FIRE RISK ANALYSIS - RATING SYSTEM

JUNE 2001

"RED BOOK" SERIES

of

"Tools for the Fire Service"

UNDERWRITERS LABORATORIES OF CANADA (ULC) is a not-for-profit organization incorporated in 1920 by letters patent issued by the Canadian Government. It maintains and operates laboratories, certification services and a quality system registration program for the examination, testing, and classification of devices, constructions, materials and systems to determine their relation to life, fire and property hazards. Underwriters Laboratories of Canada also develops and publishes standards, classifications and other recognized documents for products having a bearing on fire, accident, or property hazards.

Underwriters Laboratories of Canada is accredited by the Standards Council of Canada as a Certification Organization, a Testing Organization, a Quality Systems Registration Organization, and a Standards Development Organization, under the National Standards System of Canada, and is affiliated with Underwriters Laboratories Inc. in the United States of America.

Standards developed by Underwriters Laboratories of Canada are developed in accordance with the procedure outlined in the documents CAN-P-3, "General Requirements for Bodies Operating Product Certification Systems"; and CAN-P-1500, "Additional Requirements for Accreditation of Certification Bodies", published by the Standards Council of Canada.

The headquarters of Underwriters Laboratories of Canada is located in Toronto, Ontario. In addition, ULC is represented across Canada as well as many countries worldwide.

CORPORATE HEADQUARTERS
Underwriters Laboratories of Canada
7 Underwriters Road
Toronto, Ontario M1R 3B4
Telephone: (416) 757-3611 Fax: (416) 757-9540
Toll-free telephone: 1-866-9373-ULC

EASTERN OFFICE
6505 Trans-Canada Hwy., Suite 330
St. Laurent, Québec H4T 1S3
Telephone: (514) 363-5941 Fax: (514) 363-7014
Toll-free telephone: 1-866-9373-ULC

PACIFIC OFFICE
No. 130 – 13775 Commerce Parkway
Richmond, British Columbia V6V 2V4
Telephone: (604) 214-9555 Fax: (604) 214-9550
Toll-free telephone: 1-866-9373-ULC

For further information on ULC Publications, please contact:

STANDARDS DEPARTMENT AND GOVERNMENT RELATIONS OFFICE
200-440 Laurier Avenue West
Ottawa, Ontario K1R 7X6
Telephone: (613) 755-2729 Fax: (613) 231-5977

E-mail: customerservice@ulc.ca
Web site: www.ulc.ca

The intended primary application of this Red Book is stated in its purpose. It is important to note that it remains the responsibility of the user of the Red Book to judge its suitability for this particular application.

Copies of this Red Book may be ordered from Underwriters Laboratories of Canada.

RED BOOK **FSRC-C02**

FIRE RISK ANALYSIS - RATING SYSTEM

Prepared by
ULC FIRE SERVICES RESEARCH COMMITTEE

Published by
ULC STANDARDS

FIRST EDITION .....JUNE 2001

Copyright © ULC Standards 2012
All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior permission of ULC Standards.

TABLE OF CONTENTS

ULC FIRE SERVICE RESEARCH COMMITTEE MEMBERSHIP LIST I

TASK GROUP MEMBERSHIP LIST II

PREFACE III

1. PURPOSE 1

2. SCOPE OF RATING SYSTEM 2

3. PRINCIPLES 2

4. METHODOLOGY 3

5. FORMS AND CHECKLISTS 4
   5.1 GENERAL INFORMATION 5
   5.2 Part A – Real Property Risk Factors 6
   5.3 Part B – Property Management and Usage Risk Factors 9
   5.4 Part C – Human Risk Factors 10

6. INFORMATION SUMMARY 11
   6.1 INFORMATION SUMMARY FORMS 12

ULC FIRE SERVICE RESEARCH COMMITTEE
MEMBERSHIP LIST

NAME	TITLE	REPRESENTING
L. MacLean (chairman)	President, Fire Cross Consultants	Fire Cross Consultants Inc.
R. Cormier	Fire Marshal, Province of Nova Scotia	Canadian Council of Fire Marshals and Fire Commissioners
M. Fitzsimmons	Vice President, Toronto Professional Fire Fighters Association	International Association of Fire Fighters
L. Fronczak	Vice President, Central Canada, C.A.S.A.	Canadian Automatic Sprinkler Association
D. Geddes	Fire Chief, CFB Halifax	Canadian Association of Fire Chiefs
G. Hadjisophocleous	Senior Research Officer	National Research Council of Canada
J. Hancock	Fire Chief	Richmond BC Fire Rescue
P. McBride	Fire Safety Officer	Ottawa Fire Services
N. Miller	Account Executive	Motorola Canada Inc.
B. Murphy	Standards Manager	ULC Standards
S. Perry	Independent Consultant	Fire Safety Canada
A. Speed	Fire Chief, Toronto Fire Services	Canadian Fire Safety Association
R. Wright	Chief Engineer (retired)	Underwriters Laboratories Canada

TASK GROUP
MEMBERSHIP LIST

NAME	REPRESENTING
G. Hadjisophocleous	National Research Council of Canada
P. McConnell	Ottawa Fire Department
P. Muggleton	Cumberland Fire Department
A. Tamim	National Research Council of Canada

In addition to the members of the Fire Service Research Committee and the Task Group, acknowledgement is made to the following for their valuable contributions to the development of this rating system:

NAME	REPRESENTING
B. Miskimmon	Fire Prevention Division of the former City of Scarborough
T. Powell	Fire Department of the former City of Scarborough
T. Power	Canadian Association of Fire Chiefs

FIRE RISK ANALYSIS - RATING SYSTEM

PREFACE

The “Red Book” Series of documents are compiled by the Fire Service Research Committee for use by the Fire Service and others who share the common aim of protecting against the deleterious effects of fire.

The documents are the product of research and development conducted by dedicated individuals working collectively, and voluntarily, for the benefit of all.

The “Red Books” do not demand or imply any need for compliance, as would quite likely be the case with a code, standard or similar document. Their purpose being to assist, through their use and application at the user’s discretion, those involved in the broad field of fire protection and fire safety to be ever more efficient and effective.

Initially, the Fire Service Research Committee was sponsored by the National Research Council of Canada. However, for the past several years it has operated under the sponsorship of ULC Standards

1. PURPOSE

To provide pertinent information to the protector and the protected as a means of enhancing safety from fire in individual properties. It is not intended as a means of assessing community fire safety as a whole.

The further purpose of this rating system is to assist you in analyzing fire risk factors and fire protection requirements for particular buildings with a high degree of objectivity that yields a numerical rating, and where shortcomings are observed, to identify means of counterbalancing the deficiencies. It is not intended to serve as a means of waiving compliance with applicable codes, statutes or regulations, nor provide a definitive analysis of the fire hazard of a particular building beyond that which is provided for through an assessment against existing codes, statutes or regulations.

The use of this rating system will not result in the issuance of a Mark, Listing, Classification, Recognition or other certification by Underwriters Laboratories of Canada.

2. SCOPE OF RATING SYSTEM

Real Property Risk Factors

Property Management and Usage Risk Factors

Human Risk Factors

3. PRINCIPLES

The ratings have been assigned and weighted in consideration of the criteria contained chiefly in the current editions of the National Building Code of Canada, and the National Fire Code of Canada. The applicable passages of these codes are referenced for convenience of use. It is recognized that any building under consideration may have been previously assessed in consideration of the codes applicable at the time of its construction, or following a retroactive incorporation of changes pertaining to such codes.

In instances where any feature of the property either exceeds requirements or does not meet requirements, with respect to the current edition of the applicable codes, points are assigned to provide an approximate assessment of the significance of such a finding and its relative importance in the overall fire protection of the building. A negative rating should be recognized as the first step in risk reduction and be the subject of discussion between the authority that did the analysis and the property owner.