International Finance Corporation
Environmental, Health and Safety Guidelines

Life and Fire Safety Guidelines

LIFE AND FIRE SAFETY (L&FS) — GUIDELINES

General

All new buildings accessible to the public and financed by IFC must be designed, constructed and operated in full compliance with local building codes, local fire department regulations, local legal/insurance requirements, and in accordance with an internationally acceptable life and fire safety (L&FS) standard.

There are diverse international life and fire safety codes and standards acceptable to IFC.[1] The Life Safety Code, also known as NFPA 101, published by the National Fire Protection Association in the USA, provides extensive documentation on L&FS provisions, is one of the many codes acceptable to IFC, and may be used to document compliance with IFC L&FS objectives.[2]

Project sponsors' architects and professional consulting engineers must demonstrate that affected buildings meet these objectives. Life and Fire Safety systems and equipment will be designed and installed using appropriate prescriptive standards and/or performance based design, and sound engineering practices.

In addition, L&FS design criteria for all existing buildings must incorporate all local building codes and fire department regulations.

Scope

These guidelines apply to all IFC financed buildings that are accessible to the public. Examples of such buildings include the following.

- health and education facilities,
- hotels, convention centers, and leisure facilities,
- retail and commercial facilities,
- airports, other public transport terminals, transfer facilities, and
- any other project, upon request from IFC's investment Officer or IFC management.

Specific Requirements for New Buildings

The nature and extent of required L&FS systems will depend on the building type, structure, construction, occupancy, and exposures.

IFC will request all sponsors to prepare a L&FS Master Plan identifying major fire risks, applicable codes, standards and regulations, and mitigation measures. The L&FS Master Plan will be prepared by a suitably qualified professional acceptable to IFC, and adequately cover but not be limited to the following matters that are addressed briefly in the following points. The suitably qualified professional selected to

[1] National or regional Building Regulations typically contain the fire safety codes and standards (e.g. Australia, Canada, South Africa, United Kingdom) or they are found in separate Fire Codes (e.g. Réglementation Incendie [des ERP], USA NFPA-101). Generally, such codes and regulations incorporate further compliance requirements with respect to methodology, practice, testing, and other codes and standards (prepared by National Institutes and Authorities such as ASTM, BS, DIN, NF). Such nationally referenced material constitutes the acceptable fire life safety code.

[2] Life safety, fire prevention and protection of public welfare and the environment.

prepare the L&FS Master Plan will be responsible for a detailed treatment of the following illustrative and all other required issues.

1) **Fire prevention.** Fire prevention addresses the identification of fire risks and ignition sources, and measures needed to limit fast fire and smoke development. The aspects that come into focus here include:

a) fuel load and control of combustibles,
b) ignition sources,
c) interior finish flame spread characteristics,
d) interior finish smoke production characteristics, and
e) human acts, and housekeeping and maintenance.

2) **Means of egress.** Means of egress include all design measures that facilitate a safe evacuation by residents and/or occupants in case of fire or other emergency , such as:

a) clear, unimpeded escape routes,
b) accessibility to the impaired/handicapped,
c) marking and signing, and
d) emergency lighting.

3) **Detection and alarm systems.** Encompasses all measures including communication and public address systems needed to detect a fire and to alert:

a) building staff,
b) emergency response teams,
c) occupants, and
d) civil defense.

4) **Compartmentation.** All measures to prevent, or slow the spread of fire and smoke, including:

a) separations,
b) fire walls,
c) floors,
d) doors,
e) dampers, and
f) smoke control systems.

5) **Fire suppression and control.** All automatic and manual fire protection installations such as:

a) automatic sprinkler systems,
b) manual portable extinguishers, and
c) fire hose reels.

6) **Emergency Response Plan.** A set of scenario -based procedures to assist staff and emergency response teams during a real life emergency and training exercises. This chapter of the Plan will include an assessment of the local fire prevention and suppression capabilities.

7) **Operation and maintenance**. Preparation of schedules for mandatory, regular maintenance and testing of L&FS features to ensure that mechanical, electrical and civil structures and systems are at all times in conformance with L&FS design criteria and required operational readiness.

L&FS Master Plan Review and Approval

The suitably qualified professional acceptable to IFC will submit the L&FS Master Plan, including preliminary drawings and specifications, and certify to IFC and to the project sponsor that the design meets the requirements of these Life and Fire Safety guidelines. The findings and recommendations of the review will be used as the basis for acceptance by IFC or to establish the conditions of a Corrective Action Plan and a mutually acceptable time frame for implementing the changes.

The suitably qualified professional acceptable to IFC will conduct a review as part of the project completion test at the time of L&FS systems testing and commissioning and certify to IFC and to the project sponsor that construction of Life and Fire Safety systems has been carried out in accordance with the accepted design. The findings and recommendations of the review will be used as the basis for establishing project completion or to establish the conditions of a Pre-Completion Corrective Action Plan and a mutually acceptable time frame for implementing the changes.

Specific Requirements for Existing Buildings

All life and fire safety guideline requirements for new buildings apply to existing buildings programmed for

renovation. A suitably qualified professional acceptable to IFC will conduct a complete Life and Fire Safety review of existing buildings slated for renovation. The findings and recommendations of the review will be used as the basis to establish the scope of work of a Corrective Action Plan and a mutually acceptable time frame for implementing the changes.

If it becomes apparent to IFC that L&FS conditions are deficient in an existing building that is not part of the IFC project or that has not been programmed for renovation, IFC may request a Life and Fire Safety review of the building by a suitably qualified professional acceptable to IFC. The findings and recommendations of the review will be used as the basis to establish the scope of work of a Corrective Action Plan and a mutually acceptable time frame for implementing the changes.

OTHER HAZARDS - GUIDELINES

Facilities, buildings, plants and structures should be situated to minimize potential risks from forces of nature (e.g. earthquakes, tsunamis, floods, windstorms, and fires from surrounding areas).

Structural design. All facilities, buildings and plants must be designed in accordance with the criteria mandated by situation-, climatic-, and geology-specific location risks (e.g. seismic activity, wind loading, and other dynamic loads). Structural engineers and architects responsible for facilities, buildings, plants and structures must certify the applicability and appropriateness of the design criteria employed.