Safety Management Plan

For

Network Outcomes Contract

click and type contract name

click and type date of issue

click and type document reference

**MARCH 2016**

This is a template to be used to prepare a Network Safety Management Plan for Network Outcomes Contract.

All notes highlighted yellow should be deleted or edited and should not form part of the plan without modification.

Template version 4.0, March 2016

Record of amendment

|  |  |  |  |
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GLOSSARY

|  |  |
| --- | --- |
|  |  |
| ACC | Accident Compensation Corporation |
| CAR | Corridor Access Request |
| CAS | The NZ Transport Agencies Crash Analysis System |
| CMT | Contract Management Team |
| CoPTTM | Code of Practice for Temporary Traffic Management |
| CRS | Crash Reduction Study |
| EPPP | Emergency Procedures and Preparedness Plan |
| KAT | The NZ Transport Agencies KiwiRAP Assessment Tool |
| MOT | Ministry of Transport |
| MMP | Maintenance Management Plan |
| NOC | Network Outcomes Contract |
| OPM | Operational Performance Measures |
| RAMM | Road Asset Maintenance and Management system |
| RAPT | Review and Prioritisation Team  |
| RMP | Risk Management Plan |
| SCRIM | Sideway force Coefficient Routine Investigation Machine |
| SHSNMAM | State Highway Safe Network Management Activity Manual |
| SMP | Safety Management Plan |
| Transport Agency | NZ Transport Agency |
| TTM | Temporary Traffic Management |

# 1. Plan Context

## 1.1 Purpose

Network safety is part of the Principal’s network management objectives under the Safer Journeys Strategy, and is defined in the NOC Maintenance Specification (Volume 4, Section 5) as:

* *The Principal wishes to minimise disruption to the road users, and maximise its customers’ experience of safe, efficient and enjoyable journeys within the network.*

The purpose of the Safety Management Plan (SMP) is to guide and encourage a responsible attitude towards the Principal’s objective on achieving network safety through a Safe System approach. To achieve this the Contractor will:

* *Maintain the infrastructure in a serviceable condition so that it performs its role well*
* *Identify opportunities to improve the safety of the network and incorporate Safe System measures where it is effective and efficient to do so*
* *Have available suitably trained personnel who could be included in Safe System and Crash Reduction Studies activities.*

The SMP integrates the Contract’s performance framework requirements with the Contractor’s and Principal’s systems.

The Principal and Contractor will work collaboratively to develop the SMP and both parties can expect that there will be changes in network safety management best practice over the duration of the Contract. To this end open communication is encouraged to ensure that any changes positively enhance the management of network safety outcomes. This is a live document for all personnel working on the Contract, and will be owned and updated annually by both the Principal and Contractor to ensure current procedures and processes are reflected.

This SMP should be read in conjunction with the other Contract Plans that detail roles, responsibilities, and definitions applicable to this plan.

## 1.2 Specific Outcomes

The specific outcomes of this plan are to provide and show the following:

1. The key personnel who are responsible for safety management and information and lines of responsibility.
2. Evidence that Contractors staff have attended and met the training requirements of relevant workshops/ conferences that will enable them to undertake the activities listed in this manual and are suitably qualified to undertake a variety of activities which could be assigned and how this will be maintained throughout the Contract Period.
3. The Contractor’s safety inspection and audit programme.
4. How Temporary Traffic Management will be employed.
5. How data will be collected from the variety of different sources, including road inspections, crashes and information from key stakeholders and the public.
6. The process and activities that will be used to update databases and tools.
7. How data will be analysed. Analysis can include using data, tools and activities that have been developed for pavement and geometry programmes, various crash and safety reports and system tools, and using analysed information from key stakeholders.
8. Crash trend analysis by type, road class and severity, comparison of crash rates with national averages for example.
9. The procedures that will be undertaken during the design and construction of all pavement renewals to impart a high degree of confidence that safety design elements have been considered.
10. How specific safety projects (maintenance or capital) will be identified, using specific activities (i.e. CRS, Network trend analysis, KiwiRAP) and analysed further to compare to other safety projects on a national level and then assigned within the programme of works. Data programmes such as the Safety improvement and prioritisation databases and the KAT tool and liaison with key stakeholders will help plan and programme work.
11. Once safety projects have been programmed for implementation how they may be designed and delivered to ensure appropriate standards.
12. Once safety projects have been delivered, what methods can be used to help evaluate and monitor projects effectiveness, and determine whether the design is achieving the outcomes anticipated?
13. How the SMP links with the national policies and strategies the RMP, MMP and in particular the Safety Strategy.

# 2. Standards, Certification, Software

## 2.1 Standards

Refer to the SHSNMAM for the relevant standards applicable to this Contract.

|  |  |
| --- | --- |
| **Standard** | **SHSNAM reference** |
| NZTA M/23Barriers |  |
| Geometric Design Guide |  |
| NZTA to List the standards |  |
|  |  |
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## 2.2 Certification

The following certifications or knowledge are required to be demonstrated by any person who is undertaking a specified activity.

|  |  |  |
| --- | --- | --- |
| **Activity** | **Requirement** | **Notes** |
| Barrier Construction | Road Safety Barriers Constructors Course |  |
| Barrier Design | Road Safety Barriers Design Course |  |
| CAS Access | License issued by NZTA | Apply at service@nzta.govt.nz |
| COPTTM Implementation | NZTA Certification | Various levels of training. |
| Crash Reduction Studies | Safe System Engineering Workshop |  |
| RAMM Updating | RAMM Accreditation Level 2 |  |
| KiwiRAP/KAT Access | None (system understanding only) | Open Microsoft Internet Explorer and navigate to the following URL:<https://glsgwpro01.transactpro.nzta.govt.nz/portal/Portal.aspx>Select the ‘Request Access’ button on the IAM gateway page |
| SafetyNET Access | None (system understanding only) |  |

## 2.3 Software

Below is a list of software that is used in the management of this contract.

These applications may or may not be used, upgraded, added to or superseded by more suitable software to achieve the desired or agreed format as required by the contract deliverables.

|  |  |  |
| --- | --- | --- |
| **Software** | **Owner / Operator** | **Contractor required to provide input** |
| CAS | Ministry of Transport | No[[1]](#footnote-1) |
| KiwiRAP | NZ Automobile Association, Transport Agency, Ministry of Transport, ACC and NZ Police | Yes, for engineering updates |
| RAMM | RAMM Software Ltd | Yes |
| SafetyNET | Abley Transportation Consultants Ltd | No |
| SWIPP | Transport Agency | Yes |
| Add any relevant others |  |  |

# 3. **Roles, Responsibilities and People**

## 3.1 Roles and People

Key personnel both Principal and Contractor staff who are responsible for safety management and information.

|  |  |  |
| --- | --- | --- |
| **Role** | **Person** | **Responsibility** |
| NZTA Staff |  |  |
| Regional Safety Engineer | person name | Review and audit of network safetyReview and audit of safety worksAttends Local Authority Safety Meetings |
| Maintenance Contract Manager | person name | Ensures Contract network safety requirements managed. |
| Network Manager | person name | Approves safety works programme for construction |
| Journey Manager | person name | Customer & Stakeholder Interface |
| NZTA to complete |  |  |
| Contractor Staff |  |  |
| Traffic & Safety Engineer | person name | Network safety managementSupport the Principal to develop the Safety Projects programmeManage and review of safety works design.Update databases |
| Contract Manager (Team leader) | person name | Ensure safety works are delivered and to the required quality |
| Engineering Technician | person name | Delegated safety tasks & duties. |
| Design Engineer | person name | Design of safety works |
| Geometric Design Engineer | person name | Design of safety works |
| Inspectors | person name | Network inspections |
| Contractor to complete |  |  |
|  |  |  |

## 3.2 Certification/Qualification

List of all NZTA and Contractors staff who have the required certifications/qualifications.

|  |  |  |
| --- | --- | --- |
| **Certification/Qualification** | **Person** | **Expiry Date** |
| NZTA Staff |  |  |
| Safe System Engineering Workshop |  |  |
| Road Safety Barriers Design Course |  |  |
| NZTA to complete |  |  |
| Contractor Staff |  |  |
| Road Safety Barriers Installation and Maintenance Inspections Course |  |  |
| Road Safety Barriers Design Course |  |  |
| CAS License |  |  |
| COPTTM |  |  |
| Safe System Engineering Workshop |  |  |
| Contractor to complete |  |  |

## 3.3 People Development Plan

List of all Contract staff who are working towards the required certifications/qualifications.

|  |  |  |
| --- | --- | --- |
| **Certification/Qualification** | **Person** | **Due Date by** |
| NZTA Staff |  |  |
| Safe System Engineering Workshop |  |  |
| Road Safety Barriers Design Course |  |  |
| NZTA to complete |  |  |
| Contractor Staff |  |  |
| Road Safety Barriers Installation and Maintenance Inspections Course |  |  |
| Road Safety Barriers Design Course |  |  |
| CAS License |  |  |
| COPTTM |  |  |
| Safe System Engineering Workshop |  |  |
| Contractor to complete |  |  |
|  |  |  |
|  |  |  |

# 4. Development and Delivery Process

***The SMP development and delivery process is defined in the SHSNMAM as:***



***These processes are further outlined as follows.***

## 4.1 Collect Data

### 4.1.1 Inspections

This section outlines the various inspections of the network that are to be undertaken. A programme of inspections should be developed and agreed annually. The programme should then monitor against delivery and safety opportunities reported on to demonstrate effectiveness.

| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| --- | --- | --- | --- | --- |
| Maintenance:Asset handover Inspection | Associated with handover of the network from incumbent contractor | **Joint Inspection**NZTAIncumbent ContractorNew Contractor | 4 weeks before date of possession | Agree the extent of work required to be completed by incumbent contractor before possession of site. |
| Maintenance: Routine Contract Inspections - Daytime | Identify faults for programmed repair. These may result in immediate corrective actions | **Contractor:**Inspectors Traffic & Safety Engineer | State contract requirement by road class | Contractor to detail process, data repository and prioritisation strategy. (This could be linked to the MMP so detail appropriate section) |
| Principal to inspect network for safety and monitor the Contractor’s progress and performance | **NZTA:**Network ManagerRegional Safety Engineer Maintenance Contract Manager | Define a frequency | Principal to detail process |
| Maintenance: Routine Contract Inspections – Night-time | Inspections to focus on delineation, lighting and sign visibility  | **Contractor:**Inspectors Traffic & Safety Engineer | Twice Yearly or as per contract requirement | Contractor to detail process, data repository and prioritisation strategy. |
| Maintenance: Bridge & Other Structures | Routine Surveillance Inspections – Safety related items | **Contractor:**Contract Manager (Team leader)Engineering Technician**NZTA:**Maintenance Contract Manager | State contract requirement by road class | Contractor to detail process, data repository and prioritisation strategy. (This could be linked to the MMP so detail appropriate section) |
| Safety: Coordinated Inspections – CMT Team | CMT visit network to discuss safety issues on-site and confirm FWP and project prioritisation | **CMT Team** | Quarterly | Collaboratively detail how the safety Improvements database will be used to identify inspection sites  |
| Safety: Coordinated Inspection – Contract Board | General network Inspection | Contract BoardMaintenance Contract ManagerContract Manager | Annually | Agree an approach to ensure the Board is aware of safety concerns on the network |
| Safety: Unscheduled Inspections | Before and/or after a significant event (these may be undertaken as joint inspection) or for specific data collection.  | **Contractor:**Inspectors Contract ManagerSuitably Qualified Inspector for selected task**NZTA:**Maintenance Contract Manager | Principal Request | Contractor to detail process and prioritisation strategy (This could be linked to the EPPP so detail appropriate section) |
| Safety: Asset Hand Back. Capital Projects | Stage 4 Safety Audit | **Contractor:**Traffic & Safety Engineer**NZTA:**Network ManagerRegional Safety Engineer  | Principal Request | Contractor to detail process, suitable personnel and reporting outputs.Principal to provide detail on when a stage 4 safety audit will be undertaken |
| To ensure the asset to be handed over is fit for purpose | **Joint Inspection** | Principal Request | Identify the list of defects and agree any work required to be completed before handover of site. |
| Pavement: Pavement Rehabilitation Safety Assessment  | Identify safety improvement opportunities for approved rehabilitation sites | **Contractor**Traffic & Safety Engineer | All approved rehabilitation sites | Safety Assessment form is completed for each site |
| Safety Audits | **Joint Inspection** | Principal Approved | Detail the process when the contractor considers it appropriate to undertake a safety audit of a rehabilitation site.Principal to provide the approval process and expected detailed report  |
| Safety | Road Safety Theme Inspections & Reporting | **Contractor:**Traffic & Safety Engineer | Principal Request | Principal to provide the scope and reporting requirements. |
| Pavement: SCRIM Inspection | Field inspect and assess each site in accordance with T/10 | **Contractor** | Annually | Contractor to detail process, data repository and prioritisation strategy. (This could be linked to the MMP so detail appropriate section) |
| Priority A Site Validation | **Joint Inspection** | Annually within 3 months of SCRIM exception report | Provide a final report which confirms completion of programme |
| Pavement: Review & Prioritisation Team | An annual network tour alongside the NZTA’s RAPT to set overall project priorities, including safety projects. | **Contractor:**Traffic & Safety EngineerContract Manager (Team leader)**NZTA:**Regional Safety Engineer Maintenance Contract ManagerNetwork Manager | Annually | Collaboratively provide network information to RAPT for assessment |
|  | [Additional Inspections from tender submission]  |  |  |  |

### 4.1.2 Crashes

This section describes the various crash related report types.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Safety Studies (Crash Reduction Studies) | Crash reduction study to identify areas for further action. | **Contractor:**Traffic & Safety Engineer | Principal Request | Contractor to detail process  |
| Fatal and Serious Crash Reporting | Fatal | **Contractor:**Traffic & Safety Engineer**NZTA:**Principal to review and accept final report | After a Fatal Crash. | Contractor to detail process An initial report required within 24 hours, with a full report required within 10 daysReport content as per NOC Reference Section 5.5.6, Appendix 5.5  |
| Fatal and Serious Crash Reporting | Serious & Other (Where road deficiencies are a factor) | **Contractor:**Traffic & Safety Engineer**NZTA:**Principal to review and accept final report | When requested by Principal. | Principal to specify likely situationsContractor to detail process An initial report required within 24 hours, with a full report required within 10 daysReport content as per NOC Reference Section 5.5.6, Appendix 5.5 |
| Safety Reporting and Monitoring | Item specific reports. | **Contractor:**Traffic & Safety Engineer | Principal Request | Contractor to detail process |
| Network Safety Trend Reporting and Monitoring | Report required to update crash data trends and update on all network safety related items and works. | **Contractor:**Traffic & Safety Engineer | Quarterly | Contractor to detail process |
| Updating KiwiRAP (KAT)  | KAT update to reflect safety projects completed. | **Contractor:**Contract Manager (Team leader) | Principal Request | Contractor to detail process |
| CAS Database | Crashes updated into CAS | **Principal:**(need to confirm responsibility)**Contractor:**Traffic & Safety Engineer | Monthly | Contractor to ensure and confirm that all reported crashes have been loaded into CAS |
| Safety Reports | Update Crash Section of monthly report with relevant details | **Contractor:**Traffic & Safety Engineer | Quarterly | Principal and Contractor to agree detail and format of information |

### 4.1.3 Information from key stakeholders and public

This section describes the various methods of obtaining information from outside sources.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Road Safety Action Plan Meetings and Liaison Groups | Feedback on safety from customers at these meetings must be reviewed and any safety measures for implementation recommended. | **Contractor:**Traffic & Safety Engineer**NZTA:**Regional Safety Engineer | Principal Request | Collaboratively detail the process |
| Coroners reports (part of fatal & serious crash reporting) | The contractor must review coroner reports and recommend to the Principal for implementation any safety measures. | **Contractor:**Traffic & Safety Engineer | Principal Request | Contractor to detail process |
| Stakeholder and Partnership Arrangements | Attend any road safety forums to represent the network management. | **Contractor:**Traffic & Safety Engineer**NZTA:**Regional Safety Engineer  | Principal Request | Collaboratively detail the process |
| Feedback Forms | Feedback on safety from customers must be reviewed and any safety measures for implementation recommended | **Contractor:**Traffic & Safety Engineer**NZTA:**Regional Safety Engineer  | Principal Request | Collaboratively detail the process |
| [Additional information sources from tender submission] |  |  |  |  |

## 4.2 Analyse Data

### 4.2.1 Pavement/Geometry

This section outlines what analysis is required of available road data and the available tools.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Skid Resistance Management (RAMM) | Review of annual SCRIM report in accordance with NZTA T/10 and programme works. | **Contractor:**Contract Manager (Team leader) | Annually | Contractor to detail process may be covered in MMP so reference section |
| KiwiRAP Assessment Tool (KAT) | Review of the network’s ratings from KiwiRAP to check alignment with knowledge of network and programmed works. | **Contractor:**Traffic & Safety Engineer | Annually | Contractor to detail process |
| Highway Information Data (Tools) | Review of the network’s highway data to check alignment with knowledge of the network and programmed works. | **Contractor:**Traffic & Safety Engineer | Annually | Contractor to detail process |

### 4.2.2 Crash Data Analysis

This section outlines what tools are available to analysis the available crash data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| SafetyNET (Tools) | Identify high crash risk areas through this tool (combination of KiwiRAP and CAS). | **Contractor:**Traffic & Safety Engineer | Quarterly | Contractor to detail process |
| CAS (Tools) | Review crash data for trend analysis as part of Safety Reporting and Monitoring. | **Contractor:**Traffic & Safety Engineer | Quarterly | Contractor to detail process |
| KiwiRAP Assessment Tool (KAT) | Analysis the risk rating on sections of road and the predicted effect of safety improvement works. | **Contractor:**Traffic & Safety Engineer | Annually | Contractor to detail process |
| Crash Reduction and Modification | Review of previous CRS studies to identify and plan works. | **Contractor:**Traffic & Safety Engineer | Principal Request | Contractor to detail process |
| High Risk Guides (Tools) | Identify high crash risk areas through these guides | **Contractor:**Traffic & Safety Engineer | Quarterly | Contractor to detail process |

### 4.2.3 Information from key stakeholders and public

This section outlines what analysis is required of information from outside sources.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Road Safety Action Plan Meetings | Review feedback on safety from customers and recommend any safety measures for implementation. | **Contractor:**Traffic & Safety Engineer**NZTA:**Regional Safety Engineer | Principal request | Collaboratively detail the process |
| Coroners reports (part of fatal & serious crash reporting) | Review coroner reports and recommend safety measures for implementation. | **Contractor:**Traffic & Safety Engineer | Principal request | Collaboratively detail the process |
| Feedback Forms | Review feedback on safety from customers and recommend any safety measures for implementation. | **Contractor:**Traffic & Safety Engineer**NZTA:**Regional Safety Engineer | Principal request | Collaboratively detail the process |

## 4.3 Plan and Programme

### 4.3.1 All Data

This section describes what systems and tools should be used to programme safety works.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Safety Improvement Database | Develop and maintain a register of potential safety improvements that could be put into the Safety Projects Programme | **Contractor:**Contract Manager (Team leader) | Ongoing | Contractor to detail process |
| Safety Projects Programme (SWIPP) | Update SWIPP register with project information. | **NZTA:**Regional Safety Engineer**Contractor:**Traffic & Safety Engineer | Principal Request | Collaboratively detail the process |
| KiwiRAP Assessment Tool (KAT) | Update KAT. | **NZTA:**Regional Safety Engineer**Contractor:**Traffic & Safety Engineer | Annually | Collaboratively detail the process |
| 10 Year Programme Capital & Safety Works | Review and understand programme to coordinate safety and maintenance works. | **NZTA:**Network Manager**Contractor:**Contract Manager (Team leader) | Annually | Collaboratively detail the process |

### 4.3.2 Liaison

This section outlines what parties will be consulted with in the identification of issues safety planning thereby ensuring a joint approach to the treatment philosophy.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Road Safety Action Plan Meetings | Produce any reports required for the meeting, then attend alongside the Principal. | **Contractor:**Traffic & Safety Engineer**NZTA:**Regional Safety Engineer | Principal Request | Principal to detail the process |
| Safety Meetings | In-house meetings to discuss safety issues, agree actions, and review works. | **NZTA:**Regional Safety Engineer Maintenance Contract Manager**Contractor:**Traffic & Safety EngineerContract Manager (Team leader) | Quarterly | Collaboratively detail the process |
| Stakeholder and Partnership Arrangements | Attend any road safety forums to represent the network management. | **Contractor:**Traffic & Safety Engineer | Principal Request | Principal to detail the process |

## 4.4 Design and Deliver

### 4.4.1 Policy, Standards and Guidelines

This section outlines elements of the Contract where network safety must be considered.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| Safe System Design | For the development of any new or reconstructed road, maintenance or capital works projects. | **Contractor:**Design Engineer**NZTA:**Regional Safety Engineer | Principal request | Principal to detail process |
| Traffic Control Devices | Devices are to be protected. | **Contractor:**Contract Manager (Team leader) | Ongoing | Contractor to detail process |
| Land Development and Access  | Coordinate, manage and review all activities that require road access through the RAMM CAR manager. | **Contractor:**Contract Manager (Team leader) | Ongoing | Collaboratively detail process |
| Active Road Users  | Support the safety of pedestrians, cyclists and mobility scooter users. | **Contractor:**Design EngineerTraffic and Safety Engineer | Principal request | Principal to detail process |
| Planning Assessment Report | Report on the network safety component. | **Contractor:**Traffic & Safety Engineer | Principal Request | Principal to detail process |
| Active Road Users (Temporary Traffic Management - TTM and Safety of Work-sites) | Review, approve and audit all TTM in accordance with COPTTM. | **Contractor:**Contract Manager (Team leader) | Ongoing | This will be linked to the Traffic Control Plan so detail appropriate section |
| Geometric Design | Apply geometric standards for pavement rehabilitation design, and provide safety improvement initiatives via the safety assessment form. | **Contractor:**Design Engineer | Principal request | Collaboratively detail process |

## 4.5 Evaluate

### 4.5.1 General

This section outlines how network safety is evaluated.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Description** | **Who** | **Frequency** | **Expected Action and Outcome** |
| CAS (Monitoring Tools) | Review of the network safety trend reports, and if required undertake further work. | **NZTA:**NZTA Safety Manager**Contractor:**Traffic & Safety Engineer | Quarterly | Collaboratively detail this process. |
| KiwiRAP Assessment Tool (KAT) | Assessment of network safety by KiwiRAP. | **NZTA:**NZTA Safety Manager**Contractor:**Traffic & Safety Engineer | Annually | Collaboratively detail this process. |
| Safety Works investment Prioritisation Process (SWIPP) | Review of the SWIPP list and guidance to the Principal on any amendments. | **Contractor:**Traffic & Safety Engineer | Principal Request | Principal to detail process |
| Evaluation, Review and Improvement | Through the OPM process the Contractor and Principal evaluate network safety performance. | **Contractor:**Contract Manager (Team leader)**NZTA:**Maintenance Contract Manager | Monthly | Collaboratively detail this process. |

# Appendices

# Appendix A. Requirements Checklist

[This checklist is to be filled in, which will allow the reviewer of the Safety Management Plan to clearly establish if the minimum requirements have been complied with]

|  |  |  |
| --- | --- | --- |
|  | **Included**  | **Comment** |
| **Yes**  | **No**  |
| **1. Context** |
| 1.1 Purpose of Plan |  |  |  |
| 1.2 Specific Outcomes  |  |  |  |
|  |
| **2. Standards, Certification, Software** |
| 2.1 Standards |  |  |  |
| 2.2 Certification |  |  |  |
| 2.3 Software |  |  |  |
|  |
| **3. Roles, Responsibilities and People**  |
| 3.1 Roles and People |  |  |  |
| 3.2 Certification/Qualification |  |  |  |
| 3.3 People Development Plan  |  |  |  |
|  |
| **4. Development and Delivery Process** |
| 4.1 Collect Data |  |  |  |
| 4.1.1 Inspections |  |  |  |
| 4.1.2 Crashes |  |  |  |
| 4.1.3 Information from Key Stakeholders and Public |  |  |  |
| 4.2 Analysis Data |  |  |  |
| 4.2.1 Pavement/Geometry |  |  |  |
| 4.2.2 Crash Data Analysis |  |  |  |
| 4.2.3 information from key stakeholders and public |  |  |  |
| 4.3 Plan and Programme |  |  |  |
| 4.3.1 All Data |  |  |  |
| 4.3.2 Liaison |  |  |  |
| 4.4 Design and Deliver |  |  |  |
| 4.4.1 Policy, Standards and Guidelines |  |  |  |
| 4.5 Evaluate |  |  |  |
| 4.5.1 General |  |  |  |
|  |  |  |  |

# Appendix B. List of Other Contract Plans

1.Health and Safety Management Plan (HSMP)

2. Quality Management Plan (QMP)

3. Traffic Control Plan (TCP)

4. Environmental and Social Management Plan (ESMP)

5. Customer and Stakeholder Communication Management Plan (CSCMP)

6. Risk Management Plan (RMP)

7. Emergency Procedures and Preparedness Plan (EPPP)

8. Maintenance Management Plan (MMP).

# Appendix C. Safety Strategy

(To be developed and supplied by NZTA Regional Road Safety Engineers)

1. It is the contractors responsibility to inform the NZTA of any discrepancies within CAS (such as an incorrect location of a crash) to ensure that the data is robust [↑](#footnote-ref-1)