

Contents

ASME A17 Elevator and Escalator Committee v

CSA B44 Technical Committee on the Elevator Safety Code vii

ASME A17.7/CSA B44.7 Committee on New Technology x

Foreword xii

ASME Preface xiii

CSA Preface xv

Form and arrangement xvi

1 GENERAL 1

1.1 SCOPE 1

1.2 PURPOSE 2

1.3 DEFINITIONS 2

2 SAFETY REQUIREMENTS 5

2.1 PROCESSES FOR ESTABLISHING SAFETY 5

2.2 OPTIONS FOR ESTABLISHING SAFETY 6

2.3 SAFETY ASSESSMENT SUBJECT 6

2.4 ASSURING SAFETY BY IMPLEMENTING GESRs 7

2.5 SORTING OF APPLICABLE GESRs FOR APPROACH 1 8

2.6 IMPLEMENTATION OF GESRs 9

2.7 RISK ASSESSMENT PROCESS 9

2.8 PROTECTIVE MEASURES AND SAFETY PRINCIPLES 11

2.9 APPLICATION OF SPs 12

2.10 CODE COMPLIANCE DOCUMENTATION 13

2.11 CODE DATA PLATE 13

2.12 ADDITIONAL REQUIREMENTS 13

3 GLOBAL ESSENTIAL SAFETY REQUIREMENTS (GESRs) FOR ELEVATORS 15

3.1 COMMON GESRs RELATED TO PERSONS AT DIFFERENT LOCATIONS 15

3.2 GESRs RELATED TO PERSONS ADJACENT TO THE ELEVATOR — FALLING INTO HOISTWAY 17

3.3 GESRs RELATED TO PERSONS AT THE ELEVATOR ENTRANCE 18

3.4 GESRs RELATED TO PERSONS IN THE LCU (CAR) 19

3.5 GESRs RELATED TO PERSONS IN WORKING AREAS 21

4 SAFETY PARAMETERS 23

5 REFERENCE CODES AND STANDARDS 25

5.1 REFERENCE DOCUMENTS 25

5.2 PROCUREMENT INFORMATION 29

MANDATORY APPENDIX I — CERTIFICATION OF CONFORMANCE OF ELEVATOR SYSTEMS, SUB-SYSTEMS, COMPONENTS, OR FUNCTIONS 31

NONMANDATORY APPENDICES

A	— BACKGROUND TO GESRs	35
B	— SAFETY PARAMETERS	53
C	— RISK ASSESSMENT METHODOLOGIES	78
D	— QUICK REFERENCES	83
E	— EXAMPLE OF USE OF THIS CODE	87
F	— ASME A17.7/CSA B44.7 Process	114

Tables

A-1	— Examples of risk scenarios related to GESRs	36
A-3	— Cross-Referencing of GESRs in Part 3 and Elevator Sub-Systems	42
A-4	— Cross-Referencing of GESRs in Part 3 and Elevator Sub-Systems	48
B-1	— SPs for Each GESR	54
B-2	— Summary of Anthropometric Data	76
C-1	— Risk Assessment Template	79
C-2.1	— Levels of Severity	80
C-2.2	— Levels of Probabilities	80
C-3.1	— Risk Estimation and Evaluation	81
C-3.2	— Risk Evaluation	81
C-4	— Guide for Team Moderator — Role, Skills, Duties, and Responsibilities	82
D-1	— Examples of Hazards	83
D-2	— Examples of Hazardous Situations	84
D-3	— Examples of Causes (Component of Harmful Event)	85
D-4	— Examples of Possible Effects	86
E-2.3	— List of GESRs to be Verified for Conformance	89
E-2.4	— Risk Assessment per Nonmandatory Appendix C	96

Figures

E-1	— Determination of the Subject of the Assessment	109
E-2a	— Elaboration of the Design Concept	110
E-2b	— View of Ground Guard and Raised LCU	111
E-3	— Elaboration of Design Concept LCU – Landing Bridge	112
E-4	— Elaboration of the Design Concept	113
F-1	— ASME A17.7/CSA B44.7 Process	114