Master Specification
Part RD-PV-C6

Reinstatement of Existing Pavements

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Government of South Australia
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Contents

RD-PV-C6 Reinstatement of Existing Pavements

1 General

a) This Master Specification Part set out the requirements for the reinstatement of an existing pavement above an excavation carried out for purposes such as the installation, maintenance or inspection of culverts, drainage structures, pits, cables, conduits and pipes including:

i) the documentation requirements as set out in section 2;

ii) the requirements for construction of pavement as set out in section 3;

iii) the requirements for shoulders, as set out in section 4;

iv) the requirements for unbound and cement treated pavements, as set out in section 5;

v) the requirements for temporary pavement surfaces, as set out in section 6;

vi) the general surfacing requirements, as set out in section 7;

vii) the requirements for asphalt surfacing, as set out in section 8;

viii) the requirements for joint sealing, as set out in section 9;

ix) the requirements for sprayed bituminous surfacing as set out in section 10; and

x) the requirements for the reinstatement of other infrastructure, as set out in section 11.

b) The reinstatement of existing pavements must comply with the Reference Documents, including:

i) AS 2008 Bitumen for pavements;

ii) AS 1289.5.2.1 Methods of testing soils for engineering purposes, Method 5.2.1: Soil compaction and density tests - Determination of the dry density/moisture content relation of a soil using modified compactive effort;

iii) Department Specification for Works on Roads Carried Out for Organisations other than the Commissioner of Highways (available from: https://www.dit.sa.gov.au/contractor_documents/works_on_roads_by_other_organisations); and

iv) Department Pavement Reinstatement Manual (available from: https://dit.sa.gov.au/standards/manuals).

2 Documentation

2.1 Quality Management Records

In addition to the requirements of PC-QA1 “Quality Management Requirements” or PC-QA2 “Quality Management Requirements for Major Projects” (as applicable), the Quality Management Records must include the asphalt surfacing test results as required by section 8c).

3 Construction of pavement

a) The Contractor must ensure that the reinstatement of an existing pavement is undertaken in accordance with the applicable figure specified in the Department Pavement Reinstatement Manual.

b) The Contractor must ensure that:

i) a reinstated pavement is not of a lesser standard and thickness than the existing pavement; and

ii) the supply of pavement materials complies with the requirements of RD-PV-S1 “Supply of Pavement Materials”.

c) Backfilling of trenches below the bottom layer of the pavement being reinstated must comply with RD-EW-C2 “Trench Excavation and Backfill”.

4 Shoulders

a) The Contractor must ensure that the reinstatement of unsealed shoulders match the finished shoulder level and existing crossfall.

b) The Contractor must ensure that sealed shoulders are resealed with materials matching the original surface.

c) If traffic is diverted onto the road shoulder as part of traffic management, the Contractor must ensure that the shoulder is returned to the condition that existed prior to the Works taking place.

5 Unbound and cement treated pavements

a) The Contractor must ensure that unbound granular pavement layers are uniformly compacted in horizontal layers with thicknesses in accordance with the requirements of RD-PV-D1 “Pavement Investigation and Design”.

b) Compaction of unbound pavement layers must be:

i) determined using AS 1289 Methods of testing soils for engineering purposes Soil compaction and density tests - Determination of the dry density/moisture content relation of a soil using modified compactive effort; and

ii) tested at the frequency specified in Table RD-PV-C6 5-1.

c) The Contractor must ensure that cement treated pavements comply with the requirements of RD-PV-S2 “Plant Mixed Stabilised Pavement”.

Table RD-PV-C6 5-1 Compaction testing frequency - unbound pavement

Pavement area	Testing frequency
0 - 25 m^2	One test per layer
25 - 100 m^2	Minimum 2 tests per layer
Over 100 m^2	2 tests per layer and an additional test per layer for every 100 m^2 or part thereof over 100 m^2

6 Temporary pavement surface

a) The Contractor must ensure that the open surface of any pavement layer is maintained to prevent deterioration and the ingress or ponding of water prior to the application of the final surfacing.

b) In the event that the reinstatement or surrounding pavement layers become affected by the ingress or ponding of water prior to the application of final surfacing, the Contractor must ensure that all affected material is removed and replaced with conforming material.

c) If the final surfacing is not placed before the reinstated pavement is opened to traffic, the Contractor must ensure that a temporary asphalt or bituminous surface, similar to that previously existing, is provided and maintained in a safe and trafficable condition for all road users, including cyclists and pedestrians.

d) Where asphalt is used as the temporary surface, the Contractor must ensure that the minimum thickness of asphalt is 50 mm.

7 Surfacing general

a) The Contractor must ensure that the supply and placing of the surfacing is undertaken in accordance with the requirements of the applicable figure in the Department Pavement Reinstatement Manual.

b) The Contractor must ensure that the final surfacing extents are determined in accordance with the requirements of Department Pavement Reinstatement Manual.

c) The Contractor must ensure that the joint between the existing and reinstated final surfacing is not positioned within the wheel path.

8 Asphalt surfacing

a) The Contractor must ensure that the final wearing course of the reinstated asphalt surfaced pavements is extended beyond the sides of the trench by cold planing and reinstating to a minimum depth of 50 mm.

b) Unless approved otherwise in the Construction Documentation, the wearing course must be laid with a paver. For works falling within the Zone 1 - Metropolitan road maintenance zone, the wearing course must contain polymer modified binder.

c) The Contractor must ensure that asphalt layers, including the final surfacing, comply with the quality requirements, level tolerances and surface irregularity acceptance criteria set out in:

i) RD-BP-S2 “Supply of Asphalt”; and

ii) RD-BP-C3 “Construction of Asphalt Pavement”,

except that the frequency of sampling and testing must be in accordance with Table RD-PV-C6 8-1. Test results must be submitted as part of the Quality Management Records.

d) Individual constructed granular and asphalt layer thickness must comply with Table RD-PV-C6 8-1.

e) The Contractor must ensure that the asphalt mix is registered with the Principal in accordance with RD-BP-S2 “Supply of Asphalt” and be identified as such on cart notes.

f) The Contractor must ensure that tack coating is applied to vertical edges between old and new asphalt pavements in accordance with the requirements of RD-BP-C3 “Construction of Asphalt Pavement”.

g) On completion of reinstatement, the Contractor must ensure that any residual saw cuts are sealed to prevent water ingress into the pavement in accordance with section 9.

Table RD-PV-C6 8-1 Sampling and testing frequency - asphalt

Pavement area	Testing frequency
0 - 30 t	2 samples and tests
31 - 150 t	4 samples and tests
151 - 300 t	6 samples and tests
>300 t	6 samples and tests plus 1 sample and test for each additional 200 t or part thereof

9 Joint sealing

a) The Contractor must ensure that the supply of joint sealant complies with RD-BP-S3 “Supply of Pavement Crack Sealant”.

b) The Contractor must ensure that the application of joint sealing complies with RD-BP-C8 “Application of Pavement Crack Sealant”.

c) Cracks must be crack sealed at surface 6 months after opening, except where the joint is in good condition and formal approval has been provided by the Principal.

10 Sprayed bituminous surfacing

a) The Contractor must ensure that the reinstatement of sprayed bituminous surfacing is undertaken in accordance with the requirements of RD-BP-D2 “Design and Application of Sprayed Bituminous Surfacing”.

b) The Contractor must ensure that sprayed seal construction is in accordance with RD-BP-D2 “Design and Application of Sprayed Bituminous Surfacing”.

c) The Contractor must ensure that:

i) the sprayed bituminous surfacing matches the size and texture of the existing adjacent pavement and is finished off evenly and flush with the adjoining pavement surface; and

ii) the resultant bituminous surfacing is within the tolerance of 15 mm as measured by a 3 m straight edge in any direction.

11 Reinstatement of other infrastructure

The Contractor must ensure that all pavement marking, road furniture, drainage systems, secondary paving and similar infrastructure which has been removed or damaged during the pavement excavation and reinstatement work is replaced:

a) to the original standard;

b) in accordance with the Contract Documents and Reference Documents; and

c) as required by Table RD-PV-C6 11-1.

Table RD-PV-C6 11-1 Reinstatement of other infrastructure requirements

Infrastructure type	Requirement
Pavement marking (includes raised pavement markers or pavement bars)	Replacement in accordance with RD-LM-C1 “Application of Pavement Marking”.
	The marking must be completed within 5 days of the completion of the final surfacing of the reinstatement works.
Road furniture (including road signs, guide posts, safety barrier and detector loops)	Replacement in accordance with:
	a) RD-BF-C1 “Supply and Installation of Steel Beam Safety Barrier Systems”
	b) RD-LM-S2 “Supply of Signs”
	c) RD-LM-C4 “Sign Installation”
	d) RD-ITS-S7 “Supply and Installation of Motorway Vehicle Detection Systems”
Concrete kerb and gutter or median type kerb	Replacement in accordance with RD-DK-C2 “Kerbing”.
	Kerb reinstatement must be completed within 3 days of reinstatement of the road pavement.
Vegetation	Any vegetation must be replaced with vegetation that is of the same type and in the same positions as that removed or damaged in accordance with the Master Specification Parts - Public Realm.
Medians and traffic islands	Where the existing median consists of compacted granular material, the median must be reinstated with PM2/20 compacted to no less than 92% of the dry density determined using AS 1289 Methods of testing soils for engineering purposes Soil compaction and density tests - Determination of the dry density/moisture content relation of a soil using modified compactive effort.
Footpaths and brick paved areas	Match existing pavement (i.e. base and any sub-base) configuration and surfacing type.
Road drainage systems	Report damage to the Principal.