

# CASE STUDY

## WASHINGTON COUNTY ROAD HERMAN, NE



### UNBONDED CONCRETE OVERLAY ON EXISTING PAVEMENT

#### PROJECT SUMMARY

Washington County Road #4 was suffering from severe alkali-silica reactivity (ASR) caused by swelling and cracking due to the reaction of the highly alkaline cement paste and the non-crystalline silica when exposed to moisture. A new layer of pavement needed to be placed over the existing road and REFLECTEX® Rapid Install was used as an interlayer for the unbonded concrete overlay. REFLECTEX has the ability to lower surface temperatures during applications which reduces the overall stress on the concrete pavement causing less potential for cracking. The geotextile was installed using the ProGrip™ adhesive allowing for a quicker and more efficient installation. The adhesive also prevented the fabric from flapping in the wind as it was being installed. Since there were so many pavement patches in the original road, the traditional method of nailing down the fabric would have been very difficult as different sized nails would have to have been used. The REFLECTEX Rapid Install system was chosen because it's an innovative solution that's easier and more cost effective to install than the traditional nail down method.



#### PROBLEM

The 1990s pavement suffered from cracking and swelling, with many of the joints not much more than gravel



#### SOLUTION

REFLECTEX® Rapid Install with ProGrip™ adhesive was a quick and easy solution



#### INSTALLATION

The REFLECTEX geotextile with ProGrip adhesive was installed over seven miles of road starting at the Dodge County line



#### PERFORMANCE

The REFLECTEX Rapid Install stops reflective cracking and helps wick water from under the pavement to the shoulder area

#### FEATURES & BENEFITS

- Rapid installation offers up to 30% labor and materials savings compared to the traditional nail-down method
- Replaces the traditional asphalt interlayer = one contractor, one trade and one schedule
- Heat reduction provides uniform curing and reduced stress cracking by up to 10%
- ProGrip provides uniform laydown reducing wrinkling, potential for wind uplift and eliminates risk of rework
- Reduced installation time allows for less construction delays and traffic disruptions
- REFLECTEX solar reflective properties reduce surface temperature by up to 50 °F, eliminating the need to cool surface with water



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