500'</td>
<td>1100'</td>
<td>2600'</td>
<td>840'</td>
</tr>
<tr>
<td>freeway</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sp. lt. 45 mph*</td>
<td>500'</td>
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<td>500'</td>
<td>1100'</td>
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*note: use normal posted speed limit
1. The size of signs 1 thru 4 shall be 48" x 48" with 30" x 24" supplemental plaques for expressways/freeways. The minimum size of signs 1 thru 4 shall be 36" x 36" with 24" x 18" supplemental plaques 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.

2. When more than two lanes are to be closed, signs 2 and 3 shall agree with the number of lanes closed. Additional transition signs and accompanying arrow panels shall be used accordingly. Additional tapers and tangents for channelizing devices shall be the same as those shown.

3. The advisory speed limit on sign 3 shall be 10 mph less than the normal speed limit unless otherwise directed by the engineer.

4. 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.

5. Spacing of the channelizing devices thru the merging tapers should be 40'. Spacing of the channelizing devices thru the remainder of the closure should be 80'.

6. Arrow panel no. 1 shall be located on the shoulder at the beginning of the first merging taper. If the shoulder is narrow, arrow panel no. 1 shall be located in the first closed lane. Arrow panel no. 2 shall be placed in the first closed lane at the beginning of the second merging taper. If arrow panel no. 1 is installed in the first closed lane, arrow panel no. 2 shall be placed in the second closed lane at the downstream end of the second merging taper.

7. If arrow panel no. 1 is installed on the shoulder or within the clear zone, 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. If duration of lane closure exceeds three days, temporary edge line shall be required and skip lines shall be obliterated by approved method thru the length of tapers. Other conflicting pavement markings shall be obliterated.

9. Buffer space (optional). Refer to table 6C-2 of the MUTCD for guidance on buffer space length.

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.

<table>
<thead>
<tr>
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<th>C</th>
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<tbody>
<tr>
<td>EXPRESSWAY/FREeway</td>
<td>1000</td>
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<td>250'</td>
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</tbody>
</table>

*NOTE: USE NORMAL POSTED SPEED LIMIT
~ 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 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 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.

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

<table>
<thead>
<tr>
<th>DESIGN SPEED</th>
<th>70 MPH</th>
<th>60 MPH</th>
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<tbody>
<tr>
<td>FLARE RATE</td>
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<td>14:1</td>
<td>11:1</td>
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SIGNING AND SPACING TABLE

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*NOTE: USE NORMAL POSTED SPEED LIMIT
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 60'.

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)
(NOTES CONTINUED FROM CUR. STD. DWG. TTC-140)

7. IF AN ARROW PANEL IS INSTALLED ON THE SHOULDER OR WITHIN THE CLEAR ZONE, 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. OBLITERATE SKIP LINES THRU THE LENGTH OF TAPERS BY APPROVED METHOD.

9. OBLITERATE EXISTING CENTER LINE BY AN APPROVED METHOD. OTHER CONFLICTING PAVEMENT MARKINGS SHALL BE OBLITERATED.

10. TEMPORARY TRAFFIC BARRIER SHALL BE USED ON TAPER IF CROSSOVER REMAINS IN PLACE OVERNIGHT. IN URBAN AREAS WITH LOW OPERATING SPEEDS WHERE THE USE OF THE BARRIER RESULTS IN REDUCED LANE WIDTHS OR WHERE THE BARRIER INTERFERES WITH ACCESS TO ADJOINING PROPERTY, DRUMS OR TUBULAR MARKERS MAY BE USED IN LIEU OF TEMPORARY TRAFFIC BARRIER.

11. WHEN CHANNELIZING DEVICES ARE USED TO SEPARATE OPPOSING TRAFFIC, TWO-WAY TRAFFIC SIGNS SHALL BE REPEATED EVERY MILE.

12. WHEN TEMPORARY TRAFFIC BARRIER IS CONTINUOUS THROUGHOUT THE CLOSURE ZONE, THESE SIGNS SHALL BE ELIMINATED.

13. REVERSE TURN SIGN (W1-3) SHALL BE USED IN LIEU OF REVERSE CURVE SIGN WHEN THE ADVISORY SPEED IS 30 MPH OR LESS.

14. CHANNELIZING DEVICES SHALL BE EXTENDED BEYOND THE TRANSITION AREA FOR A DISTANCE EQUAL TO TWO TIMES THE NORMAL POSTED SPEED LIMIT.

15. 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.

16. THE COLOR OF BARRIER WALL DELINEATORS SHALL MATCH THE COLOR OF THE EDGE LINE THAT THEY SUPPLEMENT.

BID ITEMS AND UNIT TO BID
BARICADE TYPE-III EACH
ARROW PANEL EACH
CROSSOVER LUMP SUM

REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
~ 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 "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 CLOSURE.
   (NOTES CONTINUED ON CURRENT STD. DWG. TTC-146)

~ APPLICATION ~

THIS DRAWING APPLIES TO A MEDIAN CROSSES ON MULTI-LANE
HIGHWAYS WITH A MEDIAN WIDTH GREATER THAN 10 FEET.
1. Crash Cushion shall be installed parallel to the approach lane of traffic.
2. If an arrow panel is installed on the shoulder or within the clear zone, a shoulder taper shall be required. Taper length shall be 0.33 L. Spacing of channelizing devices thru the shoulder taper should be 40'.
3. Obliterate skip lines thru the length of tapers by approved method. Other conflicting pavement markings shall be obliterated.
4. Crash Cushion shall be required when the end of the barrier wall is within clear zone (refer to roadside design guide).
5. When channelizing devices are used to separate opposing traffic, two-way traffic sign(s) shall be repeated every mile.
6. Reverse turn sign (W1-3) shall be used in lieu of reverse curve sign when the advisory speed is 30 MPH or less.
7. When temporary traffic barrier is continuous throughout the closure zone, these signs shall be eliminated.
8. Channelizing devices shall be extended beyond the transition area for a distance equal to two times the normal posted speed limit.
9. 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.
10. Thin asphalt overlay to be used as directed by the engineer.
11. The color of barrier wall delineators shall match the color of the edge line that they supplement.

Bid items and unit to bid:
- BARRICADE TYPE-III: EACH
- ARROW PANEL: EACH
- CROSSOVER: LUMP SUM

Refer to section 112 of standard specifications for road and bridge construction, current edition.
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 barricade type-III each diversion lump sum.

Refer to Section 112 of Standard Specifications for Road and Bridge Construction, current edition.

--- NOTES ---

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</tr>
</tbody>
</table>

*NOTE: Use normal posted speed limit
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.

~ NOTES ~

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

LEGEND

- BI-DIRECTIONAL (YELLOW)
- 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 ~

1. 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.

2. Arrangement “B” shall be applied when the existing pavement has been removed adjacent to traffic (including bridge ends and other spot improvements).

3. 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 IV A (BW, BY, MW, MY) TEMP each.

Legend

- Mono-directional (white)
- Markings (yellow)
- Markings (white)
AUTOMATED FLAGGER ASSISTANCE DEVICES (AFADS) SHALL CONFORM TO CHAPTER 6E OF THE MUTCD. WHEN AFADS ARE USED AT NIGHT, THE LAMPS ON THE AFADS SHALL BE ILLUMINATED IN ACCORDANCE WITH SECTION 6E.08 OF THE MUTCD. AFADS SHALL BE OPERATED BY A SINGLE FLAGGER IF THE FLAGGER HAS AN UNOBSTRUCTED VIEW OF BOTH AFADS AND APPROACHING TRAFFIC. AFADS MAY BE OPERATED IN BOTH DIRECTIONS OR BY SEPARATE FLAGGERS NEAR EACH DEVICE'S LOCATION. AFADS MAY BE USED TO PROVIDE A QUEUE OF STOPPED VEHICLES. THE BOTTOM OF THE SIGNAL HOUSING SHALL BE AT LEAST 15 FEET ABOVE THE PAVEMENT. FOR OVERHEAD INSTALLATIONS, THE BOTTOM OF THE SIGNAL HOUSING SHALL BE AT LEAST 50 FEET ABOVE THE PAVEMENT. SPACING OF CHANNELIZING DEVICES THRU THE CONSTRUCTION ZONE SHOULD BE 20'. SPACING OF CHANNELIZING DEVICES SHOULDN'T EXCEED 100'. THE STEADY CIRCULAR YELLOW CHANGE INTERVAL SHOULD HAVE A DURATION OF AT LEAST 5 SECONDS. DRUMS OR 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. 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. THE BOTTOM OF THE SIGNAL HOUSING SHALL BE AT LEAST 15 FEET ABOVE THE PAVEMENT. FOR OVERHEAD INSTALLATIONS, THE BOTTOM OF THE SIGNAL HOUSING SHALL BE AT LEAST 50 FEET ABOVE THE PAVEMENT. SPACING OF CHANNELIZING DEVICES SHOULD BE 20'. SPACING OF CHANNELIZING DEVICES IN THE CONSTRUCTION ZONE SHOULD BE 20'.
APPLICATION
IN ACCORDANCE WITH KRS 189.2327, IN ORDER FOR FINES TO BE DOUBLED IN A HIGHWAY WORK ZONE, WORK ZONE SIGNS AND DOUBLE FINE SIGNS MUST BE DISPLAYED AND AT LEAST ONE (1) BONA FIDE WORKER MUST BE PRESENT.

~ NOTES ~
1. THE BEGIN AND END DOUBLE FINES SIGNS SHALL BE 48" X 60" FOR FREEWAYS, 36" X 48" FOR EXPRESSWAYS, AND 24" X 30" FOR OTHER ROADWAYS. "WHEN FLASHING" PLAQUES SHALL BE 48" X 18" FOR FREEWAYS, 36" X 18" FOR EXPRESSWAYS, AND 24" X 10" FOR ALL OTHER ROADWAYS.
2. SIGNS SHALL HAVE A WHITE BACKGROUND AND SHALL BE MOUNTED AT ELEVATIONS AND OFFSETS PRESCRIBED IN THE MUTCD.
3. USE ENGINEERING JUDGMENT WHEN DETERMINING THE LIMITS OF DOUBLE FINE ZONES. FOR SHORT LENGTH PROJECTS WHERE WORK WILL OCCUR THROUGHOUT THE PROJECT LIMITS, LOCATE "BEGIN DOUBLE FINES ZONE" SIGN ASSEMBLY BETWEEN THE LAST ADVANCE WARNING SIGN AND THE BEGINNING OF THE ACTIVITY AREA AND LOCATE THE "END DOUBLE 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 WITH ACTIVE CONSTRUCTION.
4. SIGNS SHALL BE DUAL-MOUNTED ON MULTI-LANE HIGHWAYS WHERE MEDIAN IS WIDE ENOUGH TO MAINTAIN LATERAL CLEARANCES AS PRESCRIBED IN THE MUTCD. WHERE CONSTRUCTION ONLY AFFECTS ONE DIRECTION OF A DIVIDED HIGHWAY WITH A BARRIER OR WIDE MEDIAN, SIGNS SHALL NOT BE ERECTED FOR OPPOSING DIRECTION.
5. ADDITIONAL SIGNS MAY BE REQUIRED FOR LONG CONSTRUCTION ZONES OR WHERE RAMPS OR INTERSECTING STREETS JUNCTION WITHIN THE PROJECT LIMITS.
6. BEGIN DOUBLE FINE SIGN ASSEMBLIES MAY INCLUDE A "WHEN FLASHING" PLAQUE AND FLASHING BEACONS. BEACONS SHALL BE YELLOW AND TWELVE (12") INCHES IN DIAMETER, BE MOUNTED HORIZONTALLY NEAR THE TOP OF THE SIGN ASSEMBLY, AND SHALL FLASH ALTERNATELY. BEACONS SHALL CONFORM TO PART 4L OF THE MUTCD.
7. "BEGIN DOUBLE FINES ZONE" SIGNS SHOULD BE COVERED IF A BONA FIDE WORKER WILL NOT BE PRESENT FOR A SIGNIFICANT PERIOD OF TIME. IN SUCH CASES, ASSEMBLIES WITH FLASHING BEACONS SHALL BE TURNED OFF.

BID ITEM UNIT TO BID
SIGNS SOFT
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 GRINDING 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.
1. Reduced speed zones should be used only in specific portions of the work zone where conditions or restrictive features are present. Lowering the regulatory speed limit should be avoided as much as practical because drivers reduce their speeds only if they clearly perceive a need to do so.

2. Speed limit may be reduced by 15 mph without a traffic engineering investigation on highways where the normal posted speed limit is 70 mph. The speed limit may be reduced by 10 mph without a traffic engineering investigation on other highways.

3. A speed reduction (W3-5) sign shall be installed in advance of a work zone with a temporary work zone speed limit. Signs shall be dual-mounted on multi-lane highways where median is wide enough to maintain lateral clearances as prescribed in the MUTCD. The speed limit displayed on the sign shall match the desired speed limit through the work zone.

4. If the end of the reduced speed zone does not coincide with the "end road work" sign, an "end work zone speed limit" (R2-12) or a "speed limit" (R2-1) sign displaying the normal posted speed limit should be installed at the end of the reduced speed zone.

5. Speed limit assemblies may include a "when flashing" plaque and flashing beacons. Beacons shall be yellow, at least eight (8) inches in diameter, and mounted vertically. Beacons shall flash alternately and conform to part 4L of the MUTCD.

6. If a speed limit is to apply to the entire length of the work zone, the speed reduction (W3-5) sign should be installed between the first and second advance warning sign, and the speed limit (R2-1) sign or flasher assembly should be installed between the second and third advance warning sign. If a speed limit only applies to a short section of a longer work zone, the W3-5 sign should be mounted approximately 500 feet in advance of the speed limit sign assembly and no closer than 250 feet to any other signs.

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~ 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.
   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.
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 striping 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.
~ NOTES ~

1. FLASHING 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.
~ 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 FLUORESCENT 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 PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY PAINTED LINE.

8. **THE最后一 TRAIL VEHICLE** IN THE STRIPING TRAIN SHOULD BE ADJUSTED, AS NEEDED, TO PROVIDE ADEQUATE SIGHT DISTANCE TO APPROACHING VEHICLES AND TO PROTECT THE FRESHLY PAINTED 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 EITHER THE PLACEMENT OF LANE LINES ONLY OR A COMBINATION OF LANE LINES AND EDGE LINES.**
DRAWING NOT TO SCALE

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. 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.

MOBILE OPERATION FOR DURABLE STRIPING CASE 1

KENTUCKY DEPARTMENT OF HIGHWAYS

STANDARD DRAWING NO. TTS-120-02

12-01-15

APPROVED
This drawing applies to durable striping operations involving multiple lane closures on multi-lane roadways.

**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.

Refer to section 112 of standard specifications for road and bridge construction, current edition.
- 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 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.
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.
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.

APPLICATION

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