

CROSSOVER SPECIFICATION – BLOCK & BLOCK PAVING

To provide information to property owners, developers and builders, to ensure a common understanding of how a crossover should be installed within the City of Greater Geraldton.

DEFINITION: A crossover is the part of the driveway that crosses over the verge area fronting a property, i.e. from the kerb line to the property boundary line.

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GENERAL REQUIREMENTS

INTRODUCTION

This document has been prepared to provide customers of the City of Greater Geraldton with information regarding the City's requirements for a vehicular crossover and ensure a uniform approach to the construction of a vehicle crossover in the City of Greater Geraldton.

STATUTORY REQUIREMENTS

The legislation that governs crossovers or crossings from a public thoroughfare to private land, or a private thoroughfare is defined in;

- Local Government Act 1995 Schedule 9.1(7)
- Local Government (Uniform Local Provisions) Regulation 1996 – Sections 12, 13, 14 and 15.

The legislation describes requirements to construct or repair a crossover and the City's obligation (subsidy) towards the cost of crossovers.

ROAD RESERVE (VERGES)

The portion of land between a road and the boundary of private property is called the road reserve or verge. The purpose of the road reserve (verge) is to allow the placement of services and infrastructure such as communications cables, drainage, gas, power, street furniture (bus stops) and pathways. As and when works are required to these services, they are accessible to service authorities and Local Government with minimal disruption to the property owner.

The following road reserves are designated as "Main Roads" and approval for construction of a crossover from the Commissioner of Main Roads is required:

- H004 Brand Highway
- H007 North West Coastal Highway
- H050 Geraldton-Mount Magnet Road (some sections are known as Gray Street and Maitland Road within the locality of Mullewa)
- H062 John Willcock Link
- M039 Wubin-Mullewa Road
- M054 Geraldton-Walkaway Road (or commonly known as Edward Road)

WHO CAN CONSTRUCT MY CROSSOVER?

The construction of your crossover can be constructed by any of the following:

I. <u>By Your Builder</u>

You may have already included the construction of the crossover in the contract between you and your builder.

ISE01 – Crossover Permit Application will need to be submitted after Planning Approval, but before a Building Permit Approval. You will need to ensure that your Builder has a current copy of the City's Vehicular Crossovers (Bitumen, Concrete, Block/Brick Paving and Gravel and/or Culvert), General Requirements and Specifications and a copy of your approved ISE01 – Crossover Permit Application.

II. A Private Contractor

You can engage a private contractor, which can be sourced from the Yellow Pages or a Local Newspaper.

Again, you will need to ensure that the Contractor you engage has a current copy of the City's Vehicular Crossovers (Bitumen, Concrete, Block/Brick Paving and Gravel and/or Culvert) General Requirements and Specifications and a copy of your approved ISE001 – Crossover Permit Application.

III. <u>Timeframes</u>

A crossover should be constructed within three (3) months of the building being completed (e.g. Notice of Completion).

COUNCIL SUBSIDY

I. Residential Properties

Regulation 15 of the Local Government (Uniform Local Provisions) Regulations 1996 states that where a crossing (hereafter called a crossover) constructed is:

- a. To the first crossover constructed to the private land and;
- b. A standard crossover or a type that is superior to a standard crossing.

The City is obliged to bear 50% of the cost, as estimated by the Local Government, of a standard grey concrete crossover, but otherwise the Local Government is not obliged to bear, nor prevented from bearing, any of the cost.

A standard crossover is defined by the City of Greater Geraldton as:

- A minimum of 3.0m wide at the property boundary;
- 4.5m verge length, plus 1.35m² for each wing (total area of 14.8m²); and

• A crossover that is constructed to the City's Specifications.

II. Commercial and Industrial Properties

Do not attract a subsidy for a crossover.

III. Eligibility for a Crossover Subsidy

To be eligible to claim the Crossover Subsidy, you must meet the following eligibility criteria:

- a. The crossover is the first crossover to the property or an upgrade from a bitumen crossover to a standard crossover;
- b. The crossover is a standard crossover as defined in clause I. Residential Properties (Council Subsidy);
- c. Crossover Subsidy Application is received within 12 months of the crossover being constructed; and
- d. All requirements of the ISE01 Crossover Permit Application are met to the satisfaction of the City.

IV. Fees and Subsidy Amounts

Crossover fees and subsidies for this financial year are as followed:

RESIDENTIAL

A sealed crossover from the property boundary to a kerbed sealed road;

Amount	\$ 355.00
Inspection Fee	\$ 35.50
SUBSIDY	\$ 319.50

RURAL/SEMI-RURAL

A sealed/unsealed crossover to a sealed or unsealed road;

IF A CULVERT IS NOT REQUIRED	
Amount	\$ 300.00
Inspection Fee	\$ 30.00
SUBSIDY	\$ 270.00
IF A CULVERT IS REQUIRED	
Amount	\$ 725.00
Inspection Fee	\$ 72.50
SUBSIDY	\$ 652.50

DIMENSIONS

I. <u>Residential Crossover</u>

- a. Minimum width at property line 3.0 metres;
- b. Maximum width at property line 6.0 metres;
- c. Where two (2) residential crossovers abut one another, they may be combined, provided that the two (2) crossovers are delineated by contrasting colour/material (minimum width 90mm);
- d. Where the combined width exceeds 6.0 metres, the two (2) crossovers shall be separated by a

- pedestrian refuge island of a minimum 2.0 metre in width, unless specifically approved by the Director of Infrastructure Services; and
- e. If wings will be installed on a crossover the minimum width of a wing, must be 1.5 metres and shall not cross the adjoining property line.
- II. Commercial/Industrial Crossover
 - a. Minimum width at the property line 3.0 metres;
 - b. Maximum width at the property line 10.0 metres;
 - c. All crossovers shall be separated from one another by a pedestrian refuge island, which will have a minimum width of 3.0 metres; and
 - d. Wing width will be a maximum of 6.0 metres and a minimum width of 1.5 metres straight or curved radius.

CONSTRUCTION MATERIALS

Crossovers for Residential and Commercial/Industrial properties can be constructed in a number of different materials. Please refer to the following technical specifications;

- Bitumen [ISE04]
- Block/Brick Paving [ISE05]
- Concrete [ISE06]
- Gravel and/or Culvert [ISE07]

CROSSOVER CONSTRUCTION

The construction of crossovers shall be executed in accordance with the City's Specifications. The Director of Infrastructure Services must approve any variation to these Specifications in writing prior to the construction of the crossover. Where a property owner fails to obtain prior written approval for any variation to the City's Specifications, the City may give written notice of corrective works to be undertaken by the property owner at the property owner's cost.

WARRANTIES

All materials and workmanship used in the construction of crossovers shall be in accordance with the City's Specification and any materials or workmanship that are inferior to those specified shall be rejected and the works made good to the City's satisfaction.

The work shall be carried out with minimum disruption to pedestrians and vehicular traffic. Every precaution shall be taken to ensure the safety of persons and property at the site. Where the work is being constructed on a busy Street, the contractor will be required to provide Traffic and Pedestrian management on site. All excavations, materials, plant and equipment must be made safe, barricaded and provided with warning lights, during the hours of darkness to the satisfaction of the Director of Development and Community Services. All works are to be carried out in accordance with the Occupational Safety and Health Act 1984 and its Regulations as amended.

Any damage which may occur to any City infrastructure assets or private property during the course of works or which subsequently becomes evident shall be the sole responsibility of the Applicant or their Contractor. The Applicant or their Contractor shall be held responsible for the repair, replacement, legal claims or any

other claims, which may arise from the carrying out of any such work on site.

RESPONSIBILITY OF THE APPLICANT AND/OR THE CONTRACTOR

The applicant and/or their Contractor is responsible for the following items:

- I. Where required, the cutting of the existing semi-mountable or barrier kerbing with a concrete saw and remove existing kerbing without damage to remaining kerbing and road pavement.
- II. The removal and disposal of all surplus materials from the site of the works and leaving the site in a clean and tidy condition at all times.
- III. The reinstatement of kerbing, concrete, brick paving or bituminous road surfaces damaged during the course of the work during construction of the crossover.
- IV. The reinstatement of verge area adjoining the crossover.
- V. Crossover that are no longer required or no longer connect with an internal driveway are deemed redundant. Under the Division 2 Vehicle Crossings, Subdivision 2 Redundant Vehicle Crossovers, Clause 2.5 of the City's Local Laws for Activities in Thoroughfares and Public Places and Trading Local Law 2011, redundant crossovers must be removed and the verge and kerb reinstated at the cost of the Applicant.
- VI. Application to the relevant public utilities authorities for approval to alter any utilities service that is in conflict with the proposed crossover. Any costs incurred in the alteration of any service and subsequent reinstatement of the verge shall be borne by the Applicant.
- VII. With regard to pathways, comply with the requirements of the City's Pathway Technical Specification [ISM007 Concrete Pathway Specification].
- VIII. The cost of any traffic management that may be required to ensure the safety of road users, Contractors and pedestrians during the construction of the crossover. Only qualified traffic management personnel shall be used and all traffic management shall be in accordance with Main Roads Western Australia's code of Practice "Traffic Management for Roadworks" and Australian Standard AS 1742.3 2002.
- IX. Dial Before you Dig on telephone number 1100 or via www.1100.com.au has been contacted to determine the location of services such as water mains, telecommunications cables, gas mains and sewer mains within the section of the verge to be excavated.
- X. It is the responsibility of the property owner to maintain the crossover once constructed.

GENERAL PROVISIONS

LEVELS, PATHWAYS AND OTHER FEATURES

All levels for grading, surface finishing, jointing or other construction requirements shall be as outlined in this Specification and attached drawings.

I. Clearances

Crossover shall have the following minimum clearances:

٠	Side Boundary (at the front property line)	1.0m
٠	Street Trees	1.5m
٠	Drainage – Side Entry Pits	1.0m
٠	Western Power Poles	0.6m
•	Minimum distance from the truncation of the Intersection (corner sites)	6.0m

II. Crossover Location

Crossovers are to be constructed perpendicular to the adjoining road edge alignment with a minimum clearance of 1metre from the side boundary and must align with the internal access (driveway) into the property. In cul-de-sacs and at other locations, approval may be given for a variation of this requirement. Please refer to drawing (<u>STD36</u> – Crossover Location: Cul-de-sac & Intersection).

Crossovers including wings, shall not be constructed any closer than 6.0m to the intersection of property line on a corner site/and or cross the adjoining property line.

Where there is difficultly in positioning a crossover on a property due to potential traffic problems, the Department of Infrastructure Services should be consulted for assistance.

III. Street Trees

Where a street tree is within 1.5m of the proposed crossover, the Applicant shall submit a written request to the City's Tree and Horticulture Department requesting an assessment of the street tree with regard to the street tree's relocation or removal and replacement (size and species dependant). For public liability purposes, all works associated with the removal and replacement of any street tree shall be undertaken by the City at the Property Owner's cost.

IV. Pathways

Where a slab or brick paved pathway exists, the slabs/brick paving are to be removed and re-laid as necessary to match the crossover level and not leave any gaps or trip hazards. All slabs in surplus can be taken to the City's Depot – located at the Geraldton Airport.

Where a concrete pathway exists, the footpath is to be cut by means of a concrete saw at the nearest joint in the pathway from the proposed side of the crossover. This pathway is to be replaced as necessary to match the new crossover level and the existing pathway level. There is to be expansion joint material placed in between the new crossover and the pathway. The pathway is then to be reinstated in 100mm thick grey in-situ concrete and the balance of the crossover constructed either side of the pathway in accordance with City's specifications.

The existing concrete pathway can be left in place, if it is 100mm thick, in good repair and; when

located against the kerb, has fully mountable kerbing.

Where an existing concrete pathway is situated within the proposed crossover, the pathway shall be removed. The pathway is to be neatly saw cut along the nearest expansion joint to the proposed crossover alignment and removed. The pathway is then to be reinstated in 100mm thick grey in-situ concrete and the balance of the crossover constructed either side of the pathway in accordance with City's Specifications.

V. Kerbing

Where fully mountable kerbing is cast, the crossover is to be constructed without removing the kerb. Where the carriageway is kerbed in barrier or semi-mountable kerbing, the kerb must be cut by means of a concrete saw and removed for the width of the crossover, plus any tapers.

If the kerbing is precast, the whole section of the kerb should be removed without damaging the pavement or remaining kerbing.

VI. Gradient (Verge Levels)

The crossover gradient is to be a maximum of 2.5% from the top of the kerb line to the property boundary. If the average verge level in the street is below 2% for the first 2.5 metres it will need to be constructed at a positive 2% to cater for future pathway construction. If unsure, please contact the City of Greater Geraldton to obtain correct levels.

VII. <u>Manholes and Service Pits</u>

Where the crossover covers an existing City of Greater Geraldton manhole, the lid is to be adjusted to be flush with the finished surface. For Commercial and Industrial crossovers, the lid of the City's drainage manhole is to be replaced with a trafficable (heavy-duty) type. Where the manhole or service pit belongs to a Public Utility, the property owner is to liaise with the relevant public utility and ensure that their requirements are satisfied prior to the construction of the crossover.

Where a doubt exists on the above, all queries are to be referred to the Director of Infrastructure Services or his delegated representative for determination prior to construction.

GENERAL INFORMATION

- I. A reinstatement must be made to kerbing, concrete paving or bituminous road surfaces, if damaged during the crossover construction. All spilt concrete must be total removed from the road surface immediately.
- II. The area must be cleared of all debris, bitumen, concrete etc., once the works have been completed.
- III. The public shall be protected at all times through the erection of adequate signage, barricades, flashing warning lights, temporary bridges or any other items necessary for pedestrian safety.
- IV. Any special requirements placed on the construction or location of a crossover by the Director of Infrastructure Services must be compiled with.
- V. Adequate measures (such as Dial Before you Dig) must be taken to avoid damage to services and other infrastructure prior to commencement.

TECHNICAL SPECIFICATIONS

EXCAVATION

Excavation from the crossing bed shall be taken out to the level line and grade required for the site. All excavation shall be executed cleanly and efficiently to provide for a firm, sound base free from depressions, soft spots or any deleterious materials.

BASE COURSE

The base course material shall consist of either crushed limestone or crushed rock with a maximum practical size of 19mm, alternatively; laterite gravel may be used to give a compacted thickness of no less than 100mm at a minimum of 95% MMDD. The base course must extend no less than 100mm past the edge restraint foundation.

EDGE RESTRAINT

An edge restraint shall be provided. A 150mm x 1500mm concrete foundation strip to the perimeter of the crossover. The restraint may be formed from paving bricks/blocks or precast/in-situ concrete to finish flush with the adjoining verge and crossover, to ensure that there is no trip hazard created.

The restraint shall be hunched up using a graded sharp sand/cement mix of ratio 1:4 on the outer perimeter at an angle of 45° allowing a distance for the adjacent verge treatment to abut the restraint. The hunching up shall be placed in such a manner as to create adhesion to the concrete foundation in order to provide adequate lateral resistance.

KERBING

Where the carriageway is kerbed in barrier or semi-mountable kerbing, the kerb to be removed and replaced with mountable kerb to the City's specification.

BEDDING LAYER

The bedding layer should be a well-graded, sharp sand (river sand or metal dust) passing a 5mm sieve and free from deleterious materials or impurities. This sand should have uniform moisture content at the time of placing. *Do not use brickies sand*.

The bedding layer shall be a minimum of 30mm loose-screened thickness, to provide a compacted layer no less than 20mm and not exceeding 50mm thickness. Place in two layers compacting each with several passes of a plate compactor and screed of to give the required level. The use of screeding rails or tubes is recommended for this task.

PAVING UNITS

The paving units can be either brick or block and must not be less than 60mm in thickness for a residential driveway. It is recommended that a herringbone pattern be adopted for vehicle pavements, please refer to (STD18 – Residential Brick Paving Patterns: Approved Laying Patterns) for brick/block paving patterns. The paving units shall be laid onto the freshly screeded bed with a gap of approximately 2mm between units (some units may have built in spacers).

Any part of the bricks shall be cut neatly with a bolster hammer, hydraulic guillotine or masonry saw. When the work area is complete, the units must be compacted immediately to the compressed level using a plate compactor. Several passes will be necessary in order to achieve the required result. If the units are delicate and chip easily a hard rubber base plate should be attached to the plate compactor base.

The joints in the paving shall be filled with fine sand, which is to be brushed into the joints. It is important that both units and sand are very dry when this operation is carried out. Excess sand can be removed when all joints are filled.

CULVERTS

In the case of a crossover traversing a swale/table train, a culvert under the access will be required. If this is the case, further advice shall be sought from the Department of Infrastructure Services.

STANDARD DRAWINGS

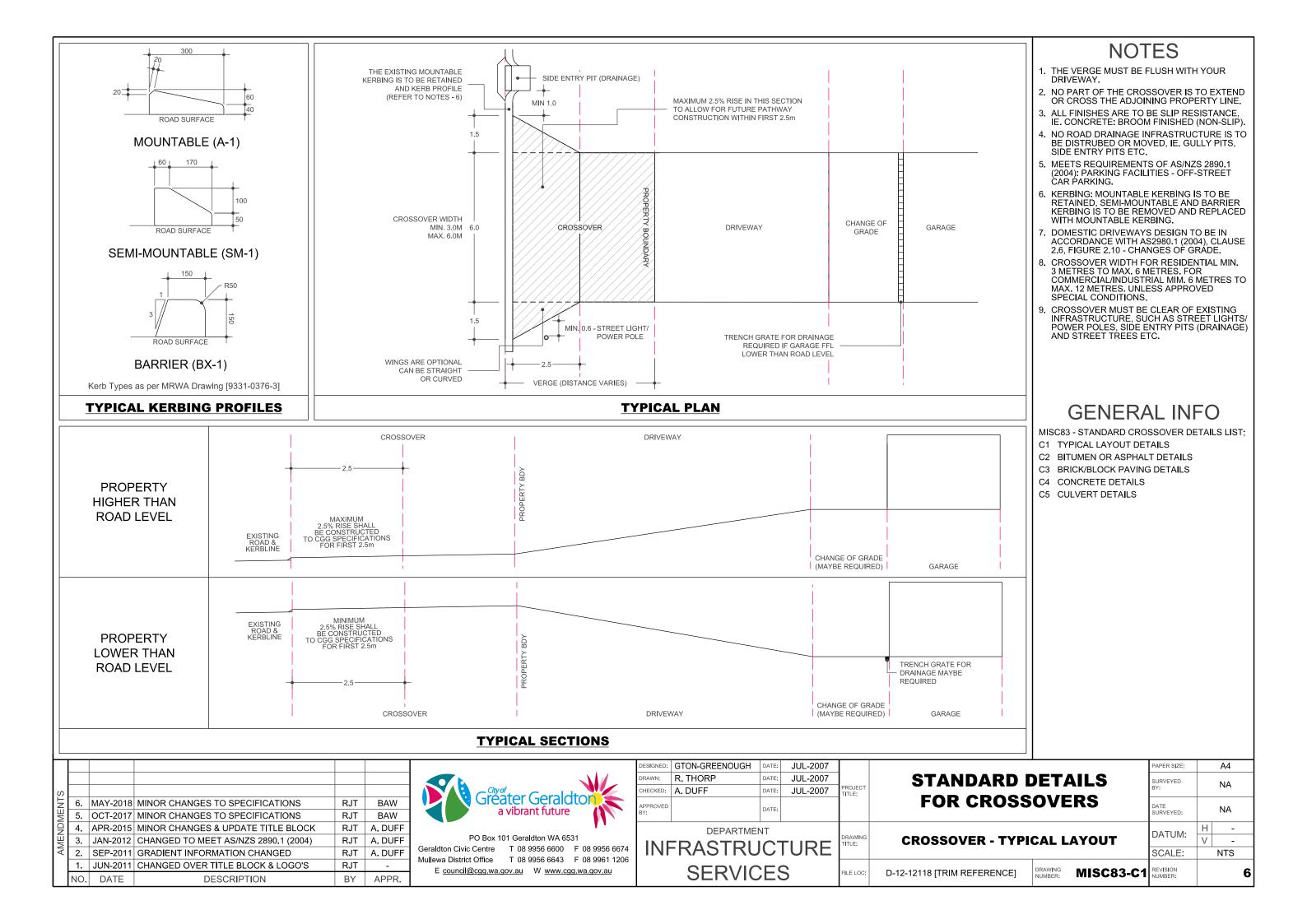
List of drawing to be read in conjunction with the General Requirements/Provisions and Technical Specifications for a Block and Brick Paving Crossover;

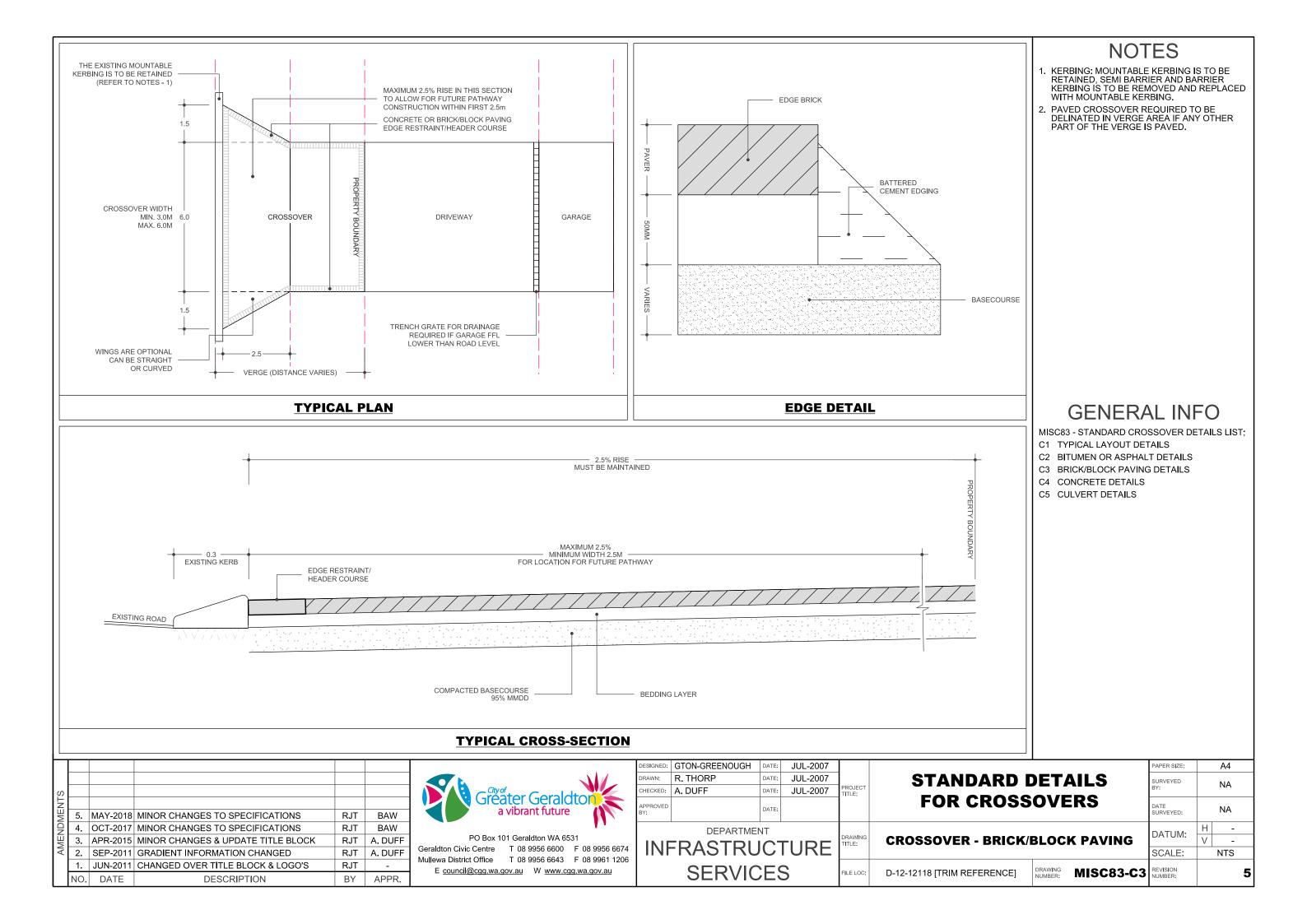
MISC83 [C1]: Typical Layout

MISC83 [C3]: Brick/Block Paving Crossover

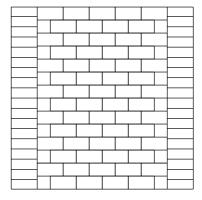
STD18: Residential Brick Paving Patterns (Approved Laying Patterns)

STD36: Crossover Location (Cul-de-sac and Intersections)





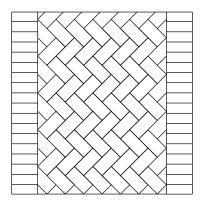
BRICK PAVING PATTERNS - Laying Patterns for Crossovers



STRETCHER BOND (RECTANGULAR)

230MM X 115MM STANDARD

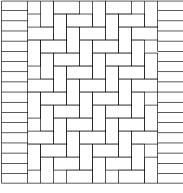




45 DEGREE HERRINGBONE

230MM X 115MM STANDARD & 230MM X 152MM PAVERS

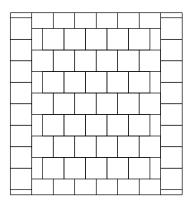




90 DEGREE HERRINGBONE

230MM X 115MM STANDARD & 230MM X 152MM PAVERS

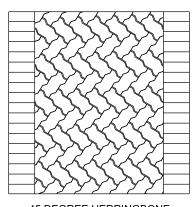




STRETCHER BOND (BLOCKS)

190MM X 190MM BLOCKS

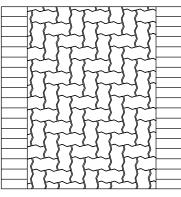




45 DEGREE HERRINGBONE

230MM X 115MM INTERLOCKS

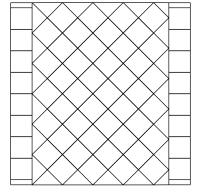




90 DEGREE HERRINGBONE

230MM X 115MM INTERLOCKS





45 DEGREE DIAMOND

190MM X 190MM BLOCKS



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AMENDMENT					
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9					
Ē	3.	APR-2015	UPDATED TITLE BLOCK	RJT	-
₹	2.	DEC-2014	MINOR CHANGES & UPDATE LAYOUT	RJT	-
	1.	JUN-2011	CHANGED OVER TITLE BLOCK & LOGO'S	RJT	-
	NO.	DATE	DESCRIPTION	BY	APPR.



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E council@cgq.wa.qov.au W www.csq.wa.gov.au

BY:					
	DEPARTMEN	١T			
INFRASTRUCTURE					
	SERVIC	ES	S		

JUL-2007

JUL-2007

JUL-2007

ESIGNED: GTON-GREENOUGH DATE:

RAWN: R. THORP

HECKED: A. DUFF

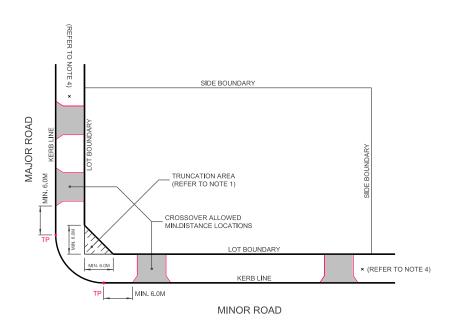
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FOR CROSS	OVERS	DATE SURVEYED:		NA
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Approved Laying	Patterns	SCALE:		NTS
D-12-13430 [TRIM REFERENCE] DRAWING NUMBER: STD18		REVISION NUMBER:		

PAVERS MUST ALWAYS BE LAID ACROSS THE TRAFFIC FLOW.
 LAYING PATTERNS OFFERING CONTINUOUS STRAIGHT LINES THROUGH THE WEARING SURFACE, SUCH AS STACK BOND, ARE SUSCEPTABLE TO A LOSS OF INTERLOCK & SUBSEQUENT PAVEMENT FAILURE AND ARE

3. RECOMMENDATION - RECTANGULAR PAVERS ACHIEVE MAXIMUM INTERLOCK WHEN LAID IN A HERRINGBONE PATTERN OF EITHER 45 OR

NOT CONSIDERED SUITABLE.

90 DEGREE CONFIGURATION.

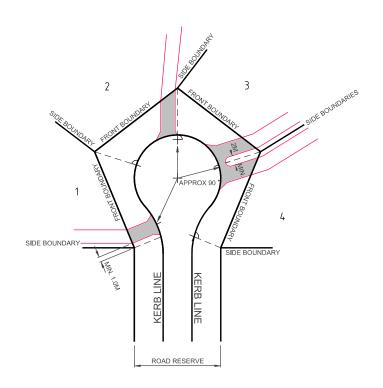


TP = TANGENT POINT

LOCATION OF CROSSOVERS AT CORNER SITES

NOTES:

- . CROSSINGS ARE NOT PERMITTED WITHIN THE LOT TRUNCATION AREA (HATCHED AREA).
- TRAFFIC ISLANDS WILL NOT BE REMOVE OR ALTERED UNDER ANY CIRCUMSTANCES, CROSSINGS SHOULD BE LOCATED IN A POSITION TO AVOID TRAFFIC ISLANDS.
- CROSSINGS LOCATED NEAR TRAFFIC LIGHTS MUST BE APPROVED BY MRWA AND BE IN ACCORDANCE WITH MRWA GUIDELINES.
- CROSSINGS ARE PREFERRED TO BE LOCATED FURTHEREST AWAY FROM THE INTERSECTION ON THE LONGEST BOUNDARY AND INSTALLED ON MINOR ROAD RESERVE.
- TO COMPLY WITH AS 2890.1 (2004) CLAUSE 3.2.3 AND FIG 3.1 PROHIBITED LOCATIONS OF ACCESS DRIVEWAYS MIN. 6m FROM TANGENT POINT OF CORNER KERBLINE.



CROSSOVERS AT CUL-DE-SAC HEAD

TYPICAL ARRANGEMENT

NOTES:

- CROSSINGS TO BE INSTALLED AT APPROXIMATELY 90 DEGREES TO THE KERB AND 1.0M MINIMUM

 TO A CITY TO A CONTROL OF THE CONTROL
- FROM SIDE BOUNDARY, UNLESS APPROVED OTHERWISE BY DIRECTOR OF COMMUNITY INFRASTRUCTURE.
- 2. VERGE BETWEEN NEIGHBOURING PROPERTIES IS TO BE DIVIDED AS SHOWN ABOVE.

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N					
AMENDME					
P					
ΛE	3.	OCT-2017	UPDATED TO COMPLY WITH AS2890.1 (2004)	RJT	BAW
Α	2.	APR-2015	UPDATED TITLE BLOCK	RJT	A. DUFF
	1.	DEC-2014	DRAWING CREATED AND APPROVED	RJT	A. DUFF
	NO.	DATE	DESCRIPTION	BY	APPR.



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DESIGNED:	GREATER GTON	DATE:	DEC-2014				PAPER SIZE:	A4	
DRAWN:	R. THORP	DATE:	DEC-2014	PROJECT TITLE:	STANDARD DETAILS		STANDARD D	SURVEYED	NA NA
CHECKED:	A. DUFF	DATE:	DEC-2014				BY:	INA	
APPROVED BY:		DATE:					DATE SURVEYED:	NA	
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			TLIDE	DRAWING TITLE:			DATON.	V	
INFRASTRUCTURE					(Cul-de-sac and Int	tersections)	SCALE:	NTS	
SERVICES				FILE LOC:	D-14-83465 [TRIM REFERENCE]	DRAWING NUMBER: STD36	REVISION NUMBER:		