KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, 1990 EDITION

SECTION 821

TRAFFIC CONTROL

Page 628, subsection 821.01. Delete the following bid items:

Advance Warning Flashing or Sequencing Arrow Panels	Each Per Day
Temporary Pavement Marking, Reflectorized	
100 mm Broken Lane Marking (*)	Per km/Line
100 mm Solid Lane Marking (*)	Per km/Line
Temporary Striping	Per km/Line
Object Markers	Each Per Day
Construction Barricades (Type I or II)	Each Per Day
Construction Barricades (Type III – 2.7 to 4.2 Lin. m)	Each Per Day
Reflectorized Drum	Each Per Day
Vertical Panels (Single Type)	Each Per Day
Vertical Panels (Back to Back Type)	Each Per Day
Tubular Markers	Each Per Day

Page 628, subsection 821.01. Add the following bid items:

Construction Sign (Special)	Each
Arrow Display	Each Per Day
Channelizer (Fixed)	Each Per Day
Channelizer (Portable)	Each Per Day
Pavement Marking (Temporary)	
100 mm Broken (2.5 m) (* Tape)	km/Line
100 mm Broken (2.5 m) (Paint)	km/Line
100 mm Solid (* Tape)	km/Line
100 mm Solid (Paint)	km/Line
100 mm Broken (1.0 m) (* Tape)	km/Line
100 mm Broken (1.0 m) (Paint)	km/Line
100 mm Broken (1.0 m) (Flexible Raised Pavement Marker)	km/Line
100 mm Dotted Extension (* Tape)	km/Line
100 mm Dotted Extension (Paint)	km/Line
Broken (Line Masking Tape)	km/Line

Solid (Line Masking Tape)	km/Line
Flagger (Set Price)	Hour
Pavement Marking Removal (Temporary) (Type II Tape)	meter
Pavement Marking Removal (Temporary) (Paint)	meter
Traffic Signal Installation (Temporary)	Lump Sum
Temporary Raised Pavement Marker (*)	Each
Traffic Control (Initial Set Up)	Lump Sum

Page 628, subsection 821.02. Add the following to this subsection:

Materials for temporary raised pavement markers shall conform to the following requirements:

(a) Temporary Raised Pavement Marker (Type I). The Type I marker shall be constructed of traffic bearing high impact plastic. The marker can vary in size to a maximum of approximately 100 mm x 100mm x 20mm. The marker shall be reflectorized with either an acrylic cube-corner retroreflector, or cube-corner microprism retroreflective sheeting material. The marker shall be the same color as the temporary pavement marking line it is to supplement. The markers must be readily visible at night when viewed with high beam automobile headlamps from a distance of at least 90 m. The marker shall be approved by the Engineer prior to use.

(b) Temporary Raised Pavement Marker (Type II). The Type II marker shall be constructed of traffic bearing high impact plastic. The size of the marker shall be approximately 300 mm x 100 mm x 65 mm. The marker shall be reflectorized either with two yellow acrylic cube-corner retroreflectors, or cube-corner microprism retroreflective sheeting material, per face. The markers must be readily visible at night when viewed with high beam automobile headlamps from a distance of at least 90 m. The marker shall be approved by the Engineer prior to use.

(c) Adhesive. The adhesive shall not stain the pavement and shall permit the marker to be easily removed without damage to the roadway surface. The adhesive shall be approved by the Engineer.

(d) Temporary Pavement Marking - Flexible Raised Pavement Marker. Materials for temporary pavement marking - flexible raised pavement markers shall conform to the following requirements: The marker body shall be made from approximately 1.5 mm thick polyurethane formed in an "L" shape. The base of the marker shall be approximately 100 mm wide by 28 mm long with a solid 3 mm thick butyl rubber adhesive pad protected with a release paper. The vertical portion of the marker shall be approximately 100 mm wide by 31 mm high. A cube-corner microprism reflective tape material shall be placed horizontally along both sides at the top of the vertical section of the marker. The reflective material shall be recessed in an "I-Beam" design to protect the reflective material from aggregate. A clear flexible polyvinyl chloride plastic cover is to be attached to the vertical section of the marker with a heavy duty staple to cover the reflective material during surfacing operations. The flexible raised pavement marker must be readily visible at night when viewed with high beam automobile headlamps from a distance of at least 90 m. The

flexible raised pavement marker shall be approved by the Engineer by visual acceptance prior to use.

Page 629, subsection 821.03. Insert the following paragraph after the seventh paragraph on this page:

Channelizing devices used for the channelization of traffic through the work area are broken into two categories: Channelizer (Fixed) and Channelizer (Portable). Fixed devices are devices that are physically adhered to the roadway with a glue or mounting hardware, or are embedded into the ground. Portable devices are devices that are self-standing and are held in place with ballast material that is either integral with the device or is applied on or around the base of the device. The individual types of devices that may be used for various situations are shown in the Traffic Control Plans.

When the Plans specify channelizer (fixed), only fixed channelizers may be used. When the plans specify channelizer (portable), the contractor has the option to use either fixed or portable devices, as approved by the Engineer.

Page 630, subsection 821.03. Delete the last two sentences of the fourth paragraph, and delete the fifth paragraph on this page.

Page 631, subsection 821.03. Insert the following paragraph after the fourth paragraph on this page:

Construction Signs (Special) are signs that have an area of 1.51 square meters or more, and whose legends are specific to the project for which they are fabricated. These signs will be designated in the Plans.

Page 634, subsection 821.03. Delete the first paragraph this page.

Page 634, subsection 821.03. Delete the fourth paragraph this page and the first paragraph, page 635, and replace with the following:

On construction projects where the movement of traffic through the project is necessary, the Contractor shall furnish and maintain temporary pavement markings as shown on the Plans, or as directed by the Engineer, or as proposed by the Contractor and approved by the Engineer. Temporary pavement markings shall consist of temporary pavement marking tape meeting the requirements of Subsection 2205 (Special Provision 90M-181, latest revision), unless otherwise specified in this Special Provision.

Type I tape is to be applied to a final surface (new pavement or any surface that will remain when the project is complete). When Type I tape is specified, only Type I tape will be allowed.

Type II tape is to be applied to a surface that is to be removed or covered by future construction.

Type IIA tape may be applied as temporary broken lines on intermediate bituminous surfaces only.

When Type II or Type IIA tape is specified, the Contractor has the option to use either Type I or Type II tape.

Line masking tape is to be applied to an existing surface to temporarily cover the existing pavement markings. The line masking tape shall be applied in widths or sizes sufficient to extend approximately 25 mm beyond the edges of the existing pavement markings.

The tape shall be applied according to the manufacturers' recommendations. The Contractor shall arrange for a technical representative of the tape manufacturer to be present during the initial installation of the tape. The manufacturers' technical representative shall remain on the project until such time that the Contractors' personnel and KDOT inspectors have been thoroughly trained in the proper installation of the various types of tape to be used on the project. After the tape has been rolled to the pavement, the Contractor shall cut the solid line markings at approximately 30 meter intervals. The cut shall be made through the entire width and thickness of the tape; this is intended to minimize loss of marking should a portion of the tape separate from the pavement.

When warranted by weather conditions (or other conditions that prevent tape from adhering to the pavement), the Engineer may authorize the use of paint or other materials for temporary pavement marking.

If painting is permitted, it shall conform to the requirements of Special Provision 90M-84, latest revision. When a change to paint is authorized by the Engineer, the unit price per unit for paint shall be the Contract price bid for the item.

The color of the markings shall be in accordance with the current edition of the M.U.T.C.D., and shall be easily visible in the daylight and dark.

The broken stripes shall have the following dimensions: broken (2.5 m) shall be approximately 2.5 m in length, with a gap of 7.5 m, and a repeating cycle of 10 m; broken (1.0 m) shall be approximately 1.0 m in length, with a gap of 9 m, and a repeating cycle of 10 m, or in the case of severe curvature, approximately 0.5 m in length, with a gap of 4.5 m, and a repeating cycle of 5 m; dotted extension lines shall be approximately 0.6 m in length, with a gap of 1.2 m, and a repeating cycle of 1.8 m.

Solid stripes and broken (2.5 m) stripes are intended for use on long term projects that are open to traffic under a different configuration than the original or final pavement markings. Broken (1.0 m) stripes are intended for use on intermediate lifts of bituminous surfacing projects where movement of traffic through the project is necessary, and on final surfaces that are opened to traffic prior to placing the permanent pavement markings. Broken (1.0 m) stripes placed on the final surface should be replaced with permanent pavement markings within two weeks. Dotted extension lines are intended to provide extra guidance through intersections or interchanges where the correct path to take may not be clear to the motorist.

Temporary pavement markings shall be placed as close as practical to the intended alignment and shall be parallel to the intended line. On bituminous surfacing projects where the

movement of traffic through the project is necessary, temporary markings shall be placed as soon as practical after each lift of bituminous material has been placed. Temporary markings placed on intermediate lifts of bituminous material shall be within approximately 300 mm of the intended alignment. Temporary markings placed on the final surface shall be within approximately 75 mm of the intended alignment.

If shown on the Plans, flexible raised pavement markers shall be used instead of tape. When used on a bituminous seal, place the flexible raised pavement markers on the roadway prior to the sealing operations. When used on all other surface treatments, place the flexible raised pavement markers on the new surface treatment. A group of three markers, spaced 0.5 m apart, with a gap of 9 m, and a repeating cycle of 10 m, or in the case of severe curvature, spaced 0.25 m apart, with a gap of 4.5 m, and a repeating cycle of 5 m, shall be used instead of the 1 m length of tape.

Unsatisfactory temporary pavement markings shall be removed and replaced by the Contractor, as directed by the Engineer. The markings shall be maintained by the Contractor until directed to be removed by the Engineer, or until they are removed or covered by construction. All temporary pavement markings must be removed prior to the placement of permanent pavement markings. When removal of the temporary pavement markings is required, the markings shall be removed without damaging the pavement surface.

Page 636, subsection 821.03. Add the following to this subsection:

If required, details for traffic signal installation (temporary) will be shown on the Plans.

The temporary raised pavement markers shall be installed at the locations shown on the Plans, the Traffic Control Plan, or as directed by the Engineer, or as proposed by the Contractor and approved by the Engineer.

When, in the opinion of the Engineer, any temporary raised pavement marker has been damaged or becomes deteriorated to the extent it is no longer effective due to dirt, grime, scarring or discoloration, it shall be replaced or cleaned as required, as soon as possible.

The temporary raised pavement markers shall be maintained by the Contractor until the Engineer orders their removal.

Page 636, subsection 821.04. Replace the second paragraph on this page with the following:

2. When bid items are shown in the Plans and Contract for individual traffic control devices used in traffic control, each sign, Type III barricade, arrow display, channelizer, and Type "B" high intensity warning light shall be measured by the unit, complete in place, each calendar day the device is required and is in place in an acceptable condition and position to meet all of the above requirements. A Type III barricade used at any location shall be in the length bracket of 1.2 m to 2.4 m. The actual length used shall be approved by the Engineer.

Page 637, subsection 821.04. Replace the seventh paragraph on this page with the following:

Uniformed flaggers specified by the Traffic Control Plan shown on the Plans (or alternate Traffic Control Plan developed by the Contractor and approved by the Engineer) shall be subsidiary to other items. If the Engineer determines that additional flaggers are required, each additional flagger will be measured for each hour they are required. Pilot cars will not be measured for payment, but shall be subsidiary to other bid items. Temporary traffic signals when used in lieu of flaggers will not be paid for, but shall be subsidiary to other items of the Contract. Temporary traffic signals and/or traffic signal installation (temporary), when shown on the Plans as a bid item or as part of the Traffic Control Plan, shall be measured as lump sum items; the location and number of signal heads required will be shown on the Plans.

Page 637, subsection 821.04. Add the following to this subsection:

Measurement for Construction Sign (Special) will be made when the special sign is first installed in place for traffic control and direction. No additional measurement will be made for relocating, repairing or maintaining the special signs.

Temporary raised pavement markers shall be measured by the number of markers complete in place. No additional measurement will be made for cleaning or replacement of markers.

If the Contractor opts to use Type I temporary pavement marking tape in place of Type II tape, as specifically allowed in subsection 821.03 (on surfaces that will be removed or covered), the Type I tape will be measured (and paid) as Type II temporary pavement marking tape.

Page 638, subsection 821.05. Replace the first two paragraphs of this subsection with the following:

Additional flaggers, measured as provided above, will be paid for at the Contract unit price set per hour for "Flagger", which price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work. Temporary raised pavement markers, measured as provided above, shall be paid for at the Contract unit price per each for "Temporary Raised Pavement Marker (*)", which price shall be full compensation for furnishing all materials, installing the markers, cleaning or replacing the markers (as required), removing the markers, and for all labor, equipment, tools and incidentals necessary to complete the work.

Signs and other traffic control devices (except temporary pavement markings), measured as provided above, will be paid for at the Contract unit price, which payment shall be full compensation for furnishing, installing, moving, cleaning, replacing, maintaining, and removing the various items, and for equipment, labor, and incidentals necessary to complete the work as specified.

Temporary pavement markings, measured as provided above, will be paid for at the Contract unit price, which payment shall be full compensation for furnishing, installing, and maintaining the various items (including all temporary striping and pavement marking required to be removed as a result of construction activities), and for equipment, labor, and incidentals necessary to complete the work as specified.

Removal of temporary pavement markings will be paid for at the Contract unit price, which price shall be full compensation for equipment, labor, and incidentals necessary to complete the work as specified.

Quantities shown in the Plans are for estimating purposes only. Quantities for Type III barricades are estimated assuming the use of 2.4 m barricades. No adjustments in the Contract unit price will be made regardless of the amount of underruns or overruns.

Page 638, subsection 821.05. Add the following to this subsection:

(d) Payment for "Construction Signs (Special)" will be made as follows:

On the first estimate following the initial installation of a "Construction Sign (Special)" the price bid per sign will be paid for each sign installed. Payment for a "Construction Sign (Special)" at the price bid is full compensation for the sign. A "Construction Sign (Special)" is not measured or paid on an "each per day" basis.

(e) Payment for "Traffic Control (Initial Set Up)" will be made as follows:

If the amount bid for this item is less than 25 percent of the sum of the amounts bid for all traffic control items, 100 percent of the amount bid for this item will be paid on the first estimate following physical work starting on the project.

If the amount bid for this item is 25 percent or greater than the sum of the amounts bid for all traffic control items, the amount equal to 25 percent of the sum of the amounts bid for all traffic control items will be paid on the first estimate following physical work starting on the project. Upon completion of all work on the project, 100 percent of the amount bid for this item will be paid.

11-12-01 C&M (MH/JAS)