

A fact sheet to assist developers prepare their submission

Strategic design requirements for DAs



Context

Development applications (DAs) will often include or require road infrastructure upgrades to enable people to access the development safely and/or mitigate the impacts of the development on the surrounding road network. For instance:

- a rural property access treatment, a widened shoulder, or a raised central median
- a pedestrian refuge, a bus lane or bus bay, new or relocated kerb and channel
- an intersection upgrade such as turning lanes, a roundabout or traffic signals
- additional through lanes, a realignment, a new overpass or an interchange.

TfNSW approvals are required under the *Roads Act, 1993* for works on State roads and traffic signals on any road. While these approvals are generally provided post development consent, TfNSW requires developers to provide a strategic design for the road infrastructure upgrades as part of their DA submission to:

- clarify the scope of works
- demonstrate a compliant design (in accordance with Austroads guides and TfNSW supplements) can be constructed within the road reserve (or land available)
- allow the consent authority to consider the environmental impacts of the upgrades as part of their determination under Part 4 of the *Environmental Planning and Assessment Act, 1979*.

In doing so, the strategic design provides TfNSW, the consent authority and the developer with confidence the development can proceed and will help streamline the post consent process.

When does TfNSW require a strategic design?

TfNSW requires a strategic design for road infrastructure upgrades on State roads and/or traffic signals (new or modifications to existing) on any road.

In most cases, the strategic design should be prepared AFTER the traffic analysis has been completed. While TfNSW recognises it can be beneficial to prepare a strategic design early in the process to gain some understanding of what can be achieved, proceeding directly to strategic design may ultimately lead to significant redesign work being required.

How much detail does TfNSW require?

The level of detail required will depend on the scope of the upgrades and the road environment. The key factors to determining the detail required include the width of the road reserve, the topography and the extent of widening/scope of works. Generally, TfNSW will require either:

1. a 2-dimensional plan overlaid on aerial photography; or
2. a 3-dimensional plan overlaid on ground survey, lidar or the like.

The scenarios and requirements for each of these options are detailed on the next page.

2-dimensional plan overlaid on aerial photography

This will suffice in less constrained environments where it can be easily demonstrated a compliant design can fit within the road reserve. The design needs to include the following:

- PDF format and, if available, CAD file in DGN or DWG format
- North point
- Road names
- Proposed edge of pavement
- New pavement shown as shaded
- Proposed line and pavement markings
- Proposed medians including type (raised or painted)
- Proposed footpaths and/or cycle ways
- Proposed safety barriers
- Property boundaries (from mapping program)
- Sight distance checks
- Proposed regulatory signage (e.g. parking restrictions, speed zone changes)
- Trees to be removed
- Hazard free zone (clear zone)
- Dimension all proposed design elements (incl. line marking)
- Typical section/s
- Turning paths of design vehicle at 15km/h.

3-dimensional plan overlaid on ground survey, lidar or the like

This will be required in more complex environments, where there are topographical constraints and/or the extent of widening or scope of works is significant and/or upgrades have the potential to impact on existing property boundaries. The design needs to include the following:

- CAD file in DGN or DWG format AND a PDF version
- North point
- Road names
- Proposed edge of pavement
- New pavement shown as shaded
- Proposed kerb and channel
- Proposed batters
- Proposed line and pavement markings
- Proposed medians including type (raised or painted)
- Proposed footpaths and/or cycle ways
- Proposed safety barriers
- Vegetation-tree trunks and foliage, including trees to be removed

- Cross sections
- Long sections
- Property boundaries
- Sight distance checks displayed as sections
- Proposed regulatory signage (e.g. parking restrictions, speed zone changes)
- Hazard free zone (clear zone)
- Dimension all proposed design elements (incl. line marking)
- Turning paths of design vehicle at 15km/h.

Significant or specific road infrastructure upgrades

The requirements listed in this document are the baseline requirements for the majority of DA related road infrastructure upgrades. For significant or specific road infrastructure upgrades additional information may be required to clarify the scope of works, demonstrate a compliant design can be constructed and allow the consent authority to consider the environmental impacts. For instance, this additional information may relate to drainage, utilities, road safety audits and design reports.

What if I am not sure and/or want pre-DA advice?

TfNSW encourages developers to engage with us before lodging their development application by contacting our teams (refer to emails below).

As highlighted earlier, the process for determining appropriate road infrastructure upgrades should generally be:

1. Traffic analysis and, where appropriate, traffic modelling to consider the impacts and identify appropriate treatment/s in terms of network performance.
2. Strategic design to clarify the scope of those upgrades, demonstrate a compliant design can be constructed with the road reserve (or land available) and allow the consent authority to consider the environmental impacts.

Given the above, it will generally be important to identify and agree on the appropriate treatment before TfNSW can provide advice on whether 2-D or 3-D will be required for the strategic design. In some instances, a hybrid model may be acceptable. That is a 2-D design with some 3-D elements.

Where appropriate, TfNSW will be happy to set up meetings to discuss your development and associated road infrastructure upgrades.

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Regional Boundaries

with Local Government Areas

Effective 1 July 2020 for Community and Place Branch

