

VEHICLE CROSSOVER SPECIFICATIONS



TOWN OF PORT HEDLAND

VEHICLE CROSSOVER
SPECIFICATIONS

RESIDENTIAL
AND
COMMERCIAL

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GLOSSARY

Name Definition	Commentary
Crossover	The extension of a driveway from the edge of the property boundary to the edge of the road
Clearance	The space required between the path and an obstruction
Concrete Apron	The transition between the road surface and the crossover
Cross fall	Grade across the path width; necessary for adequate drainage
Crossover wings	The flared edges of a driveway
Culvert	A tunnel carrying an open drain under a road
Grade	The slope of a path or driveway
Kerb	Roadway edge treatment concrete beam.
Sightlines	The visual envelope of vehicles and path users
Standards/Policies	Applicable guidelines for use in Western Australia
Street Trees	Trees located within the verge area
Utility/services	An enclosure which houses utility services for electrical, communications, etc.
Vegetation	Soft landscaping element

OBJECTIVE

This document is designed to assist property owners and contractors to construct vehicle crossovers in accordance with Town of Port Hedland (Town) specifications.

PURPOSE

To provide a consistent framework to assist contractors and owners to understand and meet the requirements of the Town. A subsidy shall apply to the first residential crossover constructed at a Lot to the Town's specifications.

PROCEDURE

APPLICATION

An owner of a residential or commercial property or their contractor, wishing to construct their vehicle crossover, is to apply in writing using the Town's Application for Vehicle Crossover form.

ASSESSMENT

Following receipt of an application to construct a crossover, the site may be inspected by the Technical Officer to determine any conditions that will apply to the approval.

All crossovers are to be approved by the Town prior to construction commencement and shall be constructed to the satisfaction of the Town. The owner/contractor is responsible for notifying Town staff prior to commencement of the construction work.

Final inspection will be made following advice from the applicant that construction is completed.

Contact details of Technical Officer Town phone (08)9158 9700

CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for:

1. Setting out of levels, construction, inspections and measuring up of work.
2. Cutting existing kerbing and bitumen with a concrete saw and removing the same without damage to pavement or remaining kerbing or services.
3. Removal and disposal of all surplus material from the site and leaving the site in a clean and tidy condition at all times.
4. Removal of all formwork without damage to concrete or pavement or existing kerbing.
5. Reinstatement of kerbing, concrete, brick paving or bituminous road surfaces damaged during the course of the works.
6. Reinstatement of any verge or private property with a landscape mix soil.
7. The identification, notification and protection of all existing underground services prior to commencing work.
8. Undertake repairs of any damage to Public Utility Services, local government assets and private property during the course of the works. (contact Dial Before You Dig)

9. The protection of private property from damage and the protection of the new crossover surfaces from rain damage or vandalism.
10. Liaising with and notifying all parties impacted by the works.
11. Where a new crossover is constructed, any existing footpath that was removed during construction of the new crossover shall be reinstated with reinforced concrete (see Drawing TOPH-1.0 to 5.0)
12. Traffic management in accordance with AS 1742.3 Traffic control for works on roads and the Main Roads Code of Practice for Works on Roads.

LOCATION

1. To be constructed at 90 degrees to the kerb line.
2. Minimum of 1.0m clearance from the boundary, utilities, service pits, lamp posts and street furniture.
3. Minimum of 3.5m clearance from street trees on verge.
4. Minimum of 6.0m clearance from the tangential point at corner Lots with truncation.

CONSTRUCTION - (over drainage and footpaths)

1. An owner requiring a crossover over an open drain shall contact the Town Technical Officer to determine the size of drainage pipe, culvert/headwall, stone pitching and other requirements for the crossover works. The crossover shall be constructed to the Town of Port Hedland specifications and designs in accordance with the drawing Nos TOPH-1.0 to TOPH- 5.0
2. If the existing footpath has been constructed at the crossover with plain grey concrete, the footpath shall be replaced with reinforced concrete through the crossover, with appropriate construction joints, to ensure uniformity of the footpath.

DIMENSIONS

1. 3.0m minimum and 6.0m maximum for residential crossovers.
2. 6.0m minimum for commercial crossovers and maximum width as approved by the Town.
3. Residential Crossovers Wings – The minimum width of 'wings' on the apron at the kerb line shall be 1.5m each side. In special cases where the standard wing width cannot be achieved, approval must be sought from the Town Technical staff.
4. The minimum width of wings for Commercial crossovers shall be 2.0m each side.
5. 30mm Lip above existing road surface is required.

CONSTRUCTION OF A CONCRETE CROSSOVER

BASE PREPARATION

The subgrade shall be compacted to 95% Maximum Modified Dry Density in accordance with AS1289 clauses 5.4.1 or 5.4.2.

CONCRETE

All concrete used shall develop a minimum compressive strength of 25 MPa at 28 days and have a maximum slump of 80mm. Additives shall be used in accordance with the manufacturer recommendations.

MINIMUM REQUIREMENTS FOR CONCRETE CROSSOVER

ITEM	RESIDENTIAL	COMMERCIAL
Thickness	100mm	150mm
Steel reinforcement	SL72 mesh	SL82 mesh
Concrete strength @28 days	25MPA / 50mm slump	25MPA / 50mm slump

The reinforcement details and thickness of the concrete for commercial crossovers shall be designed to suit vehicle types. All reinforcement shall be firmly supported on Mild Steel Plastic Tipped Chairs or Plastic Chairs or Concrete Chairs at no greater than 1.0m spacing.

SURFACE

The concrete shall be screeded to correct levels and finished with a float or broom to produce a non-slip dense fine textured surface, free from defects such as depressions, honeycomb sections, or the accumulation of fine dusty accretions.

JOINTING

Expansion joints shall be full depth joints and filled with bitumen-impregnated cane-ite or similar approved material and butyl mastic sealer. Expansion joints shall be located:

1. At the lot boundary and both sides of the footpath at the crossover location. Refer Drawing No TOPH-4.0
2. Where the new crossover adjoins a rigid structure or any public utility structure.
3. At the ends of the existing kerbing where kerbing has been removed.
4. With a maximum of 6.0m spacing between the expansion joints.

Control joints shall be 10mm deep, with 2.0m maximum spacing both laterally and longitudinally.

CONSTRUCTION OF A BRICK PAVED CROSSOVER

BASE PREPARATION

Base material shall be compacted to a minimum density of 95% of the Modified Maximum Dry Density determined in accordance with AS128EZ.1.1977

The bedding layer shall have a pre-compacted depth of 20mm to 40mm, such that the final compacted thickness is within a tolerance of $25\text{mm} \pm 10\text{mm}$. The bedding layer shall be well-graded concreting sand, free of deleterious soluble salts and other contaminants. The sand should be of uniform moisture content, and is to be spread over the compacted base course and screeded in a loose condition.

Concrete or solid pavers with minimum thickness of 60mm are permitted for residential crossovers.

ITEM	RESIDENTIAL	COMMERCIAL
Thickness	60mm -76mm	76mm
Gravel sub base	150mm	200mm
Sand bedding	25mm compacted	25mm compacted

Minimum 750mm wide concrete apron shall be constructed from the road surface as shown in the Drawing Nos TOPH-3.0 to TOPH-3.2.

MINIMUM REQUIREMENTS FOR CONCRETE APRON AT BRICK PAVED CROSSOVER

ITEM	RESIDENTIAL	COMMERCIAL
Thickness	100mm	150mm
Steel reinforcement	SL72 mesh	SL82 mesh
Concrete strength @28 days	25MPA / 50mm slump	25MPA / 50mm slump

CONSTRUCTION OF AN ASPHALT CROSSOVER

ASPHALT

Asphalt shall be a minimum of 30mm thick for residential, 40mm thick for commercial. Asphalt type shall be 10mm granite with a bitumen content of between 5% - 7% by mass and supplied from an asphalt production plant.

BASE PREPARATION

Compaction – The base course shall be placed in layers and compacted to 98% of the maximum dry density when tested in accordance with AS1289 E2.1-1977. The subgrade shall be compacted to a minimum of 95% MMDD in accordance with AS1289 clause 5.4.1 or AS1289 clause 5.4.2.

MINIMUM REQUIREMENTS FOR ASPHALT CROSSOVER

ITEM	RESIDENTIAL	COMMERCIAL
Thickness	30mm bitumen	40mm bitumen
Base course Gravel	150mm compacted	200mm compacted

Refer Drawing Nos TOPH-2.0 to TOPH-2.2 for Asphalt Crossover details.

Prior to laying of the asphalt a tack coat (primer coat) shall be sprayed on the road base. The application rate shall be 0.5 to 0.75 litres per square metre. The asphalt shall be evenly spread over the area and rolled immediately. No break in this operation shall be permitted until all the bituminous concrete is finished. The asphalt shall be laid on a dry foundation.

Surplus asphalt shall be removed from the site and disposed of at an approved disposal site.

REFERENCE DRAWINGS

Concrete Crossovers

Standard Concrete Crossover Details	Drawing No TOPH-1.0
Standard Concrete Crossover Details – Footpath at Mid Verge or Boundary	Drawing No TOPH-1.1
Standard Concrete Crossover Details - Footpath at Kerb Edge	Drawing No TOPH-1.2

Asphalt Crossovers

Standard Asphalt Crossover Details	Drawing No TOPH- 2.0
Standard Asphalt Crossover Details – Footpath at Mid Verge or Boundary	Drawing No TOPH- 2.1
Standard Asphalt Crossover Details - Footpath at Kerb Edge	Drawing No TOPH- 2.2

Brick Paved Crossovers

Standard Brick Paved Crossover	Drawing No TOPH-3.0
Standard Brick Paved Crossover Details – Footpath at Mid Verge or Boundary	Drawing No TOPH-3.1
Standard Brick paved Crossover Details - Footpath at Kerb Edge	Drawing No TOPH-3.2

Location, Grade & Joint Details

Crossover Locations at Corner Lots	Drawing No TOPH-4.0
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Stormwater Drainage Details

Drainage Culvert, Pipe and Stone Pitching Requirements	Drawing No TOPH-5.0
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