

DRIVEWAYS

MUNICIPAL INFRASTRUCTURE STANDARDS 07

Transport Canberra and City Services

SEPTEMBER 2021

Publication Number:	MIS 07 Edition 1 R	levision 1
Date of Effect:	September 2021	
Supersedes:	Municipal Infrastruc	ture Standard Edition 1 Revision 0
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Document Information

Document	Key Information
Document Title	MIS 07 Driveways
Next review date	
Key words	
AUS-SPEC Base Document	

Revision Register

Revision Number	Clause Number	Description of Revision	Authorised by	Date
1/0				
1/1	N/A	Acknowledgement of Country added		
	1.1.2.2	MIS 08 Stormwater added		
	1.1.3.1	AS 1348, AS 1379 and AS 4586 added		
	1.1.3.2	AGPT08, AGRD and AGRD03 added		
	1.1.4.1	Development application added		
	Appendix A	Changed reference to EAN04 to refer to section 1.3 of MIS 07		

Revision Number	Clause Number	Description of Revision	Authorised by	Date
	Appendix B	Second driveway response clarified. Formatting of images adjusted. Definition list consolidated with clause 1.1.4.2 and definitions in referenced documents removed. Reference to Asset Acceptance replaced with Development Review and Coordination.		

ACKNOWLEDGEMENT OF COUNTRY

Transport Canberra and City Services (TCCS) acknowledge that Aboriginal people are the Traditional Owners of Australia. We acknowledge and pay respect to the Ngunnawal peoples as the custodians of the land and waters that we live and thrive on today here in the ACT.

TCCS acknowledges that Canberra's cultural and natural heritage was maintained by the Ngunnawal people for many generations before colonial settlement on Australian soil. Aboriginal people's management of the land preserved the natural balance of local plants and animals. This knowledge of the environment in which we live is critical to the protection and restoration of our land today.

It is our responsibility to preserve and encourage Ngunnawal, Aboriginal and Torres Strait Islander cultural integrity. When using this document, consider opportunities to incorporate Ngunnawal, Aboriginal and Torres Strait Islander culture.



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1 DRIVEWAYS

1.1 General

1.1.1 Responsibilities

1.1.1.1 General

General: Provide design and documentation for all classes of driveways to be constructed within the within the verge. This Design Standard does not include circulation roadways within the boundaries of a Block.

Internal circulation: The continuation of driveways within block boundaries shall be designed to the appropriate *Australian Standard*, *Austroads*, *National Construction Code* and the relevant codes within the *Territory Plan*. This Design Standard may be used for guidance.

1.1.1.2 Objectives

Objectives: Provide designs for driveway location and layout, include consideration for the following:

- > Safety for the driveway user.
- > Safety for other users including pedestrians, cyclists and traffic on the road from which access is being gained.
- > Minimise the impact on the streetscape.
- > Protect underground services and verge landscaping.

1.1.1.3 Precedence

Where any document except legislation or the Territory Plan issued in conjunction with this Design Standard includes technical requirements that conflict with this Design Standard the requirements of this Design Standard take precedence.

1.1.2 Cross references

1.1.2.1 ACT Legislation

The following ACT Legislation is relevant to this Standard:

Public Roads Act

Public Unleased Land Act Territory Plan and General Codes Work Health and Safety Act

1.1.2.2 Design Standards

This Design Standard references the following component standards:

- MIS 01 Street planning and design
- MIS 05 Active travel facilities design
- MIS 06 Verges
- MIS 08 Stormwater
- MIS 25 Plant species for urban landscape projects

1.1.2.3 Specifications

The following specifications are related to this standard:

- MITS 03 Underground services
- MITS 04 Flexible pavement construction
- MITS 06 Concrete kerbs, footpaths and minor works
- MITS 07 Segmental paving

1.1.2.4 TCCS Reference Documents

The following TCCS reference documents are related to this standard:

Reference document 4	Protection of public landscape assets
Reference document 6	Design Acceptance submissions
Reference document 7	Operational acceptance submissions
Reference document 8	WAE quality records
Reference document 9	Final acceptance submissions
Reference document 10	Landscape consolidation

1.1.2.5 Design guides

The following design guides are related to this standard:

Development Control Code for Best Practice Waste Management in the ACT (ACT No Waste)

Preventing Pollution from Concreting Operations Information Sheet (EPA)

Water Supply and Sewerage Standards (Icon Water):

WSA-02	Gravity Sewerage Code of Australia (WSAA)
WSA-03	Water Supply Code of Australia (WSAA)
STD-SPE-G-011	Supplement to WSA-02 2014 (Icon Water)
STD-SPE-G-012	Supplement to WSA-03 2011 (Icon Water)
STD-SPE-M-006	Requirements for property service connections and water meters

1.1.3 Referenced documents

The following documents are incorporated into this Design Standard by reference:

1.1.3.1	Standards
AS 1348	Glossary of terms - Roads and traffic engineering
AS 1379	Specification and supply of concrete
AS 1742	Manual of uniform traffic control devices
AS 1742.2	Traffic control devices for general use

AS/NZS 2890	Parking facilities
AS/NZS 2890.1	Part 1: Off street car parking
AS 2890.2	Part 2: Off street commercial vehicle facilities
AS 3727	Guide to residential pavements
AS 4586	Slip resistance classification of new pedestrian surface materials

1.1.3.2 Other publications

Austroads

AGPT	Austroads Guide to Pavement Technology
AGPT02	Part 2: Pavement Structural Design
AGPT08	Pavement construction
AGRD	Austroads Guide to Road Design
AGRD03	Geometric design

Proprietary products: To TCCS Products previously considered for use list

1.1.4 Interpretations

1.1.4.1 Abbreviations

General: For the purposes of this Design Standard the following abbreviations apply:

- DA: Development application.
- EPA: Environment Protection Authority, ACT Government and its successors.
- MKG: Mountable Kerb and Gutter.
- TCCS: Transport Canberra and City Services, ACT Government and its successors.

1.1.4.2 Definitions

General: For the purpose of this Design Standard, the definitions of terms used to define the components of the road reserve are in conformance with *AS 1348, Glossary of Austroads Terms* and *AGRD03*.

Other definitions that pertain to this Design Standard are outlined below:

32 MPA: Concrete strength, in mega-pascals, after 28 days in accordance with Australian Standard AS 1379

Block: A parcel of land, as defined in the *Territory Plan*.

Circulation roadway: A road within the block that connects a driveway to an off-street car park.

Clearance: Horizontal offsets to the edge of the driveway or vehicle crossing, as indicated in Figure 07-1

Typical driveway clearance measurements.

Community Path: A path for the joint use of pedestrians and cyclists.

Design Vehicle: The largest vehicle likely to regularly perform a movement at an intersection or driveway.

Driveway: A vehicle access across the verge from the back of the vehicle crossing to the property line.

- > **Domestic driveway:** A driveway serving from 1 to 3 dwellings in residential zones and designed for light vehicle traffic only in accordance with *AS/NZS 2890.1*.
- Residential driveway: A driveway serving more than 3 dwellings within a property whose prime purpose is residential. It is designed as a heavy-duty driveway in accordance with AS 2890.2.
- > **Heavy Duty Driveway:** Is a commercial or industrial driveway, or a residential driveway other than a domestic driveway, designed in accordance with *AS 2890.2*.

Ramp: An inclined circulation roadway within the block that connects a driveway to an off-street car park.

Shared trench: A trench which is used to accommodate two or more reticulated services.

Vehicle crossing: Also referred to as a kerb crossing, is a section of kerb that has been transitioned to a lower level for the purpose of connecting the road with a driveway.

Verge: The section of the street formation that joins the carriageway with the property line. It may accommodate public utilities, stormwater flows, street lighting poles, traffic signs, paths, road safety barriers and plantings. The verge may also be referred to as a nature strip.

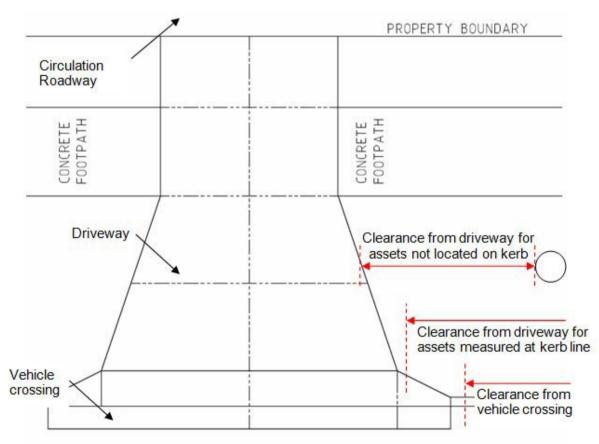


Figure 07-1 Typical drive way clearance measurements

1.2 Pre - design planning

1.2.1 Construction and maintenance

1.2.1.1 General

Construction: Within the ACT, the lessee or developer is responsible for the construction only of the driveway across the verge between the carriageway and the property line.

Maintenance: Once the driveway has been constructed; the ACT Government is responsible for the ongoing maintenance of the original/first driveway across the verge. The ongoing maintenance by the Territory only applies to the original/first approved driveway for each block.

Additional driveways: If a second driveway is approved the cost of design, construction public liability and ongoing maintenance will be borne by the lessee.

Approved materials: TCCS are only able to match plain concrete or asphalt surfaces, any additional treatments will be at the lessee's expense. Where there are heritage requirements, an approved DA includes a condition or there are lease and development conditions on the development that pertains to the driveway material, TCCS will comply with these requirements.

1.2.1.2 Unapproved driveways

General: Construction of unapproved driveways may lead to legal actions including removal of the driveway at the cost of the lessee and financial penalties imposed by TCCS.

Public Liability: Any unapproved driveways and all second driveways remain the responsibility of the lessee.

1.2.2 Consultation

1.2.2.1 TCCS and other authorities

Requirements: Consult with TCCS and other relevant authorities during the preparation of design. In addition to the requirements of this Design Standard, identify the specific design requirements of these authorities.

Submission: Prepare a *Landscape Management and Protection Plan (LMPP)* for approval by TCCS for temporary accesses or any work within the verge.

1.2.2.2 Utilities services plans

Existing site conditions: Obtain plans from all relevant utilities and other organisations whose services, trees, important ecological habitats or other assets exist within the area of the proposed development. Plot this information on the relevant drawings including the plan and cross-sectional views. As a minimum, designs should refer to 'Dial-before-you-dig' information that is readily available in most areas.

Responsibility: Confirm service plans accuracy with onsite inspection and also potholing if deemed necessary. Protect existing assets to the satisfaction of asset owners.

Proposed new services: Detail any new services proposed or relocated as part of the proposed works.

1.2.2.3 Safety in Design

Requirement: Implement safety in design processes in accordance with the *Work Health and Safety Act*. Include consideration for the following:

- > Traffic management, including site distances for all users.
- > Identification and protection of existing services.
- > Maintenance access for services.

1.2.3 Planning

1.2.3.1 Access requirements

General: Conform to the requirements in the *Territory Plan*. Provide particular focus for small block developments and other narrow frontage blocks to ensure the following:

- > Space for service connections.
- > Clearances from infrastructure such as trees, street light columns, stormwater sumps, sewer manholes, water meters, valves, hydrants, on street parking and electrical features are available to driveways.
- > Clearance to kerb tangent points, as defined in AS 2890.
- > Determine driveway locations early in the design process.

1.3 Number of domestic driveways

Residential zones: A single width domestic driveway and vehicular crossing is normally provided per residential block. Double width driveways are not considered to be a second driveway.

Additional driveways: TCCS may approve an additional driveway and vehicle crossing in a different location where safety and operational conditions will be improved. Driveways within a block shall be at least 12m apart (measured from the closest edge of each driveway along the kerb line) and incorporate a feasible layout within the block boundary to connect the two driveways.

Exclusions: An additional domestic driveway will not be approved if any of the following apply:

- > The access is not permitted in the *Territory Plan*, Lease and Development Conditions, Estate Development Plan or Planning Control Plans for the block.
- > The second driveway is expected to cause safety issues to road users or have adverse impact on the stormwater runoff.
- > The second driveway is for the sole purpose of providing an additional parking space within the block.
- > The second driveway creates any potential conflict with an existing driveway on a neighbouring block.
- > The second driveway does not have sufficient clearance to existing assets within the verge, as determined in Design Criteria.
- > The block already has two driveways.

- > The width of the existing driveway is 6.0m or more at the block boundary.
- > There is adequate space available within the block boundary to reverse safely within the property and exit in a forward direction to the fronting road.

Considerations: An additional driveway will be considered under the following circumstances. Demonstrate compliance with one of the following:

- > Driveways on Major Collectors: The additional driveway is designed to permit forward entry and exit and prevent reversing onto Major Collectors. Consult with TCCS for road hierarchies.
- > Corner blocks: The additional driveway is in the adjoining road and is considered by TCCS to be safer than the existing driveway due to lower traffic volumes, better sight lines or other operational issues.
- > Grade: The Block has an existing driveway with an average grade more than ±12.5% across the verge and the additional driveway is designed to permit forward entry and exit and prevent reversing on to the road.
- > Disability access: Where it is considered by TCCS that a second driveway will improve safety and assist a disabled person. Proof will be required of specific disability and residency of the disabled person at the location.
- > Dual occupancies or extensions: Only where TCCS consider that it is not feasible to utilise the existing driveway and the following applies:
- > Dual occupancy: if the layout of the dwellings is such that the block could be subdivided in the future without any major changes.
- > Extension to an existing dwelling: If the frontage is more than 20m.

2 DRIVEWAY DESIGN CRITERIA

2.1 Design principles

2.1.1 Objectives

All driveways: Include consideration for the following:

- > Adopt a Design Vehicle based on the most common vehicle to use the driveway.
- > Confirm clearance for the swept path of the Design Vehicle using the clearance to verge assets as defined in **Table 07-1 Driveway clearances table.**
- > Grade the driveway to ensure that water does not flow from the road into the lease via the driveway.
- > Provide access for waste management vehicles in accordance with the **Development Control Code for Best Practice Waste Management in the ACT**.
- > Demonstrate clear sightlines to oncoming traffic for vehicles exiting the driveway (in a forward and reverse direction as applicable) in accordance with the relevant sections within AS 2890. Include consideration for structures such as letterboxes, hedges, bus shelters and street trees.

Heavy Duty driveways: Include additional consideration for the following:

- > Design Heavy Duty Driveways to allow two design vehicles to pass on the circulation roadway.
- > Design Heavy Duty Driveways to allow vehicles to enter the site at low speed from the traffic lane nearest the site in accordance with AS 2890.2; i.e. on all Collector streets, vehicles should be able to enter and exit in a forward direction.

2.1.2 Location

Requirement: Driveways shall be located clear of assets and structures in accordance with **Table 07-1 Driveway clearances table**. The lessee is responsible for ensuring that the layout of internal vehicular movement areas will align with the existing driveway or kerb crossing.

Table 07-1 Drive way clearances table

Asset	Minimum Clearance to Edge of Driveway
Street tree – new or small planting	3.0m from outside of trunk
Street tree – existing mature trees	Greater of: Outside canopy drip line 3.0m from outside of trunk
Padmount substation, street light column, mini- pillar, power pole	1.5m from outside edge of asset.
Bus stop without shelter	1.5m from outside edge of bus stop pad measured at kerb line.
Bus stop shelter	To be designed based on sight distance requirements.
Stormwater sump	1.2 to 1.4m from outside edge of downstream sumps, as required by the sump type and measured at the kerb line.
	0.9m from outside edge of upstream sumps measured at the kerb line.
Sewer manhole	1.2m from outer edge of cone, also refer to <i>lcon Water design standards</i> .
Water meter, stop valve, fire hydrant	1.2m from outer edge of asset, also refer to <i>lcon Water design standards</i> .
Telecommunication: Pit Cabinet	1.2m from outer edge of pit.1.5m from outer edge of cabinet
Traffic sign	1.2m from edge of blade or post (whichever is closest).
Other road furniture	1.5m from edge of furniture.

Note

1. The minimum distance is measured from the nearest outer edge of the obstruction to the edge of the driveway by the shortest possible route.

2. TCCS and the relevant Authority may approve deviations from these values.

2.2 Restriction on location

2.2.1 Existing kerb crossings or driveways

General: Requests by the lessee to relocate existing kerb crossings or driveways, or for additional kerb crossings to be constructed, requires TCCS approval.

Approved additional kerb crossings or driveways: The lessee must meet all costs of the proposed changes, including the cost of closing any unused existing crossings and driveways and the cost of modifying or relocating any services or landscape features which would be affected by the changes.

2.2.2 Street intersections

Location: Driveways located adjacent to or opposite the terminating road of a tee-intersection shall be designed in accordance with *AS 2890.1, clause 3.2.3*.

2.2.3 Trees

General: To **Table 07-1 Driveway clearances table.** TCCS may approve variations to this requirement upon application. If supported, additional conditions may be imposed.

Location: Where an existing driveway is within 3m of a street tree then the minimum clearance to a new driveway on the opposite side of the tree shall be the greater of 5m or outside of the drip line.

Root barriers: To MIS 25 Plant species for urban landscape projects.

Replacement of an existing driveway: Where an existing driveway is located within 3m from an existing street tree, TCCS will generally allow for the replacement of the driveway in the same location provided that it is constructed to the same dimensions, on the same alignment and there is no additional excavation carried out. Seek approval from TCCS prior to commencing work.

2.2.4 Stormwater sumps

Location: To Table 07-1 Driveway clearances table, and MIS 08 Stormwater.

General: Where driveways cross stormwater mains, they should be designed so as to structurally 'span' the pipe trench. Minimum cover depths shall be maintained. Details of any change in cover or structural spanning of the trench are to be approved by TCCS.

Sump cover: Where a 1.2m clearance to a stormwater sump cannot be achieved, TCCS may approve a sump cover at the lessee's expense to allow vehicles access to a single residential dwelling. Seek approval from TCCS where the following conditions apply:

- > The road is bounded by layback or MKG kerb.
- > The driveway serves a single residential premises.
- > The conversion does not reduce inlet capacity and is not likely to increase local flooding downstream.
- > The conversion does not have an adverse effect on the public, neighbouring leases, and traffic or government assets.

Other situations: Relocate the sump or the driveway where the above conditions do not apply.

2.2.5 Icon Water assets

Location: To Table 07-1 Driveway clearances table.

General: Where driveways cross water and sewer mains, they should be designed so as to structurally 'span' the pipe trench. Minimum cover depths shall be maintained. Details of any change in cover or structural spanning of the trench are to be approved by Icon Water.

Easements: If the driveway or circulation road is proposed to be constructed near or in an Icon Water easement, seek approval from Icon Water. Consider the following:

- > Icon Water access structures (manholes etc) must not be modified, buried, hidden or made difficult to find.
- > Construction and maintenance access.
- > Load bearing capacity of structures in trafficable areas.

2.2.6 Telecommunications

Location: To Table 07-1 Driveway clearances table.

General: If clearances in the above table are unable to be met it may be necessary to relocate or modify the services at the lessee's expense. Consult with the relevant service provider.

Trafficable areas: Confirm the load bearing capacity of any covers located in trafficable areas.

2.3 Design criteria

2.3.1 Gradient

Heavy Duty Driveway: To AS 2890.2 Clause 3.4.4.

Requirement: Design in accordance with ACTSD-0701, ACTSD-0702 and ACTSD-0703 Driveways.

- > Check the design for new driveways using *critical car template B99 Fig C1 AS 2890.1*.
- For reconstruction of domestic driveways or for areas where verge and block slopes are at or near maximum, the B85 car template Fig C1 AS 2890.1 may be used with the prior approval of TCCS.

Block access gradients: To *MIS 06 Verges*.

Driveway grades and transitions:

- > New residential driveways: Designer to certify that driveway grades and transitions are compliant.
- > Additional or relocated residential driveways: Designer to provide a long section with design drawings.
- > Heavy duty driveways: Designer to provide a long section with design drawings.

2.3.2 Dimensions

Requirement: comply with ACTSD-0701, ACTSD-0702 and ACTSD-0703 Driveways.

Splays:

- > Driveways are to be constructed normal (at 90°) to the kerb wherever possible. Where necessary a maximum skew of 1:10 is permitted.
- > This requirement does not apply to domestic driveways which may be permitted to have parallel sides in situations where the driveway is accessing a double garage, and then a maximum width of 5.5m at the back of kerb and at the property line.

Replacement of an existing driveway: It is acceptable for existing driveways to be replaced with the same dimensions as existing driveways in the surrounding area. Seek approval from TCCS and construct to *AS 3727* and this Design Standard.

One way access: Driveways intended for one way use only should only be splayed on one side. The appropriate sides for the splays are on the left turn entry and the left turn exit.

2.3.3 Pavement design

General Requirement:

- > Minimum strength of concrete for each class of driveway is to 32Mpa.
- > Confirm subgrade compaction prior to construction of a driveway.
- > Provide additional compaction over trenches in accordance with the relevant authority requirements and *MITS 03 Underground services* to obtain adequate subgrade compaction.
- > Select surfaces that will not be slippery for pedestrians in wet weather. All publicly accessible driveway surfaces should have a minimum slip resistance of P4 when tested to AS 4586.

2.3.3.1 Domestic Driveway

Standard: AS 3727, MITS 07 Segmental paving and ACTSD-0701 Residential Driveways.

General: Consider a reinforced concrete design in scenarios where higher vehicle loading is anticipated during construction, such as Greenfield residential estates.

2.3.3.2 Heavy Duty Driveway

Standard: AGPT02/08 and ACTSD-0702 Heavy Duty Driveways.

2.3.3.3 Paths

General: Where paths cross the driveway, design paths to *MIS 05 Active travel facilities design*. Paths shall be made continuous through the driveway. Provide continuity lines and consistent longitudinal grade and cross fall along the path alignment.

Pavers: Maintain continuity of path colour across driveways finished with clay or concrete pavers.

3 MATERIALS

3.1 Pavement materials

Pavement type: Select the pavement type to suit the particular specific or shared function. Pavement types: This may comprise the following:

- > Clay pavers (refer to MITS 07 Segmental paving).
- > Concrete pavers (refer to MITS 07 Segmental paving).
- > In situ concrete (unreinforced and reinforced) (refer to MITS 06 Concrete kerbs, footpaths and minor works).
- > Asphalt (refer to *MITS 04 Flexible pavement construction*).
- > Sprayed seal (refer to MITS 04 Flexible pavement construction).
- > Composite surfaces.

Note:

Seek approval for polished concrete or exposed aggregate finishes from TCCS. Demonstrate an appropriate treatment to prevent wash water from entering the stormwater drainage system. Refer to *Preventing Pollution from Concreting Operations Information Sheet, EPA*.

3.2 Environmental

Refer to Estate Development Code Element 9.2.

4 DOCUMENTATION

Requirements: Comply with Reference document 6 Design Acceptance submissions.

APPENDIX A DESIGN CHECK LIST

Residential Verge crossing check list

Minimum Horizontal Clearance requirements from the edge of the verge crossing						
Storm water sumps		1.2m				
Above ground structures (Ex – light poles, street signs, mini pillars)		1.5m				
Kerb tangent point (for corner blocks)		6m				
Bus stops		Approved on a case by case basis. Contact TCCS before design				
Trees - small		3m from the trunk				
Trees – Large/Mature		Outside the canopy/or prior approval from TCCS if different				
Design/Standard requir	ements					
Maximum width	5.5m					
Minimum width	3m					
Maximum gradient	17%					
Maximum skew	10% (1 in 10)					
Slope Vehicle line of sight mus Parking facilities AS 289	crossing from the VC t st comply in accordance	pping towards the block, the first 1.5m of the verge to be 2% slope towards the road e with the section 3.2.4 of the Australian Standard for king				
Material						
Basic concrete or asphalt concrete as recommended						
Polished concrete not accepted						
Second verge crossing						
All of the second verge crossings must satisfy the requirements section 1.3 of this standard						
Formwork inspection						
Compaction (Visual and Foot penetration test)						
Sub base 75mm thick						
Alignment/clearance as per approved plan						
Pedestrian priority/footpath continuation with jointex						

APPENDIX B GUIDE TO RESIDENTIAL DRIVEWAYS

Frequently asked questions

TCCS Driveway Approvals: Application can be submitted via the online application form located on the TCCS website.

Do I need to seek approval from TCCS if I want to replace my existing driveway?

If you are replacing with plain or asphaltic concrete without modifying the original shape, size, location or surface type of the driveway then you do not need approval for design of the driveway. Approval is required if and when you change the location, size or layout of the driveway

If you are only replacing an existing driveway then you are required to book for a site inspection through the on-line application form to lodge for the final formwork/sub-base assessment of the driveway across the verge prior to pouring the concrete/asphalt and applying the surface finish.

Where do I find the application form?

The application form is located on the TCCS website at http://www.TCCS.act.gov.au

How long will it take to process my application?

TCCS have a maximum assessment time of 15 working days.

What part of my driveway is owned by the Territory?

The driveway from the road to the property boundary is on Territory land and is owned by the Territory.

Will the Territory construct a driveway on behalf of the property owner?

Design and construction of all new or modified including relocated driveways is the responsibility of the lessee. All costs associated with the design and construction work will be the responsibility of the lessee.

Do I require inspection of my driveway?

Yes you do. You are required to contact Asset Acceptance and organise an inspection prior to pouring the concrete or placing the top surface layer (Asphalt/Pavers) for the driveway. TCCS require a minimum of 48 hours notice for booking an inspection.

What are the standards or requirements for building a driveway?

In this Design Standard TCCS outlines any requirements for design and construction of driveways, including size, grade, clearances and materials.

Can I construct a second driveway?

There is one driveway and kerb crossing for each block. Provided all other provisions below are met, a second driveway and kerb crossing over the verge may be permitted.

- > Forward entry to roads carrying greater than 3000 vehicles per day; or
- > Large blocks where the visual impact to the streetscape is not adversely affected, provided the site access is of appropriate proportions and character with respect to:
- > Relationship to verge footpath: splay/grade/ etc
- > Total proportion of the width of the access relative to the building width: 5 metres at kerb and 3.5 metres at property boundary
- > Design features: Steepness/grade
- > Protection of existing landscape features: Trees and their clearances

If the answer to this question is "Yes", the approval will be subject to TCCS conditions for a second driveway. Conditions for second driveway approval are located in the Territory Plan and this design standard.

What materials are acceptable for driveway construction?

Plain coloured or stamped concrete, bitumen or pavers are an acceptable driveway material. Exposed aggregate will be allowed under special circumstances on request. Polished concrete and tiled finished are not permitted.

What is a vehicle crossing?

The vehicle crossing or "VC" is the section of kerb that has been removed on the road and replaced in concrete to allow easy vehicle access. Refer **Figure 07- 2 Vehicle Crossing: between the road surface and the first expansion joint.**

Figure 07-2 Vehicle Crossing: between the road surface and the first expansion joint

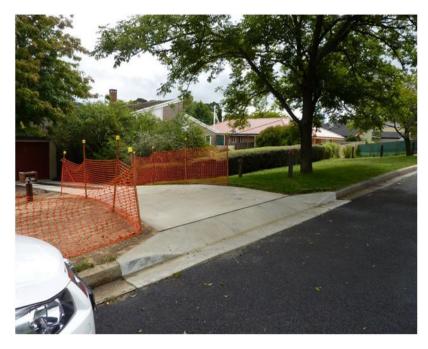


Figure 07-3 Driveway grade



What is the maximum gradient for a driveway?

Maximum upward gradient for a driveway on the verge is 17%. Maximum down grade is 12% Variations to the design of the driveway in different situations are covered in this Design Standard. These maximum grades are required for the safe operation of the driveway. Refer **Figure 07-3 Driveway grade**.

What are the Territory's minimum and maximum widths at the property boundary and kerb?

Table 07-2 Minimum and maximum driveway widths

Drive way Application	Standard driveway width at the property boundary	Maximum width at the property boundary (N2)	Standard driveway width at kerb line	Maximum width at the kerb line (N2)
Single Dwelling Unit		5.5 m	5.0 m	5.5 m
Two or three dwelling units with provision to turn around inside the property so that exit is in a forward direction.		5.5 m	5.0 m	5.5 m
Two or three dwelling units with no provision to turn around inside the property so that exit is in a usually in a reverse direction. (No longer allowed for new developments)		5.5 m	5.5 m	5.5 m

Note

1. Single dwelling driveways that do not meet the standard driveway widths may be supported subject to justification such as matching existing streetscape or in locations where the front boundary is less than 12 metres in width.

2. The maximum width at the property boundary and kerb line will only be supported where the driveway is serving a double or larger garage, or multiple dwelling; in all other cases the maximum is to be as per the standard driveway type R.

I have a double garage; can I widen my vehicular crossing to suit?

Standard driveway width at the kerb can only be increased to a maximum 5.5 metres to accommodate construction of a double garage.

What strength concrete is used for a standard residential driveway?

Concrete strength is 32Mpa for a standard residential driveway.

When is a standard or industrial strength driveway required?

Standard driveways are for residential dwellings up to 3 units. Residential dwellings of 4 or more and commercial or industrial dwellings require an industrial driveway.

How do I get approval for an industrial driveway?

Industrial driveway approval is by way of a Design Acceptance submission.

In normal circumstances an Industrial Driveway should have a Development Application lodged with ACTPLA. TCCS requests a Design Acceptance obtained from the Senior Manager, Asset Acceptance for any off site works including driveways in accordance with the Notice of Decision of the Development Approval.

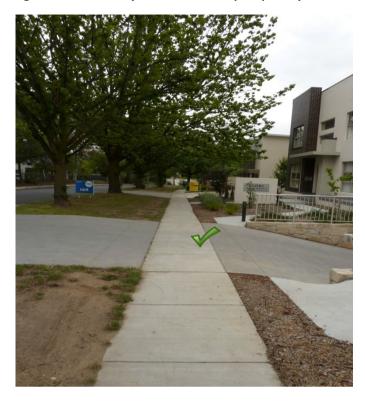
I have a footpath running through my driveway. Can I remove the footpath to construct a new driveway?

We encourage you not to remove the footpath when building a new driveway. However you are allowed to remove the footpath and reconstruct as long as the footpath is constructed to TCCS standards. Refer to this Design Standard. Refer to **Figure 07- 4 Driveway with incorrect footpath priority** and **Figure 07- 5 Driveway with correct footpath priority**.



Figure 07-4 Drive way with incorrect footpath priority

Figure 07-5 Driveway with correct footpath priority



I have an approved Development Application (DA) for either single or Dual occupancy. Do I need to lodge an application to TCCS for the design approval of my driveway?

Your design would have been approved as part of your DA application. However you still need to lodge an application for a formwork inspection through the online application form.

There is a tree close to my proposed driveway. Can I still construct the driveway in that position?

The driveway must be located at least 3 metres from the outside of the trunk of any existing new or small tree, and outside of the drip line of mature street trees, although the ACT Government may approve variations to this requirement upon application.

If you need any further help with the on-line application form or application please contact Canberra Connect 13 22 81 and ask for TCCS Development Review and Coordination.



Transport Canberra and City Services

SEPTEMBER 2021