

INDEX TO CLAUSES

PART 1 - GENERAL

- 1.1 Work Included
- 1.2 Related Sections
- 1.3 Reference Standards
- 1.4 Shop Drawings
- 1.5 Codes, Bylaws, Ordinances and Regulations
- 1.6 Certificates
- 1.7 Handling and Storage

PART 2 - PRODUCTS

- 2.1 General
- 2.2 Temporary Pavement Markings
- 2.3 Permanent Pavement Markings
- 2.4 Contact Cement

PART 3 - EXECUTION

- 3.1 General
- 3.2 Paint
- 3.3 Marking Tape
- 3.4 Temporary Pavement Markings
- 3.5 Arrows, Symbols and Letters

PART 1 - GENERAL

- 1.1 Work Included .1 This section specifies the requirements for the application of pavement markings. The Work consists of the furnishing of all materials, tools, equipment and labour to lay down pavement markings for the delineation and control of traffic.
- .2 Those materials which are not specified and/or indicated but are necessary for the complete installation of the work shall be deemed the responsibility of the Contractor and shall be included at no extra cost to the Contract.
- 1.2 Related Sections .1 S-1 Specification for Hot Mix Asphaltic Concrete.
- .2 S-2 Specification for Performance Graded Asphalt Binder.
- 1.3 Reference Standards .1 Uniform Traffic Control Devices for Canada, (4th Edition), latest revision.
- 1.4 Shop Drawings .1 Submit shop drawings in accordance with Section 01 10 00 for items listed in Supplementary Specifications.
- 1.5 Codes, Bylaws, Ordinances and Regulations .1 All work covered by this section shall be performed according to applicable Halifax Regional Municipality Codes, bylaws, Ordinances, and Regulations.
- .2 Nova Scotia Department of Transportation and Infrastructure Renewal "Temporary Work Place Traffic Control Manual" (latest revision).
- .3 HRM Traffic Control Manual Supplement.

PART 2 - PRODUCTS

- 2.1 General .1 All material supplied shall be new.
- 2.2 Temporary Pavement Markings .1 Paint: to CGSB 1-GP-74M. Color to conform to CGSB 1-GP-12C, 505-308 for yellow and 513-301 for white.
- .2 Reflectorized self adhesive marking tape.
- 2.3 Permanent Pavement Markings .1 Yellow paint: to CGSB 1-GP-74M. Color 505-308 and to CGSB 1- GP-12C. Add 75 g/L titanium dioxide and 100 g/L lead chromate.

- .2 White paint: to CGSB 1-GP-74M. Color 513-301 and to CGSB 1-GP-12C. Add 150 g/L titanium dioxide.
- .3 Glass beads: overlay type and to CGSB 1-GP-74M, premix type to CGSB 1-GP-149M.
- .4 Marking tape: 3M Stamark 380IES or equivalent

#### 2.4 Contact Cement

- .1 3M Stamark Surface Preparation Adhesive P-50 or equivalent.

### PART 3 - EXECUTION

#### 3.1 General

- .1 Pavement markings as shown on the drawings are approximate only. Contractor to accurately inventory existing markings and replace them to match the colours, sizes and configuration which existed prior to construction or as otherwise shown. HRM approval of the Contractor's inventory drawing is required prior to the removal of the existing pavement markings. The following checklist is provided to assist the Contractor in establishing uniformity in the development of pavement marking drawings. This checklist should be used as a guide to ensure that all of the basic elements are covered.
  - Pavement marking plans shall be legible; using either ink or computer generated graphics
  - Indicate project name, street name, limits, tender number and date.
  - Indicate contractor's name, address and telephone number. Include name and telephone number of the 24-hour contact person representing the contractor.
  - Indicate north arrow and scale or NOT TO SCALE (N.T.S.).
  - Use a legend to define all symbols.
  - Show colours, sizes and configurations of existing pavement markings (crosswalks, arrows, solid/dashed lines, hatching, bicycle symbols, etc.).
  - Dimension individual lane widths, bike lane widths, length/width of hatching, etc.

- .2 Clean pavement surface of all dirt, dust, oil, surface water, and pavement markings that have been previously or poorly applied.
- .3 Thoroughly clean distributor tank before refilling with materials of different colour.
- .4 Layout pavement markings in accordance with the Manual of Uniform Traffic Control Devices for Canada.

### 3.2 Paint

- .1 Apply paint only when air temperature is above 12 degrees Celsius and in dry weather.
- .2 Apply markings to within a tolerance of 12 mm of the dimensions indicated with a 5 mm maximum deviation in any 3.0 metre of length.
- .3 Apply paint under pressure at a rate to achieve a paint thickness of not less than 0.253 mm (10 mils) when sprayed on the surface.
- .4 Apply glass beads to lane markings. Do not apply glass beads to crosswalks, stop bars, arrows, symbols and letters. Apply glass beads at a rate of 300 g/m<sup>2</sup>.
- .5 Protect newly painted markings from traffic by barricades or cones or other suitable method until paint has dried sufficient so as to not be damaged by traffic.

### 3.3 Marking Tape

- .1 Apply marking tape only when the air temperature, pavement temperature, and weather conditions meets or exceeds manufacturer's recommendations.
- .2 Apply markings to within a tolerance of 12 mm of the dimensions indicated with a 5 mm maximum deviation in any 3.0 metre of length.
- .3 Apply marking film into the surface of newly laid asphalt and in accordance with manufacturer's recommendations. Roll marking tape into the asphalt surface using a two-wheel or three-axle tandem roller.
- .4 Protect newly laid markings from traffic by barricades or cones or other suitable method until asphalt has cooled or markings have set sufficiently so as to not be damaged by traffic.

3.4 Temporary  
Pavement Markings

- .1 Apply temporary lane markings to Arterials immediately after the placement of each lift of asphaltic concrete. For all other streets, apply temporary lane markings to base course of asphalt if the placement of the surface course of asphalt will not be proceeding within two weeks of the completion of the base course.
- .2 Apply temporary pavement markings to section 3.2 and 3.3.

3.5 Arrows, Symbols  
and Letters

- .1 Prepare templates to match patterns supplied by Owner. Obtain approval of all templates prior to use.  
  
Arrows to be  $\frac{3}{4}$  size of Transportation Association of Canada standards listed in the Uniform Traffic Control Devices for Canada.
- .2 Apply painted arrows, symbols, and letters in accordance with section 3.1.
- .3 Arrows, symbols, and letters applied with marking tape to section 3.2.

\*\*\*\* End S-4 \*\*\*\*