
In-Lane Sealing Practice Guide

Terry Boyle

What is In-Lane Sealing?





In-Lane Sealing Practice Guide

Purpose of Presentation

- Background
- Safety
- Skid resistance
- Monitoring
- Performance
- Guidance
- Acknowledgements

Background

- SH 33 valley floor
- 10 successive frosts in 2008
- ATP previous summer
- Six year old 2 coat seal stripping
- Grade 5 to hold
- Solution in-lane seal between ATP
- Since had another 2CS (grade 2 and 4)
- 17 additional sites monitored



Safety

Effect of Seal Lip

- Ponding
- Surface water Channelling
- Tyre lip interaction



Skid Resistance

Differential Skid Resistance

- Right turn bays
 - Ave -0.04 (+.08 to -0.13)
- Wide Shoulders
 - Ave. -0.1 (.08 to -0.11)
- Differential skid
 - ve SC greater outside in-lane seal
 - +ve SC greater on in-lane seal



Accident Analysis

Confidence that traffic stays within lane



150 M radius Curve

Accident Analysis

Confidence that traffic stays with in lane

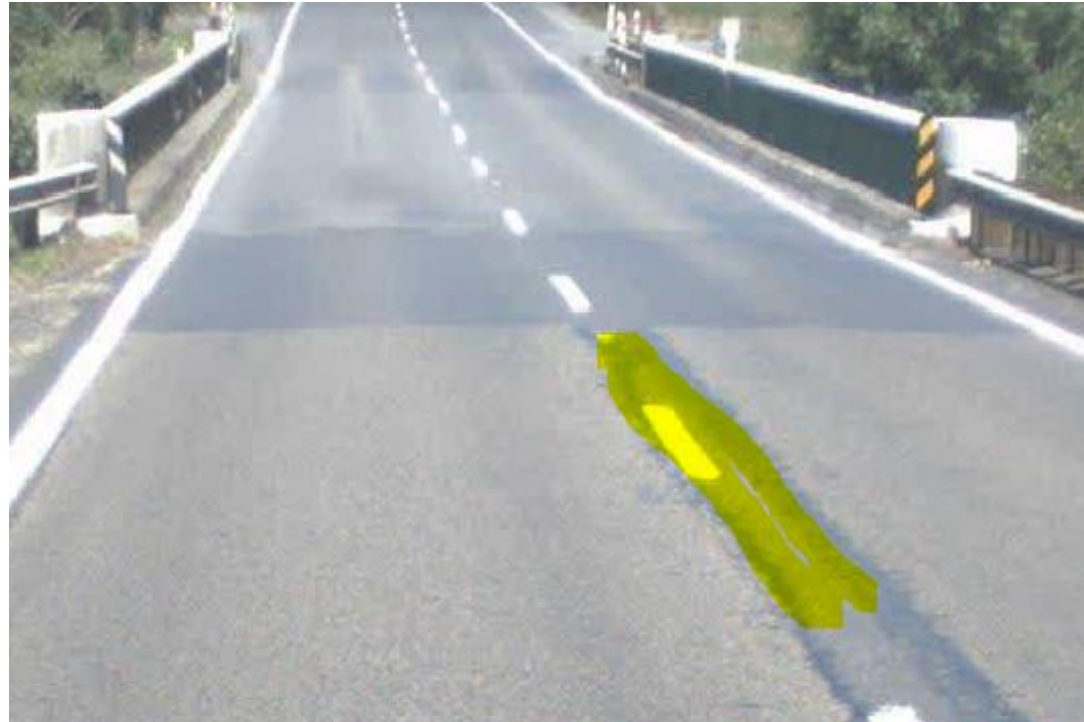


Multiple sites

Monitoring

Defects

- Centreline ponding
- No defects observed
- Shoulder sealing
 - Alternate seal cycle
 - Use smaller chip
 - 2CS vary overlap





Performance

Safety

- Ensure traffic is in lane

Skid Resistance

- OK if aggregate performance is OK

Cost Effectiveness

- \$ goes further
- Longer runs faster sealing
- No additional maintenance cost identified

Effectiveness

- Trial now 8 years old with and no \$ goes further
- 2 out of 21 sites have performed OK



Guidance

Aspect to consider

- Vehicle tracking
 - curve radii
 - multiple site factors
- Seal lip ponding
- Shoulder sealing
- Will ATP last as long as the seal coat
- NZTA Highway Information Portal



Acknowledgements

The following people have been involved in trials, researching and reviewing:

- Rodney Nicolas - Tauranga City Council, formerly of Inroads
- Downers Tauranga Sealing Crew
- Sunny Zhang - NZTA
- Tim Davidson - Beca Tauranga
- Bryson Huxley - skid resistance and accident analysis
- Robert Busuttill - NZTA Principal Surfacing Engineer
- Robert Tutty – Beca, formerly Opus



THE END