



LITHGOW CITY COUNCIL

10. PROPERTY MANAGEMENT

Policy 10.21

Specification for the Construction of Driveways, Footpath/gutter
Crossings and Footpaving Policy

Version 1

10: PROPERTY MANAGEMENT

10.21: SPECIFICATION FOR THE CONSTRUCTION OF DRIVEWAYS, FOOTPATH/GUTTER CROSSINGS AND FOOTPAVING

OBJECTIVE: This Policy is designed to inform end users of the standard procedures and specifications for constructing driveways, footpath/gutter crossings and footpaving.

POLICY:

Section 138 of the Roads Act 1993 requires that consent from Council be obtained for works within the road reservation.

This policy includes works such as driveways and footpaths. This is necessary to ensure the work complies with Australian Standards and Council policies and that the safety of all road users including pedestrians and cyclists is protected both during and after construction. Driveways and other works in the road reservation without Council approval may need to be removed if deemed to be a public liability or safety risk

GENERAL NOTES THAT MUST BE OBSERVED

1. Please read all pages carefully, and ensure this specification is on site at all times.
2. Please contact "Dial Before You Dig" on 1100 for information on service locations in the footpath area.
3. Ensure no concrete is poured until a Council Officer carries out a formwork inspection.
4. For further information and inspection bookings please contact Council on (02) 6354 9999
5. The footpath is to be clear of rubbish and suitably barricaded at all times. Following completion, all formwork and waste shall be removed from the footpath area.

CONDITIONS OF CARRYING OUT WORK

1. A 'Footpath Crossing Application' is to be lodged for each crossing/property to Council prior to the commencement of any works.
2. All contractors/owners who carry out works on Council property, i.e. footpath and roads, must have a current Certificate of Currency of the Public Liability Insurance Policy with an indemnity limit of not less than \$10,000,000.00 (ten million dollars).
3. All contractors must provide their Department of Fair Trading License Number, as well as a photocopy of their public liability Insurance Policy confirming the level of cover.
4. The works shall be carried out within the hours of 7:00am to 5:00pm Mondays to Saturdays. No work shall be undertaken on Sundays or public holidays.

5. The applicant/owner is responsible for all costs. Any alteration or damage to utilities is subject to negotiation with the relevant authority.
6. No tree is to be lopped, cut down and/or removed without the prior written consent of Council.
7. For the protection of the public, WorkCover approved barriers must be erected and maintained at any worksite on Council owned or managed property.
8. If the existing gutter crossing is damaged or cracked, it shall be completely removed and reconstructed to Council standards and specification in order to prevent infiltration of water into pavement which could cause future pavement deterioration.
9. If the road pavement is damaged during construction, it must be restored in accordance with Councils Specification at the applicant/owners cost.
10. Council may direct work in the road reserve to be removed and/or reinstated at the applicant/owners cost if work is carried out without approval or supervision.
11. Council will not be held responsible for any Public Risk Claims or otherwise, arising from incorrectly installed or unapproved footpath crossing or associated works.
12. Telstra approval is required to adjust/relocate any pits located within or adjacent to the proposed crossing.
13. RTA approval is required when working on classified roads. Please contact the RTA's Bowenfels office on (02) 6352 8953
14. Applications for additional crossings are to be submitted to Council for approval.

SPECIFICATIONS

General

1. Materials acceptable for crossover construction are plain, coloured, patterned or moulded concrete, paving and asphalt. All finished surfaces are to be non-slip as per AS 4586 & AS 3661.1 and maintain an even surface.
2. Concrete shall have a minimum compressive strength of 25Mpa at 28 Days. This minimum applies to all crossovers and associated works.
3. All soft, yielding and unsuitable materials shall be removed from the crossing and replaced with a material such as crushed rock or similar.
4. Layback and kerb and gutter must be constructed of plain concrete.
5. Formwork shall be braced in a substantial and unyielding manner, and where the crossing is skewed, all dimensions and levels are to be measured square to kerb. All formwork must remain in place for 72 hours after the final concrete pour. No traffic shall pass over the crossing for 7 days after pouring.
6. Formwork shall be completely filled by continuous tamping, spading or slicing of the concrete. Coarse aggregate shall be worked away from exposed surfaces which are to be finished with a wooden float or broom, corners and edges shall be neatly rounded.
7. Reinforcement shall have a minimum cover of 40mm, be clean and free of loose rust, and supported on bar chairs with a minimum 200mm overlap between sheets, and suitably tied.
8. Control joints shall be provided;
 - At minimum intervals of 6m;
 - Where new work abuts old, with dowels for medium & heavy duty crossings;

- Where the layback meets the footpath crossing slab;
 - Boundary line -a saw cut of 40mm minimum depth can be used, however a gap of 80mm minimum must be provided between reinforcing sheets.
9. All extensions to footpath crossings & laybacks are to be dowelled into the existing footpath crossing slab and layback using R12 bars, 500mm long at 300mm centres.
 10. Direction shall be sought from Councils Inspector regarding any skew angles.
 11. Where pedestrian footpaths within the proposed location of a new crossing are not 125mm thick and reinforced, they are to be removed. The owner/contractor must ensure that the existing footpath is transitioned into the new driveway slab so that there is no trip hazard.
 12. Following the completion of the footpath/gutter crossing and/or pedestrian footpaving construction, the surrounding edges shall be backfilled to ensure the new crossing is flush with the surrounding footpath levels. The site must be safe for pedestrian traffic.
 13. Crossings shall be 500mm clear of any drainage pit lintels.
 14. Only one access point per dwelling is permitted. Additional access points require specific Council approval.

Standard Duty Footpath & Gutter Crossings (Residential)

For single and dual occupancy dwellings

1. Minimum concrete depth is 125mm with one layer of F62 Mesh. Maximum width of gutter crossing is 5.4m, minimum width is 3m.
2. The maximum splay between back of kerb and boundary line is 1m, as per drawing SD.14.
3. For gutter crossings in existing kerb & gutter, both the kerb & gutter are to be removed. Where the pavement is damaged, the road is to be saw-cut 300mm from the edge of the gutter and repaired at the property owners/contractors expense.

Medium Duty Footpath & Gutter Crossings

For Light Commercial and Medium Density Housing

1. Prior to the driveway construction the applicant must contact INTEGRAL ENERGY for advice as to whether additional electrical ducts are required to be provided.
2. Minimum concrete depth is 150mm with one layer of F72 Mesh. The maximum width of gutter crossing to be as per development consent, minimum width is 4m.
3. The driveway must be splayed at the kerb, with a minimum splay of 500mm on each side.
4. The driveway slab is to be dowelled into the layback using R12 bars, 500mm long at 300mm centres unless constructed in one continuous pour.
5. For gutter crossings in existing kerb & gutter, both the kerb & gutter are to be removed. Where the pavement is damaged, the road is to be saw-cut 300mm from the edge of the gutter and repaired at the property owners/contractors expense.

Heavy Duty Footpath & Gutter Crossings

For Commercial, Industrial & High Density Housing

1. Prior to the driveway construction the applicant must contact INTEGRAL ENERGY for advice as to whether additional electrical ducts are required to be provided.
2. Minimum concrete depth is 200mm with one layer of F82 Mesh. The maximum width of gutter crossing to be as per development consent, minimum width is 4m.
3. The driveway must be splayed at the kerb, with a minimum splay of 500mm on each side. Any skew angle of the crossing is to be as per the development consent.
4. The driveway slab is to be dowelled into the layback using R12 bars, 500mm long at 300mm centres unless constructed in one continuous pour.
5. For gutter crossings in existing kerb & gutter, both the kerb & gutter are to be removed. Where the pavement is damaged, the road is to be saw-cut 300mm from the edge of the gutter and repaired at the property owners/contractors expense.

Rural Footpath & Gutter Crossings

1. Rural gutter crossing shall be a minimum of 4m wide. Footpath crossings shall be as per specification for, Residential, Medium Duty and Heavy Duty Footpath Crossings.
2. Pipe crossings may be used where necessary, however a site inspection and approval from Councils' Inspector is required prior to any work commencing. The pipe shall be a minimum of 375mm diameter RC with concrete head walls. An all-weather surface crossing is to be constructed, details of which are to be provided for approval by Council.
1. The owner/contractor must provide a minimum 150mm deep approved pavement with 2 coat seal or asphalt between the gutter crossing and the existing edge of pavement. The gutter crossing is to be a standard distance of 2m from the road pavement or positioned in line with, and at the existing level of the table drain.

Paved or Tiled Crossings

1. Pavers/tiles must be laid on 30mm bedding sand on the appropriate reinforced concrete footpath crossing- Residential, Medium Duty or Heavy Duty. Pavers/tiles are to be slip resistant as per AS 4586 & AS 3661.1
2. Concrete edge restraints shall be used to restrain the pavers/tiles and sand.
3. Pavers/tiles must be laid within 14 days from the completion of the slab with approved barriers to remain until all works are completed.

Asphalt (Hot-Mix) Finish

1. The AC finish is to be applied over the appropriate reinforced concrete footpath crossing - Residential, Medium Duty or Heavy Duty, laid at an appropriate level to allow for the depth of asphalt.
2. The minimum depth of asphalt is 25mm compacted thickness.

Other Finishes

1. All other finishes are to be submitted to Council for approval prior to use.

Footpaving

1. Footpaving shall be constructed of 75mm deep 25 MPa concrete, on a 50mm approved sub-base. The crossfall of the footpath shall be 2-4% and longitudinal grade shall not exceed 1:8 (12.5%).
2. Footpaths should be 600mm from the property boundary and shall be 1.5m wide, unless specified otherwise by Council. Expansion joints shall be provided every 6m with dummy joints every 1.5m.

INSPECTIONS

Formwork & Reinforcement Inspection

1. All work must be inspected by a Council Officer prior to pouring concrete. Inspections must be booked 24 hours prior to the requested time of inspection, and are only carried out Monday to Friday. Please quote the application number when booking an inspection.
2. Before requesting a crossing inspection:
 - The crossing must be excavated or filled to the design level.
 - Formwork must be in place, reinforcement cut, tied and supported on bar chairs and expansion joints are on site.
3. No concrete shall be poured prior to written approval from Council.

Final Inspection

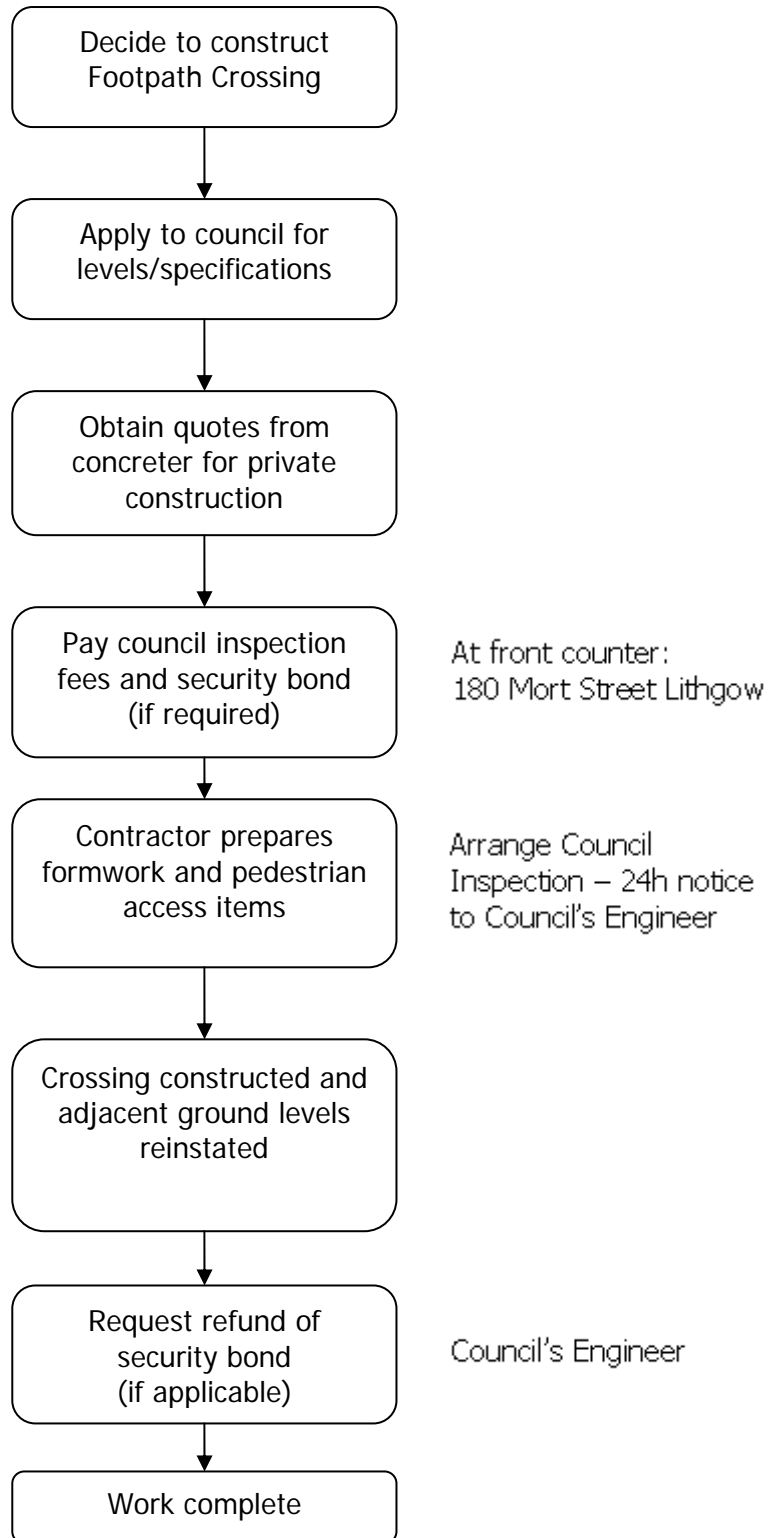
1. The applicant/owner is to request a final inspection following the completion of all works. If a private contractor carries out the work, you are advised to withhold final payment until you have received written notification that all work has been carried out to the satisfaction of Council.
2. Before requesting a final inspection:
 - The edges of the new footpath crossing must be backfilled and graded at a maximum slope of 1:8 (12.5%).
 - Any excess spoil is to be removed from the road reserve area and the area left in a tidy condition.

Standard Drawings

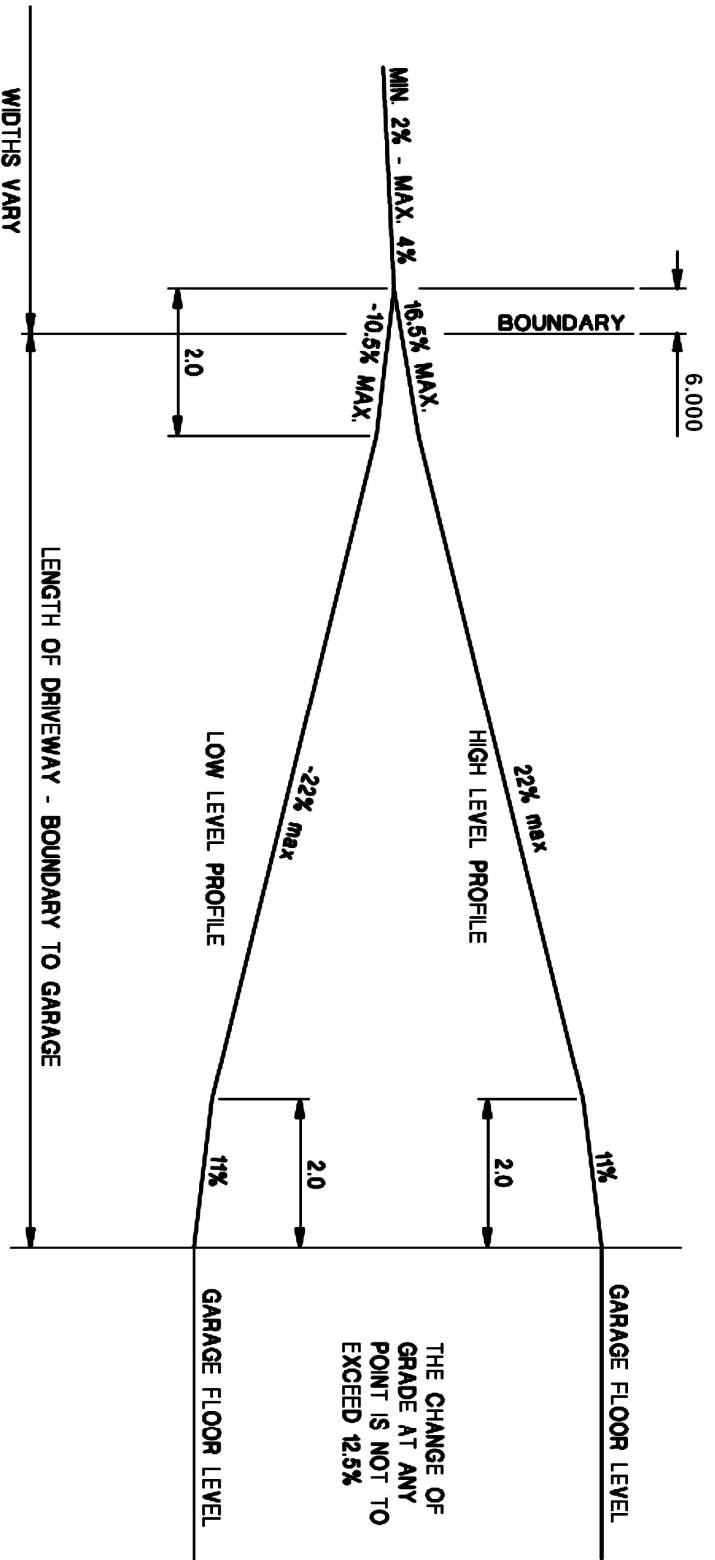
The following drawings can be downloaded from Council's website:

EN 1001	Footpath Crossing Grades & Suggested Maximum Internal Driveway Grades for Single Residential Lots
EN 1002	Rural Gutter Crossing
EN 1003	Gutter & Footpath Crossing
EN 1004	Footpath Paving and Jointing Detail

**FLOW CHART:
CONSTRUCTION OF DRIVEWAYS, FOOTPATH/GUTTER CROSSINGS AND
FOOTPAVING**



Maintained by Department:	Operations	Approved by:	Council	Exhibition Date:	N/A
Reference:	Policy Register	Council Policy No:	10.21	Effective Date:	24/01/11
Min No:	11-22	Version No:	1	Review Date:	1 st Quarter each year
Attachments:	10.21.1 – EN1001: Standard Details – Footpath Crossing Grades and Suggested Maximum Internal Driveway Grades for Single Residential Lots. 10.21.2 – EN1002: Standard Details – Rural Gutter Crossing 10.21.3 – EN1003: Standard Details – Gutter & Footpath Crossing 10.21.4 – EN1004: Standard Details – Footpath Paving and Jointing Details				



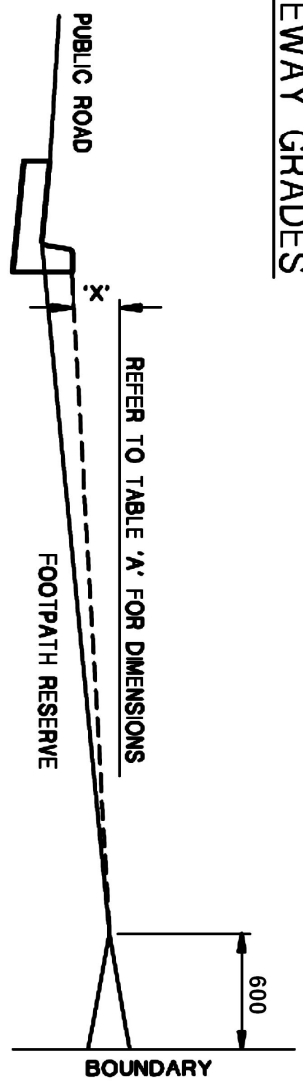
SUGGESTED MAXIMUM INTERNAL DRIVEWAY GRADES

FOOTPATH RESERVE WIDTH	HEIGHT ABOVE TOP OF KERB 600mm FROM BOUNDARY (X)
3.5m	58MM - 116MM
4.0m	68MM - 136MM
4.5m	78MM - 156MM
5.0m	88MM - 176MM
5.5m	98MM - 196MM
6.0m	108MM - 216MM

TABLE A

NOTES

1. SUGGESTED PROFILES SUIT MOST COMMON UNMODIFIED VEHICLES (WITHOUT TOWBARS, STANDARD SUSPENSION ETC.)
2. PROFILE IS TO APPLY TO CRITICAL SIDE OF THE DRIVEWAY, THAT IS THE SHORTER OF THE SIDES AND/OR THE SIDE WITH THE GREATER DIFFERENCE IN LEVEL BETWEEN FLOOR AND PROPERTY BOUNDARY.

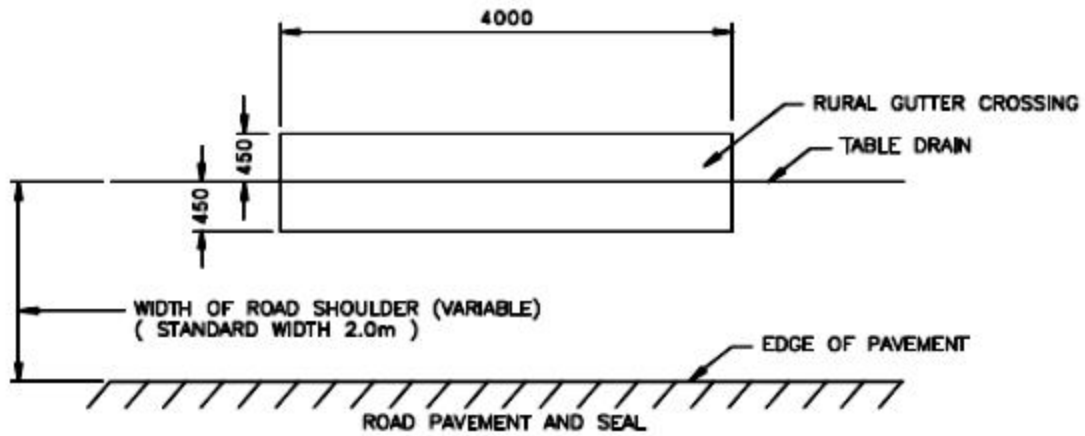


MINIMUM AND MAXIMUM HEIGHT FROM TOP OF KERB

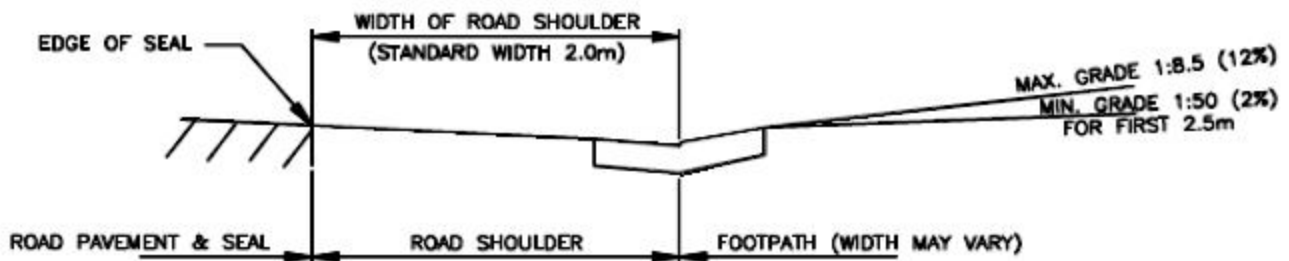
DATE	2010
DATUM	AHD
GROUP MANAGER OPERATIONS	

LITHGOW CITY COUNCIL

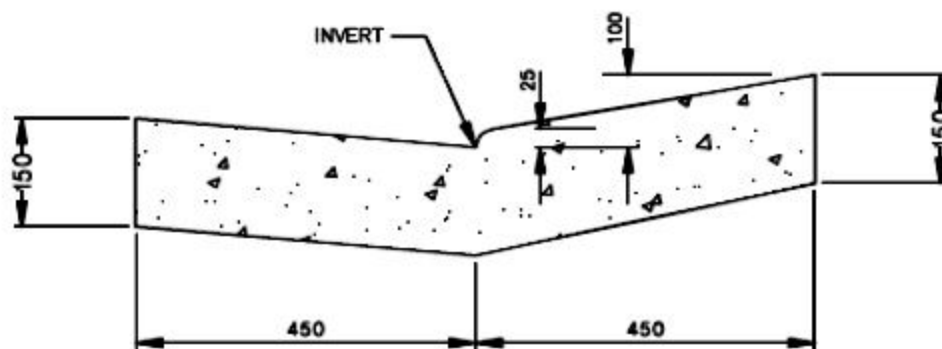
PROJECT	STANDARD DETAILS		
DESCRIPTION	FOOTPATH CROSSING GRADES AND SUGGESTED MAXIMUM INTERNAL DRIVEWAY GRADES FOR SINGLE RESIDENTIAL LOTS		
JOB No	DWG No	SHEET No	REV
	EN 1001		



PLAN



SECTION



RURAL CROSSING DETAILS

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES
2. RURAL GUTTER CROSSINGS TO BE CONSTRUCTED SO THAT THE INVERT ALIGNS WITH EXISTING TABLE DRAIN LEVELS
3. COMPRESSIVE STRENGTH OF CONCRETE 25MPA

DATE:
2010

DATUM:
AHD

APPROVED BY:



LITHGOW CITY COUNCIL

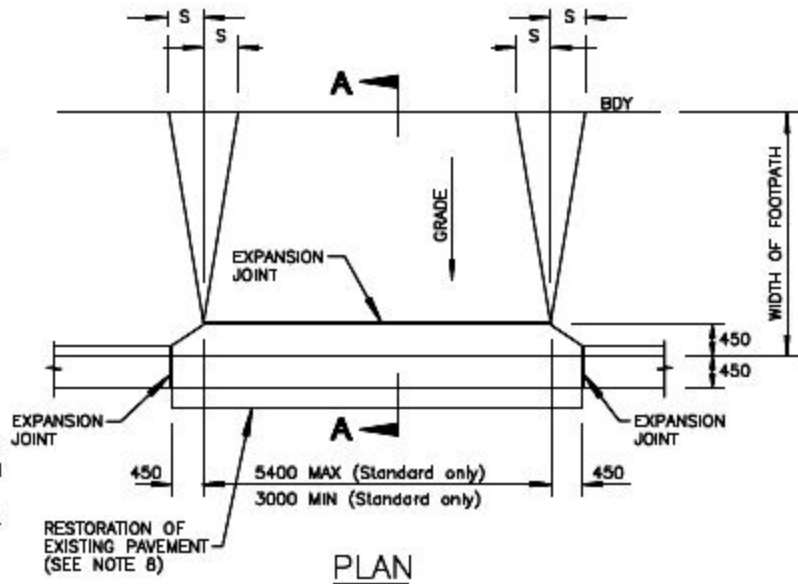
PROJECT
STANDARD DETAILS

DESCRIPTION
RURAL GUTTER CROSSING

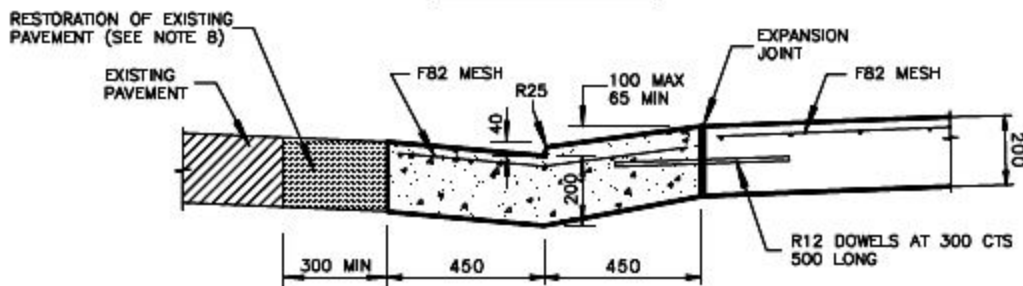
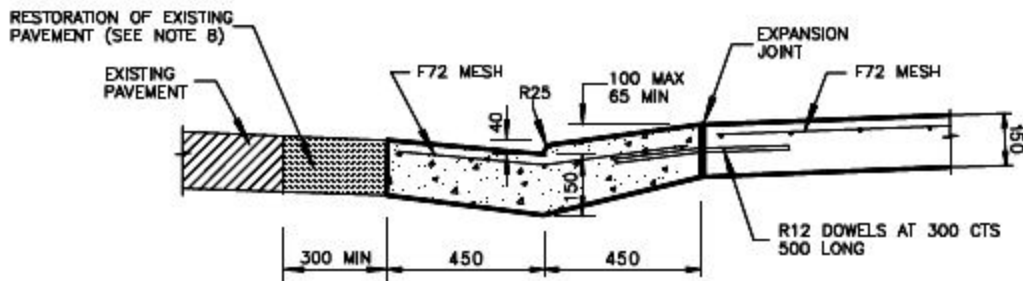
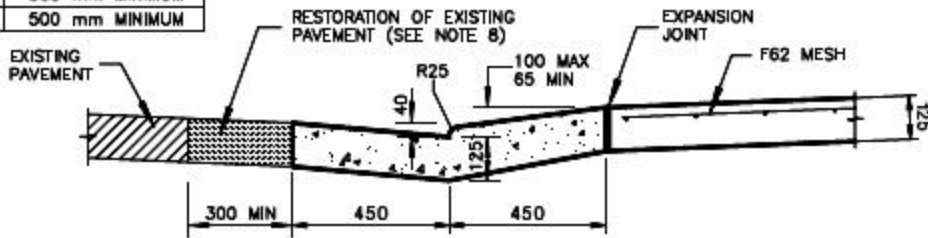
JOB No	DWG No	SHEET No	REV
	EN 1002		

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES
2. STEEL FABRIC TO BE PLACED A MINIMUM OF 40mm AND A MAXIMUM OF 60mm BELOW THE CONCRETE SURFACE LEVEL
3. CONCRETE USED IN THE WORK SHALL DEVELOP A MINIMUM CRUSHING STRENGTH OF 25MPa AFTER 28 DAYS
4. GUTTER CROSSING TO BE POURED BEFORE AND SEPERATLY FROM FOOTPATH CROSSING
5. EXPOSED LENGTH OF DOWEL FROM GUTTER CROSSING POUR TO BE COATED WITH "BRUSHDALE DURASEAL" OR EQUIVALENT PRIOR TO POURING FOOTPATH SLAB
6. REFER TO ELECTRICITY SUPPLIER FOR LOCATION OF CABLE DUCTS
7. TELECOMMUNICATIONS SUPPLIER REQUIRES THAT CONDUITS BE PROVIDED UNDER FOOTPATH CROSSING. THREE WORKING DAYS NOTICE REQUIRED TO ARRANGE INSTALLATION
8. PROVIDE A SAW CUT TO EDGE OF DAMAGED PAVEMENT PRIOR TO RESTORATION WITH FULL DEPTH ASPHALTIC CONCRETE (AC 10)



CROSSING TYPE	S
STANDARD DUTY	1000 mm MAXIMUM
MEDIUM DUTY	500 mm MINIMUM
HEAVY DUTY	500 mm MINIMUM



DATE:
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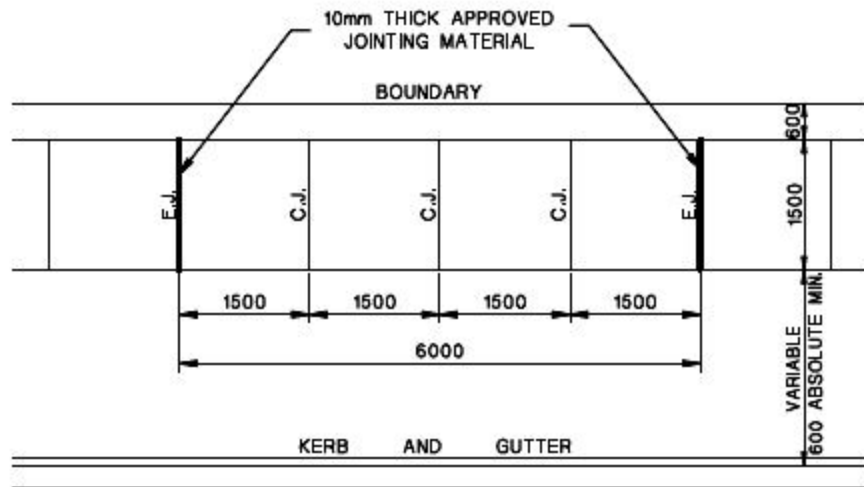


LITHGOW CITY COUNCIL

PROJECT
STANDARD DETAILS

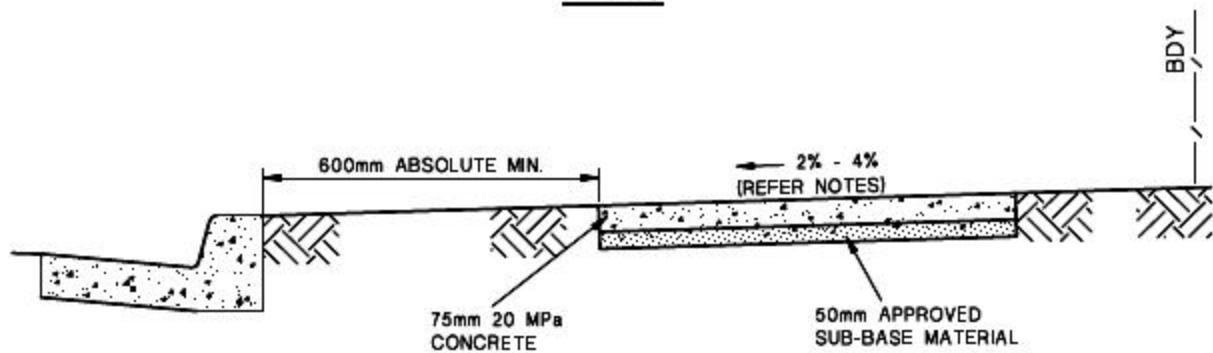
DESCRIPTION
GUTTER & FOOTPATH CROSSING

JOB No	DWG No EN 1003	SHEET No	REV
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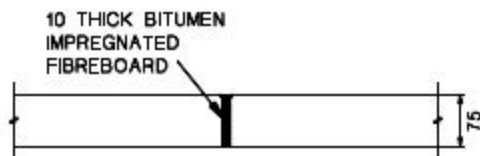


E.J. - EXPANSION JOINT (FULL DEPTH OF CONCRETE)
C.J. - CONTRACTION JOINT.

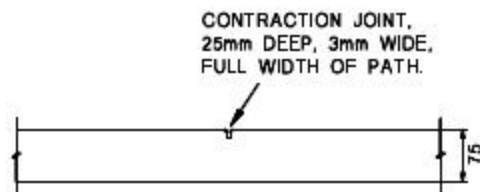
PLAN



TYPICAL SECTION



EXPANSION JOINT
AT 12000 MAX. INTERVALS



TRANSVERSE CONTRACTION JOINT
AT 3000 MAX. SPACING

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES
2. RAMP TO BE PROVIDED WITH NON-SLIP (BROOM) FINISH
3. PREFERRED CROSSFALL SHALL BE 2.5%
WHERE CONSTRUCTED ADJACENT TO VACANT LAND, INCREASE
CONCRETE DEPTH TO 125mm WITH F62 MESH
4. ALL EXPOSED CONCRETE EDGES TO BE ROUNDED TO A 5mm RADIUS

DATE:
2010

DATUM:
AHD

APPROVED BY:



LITHGOW CITY COUNCIL

PROJECT
STANDARD DETAILS

DESCRIPTION
FOOTPATH PAVING AND JOINTING DETAILS

JOB No	DWG No EN 1004	SHEET No	REV
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