

Master Specification

Part RD-PV-C4

Construction of Shared Path Pavements

September 2024



Government of South Australia
Department for Infrastructure
and Transport

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Document Information

Document Information	
K Net Number:	13995875
Document Version:	1
Document Date:	30/09/2024

Document Amendment Record

Version	Change Description	Date
0	Initial issue	31/08/2023
1	Updated cover page	30/09/2024

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Contents

Contents	3
RD-PV-C4 Construction of Shared Path Pavements	4
1 General	4
2 Finished surface	4
3 Earthworks	4
4 Compaction	5
5 Asphalt	5
6 Concrete	6
7 Elevated path	6
8 Line marking and signs	7

RD-PV-C4 Construction of Shared Path Pavements

1 General

- a) This Master Specification Part sets out the requirements for the construction of shared paths used for cycling and pedestrians including:
 - i) the requirements for finished surfaces, as set out in section 2;
 - ii) the requirements for earthworks, as set out in section 3;
 - iii) the requirements for compaction, as set out in section 4;
 - iv) the requirements for asphalt, as set out in section 5;
 - v) the requirements for concrete, as set out in section 6;
 - vi) the requirements for elevated paths, as set out in section 7; and
 - vii) the requirements for line marking and signs, as set out in section 8.
- b) The construction of shared path pavements must comply with the Reference Documents, including:
 - i) AGPT Part 4B: Asphalt;
 - ii) AP-G88 Cycling Aspects of Austroads Guides;
 - iii) AS 2150 Asphalt - A guide to good practice; and
 - iv) Department Guide to Bikeway Pavement Design Construction & Maintenance for South Australia (available from: https://dit.sa.gov.au/standards/standards_and_guidelines).

2 Finished surface

The Contractor must ensure that the finished surface of the shared paths complies with the following requirements:

- a) the finished surface must not vary more than 10 mm over a 3 m straight edge;
- b) where a design finished level is specified, the finished surface must be constructed within:
 - i) ± 10 mm for concrete, asphalt and block paving; or
 - ii) ± 20 mm for other surfaces;
- c) the finished surface must drain to the top of any adjoining kerb;
- d) the finished surface must be free draining so that water does not pond on the surface;
- e) the finished surface must be free of irregularities that could present tripping hazards to users; and
- f) the finished surface must smoothly abut any existing driveways and footpaths adjoining the new surface.

3 Earthworks

- a) This section 3 applies to minor earthworks undertaken solely for the construction of the shared paths.
- b) Where the earthworks are constructed as part of roadworks or the cut and fill or the shared path width exceeds 1.0 m, the Contractor must also comply with the requirements set out in RD-EW-C1 "Earthworks".

- c) The Contractor must ensure that the following earthworks related requirements are satisfied in the construction of the shared path:
- i) all vegetation, loose material, rubbish and existing structures must be removed from the site and disposed of in an environmentally acceptable manner and as otherwise required by the Contract Documents;
 - ii) topsoil must be stripped to a minimum depth of 100 mm;
 - iii) site preparation and topsoil stripping must be restricted to the minimum area practicable for construction of the Works;
 - iv) where batters are not restrained by retaining walls:
 - A. the batters must be constructed at a slope which is stable and erosion resistant; and
 - B. excavated topsoil must be respread on the batters;
 - v) earthworks fill must be constructed and compacted in accordance with section 4;
 - vi) the surface of the earthworks must be trimmed and compacted with at least one pass of the compaction plant prior to the construction of the shared path pavements; and
 - vii) fill material must not contain:
 - A. topsoil;
 - B. highly plastic clay;
 - C. soil classified as highly or extremely expansive;
 - D. over-wet material;
 - E. peat; or
 - F. any organic material.

4 Compaction

The Contractor must ensure that earthworks, rubble, base course and sub-base course of the shared path pavement are compacted at OMC using the minimum number of passes specified in Table RD-PV-C4 4-1.

Table RD-PV-C4 4-1 Compaction requirements

Plant	Thickness 50-120 mm	Thickness >120 mm
Small vibration plate (approx. mass 90 kg - Wacker VPA 90 or equiv.) ⁽¹⁾	6	8
Large vibration plate (approx. mass 300 kg - Wacker BPU 3345 or equiv.)	3	4
Small twin drum footpath roller minimum 1 t (e.g. Ingersoll Rand DD12)	2	3
3 t vibrating roller class VR10 (e.g. Ingersoll Rand DD22)	2	3

Table notes:

(1) The small vibration plate may only be used in areas inaccessible to larger plant.

5 Asphalt

The Contractor must ensure that any asphalt used on shared paths complies with the following requirements:

- a) asphalt pavements used on shared paths must conform with RD-BP-S2 "Supply of Asphalt";

- b) asphalt compaction must be carried out using a minimum 2 passes of a steel double drum, vibrating footpath roller;
- c) the surface of the finished asphalt must be free of:
 - i) segregated or “bony” areas;
 - ii) soft and “fatty” areas;
 - iii) ravelling and loose material;
 - iv) surface cracking;
 - v) shoving; and
 - vi) ruts; and
- d) the granular base must be PM2/20 compacted in accordance with Table RD-PV-C4 4-1.

6 Concrete

The Contractor must ensure that all concrete pavements used on shared paths comply with the following requirements:

- a) concrete pavements used on shared paths must comply with the following:
 - i) minimum concrete class: N25;
 - ii) minimum thickness: 100 mm;
 - iii) reinforcing: SL62;
 - iv) base material: PM2/20 compacted in accordance with Table RD-PV-C4 4-1;
 - v) spacing of contraction joints: 4 m; and
 - vi) minimum sub-base compacted thickness: 100 mm;
- b) the pavements must be constructed on a subbase of PM2/20 or PM3/20 compacted in accordance with Table RD-PV-C4 4-1;
- c) the concrete must comply with:
 - i) the requirements of ST-SC-S1 “Normal Class Concrete”;
 - ii) the requirements of ST-SC-S2 “Geopolymer Concrete”;
 - iii) reinforcing must be placed centrally and on spacers;
 - iv) all shrinkage grooves and edges must be tool finished;
 - v) the surface must be finished to a non-slip texture and be protected from damage for the first 48 hours after pouring the concrete;
 - vi) the length to width ratio of the distance between the shrinkage grooves must not exceed 1.3:1;
 - vii) expansion joints 12 mm wide and full depth of the concrete must be provided at not more than 6 m intervals and filled with bitumen or other flexible material; and
 - viii) 3 mm wide contraction joints must be sawn to 25 mm depth during initial set.

7 Elevated path

- a) Where the shared path consists of an elevated structure (i.e. boardwalk), the Contractor must ensure that the elevated path complies with the following requirements:
 - i) the elevated path must be capable of being trafficked by a light maintenance vehicle;

- ii) the elevated path must be designed and installed in accordance with the manufacturer's instructions;
 - iii) deck units must be placed perpendicular to the direction of travel;
 - iv) the gap between planks not exceed 5 mm; and
 - v) chamfer on the edge of the plank must not exceed 5 mm.
- b) The Contractor must ensure that elevated shared paths consist of:
- i) Recycled plastic (Replas Endroplank or equivalent (refer to: <https://www.replas.com.au/>)); or
 - ii) precast concrete.
- c) The Contractor must ensure that the elevated shared paths do not incorporate timber decking or products incorporating recycled timber.

8 Line marking and signs

The Contractor must ensure that all shared path line marking and signs are installed in accordance with the requirements of AP-G88 Cycling Aspects of Austroads Guides.
