WANNEROO DEVELOPMENT DESIGN SPECIFICATION WD2 PAVEMENT DESIGN
## DEVELOPMENT DESIGN SPECIFICATION WD2
### PAVEMENT DESIGN

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DEVELOPMENT DESIGN SPECIFICATION WD2
PAVEMENT DESIGN

GENERAL

WD2.01 SCOPE

1. The work to be executed under this Specification consists of the design of the road pavement to meet the required design life, based on the subgrade strength, traffic loading and environmental factors, and including the selection of appropriate materials for select subgrade, subbase, base and wearing surface.

2. This specification supports the requirements of the AusSpec Pavement Design specification D2. The standards outlined in Table 1 below have been used consistently throughout the City over many years and are recommended to designers.

3. Should designers wish to use alternative pavement designs or materials they should support their application for approval with documentation that demonstrates designs meet satisfactory performance standards in the following categories.
   - Technical Standards (Relevant Design Guidelines and Australian Standards)
   - Material Standards
   - Economy (Capital development and ongoing maintenance)
   - Endurance (Demonstrated objective evidence of material endurance under design traffic volumes, particularly for shoulder wear)

WD2.02 OBJECTIVES  (See AusSpec D2.02)

WD2.03 REFERENCE AND SOURCE DOCUMENTS

(a) Council Specifications

- D1, WD1 - Geometric Road Design
- D4 - Subsurface Drainage Design
- C242 - Flexible Pavements
- C244 - Sprayed Bituminous Surfacing
- C245 - Asphaltic Concrete
- C247 - Mass Concrete Subbase
- C248 - Plain or Reinforced Concrete Base
- C254 - Segmental Paving
- C255 - Bituminous Microsurfacing
(b) Other


AUSTROADS - Guide to Control of Moisture in Roads.


AUSTROAD - APRG Report 21 : A Guide to the Structural Design of Road Pavements (Note : This manual is a supplement to AP17/92 Pavement Design).

Cement and Concrete Association of Australia


Concrete Masonry Association of Australia

CMAA - T44 - Concrete Segmental Pavements - Guide to Specifying, 1997


PAVEMENT DESIGN CRITERIA

WD2.04 DESIGN VARIABLES (See AusSpec D2.04)

WD2.05 DESIGN TRAFFIC (See AusSpec D2.05)

WD2.06 SUBGRADE EVALUATION (See AusSpec D2.06)

WD2.07 ENVIRONMENT (See AusSpec D2.07)

WD2.08 PAVEMENT AND SURFACING MATERIALS (See AusSpec D2.08)  

Note that Laterite based asphalts shall NOT be used within roundabouts or intersections. Its use shall be limited to certain circumstances for example in conjunction with traffic treatments, delineation of parking embayments or as median treatments.  

WD2.09 CONSTRUCTION AND MAINTENANCE CONSIDERATIONS  
(See AusSpec 2.09)

PAVEMENT THICKNESS DESIGN

WD2.10 PAVEMENT STRUCTURE - GENERAL

1. The general pavement thickness, including the thickness of surfacing, shall not be less than 250mm for roads in which kerb is to be constructed, and 200mm for un-kerbed roads
2. Notwithstanding subgrade testing and subsequent pavement thickness design, the thickness of subbase and base layers shall not be less than the following:

- **Flexible pavement**: Subbase 150mm, Base 75mm
- **Rigid pavement**: Subbase 100mm, Base 150mm

3. Generally the subbase and base course layers shall extend a minimum of 300mm behind the rear face of any kerbing.

4. The base course and surfacing shall extend to the face of any kerbing. Where the top surface of the subbase layer is below the level of the underside of the kerbing, the base layer shall also extend a minimum of 300mm behind the rear face of the kerbing.

5. For un-kerbed roads, the subbase and base layers shall extend at least to the nominated width of shoulder. For un-kerbed roads the base course material shall be constructed of emulsion stabilised limestone (ESL). The City has found that ESL provides greatest endurance under traffic load and wet weather conditions. Designers wishing to use alternative materials must present documented objective evidence of the performance of the design material in similar traffic conditions tested over a minimum period of 3 years.

6. Should designers wish to use alternative materials in their pavement design that those traditionally used within the City as outlined in Table 1 over, they shall provide documented, quantitative evidence that the material has at a minimum the technical, safety, economic and endurance characteristics of emulsion stabilised limestone (ESL).

**WD2.11 UNBOUND GRANULAR FLEXIBLE PAVEMENTS (BITUMINOUS SURFACED)**
(See AusSpec D2.11)

**WD2.12 FLEXIBLE PAVEMENTS CONTAINING BOUND LAYERS (BITUMINOUS SURFACED)**
(See AusSpec D2.12)

**WD2.13 RIGID PAVEMENTS**
(See AusSpec D2.13)

**WD2.14 CONCRETE SEGMENTAL BLOCK PAVEMENTS**
(See AusSpec D2.14)

**WD2.15 CLAY SEGMENTAL BLOCK PAVEMENTS**
(See AusSpec D2.15)

**SURFACING DESIGN**

**WD2.16 CHOICE OF SURFACE TYPE**
(See AusSpec D2.16)

1. It should be noted that the use of a primer seal plus two coat flush seal may only be used on rural roads.

2. The use of micro-surfacing has not traditionally been used on new pavements, however designers should demonstrate the satisfactory performance of the surface, should they wish to incorporate it into their design.
WD2.17 SPRAYED BITUMINOUS SEALS (FLUSH SEALS) (See AusSpec D2.17)

WD2.18 BITUMINOUS MICROSCURFACING (COLD OVERLAY)
(See AusSpec D2.18)

WD2.19 ASPHALTIC CONCRETE (See AusSpec D2.19)

While the AusSpec document indicates that a minimum 40mm thickness of asphalt is required for medium to heavily trafficked residential, rural or commercial roads and on all industrial classified roads Table 1 highlights the traditional standards of 25mm. Consultant Engineers are responsible for providing an asphalt thickness that meets design life traffic loadings.

WD2.20 SEGMENTAL PAVERS (See AusSpec D2.20)

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WD2.21 DESIGN CRITERIA AND CALCULATIONS (See AusSpec D2.21)
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<th>RURAL ROADS</th>
<th>INDUSTRIAL ROADS</th>
</tr>
</thead>
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<tr>
<td><strong>Pavement Depths</strong></td>
<td><strong>Access Ways</strong> 150mm Limestone 75mm ESL 25mm AC</td>
<td><strong>Access Ways</strong> 150mm Limestone 75mm ESL 10mm Stone Chip Seal</td>
<td><strong>Access Ways</strong> 200mm Limestone 75mm ESL or Rock Base 25mm AC</td>
</tr>
<tr>
<td><strong>Road Type</strong></td>
<td><strong>Access Roads</strong> 150mm Limestone OR 150mm Limestone 75mm Rock Base 25mm AC</td>
<td><strong>Access Roads</strong> 150mm Limestone 75mm Rock Base 25mm AC OR 150mm Limestone 75mm Rock Base 25m AC</td>
<td><strong>Access Roads</strong> 200mm Limestone 75mm ESL or Rock Base 25mm AC</td>
</tr>
<tr>
<td><strong>Urban Roads</strong></td>
<td><strong>Distributor</strong> 150mm Limestone 75mm ESL 25mm AC OR 150mm Limestone 75mm ESL 25m AC</td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 30mm AC</td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 14mm Granite 10mm Granite Sealed Shoulders</td>
</tr>
<tr>
<td><strong>Rural Roads</strong></td>
<td><strong>Arterial</strong> 150mm Limestone 75mm ESL 30mm AC</td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 14mm Granite 10mm Granite Sealed Shoulders</td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 14mm Granite 10mm Granite Sealed Shoulders</td>
</tr>
<tr>
<td><strong>Industrial Roads</strong></td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 14mm Granite 10mm Granite Sealed Shoulders</td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 14mm Granite 10mm Granite Sealed Shoulders</td>
<td><strong>Arterial</strong> 225mm Limestone 75mm ESL 14mm Granite 10mm Granite Sealed Shoulders</td>
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ESL – Emulsion Stabilised Limestone
AC – Asphaltic Concrete
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PAVEMENT DESIGN

GENERAL

D2.01 SCOPE

1. The work to be executed under this Specification consists of the design of the road pavement to meet the required design life, based on the subgrade strength, traffic loading and environmental factors, and including the selection of appropriate materials for select subgrade, subbase, base and wearing surface.

2. The Specification contains procedures for the design of the following forms of surfaced road pavement construction:

   (a) flexible pavements consisting of unbound granular materials;
   (b) flexible pavements that contain one or more bound layers, including pavements containing asphalt layers other than thin asphalt wearing surfaces;
   (c) rigid pavements (i.e. cement concrete pavements);
   (d) concrete or clay segmental pavements.

3. Consideration to the design of unsealed (gravel) pavements will only be given for minor rural subdivisions/developments in isolated rural areas where the access to the subdivision is via an existing unsealed road.

D2.02 OBJECTIVES

1. The objective in the design of the road pavement is to select appropriate pavement and surfacing materials, types, layer thicknesses and configurations to ensure that the pavement performs adequately and requires minimal maintenance under the anticipated traffic loading for the design life adopted.

D2.03 REFERENCE AND SOURCE DOCUMENTS

(a) Council Specifications

   D1       - Geometric Road Design
   D4       - Subsurface Drainage Design
   C242     - Flexible Pavements
   C244     - Sprayed Bituminous Surfacing
   C245     - Asphalitic Concrete
   C247     - Mass Concrete Subbase
   C248     - Plain or Reinforced Concrete Base
   C254     - Segmental Paving
   C255     - Bituminous Microsurfacing
PAVEMENT DESIGN CRITERIA

D2.04 DESIGN VARIABLES

1. Regardless of the type of road pavement proposed, the design of the pavement shall involve consideration of the following five input variables:

   (a) Design Traffic
   (b) Subgrade Evaluation
   (c) Environment
   (d) Pavement and Surfacing Materials
   (e) Construction and Maintenance Considerations

D2.05 DESIGN TRAFFIC

1. The design traffic shall be calculated based on the following minimum design lives of pavement:

   (a) Flexible, Unbound Granular - 25 years
   (b) Flexible, Containing one or more bound layers - 25 years
   (c) Rigid (Concrete) - 40 years
   (d) Segmental - 25 years

2. Design traffic shall be calculated in equivalent standard axles (ESAs) for the applicable design life of the pavement, taking into account present and predicted...

(b) Other

AUSTROADS - Guide to Control of Moisture in Roads.

Cement and Concrete Association of Australia.

Concrete Masonry Association of Australia.
CMAA - T44 - Concrete Segmental Pavements - Guide to Specifying, 1997

Clay Brick and Paver Institute
commercial traffic volumes, axle loadings and configurations, commercial traffic growth and street capacity. For new subdivisions, the design traffic shall take account of both the construction traffic associated with the subdivision development and the in-service traffic. For interlocking concrete segmental pavements, the simplification of replacing ESA’s with the number of commercial vehicles exceeding 3 tonne gross contained in CMAA-T45 is acceptable up to a design traffic of $10^6$. Beyond this, ESAs should be calculated.

3. The pavement design shall include all traffic data and/or assumptions made in the calculation of the design traffic.

4. In general, reference should be made to ARRB-SR41 for the calculation of design traffic volumes up to $10^6$ ESAs and AUSTROADS Pavement Design for design traffic volumes approaching or exceeding $10^6$ ESAs.

5. In the absence of other traffic data, the following traffic values (in ESAs) may be taken as a guide to the design traffic, but shall be subject to variation depending on the circumstances for the particular development.

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<tr>
<th>Street Type:</th>
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<td>Urban Residential</td>
<td></td>
</tr>
<tr>
<td>- Cul-de-sac</td>
<td>$2 \times 10^4$</td>
</tr>
<tr>
<td>- Minor</td>
<td>$6 \times 10^4$</td>
</tr>
<tr>
<td>- Local Access</td>
<td>$3 \times 10^5$</td>
</tr>
<tr>
<td>- Collector</td>
<td>$1 \times 10^6$</td>
</tr>
<tr>
<td>- Distributor</td>
<td>$2 \times 10^6$</td>
</tr>
<tr>
<td>Rural Residential</td>
<td></td>
</tr>
<tr>
<td>- Cul-de-sac</td>
<td>$2 \times 10^4$</td>
</tr>
<tr>
<td>- Other</td>
<td>$3 \times 10^5$</td>
</tr>
<tr>
<td>Commercial and Industrial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$5 \times 10^6$</td>
</tr>
</tbody>
</table>

**D2.06 SUBGRADE EVALUATION**

1. Except where a mechanistic design approach is employed using AUSTROADS Pavement Design, the measure of subgrade support shall be the California Bearing Ratio (CBR). Where a mechanistic design approach using linear elastic theory is employed for flexible pavements, the measure of subgrade support shall be in terms of the elastic parameters (modulus, Poisson's ratio).

2. The following factors must be considered in determining the design strength/stiffness of the subgrade:

   (a) Sequence of earthworks construction
   (b) The compaction moisture content and field density specified for construction
   (c) Moisture changes during service life
   (d) Subgrade variability
   (e) The presence or otherwise of weak layers below the design subgrade level.
3. The subgrade Design CBR adopted for the pavement design must consider the effect of moisture changes in the pavement and subgrade during the service life, and hence consideration must be given to the provision of subsurface drainage in the estimation of equilibrium in-situ CBRs, and hence in the design of the pavement structure. Warrants for the provision of subsurface drainage are given in Specification for SUBSURFACE DRAINAGE DESIGN. If subsurface drainage is not provided, then the Design CBR adopted must allow for a greater variability in subgrade moisture content during the service life of the pavement, and hence a Design Moisture Content above the Optimum Moisture Content.

4. The calculation of the Design CBR shall be based on a minimum of three 4 day soaked CBR laboratory samples for each subgrade area, compacted to the relative density specified for construction, and corrected to allow for the effects of subsurface drainage (or lack of), climatic zone, and soil type if appropriate (as per the guidelines in ARRB SR41) to give an estimated equilibrium in-situ CBR. The Design CBR for each subgrade area is computed by using the appropriate formulae as follows:

Design CBR = \text{Least of estimated CBRs, for less than five results}

Design CBR = 10th percentile of all estimated CBRs, for five or more results

= C - 1.3S

Where

C is the mean of all estimated CBRs, and
S is the standard deviation of all values.

5. Where practicable, the Design CBR obtained from laboratory testing should be confirmed by testing performed on existing road pavements near to the job site under equivalent conditions and displaying similar subgrades.

6. The pavement design shall include a summary of all laboratory and field test results and assumptions and/or calculations made in the assessment of Design CBR.

D2.07 ENVIRONMENT

1. The environmental factors which significantly affect pavement performance are moisture and temperature. Both of these factors must be considered at the design stage of the pavement. Reference should be made to AUSTROADS Pavement Design, ARRB-SR41, and to NAASRA (Now AUSTROADS) - Guide to Control of Moisture in Roads.

2. The following factors relating to moisture environment must be considered in determining the design subgrade strength/stiffness and in the choice of pavement and surfacing materials:

(a) Rainfall/evaporation pattern
(b) Permeability of wearing surface
(c) Depth of water table
(d) Relative permeability of pavement layers
(e) Whether shoulders are sealed or not
(f) Pavement type (boxed or full width)

3. The effect of changes in moisture content on the strength/stiffness of the subgrade shall be taken into account by evaluating the design subgrade strength parameters (ie. CBR or modulus) at the highest moisture content likely to occur during the design life, ie the Design Moisture Content. The provision of subsurface drainage may, under certain circumstances, allow a lower Design Moisture Content, and hence
generally higher Design CBR.

4. The effect of changes in temperature environment must be considered in the design of pavements with asphalt wearing surfaces, particularly if traffic loading occurs at night when temperatures are low, thus causing a potential reduction in the fatigue life of thin asphalt surfacing. The effect of changes in temperature environment should also be considered for bound or concrete layers.

5. The pavement design shall include all considerations for environmental factors, and any assumptions made that would reduce or increase design subgrade strength, or affect the choice of pavement and surfacing materials.

D2.08 PAVEMENT AND SURFACING MATERIALS

1. Pavement materials can be classified into essentially four categories according to their fundamental behaviour under the effects of applied loadings:

   (a) Unbound granular materials, including modified granular materials
   (b) Bound (cemented) granular materials
   (c) Asphaltic Concrete
   (d) Cement Concrete

2. Surfacing materials can also be classified into essentially five categories or types:

   (a) Sprayed bituminous seals (flush seals)
   (b) Asphaltic concrete and bituminous microsurfacing (cold overlay)
   (c) Cement Concrete
   (d) Concrete Segmental Pavers
   (e) Clay Segmental Pavers

3. Unbound granular materials, including modified granular materials, shall satisfy the requirements of the Construction Specification for FLEXIBLE PAVEMENTS.

4. Bound (cemented) granular materials shall satisfy the requirements of the Construction Specification for FLEXIBLE PAVEMENTS.

5. Asphaltic concrete shall satisfy the requirements of the Construction Specification for ASPHALTIC CONCRETE.

6. Cement concrete shall satisfy the requirements of the Construction Specifications for MASS CONCRETE SUBBASE or PLAIN OR REINFORCED CONCRETE BASE, as appropriate.

7. Sprayed bituminous seals shall satisfy the requirements of the Construction Specification for SPRAYED BITUMINOUS SURFACING.

8. Concrete and clay segmental pavers shall satisfy the requirements of the Construction Specification for SEGMENTAL PAVING.
9. Bituminous microsurfacing (cold overlay) shall satisfy the requirements of the Construction Specification for BITUMINOUS MICROSURFACING.

D2.09 CONSTRUCTION AND MAINTENANCE CONSIDERATIONS

1. The type of pavement, choice of base and subbase materials, and the type of surfacing adopted should involve consideration of various construction and maintenance factors as follows:

(a) Extent and type of drainage
(b) Use of boxed or full width construction
(c) Available equipment of the Contractor
(d) Use of stabilisation
(e) Aesthetic, environmental and safety requirements
(f) Social considerations
(g) Construction under traffic
(h) Use of staged construction
(i) Ongoing and long-term maintenance costs

These factors are further discussed in AUSTROADS Pavement Design.

PAVEMENT THICKNESS DESIGN

D2.10 PAVEMENT STRUCTURE - GENERAL

1. The pavement thickness, including the thickness of surfacings, shall not be less than 250mm for roads in which kerb is to be constructed, and 200mm for unkerbed roads.

2. Notwithstanding subgrade testing and subsequent pavement thickness design, the thickness of subbase and base layers shall not be less than the following:

(a) Flexible pavement: Subbase 100mm, Base 100mm
(b) Rigid pavement: Subbase 100mm, Base 150mm

3. The subbase layer shall extend a minimum of 150mm behind the rear face of any kerbing.

4. The base and surfacing shall extend to the face of any kerbing. Where the top surface of the subbase layer is below the level of the underside of the kerbing, the base layer shall also extend a minimum of 150mm behind the rear face of the kerbing.

5. For unkerbed roads, the subbase and base layers shall extend at least to the nominated width of shoulder.
D2.11 UNBOUND GRANULAR FLEXIBLE PAVEMENTS (BITUMINOUS SURFACED)

1. Unbound granular flexible pavements with thin bituminous surfacings, including those with cement or lime modified granular materials, with design traffic up to $10^6$ ESAs shall be designed in accordance with ARRB-SR41, using Figure 7 (95% confidence limit curves).

2. For design traffic above $10^6$ ESAs, the design shall be in accordance with AUSTROADS Pavement Design.

D2.12 FLEXIBLE PAVEMENTS CONTAINING BOUND LAYERS (BITUMINOUS SURFACED)

1. Flexible pavements containing one or more bound layers, including cement stabilised layers or asphaltic concrete layers other than thin asphalt surfacings, shall be designed in accordance with AUSTROADS Pavement Design.

2. As an alternative to AUSTROADS Pavement Design for design traffic up to $10^6$ ESAs, bound layers may be assumed to be equivalent to unbound layers of the same thickness, and the pavement designed in accordance with ARRB-SR41, using Figure 7 (95% confidence limit curves).

D2.13 RIGID PAVEMENTS

1. Rigid (concrete) pavements, with design traffic up to $10^6$ ESAs shall be designed in accordance with either CACA -T51 or AUSTROADS Pavement Design.

2. Rigid (concrete) pavements for design traffic above $10^6$ ESAs, the design shall be in accordance with AUSTROADS Pavement Design.

D2.14 CONCRETE SEGMENTAL PAVEMENTS

1. Concrete segmental pavements with design traffic up to $10^6$ estimated commercial vehicles exceeding 3T gross shall be designed in accordance with CMAA - T45.

2. For design traffic above $10^6$ estimated commercial vehicles exceeding 3T gross the design shall be in accordance with AUSTROADS Pavement Design, with the calculation of design traffic in terms of ESAs.

D2.15 CLAY SEGMENTAL PAVEMENTS

1. Clay segmental pavements with design traffic up to $10^6$ ESAs shall be designed in accordance with Design Manual 1 - Clay Segmental Pavements.

2. For design traffic above $10^6$ ESAs and up to $10^7$ ESAs the design shall involve consideration of both Design Manual 1 - Clay Segmental Pavements and AUSTROADS Pavement Design, with the thicker and more conservative design of each of the two methods adopted.

3. For design traffic above $10^7$ ESAs, the pavement shall be designed in accordance with AUSTROADS Pavement Design.
SURFACING DESIGN

D2.16 CHOICE OF SURFACE TYPE

1. Except where the pavement is designed for concrete or segmental block surfacing, the wearing surface shall be a bituminous wearing surface as follows:

   (a) Urban Residential streets - Cul-de-sac, Access Places and Ways, and Rural Residential streets:
       - primer seal plus two coat flush seal
       or
       - primer seal, plus one coat flush seal, plus bituminous microsurfacing
       or
       - primer seal, plus asphalt.

   (b) Urban Residential streets - Local Distributor and District Distributor (B):
       - primer seal, plus one coat flush seal, plus bituminous microsurfacing
       or
       - primer seal, plus asphalt

   (c) Commercial and Industrial streets:
       - primer seal, plus asphalt

   (d) Sub-arterial and Arterial roads:
       - primer seal, plus asphalt.

2. At intersection approaches and cul-de-sac turning circles on residential streets with flush seals, either bituminous microsurfacing or asphalt surfacing shall be provided within the vehicle braking and turning zones.

3. Variations to these requirements may be approved by Council in special circumstances.

D2.17 SPRAYED BITUMINOUS SEALS (FLUSH SEALS)

1. The design of sprayed bituminous (flush) seals, including primer seals, shall be in accordance with the AUSTROADS - Design of Sprayed Seals.

2. 7mm primer seals shall be indicated on the Drawings below all flush seals, bituminous microsurfacing, and asphalt surfacings. Where a 7mm primer seal is impractical, a 10mm primer seal shall be indicated in lieu.

3. Two-coat flush seals shall comprise a minimum of two coats binder and two coats of aggregate. The preferred seal types are:

<table>
<thead>
<tr>
<th>Coat</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>14mm</td>
</tr>
<tr>
<td>2nd</td>
<td>7mm</td>
</tr>
</tbody>
</table>

4. Single coat flush seals shall be allowable if bituminous microsurfacing (or
asphaltic concrete) is to be applied as the finished surface. The preferred seal type is either 14mm or 10mm.

D2.18 BITUMINOUS MICROSURFACING (COLD OVERLAY)

1. Bituminous microsurfacing, also referred to as 'cold overlay', shall be designed to provide a nominal compacted thickness of not less than 8mm.

2. As a minimum, a 7mm primer seal and a single coat flush seal shall be indicated on the Drawings below the bituminous microsurfacing.

D2.19 ASPHALTIC CONCRETE

1. In light to medium trafficked residential, rural or commercial streets (design traffic up to approximately 3 x 10^5 ESAs), the asphalt mix design shall be either a 'high-bitumen content' mix or the ARRB Gap-graded mix in accordance with ARRB-SR41 and the Construction Specification for ASPHALTIC CONCRETE.

2. In medium to heavily trafficked residential, rural or commercial roads and in all industrial and classified roads, the asphalt mix design shall be a dense graded mix in accordance with the Construction Specification for ASPHALTIC CONCRETE.

3. Asphaltic concrete surfacings shall be designed to provide a nominal compacted layer thickness of not less than 25mm on light to medium trafficked residential, rural and commercial streets, and 40mm on medium to heavily trafficked residential, rural or commercial roads and on all industrial and classified roads.

4. As a minimum, a 7mm or 10mm primer seal shall be indicated on the Drawings below the asphalt surfacing.

D2.20 SEGMENTAL PAVERS

1. Concrete segmental pavers shall be 80mm thick, shape Type A, and designed to be paved in a herringbone pattern.

2. Clay segmental pavers shall be 65mm thick, Class 4, and designed to be paved in a herringbone pattern.

3. The edges of all paving shall be designed to be constrained by either kerbing or by concrete edge strips.

DOCUMENTATION

D2.21 DESIGN CRITERIA AND CALCULATIONS

1. All considerations, assumptions, subgrade test results, and calculations shall be submitted with the pavement design for approval by Council.

2. The Drawings shall clearly indicate the structure, material types and layer thicknesses of the proposed pavement and surfacing.
SPECIAL REQUIREMENTS

D2.22 RESERVED

D2.23 RESERVED

D2.24 RESERVED

D2.25 RESERVED