

SM012 State Highway Control Manual

Part 2 - Consolidated Miscellaneous Sections

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Introduction to State Highway Control Manual Sections

Purpose and scope of the devolved manual sections

The devolved manual sets out the New Zealand Transport Agency (NZTA) powers and policy with regard to State highways. The manual details procedures for protection, control, asset management and work execution. It references empowering legislation and provides guidance for staff, consultants, Territorial Local Authorities (TLAs), Regional Councils and other bodies in their dealings with State highways.

Reference to other manuals or guidelines is also made where appropriate.

Ownership of information

The information in these manual sections is owned by the Transport Services Group of the NZTA.

Amendments

Amendments to this manual shall be made in accordance with Business Delegation BR141 and the processes detailed in the *Highways Information Portal*.

Companion manual

These manual sections deal with State highway matters only.

Policy and procedures relating to development and management of the annual National Land Transport Programme (NLTP) are found in NZTA's *Planning and Investment Knowledge Base* (PIKB) and NZTA's annual instructions.

The PIKB deals with the following topics which affect State highways:

- A. Work category definitions.
 - B. Funding provisions for all roading and ancillary activities.
 - C. National Land Transport Programme (NLTP) development and review procedures.
 - D. Reporting requirements.
 - E. Monitoring, review and audit procedures.
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Specialist topic manuals

Wherever possible specialist topics, such as Administration Procedures, will be covered by a standalone manual. Reference will be made to other manuals for this information.

Vision Zero and a Safe System

What is Vision Zero and a Safe System?

Vision Zero for Waka Kotahi means implementing and maintaining “Primary Safe System” infrastructure and speed measures wherever possible, i.e. median barriers, speed management, roundabouts, raised safety platforms. It’s acknowledged it may not always be possible to implement a Primary Safe System intervention, however if a primary treatment cannot be achieved then there should be strong justification to support this.

This is a change, as traditionally we’ve taken an incremental, risk-based approach in determining the most appropriate type of intervention. And those interventions were not always Safe System aligned and generally led to limited, or even poor, safety outcomes (i.e. high-volume roads without median barriers, high volume high speed signalised intersections, at-grade/non separated pedestrian crossings and cycle facilities).

A safe system must be one that is well engineered, maintained and operated.

What role can the engineering sector play?

The responsibility of the road engineering sector is to help take New Zealand toward Vision Zero, a New Zealand where no one is killed or seriously injured on our roads.

The sector will do this by designing, maintaining and operating a forgiving road network that takes human fallibility and vulnerability into account. Under a Safe System we design the whole transport system to protect people from death and serious injury.

Waka Kotahi will do this by embedding the Safe System principles in our policies, guidance, standards and processes. This ensures the way we design, operate and maintain our transport network not only reduces the chance of a crash occurring but also reduces the severity of that crash when it does occur.

Deviation from manuals

The Safe System principles are:

- We promote good choices but plan for mistakes.
- We design for human vulnerability.
- We strengthen all parts of the road transport system.
- We have a shared responsibility.

Examples of how engineers can apply Safe System principles

The Safe System principles can be applied in road and street design, maintenance and operations. In engineering terms, it is about understanding and managing crash forces to within survivable limits.

The Safe System approach requires a change in mindset.

Issue	Traditional approach	Safe System approach
Belief	Some deaths are inevitable As long as we were making a good go at improving things, people accepted that some road deaths would still occur, and would be satisfied with some improvement.	Road deaths are preventable We know road deaths are preventable. It's not acceptable to accept the status quo. By taking a system approach, and choosing Safe System interventions, we can drastically reduce the level of harm on our roads.
Human error	Expect perfect human behaviour Human error was often seen as the excuse for inaction, and effort was focused toward improving driver behaviour rather than infrastructure.	Plan and design for mistakes, people are fallible and vulnerable A 'forgiving' transport network is core to the Safe System. Death and serious injury crashes should not occur as a result of driver error. Vehicle and infrastructure/speed improvements should be used to reduce impact forces (should a crash occur) to within human biomechanical tolerances, and therefore reduce the harm.
Responsibility	Blame the road user The focus was on driver education to address road user error which consequently lowered the responsibility of system designers.	System designers and operators are also responsible for creating a Safe System System designers and operators share the responsibility for safe travel outcomes by accommodating people's errors.
Crash severity addressed	Total number of crashes Total crashes (of all severities) was often used to identify problem sites.	Crashes resulting in death or serious injury Death and serious injury crashes and/or high-risk crash types should be the starting point in site identification. Minor injury and non-injury crashes may be useful to provide additional information but are not the core focus.

<p>Understanding speed at which deaths and serious injuries (DSI) occur for different crash types</p>	<p>Biomechanical tolerances known but not core to decision making</p> <p>Information on biomechanical tolerances was available but was not core to the understanding of how to address risk.</p>	<p>Biomechanical tolerances core to decision making to eliminate DSI</p> <p>Biomechanical tolerances are core to the vision of eliminating death and serious injury crashes.</p> <p>We need to understand and be guided by the speed at which DSI occur for different crash types.</p>
<p>Design requirements</p>	<p>High Benefit Cost Ratios (BCRs) favoured rather than eliminating death and serious injury</p> <p>Treatment types were often selected based on high BCRs rather than eliminating death and serious injury.</p>	<p>Must focus on eliminating death and serious injury</p> <p>It is paramount that new infrastructure assists in eliminating death and serious injuries. This also includes speed management and prioritisation/separation of different transport users travelling in different directions or modes.</p>

Safe System principles in design

Principle

The road system needs to be managed and designed in such a way that impact energy on the human body is:

- Firstly avoided - this includes considering the ways in which people respond to road conditions and design roads to minimise opportunities for error.
 - Secondly managed at tolerable levels, in the event a crash occurs - design a system that is error tolerant – i.e. design that is resilient to human error and will minimise harm when something goes wrong.
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Embedding

For the Safe System approach to be fully embedded into New Zealand we need systematic application of these principles in road design, operations and maintenance.

Translation

To translate the Safe System approach into application, the following questions should guide us:

- Is it possible to have a head-on crash at a speed greater than 70 km/h?
 - Is it possible to have an intersection (right-angle) crash at a speed greater than 50 km/h?
 - Is it possible to have a run-off-road (side impact with a rigid object) crash at a speed greater than 40 km/h?
 - Is it possible to have a vulnerable person (e.g. pedestrian, cyclist and motorcyclist) crash at a speed greater than 30 km/h?
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Outcome

Through implementing the Safe System approach there will be potential reductions of human error and, preventing crashes occurring, the priority is reducing the level of harm (death and serious injuries) when crashes do occur.

Targets

Infrastructure and speed management improvement projects and programmes should address high severity, head-on, run-off-road, intersection (side impact) and vulnerable road user casualties where the appropriate value for money can be achieved.

Miscellaneous Policies

Official opening ceremonies

Guidelines for opening ceremonies are set out on pages 11 and 12. All proposals for official opening ceremonies must conform with the criteria specified in the guidelines. Funding should be provided as a provisional sum in the approved contract.

Salt as ice control

NZTA holds no approval to use salt on roads.

Rural selling places

Guidance on rural selling places is contained in:

- A. *RTS3: Guidelines for Establishing Rural Selling Places*, MOT/Transit.
 - B. Planning Policy Manual.
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Roadside landscaping and vegetation

Roadside planting shall be in accordance with the NZTA's *Landscape Guidelines first edition*.

A schedule of landscape areas maintained by the NZTA shall be kept by the Network Consultants and regional offices.

All specified NZTA maintained landscape areas shall be maintained to a standard appropriate to that situation.

Filming on State highways

From time to time requests will be received from filmmakers wishing to film short-term mobile activities on the State highway network and such requests should be allowed if it is assessed that the request is reasonably achievable. Such requests will need to be properly managed so that neither the people involved in the filming nor the public using the road are put at risk. Note that driver distraction is an issue.

Closures may be requested and these should only be of the same order of magnitude as would be applied to temporary closures for roadworks. They must not unduly delay traffic and should only be considered if where and when the closures are to be done can be appropriately managed. The filmmaker must submit a work plan for the site, which must include a site safety plan with all necessary temporary traffic management plans and arrangements attached, to be approved by the System Manager. All enquiries will be directed to the relevant regional office for liaison and approval and regional offices should provide guidance as necessary so that the filmmaker can arrange the necessary advice to submit a proposal.

Filming at static roadside sites for extended periods involving road restrictions or closures is not encouraged because of the impact on road users and public safety. In general, while not wishing to be overly bureaucratic, the use of highways for unrelated commercial activities is not the purpose of their management and may create liabilities that are otherwise avoidable.

Standards and Guidelines

Background

NZTA policy is to house all policies and procedures in manuals. All changes to those policies or procedures are to be promulgated by an amendment to the appropriate manual. This change has allowed the use of the *Register of Network Standards and Guidelines* as a definitive list of all policy documents that are used by the NZTA.

Definition and application

Definition of the terms Standards and Guidelines and their applications are contained in the *Standards and Guidelines Process Manual*.

Deviation from manuals

There are very important rules and procedures relating to amendments or variations to any manual. Details of these rules are as set out in processes detailed in the *Highways Information Portal*.

Aerial Photography of the State Highway Network

Introduction

A set of aerial photographs of the State highway network are to be maintained on-line. The Wellington Office will keep the set up-to-date for the whole network.

Strategy

The strategy for updating these photographs will be:

- A five year rotation cycle will be used for major strategic State highways.
 - A seven year rotation cycle will be used for non-strategic State highways;
 - Some flexibility is permitted where there are route changes and where significant realignment or improvement works have been carried out in the intervening periods;
 - The result is to be delivered as digital imagery;
 - All imagery will be in colour;
 - The on-line dataset will be as specified by the Manager, Programme and Performance;
 - The Manager, Programme and Performance will appoint a project manager for implementation of the above requirements and responsible for the provision of funding and administration of any necessary contract(s); and
 - The project manager will ensure that product and programme information for users is produced and distributed annually.
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Miscellaneous Schedules held for Group Activities

Purpose

System Managers and the Portfolio Manager, Delivery Portfolio, regional Managers and Programme Directors from Infrastructure Delivery are required to maintain schedules and registers of various consents given for works on State highways or other activities approved under delegation.

Schedules maintained by System Managers

The table below shows the schedules required to be maintained by System Managers but not required to be presented to Group meetings:

No	Name of Schedule	Activity approved by	Comment
1	Traffic restrictions approved under delegation.	SMMO	Road closures, bus stops, parking restrictions etc.
2	Special vehicle lanes approved under delegation.	SMMO	Clearways, bus lanes, HOV lanes etc.
3	Consent for works on State highways approved under delegation.	SMMO	Service crossings, installations etc.

NZ Transport Agency Logo Details



NOTE:

- B. Logos shall be printed in black or white on a clear self-adhesive background. Black logos shall be applied to signs with black symbol/legend and border. White logos shall be applied to signs with white symbol/legend and border.
- C. The smaller logo (< 30 sq. cm) shall be applied to signs less than 1sq metre in area. The larger logo (<100 sq. cm) shall be applied to larger signs
- D. The logo should be located in a corner of the sign where it does not obscure any part of the symbol or legend, but generally for:
 - rectangular signs at the bottom corner nearest the traffic line;
 - permanent warning signs (diamond) in the bottom corner; and
 - fingerboards at the point end.
- E. Only one logo may be displayed on a sign.

ELECTRONIC VERSION OF LOGO:

Go to [Using our logo | ONRAMP \(nzta.govt.nz\)](#) on the internet.

For general communications queries email act@nzta.govt.nz.

Rural Mail Boxes

Introduction

Mailboxes can be a roadside hazard. Limited New Zealand data exists for vehicle collisions with mailboxes as the MoT crash analysis system (CAS) does not include mailbox separately as a coded object hit. However, US data suggests as many as 70 to 100 people die annually in the US as a result of colliding with improperly designed mailboxes and their supports (AASHTO, 2002). This data excludes those crashes associated with vehicles (or pedestrians) delivering or picking up mail.

Application

This policy applies to all new and replacement mailbox installations on rural State highways (i.e. those with a posted speed limit greater than 70 km/h). Mailboxes in the urban environment do not pose the same safety risks as those on high speed roads and, therefore, this policy is specific to rural roads.

Location

Mailboxes must not be installed where access is from the lanes of a motorway or where access, stopping or parking is otherwise prohibited by law or regulation (e.g. where “no stopping” signs are installed or where segregation strips have been established).

In most cases mailboxes should be located at an authorised access where the mailbox can be easily and safely serviced from a vehicle without the vehicle having to reverse from the mailbox into the traffic flow.

Ideally mailboxes should be installed on one side of the road so deliveries can be made in one direction without crossing the road.

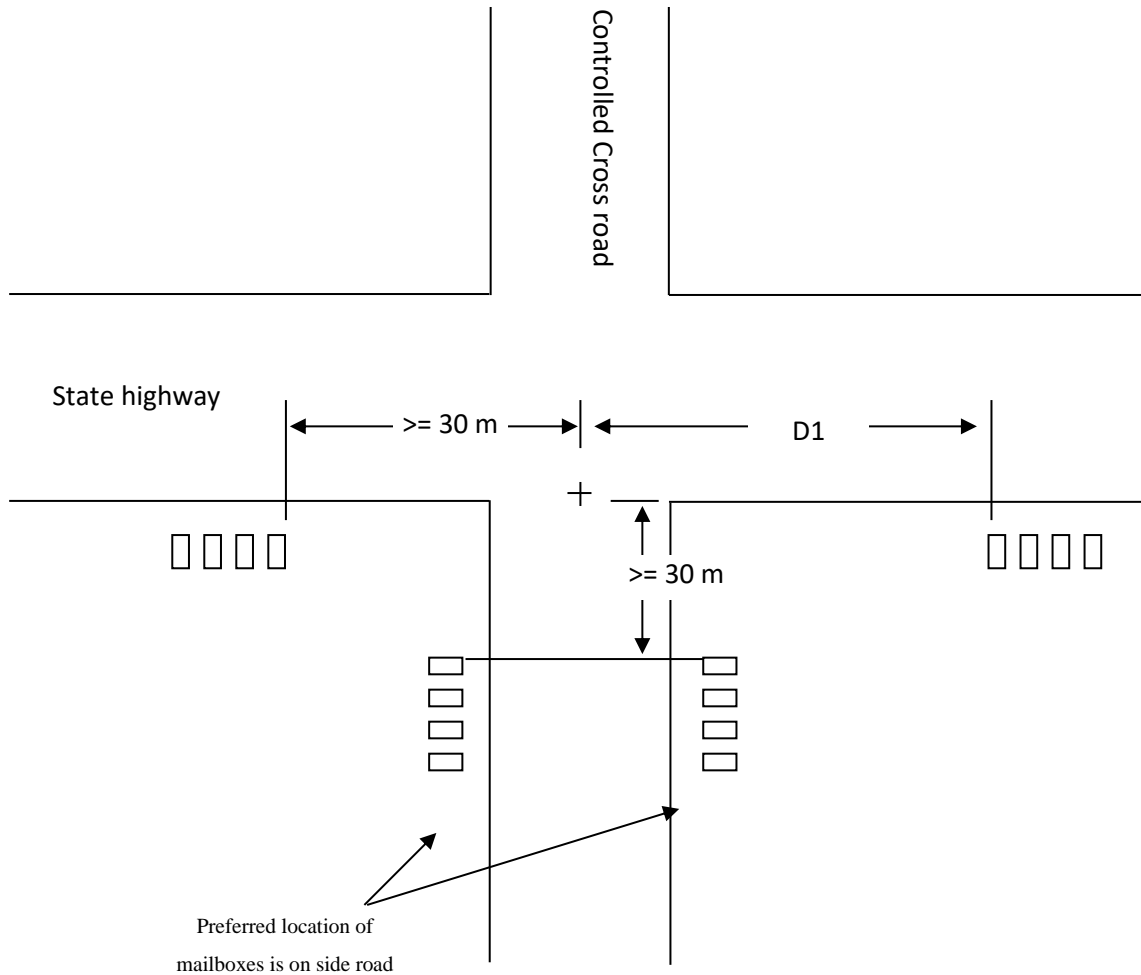
In some situations it may be possible and desirable to locate mailboxes on a side road.

Pedestrian travel along the road shoulder to access the mailbox is undesirable. However for distances up to 60 m this may be preferable to alternatives such as, placing a mailbox just beyond a sharp crest vertical curve, or constructing two or more closely spaced lay-bys.

Intersections

Placing a mailbox near an intersection can affect the safety and operation of an intersection. **Figure 1** shows suggested minimum clearances to the nearest mailbox at intersections.

Figure 1 Minimum Clearances to Mailboxes at Intersections



D1 Operating Speed on State Highway

- 60 m ≤ 60 km/h
- 90 m > 60 km/h

Guidelines for Opening Ceremonies for New Zealand Transport Agency Projects

In this Section

This section contains guidelines for opening ceremonies.

Guidelines for Opening Ceremonies for New Zealand Transport Agency Projects

Appropriate Projects

Opening ceremonies should be considered for all large projects of national significance (e.g. the completion of Grafton Gully, Auckland).

They may be appropriate for some projects of local significance (e.g. completion of the sealing of SH 6).

Small projects which generate high local interest, but have little or no national significance may also be considered at the discretion of System Managers.

Funding

New Zealand Transport Agency (NZTA) will fund opening ceremonies of significant projects on the grounds that they are NZTA's achievements on behalf of road users. The contractor and/or the local territorial authority may wish to contribute. Where appropriate, NZTA will accept and acknowledge other contributions, but ownership of the ceremony will remain with NZTA.

Joint projects (e.g. NZTA/local authority projects) should be funded in proportion to the funds contributed to the project.

Official openings should preferably be identified during the early planning phase of projects. Funding for an opening ceremony should be written into the professional services contract as a provisional item.

Where the desirability of having an opening ceremony becomes apparent at a later phase of the project, funding must be negotiated as a variation to the professional services contract.

The upper limit on NZTA funding of opening ceremonies is \$5,000.00 unless the Chief Executive approves otherwise.

Approval

All opening ceremonies are to be approved by the Chief Executive at least two months before the date of the ceremony. A memo to the Chief Executive outlining the proposal and cost should be copied to the Practice Manager, Engagement and Communications.

Publicity

The publicity for opening ceremonies will be managed through NZTA's Communications and Engagement Group. The details must be with the Practice Manager, Engagement and Communications at least one month prior to the ceremony.

Invitations

Invitations should be issued to all organisations and individuals approached during the consultation phase. This should include the local MP (including the local Māori MP), the local authority Mayor and relevant councillors, Regional Transport Committee members, the Chair of NZTA, the Chief Executive, General Manager, Transport Services, NZTA, or their representatives.

NZTA Board members living in the project region should be invited. Invitations should also be extended to other local dignitaries and interest groups in accordance with the wishes of the community (e.g. iwi where they have an interest) and organisations which have an interest in the project (e.g. RTA or AA).

The Minister of Transport should be invited to attend only when the project is one of national or very significant local interest. In that case the Minister should be requested to perform a brief ceremonial role (e.g. declaring the highway open/ cutting the ribbon) and to speak on any particular subjects of public interest. The invitation should be extended formally through the Chief Executive.

Small, local ceremonies may involve only the System Manager, a local authority representative and possibly a locally based Board member.

Opening Ceremony Protocols

The appropriate Infrastructure Delivery Manager should preside over the ceremony.

The official speakers should be:

- the Chair (or representative) of NZTA
- the contractor
- the Mayor (or representative)
- the local MP
- a representative from Iwi where appropriate
- the Minister of Transport or Prime Minister where appropriate
- a blessing / tapu lifting etc. where appropriate

For small local ceremonies the System Manager will represent NZTA if a locally based Board member is not available to attend.

The ceremony may be followed by morning or afternoon tea or appropriate catering.