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**GUIDELINES  
FOR  
IRC STANDARDS**  
*(First Revision)*



**INDIAN ROADS CONGRESS  
2018**

# **GUIDELINES FOR IRC STANDARDS**

*(First Revision)*

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**PERSONNEL OF THE GENERAL SPECIFICATIONS  
AND STANDARDS COMMITTEE (GSS)**

**(As on 25<sup>th</sup> April, 2018)**

- |     |                                       |  |
|-----|---------------------------------------|--|
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| 11. | Chandra, Dr. Satish                   | Director, Central Road Research Institute, New Delhi   |
| 12. | Amitabh, Manu                         | Chief Engineer, Central Public Works Department, New Delhi   |
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| 20. | Agrawal, C.P.                         | Secretary, Public Works Department, M.P.   |
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***Ex-Officio Members***

1. President, IRC (Reddy, K.S. Krishna), Managing Director, M/s KRDC Ltd.
2. Director General (RD) & Spl. Secretary to the Govt. of India (Kumar, Manoj), Ministry of Road Transport and Highways, New Delhi
3. Secretary General (Nirmal, S.K.), Indian Roads Congress, New Delhi

## **GUIDELINES FOR IRC STANDARDS**

### **1. INTRODUCTION**

**1.1** It is necessary that various documents such as Standards, Specifications, Codes, Manuals, Guidelines, State of the Art Reports (SOAR) brought out by the Indian Roads Congress (IRC) follow an uniform format and be consistent in contents. The following general Guidelines, hence shall be followed for all the IRC Publications unless there are reasons to the contrary. The reasons for deviation, if any, from the format should be indicated.

**1.2** The language of IRC documents shall be English. The presentation of material should be in third person. For spellings, the Oxford Dictionary shall prevail.

**1.3** The document should cover the necessary technical provisions relating to the main subject of the document. The repetitions should be avoided and the strategy of cross-reference shall be considered wherever necessary.

**1.4** “Guidelines on Format for IRC Standards” was first published in January, 1991. The revised version prepared by IRC Secretariat was placed before the GSS Committee in its meeting held on 25.04.2018. The draft of the Guidelines was accordingly refined further in the light of observations made by the GSS Committee. The refined draft was placed before the Executive Committee in its meeting held on 3<sup>rd</sup> May, 2018 which recommended its submission to the Council for its approval. The Guidelines were finally approved by the Council in its 215<sup>th</sup> meeting held on 4<sup>th</sup> May, 2018 at Aizawl (Mizoram) for publishing.

**1.5** The following Format shall be adopted by all the Committees. The contents of the document i.e. Standards/Specifications/Codes/Manuals/Guidelines/Special Publications will be decided by the concerned Committee depending upon the applicability of a particular item listed in this Format.

### **2. TITLE**

The title shall be short, yet indicative of the scope/purpose of the document. The Committee may like to give consideration to the wordings of the title in the initial stages of the drafting of the document. No abbreviations shall be used in describing the title.

### **3. CONTENTS**

Every document shall have Table of Contents as per illustration given below:



**Table of Contents**

<b>Chapter/Section</b>	<b>Heading of Chapter/Section or Sub-Chapter/Sub-Section</b>	<b>Page Nos.</b>
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	<b>Abbreviations</b>	
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<b>4.1</b>	-----	
<b>4.1.1</b>	-----	
	-----	

**LIST OF TABLES**

(List of Tables in any Chapter can be given number in two digits separated by full stop. 1<sup>st</sup> digit pertains to Chapter No. and 2<sup>nd</sup> Digit is the Table No. in that Chapter)

**CHAPTER 1**

**Table 1.1:** -----

**Table 1.2:** -----

**Table 1.3:** -----

**CHAPTER 2**

**Table 2.1:** -----

**Table 2.2:** -----

**Table 2.3:** -----

**LIST OF FIGURES**

(List of Figures in any Chapter can be given number in two digits separated by full stop. 1<sup>st</sup> digit pertains to Figure No. and 2<sup>nd</sup> Digit is the Figure No. in that Chapter)

**CHAPTER 1**

**Fig.1.1:** \_\_\_\_\_

**Fig.1.2:** \_\_\_\_\_

**Fig.1.3:** \_\_\_\_\_

**CHAPTER 2**

**Fig.2.1:** \_\_\_\_\_

**Fig.2.2:** \_\_\_\_\_

**Fig.2.3:** \_\_\_\_\_

**LIST OF PHOTOS/MAPS**

(List of Photos/Maps in any Chapter can be given number in two digits separated by full stop. 1<sup>st</sup> digit pertains to Photo/Map No. and 2<sup>nd</sup> Digit is the Photo/Map No. in that Chapter)

**CHAPTER 1**

**Photo/Map 1.1:** \_\_\_\_\_

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**CHAPTER 2**

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**APPENDICES**

**Appendix-1** \_\_\_\_\_

**Attachment A to Appendix-1**

**Attachment B to Appendix-1**

\_\_\_\_\_

**REFERENCES**

#### **4. LIST OF APEX COMMITTEE MEMBERS**

Every document, shall include the list of Members of the corresponding Apex Committee viz. Highways Specifications and Standards Committee (HSS)/Bridges Specifications and Standards Committee (BSS)/General Specifications and Standards Committee (GSS). The names of the Personnel shall be as per the composition of the Committee at the time of approval of the document in an alphabetical manner. The Membership of the Committee shall be as on date of finalization of the Document.

**4(A)** Composition/List of Members of the Committee which has prepared/revised the document shall be given after the Apex Committee.

#### **5. PREFACE**

It shall contain the following:

- a) The origin of the request for the document.
- b) Brief history relating to the preparation of the document, composition of Committee, Sub-Committees and Panel constituted with specific work. The Membership of the Committee shall be based on the date of finalization of the document. IRC Secretariat will normally look after the work of listing the Committee Members.
- c) Due acknowledgment to the key contributors such as members of Sub-Groups including Organization if any, as the Convenor of the Committee shall propose.
- d) Modification/special features added in the document.
- e) Other matters relevant to the document, such as source of information on which the document is based, the relevant Standards which have been referred to including IRC Standards and other Standards on the same or similar subjects published earlier.

#### **6. ABBREVIATIONS**

Abbreviations used in the document shall be those prevalent in the Indian Roads Congress/Indian Standards. Otherwise, they shall follow the norms keeping in view International Standards and Practice. The letters of abbreviations shall neither be spaced nor punctuated. The abbreviations shall be listed in the alphabetical order.

## 7. NOTATIONS/SYMBOLS

The Notations/Symbols contained in the document shall conform to the IRC:71 “Recommended Practice for Preparation of Notations”.

## 8. SIZE OF LETTERS

Times New Roman Font should be used with Text Size 12 for running matter and 10 for Tables.

## 9. SCOPE

It shall include a clear statement of the applicability of the document indicating the field covered. The subject matter of the document shall be kept within the limits so outlined. To avoid ambiguity in the interpretation of the applicability, it is, sometimes useful to state explicitly what is excluded and limitations, if any.

The broad scope of different documents are:

**Specification:** Specifications is a document that defines a set of requirements to be satisfied by Material, Design, Executed work. It is mandatory in nature and no references are given in support of any recommendation.

**Standard:** A Standard is an established norm or requirement in regard to roads and bridges. It is usually a formal document that establishes uniform engineering or technical criteria, methods, processes and practices. As per the site requirement, there may or may not be deviation from Standards.

**Code:** A Code is intended to bring uniformity in various aspects of Planning, Design and Execution of Road/Bridge Projects. The Code deals with various aspects of Construction of Road/Bridge Projects, like Materials, Equipment, Proportioning of Materials, Measurement, Handling of Material, Mixing, Subgrade & Subbase preparation, Formwork, Joints, Reinforcement of Concrete, Placing, Finishing, Curing, Evaluation for Acceptance criteria etc. The Code incorporates latest versions of the other documents on the subject.

**Guidelines:** It is a guide for streamlining Planning, Design and Execution of any Road/Bridge Project. It is not mandatory. It is issued on the basis of successful Planning, Design Construction, Operation and Maintenance of Road/Bridge Projects.

**Manual:** Manual is a document for giving complete information on a subject. It is a comprehensive and step-by-step guide to a particular topic for both beginners and practitioners that also serve as a reference book. Manual details what is given and what is required, explains how to put the presented information into practice, and instructs how to solve problems as

they occur. It is a reference book. It contains a Background Note, Specifications for the work, Pre-construction Activities, various Design and Construction aspects etc. It is non- mandatory in nature.

**Tentative Guidelines:** Tentative Guidelines are issued where intention is to have implementation of Project on trial basis.

**State of Art Report:** Total Scientific or Technical knowledge currently available and as applied to any aspect of Design, Construction, Maintenance or Instrumentation of Road and Bridge Project. SOAR is a compilation of literature survey on a subject. What is the objective, what is to be done, how is to be done and what equipment/instruments are required to perform, are in the scope. The literature referencing is given wherever required. For illustration/explanation of technical issues, case studies are given. References to the related literature are given. The recommendations/ explanation to the technical issues covered in SOAR are non-mandatory in nature.

**General:**

- i) The provision of all Codes and Documents should not be in conflict.
- ii) All definitions should be included in the basic Code of Road, Bridges, Traffic etc. Other Codes and Documents will have additional definitions relevant to that Document. In case, there is any comment on any definition, it should be referred to the respective Committees.
- iii) Specifications and Code of Practice have priority over Manuals and Guidelines.

## 10. PARAGRAPHING AND NUMBERING

For uniformity, the text of a document shall be numbered as per Indian numerals.

For the purpose of numbering, the document shall have the following divisions:

- i) **Item:** A major subdivision of the subject matter of the document. Items of a document shall be numbered in consecutive order.
- ii) **Clause:** A subdivision of the item. Clauses shall be numbered and shall contain two numbers separated by a full stop. The first number being the number of the Item and the second being that of the Clause numbered in consecutive order.
- iii) **Sub-Clause:** Sub-clause shall be numbered and shall contain three numbers separated by full stops. The first two numbers being those of Item and Clause respectively, and the last one being that of the Sub-clause numbered in consecutive order.

- iv) **Sub-Subclause:** A subdivision under a Sub-clause shall contain four numbers separated by full stops. The first three numbers being those of the Item, Clause and Sub-clause respectively and last one being that of the Sub-subclause numbered in consecutive order.

In numbering Items, Clauses, Sub-clauses and Sub-subclauses, care shall be taken that ideas having same status are numbered at the same level and that a given idea is not split up into too many unnecessary Sub-clauses and Sub-subclauses.

## 11. APPENDICES

Any matter such as description of a lengthy test method, discussion of any of the requirements of the document or its basis not included in Clauses and any other matter, which is not suitable for the test of the document but is of general interest or assistance in the use of document shall be given as an Appendix.

Immediately under the Appendix designation, reference to the relevant Clause or Clauses of the document shall be given in brackets, followed by the title of the Appendix.

## 12. TABLES AND FIGURES

Tables are invariably used eliminating repetition or represent relationships clearly. Tables may be formal or informal type. The formal type shall be used where large amount of data is to be presented and which is more likely to be mentioned as a separate unit or referred to elsewhere in the text. The informal type should be used where a lesser amount of information is presented as an integral part of the text.

Wherever the contents of the Tables/Figures are taken from a previously published document of IRC or others, the source shall be invariably given and necessary permission obtained, if necessary.

Title shall be placed at the top of all formal Tables which shall be numbered in numerals chapterwise. Initial letter of all principal words in the caption of the Table shall be in capitals.

All the item shall be divided in sequential manner to maintain the continuity and flow of the matter. The repetition of text or cross-referencing shall be followed religiously.

As a general rule, the Table shall be placed as near the first reference to it as possible without breaking it into the middle of the paragraph.

In general, footnote to the Tables should be avoided. Where it is necessary to use footnote to formal Tables, they shall be in smaller type placed immediately below the Table. To indicate reference to footnote, the use of asterisks, daggers, another small symbol should be made. However, where there is a large number of footnotes to a Table, superscript numerals in one consecutive series may be used.

### 13. ILLUSTRATIONS

Diagrams, Maps, Graphs, Photographs, Animations and Drawings in perspective isometric or in third angle projection shall be used wherever it is required to illustrate the text more precisely and candidly. All the drawing shall be made with appropriate tool like AUTOCAD/ else. These shall be referred to as Figures.

**Diagrams:** The text for the Standard is printed in 12 point size type (nearly 1.5 mm in height); therefore, the written matter in Diagrams should be so made that the size of the letter when reduced for reproduction should be about 1.5 mm. If a Diagram is to be reduced to one quarter of its size, the lettering on it should not be less than 6 mm in height.

All the illustrations shall be well accommodated within the margins evenly. Single illustration shall be placed at the centre.

All illustrations in a given document shall be designated as Figures and consecutively numbered. Grouping of Figures as 1-A, B shall be avoided to extent where a Figure illustrates a number of parts relating to the same object. Title shall be placed at the bottom of Figures. The initial letter of all the principal words shall be in capitals. All Graphs and Photos shall be coloured wherever is possible.

Each Figure shall be placed as near the reference to it in the text as possible without needlessly breaking into the middle of a paragraph. Necessity for turning over a page to refer to Figure shall be avoided.

### 14. UNITS OF MEASURE

SI units shall be used in all the documents.

### 15. TERMINOLOGY

The definitions/glossary of terms used in the document shall be given invariably in all the document. The terms should be consistent with other documents of Indian Roads Congress (IRC) or Bureau of Indian Standards (BIS) including International Standard.

As far as possible, alphabetic order shall be adopted.

## **16. REFERENCES**

At the end of the document, a list of all sources and references that were adopted/referred to, in preparation and formulation of the document as they appear in the text in the document, is to be given.

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**(The Official amendments to this document would be published by the IRC in its periodical, 'Indian Highways' which shall be considered as effective and as part of the code/guidelines/manual, etc. from the date specified therein)**