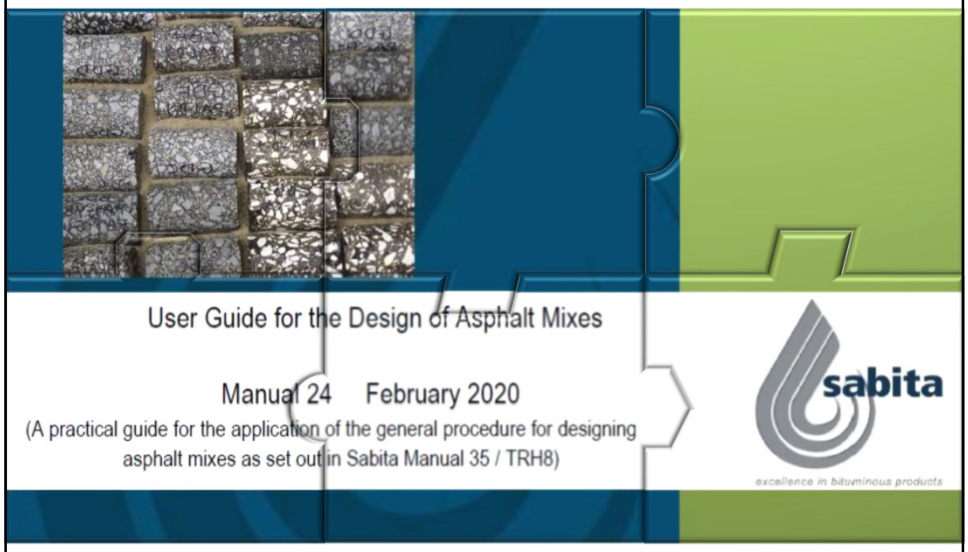
Practical user guide for the design of asphalt mixes based on Sabita Manual 24

in association with
THE SOUTH AFRICAN ROAD FEDERATION

Sabita Manual 24

Virtual via MS Teams

Presented by: Joanne Muller (Much Asphalt) & Christi Botha (SMEC SA), SARF Course – 24, 25 November 2020



Scope of Course

Introduction

2 Evaluate Design Situation

3 Design Objectives

4 Mix Type Selection

5 Constituent Materials

6 Laboratory Design Procedures

7 Special Mixes

POP QUIZ at the end of each day

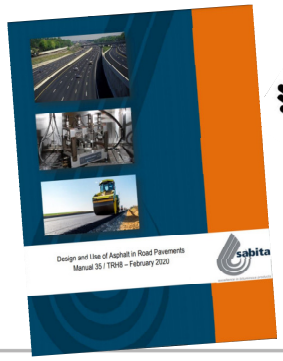
Course Programme

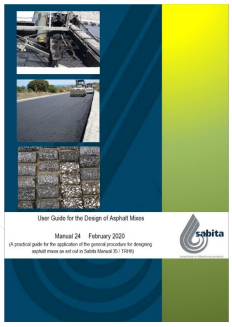
Day 1		Time Slot
Activity / Topic		
Registration		08:15 – 08:30
Introduction	Module I inc	08:30 – 08:45
Evaluate design situation	Module 2	08:45 – 10:00
Break		10:00 – 10:15
Design objectives	Module 3	10:15 – 12:30
Break		12:30 – 13:15
Mix type selection	Module 4	13:15 – 15:00
Pop quiz on day 1 slides		15:00 – 15:30

DAY 2		
Constituent materials	Module 5	08:00 – 09:00
Break		09:00 – 09:15
Laboratory design procedures	Module 6 (including volumetric additions info)	09:15 – 11:00
Break		11:00 – 11:30
Special mixes	Module 7	11:30 – 12:30
Pop quiz on day 2 slides		12:30 – 13:00

Manual 24 in Context

Sabita Manual 35 / TRH8 –
Standard Method

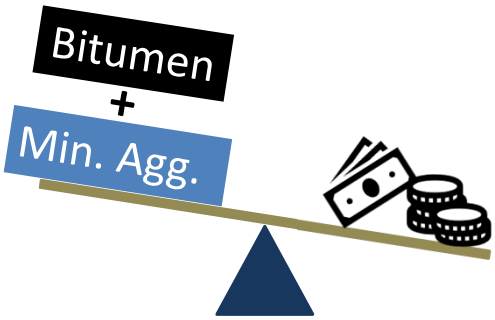




Guidelines on use of
Manual 35

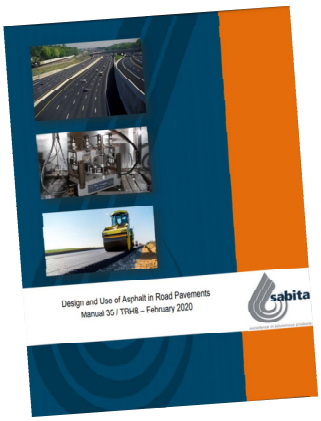
Main Aim of Asphalt Mix Design

- Cost effective combination of



- That is:
  - Workable
  - Durable
  - Desired Aggregate Packing

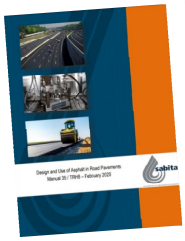
Concept of Manual 35



- Mix Properties Defined & Evaluated i.t.o.
  - Loading &
  - Environmental Conditions
- Test Parameters
  - Direct Relation to Performance

Approach of Manual 35

- Do away with "over specification"
- Have single, validated criterion for each performance requirement



- Single test described per performance indicator
  - Simplified Design Process
  - Direct comparison of performance characteristics of different designs

Purpose of Manual 24

Aimed at practitioners with ***less experience*** in asphalt mix design

Emphasise ***key content***

Cautions on ***limitations*** of some procedures and requirements

Guidance on ***supplementary methods***

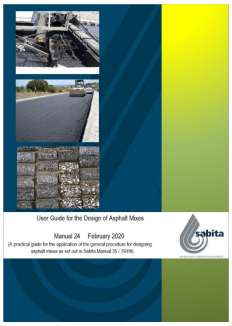
Gives some ***background*** on the principles

Intention of Manual M24

- Assist Mix Designers to achieve Design Aim
  - Road Map

  - Systematic Approach
  - Address each Step Progressively

Mix Design.. → Constituent Materials.. → Laboratory Design..



Focus of Manual 24

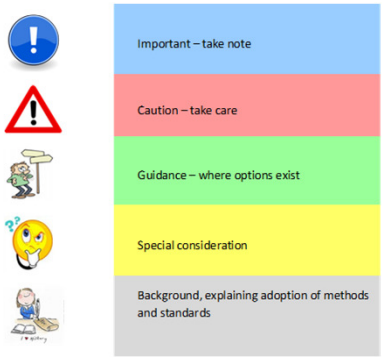
General Method of Design

Brief reference to special considerations

- Cold mixes
- Porous asphalt
- Thin asphalt wearing courses
- Warm mix asphalt
- EME (high modulus asphalt)
- SMA (stone mastic asphalt)
- Mixes with reclaimed asphalt

Layout of Manual 24

To assist the reader ***sections are highlighted*** to draw attention to important content and to give additional guidance



Useful references indicated in the RHS margin

Sabita Manual 35

LET's GO

sabita

excellence in bituminous products