



# Crossover guidelines: Residential and Non-Residential

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## 1.0 Introduction

### 1.1 Purpose

The purpose of these guidelines is to provide necessary information to enable property owners and builders to construct a crossover that:

- Is of a uniform standard
- Ensures safe entry and exit to properties
- Prevents stormwater entering private land
- Provides a safe and even surface for pedestrians
- Prevents negative impact on other infrastructure in the road reserve
- Maintains and/or improves the streetscape; and
- Complies with the Heritage requirements.

Note: These guidelines must be read in conjunction with Technical Specification and crossover policy.

### 1.2 Contacts

It is important to clarify all information within this document prior to constructing a crossover. All matters related to crossovers, including design and/or location difficulties, requests for information, application forms for permits, subsidies, notification for inspections and as otherwise described in this document, should be directed to the City's Customer Services Centre on (08) 9205 8555.

### 1.3 Definitions

**Crossover:** A crossover is the extension of a driveway from the edge of the property boundary to the edge of the road.

**Verge:** The portion of land between the road kerb line and the property boundary.

**Property Owner:** Refers to the owner or authorised occupier of a property that the crossover serves and includes a builder, agent or contractor authorised by the owner of the property to construct or modify a crossover.

**Contractor:** Refers to the person / agent or company undertaking the construction works.

**Permit:** Refers to the City's permission to build a crossover, subject to conditions specified on the permit notification.

**Subsidy:** The contribution that the City will make towards the cost of an approved and correctly constructed crossover.

**Redundant Crossover:** A crossover that does not provide access to a property, garage, carport, parking area or is not a primary access.

**Road Reserve Infrastructure Assets:** Public assets in the road reserve such as power poles, underground services, service pits/manholes, underground drainage structures, kerb, paths, streetscape/ street trees, other public utilities services and the like.

**Satisfaction of the City:** When the work complies with this specification or otherwise approved in writing by the City.

**Work Notice:** A written letter from the City requesting remedial works to be carried out.

**MRWA:** Main Roads Western Australia

**WAPC:** Western Australian Planning Commission

## 1.4 Common questions and answers

### Do I need a permit to construct a crossover?

Yes, constructing a crossover involves crossing Council land and a permit is required to ensure that the proposed crossover meets the City's specifications.

### Can I get a permit retrospectively?

The City requires a prior approval in order to properly evaluate your application and ensure that all the requirements are being met. Should you decide to install your crossover without a permit, there is a chance you will need to remove the crossover if it does not comply with the guidelines and technical specifications.

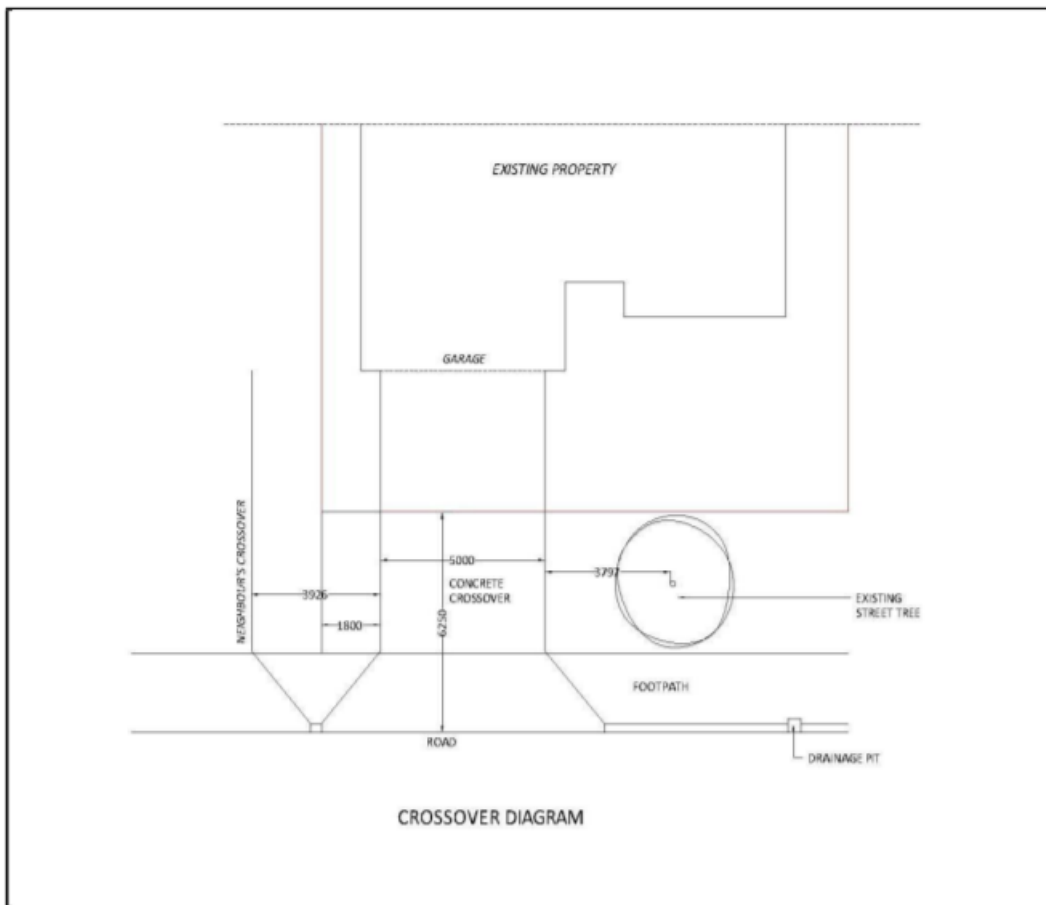
### What information is required for a permit?

You need to fill out a Crossover Application form and provide a drawing that indicates:

- Location of your property
- Road and footpath (if present)
- Location of verge trees
- Dimensions of crossover (length and width) and setbacks from boundary trees and existing infrastructure

- Closest neighbour’s crossover and distance between their and your crossover
- Services affected by your crossover proposal (power poles, Telstra pits, drainage pits etc).

Below is a sample drawing which may either be a professionally drafted drawing or a hand-drawn plan, as long as it provides sufficient information:



### What are my responsibilities?

Unless otherwise stated, it is the property owner’s responsibility to comply with the requirements contained in this document. This responsibility includes works undertaken by any person, builder or contractor engaged by the owner.

You must exercise due care and avoid unnecessary damage to the road reserve infrastructure assets and adjoining properties during construction.

You are responsible for the following:

- Submission of an application to obtain a Crossover Permit
- Notifying the authority and the City of any potential conflict or any damage caused to the road reserve infrastructure assets
- Repair of any damage caused to road reserve infrastructure assets and adjoining property
- Reinstatement of the road reserve infrastructure assets and adjoining property resulting from the construction works or repair works
- All repair and reinstatement works to be carried out such that the verge, road reserve infrastructure assets and adjoining property are returned to the original condition or better using materials that match existing in colour texture, strength and durability
- Traffic management
- Public safety
- Any legal claims and liability resulting from above
- Advising the City of completed works.

### **What if I can't comply with the requirements?**

For crossovers that cannot be constructed according to the City's requirements, the services of an Engineering professional should be employed to achieve a solution that is acceptable to the City. Alternatively, you can contact the City to request advice on ways you can meet the City's requirements.

### **What happens if there is a conflict with the City's infrastructure?**

You should plan the location of the driveway according to the required setbacks, clear of any utility service. Significant trees, traffic islands and stormwater pits generally cannot be moved to suit driveways. The cost of any remedial works will be at the property owner's expense. The conflict needs to be clearly identified on the application form. Please note that the City has no authority to relocate street lights or power poles. Please contact Western Power directly.

### **Can I get a subsidy?**

You may be eligible for a subsidy if:

- It is a first crossover giving access to the property
- It complies with the City's specifications and
- Is lodged within twelve (12) months of completion of the crossover.

## 1.5 Approval by other Statutory Authority

a) Vehicle crossovers adjacent to the following major roads are subject to the approval of MRWA (Main Roads Western Australia), in conjunction with the City of Stirling:

- Wanneroo Road
- Karrinyup Road (East of Marmion Avenue)
- Morley Drive
- West Coast Highway
- Marmion Avenue

Please contact (MRWA) directly on 13 81 38

b) Crossings adjacent to the following regional roads are subject to approval by the WAPC (Western Australian Planning Commission):

- Hale Road
- Hutton Street (Main Street - Scarborough Beach Road)
- Walcott Street
- Green Street
- Main Street (Royal Street – Wanneroo Road)
- Beaufort Street
- Mirrabooka Avenue (Beach Road – Reid Highway)
- Scarborough Beach Road
- London Street
- Beach Road (west of Marmion Avenue)
- Jon Sanders Drive
- Alexander Drive
- Cedric Street (Mitchell Freeway – Karrinyup Road)
- Guildford Road

Please contact WAPC directly on (08) 6551 9000

c) No Vehicle access is permitted on the following roads (contact MRWA):

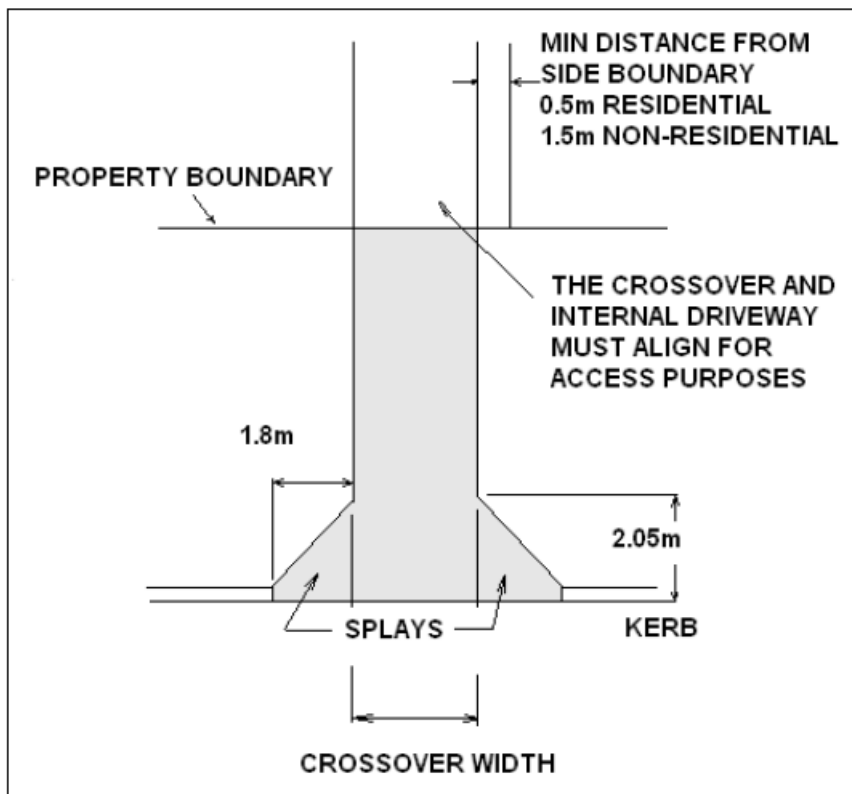
- Mitchell Freeway
- Reid Highway
- Stephenson Avenue

## 2.0 Crossover General Requirements

### 2.1 Geometry/Dimensions

- a) The crossover site requirements and geometry shall be in accordance with the drawing shown below.
- b) Where the crossover width exceeds 4 metres, the requirement for splays may be reviewed as part of the approval process.
- c) Crossover Width (excluding splays):
  - Single Residential 3.0 metres - 6.0 metres
  - Secondary crossover 3.0 metres
  - Duplex or multi residential 3.0 metres - 7.5 metres (shared)
  - Non-Residential 6.0 metres -10.0 metres
- d) Crossovers are to be constructed at right angles to the roadside kerb.

Crossover geometry/dimensions diagram





## 2.2 Materials

### Residential crossovers

Residential crossovers may be constructed using the following materials:

- Plain grey pre-mix concrete, with or without steel reinforcement and will comply with Australian Standard 1379
- Colour incorporated concrete
- Segmented or square clay pavers or concrete pavers suitable for heavy duty vehicular traffic
- Flagstone and products such as formstone, urbanstone
- Crossovers formed in liquid limestone or exposed aggregate may be approved subject to meeting the requirements of AS 1379
- Asphalt is **not permitted** for residential crossovers.
- Refer to 2.6 (New Footpaths) if no footpath present

### Non-residential crossovers

Non-residential crossovers may be constructed with the same materials as residential crossovers plus an allowance to use asphalt as an approved material. Special allowances for additional design and strength required to accommodate on-site operations will be allowed if supported by appropriate specifications and drawings approved by a certified professional engineer.

## 2.3 Location

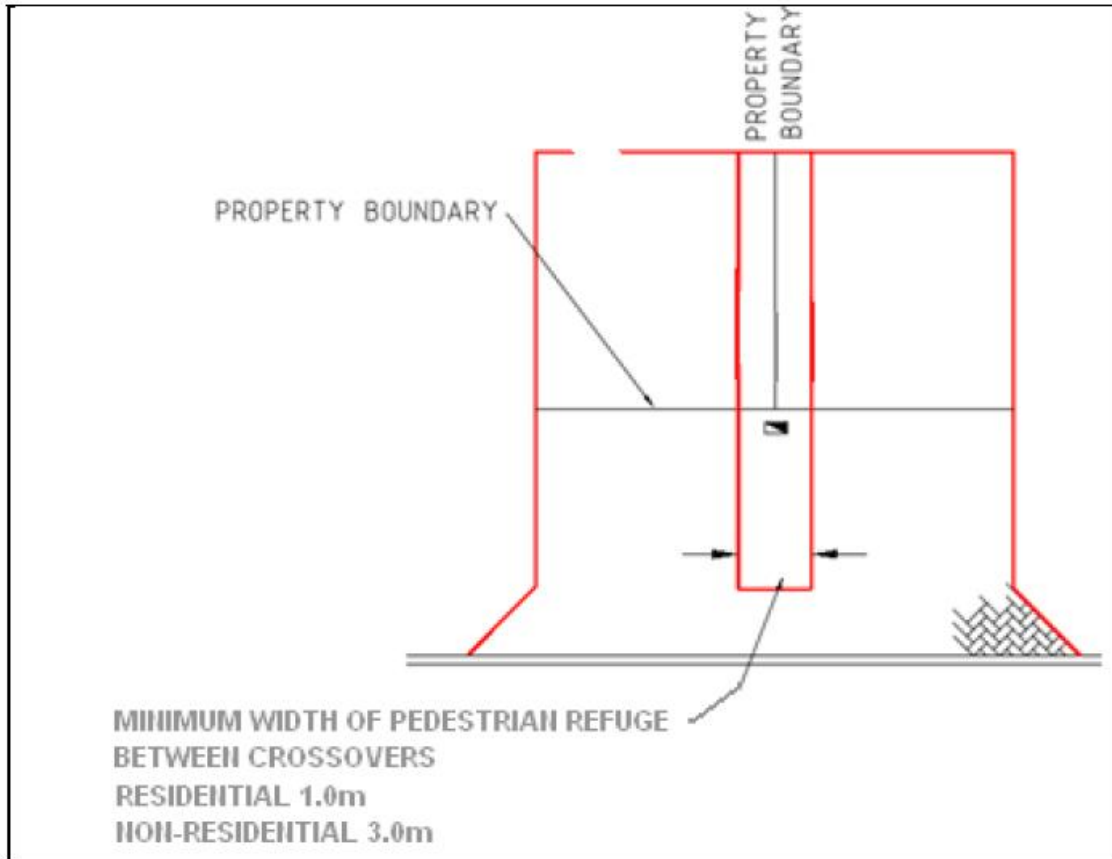
### Residential crossovers

Residential crossovers are to be no closer than 0.5m from the adjoining property boundary. Where adjoining property crossovers are in close proximity special allowance should be made for a pedestrian refuge area that is clearly defined as per the drawing below. The minimum width of a refuge for residential crossovers is 1m. (see diagram next page)

### Non-residential crossovers

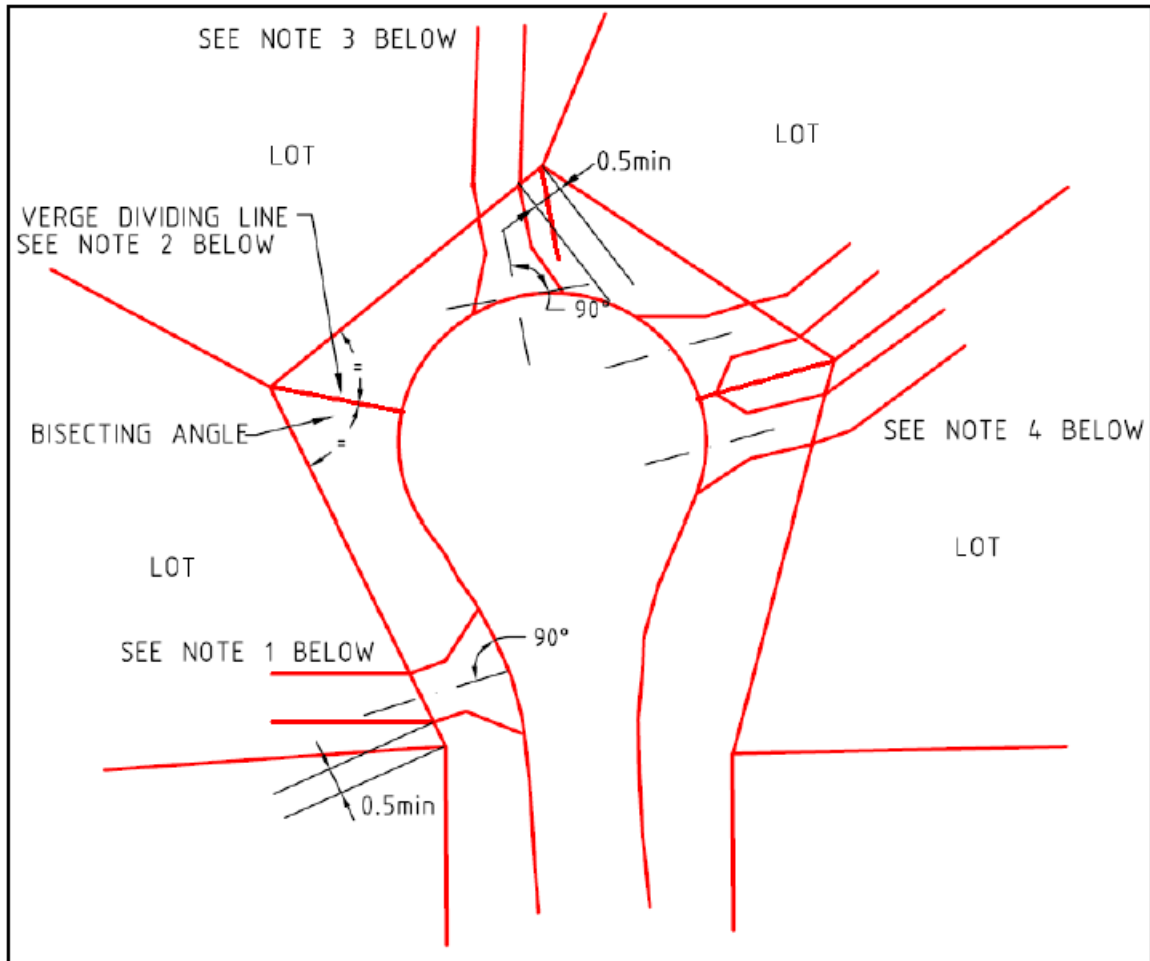
Non-residential crossovers are to be no closer than 1.5m from the property boundary. Where adjoining property crossovers are in close proximity special allowance should be made for a pedestrian refuge area that is clearly defined as per the drawing below. The minimum width of a refuge for non-residential crossovers is 3m. (see diagram next page)

### Pedestrian refuge diagram



### Crossovers in cul-de-sacs

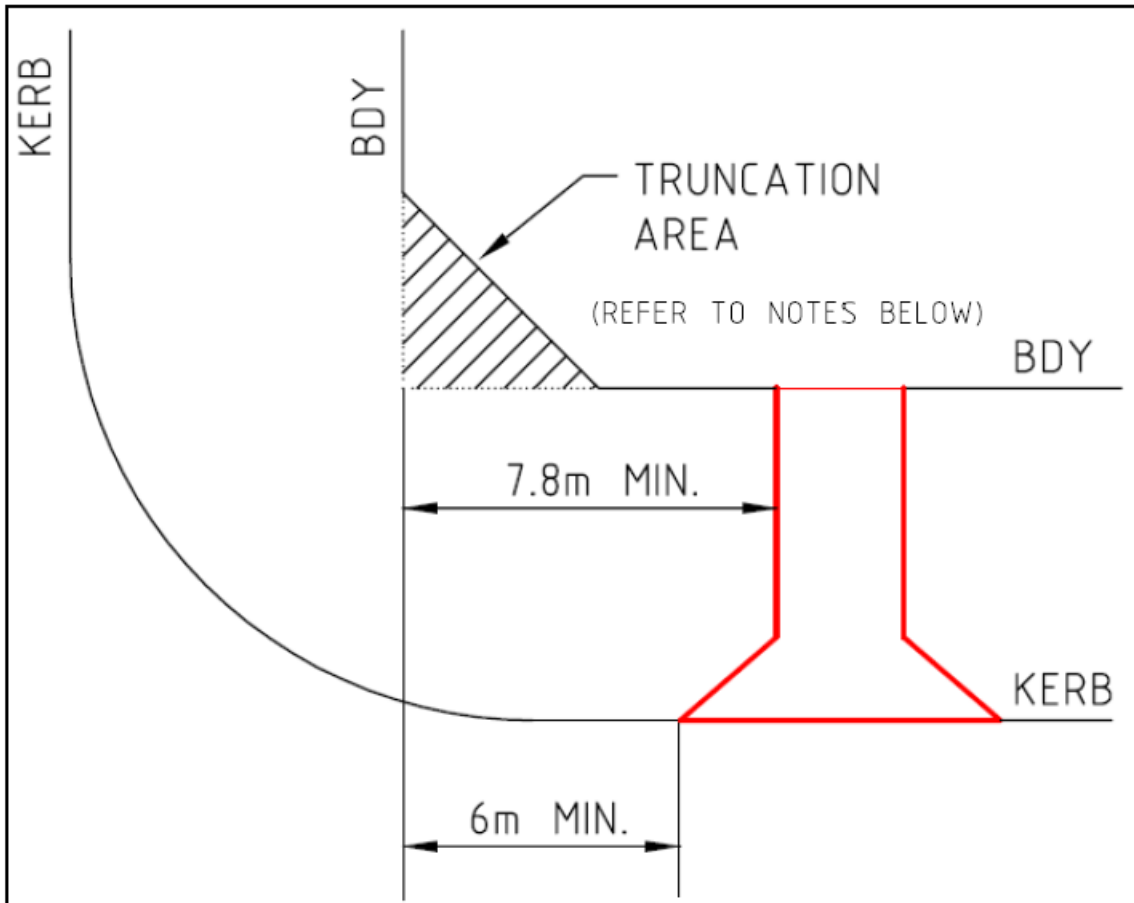
Crossovers in cul-de-sacs are to be located as shown on the drawing below:



- NOTE 1: Crossover to be installed at approximately 90° to the kerb and to be a minimum of 0.5 metre from the boundary, unless approved otherwise.
- NOTE 2: Dividing the verge between neighbouring properties is achieved by bisecting the angle of the two front boundaries.
- NOTE 3: The crossover splay may only encroach the verge adjacent to the neighbouring property
- NOTE 4: Crossovers may intersect when they are constructed along the same side boundary. NOTE 1 not enforced in favour of crossovers parallel to verge dividing line to give best access to each lot.

### Crossovers at intersections

Crossovers at intersections are to be located as shown on drawing below or as per Australian Standard AS2890.1:



- NOTE 1: Crossovers are NOT permitted within the lot truncation area.
- NOTE 2: Crossovers located near road corners may be obstructed by traffic islands. Crossovers should be located in a position to avoid traffic islands, as the removal or alteration will not be considered.
- NOTE 3: Crossovers located near traffic lights must be approved by MRWA in accordance with MRWA standards and guidelines.

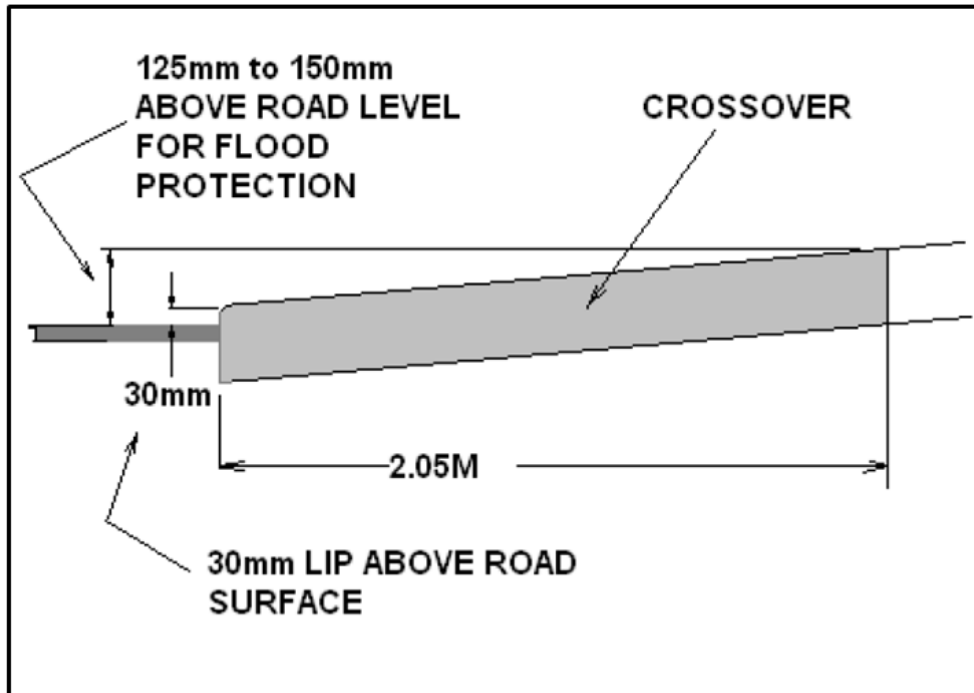
## 2.4 Levels & Grades

- a) Where difficulties are encountered on site and the levels cannot be achieved, the applicant should contact the City for further advice. The applicant may be required to provide site-specific drawings to obtain approval for crossovers which vary from the prescribed standards as outlined in the Guidelines and the Technical Specifications for Crossovers.
- b) The grade and level of a new crossover needs to take into account stormwater drainage, existing verge and road reserve infrastructure assets and their levels, and vehicle accessibility.

### Stormwater drainage

The crossover must be constructed such that stormwater cannot flow from the roadway onto the crossover and into adjoining properties.

- a) The level of the crossover at the road gutter is to be 30 mm higher than the road surface at that point for future resurfacing.
- b) The level of the crossover at a distance of 2050 mm from the edge of the road pavement, to be from 125 mm to 150 mm higher than the road surface at the road gutter or height of the top of the kerb, whichever is greater.
- c) The property owner may be required to install a trench grate and soak wells to prevent water entering the property, or entering the road from internal driveways. A trench grate must be installed inside the property boundary.
- d) Stormwater drainage pits cannot be relocated unless there is no other way to install a crossover. Cost of the relocation will be borne by the property owner.



#### Existing verge and road reserve infrastructure assets and their levels

- a) New crossover levels to follow the existing verge levels with any excavation or fill to be less than 150 mm.
- b) Retaining walls are NOT permitted within the road reserve.
- c) The gradient of the ground between the crossover and the adjoining verge and road reserve infrastructure assets are to be less than or equal to 1 in 7 (14%).
- d) If there is a stormwater manhole in a proposed crossover, it is required to be made trafficable. The City will undertake the work at the property owner's cost.
- e) If any of the City's road reserve infrastructure assets such as drainage pits are required to be relocated, it must be approved and carried out by the City at the property owner's expense.

#### Vehicular access

The property owner is responsible to ensure that the crossover is constructed at the appropriate grades and levels to enable a standard vehicle, in accordance with Road Traffic (Vehicle Standards) Rules 2002 Regulation 67, to enter/exit from the roadway into the property without scraping the under carriage of the vehicle.

## 2.5 Existing footpaths

In most cases the City's existing footpaths have a 2% cross fall towards the road. As part of the new crossover construction, where the existing footpath is less than 100mm in thickness, the footpath is to be removed and replaced to specifications.

### **Where the existing footpath is against the back of the roadside kerb**

The existing footpath is to be accommodated (see Accommodation Works) as a Continuous footpath in the new crossover works. The section of the footpath that intersects the location of the new crossover shall be reconstructed in plain grey premixed concrete to accommodate the splays and rise up to the crossover so as to visually show the continuation of the footpath.

### **Where footpaths are not against the back of the roadside kerb**

The path alignment is to be clearly delineated in the new crossover by either one of the following methods:

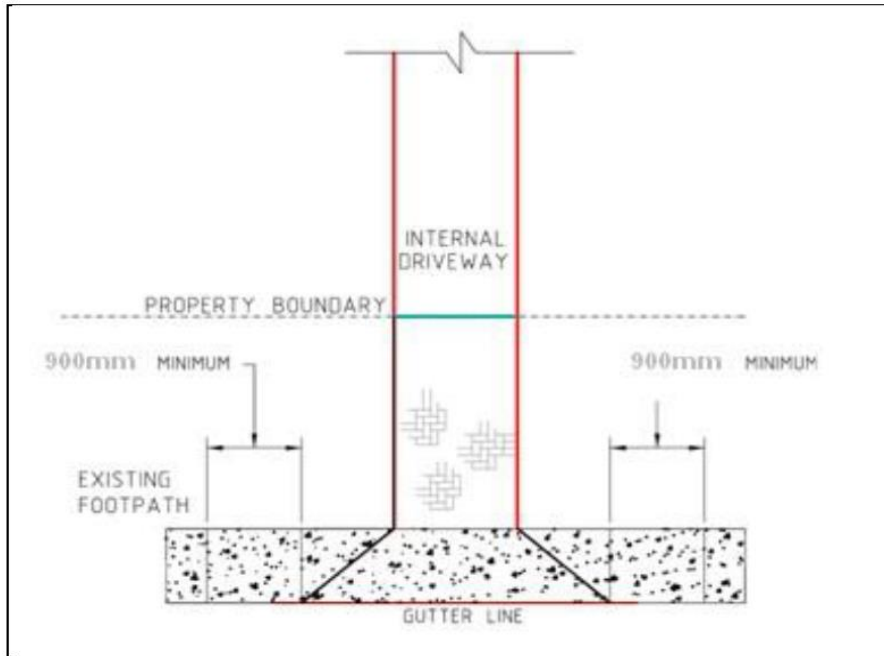
- Leaving the existing concrete path in
- Removing the existing concrete path and installing matching control joint edge lines in the new crossover to line up with the edges of the path; or
- For brick paved crossovers, removing the existing concrete path and incorporating two separate courses of bricks of different colour (to remainder of crossover) to line up with the edges of the path.

### **Accommodation works**

Where the existing footpath is accommodated as part of the crossover construction:

- Expansion and contraction joints are required in accordance with the Technical Specification
- The existing footpath is to be cut neatly to the nearest joint with a concrete cutting saw perpendicular to the existing alignment with no joints less than 900mm apart as shown below.

Sketch below showing details for existing path against the back of the kerb:



## 2.6 New Footpaths

The City's footpaths are constructed 1.8m wide adjacent to the kerb, and the City aims to have one footpath on each street by 2031. New footpaths will be constructed through existing crossovers and the first 2.05m of existing materials from the road gutter line be replaced with plain grey concrete to match the new path and maintain the continuity and delineation of the new footpath.

If there is no footpath on the street you are installing a crossover on, there will be a path scheduled for construction in the near future. If the new footpath is to be constructed on your side of the street, the City will construct through the crossover and replace the first 2.05m with plain grey concrete. Please consider this before constructing a crossover and note that no compensations will be provided. If you would like further information regarding the City's upcoming footpath programme please contact the City's Engineering Design Business Unit.

## 2.7 Protection of infrastructure & the public during construction

The property owner has a responsibility to ensure that the road reserve infrastructure assets are protected and maintained in a condition that does not interfere or obstruct their function.

When constructing a crossover, the property owner will be responsible for the arrangement and all costs associated with the necessary protection,



guarding (against vandalism), repair, relocation and adjustment of road reserve infrastructure assets. This includes obtaining service information (one call – dial before you dig), necessary permits and location of all services prior to excavation.

The owner is to ensure that protection measures deemed necessary under the State of Western Australia legislation are undertaken including the following precautionary measures:

- Protect the work, private property (including reticulation and approved verge treatments)
- Safeguard the public
- Allow reasonable access to all properties during progress of work
- Protect all land monuments, property marks and all public and private property from disturbance or damage until the City's representative has witnessed or otherwise recorded their location
- Street Trees
- Crossovers shall be constructed with full consideration of the protection and retention of street trees to enable them to fully mature all in accordance with the City of Stirling Street Trees policy
- A minimum setback of a crossover from any street tree on the verge is required. The setback distance will be in direct relation to the Diameter at Breast Height (DBH) of the street tree:
  - DBH of up to 200 mm requires a minimum setback of one metre
  - DBH of 201 mm to 400 mm requires a minimum setback of two metres
  - DBH of 401 mm or greater requires a minimum setback of three metres.
- The property owner is to ensure all traffic management and safety equipment or any other protection measure is provided.
- The cost for traffic management will be borne by the owner.

## **2.8 Maintenance of crossovers**

It is the responsibility of the property owner to maintain the crossover in a safe and serviceable condition

## **2.9 Responsibility by others**

Crossovers, road reserve infrastructure assets and adjoining property damaged from works undertaken by others (including the City) will be required to be reinstated to a satisfactory condition by the party who had caused the damage.

The City will only accept responsibility for the equivalent replacement with standard materials when reinstating crossovers that do not comply with guidelines and technical specifications for crossovers and have been made of non-standard materials.

Works undertaken by any person or contractor engaged by other parties is required to comply with these Guidelines and Technical Specifications.

### **2.10 Redundant crossovers**

The redundant crossover is to be removed immediately after the new crossover comes into use, at the property owner's expense.

Any depression created on the verge by the removal of the redundant crossover is to be made safe and backfilled to match the existing verge and comply with the City's Verge Treatment Guidelines and Specifications.

Road kerbing and any footpath is to be reinstated once the redundant crossover is removed.

### **2.11 Bitumen reinstatement**

Should the bitumen road surface get damaged during the crossover construction works, it is the owner's responsibility to repair the damage or pay the City to undertake the works. Refer to Technical Specification for different methods to reinstate bitumen surface.