**R36 SHOULDER CONSTRUCTION**

1. ***MATERIALS***

*A total of approximately 2 000 cubic metres of PM2/20QG is stockpiled at MMP 76.8 and MMP 98.8. This material must be used by the Contractor for topping up of shoulders where required before any additional material is used.*

*Additional material for topping up of shoulders, if required, must be PM2/30QG and must be supplied by the Contractor.*

1. ***PAVEMENT LAYER DETAILS (****refer also to Pavement details attached)*

***Treatment Type 1***

*1. Add additional shoulder material, if required. Using a Bomag or similar, wet-mix to a minimum compacted depth of 130 mm at the edge of seal. Compact and trim.*

*2. The constructed shoulder must be a minimum of 2.4 m wide or 6.4 m from the existing centreline.*

***Continue for each Treatment Type.***

***Treatment Type 4***

*This treatment is for areas where insufficient width exists to accommodate a Bomag. Other methods of construction will be required.*

***Treatment Type 5***

*Reseal existing sealed shoulders/widenings using a two coat 14/7 mm C170/C170 seal. This reseal must overlap the existing seal by: 14 mm application – 50 mm, 7 mm application – 100 mm.*

***Treatment Type 6***

*Reseal existing sealed shoulders/widenings using a single 7 mm C170 seal. This reseal must overlap the existing seal by 100 mm.*

1. ***BITUMINOUS SURFACING***

***7 mm Primer Seal***

*It is not expected that this activity will be required, however, in the event of adverse weather conditions it may be necessary to Primer Seal. A rate for this activity must be submitted in the Schedule of Rates.*

*The primer seal must be as follows:*

|  |  |
| --- | --- |
| *Treatment Type 1* | *- a total sealed width of 10.0 m and/or 5.0 m from existing centreline is achieved.* |
| *Treatment Type 2* | *- a sealed width of 6.0 m from existing centreline is achieved.* |
| *Treatment Type 3* | *- a sealed width of 6.5 m from existing centreline is achieved.* |

*The primer seals must overlap the existing edge of seal by 50 mm.*

***Final Seal***

*14/7 mm Final Seal.*

*No prime or primer seal, unless otherwise directed by the Superintendent.*

*It is expected that this activity will need to be undertaken at regular intervals throughout the Contract.*

*The final seal must be applied as follows:*

|  |  |
| --- | --- |
| *Treatment Type 1* | *- a total sealed width of 10.0 m and/or 5.0 m from existing centreline is achieved.* |
| *Treatment Type 2* | *- a sealed width of 6.0 m from existing centreline is achieved.* |
| *Treatment Type 3* | *- a sealed width of 6.5 m from existing centreline is achieved.* |

*All final seals must overlap the existing edge of seal by:*

|  |  |
| --- | --- |
| *14 mm application* | *– 50 mm overlap* |
| *7 mm application* | *– 100 mm overlap.* |

*Application rates over an un-primed surface:*

|  |  |
| --- | --- |
| *14 mm application* | *- 1.50 L/m² of C170 binder* |
| *7 mm application* | *- 0.80 L/m² of C170 binder.* |

***Reseal***

*14/7 mm or a 7 mm C170 reseal must be applied on the existing sealed shoulders as required.*

*All reseals must overlap the existing edge of seal by:*

|  |  |
| --- | --- |
| *14 mm application* | *- 50 mm overlap* |
| *7 mm application* | *- 100 mm overlap.* |

*Application rates over sealed surface:*

*14/7 mm C170/C170*

|  |  |
| --- | --- |
| *14 mm application* | *- 1.10 L/m² of C170 binder* |
| *7 mm application* | *- 0.75 L/m² of C170 binder* |

*7 mm C170*

|  |  |
| --- | --- |
| *7 mm application* | *- 1.20 L/m² of C170 binder* |

***AGGREGATE***

*Aggregate spread rates:*

|  |  |
| --- | --- |
| *14 mm aggregate* | *100 m² / m³* |
| *7 mm aggregate* | *- 170 m² / m³* |

***AGGREGATE PRECOAT***

*All Final Seal and Reseal aggregate is to be precoated using Industrial Diesel Fuel, C170 bitumen and approved additive, mixed in the proportions of 100 parts IDF, 30 parts C170 and 1.5% approved additive (IDF++).*

*Precoat Rate:*

|  |  |
| --- | --- |
| *14 mm aggregate* | *- 4 L/m³* |
| *7 mm aggregate* | *- 6 L/m³* |

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NOMINAL COMPACTED**  **THICKNESS AT EDGE OF SEAL** | **TOLERANCE**  **(mm)** | **LAYER** | **MATERIAL** | **APPLICATION RATES**  **AND**  **ADDITIONAL DETAILS** |
|  |  | *14/7 mm Double Spray Seal* | *Binder: C170 bitumen*  *Aggregate: SA 14-10*  *Precoat: IDF++* | *1.5 L/m2*  *Spread rate: 100 m2 /m3*  *4 L/m3* |
|  | *Binder: C170 bitumen*  *Aggregate: SA 7-5*  *Precoat: IDF++* | *0.8 L/m2*  *Spread rate: 170 m2 /m3*  *6 L/m3* |
|  |  | *7 mm Primer Seal\** | *Binder: Primer Binder*  *Aggregate: SA 7-5* | *1.2 L/m2,*  *Spread rate: 170 m2 / m3* |
| *XX (treatment 1)*  *XX (treatment 4)* | *+0, -40* | *Shoulder* | *Existing shoulder material topped up if required with PM2/30QG.* | *Refer clause 226.8 and clause 236.3*  *or Specifier to state if different dryback requirements than that stated in clause R26.8.*  *or Specifier to state if different compaction and testing frequency than that stated in clause R36.3* |

KEY TO ABBREVIATIONS

\* If directed by the Superintendent.

L/m2 litres per square metre.

IDF++ 100 parts IDF, 30 parts C170, 1% adhesion agent.

Spray rates are nominal values only and may vary due to stone ALD, surface texture, weather conditions, etc. Rates are to be verified by the Superintendent prior to application.

**PAVEMENT TREATMENT 1, 2, 3 AND 4**