THE DEVELOPMENT OF A SAFETY MANAGEMENT SYSTEM FOR MARLBOROUGH ROADS
Introduction

- **Road Safety to 2010** identified the development of “Safety Management Systems” for Road Controlling Authorities as one of the prime means of improving Road Safety.

- The LTSA appointed a new Project Manager for SMS Development ~ Bill Greenwood~ in December 2002.

- Opus commissioned by the LTSA to assist Marlborough Roads to develop a “Safety Management System” ~ June 2003.
Introduction

- The Marlborough Roads Safety Management System (SMS) was developed as a “demonstration” SMS.
- The SMS was developed in terms of the LTSA Guidelines for Developing a Safety Management System for Road controlling Authorities.
- The Marlborough Roads Interim “Safety Management System” was completed early September 2003.
- The Marlborough Roads SMS was subjected to a Stage 3 Review ~ 15 December 2003.
What is a SMS?

- A high level over “Umbrella” document.
- The SMS describes how Marlborough Roads will manage all Road Safety aspects that will or could affect the safety performance of the road network under their control.
- Includes the 3 “E’s”
  - Engineering
  - Education, and
  - Enforcement.
What is a SMS?

- However the main focus is on “Engineering”.
- The SMS covers:
  - Design
  - Management, and
  - Maintenance functions.

For State Highways and Local roads

- In the event of any potential claims against Marlborough Roads and the Marlborough District Council the SMS would be used to demonstrate the method to manage safety issues on the road network.

- How does the SMS fit into “the scheme of things”?
Long Term Road Safety
Direction ~ 5 to 10 Years

NZ Land Transport Strategy

Road Safety 2010

Regional Land Transport Strategy 2001 - 2006
And Marlborough Roads - Road Safety Strategy
Means of Achievement for Road Safety (Systems and Processes)

Regional Land Transport Strategy 2001 - 2006
And Marlborough Roads - Road Safety Strategy

Marlborough Roads Safety Management System

Marlborough Roads - Road Safety Plan
Operational Achievement of Road Safety

Marlborough Roads
Safety Management System

- Network Management
- Network Maintenance
- Capital Projects

Safety Management Plan
A complementary Document

Safety Intervention Strategy
A complementary Document

Contract Documents
Alignment of SMS

NZ Land Transport Strategy

Road Safety to 2010

Regional Land Transport Strategy 2001-2006
and Marlborough Roads - Road Safety Strategy

Marlborough Roads SMS

National Direction

Unitary Authority

Joint Road Safety Committee

Marlborough Roads - Road Safety Plan

Engineering Specific + Education & Enforcement

Network Management

Network Maintenance

Capital Projects

Safety Management Plan

Safety Intervention Strategy
Main Users of the SMS

- Marlborough Roads Staff
- Marlborough District Council Staff
- Transit NZ - for this Network area
- NZ Police
- Consultants ~ Network and Project ~
  The SMS will be the prime Road Safety reference in Requests for Tender and Contract Documents.
- Contractors ~ Network and Project ~
  The SMS will be the prime Road Safety reference in Requests for Tender and Contract Documents.
Structure of the SMS

Direction

Means of Delivery

Control

Review

Safety Strategy

Policies Standards Procedures Guidelines

Expertise Experience Qualifications

Management of the System

Audit Regime
Safety Strategy ~ Direction

Direction

Means of Delivery
- Policies
- Standards
- Procedures
- Guidelines

Expertise
- Experience
- Qualifications

Control
- Management of the System

Review
- Audit Regime
Components of the Safety Strategy

- **Vision** – *To reduce the crash rate and enhance road user safety in the region*

- **Mission Statement** – *To manage road hazards by a best value approach to provide a roading network that will achieve no surprises environment for the road user.*

- **Prime Goal** – *Reduce the number of fatalities and the number of hospitalisations resulting from crashes, based on the current crash trends*

- **Goals** – *for Road Safety on the Network are identified on an annual basis, following a review of safety performance in the past year.*
Components of the Safety Strategy

- **Goals** – for Road Safety on the Network achieved by
  - Engineering initiatives
  - Education initiatives
  - Enforcement initiatives

- Key Stakeholders and Partners are identified.

- Progress towards goals – Reviewed on an Annual Basis - Annual audit review
Policies, Standards, Procedures & Guidelines

- These are identified in “Template” form
- Divided by Asset Component Type:
  - Management General – Planning
    Management, Road Safety Hazard
    Database, etc.
  - Management Processes – CRS, Road Safety
    Inspections, Safety Audits, Emergency and
    Incident Management, etc
  - Operations – Potholes, Edge break,
    Drainage, Kerb and Channel, Street
    lighting, etc
Policies, Standards, Procedures & Guidelines

All items with a risk rating of “High” or “Medium” are included in the SMS.

Each Template includes the following information:

- The “Owner” - Person Responsible
- The Principal document reference
- Safety Issues associated with the item
- Purpose / Description
- Legislation
- Standards
- Principal Guidelines
- Policies
Policies, Standards, Procedures & Guidelines

The detail for each template is further subdivided by road classification / hierarchy covering ~ State Highways, Regional Routes, District Arterials, Collector Routes and Local roads ~ and include the following:

- Inspection / Monitoring
- Routine Maintenance
- Emergency Maintenance
- Response
- Capital works
Policies, Standards, Procedures & Guidelines

Example Template
Means of Delivery

- Safety Strategy
- Policies
  - Standards
  - Procedures
  - Guidelines
- Expertise
  - Experience
  - Qualifications

Direction

Means of Delivery

- Management of the System
- Audit Regime

Control

Review
Expertise, Experience & Qualifications

Requirements

• The “ideal” level of competence for each position and activity in terms of Road Safety has been identified

• Competence Level:
  - **Appreciation (A)** ~ Knows who can help and the likely process
  - **Understanding (U)** ~ Understands the process. Can identify appropriate response
  - **Competence (C)** ~ Can develop an appropriate solution. Can identify when expert assistance is required
  - **Expertise (E)** ~ Specialist adviser. Can develop guidelines, can assess the implication of trends and offer options for solutions.
Matrix of Expertise

Used when:
- Engaging Suppliers
- Employing New Staff
- Developing Current Staff
Management of the System

Direction

Means of Delivery

Control

Review

Safety Strategy

Policies Standards Procedures Guidelines

Expertise Experience Qualifications

Management of the System

Audit Regime
Management of the SMS

- Describes :
- Application of the SMS.
- Implementation of the SMS.
- Management Responsibility.
- Management Processes, &
- Opportunities for Improvement (OFI):
  - Reason for required improvement
  - Person responsible for undertaking the improvement
  - Date for action
  - Date Completed
Audit Regime

Direction

Means of Delivery

Control

Review

Safety Strategy

Policies
Standards
Procedures
Guidelines

Expertise
Experience
Qualifications

Management of the System

Audit Regime
Audit Regime

SMS Audited in Two Stages

Stage 1 Technical Effectiveness

Internal Audit in Feb each Year

- Progress towards Targets - KPI's, KPM's
- Suitability of Targets
- Funding / needs
- Adequacy of SMS
Audit Regime

Stage 2 Systems Compliance ~

External Audit August each Year

- Currency of SMS components
- Implementation of SMS
- Adherence to Procedures and Guidelines
- Adoptions of "Opportunities for Improvements".
Audit Regime

- **Audit Team will include:**
  - LTSA Regional Engineering Manager or representative
  - Manager Marlborough Roads or representative
  - Network Consultant – Team Leader/ Road Safety Manager
  - Transit NZ representative

- **Audit Team may include:**
  - Network Maintenance Contractor
  - Manager, Asset and Services MDC
  - Independent Auditor ~ from another RCA or Consultant
Audit Regime

- Auditors will report on:
  - Review of previous audits
  - Progress towards Road Safety Targets
  - Outcomes of KPI’s set in the Road Safety Strategy section
  - Highlight areas of High Compliance or Non Compliance
  - Summarise actions to address Non Compliance
  - Recommendations for the development of new or updated policies, standards, guidelines, specifications and strategies
Comparison of the Marlborough Roads SMS and the Transit NZ SMS

- A review of the two documents has been undertaken.
- The Marlborough Roads SMS fully complies with the requirements of the Transit NZ State Highway Safety Management System Manual and in many cases exceeds the Transit NZ’s requirements.
~ Where to from here ~
Stage 3 Review ~ Dec 2003

Issues Identified to complete SMS

- Memorandum of Understanding (LTSA / MR) to be signed
- SMS Document Endorsement ~ OFI
- Add “Enforcement” and “Education” to Legislative Links flow chart ~ OFI
- Develop a “Family Tree” showing the management setup of Marlborough roads ~ OFI
- Minor OFI’s
Stage 3 Review ~ Dec 2003

Issues Identified

Target the development of companion Operational link documents:

- **Safety Management Plan (SMP) ~**
  - Developed in conjunction with Network Management Consultant
  - Complies with Transit NZ SHAMM Section 2
  - Describes the day to day management of the network with respect to Road Safety including:
    - Day, Night and Side road Safety Inspections
    - Fatal and High Profile serious crash investigations and reporting
    - Grey and Black spot studies
    - Development and Management of prioritised Road Safety Hazard register
Issues Identified

Target the development of companion Operational link documents:

- **Safety Intervention Plan (SIP) ~**
  - Developed in conjunction with Network Maintenance Contractor
  - Complies with SHAMM Section 2
  - Describes the day to day activities of the Maintenance Contractor with respect to “Safety Maintenance” and Road Safety issues, including:
    - Inspections
    - Work Prioritising and programming
    - Treatment Selection
    - Work Execution
    - Monitoring and recording
    - Maintenance of the Recurring Hazard Register
Implementation of the Marlborough Roads SMS

- Distribute copies of the SMS for review and comments.
- Release the SMS as a “Final” document (Interim Tag removed).
- Include the SMS as a requirement/reference in future Contracts, Consents for Work on the Road, issued by Marlborough Roads and the Marlborough District Council.
- Include the SMS in Marlborough Roads and the Marlborough District Council operational procedures/documents.
Thank You

Any Questions