

CASE STUDY

Road Maintenance | Road Rehabilitation | Resurfacing of Concrete Roads, Manenberg

Aug 2015

Client City Of Cape Town

Contractor Ratanane Construction JV & Toloni Construction

Consultant Daveng Consulting Engineers

Product **Sealgrid 50/50**

Rep Grant Hartzenberg

Problem

More than 30 years ago in South Africa a number of concrete roads were constructed in low cost housing areas during a period when supply of bitumen was limited. Many years of increased loading from the growth of adjacent industrial developments, continuous thermal expansion, coupled with the lack of joint maintenance, has resulted in loose material entering the joints.

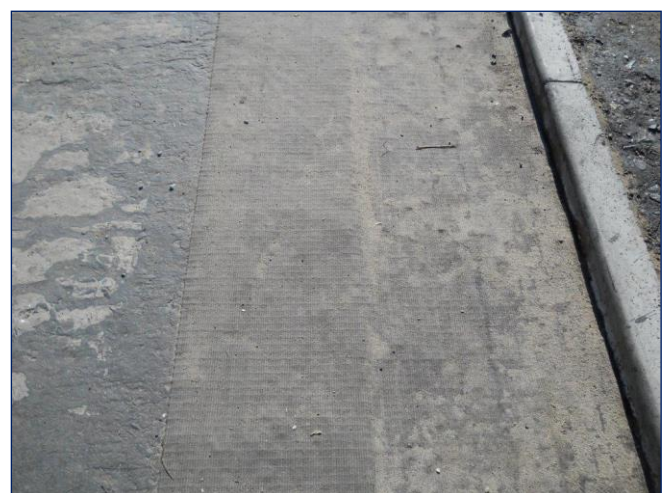
Subsequent contraction has caused spalling and substantial cracking of the concrete with water penetrating the permeable joints and weakened base layers. Remedial work to concrete pavements is always an expensive operation with long periods of closure required.



SealGrid® 50/50 placed over expansion joint.

Solution

Although an asphalt overlay provides the logical economical solution that can be trafficked immediately, the joints in the existing concrete quickly reflect through to the surface. The concrete slabs were first mechanically broken down in place into smaller pieces. **SealGrid®** was then applied over all the major cracks and expansion joints and overlaid with 30mm asphalt. **SealGrid®** provides high tensile strength (50kN) at very low elongation (3% to 5%) through the glass grid roving. This prevents the development of further cracking and widening of existing cracks.



SealGrid® 50/50 placed over road widening.

Benefits

The **Sealmac®** paving fabric portion of the composite grid provides a waterproofing semi layer which prevents water from penetrating old joints, saturation and weakening on the base and subsequent pumping of fine material. The sealing effect also stabilizes the moisture content and prevents drying out of the base.