



Ministry of
Transportation
and Infrastructure

ELECTRICAL AND TRAFFIC ENGINEERING MANUAL

Section 100

Introduction

Electrical and ITS Engineering

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Electronic versions of this manual and appendices available at:
http://www.th.gov.bc.ca/publications/eng_publications/electrical/electrical_and_traffic_eng/Electrical_Signing_Design_Manual/table_ofcontents.htm

101 PURPOSE OF THIS MANUAL

- .1 The purpose of this manual is to establish uniform design guidelines for lighting, traffic signal, intelligent transportation systems (ITS), and other electrical infrastructure.
- .2 The intended audience for this manual includes ministry designers, consultants, contractors, reviewers, and managers. The manual covers a variety of topics and is designed to be used as both a text and a reference manual.
- .3 This manual is not intended to be a substitute for sound engineering knowledge and experience. Designers are encouraged to be innovative and to employ the principals of “value engineering” to all designs. Designers shall review concepts presenting good value with the ministry electrical representative prior to proceeding and to provide documentation outlining the justification for new initiatives.

102 USING THIS MANUAL

- .1 A structured number format is used to order the information in this manual. This format allows each point to be referenced using a unique identifier, so the reader can refer to, or find a specific point quickly and easily.
- .2 This manual is divided into sections, chapters, clauses, sub-clauses, paragraphs, sub-paragraphs and sub-sub-paragraphs. Each element is numbered sequentially, with sections beginning at the highest level. The numbering for all other element begins with the section number. Table 1 describes each element and gives examples.

ELEMENT	NUMBERING	EXAMPLE
Sections	Are numbered starting at 100 in intervals of 100.	100, 200, 300...
Chapters	Use the same numbering as sections but increment by 1.	101, 102, 103...
Clauses	Use a decimal and a one digit number incrementing by 1.	101.1, 101.2, 101.3...
Sub-clauses	Use a decimal and a one digit number incrementing by 1.	101.1.1, 101.1.2, 101.1.3
Paragraphs	Use a decimal and a one digit number incrementing by 1.	.1, .2, .3...
Sub-paragraphs	Use a decimal and a one digit number incrementing by 1.	.1, .2, .3...
Sub-sub-paragraphs	Use a decimal and a one digit number incrementing by 1.	.1, .2, .3...

Table 1. Description and examples of manual format

- .3 Using this format it is easy to identify any part of the manual. For example, if you wish to find Chapter 302.1 Paragraph 3.2, you would refer to section 300, chapter 2, clause 1, paragraph 3, sub-paragraph 2. Drawings are located in the appendices.

103 **MANUAL REVISIONS AND ADDITIONS**

- .1 Users of this manual may submit suggestions or comments aimed at improving this manual to Ministry of Transportation and Infrastructure Electrical Engineering Services, Electrical Design Group, located at the Regional Traffic Management Centre in Coquitlam.
- .2 Manual revisions and additions will be issued as and when required and can be found on the Ministry Engineering Publications web site at:

http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm#Traffic_Electrical_Highway_Safety_and_Geometric_Standards_Section_Publications.

- .3 Note: Users must check the Engineering Publications website for technical bulletins and technical circulars that may rescind, update, or augment the information contained in this manual. These documents can be found on the website noted above.
- .4 Where changes to this Manual impact projects out to bid or under construction the designer shall contact the ministry electrical representative to advise of impacts. The ministry electrical representative shall advise if design revisions will be required.
- .5 Ministry electrical and ITS engineering services contact information is as follows:

Mailing Address:

Ministry of Transportation & Infrastructure
Electrical and ITS Engineering
Suite 310 – 1500 Woolridge Street
Coquitlam, BC V3K 0B8

Phone:

604-527-2221

104 RELATED MANUALS AND DOCUMENTS

- .1 When preparing designs, designers must comply with all relevant sections in the most recent revisions of the following documents and manuals:
 - .1 This manual.
 - .2 *Canadian Electrical Code* including B.C. Electrical Bulletins.
 - .3 *British Columbia Motor Vehicle Act*.
 - .4 *National Building Code of Canada*.
 - .5 *WorkSafe BC Regulations*.
 - .6 *Ministry Standard Specification for Highway Construction*.
 - .7 *Manual of Uniform Traffic Control Devices (MUTCD)*
 - .8 *Illuminating Engineering Society of North America (IESNA) Recommended Practices* and other documents as noted in Section 300 – *Lighting Design*.
 - .9 Traffic engineering manuals as noted in Section 400 – *Signal Design*.
 - .10 Ministry *Traffic Management for Work on Roadways* documents at:
<https://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/traffic-engineering-safety/trafficmanagementmanual>
 - .11 Other Ministry documents and publications located on the Ministry engineering publications website at:
http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm#Traffic_Electrical_Highway_Safety_and_Geometric_Standards_Section_Publications
 - .12 Technical bulletins and technical circulars published by the Ministry that may supersede sections of these documents.
- .2 If there are discrepancies between this manual and the documents and manuals listed above, contact ministry electrical and ITS engineering, electrical design group, Coquitlam for clarification.