<table>
<thead>
<tr>
<th>TYPE</th>
<th>SIGN SUPPORT</th>
<th>SIGN CONSTRUCTION</th>
<th>MINIMUM MOUNTING HEIGHT</th>
<th>USAGE LIMITATIONS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST</td>
<td>PERFORATED SQUARE STEEL TRUSS CHANNEL</td>
<td>FIXED</td>
<td>5′ RURAL UNDIVIDED HIGHWAYS</td>
<td>NO IDEAS ON BARRIERS ZONE</td>
<td>MUST BE FREE OF ANY BRACING AND \ NEETING NO FURTHER ABOVE THE SIGN. EXCEPT AS NEEDED FOR MOUNTING LIGHT ATTACHMENT. DEPENDS ON POST INSTALLATION DETAILS. SEE SHEET [N]. CARDINALIZATION OF POSTS WILL NOT BE REQUIRED.</td>
</tr>
<tr>
<td>TYPE 1 PORTABLE</td>
<td>8′ SQUARE STAND</td>
<td>FIXED</td>
<td>5′ RURAL UNDIVIDED HIGHWAYS</td>
<td>PERMITTED ONLY WHERE POST MOUNTING IS NOT FEASIBLE.</td>
<td>SYSTEMS SHALL COMPLY WITH CRASH TEST REQUIREMENTS OF NCHRP 350 TEST LEVEL 3 AND MAY BE PLACED SUBJECT TO BE WITHIN THE ROADWAY PROVIDE A MINIMUM LATERAL CLEARANCE OF 3 FEET, MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF THE DESIGNATED TRAVELER PATH. IS MAINTAINED.</td>
</tr>
<tr>
<td>TYPE 2 PORTABLE</td>
<td>8′ SQUARE STAND</td>
<td>FIXED</td>
<td>5′ RURAL UNDIVIDED HIGHWAYS</td>
<td>PERMITTED ONLY FOR INSTALLATION UP TO 3 YEARS, WHERE SIGNS ARE REQUIRED BY OTHER OBJECTIVES, I.E., TRAFFIC CONTROL DEVICES, PARKED VEHICLES, VEHICLES, ETC., BE INSTALLED IN MULTI-LANE UNDIVIDED FACILITIES WITH 2 OR MORE LANES IN ONE DIRECTION. MOUNTING HEIGHTS SHALL BE AS SPECIFIED FOR POST-MAINTAINED SIGNS.</td>
<td>SYSTEMS SHALL COMPLY WITH CRASH TEST REQUIREMENTS OF NCHRP 350 TEST LEVEL 3 AND MAY BE PLACE SUBJECT TO BE WITHIN THE ROADWAY PROVIDE A MINIMUM LATERAL CLEARANCE OF 3 FEET, MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF THE DESIGNATED TRAVELER PATH. IS MAINTAINED.</td>
</tr>
<tr>
<td>BARRIER</td>
<td>CONCRETE TRAFFIC BARRIER CUSHION</td>
<td>FLEXIBLE</td>
<td>5′ RURAL UNDIVIDED HIGHWAYS</td>
<td>PERMITTED ONLY WHERE LONGITUDINAL BARRIERS IS PRESENT.</td>
<td>SYSTEMS SHALL PROVIDE POSITIVE CONNECTION TO THE BARRIER AND MINIMIZE POTENTIAL FOR VEHICLE SHATTERING.</td>
</tr>
<tr>
<td>VEHICLE</td>
<td>PAVEMENT MARKING EQUIPMENT PILOT CAR PROTECTIVE VEHICLE</td>
<td>FLEXIBLE</td>
<td>4′6″ (6′)</td>
<td>PERMITTED ONLY IN PILOT CAR OR MOVING OPERATIONS.</td>
<td></td>
</tr>
</tbody>
</table>
USE OF SPICE IS OPTIONAL.
SPICE OVERLAP SHALL BE POSITIONED ENTIRELY BETWEEN GROUND LINE AND 1/2 ABOVE GROUND LINE.

+ IF A PLACARD IS USED, NEITHER THE SIGN NOR PLACARD SHALL BE POSITIONED WITHIN THE SPICE OVERLAP AREA.
ONLY ONE SPICE WILL BE ALLOWED PER POST.

**POST TYPE**

<table>
<thead>
<tr>
<th>SIGN AREA</th>
<th>U-CHANNEL</th>
<th>WOOD</th>
<th>PERFORATED SQUARE STEEL TUBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.10</td>
<td>1 - 3.0 LB/FT²</td>
<td>1 - 4” X 4”</td>
<td>1 - 2” X 2” 12 GA</td>
</tr>
<tr>
<td>&gt; 10.16</td>
<td>2 - 5.0 LB/FT²</td>
<td>2 - 4” X 4”</td>
<td>2 - 2” X 12 GA</td>
</tr>
<tr>
<td>&gt; 20.24</td>
<td>3 - 7.0 LB/FT²</td>
<td>3 - 4” X 4”</td>
<td>3 - 2” X 12 GA</td>
</tr>
<tr>
<td>&gt; 24.32</td>
<td>4 - 9.0 LB/FT²</td>
<td>4 - 6” X 6”</td>
<td>4 - 2” X 12 GA</td>
</tr>
<tr>
<td>&gt; 30.50</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* SIGNS GREATER THAN 4 FEET IN WIDTH. EXCEPT DIAMOND SHAPED SIGNS. REQUIRE THE POSTS.

++ REQUIRES SLIP BASE PER MANUFACTURER’S RECOMMENDATION.

**U-CHANNEL POST DETAIL**

- 6" X 6" WOOD POST - NO SLOTS OR HOLES REQUIRED
- 6" X 6" WOOD POST - 1/2" X 1/2" SLOT ON 6" SIDE OR 1/2" DIAM. HOLE ON 6" SIDE
- 6" X 6" WOOD POST - 2" X 1/2" SLOT OR 2" DIAM. HOLE
- SLOT ACROSS NEUTRAL AXIS FORMED BY SUCCESSIVE DRILLING WITH 1/2” BIT.

**WOOD POST DETAIL**

- MONUMENT BOLT ON THE FACE OF POST
- GROUND LINE

**PERFORATED SQUARE STEEL TUBE POST DETAIL**

- THE SIGN POST MAY BE ATTACHED TO THE ANCHOR WITH A CORNER BOLT OR STRAIGHT BOLT PER MANUFACTURER’S SPECIFICATION.

**GENERAL NOTES**

- ALL SIGNS SHALL BE ERECTED A MINIMUM OF 3 FEET.
- SIGN INSTALLATION DETAILS SHOWN SHALL APPLY TO ALL POSTS IN A MULTI-POST INSTALLATION.

- THE ENGINEERS DISCRETION & FLUORESCENT PAINT SHALL BE APPLIED HEAVILY TO BOTH SIDES OF U-CHANNEL POST FOR A LENGTH OF AT LEAST 6 INCHES BELOW THE TOP OF THE SIGN.

**MISOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

**TEMPORARY TRAFFIC CONTROL DEVICES POST INSTALLATION DETAILS**

- SHEET NO: 2 OF 9
- DATE: 9/30/2021
- SHEET: 616.0A4
**Advance Warning Rail System**

**Maximum Weight of Sign:** Shall not exceed 25 lbs.

The sign and rail system may be installed as two separate crashworthy devices. The rail system shall be located directly in front of the sign with 1 to 10 feet separating the two devices.

Where warning is provided on the rearside, steps of 3½ wide metal type IV orange sheeting may be applied to the ends of each rail to help delineate the device.

White and orange reflective sheeting shall be in accordance with Sec. 1042.2.1.4.

**Cone:** Cones shall maintain their shape upon exposure to normal work conditions.

Cones shall be used during daylight hours only.

**Cone Size:** Shall maintain their shape upon exposure to normal work conditions.

**Advance Warning Light:** (Paid separately, when required)

**General Notes:**

White, orange, and fluorescent orange reflective sheeting shall be in accordance with Sec. 1042.2.1.4.

Ballast for traffic control devices shall conform to manufacturer's recommendations for field conditions when applicable.

If used, the warning light unit and battery compartment shall be furnished by the device manufacturer or otherwise meet the manufacturer's recommendations for design and will be required on all devices in the series.

Warning lights shall be in accordance with Sec. 1063.5.

Upon approval of the engineer, the contractor may, at no additional cost, use direction indicator barricades in lieu of two-line channelizers or to provide longitudinal channelization within the activity area where no ramps, intersections, or limited lateral clearance exists.

Upon approval of the engineer, the contractor may, at no additional cost, use vertical panels in lieu of trim-line channelizers in working areas.

Upon approval of the engineer, the contractor may, at no additional cost, use vertical panels in lieu of trim-line channelizers to provide longitudinal channelization within the activity area.

Upon approval of the engineer, the contractor may, at no additional cost, use vertical panels in lieu of trim-line channelizers during daylight operations on minor routes.

Panel and rail markings for traffic delineation shall slope downward toward the intended direction of travel. Illustrations shown are for guidance where traffic moves to the left. Other configurations shall be used for traffic movements to the right. Markings shall only be applied to the front of each rail or panel and may be applied to both the front and back projecting the marking on the back does not conflict with intended opposing traffic movement.

**Temporary Traffic Control Devices**

**Channelizers and Direction Indicator Barricades**

**Effective Date:** 11/01/2014

**Sheet:** 3 of 9

**Sheet No.:** 616.10AY

**Must Be Certified:** Kansas City, MO 64103

1-888-468-MODOT (6636) 101 West Capital

Missouri Highways and Transportation Commission
TWO LANE / TWO WAY TRAFFIC DELINEATION PLAN
FOR DIVIDED HIGHWAY

IF RAISED PAVEMENT MARKERS ARE PRESENT, THE LEDGES
SHALL BE REMOVED OR COVERED TO THE SATISFACTION
OF THE ENGINEER.

SECTION A-A
TUBULAR DELINATOR DETAIL

An adhesive, in accordance with the manufacturer's recommendations,
shall be used to apply the tubular delineator to the roadway surface.
The adhesive shall permit easy removal of the tubular delineator without
corrosion to the roadway surface.

Reflective sheeting applied to tubular delineators shall be in accordance
with sec 1042.2.7.5.

CHANGEABLE MESSAGE SIGN

TYPE 3 OBJECT MARKERS
FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE
IN ACCORDANCE WITH SEC 1042.2.7.5.
<table>
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<tr>
<th>SIGN</th>
<th>SITE</th>
<th>AREA</th>
<th>SHEETING</th>
<th>COLOR</th>
<th>BACKGROUND</th>
<th>DESIGNATION</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>MO-FL</td>
<td>4824</td>
<td>16.0</td>
<td>ATM</td>
<td>H</td>
<td>OR</td>
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**Temporary Traffic Control Devices**

**Warning Signs**

**General Notes:**
- Sign layouts shall be in accordance with the latest editions of "Standard Highway Signs" by the U.S. Department of Transportation, unless specified otherwise.
- Sign dimensions shown are nominal. No additional paint will be used if contractors use larger signs.
- No additional paint will be used for platters. All platters shall have a border. Platters shall not have a border.

**Missouri Highways and Transportation Commission**

**Temporary Traffic Control Devices**

**Warning Signs**

**Sheet No:** 616.10AY

**Sheet Date:** 6 OF 9
<table>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGHT DISTANCE (FT)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**GENERAL NOTES:***

- **Sign Layouts shall be in accordance with the latest edition of "Standards Highway Signs" by the U.S. Department of Transportation.**
- **Sign Dimensions shown are minimum. No additional pavement or boxes will be necessary if contractors use larger signs.**

**NO ADDITIONAL PAINT WILL BE NEEDED IF CONTRACTORS USE LARGER SIGNS.**

[Missouri Highways and Transportation Commission](https://www.mdot.gov)

**TEMPORARY TRAFFIC CONTROL DEVICES WARNING, GUIDE, AND REGULATORY SIGNS**

**SITE EFFECTIVE:** 06/24/2023

**616.10AY SHEET 7 OF 9**