



# STATE HIGHWAY

## LOCATION REFERENCING MANAGEMENT SYSTEM (LRMS) MANUAL

**Manual Number:** SM051  
**Effective From:** 1 July 2004  
**Latest Revision:** 1.0

Transit New Zealand  
PO Box 5084  
WELLINGTON  
Telephone (04) 499 6600  
Facsimile (04) 499 6666

**Manual Owner:** Asset Information Manager  
**National Office Contact:** LRMS Administrator  
**Regional Office Contact:** Regional LRMS Champion



**State Highway Management Division**

**Date of issue: July 2004**

**Manual Management Plan for the LRMS Manual**

**Manual Owner:** Chris Parkman (Asset Management Information Manager)

**Sponsor Endorsement:** Dave Bates (National Operations Manager)

**1. Purpose**

This is the Manual Management Plan for the above LRMS Manual.

*[In accordance with Transits ISO 9001 Quality System, Manual Owners are expected to complete this form for all manuals]*

**2. Document Information**

Manual Name	Location Reference Management System Manual
Manual No.	SM 051
Regional Champion	Regional LRMS Champion
Review Team Members	<ul style="list-style-type: none"> <li>• Chris Parkman</li> <li>• Philip Blagdon</li> <li>• Mark Owen</li> <li>• LRMS Champions</li> </ul>

**3. Amendment and Review Strategy**

All Corrective Action/Improvement Requests (CAIRs) suggesting changes will be acknowledged by manual owners.

	Comments	Frequency
Amendments	To be forwarded to Manual Owner	Annually
Review (major changes)	Reviewed in March	Annually

## Foreword

Most aspects of Transit New Zealand's business require accurate and consistent referencing to the State Highway network. To do this Transit New Zealand has used a linear referencing system. However, with the present demands on reliable location data for analysis and management, particularly in computer databases, it is becoming increasingly difficult and costly to manage. The complexities of multi-lane environments and the use of automated data collection devices (SCRIM, High Speed Data) add to the difficulties of locating data on a dynamic network.

This led to the Location Referencing Management System (LRMS) Project, which included:

- The upgrade of the location referencing method (spatial and linear).
- Enhancements to the management procedures to provide a more accurate and consistent referencing system over time.
- Implementation of an improved method and procedures along with the software 'Highways by Exor' for network management.

The previous location referencing system worked well but was not always applied in the correct or consistent manner. Therefore refinements have been made to the location referencing system and a new management process has been introduced to provide quality assurance. This includes controls to ensure that the required work is done at the correct time and in the correct manner.

Transit New Zealand appreciates the input from many interested parties and also thanks the project team comprising HTC Infrastructure Management Limited, MWH New Zealand Limited, Scott Wilson (UK), Africon (South Africa), CJN, Exor and Beca Carter.

This document replaces the current Distance Marking Manual (SM051). It is intended to tie together all aspects of location referencing. To achieve this it looks at the three major elements of the LRMS:

- The Location Referencing Method
- The Location Referencing Procedures
- The LRMS Software.

It also cross-references relevant proforma and maintenance specifications to provide a "one-stop-shop" for location referencing.

Chief Executive

## Document Status

This document has the status of a mandatory guideline as defined in Transit New Zealand's (1993) *Standards, Criteria and Guidelines Manual*.

The objective of the manual is to set out Transit New Zealand's policies and procedures for managing the state highway network in a manner that meets Transit New Zealand's goals.

The content is based on Transit New Zealand's current practices and those developed in the past from experience in managing the network.

While all care has been taken in compiling this document, the Transit New Zealand Authority accepts no responsibility for failure in any way related to the application of this guide or any reference document noted in it. There is a need to apply judgement to each particular set of circumstances.

## **Amendment Procedures**

All future amendments will be issued to manual holders in the form of dated replacement pages. Changes are indicated by a vertical line in the margin. The record of amendment table (see next page) will be updated and reprinted each time a new amendment is released.

The first release of this LRMS Manual (version 1.0) replaced the Distance Marking Manual following extensive re-writing.

Amendments will be distributed to all organisations and individuals on the list of registered manual holders. If you wish to check that you are on this list, or change the number of copies of amendments that are sent to your organisation, please contact:

The LRMS Administrator

Telephone (04) 499 6600

Facsimile (04) 499 6666

**AMENDMENT LIST REGISTRATION FORM**

[**Note** this form **must** be returned to ensure receipt of amendments]

---

To: The LRMS Administrator  
Transit New Zealand  
PO BOX 5084  
WELLINGTON

Please change/add/delete (indicate which) my address for the amendment list for the  
*State Highway LRMS Manual.*

**Current Address:**

---

---

---

**Title:**

---

**Email Address:**

---

New Address:

---

---

---

**Title:**

---

**Email Address:**

---



This page intentionally blank