



URBAN AND RURAL DRIVEWAY CROSSINGS DESIGN & CONSTRUCTION GUIDELINES

The construction and maintenance of residential, commercial and industrial driveways within road reserves (i.e. between the kerb or edge of roadway and the front of the property) is the responsibility of the Property Owner. Any modification or alteration required at the kerb is considered to be part of the driveway and is also the responsibility of the Property Owner. Council are required to approve any works within the road reserve prior to their commencement.

Items to check when designing your driveway:-

1. Prohibited Locations.

Australian Standard 2890.1 figure 3.1 shows areas around an intersection where driveways are prohibited. For residential properties having a lot frontage less than 30 metres, only one vehicular access to the premises is permitted unless approved otherwise by Council.

2. Council Infrastructure

(i) Traffic Control Devices.

Some roads have traffic control devices, concrete islands for example, and these are generally unlikely to be moved. Locate your driveway clear of such devices.

(ii) Stormwater Drainage Pits

Concrete pits are located under the kerb and channel for stormwater drainage. Ensure the driveway is at least one (1.0) metre clear of any stormwater pit. The substantial costs associated with relocation of these pits would be the responsibility of the applicant. Where no kerb and channel exists and the table drain is not suitable for a pipe cross over, construction should be carried out using a concrete dish crossing in such a manner that drainage is not affected, and this is subject to approval by Council.

(iii) Road Signs

Road signs can generally be relocated a short distance if there is a conflict with the proposed driveway. The costs involved with relocation of these signs would be the responsibility of the applicant.

(iv) Footpath Trees

Mature trees will not be removed. Council will replace or transplant where possible any small trees if necessary. The costs involved with relocation of any trees would be the responsibility of the applicant.

(v) Survey Marks

Do not disturb a survey mark. Survey marks are often located on sections of existing kerb and gutter. These marks are a numbered brass disk set in concrete and are usually 1m from the property boundary or immediately behind the kerb. Contact Council for further advice.

(vi) Concrete Footpaths

Driveway levels must match any existing concrete footpaths. The existing footpath must be removed across the width of the driveway. Tooled contraction joints are to be made in the driveway slab to denote the footpath. Dowelled expansion joints are required at any joins.

(vii) Sewerage Access Chambers

The access chambers must remain accessible at all times. It is best to locate the driveway so as not to coincide with a Council access chamber. If this is unavoidable and the access chamber needs to be lowered or raised to match levels, or if it does not have a metal lid, contact Council on phone 02 6730 2350 to arrange for a Council officer to inspect the site and supply a quote for the work to be carried out. The costs involved with realignment of any manhole may be the responsibility of the applicant.

(viii) Water Supply Fittings

As with sewerage access chambers, it is best to locate the driveway so as not to coincide with water supply fittings. However, if this is unavoidable the pre-cast concrete surround and the cast iron coaming box will need to be raised or lowered to match levels. For concrete driveways, the concrete surround must be separated with an expansion strip to avoid adhesion and allow clearance for the concrete surround to be removed. The costs involved with realignment of any fittings would be the responsibility of the applicant.

(ix) Water Supply Services

Driveways must not interfere with water meters or cover water supply pipes located between the main in the footpath and the meter. The driveway must not cover a water supply conduit from the main on the opposite side of street. The costs involved with relocation of any meter would be the responsibility of the applicant.

3. Other Service Providers

Various services provided by other authorities may be installed in the footpath. Check with the relevant organisation for any conflict. Any relocation work is to be arranged with the relevant authority with the costs involved being the responsibility of the applicant.

(i) Electricity – Country Energy. Check for underground power as well as poles.

Allow at least 1.0m clearance from power poles.

(ii) Telephone - Telstra Phone: 1100.

(iii) Gas

4. Other aspects to check.

(i) Driveway Slope

Your driveway must have at least a 1% (1 in 100) grade towards the street to drain properly. Do not construct your driveway at slopes greater than 3% (3 in 100) until you have had your design approved by Council. The Designer shall design a vehicular driveway centreline profile for the property access and check this design against critical car templates, available from Council, to ensure that vehicles can use the driveway satisfactorily.

(ii) Visibility

Check the visibility of oncoming traffic at the location where you want to put the driveway, as well as that of cyclists and pedestrians. Items to consider include curves and crests in the road or other obstructions that may block your view. Sight distances shall comply with Austroads guidelines based on likely operating speeds.

(iii) Pedestrian/Cyclist Safety

Loose gravel or raised edging is not permitted on the footpath due to the hazard to pedestrians and cyclists. Sealants used on some concrete driveways may be very slippery. It is the responsibility of the applicant to ensure a sealant additive is used to combat this problem.

(iv) Extent of Concrete

Where no kerb and channel exists, the concrete must not be extended past the table drain. Tracks are not permitted on the road reserve – full slab construction is required between the kerb and the property boundary.

(v) Existing Kerb & Gutter

Merely removing the kerb is not permissible. Barrier kerb and channel must be removed in its entirety and replaced with Council's standard invert. Council will not approve any alterations to drive over kerb and channel except in extenuating circumstances e.g. requirement for disabled access.

(vi) Other than in Plain Concrete

The thickness of the decorative surfacing is to be added to the thickness of crossing shown on Standard Drawing GISC-10/025 and should not extend closer to the road pavement than the back of the kerb. The surface finish shall be non-slip and have a minimum coefficient of friction of 0.47 as specified in Australian Standard AS/NZS 3661 - Slip Resistance of Pedestrian Surfaces. e.g. plain, lightly broomed concrete or unglazed bricks are materials which comply with the standard. The surface projections shall not exceed 5mm in height relative to the adjacent surfaces.

Guidelines for constructing your driveway:-

1. The Contractor

(i) General

Any person or Contractor performing work within a road reserve must be competent to perform that work. During the course of the work, the Contractor shall work safely in a manner compliant with current occupational health and safety legislation and guidelines.

(ii) Insurances

The Contractor shall be able to demonstrate to Council certificates of currency for the following insurances:

- Workers Compensation Insurance (or Personal Accident and Illness Insurance for a sole trader);
- Public Liability Insurance – in the joint names of the Council, Contractor and all subcontractors (noting the interests of Council as a Principal), and to the value of a minimum of \$10,000,000.
- Motor Vehicle Insurance - compulsory third party insurance for registered vehicles, & insurance for any unregistered plant.

Submissions to Council are to include the insurance company, policy number, expiry date, and amount of cover where appropriate.

2. Provision for Traffic

(i) General

The Contractor shall construct the Works in a safe manner with the least possible obstruction to traffic, both vehicular and pedestrian.

(ii) Traffic Control Plan

The Contractor shall perform all work in accordance with a Traffic Control Plan (TCP) for controlling pedestrian and vehicular traffic. The TCP shall be prepared in accordance with the Australian Standard 1742: Manual of Uniform Traffic Control Devices.

(iii) Access

Safe, all weather vehicular and pedestrian access to properties shall be maintained wherever possible. Notice of 48 hours shall be provided to property owners whose access will be restricted.

3. Protection of Trees

(i) General

Existing trees shall be protected from all damage during the Works.

(ii) Materials Clear of Trees

The Contractor shall not store, stockpile, dump or otherwise place under or near trees bulk materials and harmful materials including oil, waste concrete, clearings, boulders and the like and shall prevent wind blown materials from harming trees and plants.

(iii) No Attachments

The Contractor shall not attach stays, guys and the like to trees and shall prevent damage to tree bark.

(iv) Work Near Trees

When working near trees the Contractor shall not remove topsoil from within the drip line of trees unless otherwise specified or directed. Where it is necessary to excavate within the drop line, hand methods or trenchless methods, such that root systems are preserved intact, shall be used. The duration of open excavations under tree canopies shall be determined by the Superintendent at the time of the excavation and shall comply with the requirements of Council's Manager of Recreation and Open Spaces.

(v) Tree Roots

The Contractor shall not cut tree roots exceeding 50mm in diameter without the approval of Council's Manager of Recreation and Open Spaces. Where it is necessary to cut tree roots, a saw or similar means shall be used such that the cutting does not unduly disturb or rock the remaining root system. Immediately after cutting, an approved bituminous fungicidal sealant shall be applied to the cut to prevent the incursion of root disease.

4. Pathways

(i) General

Pathways, and other public areas, shall be restored with materials consistent with the existing surface before commencement of the Works, or as directed by the Superintendent.

(i) Remove Temporary Material

Prior to final footpath restoration, the temporary pavement material shall be removed and disposed of off-site by the Contractor. If approved by the Superintendent, the temporary material may remain in place and be incorporated into the final subbase.

(i) Subbase Material

All paved footpaths, and paved areas, shall be constructed on a subbase of 150mm crushed stone DGB20 compacted to 100 percent relative compaction in accordance with AS 1289.5.4.1.

(i) Patches

For restoration patches in footpath surfaces, the surface level at any point along the patch's edge shall match the adjoining footpath surface within $\pm 2\text{mm}$.

5. Concrete Footpaths, including Textured and Patterned

(i) Match Existing Footpaths

Concrete footpaths shall be constructed in 20 MPa concrete to the same thickness (with a minimum of 100mm), surface finish and pattern as the adjoining footpaths and driveways as appropriate or as directed by the Superintendent.

(i) Expansion Joints

In concrete footpaths, expansion joints consisting of a 15mm thick preformed jointing material of bituminous fibreboard or equivalent approved by the Superintendent shall be placed where new concrete abuts existing concrete and in line with joints in existing concrete.

(i) Control Joints

Control joints shall be formed strictly in line with the control joints in existing concrete.

(i) Poles

Around electricity supply poles, the concrete paving shall be terminated 200mm from the pole and the resulting space filled with cold mix asphalt.

6. Turfed Edges

(i) Topsoil Bed

A bed of stockpiled topsoil, of minimum thickness 50mm, shall be placed on the subgrade prior to restoration of turfed verges.

(ii) Relay Turfs

Existing grass turfs, taken up and stored, shall be relaid to conform with the original grassed surface. Turfs shall be hard butted against each other in rows and the seams toppedressed with topsoil. Turf shall be rolled and watered to ensure direct and uniform contact with the topsoil.

(ii) Additional Turf

Any additional turf required to fully restore grassed verges shall be supplied by the Contractor and shall be the same type as the existing grass.

6. Verge Plants, Shrubs and Trees

(i) Topsoil Bed

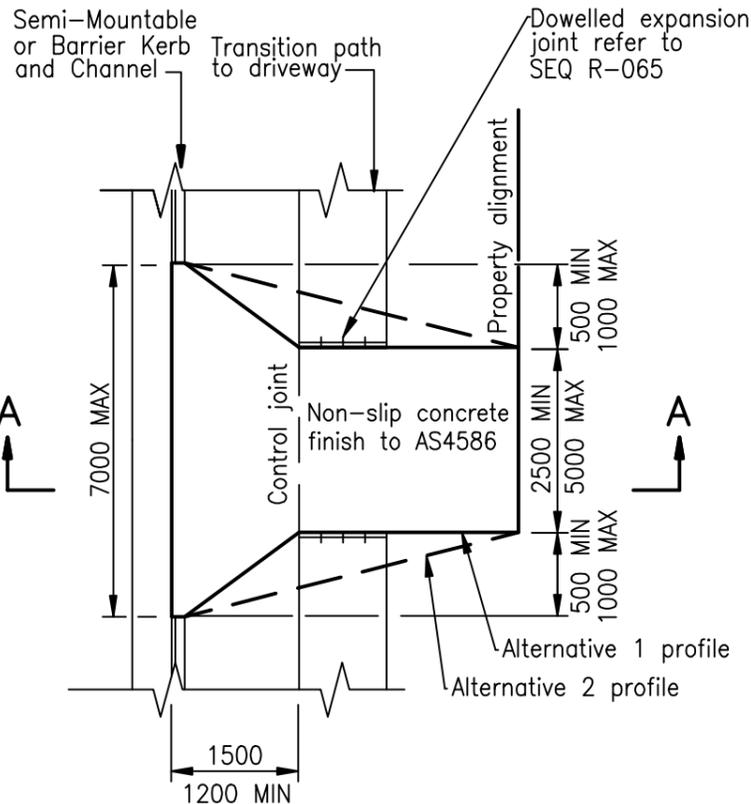
Stockpiled topsoil shall be placed on the subgrade to the same thickness as the surrounding topsoil, prior to replanting. Planting holes shall be excavated, at locations determined by the Superintendent in consultation with Council's Manager of Recreation and Open Spaces, and the material spread evenly around each hole.

(iii) Replanting

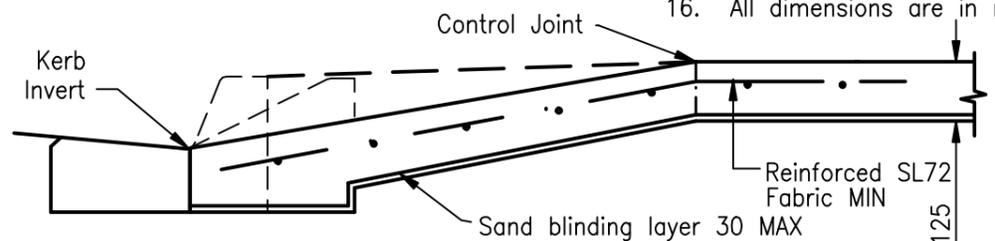
Existing plants, shrubs and trees, taken up and stored which are suitable for replanting as determined by the Superintendent, shall be replanted in the prepared holes.

(iii) Compacted, Staked and Watered

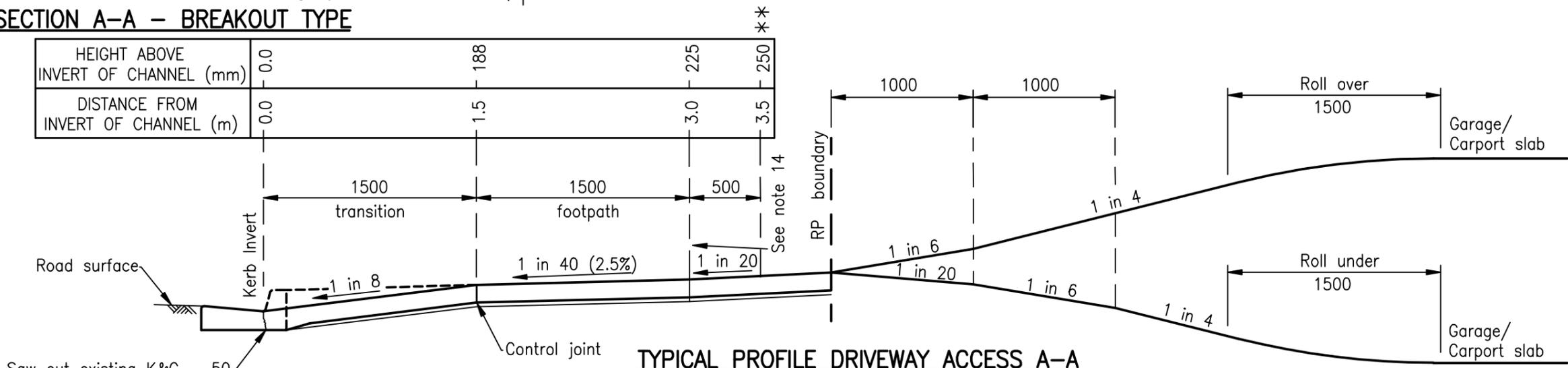
The planting hole shall be backfilled with topsoil and compacted by foot up to surface level. The shrubs and trees shall be staked as directed by the Superintendent, watered and maintained for 2 months after the date of formal completion of the restoration works.



SPLAYED DRIVEWAY



SECTION A-A - BREAKOUT TYPE



TYPICAL PROFILE DRIVEWAY ACCESS A-A

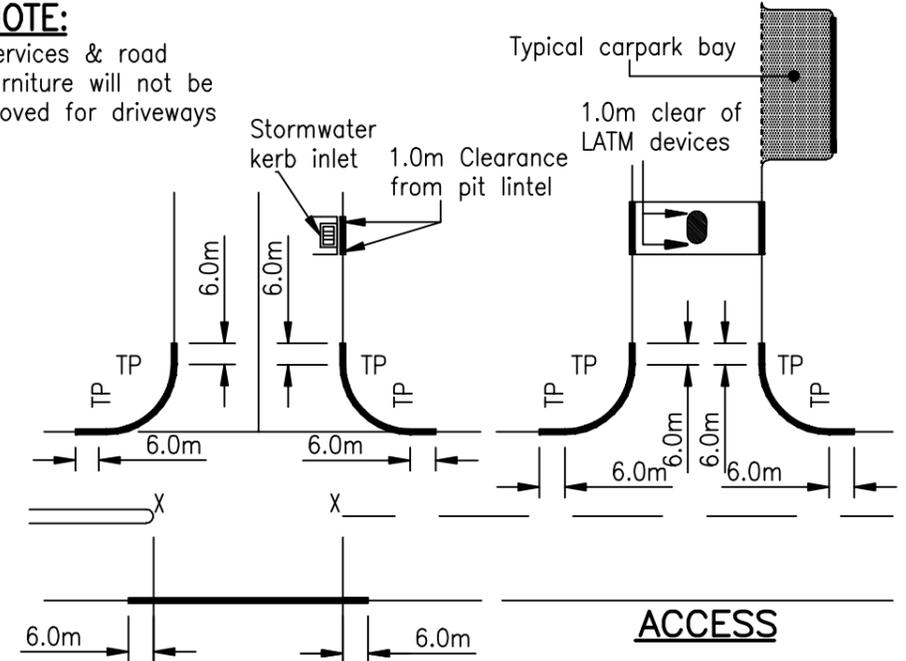
Saw cut existing K&C - 50 MIN depth at invert - break out and remove back of K&C

NOTES:

- Crossings are not designed for commercial vehicles.
- Footpath section to vary where necessary to match concrete footpaths and verge profiles. Footpath earthworks adjoining concrete must be well compacted.
- Concrete surface tolerance to be, $\pm 5_{-0}^{mm}$ over 3 metre sections.
- Concrete N32 in accordance with AS 1379 and AS 3600.
- Reinforcement fabric to AS 1304, 50 top and edge cover, lap fabric 250.
- Approved materials for construction:- concrete, paving blocks or asphalt, refer project drawings.
- Expansion joints to be 10mm thick, full depth closed cell cross linked polyethylene foam (85 - 150 kg/m³), or 10mm thick compressed granulated corkboard, installation to manufacturers' instructions.
- All appropriate permits must be obtained from relevant Council, including approval of location and levels prior to excavation.
- Refer project drawings or relevant Council standard drawings for verge type cross sections.
- One access to be constructed per allotment unless otherwise approved by relevant Council.
- Earthworks cut and fill batters from edge of driveway to natural surface to be maximum grade at 1 in 10 and fully turfed.
- ** Driveways must achieve a high point of 250mm above invert of kerb to ensure stormwater is contained within the road reserve as per requirement of QUDM (Queensland Urban Drainage manual). This constraint may be varied upon the approval of the relevant Council.
- Existing footpath to be transitional to new driveway at a maximum grade of 1 in 10.
- Under special circumstances Council may approve a rising grade of 1:8 in this location or within 1 metre of the property boundary.
- Cross fall of existing pavement adjacent to the driveway to be checked. If cross fall exceeds 3%, relevant Council will decide if driveway needs to be re-designed to ensure satisfactory clearance for vehicles.
- All dimensions are in millimetres unless shown otherwise.

NOTE:

Services & road furniture will not be moved for driveways



COLLECTOR

Prohibited locations shown in a heavy line, based on AS 2890.1

DRIVEWAY PROHIBITED LOCATIONS

The points marked 'X' are either at the median on a divided road, or at the intersection of the main road centreline and the prolongation of the side road kerb line on an undivided road.

These drawings have been developed in consultation between the participating Councils. BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

Rv.	DATE	REVISIONS
C	6/10	REVIEW
B	6/09	REVIEW
A	3/08	ORIGINAL ISSUE

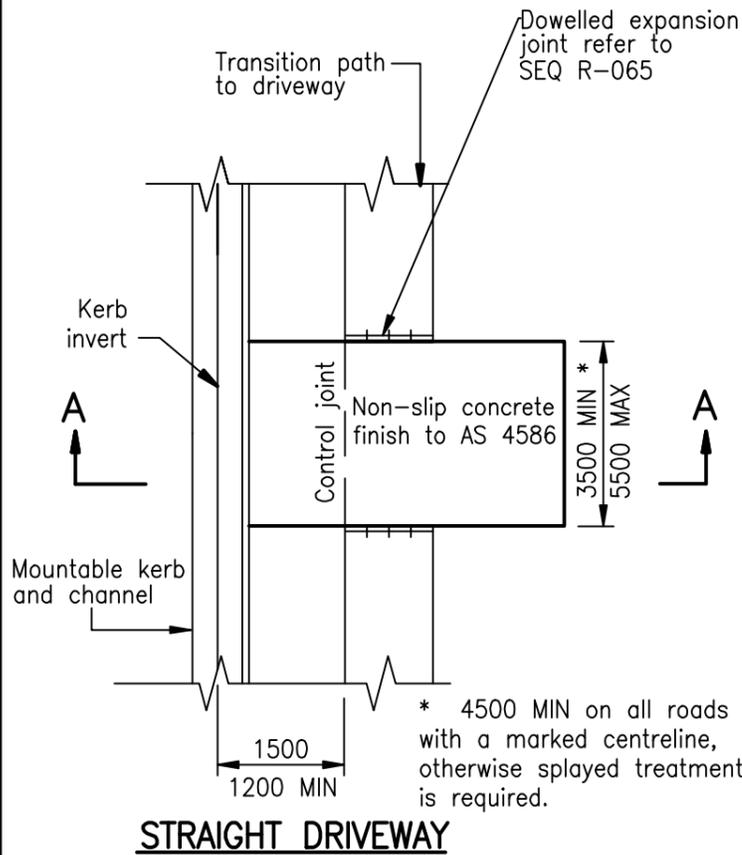


INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA
QUEENSLAND DIVISION INC.
STANDARD DRAWINGS

DRIVEWAYS
RESIDENTIAL DRIVEWAY
BREAKOUT TYPE

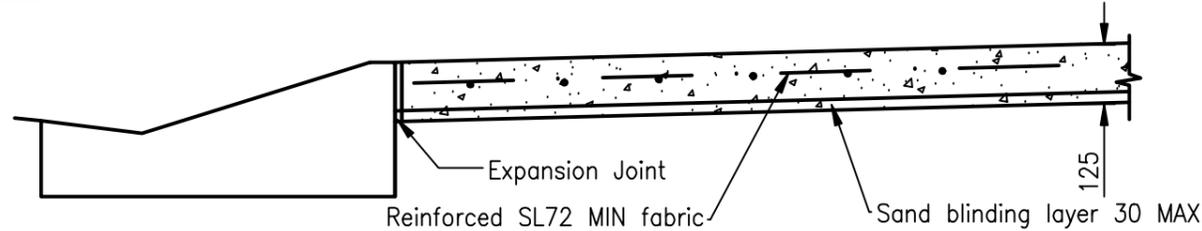
SEQ R-050

C
B
A
Rv.

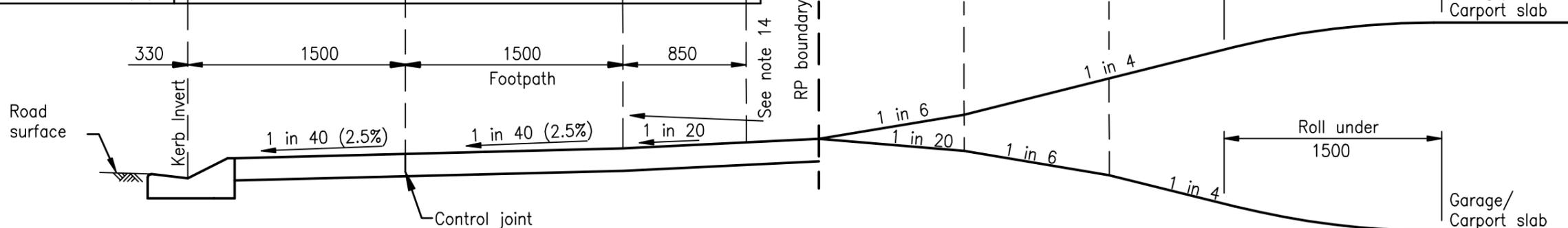


NOTES:

- Crossings are not designed for commercial vehicles.
- Footpath section to vary where necessary to match concrete footpaths and verge profiles. Footpath earthworks adjoining concrete must be well compacted.
- Concrete surface tolerance to be, $\pm 5\text{mm}$ over 3 metre sections.
- Concrete N32 in accordance with AS 1379 and AS 3600.
- Reinforcement fabric to AS 1304, 50 top and edge cover, lap fabric 250.
- Approved materials for construction:- concrete, paving blocks or asphalt, refer project drawings.
- Expansion joints to be 10mm thick, full depth closed cell cross linked polyethylene foam ($85 - 150 \text{ kg/m}^3$), or 10mm thick compressed granulated corkboard, installation to manufacturers' instructions.
- All appropriate permits must be obtained from relevant Council, including approval of location and levels prior to excavation.
- Refer project drawings or relevant Council standard drawings for verge type cross sections.
- One access to be constructed per allotment unless otherwise approved by relevant Council.
- Earthworks cut and fill batters from edge of driveway to natural surface to be maximum grade at 1 in 10 and fully turfed.
- ** Driveways must achieve a high point of 250mm above invert of kerb to ensure stormwater is contained within the road reserve as per requirement of QUDM (Queensland Urban Drainage manual). This constraint may be varied upon the approval of the relevant Council.
- Existing footpath to be transitional to new driveway at a maximum grade of 1 in 10.
- Under special circumstances Council may approve a rising grade of 1:8 in this location or within 1 metre of the property boundary.
- All dimensions are in millimetres unless shown otherwise.



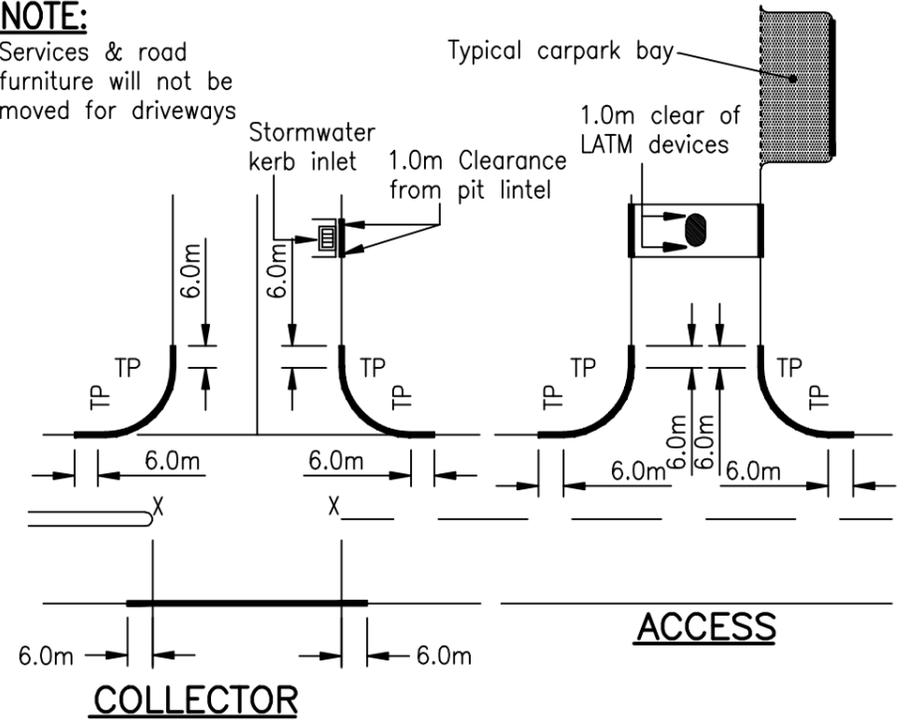
HEIGHT ABOVE INVERT OF CHANNEL (mm)	0.0	169	207	250
DISTANCE FROM INVERT OF CHANNEL (m)	0.0	1.5	3.0	3.85



These drawings have been developed in consultation between the participating Councils. BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

NOTE:

Services & road furniture will not be moved for driveways



The points marked 'X' are either at the median on a divided road, or at the intersection of the main road centreline and the prolongation of the side road kerb line on an undivided road.

Rv.	DATE	REVISIONS
C	6/10	REVIEW
B	6/09	REVIEW
A	5/08	ORIGINAL ISSUE

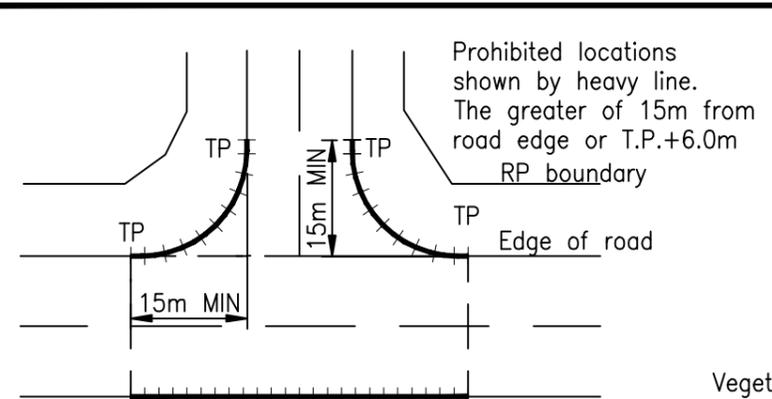


INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA
QUEENSLAND DIVISION INC.
STANDARD DRAWINGS

DRIVEWAYS
RESIDENTIAL DRIVEWAY
ABUTTING TYPE

SEQ R-053

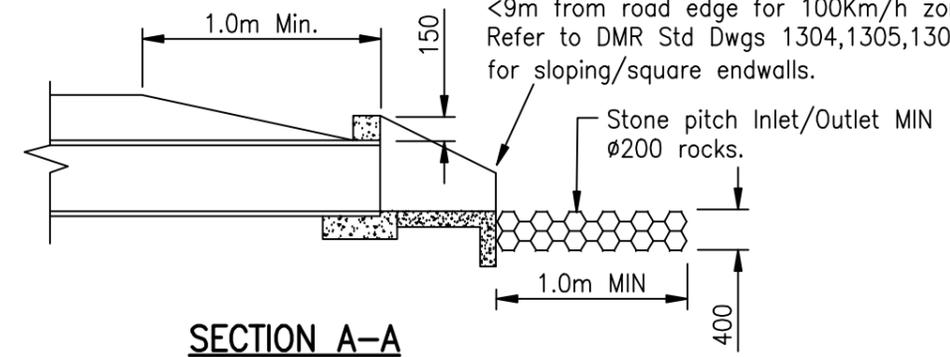
C
B
A
Rv.



PROHIBITED LOCATIONS AT INTERSECTIONS FOR RURAL DRIVEWAYS

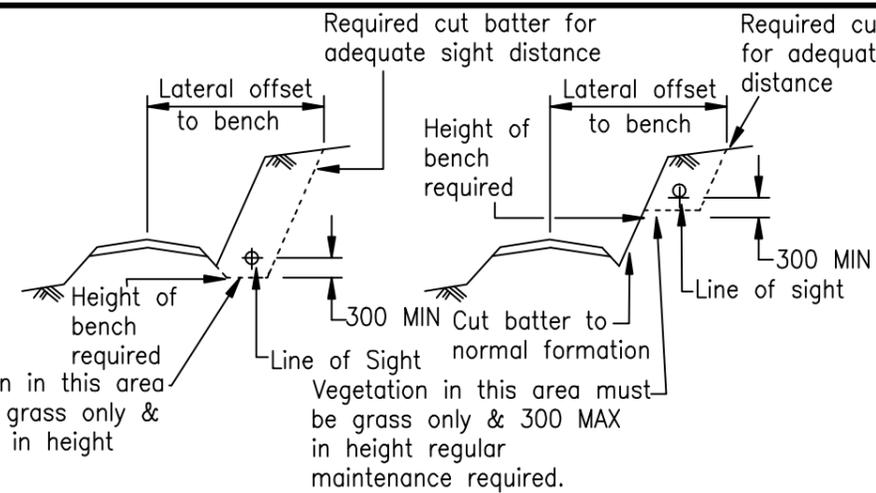
Prohibited locations shown by heavy line. The greater of 15m from road edge or T.P.+6.0m RP boundary

Endwalls to be concrete or MIN $\phi 200$ rocks grouted with cement. On roads with a marked centerline, ends to be sloping if:
 <4.6m from road edge for 60Km/h zone.
 <6m from road edge for 80Km/h zone.
 <9m from road edge for 100Km/h zone.
 Refer to DMR Std Dwg 1304,1305,1306 for sloping/square endwalls.



SECTION A-A

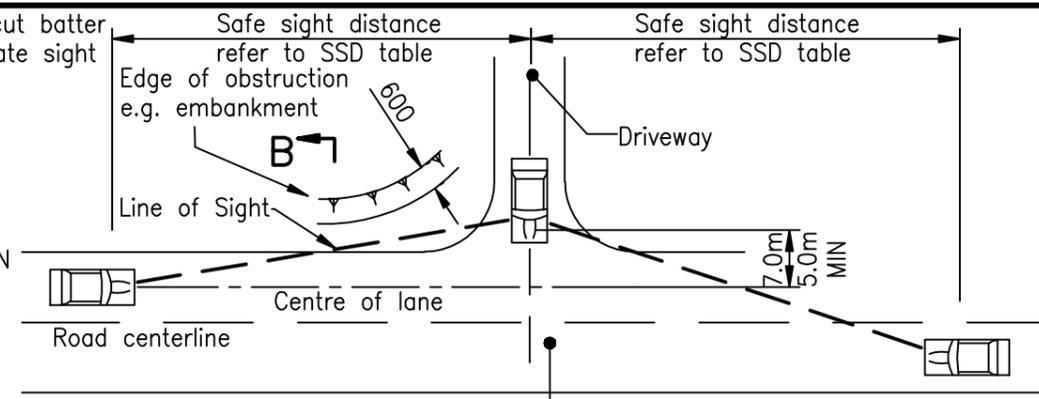
125 Compacted gravel base, unbound pavement, Type 2.1. 4.0m MIN



BENCHING DETAIL SECTION B-B

Catchment Area	PIPE SIZE	
	ARI 2	ARI 10
<0.5Ha	375	450
<1.0Ha	450	525
<1.5Ha	525	600
<2.5Ha	600	2/450
<3.0Ha	2/450	2/525
<4.0Ha	2/525	2/600
<5.0Ha	2/600	(2)

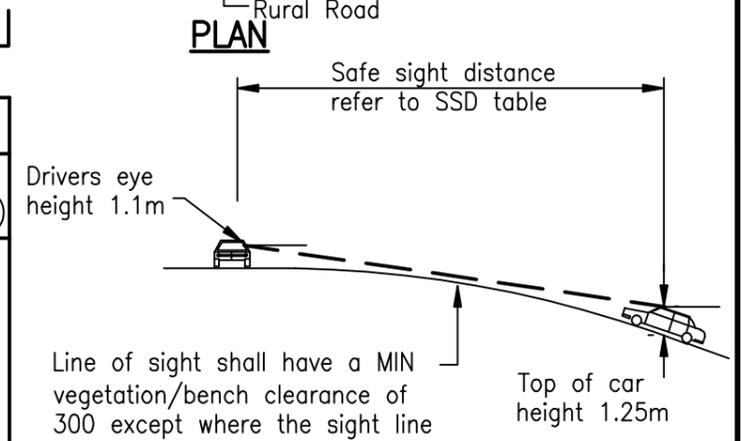
For average daily traffic ≤ 2000 , ARI 2
 For average daily traffic > 2000 , ARI 10
 (1) Alternatives may be approved if supported with calculations in accordance with the provisions of the Queensland Urban Drainage Manual or under the provisions of Council's Planning Scheme.
 (2) Seek consulting engineer advice.



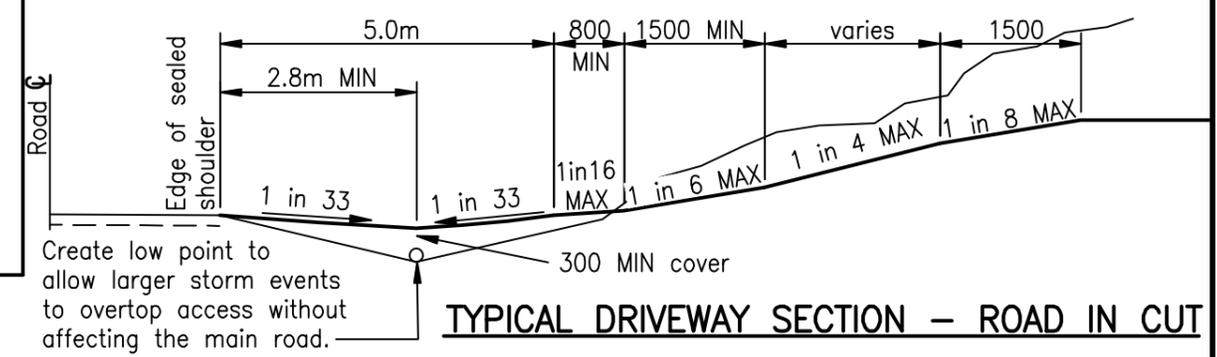
PLAN

Speed Limit (km/h)	Safe Sight Distance (m)
40	73
50	97
60	123
70	151
80	181
90	214
100	248

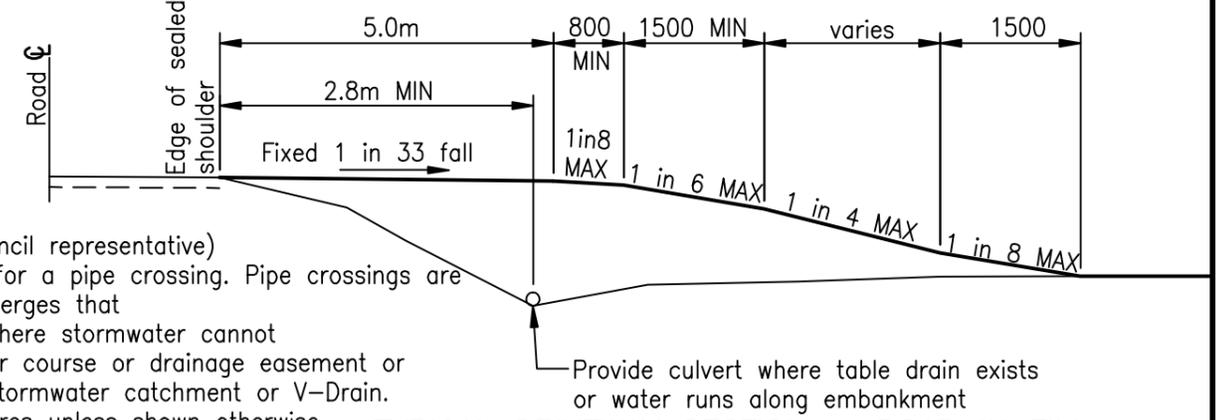
Based on Austroads Part 4A - 2009, Table 3.2



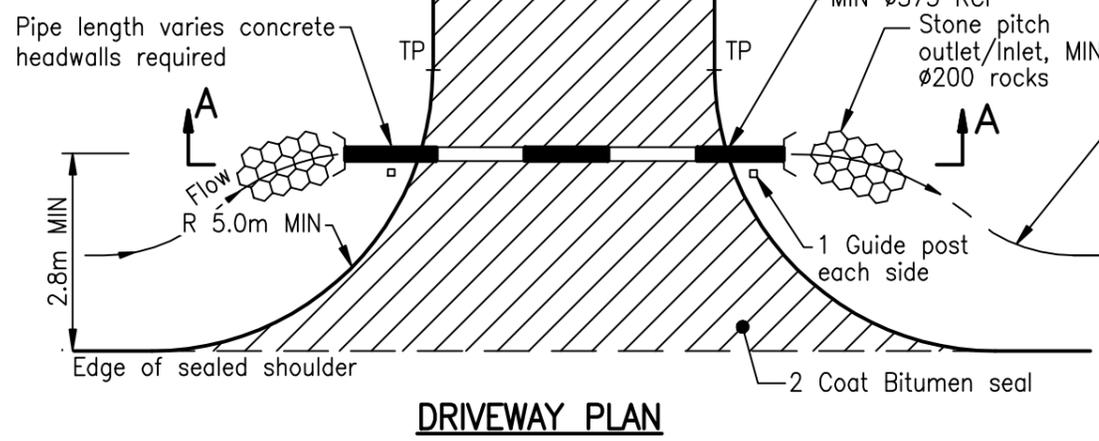
LONGITUDINAL SECTION SSD - EXITING FROM DRIVEWAY



TYPICAL DRIVEWAY SECTION - ROAD IN CUT



TYPICAL DRIVEWAY SECTION - ROAD IN FILL



DRIVEWAY PLAN

NOTES:

1. A site assessment (By a Council representative) is to occur upon application for a pipe crossing. Pipe crossings are not to be installed on road verges that fall to the subject property where stormwater cannot be directed to a natural water course or drainage easement or when there is no upstream stormwater catchment or V-Drain.
2. All dimensions are in millimetres unless shown otherwise.

These drawings have been developed in consultation between the participating Councils. BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

Rv.	DATE	REVISIONS
C	6/10	REVIEW
B	6/09	REVIEW
A	3/08	ORIGINAL ISSUE



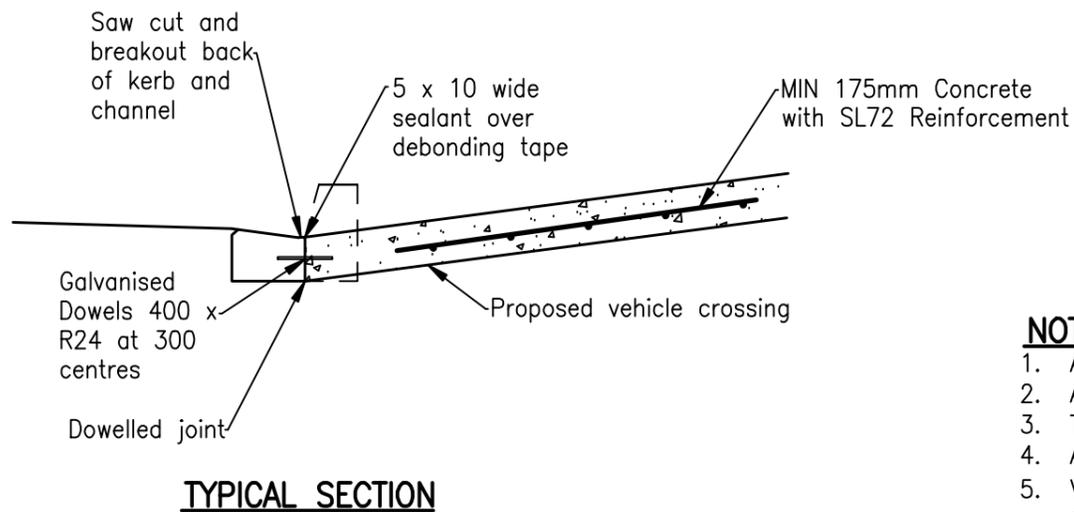
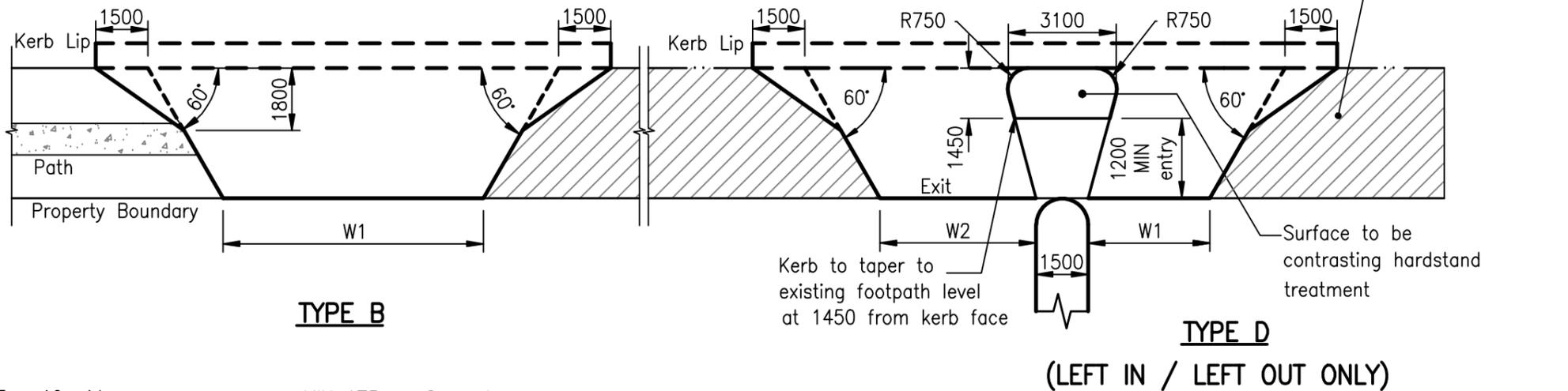
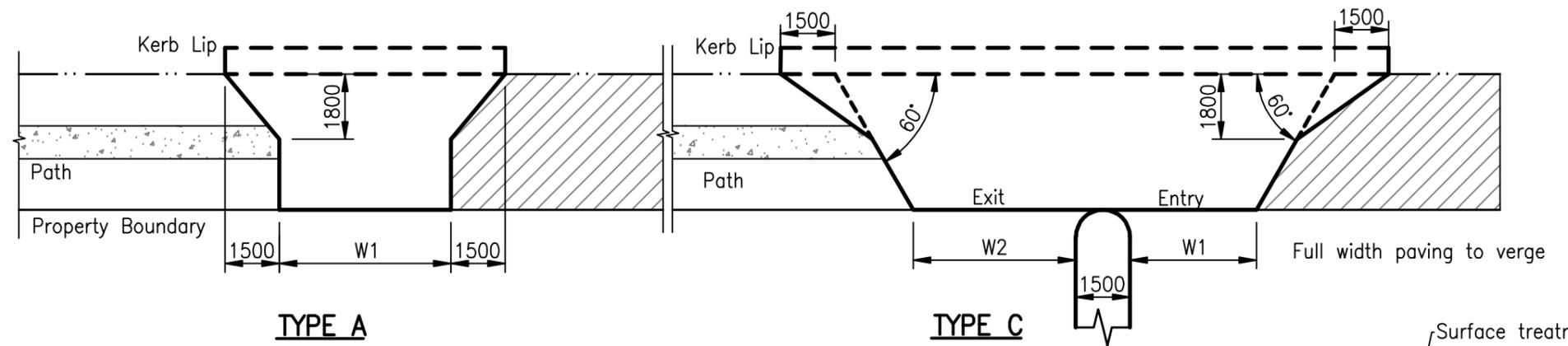
INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA
QUEENSLAND DIVISION INC.
STANDARD DRAWINGS

DRIVEWAYS
RURAL DRIVEWAY

SEQ R-056

VEHICLE CROSSING DETAILS		
TYPE	W1(m)	W2(m)
A	6.0	—
B2	6.0 – 9.0*	—
C1/D1	4.5	3.5
C2/D2	5.5	5.0
C3/D2	7.5	6.0
C4/D4	9.0	7.5

* As required by Council.
Driveway type to be as per the relevant Council's Planning Scheme.



NOTES:

1. All concrete to be Grade N32 in accordance with AS 1379 and AS 3600.
2. All concrete to be non slip finish to AS 4586.
3. The thickness of decorative surfacing where approved is additional to the concrete thickness specified.
4. All adjacent asphalt or concrete surfaces and pavements to be saw cut.
5. Variations to the designs shown are subject to approval from relevant Council.
6. Refer to SEQ R-050 for driveway prohibited locations and driveway gradient.
7. All appropriate permits must be obtained from Council, including approval of location and levels prior to excavation.
8. Where directed by Council Tactile Ground Surface Indicators are to be provided adjacent to the driveway in accordance to AS 1428.4.
9. Valves, hydrants located within the driveway shall have HDPE surround or equivalent placed between the service lid and the concrete. For any alterations to levels contact relevant Council prior to concrete pour.
10. All dimensions are in millimetres unless shown otherwise.

These drawings have been developed in consultation between the participating Councils.
BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

Rv.	DATE	REVISIONS
C	6/10	REVIEW
B	6/09	REVIEW
A	3/09	ORIGINAL ISSUE



INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA
QUEENSLAND DIVISION INC.
STANDARD DRAWINGS

DRIVEWAYS
HEAVY DUTY VEHICLE CROSSING

SEQ R-051

C
B
A
Rv.