



**Marathon  
Sealing FZE**

# METHOD STATEMENT

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**Crack Sealing After Milling with  
Rubberized Hot Applied Sealant  
& Application of Geogrid before the new overlay**



Crack Sealing after milling technique is used to extend the pavement life & saving cost of construction, as total reconstruction of pavement is not required.

## SEALING PROCEDURE

1. Pavement Milling: Milling of the surface.
2. Crack preparation: Cracks need to be routed using a crack router.
3. Cleaning: Routed Cracks need to be cleaned in two steps.
4. Sealant application: Sealing the Cracks.
5. Curing: Sealed cracks need to be properly cured before resurfacing.
6. Geogrid Application: Geogrid installation over the sealed Cracks.
7. Overlay of New Asphalt: New Asphalt pavement.

### 1. PAVEMENT MILLING :

Overlays (either structural or non-structural) make up a large portion of the roadway paving done today. The degree of surface preparation for an overlay is dependent on the condition and type of the existing pavement. Generally, the existing pavement should be structurally sound, level, clean and capable of bonding to the overlay. To meet these prerequisites, the existing pavement is usually repaired, leveled (by milling, preleveling or both), cleaned and then coated with a binding agent. This subsection covers:







- Repairs
- Tack coats
- Leveling (both by applying a leveling coarse and by milling)
- HMA overlays on PCC pavement
- PCC overlays on HMA pavement

Generally, pavement overlays are used to restore surface course (both HMA and PCC) characteristics (such as smoothness, friction and aesthetics) or add structural support to an existing pavement. However, even a structural overlay needs to be placed on a structurally sound base. If an existing pavement is cracked or provides inadequate structural support these defects will often reflect through even the best-constructed overlay and cause premature pavement failure in the form of cracks and deformations. To maximize an overlays useful life, failed sections of the existing pavements should be patched or replaced and existing pavement cracks should be filled.





## 2. CRACK PREPARATION

Routed Reservoir – Routed reservoirs are recommended for longest life.

### Guidelines for determining reservoir use are:

- Crack density should not exceed approximately 20% (linear feet of cracks per square feet of pavement area).
- Pavement should be sound enough to resist significant spalling during cutting. (Final reservoir width should not exceed double the cutter width, or 1 ½" (38 mm) maximum.

### Reservoir Dimensions – Determined as follows:

- The cut should remove at least 1/8" (3mm) from each side of the crack and cut back to sound pavement.
- Minimum width is ½" (12mm), maximum is 1½" (38mm).
- Recommended cut depth is ¾" (19 mm).
- Reservoirs are then cleaned with compressed air.





### 3. CLEANING:

Major debris on the crack surrounding is cleaned using Push Behind Wind Blower. The cracks are cleaned using Backpack wind blower/ Air compressor. Make sure all the debris is cleaned properly before sealant application.





## 4. SEALANT APPLICATION:

Crack Sealant shall be heated in an Oil Jacketed Kettle equipped with constant agitator and Automatic Temperature Control (ATC), and is heated up to a temperature range from 180° C to 200° C. After cleaning, Sealant is applied using a cone keeping 2mm underfill from the surface.

### **Sealant Used: Approved Rubberized Hot Applied Sealant Matching Site Weather Condition**





## 5. CURING:

Sealant shall be properly cured before overlay. Minimum 24 hours shall pass after sealant application.

## 6. GEOGRID APPLICATION:

The geogrid of required strength shall be used according to the design requirement. Geogrid shall cover 25 cm minimum on each side of sealed crack. Geogrid is installed after spraying Bitumen and fixed in ground using Nails.







## 7. NEW OVERLAY:

New Asphalt is laid and compacted as per the asphalt installation procedure.







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