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APPENDIX A: TRAFFIC MANAGEMENT PLANS

1. Traffic Management Plan Details

Traffic Management Plans (TMPs) should be prepared on the "Traffic Management Plan" Form in this appendix, or similar, and should include the following details:

- *Traffic Management Plan Reference* – For use by the network or area Traffic Management Coordinator.
- *Organisation* - Include the name of the Contractor and Client
- *Contract Name/Number* - Include the name and/or the reference number of the contract or consent for works.
- *Location* - Include the road name(s), including any affected intersections, the road **Level**, the existing posted speed limit and route positions where applicable.
- *Description of Activity* - Describe the main elements of the activity and how it will affect the normal road operating conditions.
- *Work Programme* - Include the proposed start and finish dates for the activity. Significant components of a complex or long-term activity should be identified as separate items. Include any temporary road closures, detours and no-activity periods.
- *Proposed/Restricted Work Hours* - Include the hours that the activity will take place. Activity hours may be restricted by the RCA or contract documents.
- *Traffic Details* - Include AADT, peak hour and heavy vehicle counts where available. The RCA or Engineer must provide this information if available.
- *Proposed Traffic Management Method* – Detail the traffic management measures for all anticipated specific work operations showing the level of traffic management to be undertaken when:

  (i) The site is active (for all phases of the work – note a separate Traffic Management Plan may be required for each phase)

  (ii) The site is unattended

  (iii) The activity is at night (for all phases of the work)

  Include plant and equipment visibility, signs, delineation devices, proposed layout, traffic controllers etc.
- *Proposed Speed Restrictions* - Detail any speed restrictions required. Include an application form for the authorisation to use a temporary speed limit. Refer Appendix B: Temporary Speed Restrictions, for an application form.
- *Positive Traffic Management Measures* – Detail the extent of positive traffic management to be undertaken when:

  (i) Temporary speed restrictions below 70 km/h in areas with existing posted speed limits of 100 km/h, or below 50 km/h in areas with existing posted speed limits of 70 km/h or 80 km/h

  (ii) Traffic is stopped to allow work to proceed

  (iii) Traffic is reduced to one lane

- *Contingency Plans* - Plan for excessive delays, foreseeable emergencies, deterioration in weather or road conditions, or if the work takes longer than expected. Emergency services vehicles must always be able to proceed through the site without delay. Plans must include pre-planned provision for a "major incident" (fatality, real or potential) including significant property damage and must include steps to secure site, reduce or remove the effects of TTM.

  For a "minor incident" – excessive delays, non-injury accident or a structural failure of the road, the plan must include steps to secure the site, remove TTM and establish normal traffic flows and to re-establish site when safe to do so.

- *Public Notification* - Include details of notices proposed to be advertised via local radio or newspapers or distributed to local residents. Refer contract documentation and RCA requirements.

- *Personal Safety* – Outline personal high visibility safety clothing for day and night operations, procedures to ensure all other personnel on site, including visitors, are correctly equipped.

- *On-Site Monitoring* - Identify the frequency of monitoring the continued effectiveness of the traffic management measures. Detail the monitoring of occupied and unoccupied sites both overnight and during weekends or holiday breaks.

- *Other Information* - Further details may be required as a result of specific site conditions or contract documents.

- *Layout Diagrams* - Show all temporary traffic management devices proposed to be used. Layout diagrams must be clear, legible and accurate and show all set-out distances. There is likely to be more than one layout for each site to show the changes as a result of:

  (i) traffic or site changes throughout the day

  (ii) day and night operations

  (iii) different phases of the work

  (iv) the site being attended or unattended

- *EED Apply Applicable?* - Confirm yes or no and attach as appropriate.

- *Traffic Controllers* - Nominate the STMS and other TCs for the work site along with their 24-hour contact phone numbers. Include a copy of the STMS's and TC's certificate(s) numbers.

- *TMP Prepared …..…* - Name of the STMS who prepared the TMP, including details of the STMS's certificate numbers.

- *Requires Amendment* - Details of Engineer rejecting TMP.

- *Approval* - Name of the Engineer and certificate number who approved the TMP.

- *Acceptance by TMC* - The TMC is to sign to confirm he has sighted the TMP.

2. Generic Plans

Generic TMPs should, in addition to the above requirements:

- allow for an annual review by the RCA;
- be readily changeable at any time over the term to allow for site and personnel changes; and
- allow for the conditions under which the RCA may be prepared to delegate authority to fix temporary speed limits

3. Mobile Operation Plans

TMPs for mobile operations should also include the following additional information:

- the type and function of each vehicle in the mobile team
- the vehicles that will be equipped with attenuators and arrow boards and their location within the closure
- the number, location and, duration of exposure and tasks of personnel who are permitted to leave their vehicles
- the method of inter-vehicle communication if appropriate

4. Additional Information

In addition, TMPs should also include the following as appropriate:

- Liaison with emergency services and public transport operators (if they could be affected by the work site)
- Changes to parking controls
- Traffic environment details of speed limit, parking, traffic signals, pedestrian crossings, road alignment and hierarchy.
- Specialised equipment such as pilot vehicles, use of temporary lights
- Materials storage
- Pedestrian barriers and equipment to be used
- Queuing
- Plant operational requirements; eg. truck waiting and filling areas

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5. Traffic Management Plan Form

TRAFFIC MANAGEMENT PLAN

<table>
<tr><td>Traffic Management Plan Reference</td><td colspan="4"></td></tr>
<tr><td></td><td colspan="4">For Office Use Only</td></tr>
<tr><td>Organisation</td><td>Contractor</td><td colspan="3">Client</td></tr>
<tr><td>Contract Name/Number</td><td></td><td colspan="3">RCA Consent Reference</td></tr>
<tr><td rowspan="2">Location</td><td rowspan="2">Road Name(s)</td><td rowspan="2">Road Level (LV, 1, 2, 3)</td><td rowspan="2">Speed Limit</td><td>From RP</td></tr>
<tr><td>To RP</td></tr>
<tr><td>Description of Activity</td><td colspan="4"></td></tr>
<tr><td>Work Programme</td><td colspan="4"></td></tr>
<tr><td>Proposed/ Restricted Work Hours</td><td colspan="4"></td></tr>
<tr><td>Traffic Details (Main Route)</td><td>AADT</td><td colspan="3">Peak Hour Flow</td></tr>
<tr><td rowspan="3">Proposed Traffic Management Method</td><td colspan="4">Active:</td></tr>
<tr><td colspan="4">Unattended:</td></tr>
<tr><td colspan="4">Night:</td></tr>
</table>

Proposed Speed Restrictions	
Positive Traffic Management Measures	
Contingency Plans	
Public Notification	
Personal Safety	
On-Site Monitoring	**Attended:** **Unattended:** **Overnight:** **Other times:**
Other Information *(eg. delay calcs, EED issues, temporary speed issues, etc)*	

<table>
<tr><td>Layout Diagrams</td><td colspan="2"></td></tr>
<tr><td>EED Applicable?</td><td>Y/N</td><td>Attached Y/N</td></tr>
<tr><td rowspan="2">Traffic Controllers</td><td>Name (STMS)

Cert No:</td><td>Phone (24 hours)</td></tr>
<tr><td>Name (TC)

Cert No:</td><td>Phone (24 hours)</td></tr>
<tr><td>TMP prepared accurately to represent site conditions and submitted by</td><td>Contractor/Applicant

Cert No:</td><td>Date</td></tr>
<tr><td>Requires Amendment</td><td>Engineer

Cert No:</td><td>Date</td></tr>
<tr><td colspan="3">This TMP is Approved on the Following Basis
1. To the best of the approving Engineer’s judgment this TMP conforms to the requirements of Transit New Zealand’s Code of Practice for Temporary Traffic Management.
2. This plan is approved on the basis that the activity, the location and the road environment have been correctly represented by the applicant. Any inaccuracy in the portrayal of this information is the responsibility of the applicant. The STMS for the activity is reminded that it is the STMS’s duty to “Postpone, cancel or modify operations due to the adverse traffic, weather or other conditions that affect the safety of this site” (reference A4.5).

Approving Engineer: .....
(Name and Certificate Number)

.....
(Signature)</td></tr>
<tr><td>Acceptance by TMC</td><td>TMC: .....
Cert No: .....
Signature: .....</td><td>Date: .....</td></tr>
</table>

6. Schedule of Specific Job Requirements for Traffic Management and Safety

(to be included in contract documents)

CONTRACT No: ……..

CONTRACT NAME: ……

OPERATIONAL REQUIREMENTS

1. Level of Temporary Traffic Management

The temporary traffic management shall be to:

Level LV
Level 1
Level 2
Level 3

(Strike out those that do not apply)

2. Hours of Work

The contractor shall program work such that contract activities affecting traffic flow are not carried out on-site between the hours specified below Monday to Friday inclusive.

No work other than emergency or maintenance work shall be undertaken on weekends without prior approval of the Engineer

Hours/Days when work in Prohibited or Restricted

……

……

……...…

3. Project Specific Conditions

……

……

……...…

4. Excessive Traffic Delays

The steps outlined in the Traffic Management Plan to deal with excessive traffic delays shall be implemented once the traffic delay exceeds ……... minutes.

The Contractor is responsible for monitoring of traffic delay.

5. Road Controlling Authority Approval at Single Lane Operations

Approval of the RCA is required/is not required in advance if traffic is restricted to single lane operation.

6. Advice to Other Parties

Public Notification is not required/is required. If required, the details are:

……

……

……...…

Parties with Access Affected

……

……

……...…

7. Delineation Devices

The height of delineation devices will be at least:

……mm when used on roads

……mm for protecting wet pavement marking

8. Condition of Road Surface

Deduction made for temporary road not being sealed and maintained for greater than ……..days at $……/calendar day

9. Basis of Payment

Payment shall be in accordance with:

(a) Lump Sum $…….

(b) Daily Rate $……. per 24 hours

(c) Provisional Sum $……. per 24 hours

10. Positive Traffic Management - Specific Requirements

……...

……...

……...…

……...

……...…

……...

……...…

……...

……...…

……...

……...…

……...

……...…

11. Pilot Vehicle Exemption

……...…

……...…

……...…

……...

……...…

……...

……...…

APPENDIX B: TEMPORARY SPEED LIMITS

1. LTSA Traffic Note 15: *Use Of Temporary Speed Limits For Temporary Hazards And Special Events*

Traffic Note 15 is reproduced below:

Traffic Note 15 – Revision 1

Date: July 2004

From: Safer Roads

Authorisation: Don Hutchinson, Acting Manager Safer Roads

Signature: _____

No. of pages: 3

Use of temporary speed limits for temporary hazards and special events – guidelines

1 Purpose

The installation of temporary speed limits helps to control traffic at temporary hazards and for special events. In general, temporary speed limits are not designed to be used to warn motorists of long-term road performance deficiencies that cannot be immediately rectified. This note examines temporary speed limits and provides recommendations for their effective management and use.

2 Temporary speed limits

The *Land Transport Rule: Setting of Speed Limits 2003* (the rule) provides for the installation of temporary speed limit signs on roads where there is a temporary risk of danger to the public or road workers, or of damage to the road, or for special events. In these circumstances, a road controlling authority (RCA) must consider the need for a temporary speed limit. The limit may be any multiple of 10 within the range of 20 to 80 km/h, but must be at least 20 km/h less than the existing speed limit on the road. A temporary speed limit is defined in the rule as a speed limit that is in force for a period of less than six months and is generally used for short-term road hazards, active road work sites or special events. A temporary speed limit may also be appropriate on a section of long-term, inactive road works, or at other locations where:

1. the surface has been damaged due to previous road work, slip, subsidence etc
   and
2. there are road features such as reduced width, extremely poor alignment or detours, non-useable shoulders etc that are completely out of character with the approaches and with the normal condition of the road
   or
3. there are good technical reasons (eg the road might otherwise collapse)
   and
4. other traffic control devices have been installed to control vehicle speeds.

In these situations, the nature of the roadway deficiency (or the traffic control devices) should be evident to motorists so that they recognise the need to adjust their behaviour. The temporary speed limit gives positive direction and guidance and, if set at an appropriate level, should receive a good level of compliance.

3 Varying a temporary speed limit

Temporary speed limits affect the safety of workers, event participants and road users. If not set realistically, drivers often ignore them, which can lead to reduced compliance with all temporary speed limits. In addition, the police may not feel they can justify enforcing temporary speed limits that are obviously not appropriate for the conditions. To improve driver compliance, varying the temporary speed limit may be appropriate in the following circumstances:

- Within the work zone. Where a long work zone is established, but active work is concentrated within a specific area, a lower speed limit might be applicable in the area where work is actually being carried out.
- Over the work period. Different stages of works may require different safety levels and therefore higher or lower temporary speed limits may be appropriate, depending on the stage.
- Over a 24-hour period. A higher temporary speed limit might be more appropriate within an established work zone during a period when workers are inactive, eg at night.

RCAs sometimes vary a temporary speed limit on the approach to a work zone, in order to create a ‘buffer zone’ so vehicles slow down in stages. However, research has shown that motorists do not tend to comply with these temporary speed limits unless there is obvious activity in the area of the buffer zone. Instead, we recommend installing a ‘ “_”0 km/h AHEAD’ (TW–1B.3) supplementary sign below a roadworks (TW–1) sign to indicate that a speed limit change is ahead.

4 Traffic management plan

The rule requires that a traffic management plan (TMP) be approved, in writing, by the relevant RCA before a temporary speed limit can be installed. The TMP should detail the limit and any other conditions such as the positioning of the signs and the times during which the limit applies.

In addition, RCAs should have a pre-approved general contingency TMP in place, to be used for emergency situations where a hazard such as flooding, slips or road subsidence suddenly develops. This TMP should provide for a contractor to be on call to establish traffic control at any site where an emergency situation arises, including installation of temporary speed limits. This pre-approved TMP should only be used for a short duration depending on the hazard type. A site-specific TMP should be developed if conditions require a temporary speed limit to be in place for more than a few days. Regardless of circumstances, a temporary speed limit applies for a maximum period of six months. After six months, the RCA must review the temporary speed limit, and if it is still required, then a new TMP will need to be approved in accordance with the procedures in the rule.

5 Warning signs

On sections of road that do not fall into the criteria described in section 2 above it is generally inappropriate to install a temporary speed limit. In these circumstances permanent warning signs, ie those with yellow rather than orange backgrounds, should be erected to advise road users of the effect of any detected deficiency.

For example, if a section of road fails to meet standard skid resistance properties then a PW–41 ‘slippery surface’ sign may be appropriate at the commencement and at significant locations along the section. Appropriate supplementary signs could include ‘WHEN WET’ and ‘NEXT x km’.

N.B. The procedure for determining whether a sign is required and its format should follow normal practice for the erection of any permanent warning sign.

6 Recommendations

Temporary speed limits must be set in accordance with the rule and should:

- **be set** in the circumstances described in section 2 of this note
- **be set** in accordance with a pre-approved traffic management plan (TMP) for emergency situations
- **not be set** to warn motorists of long-term road performance deficiencies that cannot be immediately rectified

Signs used for warning motorists of long-term road performance deficiencies that cannot be immediately rectified should be permanent warning signs, ie on a yellow, rather than orange background. The procedure for determining whether a sign is necessary and its format should follow normal practice for the erection of any permanent warning sign.

2. Application for Temporary Speed Limit Form

APPLICATION FOR TEMPORARY SPEED LIMIT

Sought by (Contractor/Applicant): .....

For (Client): .....

Contract No. (if appropriate): .....

Pursuant to Section 5 of Land Transport Rule: Setting of Speed Limits 2003, a temporary maximum speed limit of **……...** kilometres per hours is hereby fixed for motor vehicles travelling over the length of:

Road Name / State Highway: .....

Situated at: .....

From Route Position: **RP** ...../

.....

To Route Position: **RP** ...../

.....

From the Date of .....

To the Date of .....

Between the Hours of: ..... **am** .....**pm**

Approval Granted By: **Name:** .....

Position: .....

Signature: .....

Date: .....

Special Conditions to Apply: .....

.....

.....

.....

.....

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EXPLANATORY NOTE - Background to Development of Procedures

Safety Auditing of projects was introduced by Transit New Zealand in 1993 and is continuing to be used to ensure safety aspects of projects are addressed in the best possible way. Procedures were developed for Stage 1 *Feasibility* to Stage 4 *Pre opening of roading improvement projects.* Safety audits of existing roads started in February 1995, with draft procedures being published by Transit in February 1996.

Following the formation of Transfund New Zealand the above procedures have been revised and published in December 1998 as final procedures for *Safety Audits of Existing Roads.*

In January 1997 a pilot safety audit of temporary traffic management at work sites was undertaken in the Wellington/Wairarapa area. This initial study was followed up, in March 1998, by two more safety audits of temporary traffic management in the North Canterbury and the Auckland North areas.

From experience gained during the above trials, Transfund New Zealand published "Interim Procedures for Safety Audit of Traffic Control at Roadwork Sites" - Audit and Review Division Report No RA 98/689S, in February 1999.

Transfund New Zealand held workshops throughout the country during March 2001 to gain industry feedback on the procedures. A working group met in September 2001 to refine these procedures for inclusion into this Code of Practice as an appendix. These procedures were introduced to the roading industry during a series of training workshops held during February and March 2002. Feedback from attendees of these workshops has been considered in the production of these procedures.

Changes to the Transfund NZ Interim Procedures

These procedures differ from the Transfund NZ Interim procedures in that they use an expanded “Site Condition Factor” (Site Condition Rating) which does not account for the “Site Complexity Factor” or the “Traffic Effects Factor” which were included in the interim procedures.

As the practices described in this Code of Practice are deemed to be safe, the auditing procedures should not discriminate between the choice of temporary traffic management implemented. It is the joint responsibility of the STMS preparing the TMP and the RCA approving the TMP to select the most suitable method of temporary traffic management for each activity.

APPENDIX C: PROCEDURES FOR THE SAFETY AUDIT OF TEMPORARY TRAFFIC MANAGEMENT OF WORK SITES

1. Uses of the Procedures

These procedures shall be used to audit all activities requiring Temporary Traffic Management including the following:

- Active and unattended static sites
- Semi-static activities
- Mobile and inspections activities
- Daytime and Night time activities

2. Who Could Use the Procedures

• RCAs	To establish the level of compliance for Temporary Traffic Management installed and maintained for each activity in terms of this Code of Practice and to measure the level of safety within their network.
• Consultant / Engineers	To establish Contractor safety compliance.
• Contractors	To self audit their own activities.
• OSH	Occupational Safety and Health Service inspectors may use these procedures as part of their inspection process for any activity. The Site Condition Rating form can be used to support formal "Improvement Notices"

Each organisation that audits temporary traffic management must retain a system of recording the results of the audits. It is recommended that audit records are maintained for a minimum of five years.

3. Training Requirements

People using these procedures must hold a current STMS or STMS NP certification (refer Section A4) to the level of the temporary traffic management for which they are auditing.

4. Safety Audit Methodology

The general methodology recommended for using these procedures is:

- Fill out the top section of Site Condition Rating form.
- Drive through the site in both directions making notes of defects and/or non-compliance with Section A6.3 TMP principles, and recording them on the Site Condition Rating form.
- Drive all intersecting side roads making notes of defects and recording on the Site Condition Rating form.
- Address all other prompts on the Site Condition Rating form that have not been considered.
- Tally the points and place the site in the appropriate Site Condition Rating Category.
- Sight the TMP if the Site Condition Rating Category is "Needs Improvement" or "Dangerous" (refer 5.3 below).
- Apply the "Feel Good" factor (refer 5.4 below) if required in the opinion of the auditor.
- Take the appropriate action (refer 6 below).
- Where non-compliance with section A6.3, TMP Principles, (not included in the numerical site condition rating (SCR) is noted, these shall be recorded and forwarded to the contractor.

Photographs or videos should be taken of the work activity if the Site Condition Rating category is "Needs Improvement" or "Dangerous" and to record items of interest.

5. Site Condition Rating (SCR)

5.1 Site Condition

The "Site Condition Rating" (SCR) evaluates temporary traffic management compliance with the minimum requirements of this Code of Practice. Each element of non-compliance is given a number that reflects its component importance in terms of temporary traffic management at the work site. The defects observed are tallied by occurrence and summed to give the Site Condition Rating.

5.2 Categories

The SCR categories are:

0 - 10	High Standard
11 - 25	Acceptable
26 - 50	Needs Improvement
51+	Dangerous

5.3 Traffic Management Plans

If the Site Condition Rating falls within the "Needs Improvement" or "Dangerous" categories then the TMP must be sighted to ensure that the site layout complies with the approved TMP. Where the approved TMP varies from this Code of Practice and an Engineering Exception Decision (EED) has been approved, the "Site Condition Rating" should be reworked to reflect the site's compliance with the approved TMP and the EED.

5.4 Feel Good Factor

A small percentage of audits are likely to fall into categories that do not "feel" correct to the auditor. The "Feel Good" factor is a subjective sensibility check on the Site Condition Rating category which allows the audit result to be shifted into a different category where the site:

- Looks safe, and
- Feels safe, and
- Operates safely

or

- Looks unsafe for the rating obtained, or
- Feels unsafe for the rating obtained, or
- Operates in an unsafe safe manner

The feel good factor is applied when the Site Condition Rating falls into the "Acceptable" or "Needs Improvement" categories.

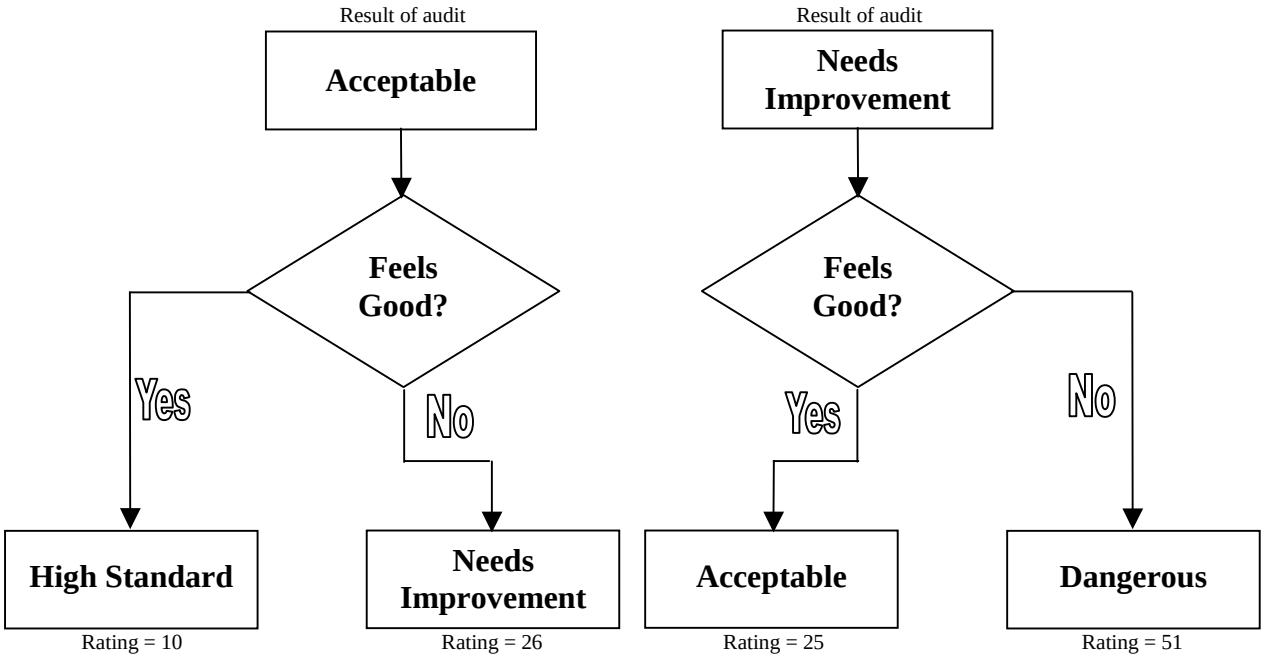
If the feel good factor is applied and the site rating category is changed, the Site Condition Rating number shifts to the lower bound when shifted up a category and to the upper bound when shifted down a category.

The flow chart that follows illustrates how the "Feel Good" factor is applied.

5.5 Non Compliance with TMP Principles

Where non compliance with TMP Principles are recorded and forwarded to the Contractors in accordance with section 4 the contractor shall either make prompt changes to address the issues raised or forward reasons why the issues should not be addressed to the TMC within 24 hours.

SITE CONDITION RATING – DETERMINED FROM AUDIT



Note: It is anticipated that the **"Feel Good"** factor will only need to be applied to a minority of the activities and sites that are audited. The **"Feel Good"** factor must not be used to change the results without justification, and must not be used by safety auditors with limited experience.

6. Actions Following Audits

The auditor need not take any action on-site when the Site Condition Rating is either "High Standard" or "Acceptable". It is recommended however, that the STMS be advised of these good audit results.

Where the Site Condition Rating category is "Needs Improvement" the STMS must be informed of the audit result immediately. The auditor shall discuss the temporary traffic management features that are non-complying with the STMS and make recommendations on how the work site can be made safer. The STMS must undertake remedial action as soon as possible and has a maximum of 4 hours to bring the site rating to an "Acceptable" standard or better.

Where the Site Condition Rating category is "Dangerous" the STMS must be informed of the audit result immediately. All work shall cease on site immediately and the temporary traffic management be brought up to an "Acceptable" level or better. If the temporary traffic management cannot be improved to the required standard, the work site shall be cleared and left in a safe condition.

A Notice of Non-Conformance must be issued to the STMS whenever a "Dangerous" Site Condition Rating is calculated.

It may be necessary to supplement the SCR form with an attached memo or fax coversheet on which the auditor may add additional comments regarding the audit and / or the condition of the activity that was inspected.

7. Site Condition Rating - Item Descriptions

Multiple deficiencies relating to one item of temporary traffic management may only be recorded as a single defect assigned against the rating that is the highest. For example, a sign in marginal condition located on the wrong side of the road is to be assigned as "Sign on Wrong Side" as this item has a rating higher than "Condition Marginal" item.

7.1 Signs

Sign Missing:	Any signs that should have been erected that are missing.
Sign Spacing:	Any signs where the spacing is too close or where the spacing too far from other signs or the work area.
Not Visible:	Any temporary traffic management sign that should be erected at the work site, which is not visible, eg. knocked down, or visibility blocked by a parked vehicle.
Condition Marginal:	Refer Section C20 Maintenance Standards.
Condition Unacceptable:	Refer Section C20 Maintenance Standards.
Order Incorrect:	Signs installed in the incorrect order.
Permanent Signs Not Covered:	Permanent signs not relevant to road users because of the works, which have not been covered.
Unapproved Signs / Too Small:	Signs used that are not approved for use at work sites, includes using Level 1 signs at Level 2 and 3 temporary traffic management work sites.
Sign On Wrong Side:	Sign erected on the right hand side and not on the left hand side.
Sign Too Low:	Sign mounted lower than the accepted minimum as described in COP for TTM.
Speed Limits Wrong:	The speed limit (including derestriction) is not appropriate or correct.
Speed Limit Alignment:	The speed limit or location of the speed limit change is not the same for opposing lanes on the same carriageway.
Sign Not Upright:	Signs on a vertical lean outside the maximum permitted in COP for TTM.

(continued on next page)

Non-Compliant Supports:	Using banned supports or supports that fail to meet the requirements of Section B1.6.
Wrong Sign:	The wrong sign has been used e.g. TW-7 sign showing the wrong lane being closed.
Lateral Location:	Signs located too far or too close to the vehicle travel path. This includes signs located on footpaths, cycle lanes and cycle travel paths where other alternative / safer locations exist.

7.2 Delineation Devices

Missing:	No delineation devices on site when they are required.
Tapers Too Short:	Taper has been formed but is too short.
Spacing In Tapers:	Taper has been formed but spacing of delineation devices is too great.
Spacing in Lanes:	Cones placed in rows, which are generally parallel to the centreline, but spacing of delineation devices is too great.
Condition Marginal:	Refer Section C20 Maintenance Standards – for each device.
Condition Unacceptable:	Refer Section C20 Maintenance Standards – for each device.
Using Non-Approved Device:	Delineation or channelling devices that fail to meet the criteria specified in this Code of Practice.
Used Incorrectly:	Using devices incorrectly e.g. barricades in tapers, or cones to fence excavations etc.
Road Marking Incorrect:	Road marking not correctly adjusted at long term Level 2 and 3 temporary traffic management static sites where alterations are required.
Chicane:	Chicane omitted when required for Level 3 temporary traffic management.

7.3 Miscellaneous

Working in Live Lanes:	People associated with the activity are in the live lane outside the established temporary traffic management area.
Flashing Beacons:	Amber Rotating Flashing beacons are not in operation or have been omitted from vehicles where required.
High Vis. Garment Marginal:	Refer Section C20 Maintenance Standards.

(continued on next page)

High Vis. Garment Unacceptable: Refer Section C20 Maintenance Standards, includes jackets that are worn but are not done up.

No Provision for Pedestrians: Footpath blocked by work and neither temporary path nor direction to alternative pedestrian facilities provided.

No Provision for Cyclists: Work in cycle lane or high cycle use area and temporary cycle lanes have not been provided.

Parking/Stopping not relocated: Work encroaches on parking or stopping feature, which has not been relocated to a position clear of the worksite. Such features could include a Taxi Stand, Bus Stop, Loading Zone and a Drop Off area etc.

Surface Hazard: Surface is unacceptably rough and likely to be dangerous for any type of road user for the speed limit, temporary or permanent posted, at the site.

Safety Zones Compromised: Where each safety zones is too small or is missing.

Excavation Not Protected: Refer Section C12.5 An unattended excavation is not protected with a safety fence or other approved method. Safety fences must meet the minimum design requirements specified in Section B6 Safety Fences.

VMS Message Incorrect: VMS displaying incorrect messages in relation to work activities.

Barriers: Includes, missing or incorrect end treatment on barrier, non compliant barriers, end flares too sharp, barrier too close to live lane and barrier not used when required

Note: Multiple defects for this item must be counted individually .

7.4 Mobile and Semi Static Operations

Tail Pilot Vehicle: Missing when required or location (lateral or longitudinal) is incorrect.

Lead Pilot Vehicle: Missing when required or location (lateral or longitudinal) is incorrect.

Shadow Vehicle: Missing when required or location (lateral or longitudinal) is incorrect.

(continued on next page)

Vehicle Mountedand Static Signs:	Signs missing or incorrect when required on mobile operation plant. This item must also be allowed for when Tail Pilot, and /or Lead Pilot and / or Shadow Vehicles have been omitted. This item also includes any "static signs" that must be erected as part of the mobile or semi Static operation.
TMA Missing:	TMA not on mobile operation vehicle(s) when required.
TMA Non-Compliant:	TMA is being used correctly but does not meet the certification for compliance as per the Test level stated in NCHRP 350 and B10 of this Code of Practice.
Arrowboard Missing:	Arrowboard not fitted or uses on mobile operation vehicles when it is required.
Arrowboard Message Incorrect:	Arrowboard is being used but displays the wrong message.

7.5 Site Condition Rating Form

Sheet No. 1 of 2

SITE CONDITION RATING FORM

Auditor

Name _____

Qualification _____

Rego No. _____

Contractor

Name _____

STMS _____

Qualification _____

Rego No. _____

Location _____

Activity _____ Level of TTM

RCA _____ Client

Date & Time _____

High Standard / Acceptable / Needs Improvement / Dangerous

0 - 10 11 - 25 26 - 50 51 +

Audit Result (SCR) _____

Actions Taken _____

TMP Sighted Yes / No

Signs	Points	Tally Box	Total
Missing (including side road)	5 for each sign		
Spacing (too close / far)	2 for each sign		
Not visible	3 for each sign		
Condition marginal	1 for each sign		
Condition unacceptable	4 for each sign		
Order incorrect	2 for each set of signs out of order		
Permanent signs not covered	2 for each sign		
Unapproved signs used / too small	4 for each sign		
Sign on wrong side	2 for each sign		
Sign too Low	1 for each sign		
Speed restriction/derestriction not appropriate / inconsistant	5 for each occasion		
Speed limit not correctly aligned	2 for each occasion		
Sign not upright	1 for each sign		
Non-compliant support	2 for each support		
Wrong sign	5 for each sign		
Lateral location	1 for each sign		
		Subtotal	

Delineation Devices	Points	Tally Box	Total
Missing	30 where delineation is missing and required		
Tapers too short	5 for each taper		
Spacing in tapers	3 for each taper where spacing too great to be effective		
Spacing in lanes	2 where spacing in lanes / around work area is too great		
Condition Marginal	1 for each device where classified in marginal condition		
Condition Unacceptable	3 for each device where classified in unacceptable condition		
Using non-approved device	4 for each non-approved device		
Used incorrectly	2 for each device		
Road marking incorrect	5 where not adjusted at long term sites on Level 2 or 3 roads		
Chicane	10 for each missing or installed incorrectly		
		Subtotal	

Miscellaneous	Points	Tally Box	Total
Working in Live Lanes	20 for each occasion		
Flashing Beacons not Used/Ineffective	1 for each vehicle		
High Visibility Garment not Worn	5 for each individual		
No provision for pedestrians	10 where no provision made and required		
No provision for cyclists	5 where no provision made and required		
Parking/stopping features not relocated	5 where relocation of feature is required but has not been made		
Safety (long) zone compromised	2 for unacceptable or no safety zone		
Safety (lateral) zone compromised	2 for unacceptable or no safety zone		
High visibility garment marginal	3 for each garment classified in marginal condition		
High visibility garment unacceptable	5 for each garment classified in unacceptable condition		
Excavation not protected	10 for excavation not protected by acceptable method		
VMS message incorrect	10 for displaying incorrect information		
Barrier defects	10 for each incorrect or missing barrier component.		
		Subtotal	

Mobile & Semi Statics Operations	Points	Tally Box	Total
Tail pilot vehicle omitted	20 for missing or incorrect location		
Lead pilot vehicle omitted	20 for missing or incorrect location		
Shadow vehicle omitted	20 for missing or incorrect location		
Vehicle mounted signs	5 for missing or incorrect signs		
TMA missing	20 for TMA missing when required		
TMA non-compliant	5 for TMA in use but not of acceptable standard		
Arrowboard missing	20 for arrowboard missing when required		
Arrowboard message	20 for no message or incorrect message		
		Subtotal	
		TOTAL	

7.6 Safety Audit Site Condition Check Sheet

SAFETY AUDIT OF TEMPORARY TRAFFIC MANAGEMENT
SITE CONDITION CHECK SHEET

(Print on back of Site Condition Rating form)

Description of Site activity: .....
.....

Location of Site: .....
.....

Description TTM installed: .....
.....
.....

Prompts **Y / N = Yes / No** **A - S - N = All - Some - None**

Advanced Warning zone:		**Comments:**
• Signage	A - S - N	
• Visibility	A - S - N	.....
• Placement	A - S - N	.....
• Quality	A - S - N	
Direction and Protection zone:		
• **Signage**	A - S - N	
• Visibility	A - S - N	.....
• Placement	A - S - N	.....
• Quality		
• **Delineation**	A - S - N	.....
• Placement	A - S - N	.....
• Quality	A - S - N	.....
• Spaced Correctly	Y / N	
Other issues:		
• Excavations	Y / N	.....
• Pedestrians from work	Y / N	.....
• Pedestrians from traffic	Y / N	.....
• Cyclists from work	Y / N	.....
• Cyclists from traffic	Y / N	.....
• Safety spaces/ zones	A - S - N	.....
• Warning lights	A - S - N	.....
• Vehicles operating with traffic flow	A - S - N	.....
• Vehicles parked with traffic flow	A - S - N	.....
• Vehicles outside zone	A - S - N	.....
• Entering/leaving with traffic flow	A - S - N	.....
• Workers safety	A - S - N	.....
• STMS / TC on site	Y / N	
End of works zone:		
• Sign Placement	A - S - N	.....
• Sign quality	A - S - N	.....

General Observations: .....
.....

APPENDIX D: Measure and Payment for Traffic Management

(guidelines only)

1. Installation and Removal

Payment will be made on a lump sum basis for the:

- Preparation and approval of the Traffic Management Plan and all advertising and notifications necessary.
- Establishment on site of all vehicles, equipment, materials and personnel sufficient to undertake the installation of all traffic management as per the approved Traffic Management Plan.
- Establishment on site of all vehicles, equipment, materials and personnel sufficient to undertake the uplifting and reestablishment of any traffic management measures required as part of the changing road works operation throughout the project.
- Establishment on site of all vehicles, equipment, materials and personnel sufficient to uplift all traffic management measures on final completion as per the approved Traffic Management Plan and leave the site in an equivalent or better condition then originally.

Fifty percent of the payment will be made on successful installation of the first phase of the traffic management plan. The remaining payment will be made on completion of all traffic management activities and tidy up of the site.

2. Maintenance of the Traffic Management Measures

Payment will be made on a daily basis for the duration of the traffic management services. This payment shall cover all costs associated with:

- The daily maintenance of **conforming traffic management** at the site including the supply of all vehicles, equipment, materials and personnel sufficient to maintain the traffic management measures as specified in the accepted traffic management plan.
- Inspections and maintenance of QA records.
- Any other costs associated with traffic management on site that have not otherwise been allowed for.

There will be no payment for any day or days when traffic management occurs on site that does not conform to the signed and accepted TMP. Non-conforming traffic management is deemed to occur when signs, delineation devices and/or any other traffic management equipment are not positioned or used as required by the accepted TMP for any period exceeding the inspection cycle as specified in Table C20.1: Minimum Inspection Frequency of Traffic Management Devices.

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APPENDIX E: NEWSPAPER ADVERTISEMENT STANDARD

Advert Format to be as follows:

Width: Double Column

On Top: Road Controlling Authority Logo

Title: Brief description of the works

Wording "(RCA) ***wishes to advise that, weather permitting,*** (if appropriate) ***the*** (local description of affected road including start and finish points if necessary) ***will be closed between the hours of …….*** (time format to be **9.00 am**) ***and …….*** (time format to be **7.00 pm**) ***on ……***(date format to be **11 April 2000**) ***for ……***(brief description of work).

Where work could be delayed the following provision may also be added:

However if …… (give reasons for possible delay) ***prevents work at these times, work will be carried out on the next available day/night*** (give alternative dates and times as detailed above)***road users are requested to follow the sign posted detours whilst the closure is in operation.***

(RCA) ***regrets any inconvenience caused.***

(Name of RCA Representative)"

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APPENDIX F: NOTICE OF NON-CONFORMANCE

Date of Inspection: ..... Time: .....

Inspected By: ..... Of: .....

Contractor: ..... Contract Number: .....

Site Traffic Management Supervisor: .....

This notice is to inform you that the temporary traffic management at the following work site is not in accordance with accepted traffic management practices:

Road(s): .....

Location: ..... RS ..... RP .....

This notice of non-conformance is issued in respect of the following temporary traffic management defects:

- STMS nominated in TMP not on site
- TC nominated in TMP and briefed by STMS (Level LV and Level 1) not on site
- Copy of signed and approved TMP not on site
- Safety audit of temporary traffic management site condition rating "dangerous"
- Temporary traffic management not in accordance with COP for TTM

(strike out if doesn't apply)

The details of non-conforming temporary traffic management are:

.....

.....

.....

The actions required to be implemented are:

.....

.....

.....

Notice Handed/Mailed/Faxed (circle) to: .....

on:.....(date) at:.....(time)

Signed:	**Received:**
Engineer: / /	Contractor: / /

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APPENDIX G: NOTIFICATION OF ROAD CLOSURE/LANE CLOSURE OF STATE HIGHWAYS/LA ROADS

RCA: _____

Road / SH: _____ RP: _____

Locality: _____

Closed at: _____ am/pm

Date: _____

Reason:

☐ snow ☐ ice ☐ slip

☐ drop out ☐ wash out ☐ flooding

☐ vehicle blockage/crash ☐ toxic spill

☐ crash fatal ☐ planned closure

_____

Other:

Estimated duration closure:

☐ <2 hours ☐ <12 hours

☐ <6 hours ☐ >12 hours (see below)

Closed by:

☐ Police ☐ RCA

☐ Fire Service ☐ Other

Alternative route/s available and conditions that apply:

_____

_____

_____

_____

Reporting Officer: _____

For closures > 12 hours AND crashes/spills

Open at: _____ am/pm Date: _____

Remaining Restrictions: ☐ No ☐ Yes (specify): _____

_____

Work Outstanding: ☐ No ☐ Yes (specify): _____

_____

Reporting Officer: _____ Lane km closed: _____
(divided carriageways only)

Head Office use only: cc ☐ *HCM* ☐ *CE* ☐ *File*

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