

### 1. CONSTRUCTION CONDITIONS

- 1.1 All vehicular crossing construction shall comply with the conditions and specifications provided by Council. If work does not comply with specifications, it shall be removed and made good at the cost of the applicant.
- 1.2 No work shall commence until the inspection fee is paid and Council have issued specifications and conditions.
- 1.3 The applicant shall ensure that their contractor is licensed and has a valid Public Liability Cover (\$10 mil). The contractor is responsible for the protection of the public from hazards which may be caused by the work and is liable for injury or damage to any person or property as the work is under their supervision.
- 1.4 The contractor shall maintain site safety and ensure the work site is properly barricaded and lit. A Traffic Management Plan must be provided upon request by Council's Inspection Officer. The Contractor shall fulfil the obligations under the Work Health and Safety Act 2011 (the WHS Act) to ensure that the land and buildings, plant and substances are safe and without risk to health.
- 1.5 The crossing shall be formed in timber and must be firm and unyielding at the time of inspection. Tolerance for formwork shall be 10mm in line and level.
- 1.6 After the Vehicular Crossing Application QM-CA-17 is submitted and payment is received, a Customer Request Number (CRM) and the Driveway Specifications will be provided to the applicant. This allows the formwork installation to commence as per Council vehicular crossing specifications.
- 1.7 At least Forty-Eight (48) hour's clear notice is to be given to Council for the following inspections during the construction of Vehicular Crossing (Driveway) :

- **Formwork Inspection** - when the site is excavated with formwork and reinforcement in place, ready for pouring of concrete.

Council Officer will provide a Formwork Inspection Slip if the formworks is approved, then the applicant can proceed to pour concrete and complete other driveway associated works as outlined in the inspection slip.

Inspections are arranged by phoning Council's Customer Service Centre on 9725 0222 between the hours of 8:30am and 4:30pm, Monday to Friday. Formwork inspections will be carried out between 9:00am and 1:00pm, Monday to Friday.

- **Final Inspection** – Typically two (2) weeks after the formwork inspection or when all works have been completed and the site has been tidied up, a council officer will return to the site to complete a final inspection and will provide a Final Inspection Slip if the works comply with council's specifications and requirements.

Where the complete vehicular crossing does not comply with Council's specifications a notice of non-compliance will be issued to the applicant, and a reinspection will need to be booked with Council. Any additional inspections required will be at the discretion of Council and an inspection fee will be charged in line with Council's Fees & Charges.

- 1.8 Before commencing any work, the Contractor is to contact “Dial Before You Dig” on telephone number 1100 to obtain all information on existing services and have these plans on site at all times. This may also be achieved through the Dial Before You Dig website <https://www.1100.com.au/>. The contractor/owner is responsible for all damage caused to any public utility located in the footway/road area that is damaged as a result of work performed.
- 1.9 Where it is necessary to make alterations to any of Council's stormwater drainage structures, such alterations shall be carried out as directed by Council at no cost to Council. These alterations may entail the prior payment of additional bonds to Council depending on the scope of the works.
- 1.10 The owner of the property shall consult and obtain approval from any Public Authority (i.e. NBN, Telstra, Sydney Water, Energy and Gas Companies, TfNSW) whose services or assets may be affected by the proposed vehicular crossing and shall bear the full cost of any alteration which may be required to such services.
- 1.11 Under the Roads Act 1993, property owners are liable for all costs associated with the construction, maintenance and repair of a vehicular access between the road pavement and property boundary line.
- 1.12 Any works that are carried out by external companies (e.g. utilities) may result in the removal of a segment of a driveway. The concrete restoration will not have to be carried out by the owner. The restoration will only be done in plain concrete.
- 1.13 If the driveway is proposed on a State road or is within 100m distance from a traffic lights, a Road Opening License must be obtained from the Transport for NSW (TfNSW). Council will not approve the driveway until evidence of a Road Opening License is submitted.
- 1.14 If the driveway is proposed on a State road, separate approval is required from the TfNSW. Contact the TfNSW to ascertain their requirements. Council will not grant any formwork approval until the applicant has provided concurrence from TfNSW.
- 1.15 If a tree exists on Council land or is over 4m in height and a minimum clearance of 1.5m cannot be adhered to, a tree works permit must be submitted to Council <https://app.fairfieldcity.nsw.gov.au/Forms/TreePermit/> or by filling out the form on the front desk. If tree clearance requirements are not met, no plans will be approved.
- 1.16 Regrading and returfing shall be undertaken on either side of the concrete work, with a maximum slope of 1 Vertical: 7 Horizontal (14%). All disturbed turf areas shall be regraded, returfed with a grass type to match that existing and shall be free of weeds at the time of laying to the satisfaction of Council. Excess spoil shall be removed from the job and in general the footpath area is to be left in a tidy condition.

## 2. CONCRETE / FORMWORK CONDITIONS

- 2.1 Concrete shall be supplied by an approved ready-mixed concrete supplier and placed within one hour of mixing.
- 2.2 Concrete shall not be poured on the crossing, internal driveway or any adjacent footpath until the formwork has been inspected and approved by Council's Inspection Officer.
- 2.3 Concrete shall not be poured in adverse weather conditions (rain, heat, wind). Inspections may be rearranged by the Council Officer due to these conditions.
- 2.4 All steel reinforcement must have 40mm concrete cover. Steel mesh must be placed on chairs prior to pouring concrete for the whole driveway slab (both external and internal). All reinforcement

shall be free from rust, grease, tar, paint oil, mud, mill scale, mortar or any other coating, and shall be stored under a waterproof shelter and supported above the surface of the ground. The reinforcement when in position shall be secured against displacement due to the flow and working of the concrete.

- 2.5 The crossing shall be plain (grey) concrete. *Coloured concrete, stamped concrete, stencilled concrete, exposed aggregate, pebblecrete and ceramic tile finishes* are **not permitted**
- 2.6 The surface finish of the concrete shall be wood float, trowel, broom and cove finish, true to grade and free of cracks. The slab shall not have a smooth or polished finish. A steel float finish is not permitted. Any surface treatments shall have a non-slip finish as defined by **AS/NZS 4586.2013; AS/NZS 3661.2.1994**, with a dynamic coefficient of friction on a wet surface above 0.50.
- 2.7 The vehicular crossing should not be used for a period of 7 days after its completion and is to be kept damp for this period to ensure adequate curing.
- 2.8 When the formwork is removed, the excavated area is to be backfilled and levelled to the top of the slab, and made safe for pedestrian traffic. Maintenance of this area over the settlement period is the owner's responsibility.

### 3. GENERAL SPECIFICATIONS

- 3.1 Levels for crossings are to be based on the change in grade from the road to the crossing to prevent vehicle scraping. Crossover design will conform to AS2890.1 for residential dwellings and A2890.2 for commercial and industrial developments. Specifications that do not conform to these standards will be subject to Council's approval.
- 3.2 Subgrade shall be true to levels (to allow for required thickness of concrete) and compacted so that the concrete is fully and evenly supported. The subgrade shall be dampened but not saturated.
- 3.3 The contractor must provide a clean cut along the gutter lip when reconstructing the layback. If any part of the road has been removed or damaged due to construction, a box trench (minimum 300mm box from the gutter lip) must be cut and removed, then restored with compacted AC10 hot mix (bitumen) at the owner's expense.
- 3.4 Any existing concrete footpath adjacent to the crossing may be required to be removed and reconstructed to meet the issued levels.
- 3.5 The layback shall be constructed from the back of the kerb to the lip of the gutter. All laybacks shall be placed on a compacted layer of road base (DGB20), 175mm thick.
- 3.6 Where a new layback or layback extension is required, both the kerb and gutter shall be saw cut at each end and completely removed. Any redundant laybacks shall be reinstated to standard kerb and gutter.
- 3.7 Where there is any existing concrete crossing or internal driveway adjacent, the proposed crossing must be dowelled into the existing concrete with 400mm galvanised R12 dowel bars (800mm spacing) for light-duty or 400mm galvanised R16 dowel bars (500mm spacing) for medium or heavy-duty.
- 3.8 Any affected or existing damaged stormwater outlets to kerb shall be reinstated to galvanised steel RHS (150x50mm), placed 25mm above the water run. Any stormwater outlet pipes within the area of the vehicular crossing or layback shall be entirely relocated outside it. Any redundant outlets must be removed and the kerb restored to standard kerb and gutter.

- 3.9** Expansion joints shall be constructed of 10mm thick, full depth, bitumen impregnated fibreboard mastic. Where a concrete footpath is cast in position, expansion joints are to be provided at intervals of 3.6 metres and false (dummy) joints are to be marked every 1.2 metres unless otherwise instructed. Expansion joints shall be placed between existing and new work. All false (dummy) joints on the vehicular driveway and footpath slabs shall be made to form a straight, well defined line using an appropriate jointing tool.
- 3.10** All vehicular crossings shall be located a minimum of 1 metre from any stormwater lintel/drain, utility pillar, light/power pole, sign, or any other obstruction.
- 3.11** All vehicular crossings shall be located a minimum of 1.5 metres from any trees, otherwise seek Council approval for tree removal.
- 3.12** The vehicular crossing shall be constructed perpendicular (at a right-angle) to the kerb and gutter or centreline of the road.
- 3.13** New vehicular crossings on corner allotments shall not be constructed within 6 metres of kerb tangent point.
- 3.14** Any shared vehicular crossings must not exceed a total of 6 metres width at the boundary.
- 3.15** Soil erosion and sedimentation control measures are to be maintained during the entire construction period until the disturbed areas are restored. Council may issue infringement notices including a monetary penalty where the control measures fail to meet minimum standards as required by Council policy and Acts of Law.
- 3.16** Where there is a difference of levels, between those existing at fence (boundary) alignment and designed levels, suitable adjustments within the owner's property will be necessary. This situation will be subject to negotiation between the Contractor and the Owner. Council accepts no liability for driveways that do not comply with Australian Standard grades/Council design and specifications or vehicles that may encounter access difficulties due to non-compliance of these grades.
- 3.17** Some existing driveways have grades that make access difficult or cause 'scraping'. Addressing this issue is the responsibility of the property owner and Council approval is required prior to any works on the road reserve areas. In some situations, an asphalt gap crossing may be constructed to eliminate the issue.

In a situation where an existing driveway has limited sight distance Council does not supply, install or maintain mirrors as a sight distance improvement device. If a property owner wishes to install a mirror, they must demonstrate that it will not negatively impact road safety and seek Council approval prior to installation.

- 3.18** Fairfield Council cannot guarantee that cracking, settlement, scraping, etc of the vehicular crossing will not occur in the future and will not be held liable for any claims related the crossing even where Council had approved of the work.

### **LIGHT-DUTY (RESIDENTIAL - URBAN) VEHICULAR CROSSINGS**

Specified for single lot residential properties (including granny flats), and attached or detached multiple occupancy properties (duplex, triplex etc.).

- Minimum concrete thickness – 125mm.
- Concrete Characteristic strength of 25MPa at 28 days.
- SL72 mesh on 100mm bar chairs. Minimum 40mm top cover.

- Sub-base – 100mm thick layer of 20mm D.G.B which is to be compacted using a vibrating plate or other approved compaction methods prior to placement of concrete.
- Width at Boundary:
  - Single Garage/carport – Max. 3m.
  - Double Garage/carport – Max. 4.5m.
  - Multiple dwelling lots (Duplex/triplex) – Max. 3m per dwelling.
  - Triple Garage – Max. 5.5m

### MEDIUM-DUTY VEHICULAR CROSSINGS

Specified for residential townhouses, light-industrial use (no truck use), and basement apartment parking lots (no truck use):

- Minimum concrete thickness – 150mm.
- Concrete Characteristic strength of 32MPa at 28 days.
- SL82 mesh on 100mm bar chairs. Minimum 40mm top cover.
- Sub-base – 100mm thick layer of 20mm D.G.B which is to be compacted using a vibrating plate or other approved compaction methods prior to placement of concrete.
- Width at Boundary: Max. 6m.

### HEAVY-DUTY (INDUSTRIAL AND COMMERCIAL) VEHICULAR CROSSINGS

- Concrete thickness: 225 mm.
- Reinforcement: Dual layer SL82, Single SL82 in layback.
- 28-day concrete compressive strength: 40 MPa.
- Sub-base – 150mm thick layer of 20mm D.G.B which is to be compacted using a vibrating plate or other approved compaction methods prior to placement of concrete.
- Width at boundary: To be determined based on turning paths of servicing vehicles, or as approved in Devolvement Application.

### RURAL VEHICULAR CROSSINGS

#### Concrete Pavement:

- Minimum concrete thickness – 150mm.
- Concrete Characteristic strength of 32MPa at 28 days.
- SL82 mesh on 100mm bar chairs. Minimum 40mm top cover.
- Sub-base – 100mm thick layer of 20mm D.G.B which is to be compacted using a vibrating plate or other approved compaction methods prior to placement of concrete.
- Width at Boundary: Subject to Vehicular Crossing Policy and AS2890.1. and Council's Development Control Plan (DCP)

#### Asphalt Pavement:

- A pavement of a minimum 150mm of compacted DGB 20 or a pavement material in accordance with Councils Engineering Specification for Civil Works on a compacted sub-grade, using a 10 tonne steel wheeled roller, or at the discretion of Council's Engineer with a minimum 25mm AC wearing course or 2 coat seal with a minimum 2% cross fall.

As there is no kerb and gutter in most rural locations, the crossing must be constructed flush to the edge of the road (no expansion joint is required here). The contractor must sawcut the edge of the road to form a straight edge.

**GRATE CROSSINGS**

Drainage in rural areas is in the form of a table drain (or swale). Where table drain is present, the driveway must be constructed with a minimum 200mm heavy-duty drainage grate in line with the direction of the table drain to direct the flow through the crossing. The applicant must provide appropriate landscaping adjacent to the crossing to direct the flow.

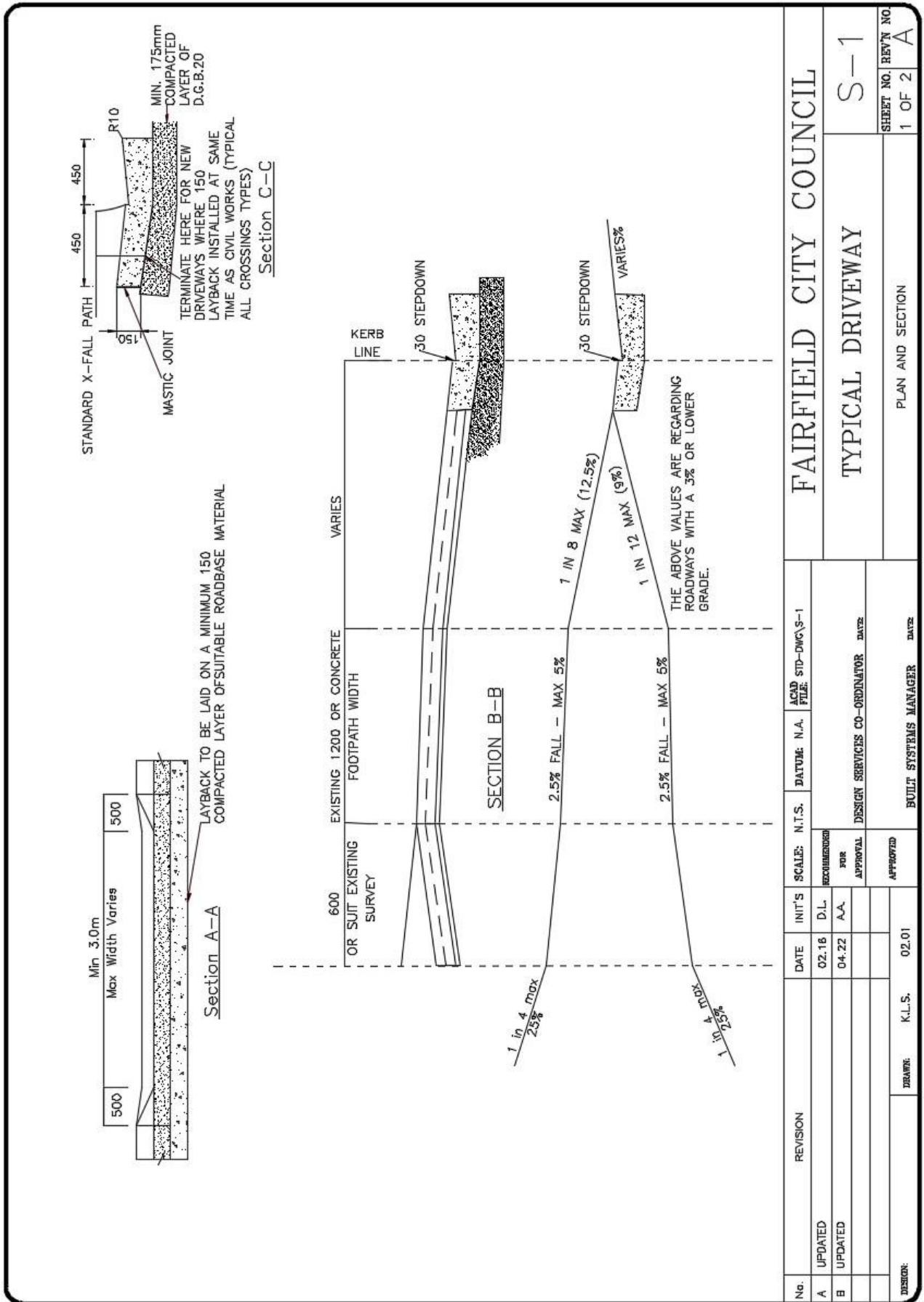
**PIPE CROSSINGS**

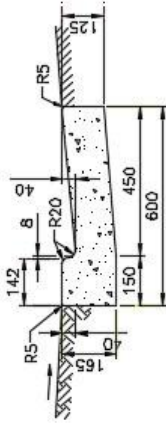
Pipe crossings Pipes are to be a minimum of 300mm internal diameter supported by headwalls at either end, on a 100mm sand/cement base. A minimum of 100mm cover is to be provided over the top of the pipe and all drainage levels are to be calculated and checked prior to installation.

**DISH CROSSINGS**

Dish crossings are to be constructed as per Council specifications. Dish crossings are to have a crossfall along the length of the table drain in the direction of the water flow.



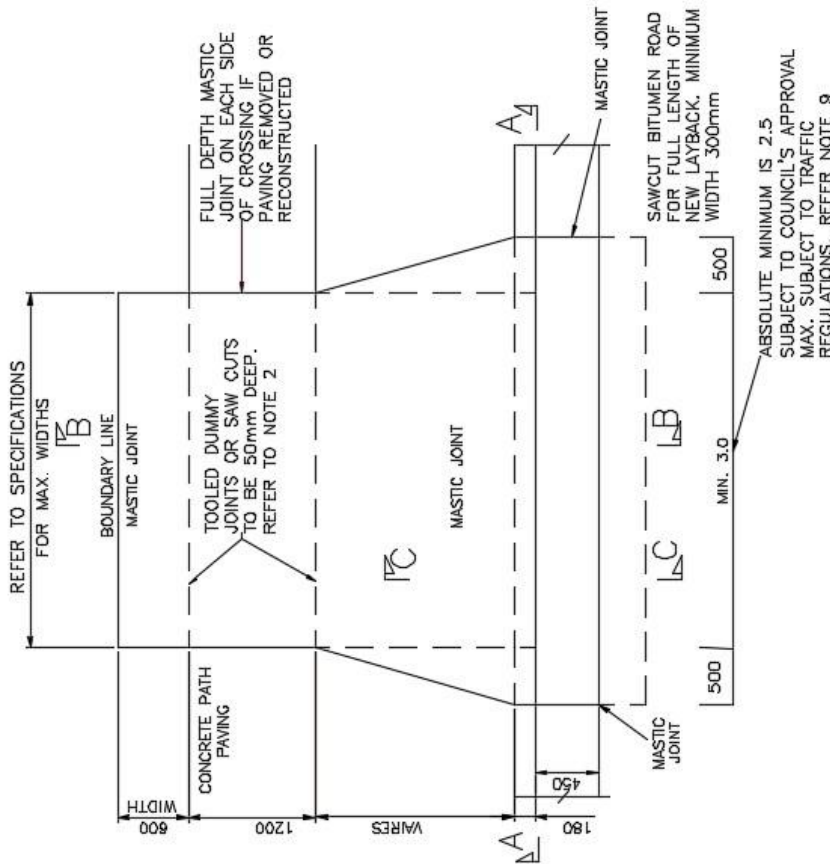




**MODIFIED KERB AND GUTTER**  
(ALONG DRIVEWAY – FORM)

**NOTES:**

- RESIDENTIAL VEHICULAR FOOTWAY CROSSING SHALL BE 100mm THICK CONCRETE, REINFORCED WITH SL72 MESH ON CHAIRS, 40mm COVER.
- THE CONCRETE FOR THE DRIVEWAY SHALL BE PLACED ON A 25mm LAYER OF APPROVED CLEAN WASHED NATURAL SAND, THE KERB & GUTTER SECTION SHALL BE PLACED ON A MINIMUM 150mm DGB. EXISTING CONCRETE FOOTPATH SHALL BE SAW CUT EITHER SIDE OF THE CROSSING AND WHERE NECESSARY RECONSTRUCTED IN CONJUNCTION WITH THE CROSSING.
- CONCRETE SHALL HAVE A 28 DAY STRENGTH (F'c) OF MPa AND A SLUMP OF 80mm (REFER TO THE VEHICULAR CROSSINGS SECTION FOR SPECIFIC CONCRETE CHARACTERISTIC STRENGTH VALUES). ANY VARIATIONS TO STANDARD CROSSFALL 2.5% ON FOOTWAY SHALL HAVE THE PRIOR APPROVAL OF COUNCIL.
- BITUMINOUS FIBRE BOARD 10mm THICK, 125mm DEEP TO BE PLACED AS PER THE PLAN.
- SURFACE FINISH ON A PLAIN CONCRETE, THE EXPOSED SURFACE SHALL BE BROOM FINISHED WITH BULL NOSED EDGES TO LEAVE THE SURFACE PLAIN, SMOOTH & UNIFORM IN COLOUR & APPEARANCE. AFTER REMOVAL OF FORMWORK, ANY ROUGH OR POROUS PLACES OR HOLES SHALL BE PICKED OVER & DRESSED WITH A TWO (2) AND ONE (1) CEMENT MORTAR. OTHER FINISHES MUST BE APPROVED IN WRITING FROM THE DIRECTOR OF CITY WORKS.
- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS.
- MAXIMUM WIDTH OF ENTRY AT KERB LINE IS SUBJECT TO TRAFFIC REGULATIONS, POLICY AND STANDARDS FOR TRAFFIC GENERATING DEVELOPMENTS AND INDUSTRIAL DRIVEWAYS.
- DRIVEWAY DESIGN, WIDTH, THICKNESS AND CONCRETE STRENGTH SHALL BE IN ACCORDANCE WITH COUNCIL'S DRIVEWAY (VEHICULAR CROSSING) SPECIFICATIONS QMPOL –CA-017 AND DRIVEWAY (VEHICULAR CROSSING) POLICY 0-088.
- SPECIFIC STRUCTURAL DESIGN MAY BE REQUIRED WHERE THE DESIGN VEHICLE HAS A GROSS VEHICLE MASS GREATER THAN 10 TONNES.
- REFER AS 2890 FOR DETAIL DESIGN CONSIDERATIONS.



**VEHICULAR CROSSING PLAN FOR STANDARD 3.0m DRIVEWAY WIDTH**

No.		REVISION	DATE	INIT'S	SCALE:	N.T.S.	DATE/TIME	N.A.	ACAD	STO-DWG'S-1	FILE
A	UPDATED		02.16	D.L.							
B	UPDATED		06.22	A.A.	FOR APPROVAL						
DESIGN SERVICES CO-ORDINATOR DATE:											
APPROVED											
DRAWN: K.L.S. DATE: 02.01											
BUILT SYSTEMS MANAGER DATE:											
FAIRFIELD CITY COUNCIL											
TYPICAL DRIVEWAY											
S-1											
PLAN AND SECTIONS											
SHEET NO. REV'N NO 2 OF 2 A											