SARF Road Safety Audit Course
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Course content and Program

Prepared by

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SANRAL
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SARF
better roads

Prepared for:
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5 Day Course Content

Course structure

The course content presented below provide an overview of the road safety appraisal and audit process as well as the background required to manage the process. The course is structure so that the first two days can be presented as a separate course

First Two-days*: Understanding and managing road safety audits*

- The first two-day course is aimed at
  - professionals involved in road safety studies,
  - professionals involved with road designs and maintenance,
  - public sector officials responsible for the management, maintenance or provision of roads,
  - law enforcers who need to gain an understanding of the purpose and scope of road safety audits and appraisals, or
  - any individual vested in the management or betterment of road safety, interested in furthering their technical knowledge of the road safety field with a focus on the road environment itself.
- It is recommended for senior managers at road authorities or in the private sector involved in the roads design and/or road safety field/s. It would include individuals who need to procure road safety services from professionals or those who would manage staff responsible for the supervision or execution of road safety audits.
- The two-day course is therefore most suitable for individuals who would typically not become directly involved in the process of conducting road safety audits themselves.
- The two-day course is critical for any individuals who need to appoint specialist road safety audit teams, in order to gain an understanding of the process and outcomes of a road safety audit. An understanding of the requirements and skills required in a road safety audit team, as well as the content of a typical road safety audit Terms of Reference will be gained.
- This course will also be useful to introduce junior technical staff involved in the road safety environment or geometric design engineers who want to gain a general understanding of the road safety audit process.

Full five days*: Understanding, managing and conducting road safety audits*

- The five-day course is aimed at individuals who intend to become involved in the execution and sign-off of formal road safety audits.
- The first two days of the course, provide an overview and introduction to the detailed road safety course content which will be covered in days 3 to 5.
- Delegates will be guided through the varied aspects of a road safety audit process, whilst being required to complete a road safety audit assignment in class as part of a road safety audit team.
- The attendance of the first two days of the course is a pre-requisite for the attendance of days 3 to 5.
- Day 3 to 5 broadly entails the following:
  - Teams will be guided through a step by step process of conducting a RSA;
  - Teams (5 to 6 people per team) will complete an assignment in class;
  - Each team will have a unique assignment (based on a real-life situation);
  - The class practical assignments will be preceded by the theory and practical examples related to the tasks to be conducted.
  - On completion of the 5-day course, delegates will be required to complete a road safety audit project of their choice at their own time and submit a RSA report for review.

1 Course programme and content

Day 1 - Understanding and managing RSAs

DAY 1 - UNDERSTANDING AND MANAGING ROAD SAFETY AUDITS/APPRAISALS (RSAs)			
	8:00 to 8:30	Registration and Reception	
Day 1, Session 1 (1.1)	8:30 to 9:00	Course introduction	Introduction to the scope and the purpose of the RSA, including: • SARFs involvement in the promotion of road safety • Introduction to presenters Course overview: • Highlights of the content • Course accreditation (CPD points etc.) • Road Safety Terms and Definitions
1.2	9:00 to 9:30	Road safety context	Setting the scene: • Road safety context in Southern Africa • Crash data and road user information
1.3	9:30 to 10:15	Systems approach	The holistic approach to road safety: • 3Es • 6Es • Haddon Matrix • Safe Systems Framework Roles and responsibilities: • Stakeholders – government, institutional and private
	10:15 to 10:45	Break and refreshments	
1.4	10:45 to 11:30	Understanding road safety risks	What is a crash? Contributing factors to crashes Crash definitions (fatal, serious, minor) What influence crash likelihood and severity. Road safety risk rating.
1.5	11:30 to 12:15	Introduction to Road Safety Audits and Appraisals	Road safety appraisals vs road safety audits: • RSA guideline document (RTMC's Road Safety Audit Manual) • RSA stages • RSA process
	12:15 to 13:00	Lunch	
1.6	13:00 to 13:45	The Need for and Legal Implications of RSAs	SA Road Safety Strategy 2016- 2020 Are road authorities compelled to do road safety audits? • What is the implication if a RSA has been conducted:
1.7	13:45 to 14:30	Expected outcome of a RSA	Benefits of a Road Safety Audit Expected outcome of a Road Safety Appraisals and Audits Client response required
	14:30 to 15:00	Break and refreshments	
1.8	15:00 to 15:30	Terms of reference for a typical RSA	Requirements for the compilation of an RSA. Typical TOR, including the specification of the RSA team. • Commissioning a RSA The importance of selecting the correct audit team
1.9	15:30 to 16:00	Accreditation of Road Safety Auditors	Status of RSA accreditation. Accreditation options.
	16:00 to 16:30	Discussion & closure	Q&A, General discussion

Day 2 – Road safety audit and appraisal process

DAY 2 – ROAD SAFETY AUDIT AND APPRAISAL PROCESS			
2.1	8:30 to 08:45	Recap of Day 1	Recap of day 1, including a questions and answers session.
INTRODUCTION TO ROAD SAFETY ENGINEERING CONCEPTS			
2.2a	8:45 to 9:45	Road Safety Engineering Concepts	Part 1
2.2b	9:45 to 10:30	Road Safety Engineering Concepts	Part 2
	10:30 to 11:00	Break and refreshments	
CONDUCTING A ROAD SAFETY AUDIT			
2.3	11:00 to 11:30	Project inception & The Audit Team	• Commissioning the Audit • Select and approve audit team • Audit Brief • Commencement Meeting
2.4	11:30 to 12:15	Information Review and Site Inspection	• Information Review • Relevant data: Traffic surveys, Crash Data, Infrastructure & Environment • Site inspection
	12:15 to 13:00	Lunch	
2.5	13:00-14:30	Identification and evaluation of road safety risks	Identification and evaluation of road safety risks. Road safety risks ratings.
2.6	14:30 to 14:45	Report content and structure	Typical RSA report structure and content Presentation of findings Classification of risks (fatal & serious risk, vs minor injury risks) Focus on critical risks
	14:45 to 15:15	Break and refreshments	
2.7	15:15 to 15:45	Technology and useful resources	Use and applicability of technology and electronic tools in Road Safety Audits: • Netsafe (SANRAL) • iRAP Useful resources – reference documents and website.
	15:45 to 16:00	Closure	General discussion and closure of day 2

Day 3 – Conducting a RSA

DAY 3 – CONDUCTING A ROAD SAFETY AUDIT/APPRAISAL			
3.1	8:30 to 8:40	Structure and content of day 3 to 5	
3.2	8:40 to 8:45	Group Assignment 5: - Developing a TOR for an RSA	Overview of the requirements for Group Assignment no 5 to be completed on day 5.
3.3	8:45 to 9:00	Recap of the road safety process (15 minutes)	Recap of the RSA stages and process
3.4	9:00 to 9:45	Planning road safety	• Land use planning and road safety • Impact of road hierarchy on road safety • Importance of access management • Importance of planning for NMT and other modes of transport
3.5	9:45 to 10:00	Conducting a RSA: Project inception (Recap)	Recap of most important aspects of the Inception phase: Compiling the RSA audit team. • Team members, experience, roles • Inception meeting • The role and duties of the Client • What the Client can expect from the RSA Team. • Data and information to be made available
3.6a	10:00 to 10:30	Group Assignment 1: Project Inception	In class group assignment – project inception
	10:30 to 11:00	Break and refreshments	
3.6b	11:00 to 11:30	Group Assignment 1: Project Inception (continued)	
3.6c	11:30 to 12:30	Group Assignment 1: Group Presentations	Group presentation of approximately 10 minutes per group
	12:30 to 13:15	Break and refreshments	
3.7	13:15 to 14:00	Road safety concept	• The forgiving roadway concept • Speed, setting speed limits and speed differentials • Understanding conflicts and conflict studies
3.8	14:00 to 14:30	Road signs, markings and traffic signals	Road signs and markings • Road signs and marking standards • Reflectivity & class of road signs • Principles of road sign design Traffic signals • Signal layout • Signal timing
	14:30 to 15:00	Break and refreshments	
3.9	15:00 to 15:10	Conducting a RSA: Data collection and Site visit (Recap)	Recap - highlighting the most important aspects of the site visit and data collection
3.10	15:10 to 19:00	Group Assignment 2: Data Collection and Site Visit	Groups must visit an intersection or road section and conduct a site visit, during the afternoon and night time. Report on the risks observed and data required for a RSA at the location.

Day 4 – Conducting a RSA

DAY 4 – CONDUCTING A ROAD SAFETY AUDIT/APPRAISAL (continued)			
4.1	8:00 to 8:40	Finalisation of group assignment 2	
4.2	8:40 to 9:45	Group Assignment 2: Group Presentations	Group presentation of approximately 15 minutes per group
4.3	9:45 to 10:30	Road side protection	Principles of roadside protection • Recovery area • Barriers 1. Barrier types 2. Containment level and working width • Roadside furniture
	10:30 to 11:00	Break and refreshments	
4.4	11:00 to 11:15	Conducting a RSA: Data Analysis (Recap)	Highlights of the most important aspects of the site visit and data collection • Analysis of data: • Traffic counts • Speed surveys • Crash data
4.5a	11:15 to 12:30	Group Assignment 3: Data Analysis	Groups need to analyse typical data and indicate what conclusions relating to road safety can be made from the data.
	12:30 to 13:15	Break and refreshments	
4.5b	13:15 to 13:45	Group Assignment 3: Data Analysis (Continued)	
4.5c	13:45 to 14:30	Group Assignment 3: Group Presentations	Group presentation of approximately 10 minutes per group
	14:30 to 15:00	Break and refreshments	
4.6	15:00 to 15:15	Conducting a RSA: Identification of road safety risks (Recap)	• Road safety appraisals – identification and classification of road safety risks observed on site • Road safety audits – auditing design drawings, classification of road safety risks.
4.7	15:15 to 15:45	Designing for road safety: Alignment, cross section and level of service	Horizontal and vertical alignment Sight distance Cross section Road capacity Climbing and passing lanes
4.8	15:45 to 16:15	Designing for road safety: Intersection design	• At grade vs grade separation • Intersection types, conflict at intersections • Interchange types • NMT grade separation considerations • Double right turn lanes • Median width • NMT at intersections and mid-block crossings
4.9	16:15 to 16:30	Group Assignment 4: Identification of Road Safety Risks	Groups will be provided with a set of drawings/information for different projects. Each group need to evaluate the drawings and need to identify potential road safety risks from the drawings

Day 5 – Conducting a RSA

DAY 5 – CONDUCTING A ROAD SAFETY AUDIT/APPRAISAL (continued)			
5.1	8:30 to 8:40	Overview of day 4, programme for day 5	
5.2	8:40 to 9:15	Vehicle restraint systems	Vehicle restraint systems: • Containment level & working with • Types • International best practice
5.3a	9:15 to 10:30	Group Assignment 4: Identification of Road Safety Risks	Finalisation of group assignment
	10:30 to 11:00	Break and refreshments	
5.3b	11:00 to 12:00	Group Assignment 4: Group Presentations	Group presentation of approximately 10 minutes per group
5.4a	12:00 to 12:30	Group Assignment 5: TOR for a RSA	Time for groups to finalise presentations (handed out during day 3)
	12:30 to 13:15	Break and refreshments	
5.4b	13:15 to 14:30	TOR - Group Feedback	Group presentation of approximately 15 minutes per group – TOR for a typical RSA
5.5	14:30 to 14:45	Reporting and key RSA Concepts	Recap on compilation of RSA reports and revision of key concepts
5.6	14:45 to 14:30	Individual Assignment Overview	Handing out of requirements of individual assignments to be competed after the course
5.7	14:30 to 15:00	Closure	