



DESIGN & CONSTRUCTION SPECIFICATION

EXTRACT

VEHICULAR ACCESS

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1.0 Introduction

This policy has been developed to ensure the safety and accessibility for residents when entering properties or exiting properties on roads within Lismore City Council area. It will ensure that all works are carried out to a satisfactory and engineering standard and will encourage satisfactory long-term maintenance of property vehicular accesses, which will assist in the effective and economic maintenance of Council's road network.

**Council
Objectives**

This policy is also framed to develop an ongoing surveillance program to ensure that any existing or non approved vehicular accesses which are below standard are brought up to Council's minimum standard and that they are maintained regularly and to Council's required standard.

2.0 Legality

This policy takes its statutory authority from the Roads Act 1993 and the Roads Regulations 1994 (as amended). All the works carried out shall be subject to RTA minimum standards for site distance and will accord with any other Council standards that may be enforced from time to time.

Roads Act

3.0 Owners Responsibility

3.1 All properties must have a legal access for vehicles in accordance with Council's minimum standard requirements. This will apply to vehicular crossings, which are pre-existing, whether or not a permit has been issued previously and for any new crossings for which permits have been issued.

**Quality
Assurance**

3.2 The Manager-Works must approve the location of vehicular accesses and proposal to construct it and a permit must be issued prior to any works being carried out. Failure to satisfy these requirements may result in Council removing the work or performing remedial action to legalise the vehicular access, which will be recovered from the owner of the property.

**Construction
Approval**

3.3 All vehicular accesses must be maintained to a satisfactory standard which involves ensuring that the surface is maintained with a satisfactory cover (as determined by the Manager-Works) of good quality material. The surface is cambered so as to shed water to the sides of the driveway, that the water from the driveway is directed into road side drains and not onto the road pavement. The pipe under the vehicular access is kept clear of foliage and rubbish and is large enough to take the water from a 1 in 5 year intensity storm however the minimum pipe diameter shall be 375mm.

Maintenance

All maintenance and construction for vehicular access shall be the responsibility of the owner and shall be at their cost.

3.4 All vehicular accesses shall be required to comply with the standard set out in the policy and with relevant RTA standards.

RTA Standards

4.0 The Application Process

4.1 Notice of Intention to construct vehicular access

A person wishing to construct a vehicular access shall be required to give Council at least two weeks notice in writing of the proposed works. Works cannot commence until the relevant fees are paid and the vehicular access permit is issued.

Written notice

4.2 Site Inspection

Prior to the issuing of the vehicular access permit and officer of the Works Group shall carry out a site inspection of the proposed works.

The relevant engineering requirements such as site distance, the grade or slope of the land and access onto the road, and the erodability of the soil in the area shall be considered in the suitability of the site for the vehicular access. Minimum standards for these issues are indicated in section 5.0 Standard of Works.

**Engineering
Requirements**

4.3 Issue of Permit

Following a satisfactory site inspection, a vehicular access permit shall be issued which will require the payment of set fees and a maintenance bond. The permit shall be issued in the name of the landowner and will be valid for the property described thereon with the landowner being responsible for all works carried out.

**Vehicular
Access Permit**

A new permit must be issued for each individual vehicular crossing but for works in close proximity to the other no fee shall be payable for any subsequent permits taken out with the initial permit provided works are to be carried out at the same time.

4.4 The Period of the Permit

The period of the permit shall be for 12 months from the date of the issue of the vehicular access permit. Any vehicular access permit not actioned prior to the 12-month period shall be considered void and a new application will have to be made. There will be no refund or credit of previously paid fees.

Permit Duration

4.5 Fees and Maintenance Bond

As a guarantee against poor workmanship and substandard reinstatement a maintenance bond is charged, in accordance with Council's Fees and Charges at the time of taking out the permit. The maintenance bond will be refunded to the applicant upon written application and following a satisfactory final inspection of the works.

**Standard Fees
Bonds**

4.6 Production of Permit

The vehicular access permit or a copy of the permit is to be held on the job site at all times during the construction period. A copy must be produced for inspection if requested by an officer of the Council and if this cannot be done a stop works order shall be issued and the works will cease until the permit is produced or until the vehicular access is legalised through the normal permit application process.

If the vehicular access cannot be constructed in accordance with this policy at the location and the work has commenced the job shall be reinstated to its original condition at the cost of the owner. Any works required to be done by Council in such a case will be recoverable from the owner of the property.

Authority

4.7 Post Works Inspection

After the works have been completed the applicant shall apply in writing for a final inspection which will be carried out within two weeks of notification by an officer of Council. If the works are deemed satisfactory in accordance with this policy the maintenance bond will be refunded to the applicant during the next cheque run after the inspection.

If it is found that works have been carried out in an unsatisfactory nature or below Council's minimum standard, the applicant will be notified in writing and will be given 30 days from the date of the notice to rectify the works. If works are not rectified within this period, Council will undertake to carry out remedial works for which the owner or applicant will be liable. The cost of such works shall be deducted from the value of the maintenance bond or if in excess of this amount shall be charged to the landowner.

Inspections

4.8 Council Works

Council shall not normally undertake contract works of this nature however during the reconstruction of the road pavement fronting the property Council may undertake the construction of an access to a private property. The request for these works must be lodged prior to the completion of bulk earthworks and be located so as to comply with this standard. In these cases Council will prepare a fixed sum quotation for the carrying out of the works, however, the application fee will still be chargeable to the applicant as per clause 4.4. There will be no requirement under these circumstances for the payment of a maintenance bond.

**Council
Construction**

On the completion of the work by Council the owner of the property shall become the person responsible for the maintenance of the vehicular crossing from the property boundary to the road shoulder/road pavement.

5.0 Standard of Work

To ensure the safety of vehicles entering and accessing properties, minimum standards have been set and must be satisfied prior to the granting of a vehicular access permit.

**Minimum
Standards**

5.1 Sight Distance

Sight distance for vehicles both entering and leaving a vehicular access shall be that distance necessary for the design speed of the road in that location.

Sight distances based on the Austroads "Guide to Traffic Engineering Practice".

Austroads

*Approach Speed	Desirable (m) Sight Distance	Acceptable (m) Sight Distance		Absolute Minimum (m) Stopping sight distance
		Urban	Rural	
60 km/h	160	115	65	55
80 km/h	305	175	165	95
100 km/h	500	250	-	145

The above dimensions may be difficult to address in some cases. Where this occurs the proposal should provide the following:

- actual design speed specific to the site;
- road treatments to compensate for any reduced site distance.

The above absolute minimum sight distance may be further reduced should it be proven to comply with the calculations tabled in Austroads Pt 5 Intersections at Grade.

5.2 Gradient of Access

The grade allowable for vehicular access within the road reserve varies from 3% to a maximum of 16%. Standard Drawings SD 780A and SD 782A clearly define the standard applicable to the specific situation. A maximum grade of 29% may be adopted within the property. However, any grades in excess of 12.5% must be bitumen sealed regardless of whether the access services gravel or bitumen sealed road. This is designed to stop erosion of the driveway onto the road reserve and also ensures that vehicular access is maintained in all weather.

Max. Gradient

Location

In addition to other requirements the location of any access shall be wholly placed within the road frontage of the land. Diagonal drives are not preferred, however, Council shall assess each application on its merits giving topographic features.

5.3 Erosion Controls

In the design and placement of vehicular accesses consideration must be given to the erodability of the soil types. In a situation where erosion is likely to occur in the table drains or onto the driveway itself, attention must be paid to the provision of suitable protection devices and careful design. A standard sedimentation control plan will be included if the vehicular access is likely to cause erosion or has design grades in excess of 12.5%.

Environment

5.4 Width of Access

The width of vehicular access to a residential property shall be in accordance with the figures below, however some variations may apply. The following table provides guidance of Councils minimum standard on various road classifications.

Road Type	Minimum width	
	Kerb and Gutter	Pipe
Local	2900	3660
Regional	2900 splayed to 5000	5000
State	As specified by RTA written instruction	

5.5 Pipe Crossings

Pipe Standards

Piped vehicular access crossings will be required in all situations on local roads where vehicular access traverses a formal table drain or in areas where fill will impede the flow of stormwater.

The minimum standard for a pipe crossing shall be a 375 diameter reinforced concrete Rubber Ring Jointed or fibre reinforced concrete pipe of minimum width 3.66 metres and which shall have concrete headwalls either precast or case insitu on both ends. Stone pitched headwalls may be acceptable if constructed by a competent tradesman, mortar filled and in the same profile as a precast concrete headwall. The pipes shall be set back a minimum of 7.1 metres from the road centre line. A minimum of 150-mm cover of good quality crushed rock material over a Class 4 pipe increasing to a minimum of 450 mm over a Class 2 pipe shall be provided.

On sealed roads, the vehicular access shall be sealed from the edge of the bitumen to the property boundary.

Refer to standard drawing SD 782A for typical sections.

5.6 Non-Piped Crossings

Alternatives to pipe crossings

Vehicular access crossings without pipes shall be permitted in the following situations.

- On the crest of a hill
- Vehicular accesses which slope downwards from the road pavement towards the property boundary
- Where a kerb and gutter layback has been installed.
- The pavement and wearing surface of these crossings shall be in accordance with the standards tabled within this policy.

Refer to standard drawing SD 782A for typical sections.

5.6.1 Non-Piped Crossings - Rural Roads

Non-piped crossings in rural roads shall commence from the shoulder of the road and shall be designed to ensure that a standard vehicular does not bottom out when entering or when exiting the vehicular access. The access shall have a minimum width of 3.66 metres and shall have a minimum depth of 150 mm compacted crush rock pavement.

For a grade in excess of 12.5% or for a driveway on a sealed road the vehicular access shall be sealed. (See Clause 5.5.2)

5.6.2 Sealed Roads

On sealed urban roads the vehicular access may be constructed in 3 ways.

- Reinforced concrete 150 mm thick 3.66m wide to the edge of the bitumen.
- 250 mm compacted gravel with 2 coat bitumen seal to the edge of the bitumen.
- 200 mm compacted gravel with 22 mm depth of Class 170 type N 10 mm nominal size asphalt to the edge of the bitumen.

In all cases the vehicular access shall match the contour of the grassed swale and shall be graded across its width at the same longitudinal grade as the swale to ensure unimpeded flow of storm water. Should the grassed swale not comply with Council standards this may require reconstruction with the establishment of the proposed access.

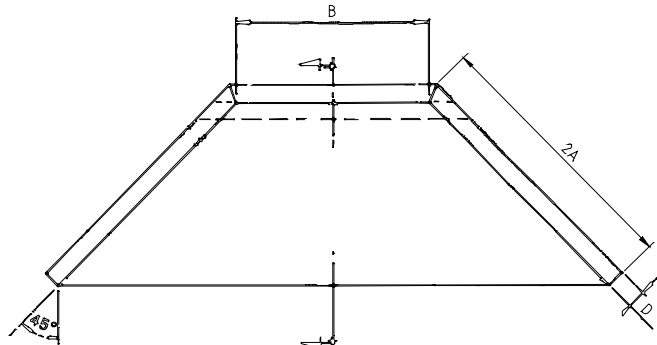
5.6.2.1 Gravel Roads

On gravel urban roads the vehicular access shall be constructed in 150 mm compacted depth crushed rock to the shape and grades as specified in Clause 5.5.2.

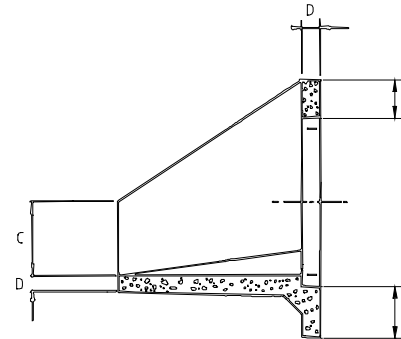
5.7 Battle Axe Blocks

Where approved battle axe blocks are created in accordance with Council Policy No. 1.8.2, construction standards for the access shall be consistent with this specification.

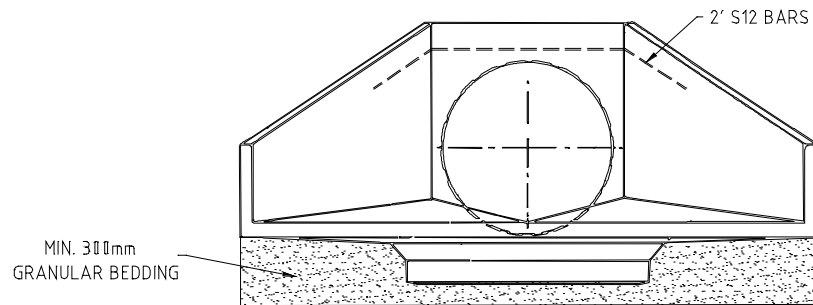
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PLAN



SECTION




ELEVATION

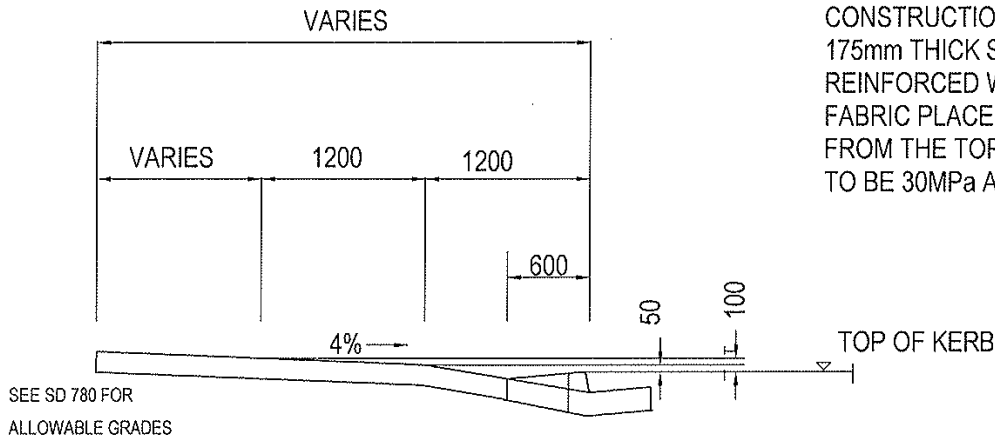
NOTE

WHERE MULTIPLE PIPE CULVERTS
ARE TO BE INSTALLED A MIN 200mm
SHALL BE PROVIDED BETWEEN PIPES

NOMINAL PIPE SIZE	DIMENSIONS (mm)			
	A	B	C	D
375	450	550	300	100
450	538	550	300	100
525	620	800	300	100
600	702	800	300	100
675	786	800	300	100
750	890	1000	300	100
825	946	1000	300	100
900	1042	1100	300	100

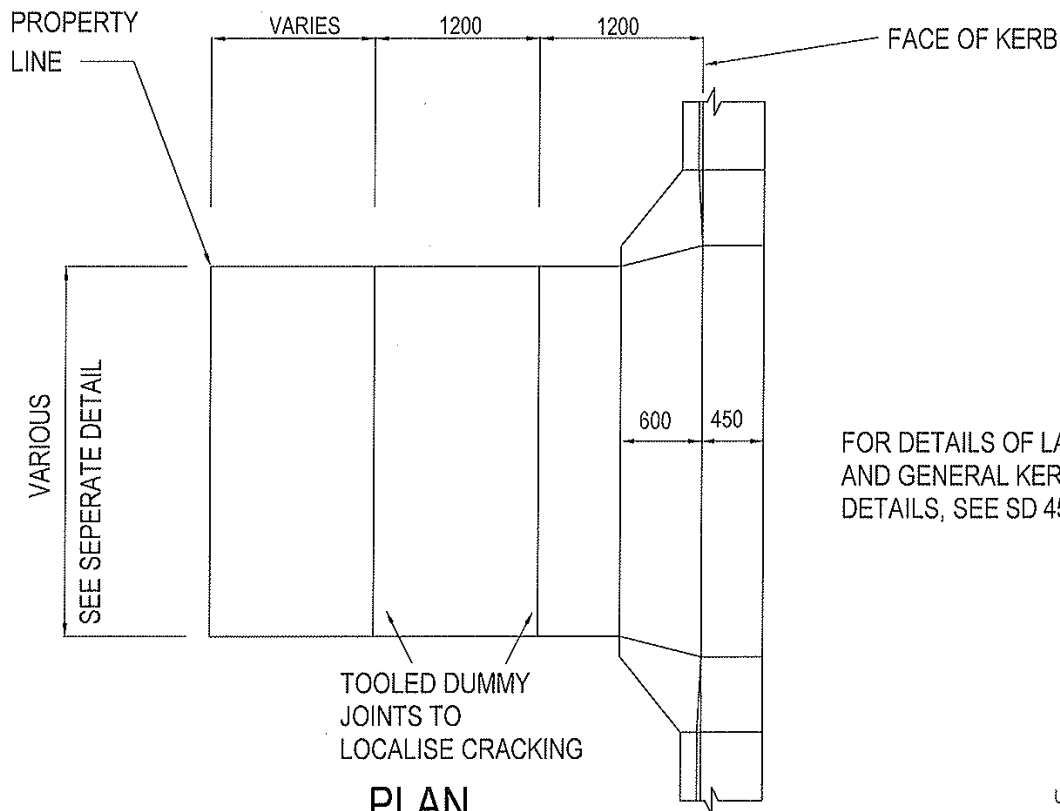
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DATUM	DESIGNED DRAWN G. REES, 7 NOV. 1998 PASSED	DATE		PLAN No. SD6	

FOOTPATH ALLOCATION



CONSTRUCTION:
175mm THICK SLAB,
REINFORCED WITH F62
FABRIC PLACED 25mm
FROM THE TOP. CONCRETE
TO BE 30MPa AT 28 DAYS


SECTION



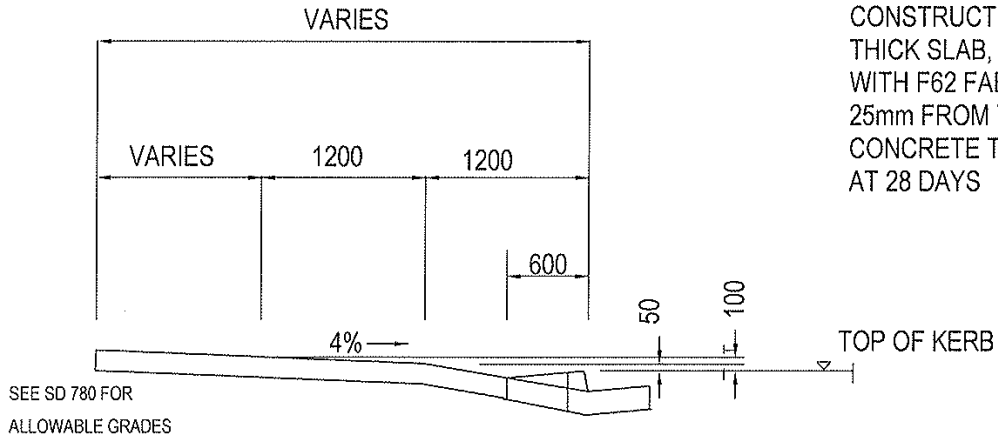
FOR DETAILS OF LAYBACK
AND GENERAL KERB
DETAILS, SEE SD 45.3

PLAN

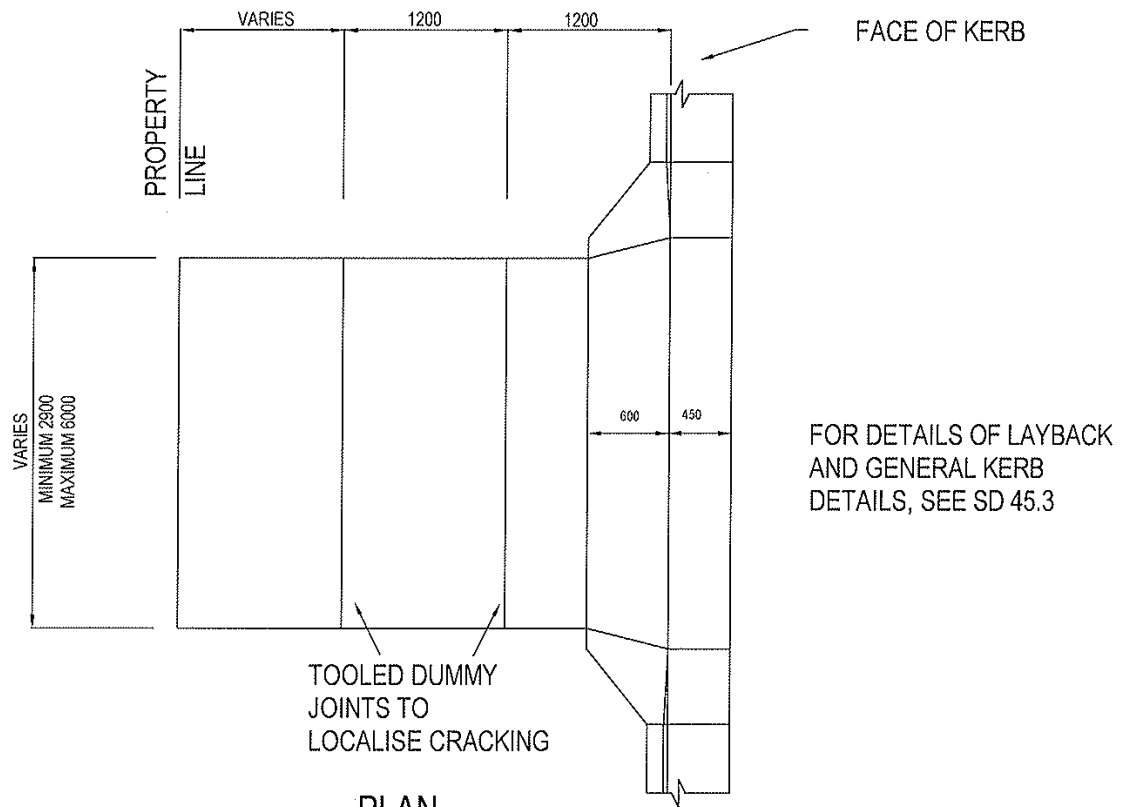
UPDATED NOV 2012
SD452_AMEND 2012.DWG

DATUM		LISMORE CITY COUNCIL	SCALE NTS
APPROVED		COMMERCIAL & INDUSTRIAL	AUTOCAD SD452
MGR DESIGN SERVICES - DATE		VEHICLE CROSSING	DRAWN RJ DEC 2000
CITY ENGINEER - DATE			PLAN No. SD 45.2

FOOTPATH ALLOCATION

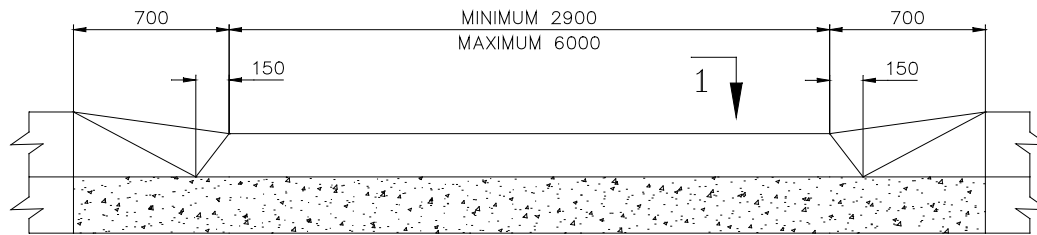


SECTION

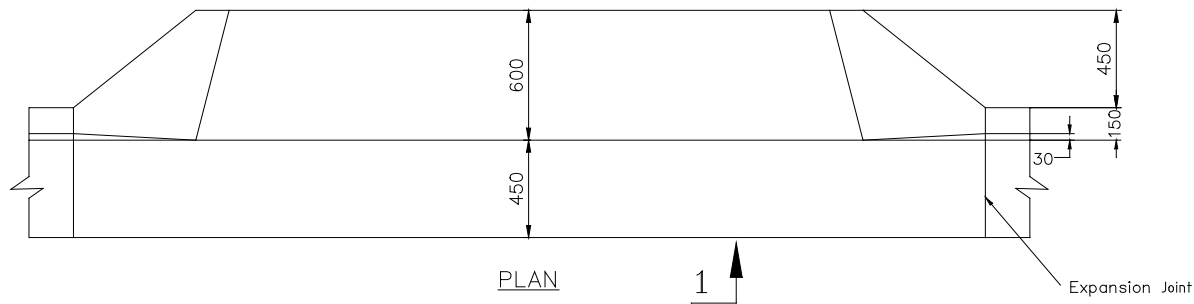


PLAN

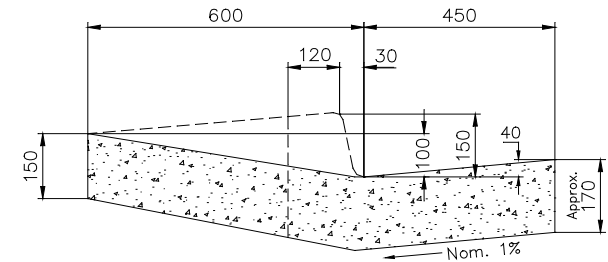
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APPROVED	RESIDENTIAL VEHICULAR CROSSING	SURVEYED BY
CITY ENGINEER		DRAWN UPDATED NOV.2012 SD454A_AMEND 2012.DWG
DATE 17/10/97		PLAN No. SD 45.4A



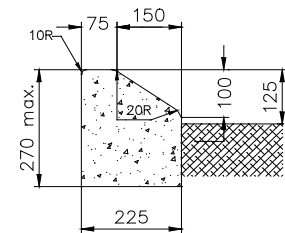
ELEVATION



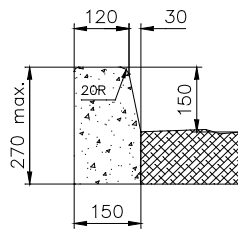
PLAN



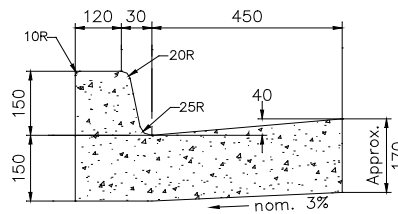
SECTION 1-1



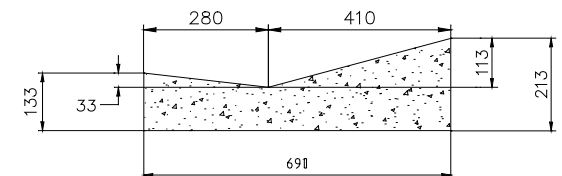
MOUNTABLE KERB



KERB ONLY



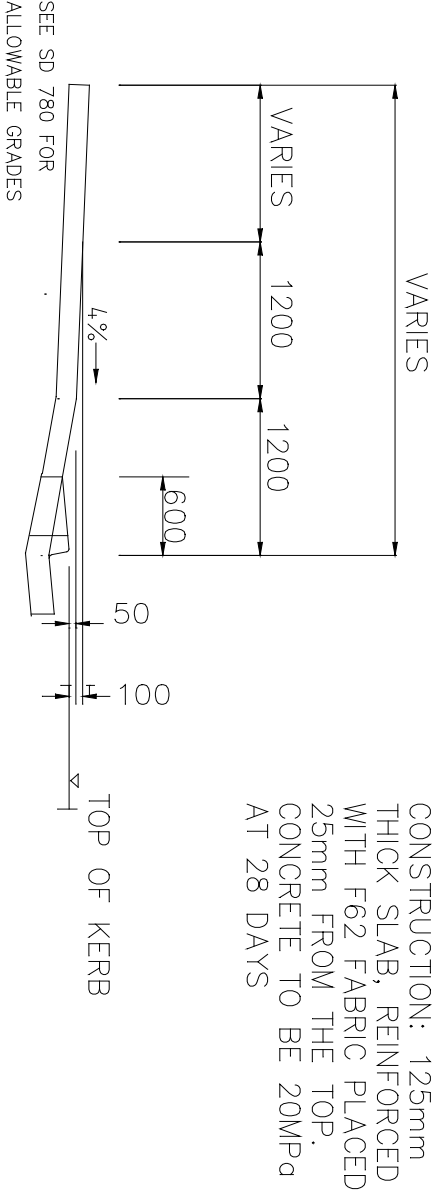
KERB AND GUTTER



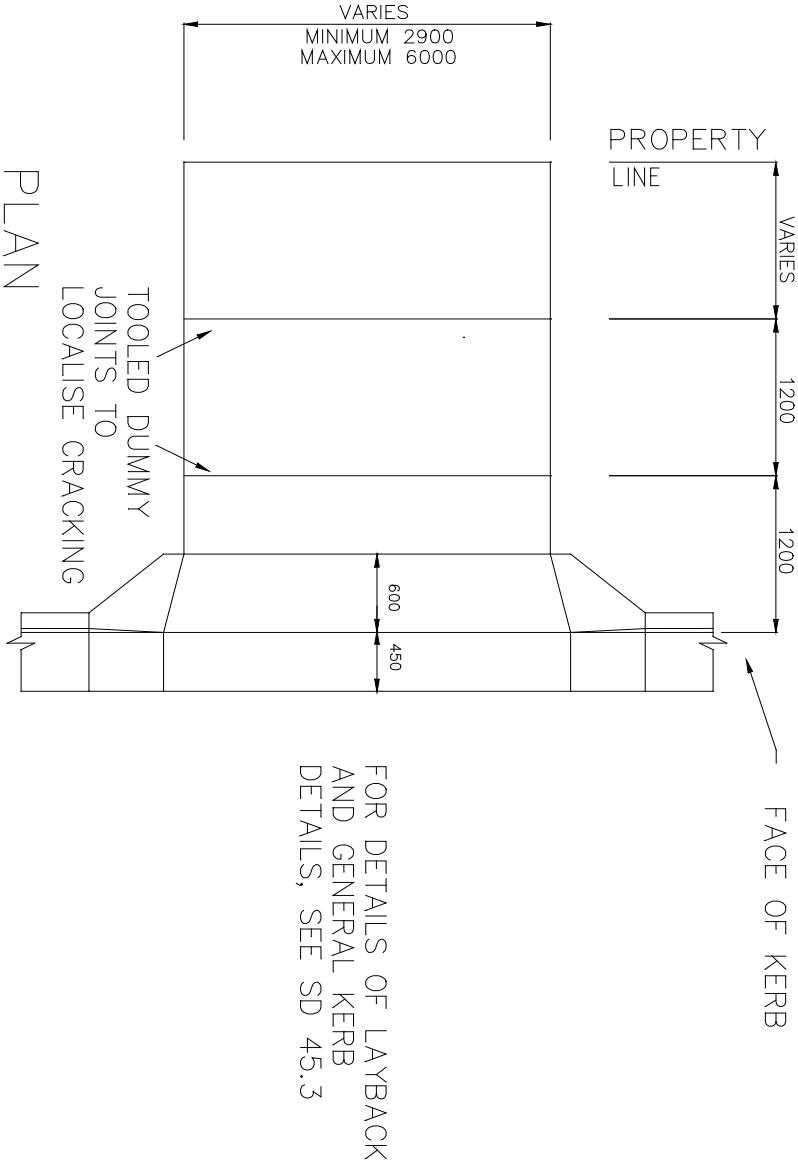
LAYBACK KERB

<p>SCALE</p> <p>Not to Scale</p>	<p>SURVEYED BY</p> <p>DATE</p> <p>CIVILCAD No.</p>	<p>APPROVED</p> <p>.....</p> <p>CITY ENGINEER</p>	<p>LISMORE CITY COUNCIL</p>		<p>AUTOCAD NAME</p> <p>SD453A</p>	<p>SHEET No.</p>
<p>All dimensions are shown in millimetres</p>	<p>DESIGNED</p> <p>DRAWN 17/10/97</p> <p>PASSED</p>	<p>DATE</p>	<p>LAYBACK AND GENERAL KERB DETAILS</p>		<p>PLAN No.</p> <p>SD 45.3A</p>	

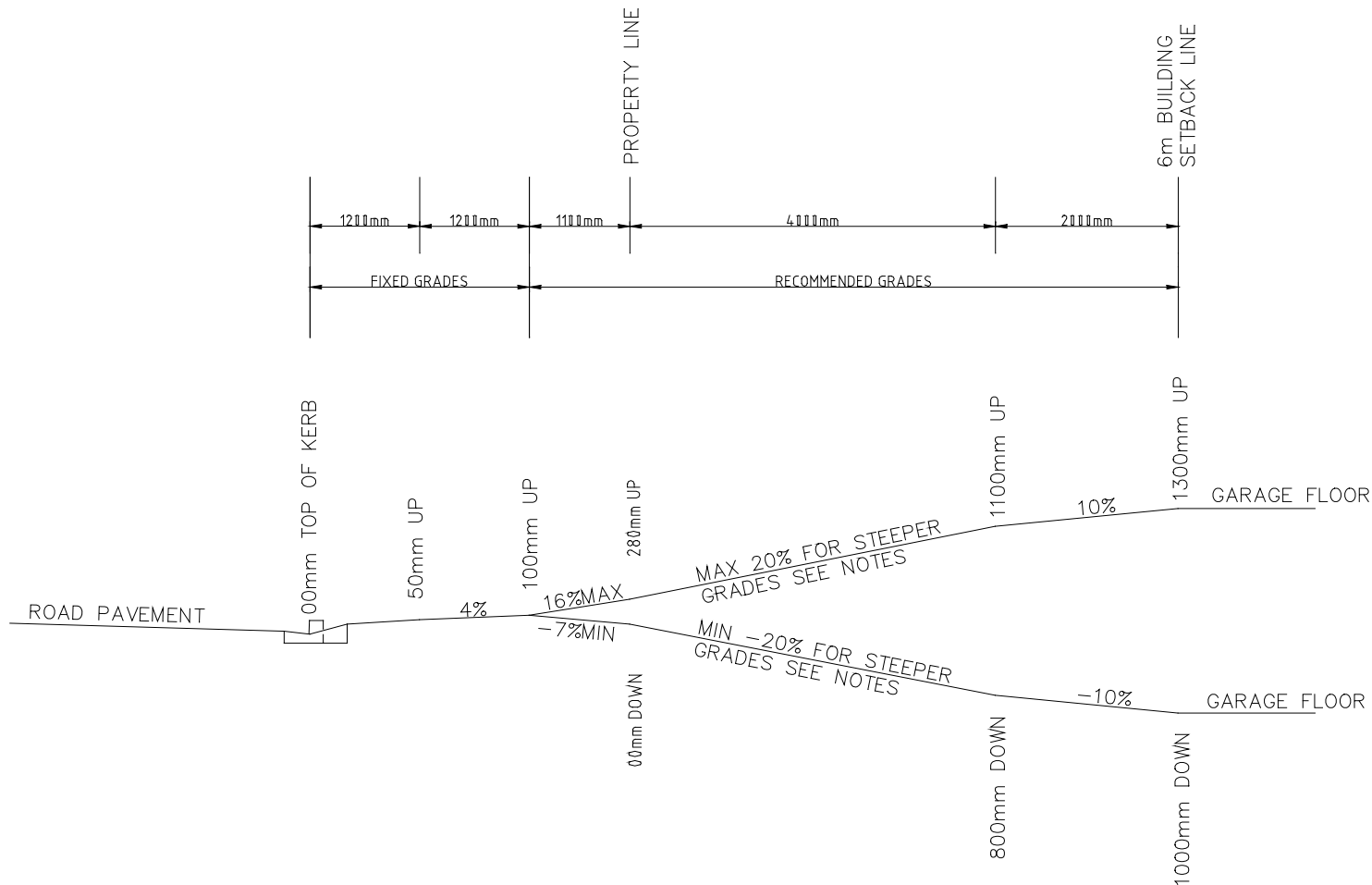
FOOTPATH ALLOCATION



SECTION

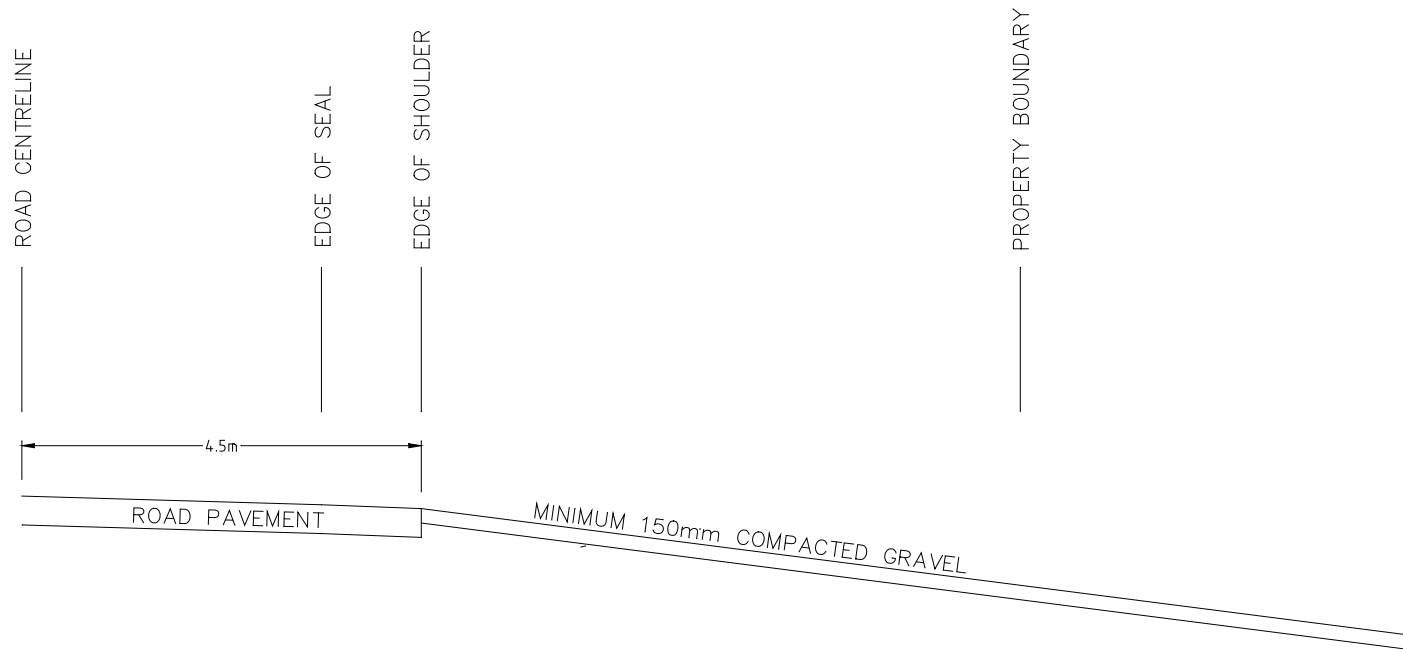


DATUM	LISMORE CITY COUNCIL		SCALE	NTS
APPROVED	RESIDENTIAL VEHICULAR CROSSING		SURVEYED BY	
			DRAWN	
			PLAN No. SD 45.4A	
CITY ENGINEER				
DATE 17/10/97				



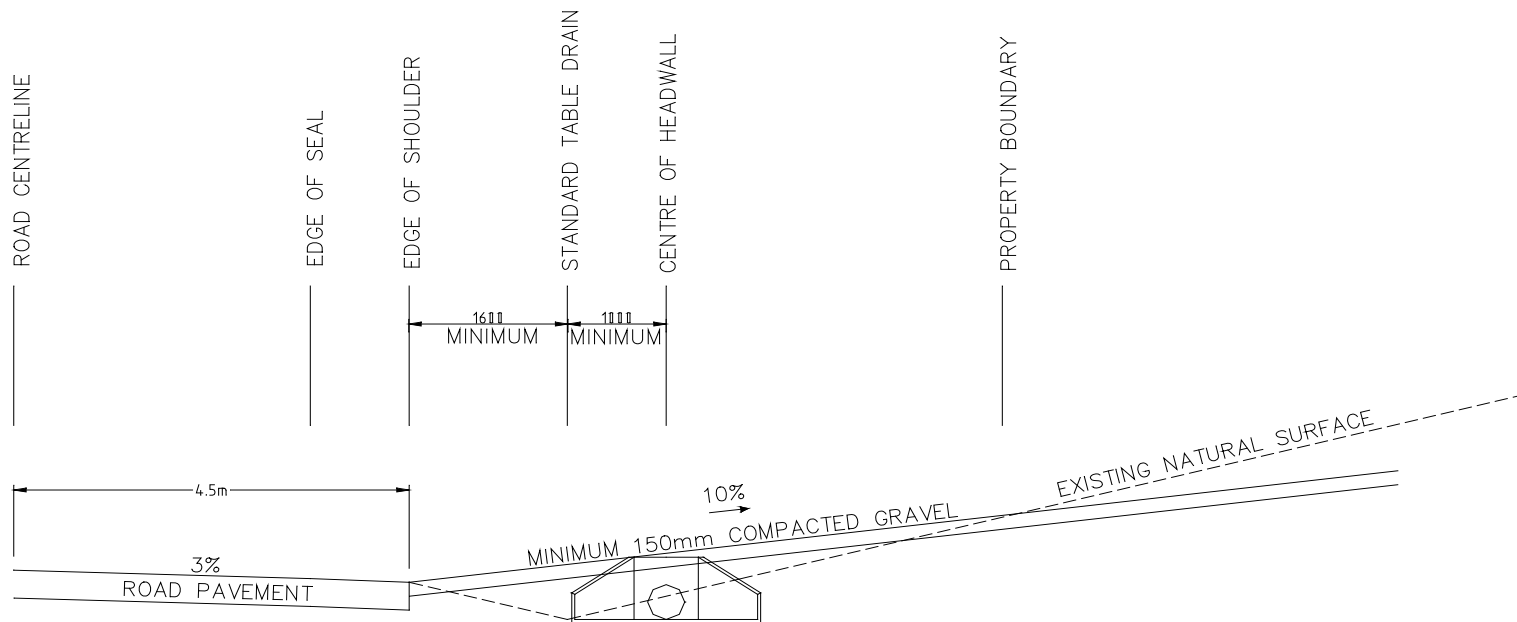
NOTES: Maximum change in grade 12.5% (including transition from road pavement)
 Absolute maximum grade up to 29% shall be
 considered on individual merit based on A.S. 2890

SCALE Not to Scale	SURVEYED BY DATE CIVILCAD No.	APPROVED CITY ENGINEER DATE	LISMORE CITY COUNCIL		AUTOCAD NAME SD780A	SHEET No.
			STANDARD LONGITUDINAL SECTION FOR URBAN VEHICULAR ACCESS		PLAN No. SD 780A	



NOTES: Maximum change in grade 12.5% (including transition from road pavement)
 Maximum grade 29%
 Grades steeper than 12.5% to be sealed

SCALE Not to Scale	SURVEYED BY	APPROVED CITY ENGINEER	LISMORE CITY COUNCIL	AUTOCAD NAME SD781A	SHEET No.
			STANDARD LONGITUDINAL SECTION FOR RURAL CROSSING (NO PIPE REQUIRED)		
All dimensions are shown in millimetres	DESIGNED	DATE		PLAN No.	SD 781A
	DRAWN 17/11/97				
	PASSED				



NOTES: Maximum change in grade 12.5% (including transition from road pavement)
 Maximum grade 29%
 Grades steeper than 12.5% to be sealed

SCALE Not to Scale	SURVEYED BY DATE CIVILCAD No. DESIGNED DRAWN 17/10/97 PASSED	APPROVED CITY ENGINEER DATE	LISMORE CITY COUNCIL		AUTOCAD NAME SD782A	SHEET No.
			STANDARD LONGITUDINAL SECTION FOR RURAL PIPE CROSSING		PLAN No. SD 782A	

