INFORMATION SHEET

City of Joondalup

Specifications

Construction of Standard Commercial or Industrial Crossovers

1) SCHEDULE OF REQUIREMENTS:

a) Depth of Concrete – 150mm minimum with reinforcement mesh; or

b) Depth of Asphalt – 40mm minimum (AC10) and sub-base

c) Depth of Sub-base – 200mm for limestone Sub-base **(for Asphalts)**.

d) Minimum width of crossover at the property line - 6.0 metres

e) Maximum width of crossover at property line - 10.0 metres

f) Canite strips 12mm wide by 100mm deep of bituminous impregnated canite material shall be used. Details of material can be found in Section 5 **(only when concrete material is used).**

g) Splay dimensions - Typically 2.1m along the kerb line and 2.1m back at 90 degrees to the kerb line, measured from the edge of the main body of the crossover. A 6.0m radius is also supported for crossovers servicing heavy duty vehicles.

h) Verge Gradient - A positive 2.5% grade over at least a distance of 2.5m from the back of the kerb must be maintained. **NOTE**: This may not be achievable in some locations, that being the case the maximum grade can be determined specific to the site requirements and at the approval of the City.

i) Crossovers must be constructed to meet the kerb line at an angle of 90 degrees.

j) The minimum compressive strength of the concrete is to be 25Mpa at 28 days with the minimum of a F63 reinforcement mesh. The mesh is to be located centrally within the depth of concrete.

k) Surface finish is to be non-slip broom finish. The use of exposed aggregate or coloured concrete surface treatments are acceptable.

l) A transition from Barrier/Semi-Mountable kerb to Flush road surface level is required to be a minimum of 700mm beyond both sides of the splays of the crossing.

m) Both Commercial and Industrial crossovers shall not be constructed closer than 12.0m to the side truncation area (Refer to standard drawing ES07-11-4).

n) Crossovers shall be located at a minimum distance to obstructions as follows:

i) Drainage pits, Utility Boxes, Street trees and Street Lights: 1.0m

ii) Bus stops and Bus stands: 1.5m

2) CONSTRUCTION (Concrete):

a) Concrete - Premix concrete shall comply with the requirements of Australian Standard 1379-2007 (or as amended). All concrete used in the works shall develop a minimum compressive strength of 25 Mpa at 28 days with a F63 reinforcement mesh located centrally within the depth of the concrete. The crossover shall be designed to meet the requirements of traffic loads and provide suitable access.

All concrete shall have an approved high early strength additive to give rapid hardening.

b) Excavation

i) The excavation for the crossover bed shall be taken out to the levels, lines and grades as per the standard design shown on standard drawing ES-07-11-4. Excavation shall be cleanly executed, watered and vibrated to give a solid compaction to provide for a sound base free from any deleterious materials giving a minimum depth of 150mm of concrete pavement for commercial/industrial crossovers.

ii) All surplus material resulting from site preparation and construction of the crossover shall become the property of the property owner and shall be removed at the owner's expense.

iii) Where an existing concrete footpath has thickness of 100mm or more, in good condition, and adjacent the lot boundary or kerb line, the crossover shall be constructed through the concrete path so that the path stops at either side of the crossover.

c) Placing Concrete - The base shall be thoroughly and evenly moistened, but not saturated, prior to placing concrete.

Concrete shall be evenly placed to a depth specified and shovelled into position continuously and spaded especially at all edges to give maximum density. No break in operations shall be permitted from time of placing to finishing.

d) Finishing - The finish shall be obtained by screening to correct levels and broom finished to provide a non-slip, dense surface free of any depressions, marks, jointing marks, honeycomb sections or accumulation of fine dusty accretions liable to cause excessive surface wear.

Where required and or where directed, any portion of the surface may be required to be treated with a multi-grooved grooving tool with grooving to be at 200m centres worked parallel to the kerb line to minimise the slipping effect.

A steel trowel finish is not permitted on a vehicle crossing

e) Surface Patterns - The final surface shall be broom finished and non-slip. It should provide a safe route for pedestrians. All expansion joints must comply with concrete vehicle crossing specifications (Refer to standard drawing ES07-2-4).

f) Jointing – Expansion joints shall be full depth joints and filled with bitumen-impregnated canite or similar approved material.

3) CONSTRUCTION (Asphalt):

a) Asphalt - Black asphalt shall be of type AC10 with 50 Marshall Blow and in accordance with IPWEA/AAPA specifications for supply and installation of asphalt road surfacing.

b) Excavation

i) The excavation for the crossover bed shall be taken out to the levels, lines and grades as per the standard design shown on standard drawing ES-07-11-4. Excavation shall be cleanly executed, watered vibrated to give a solid compaction to provide for a sound base free from any deleterious materials giving a minimum depth of 40mm of type AC10 asphalt for commercial/industrial crossovers.

ii) All surplus material resulting from site preparation and construction of the crossover shall become the property of the property owner and shall be removed at the owner's expense.

iii) Where an existing concrete footpath has thickness of 100mm or more, in good condition, and adjacent the lot boundary or kerb line, the crossover shall be constructed through the concrete path so that the path stops at either side of the crossover.

c) Laying - Asphalt works should not be done in cold, windy or wet conditions as thin layers of asphalt (30mm or less) cool rapidly in these situations and will not be able to be compacted adequately. The finishing work should be undertaken while the asphalt is hot, to produce a fine, dense, smooth surface, free of surface voids.

d) Base - The material is to be spread, rolled, water-bound and corrected as necessary to shape, grade, etc.

e) Edging - The edges of the crossover are to be formed using a flexible 30m deep steel border pegged to shape (to be removed on completion), to provide a symmetrical and uniform shape and appearance. Concrete kerb laid to finish flush with the final surface of the crossover may also be used as edge restraints.

f) Surface - The surface is to be reshaped and base course added where required to give the correct shape. The surface is to be well watered and rolled with a vibrating roller, slurried and swept clean from any loose material.

4) GENERAL:

a) All materials used in the construction of vehicle crossings shall be in accordance with the standard specifications of the Council and any materials used which are inferior to those specified shall be liable to rejection and replacement without payment or compensation being made to the owner for the supply, delivery, laying ,placing, finishing, removal or disposal of anything so rejected.

b) Any damages that may occur to any City infrastructure or private property during the course of the works or which may subsequently become evident from the operations thereof shall be the sole responsibility of the owner who shall be held responsible for the repair replacement or legal liability

5) CANITE MATERIAL:

Approved Canite-type material shall be such that when it is subject to compression in hot weather, no concrete is extruded. The following materials are approved and the use of any other material requires the approval of the City.

a) NON PORITE -Bitumen Impregnated Canite by the cold solvent process
b) FOSROC EXPANDITE
c) MELJOINT