

**ITEM 08608.9401 M - STREETPRINT PAVEMENT TEXTURING SYSTEM (NON-VEHICULAR AREA)**

**DESCRIPTION:**

This work shall consist of furnishing and installing StreetPrint Pavement Texturing on Hot Mix Asphalt Concrete (HMA) and treating the patterned surface to create the appearance of hand laid decorative paving product by a authorized StreetPrint Applicator.

**MATERIALS:**

A. Hot Mix Asphalt Concrete (HMA)

The HMA shall conform with the requirements of Section 401-2.01 through 401-2.06. The construction shall incorporate one or more of the following, Type 6 and or Type 7 Top Course.

B. Surface System

The surfacing system shall consist of two (2) coats of an integrally colored, cement modified acrylic polymer with a sealer coat. The product used in the surfacing system shall meet the minimum physical and performance properties as described under "Physical Properties" at the end of this specification.

C. Maintenance Kit

The maintenance kit shall include:

- 1 - 1.5 m x 2.75 m form to match pattern as shown on plans
- 1 - .6 m x 1.2 m form to match pattern as shown on plans
- 1 - finishing tool
- 2 - boxes standard formula coating (coverage approximately 28 m<sup>2</sup>/box)
- 2 - boxes sealer concentrate (coverage approximately 185 m<sup>2</sup>/box)

The contractor shall supply one maintenance kit to the Engineer.

**CONSTRUCTION DETAILS:**

Only the authorized StreetPrint applicator can install the textured pattern & surface treatment. The contractor shall submit verification of authorization for the StreetPrint applicator to the Engineer 21 days before fabrication commences. It will then be up to the discretion of the StreetPrint Applicator to allow the contractor to install the Hot Mix Asphalt, or to preform this task themselves. The texture and surface treatment shall be installed in the position and manner indicated on the plans and as reviewed by the Regional Landscape Architect and approved by the Engineer.

Contractor shall employ a method approved by the Engineer to prepare subgrade and if required; installation of Hot Mix Asphalt to assure proper installation.

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Hot Mix Asphalt - This work shall consist of constructing a pavement course of hot, plant mixed asphalt concrete on a prepared base in accordance with these specifications and in reasonable close conformity with the required lines, grades, thickness and typical sections shown on the plans or established by the Engineer.

Surface Imprinting - The contractor shall follow procedures detailed in the latest revision of StreetPrint Application Procedures as issued by integrated Paving Concepts Inc. The pattern shall be created in accordance with the design as shown on plans and reviewed by the Regional Landscape Architect. Patterning shall begin once the asphalt has reached its final density and while there is still sufficient heat in the asphalt to permit imprinting. Patterning shall be achieved using steel rollers and/or vibratory plates and shall be of consistent depth.

Surfacing System - The contractor shall apply two (2) coats of the StreetBond Standard Formula specified in Materials section of this specification. Installation shall be in accordance with the latest revision of the StreetPrint Application Procedures as issued by Integrated Paving Concepts Inc. StreetPrint Surfacing System shall not be applied when the temperatures are below 7.2° C or when precipitation is expected within 24 hours. The StreetBond system shall be spray applied and broomed using a broom or brushes to cut-in areas where required. Care shall be taken to ensure that the entire surface is covered, including the imprinted surfaces. Sufficient masking (payment covered under this item) shall be used to ensure that the surfacing products are applied only where specified. Coverage rates shall be monitored to ensure adequate build is achieved. StreetBond shall be applied at a minimum coverage rate of 1.85 square meters per liter per coat. Once the StreetBond Standard Formula is dried in accordance with performance properties, one coat of a curing membrane of StreetBond Sealer Concentrate shall be applied at the coverage rate of 7.5 square meters per liter. Coverage rates shall be monitored to ensure adequate build is achieved.

**METHOD OF MEASUREMENT:**

The installation of the StreetPrint Pavement Texturing System will be measured by the number of square meters of hot mix asphalt satisfactorily imprinted in accordance with this specification and as approved by the Engineer.

**BASIS OF PAYMENT:**

The unit price bid per square meter shall include the cost of furnishing all labor, materials, equipment and tools necessary to complete the work.

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| Physical Properties Standard Formula         |                    |                             |
|--|--------------------|-----------------------------|
| Characteristics                              | Test Specification | StreetBond Standard Formula |
| Solids by Volume (%)                         | ASTM D-5201        | 53 ± 3%                     |
| Solids by Weight (%)                         | ASTM D-1351        | 75.5 ± 2%                   |
| Density                                      | ASTM D-1475        | 1.75 g / ml                 |
| Flash Point                                  | ASTM D-3278        | 93° C                       |
| Percent Pigment (by weight including cement) | ASTM D-3723        | 62 ± 2%                     |
| Sheen (85°)                                  | ASTM D-523         | <3 @ 85%                    |

| Physical Properties Sealer Concentrate |                    |                               |
|--|--------------------|-------------------------------|
| Characteristics                        | Test Specification | StreetBond Sealer Concentrate |
| Solids by Volume (%)                   | ASTM D-5201        | 24 ± 2%                       |
| Solids by Weight (%)                   | ASTM D-1353        | 27 ± 2%                       |
| Density                                | ASTM D-1475        | 1.03 g / ml                   |
| Spec. Gravity                          | ASTM D-1475        | 1.03                          |
| Sheen (85°)                            | ASTM D-523         | > 75 @ 85°                    |
| VOC Coating                            | ASTM D-3960        | 93° C                         |
| Flash Point                            | ASTM D-3278        | 93° C                         |

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| Performance Properties Standard Formula  |                     |   |
|--|---------------------|---|
| Characteristics                          | Test Specification  | Minimum Criteria StreetBond Standard Formula          |
| Tensile Strength (kPa)                   | ASTM D-412          | 45.7 kg / cm <sup>2</sup>                             |
| Flexibility, Mandrel (High)              | ASTM D-1737         | Pass 25.4 mm @ 21° C                                  |
| Flexibility, Mandrel (Low)               | ASTM D-1737         | Pass 50.8 mm @ -18° C                                 |
| Dry Time (to re-coat)                    | ASTM D-711          | 1 - 4 hours   |
| Dry Time (for traffic)<br>24° C / 30% RH | N/A                 | ~ 80% strength @ 2 days                               |
| Taber Abrasion (H-10)                    | ASTM D-4060         | < .18 g / 1000 cycles                                 |
| Adhesion (PLI) to an asphalt substrate   | ASTM D-4640         | Cohesive failure of asphalt prior to adhesive failure |
| QUV E                                    | ASTM G-53           | 300 hours - 2.35 CIE units                            |
| Hydrophobicity (3 days)                  | ASTM D-570          | < 12% weight gain                                     |
| Shore Hardness                           | ASTM D-2240         | 80 D  |
| Temperature Limits for Service           | Dry, cured material | -34° C to 71° C                                       |
| Surface Build                            | N/A                 | .25 - .38 mm (1 coat)                                 |