# PAVEMENT FABRIC
# CONSTRUCTION SPECIFICATION

**MATERIALS:**

The pavement paving fabric shall be furnished by an ISO approved manufacturer of polypropylene or polyester geosynthetics and is utilized extend the service life of pavement overlays. The paving fabric shall be needle punched nonwoven and heat treated on one side and shall conform to AASHTO M 288-92, Mild Climate Region specification for paving fabrics and the following physical and mechanical properties:

| **Property** | **Units** | **Test Method** | **Minimum Average Roll Value (MARV)** |
|---|---|---|---|
| Mass Per Unit Area | $oz/yd^2/(gm/m^2)$ | ASTM D 5199-01 | 3.6 (122) |
| Grab Tensile Strength | lb (N) | ASTM D 4632-91 | 90 (400) |
| Grab Elongation at Break | % | ASTM D 4632-91 | 50 |
| Mullen Burst Strength | lb (kPa) | ASTM D 3786-87 | 180 (1240) |
| Asphalt Retention, | $gal/yd^2$ $(l/m^2)$ | ASTM D 6140-00 | 0.20 (0.90) |

A Certificate of Compliance for the paving fabric used on the project shall be furnished by the manufacturer to the engineer. The paving fabric shall be supplied in protective a cover or wrap that is capable protecting the fabric form ultraviolet rays, abrasion, and water. Mirapave® 400 or approved equal paving fabric should be used. Mirapave® 400 is available from *MIRAFI*® Construction Products, 800-685-9990 or 800-333-6205.

Asphalt Sealant: The Engineer shall approve asphalt cement. A grade asphalt of the same type used in the manufacture of the hot mix asphalt for the overlay should be acceptable.

**EQUIPMENT:**

Asphalt Distributor: The distributor must be suitably metered and capable of spraying the asphalt cement uniformly and at the prescribed application rate. No drilling or skipping shall be permitted.

Fabric Handling Equipment: A tractor or similar mechanical device with mounted lay down equipment that is capable of handling full rolls of fabric shall be used. The equipment shall be capable of laying the paving fabric smoothly without excessive wrinkles and/or folds.

Miscellaneous Equipment: Stiff bristle brooms used to smooth, and scissors (or blades) used to cut the paving fabric shall be provided by the Installer. A pneumatic-tired roller may be needed in some cases to smooth paving fabric into the asphalt cement.

**INSTALLATION PROCEDURE:**

Surface Preparation: The surface on which the paving fabric is to be placed shall be free of dirt, water, vegetation and other foreign materials. Open cracks 1/4 inch or larger shall be filled with sand mixed asphalt as directed by the Engineer. Cracks larger than 1/2 inch or holes shall be filled with cold or hot mix asphalt. The use of a leveling course may be required prior to placing the paving fabric in severe cases.

Application of Sealant: The asphalt cement and binder must be uniformly spray-applied at the specified rate. The quantity required may vary with the surface condition of the existing pavement (e.g. degree of porosity), but shall be applied at a nominal rate of 0.25 gallons per square yard of residual asphalt. Application of asphalt cement will be performed by truck-mounted distribution equipment whenever possible, with hand spraying kept to a minimum. The temperature of the asphalt cement must be sufficiently high to permit a uniform spray pattern. The minimum recommended temperature for asphalt cement is $290^{o}$ F, and should not exceed $325^{o}$ F.

Paving Fabric Placement: The paving fabric shall be placed onto the asphalt cement with a minimum of wrinkles before the asphalt can cool or lose its tackiness. The paving fabric shall be placed so that the non-heat treated (bearded or fuzzy) side is placed downward, into the sealant, thus providing optimum bond between fabric and pavement during the construction process. As directed by the Engineer, wrinkles severe enough to cause “folds” shall be slit and laid flat in the direction of paving operations. Brooming the paving

fabric will assist it in making intimate contact with the pavement surface.
Any overlap of the paving fabric should be minimized, although an overlap of 1 to 3 inches is recommended to insure full closure of overlapping layers. Care must be exercised to prevent edge pick-up by the paver on transverse joints they may be shingled (overlapped) in the direction of paving operations or secured by asphalt tack. The contractor installing the paving fabric must prove that they have at least 4 years experience in placing paving fabric.
In the event that asphalt cement should bleed through the paving fabric before the hot mix asphalt is placed, it may be necessary to absorb any visible sealant by spreading sand or hot mix asphalt over those areas. This should minimize the tendency for construction equipment tires to lift the paving fabric when driving over it. Turning of paving equipment and other vehicles on the paving fabric must be kept to a minimum to avoid movement or damage to the fabric. Satisfactory installation of hot mix asphalt can be accomplished at temperatures below 300$^{o}$ F. In no case should temperature of the hot mix asphalt concrete exceed 325$^{o}$ F at time of placement.