

Hamilton City Development Manual	
<b>Volume 3 : Standard Technical Specifications</b>	<b>Part 3 —Roading Projects</b>
Authorised by : City Transportation Manager	Section 10 <span style="float: right;">Page 1 of 3</span>

## SECTION 10 : ROAD SURFACING

### 10.1 GENERAL

10.1.1 The NZTA Specification P/3 "Specification for First Coat Sealing", NZTA Specification P/4 "Specification for Resealing", and the NZTA Specification M/6 "Specification for Sealing Chips" shall be deemed to be part of this Specification except that:

- i) All references to the basis of payment contained within these NZTA Specifications are deleted.
- ii) Reference to the Contractor's obligation with respect to the foreshortening of the maintenance requirements of the seal coat (NZTA P/3, P/4 - relevant Clause "Protection and Repairs of the Seal Coat") is deleted.

10.1.2 In all cases the spraying and chipping rates specified are for tendering purposes only. Actual application rates, cutback percentage and the percentage of adhesion agent will be specified by the Contractor and forwarded to the Engineer with design calculations for consent acceptance at least 24 hours prior to application.

10.1.3 Immediately prior to surfacing exposed basecourse, a 300mm wide strip adjacent to the channel must be sprayed with an approved sterilising weed killer.

10.1.4 For both first and second coat chip seal, the bitumen application shall extend over the channel lip, but not by more than 25mm.

### 10.2 TWO COAT SEAL (FIRST COAT WITH WET LOCKING COAT)

A two coat chip seal shall be applied to the prepared basecourse surface.

The first layer shall consist of the supply and spraying of NZTA P/3 180/200 penetration grade bitumen cut back to suit, plus 1 parts per hundred (p.p.h) adhesion agent, at a rate of 1.2 litres/m<sup>2</sup> residual (measured at 15°C) and the supply, spreading and rolling of NZTA M/6 Grade 3 chip at a spread rate of 75 m<sup>2</sup>/m<sup>3</sup>. It is essential that the spreading of the first chip layer is carefully controlled so that the chips are evenly spread and no more than 1 chip thick over the entire surface. Hand work to correct spreading inconsistency will be required.

The second layer shall consist of the supply and spraying of NZTA P/3 180/200 penetration grade bitumen cut back to suit, plus 1 p.p.h. adhesion agent, at a rate of 0.8 litres/m<sup>2</sup> residual (measured at 15°C) and the supply, spreading and rolling of NZTA M/6 Grade 5 chip at a spread rate of 150 m<sup>2</sup>/m<sup>3</sup>.

### 10.3 TWO COAT SEAL AND OPEN GRADED POROUS ASPHALT OVERLAY

10.3.1 Two Coat Seal (First Coat With Wet Locking Coat)

A two coat chip seal as described in Clause 10.2 of this Specification shall be applied to the prepared basecourse surface.

10.3.2 Open Graded Porous Asphalt Overlay

The friction mix overlay shall be placed no sooner than 14 days after the application of the two coat chipseal. Prior to laying the open graded porous asphalt the new first coat chip

Hamilton City Development Manual	
<b>Volume 3 : Standard Technical Specifications</b>	<b>Part 3 —Roading Projects</b>
Authorised by : City Transportation Manager	<b>Section 10</b> <span style="float: right;">Page 2 of 3</span>

seal shall be repaired as necessary to ensure that a robust waterproof membrane is present over the full area of the surface. Particular attention must be paid to the joint at the kerb edge.

The friction mix overlay shall be laid in accordance with clauses relevant in NZTA P/11P "Specification for Open Graded Porous Asphalt". The thickness of the friction course shall be a minimum of 30mm except at the lip of kerb and channel where it shall be 15mm thick, tapered from a point 600mm from the channel lip.

A tack coat of NZTA M/1 quick breaking cationic bituminous emulsion shall be supplied and sprayed an application rate of 0.3 litres/m<sup>2</sup> residual (measured at 15°C)

#### 10.4 CHIP SEAL AND ASPHALTIC CONCRETE

##### 10.4.1 Chipseal

A chip seal as described in Clause 10.2 shall be applied to the prepared basecourse surface to provide a robust waterproof surface.

##### 10.4.2 Asphalt Concrete

The asphalt concrete shall be placed no sooner than 14 days after the application of the coat chip seal . Asphaltic concrete shall be laid in accordance with the relevant clauses of NZTA P/9 "Specification for the Construction of Asphaltic Concrete Paving". Asphaltic concrete sealing shall consist of the supply and spraying of NZTA M/1 Tack Coat with a quick breaking bituminous emulsion at an application rate of 0.3 litres/m<sup>2</sup> and the supply, spreading and rolling of NZTA M/10 Asphaltic Concrete or an alternative mix such as SMA approved by the Asset Manager.

#### 10.5 RESEAL (CHIPSEAL AND DRY LOCKING COAT)

##### 10.5.1 Application

This treatment shall be applied on carriageways to produce a uniform texture on surfaces that have an existing (old) seal coat or a combination of an existing (old) seal coat with asphalt patches or levelling (which have been texturised) or basecourse repairs (which have been two coat sealed).

The resealing shall not be applied until 14 days after the asphalt patching or levelling has been texturised or the basecourse repairs have been two coat sealed. The asphalt repairs shall not be texturised until 14 days after being completed.

##### 10.5.2 Chipseal and Dry Locking Coat (G4 and G6)

The reseat shall consist of supply and spraying of NZTA M/1 180/200 penetration grade bitumen cut back to suit, plus 1 pph Adhesion agent, at the rate of 1.3 litres/m<sup>2</sup> residual (measured at 15°C) and the supply, spreading and rolling of NZTA M/6 chip. Final seal design of chip sizes and bitumen application rates shall be done by the Contractor and submitted for acceptance by the Engineer.

If specified a dry locking coat of M/6 Grade 5 or 6 chip shall then be supplied and applied in accordance with NZTA Specification P/4, and spread at a rate of 300 m<sup>2</sup>/m<sup>3</sup>.

<b>Hamilton City Development Manual</b>	
<b>Volume 3 : Standard Technical Specifications</b>	<b>Part 3 —Roading Projects</b>
Authorised by : City Transportation Manager	<b>Section 10</b> <span style="float: right;">Page 3 of 3</span>

## **10.6 SECOND COAT SEAL**

### 10.6.1 Preparation

Prior to a second coat seal being applied any faults in the existing surface shall be carefully repaired in accordance with relevant clauses of this manual.

### 10.6.2 Application

The chip seal is to be constructed in accordance with the requirements for a reseal in clause 10.5.

## **10.7 REQUIREMENTS AFTER CHIP SEALING**

### 10.7.1 Traffic Control

Unless otherwise authorised a temporary speed restriction of 30 km/hr shall be used for 48 hours after the completion of rolling or until after the first sweep, whichever is the later.

### 10.7.2 Removal of Surplus Chip

All surplus chip shall be removed within 48 hours of the completion of rolling when the sealed surface is open to traffic. For sites that are not open to normal traffic chip sweeping may be delayed but must be completed within 48 hours of opening the road to normal traffic.

All surplus chips shall be removed from grass berms, driveways, parking areas and footpaths.

### 10.7.3 Protection and Repairs of the Sealcoat

The contractor will be responsible for the maintenance and repair of the seal surface for the duration of the specified maintenance period. In any case this maintenance period shall be until the 1<sup>st</sup> of October following sealing date or a period of 6 months — whichever is longer.