Design and Construction Note

102.15
Street Layout and Pavement Design Guidelines
Granite Paving
Material Specification
Reviewed: 30/10/2018

City of Perth

Granite Paving

1) Performance Specification:

Compressive Strength	Minimum 135 Mpa	Tested by Std ASTM C99
Modulus of Rupture	Minimum of 12 Mpa	Tested by Std ASTM C99
Abrasion Resistance	Minimum of Ha 25	Tested by Std ASTM C1353
Tensile Strength	Minimum of 10Mpa	Tested by Std ASTM C880
Slip Resistance	Minimum of Class W	Tested in accordance AS4586
Coefficient of Thermal Expansion	Max of $8.4 \times 10^{-6}/°C$	Tested by Std ASTM E831
Moisture Absorption by Weight	Max 0.30% by weight	Tested by Std ASTM C97
Density	Minimum 2560 kg/cum	Tested by Std ASTM C97
Breaking Load	Minimum 34kN	Tested in accordance AS4456.5

2) Testing of Paving:

All proposed paving must have test results to confirm the above properties are fulfilled. Testing to be irrespective of orientation and be performed on exfoliated finished samples. The required methods and standards of testing are:

ASTM Standards:

C97/C97M	*Test methods for absorption and bulk specific gravity of dimension stone.*
C99/C99M	*Test method for modulus of rupture of dimension stone.*
C119	*Terminology relating to dimension stone.*
C170/C170M	*Test method for compressive strength of dimension stone.*
C241/C241M	*Test method for abrasion resistance of stone subjected to foot traffic.*
C880/C880M	*Test method for flexural strength of dimension stone.*
D7102	*Test method –intact rock core specimens.*

Australian Standards:

AS4456.5-2003	*Masonry units and segmental pavers and flags - Methods of test - Determining the breaking load of segmental pavers and flags*
AS4586-2013	*Slip resistance classification of new pedestrian surface materials*

3) Approval of Test Results

The appropriate specimens should be prepared from the supplied samples and the above test work completed prior to supply of paving.