



transport

Department:
Transport
REPUBLIC OF SOUTH AFRICA

Status Report to RPF on Road Infrastructure Codes of Practice

6 NOVEMBER 2012

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Department of
Transport

Overview of Presentation

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- ▶ **Documents completed & ready for COTO approval**
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Role-players

- **SABS**
- **Agrément South Africa**
- **Committee of Land Transport Officials (COLTO), now COTO**
- **Department of Transport**
- **SANRAL**
- **Industry**

Structures for Approval of National Guidelines



- National Minister of Transport & Provincial MEC's



- DG of Department of Transport
- HOD's of Provincial Departments of Transport/Roads/Public Works



- DoT
- Provincial Roads Authorities
- SANRAL
- National Treasury
- National Dept. of Public Works
- National Dept. Cooperative Government & Traditional Affairs
- Metros & SALGA

Approved COTO Sub Committees

| No | Permanent or Ad hoc | Technical Committee | REMARKS |
|----|---------------------|---|---|
| 1 | Permanent | Road Signs & Route Numbering & Safety Engineering | Road traffic signage, navigational signs, special events signs, symbols |
| 2 | Permanent | Overload Control Committee | Overload control strategies |
| 3 | Permanent | Abnormal Loads Technical Committee | Abnormal routes, clearance/permits, procedures |
| 4 | Ad hoc | Survey | TMH11 amendment |
| 5 | Permanent | Construction & Maintenance | Service delivery, documentation, LIC, EPWP, new technology |
| 6 | Permanent | Road Materials Committee | |
| 7 | Ad hoc | Geometric Design Committee | RAM, amendment to geometric design manuals |
| 8 | Permanent | RNMS Committee | Road network management systems |
| 9 | Ad hoc | Construction Plant Committee | |
| 10 | Ad hoc | General Structures & Bridge Loading | |
| 11 | Permanent | Infrastructure Protection | Outdoor advertising, utilities, way-leaves, landmark court cases, access control – game reserves – statutory compliance |
| 12 | Ad hoc | Human Capital & Research Initiatives | Lack of technical capacity & proposed ways to address |

Approval Procedure

- Formal request to DG: Transport & copy Chairperson of RCB
- Presentation to RCB for consideration & support
- RCB members to send letter approving/not approving document
- DDG RT must table the item for COTO consideration & approval with a supporting memo



SUMMARY OF TECHNICAL STANDARDS, GUIDELINES & MANUALS

Technical Recommendations for Highways

| No. | Title | Date |
|---------|---|-------------|
| TRH1 | Prime coats and bituminous curing membranes | 1986 |
| TRH2 | Geotechnical and soil engineering mapping for roads and the storage of materials data | 1978 |
| TRH3 * | Surfacing seals for rural and urban roads | 2007 |
| TRH4 * | Structural design of flexible pavements for interurban and rural roads | 1996 |
| TRH5 * | Statistical concepts of quality control and their application in road construction | 1987 |
| TRH6 | Nomenclature and methods for describing the condition of asphalt pavements | 1985 |
| TRH7 | Use of bitumen emulsions in the construction and maintenance of roads | 1994 |
| TRH8 * | Design and use of Hot-mix asphalt in pavements | 1987 |
| TRH9 | Construction of road embankments | 1982 |
| TRH10 | Design of road embankments | 1994 |
| TRH11 | Guidelines for the conveyance of abnormal loads | 2010 |
| TRH12 * | Flexible pavement rehabilitation investigation and design | 1997 |
| TRH13 * | Cementitious stabilizers in road construction | 1986 |
| TRH14 * | Guidelines for road construction materials | 1985 |

Technical Recommendations for Highways (continued)

| No. | Title | Date |
|---------|--|-------------|
| TRH15 | Subsurface drainage for roads | 1994 |
| TRH16 * | Traffic loading for pavement and rehabilitation design | 1991 |
| TRH17 | Geometric design of rural roads | 1988 |
| TRH18 | The investigation, design, construction and maintenance of road cuttings | 1993 |
| TRH19 | Standard nomenclature and methods for describing the condition of jointed concrete pavements | 1989 |
| TRH20 | The structural design, construction and maintenance of unpaved roads | 2009 |
| TRH21 | Hot mix recycling | 2009 |
| TRH22 @ | Pavement management systems | 1994 |
| TRH25 | Guidelines for the hydraulic design and maintenance of river crossings: | |
| | Vol 1: Hydraulics, hydrology and ecology | 1994 |
| | Vol 2: Structural aspects, bridge configurations and foundations | 1994 |
| | Vol 3: Embankment and bank protection | 1994 |
| | Vol 4: Parameters for the design of low-level structures | |
| | Vol 5: Bridge management of river bridges | 1994 |
| | Vol 6: Risk analysis of river crossing failure | 1994 |
| | Vol 7: Legal aspects | 1994 |

Technical Methods for Highways

| No. | Title | Date |
|---------|--|-------------------|
| TMH1 | Standard methods of testing road construction materials | 1986 |
| TMH2 | National standard for the spraying performance of binder distributors | 1979 |
| TMH3 * | Traffic axle load surveys for pavement design | 1988 |
| TMH4 | Superseded by TRH17 | |
| TMH5 * | Sampling methods for road construction materials | 1981 |
| TMH6 | Special methods for testing roads | 1984 |
| TMH7 | Code of practice for the design of highway bridges and culverts in SA, Parts 1 & 2 | 1981 |
| TMH7 | Code of practice for the design of highway bridges and culverts in SA, Part 3 | 1989 |
| TMH8 * | Verkeerstellingsprosedures vir buitestedelike paaie | 1987 |
| TMH9 @ | Pavement management systems: Standard visual assessment manual for flexible pavements | 1992 |
| TMH10 * | Manual for the completion of as-built materials data sheets | 1993 |
| TMH11 | Standard survey methods | March 2012 |
| TMH12 @ | Pavement management systems: Standard visual assessment manual for unsealed roads, version 1 | Dec 2000 |
| N/A | Proficiency testing schemes for quality control of road building materials | NEW |

Urban Transport Guidelines

| No. | Title | Date |
|------------|--|------|
| UTG1 | Guidelines for the geometric design of urban arterial roads | 1986 |
| UTG2 | Structural design of segmental block pavements for South Africa | 1987 |
| UTG3 | Structural design of urban roads | 1988 |
| UTG4 | Guidelines for urban stormwater management | 1991 |
| UTG5 | Geometric design of urban collector roads | 1988 |
| UTG6 | Guidelines on maintenance management for large municipalities | 1989 |
| UTG7 | Geometric design of urban local residential streets | 1989 |
| UTG8 | Guidelines for the preparation of an urban transport plan | 1989 |
| UTG9 | Guidelines for the transportation system management process | 1991 |
| UTG10 | Guidelines for the geometric design of commercial and industrial local streets | 1990 |
| UTG11 | Guidelines for public participation in land use/transport planning | 1990 |
| UTG12 @ | Pavement management systems: standard visual assessment manual for flexible pavements in urban areas | 1996 |

Other Documents

| No. | Title | Date |
|----------------------|--|--|
| | COLTO Standard Specifications for Road & Bridge Works | |
| SADCRTSM Volume 1 | Southern African Development Community Road Traffic Signs Manual | Nov 1997 Digitised 2012 |
| SARTSM Volume 2 | South African Road Traffic Signs Manual | Nov 1997 Digitised 2012 |
| SARTSM Volume 3 | South African Road Traffic Signs Manual | Apr 2001 Digitised 2012 |
| SADCRTSM Volume 4 | Southern African Development Community Road Traffic Signs Manual | Nov 1997 Digitised 2012 |
| RDDA | Route Numbering and Destination Analysis | May 2012 |
| CR-96/036 | National Guidelines for Traffic Calming | Mar 1996 |
| | Pedestrian and Bicycle Facility Guidelines | Aug 2003 To become NMT Guideline |
| SSP | S'hamba Sonke Concept Document | |
| SSP | S'hamba Sonke Implementation Manual | |

Other Documents (continued)

| No. | Title | Date |
|-----------------|--|-----------|
| | Geometric Design Manual | Nov 2002 |
| | Road Drainage Manual | 2007 |
| | Routine road maintenance guidance manual | Jun 2000 |
| | Die uitleg en ontwerp van rus- en diensareas | 1982 |
| 111707/01/1 | Toegang van en na fasiliteite langs nasionale deurpaaie | 1991 |
| | Code of Procedures for the Planning and Design of Highway and Road Structures in South Africa | Feb 2002 |
| | Design Manual for Standard Box Culverts Book I: Design Book II: Standard Drawings | 1981 |
| CR96/034 | Review of SA Bitumen Specification to take cognisance of compositional balance relative to long-term behaviour | 1996 |
| GMH2 | Handleiding vir die hervestiging van plantegroei in padreserwes | 1993 |
| LICT1 to LICT16 | SANRAL Labour Intensive Construction Guidelines (and videos) | 1996/1997 |
| | Procedures for road planning and geometric design | Jan 2003 |
| | Policies in respect of road planning and design | Jan 2003 |
| | Policy Design Guideline Standards for Single Carriageway National Roads - Draft | May 2009 |

Other Documents (continued)

| No. | Title | Date |
|-----------|--|-----------|
| CR-97/103 | Standard Specifications for Road and Bridge Works | Sept 1998 |
| CR-97/049 | Code of Practice for the Geometric Design of Trunk Roads | Sept 1998 |
| CR-97/105 | Code of Practice for the Design of Road Pavements | Sept 1998 |
| CR-98/008 | Code of Practice for Pavement Rehabilitation | Sept 1998 |
| CR-97/104 | Code of Practice for the Design of Road Bridges and Culverts | Sept 1998 |
| | SADC (SATCC) Low-volume Sealed Roads | 2003 |
| | | |
| | Various Industry specific manuals | |
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DOCUMENTS awaiting COTO approval

TRH3 : Design and Construction of Surfacing Seals. The document was updated throughout to reflect the latest technology and industry practices.

TRH11: Dimensional and Mass Limitations and Other Requirements for Abnormal Load Vehicles. Current update reflects current best practice; Simplified guidelines divided into a user section and a technical section;

TRH20 : Unsealed Roads: Design, Construction and Maintenance. revised and expanded to include best practice in southern Africa and internationally; a minimum standard for an unsealed road in South Africa;

TRH 21: Hot mix Asphalt Recycling: updated draft entitled “TRH 21: 2009 Hot mix Asphalt Recycling” incorporates significant developments in hot mix asphalt recycling technologies, based on international best practise

TMH 11: Survey: updated extensively, based on international best practise

DOCUMENTS completed & ready for COTO approval

- TMH 13: 1 Guidelines on Roughness Measurements
- TMH 13: 2 Guidelines on Rut Measurements
- TMH 13: 3 Guidelines on Deflection Measurements
- TMH 13: 4 Guidelines on Skid Resistance Measurements
- TMH 13: 5 Guidelines on Imaging and GPS Measurements
- TMH 14: South African Standard Automatic Traffic Data Collection Format
- TMH 16: South African Engineering Service Contribution Manual for Municipal Road Infrastructure
- TMH 17: Traffic Impact Assessments Vol. 1 & 2
- TMH 18: South African Trip Data Manual
- TRH 26: South African Road Classification and Access Management Manual
- TRH 27: South African Services Road Reserve



Work in Progress

•Department of Transport

- Non-Motorised Transport Facility Guidelines
- RAMS Policy
- Infrastructure Policy
- Road Infrastructure Safety Audit Framework

•Other

- COLTO Standard Specifications
- SABS ARP 035 Street Lighting
- SANS 1519 part 2
- TMH9/UTG12/TMH12/M3-1 - Revision & consolidation into single Visual Assessment Manual (March 2013) with addition of (New) section on Block Pavements
- Develop New TMH for assessment of Structures, based on DER Method. To include Bridges, culverts, retaining walls, sign gantries & tunnels (March 2013).
- TRH 22 - Revision & expansion to Road Asset Management Guideline for South Africa in-line with ISO 55000 requirements;
- SABITA, CSIR & other industry role-players are busy with various documents



THANK YOU