

# **Guideline for the Regulation of Submitting Fire Prevention and Protection Drawings**

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## 1.0 Introduction:

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In accordance with the Royal Decree No. (M/43), dated 26/4/1438 AH, which approves the implementation of the Saudi Building Code, and noting that the General Directorate of Civil Defense is one of the authorities responsible for enforcing this Code, this guideline has been prepared. This is also referenced in Section (105.4.1) of the Saudi Fire Protection Code (SBC 801), which states that construction documents and supporting data must be submitted in the form and level of detail required by the Fire Code Official. Additionally, this is supported by Civil Defense Council Resolution No. (24090), dated 26/7/1435 AH, which approves the Regulation Governing the Practice of Engineering, Technical, and Contracting Businesses Related to Fire Prevention and Protection.

Therefore, the General Directorate of Civil Defense, represented by the Safety Affairs Department, has developed this guideline to regulate the procedures for accredited Fire Safety Engineering Consultants offices to submit fire prevention and protection plans and drawings..

## 2.0 Purpose

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This guideline explains the procedure for submitting fire prevention and protection plans for facilities under the supervision of the General Directorate of Civil Defense, to be used by accredited Fire Safety Engineering Consultants offices in the field of fire prevention and protection. The guideline may not be used for any purpose other than its intended purpose, except with written permission from the Safety Affairs Department of the General Directorate of Civil Defense.

### 3.0 Definitions:

The following definitions clarify the terms used throughout this guideline, ensuring clear concepts and consistent procedures.

| Term                                           | Description                                                                                                                                                                                                  |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Building Name</b>                           | The name registered on the building permit.                                                                                                                                                                  |
| <b>Address</b>                                 | The short version of the National Address of the building.                                                                                                                                                   |
| <b>Occupancy Classification</b>                | As defined in the Saudi Building Code, including the classification code such as (I2) for Hospitals.                                                                                                         |
| <b>Construction Type</b>                       | The construction type according to Saudi Building Code, such as (IA).                                                                                                                                        |
| <b>Area</b>                                    | The ground- floor area in square meter, as specified in the building permit.                                                                                                                                 |
| <b>Height</b>                                  | As specified in the Saudi Building Code, this measurement is taken from the lowest accessible point for Civil Defense apparatus to the floor of the highest occupied level, measured in meters.              |
| <b>Number of Floors</b>                        | The number of floors above grade. For example: a ground floor and a first floor constitute (2) floors.                                                                                                       |
| <b>Number of Basement Floors</b>               | Floors located below grade.                                                                                                                                                                                  |
| <b>Number of Exits</b>                         | The number of exits leading outside the building.                                                                                                                                                            |
| <b>Number of Staircases</b>                    | The number of staircases that lead to the exit discharge level in the building, whether enclosed or not, excluding escalators                                                                                |
| <b>Number of Elevators</b>                     | The total number of elevators in the building, including Civil Defense elevators                                                                                                                             |
| <b>Addition or Exemption Code requirements</b> | Mark "Yes" if any requirement from the Saudi Building Code has been added or exempted; form (1) must be attached. Mark "No" if all requirements follow the Saudi Building Code without addition or deletion. |
| <b>Private Firefighting and Rescue Teams</b>   | Firefighting and rescue teams as defined in the regulation issued by the National Risk Council's Decision No. (2) Dated 6/3/1443H.                                                                           |

#### 4.0 Engineering Document Requirements:

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**All requirements and provisions of the Saudi Code Building must be met and reflected in the drawings. Each project must include 3 to 6 separate drawings, depending on the nature of the project, as follows:**

1. General site plan.
2. Architectural and life safety.
3. Firefighting systems.
4. Alarm system.
5. Emergency lighting systems and guidance signage.
6. Ventilation and smoke control systems (if applicable).

#### **Guidelines for submitting drawings:**

- File naming (using the title listed above + project name).
- Include the drawing reference number and issuance date.
- Submit a soft copy of the drawings in PDF format, with an appropriate drawing scale, and a hard copy if needed.
- Each drawing shall be submitted separately according to the above classification, and if no automatic sprinkler system exists in the building:
  - The firefighting systems drawings may be combined with architectural and life safety drawings.
  - The drawings for emergency lighting and guidance signage may be combined with the drawings for the alarm system.

#### **4.1 GENERAL SITE REQUIREMENTS (INCLUDING BUT NOT LIMITED TO):**

1. Access routes and maneuvering areas for Civil Defense vehicles and equipment, clearly indicating the width and height of gates, road width, and the maximum reachable point around the building perimeter from the outside, including dead ends and maneuvering zones.
2. Fire hydrants with a coverage diagram illustrating the area covered by each hydrant (with a radius equal to half the required diameter according to the Saudi Building Code).
3. Assembly points.
4. Civil Defense connections (with details of the connection type illustrated by a schematic drawing).

**4.1.1 THE TECHNICAL REPORT SHALL INCLUDE ALL TECHNICAL SPECIFICATIONS, INCLUDING–BUT NOT LIMITED TO–THE FOLLOWING EXAMPLE:**

- Clarifying the required loads for emergency routes.
- Pressure, flow, hydraulic calculations for fire hydrants and their specifications.

**4.2 REQUIREMENTS FOR ARCHITECTURAL DRAWINGS AND LIFE SAFETY (INCLUDING BUT NOT LIMITED TO):**

1. A cross-sectional view of the building showing the number of floors and all vertical openings throughout the building.
2. Exterior elevations of the building from all sides indicating exits and windows.
  3. Inclusion of information for each space on every floor, including (occupancy classification + area + occupant factor + number of occupants).
4. Clarification of vertical and horizontal fire and smoke compartments, their fire-resistance ratings (durations), and door fire-resistance ratings
5. Indication of travel distances, common paths of travel, and dead ends.
6. Indication of diagonal distances between staircases.
7. Identification of the locations of evacuation elevators, firefighter elevators, fire pump room, water tanks, power generator, and the control room (if applicable).
8. Identification of locations for the storage and use of hazardous and flammable materials, the permitted quantities thereof, and any other potential sources of hazard.

**4.2.1 PROVIDED THAT THE TECHNICAL REPORTS SHALL INCLUDE ALL TECHNICAL DETAILS, INCLUDING (BUT NOT LIMITED TO):**

- Clarification of the details of fire-stopping materials and smoke-sealing systems used to seal openings in fire and smoke compartments.
- Requirements for internal finishes in accordance with the Saudi Building Code and the approved standards.

**4.3 FIRE SUPPRESSION SYSTEMS REQUIREMENTS INCLUDING (BUT NOT LIMITED TO):**

1. indication of fire suppression systems on the architectural drawings.
2. Layout and distribution of portable fire extinguishers including types, sizes, and distances between them.
3. Design of automatic fire extinguishing systems (automatic sprinkler systems, gaseous suppression systems, foam systems, etc.)
4. Design of vertical standpipe and fire cabinets, including their coverage.
5. Details of fire pumps and water storage tank.
6. Fire system riser diagram

#### **4.3.1 PROVIDED THAT THE TECHNICAL REPORT SHALL INCLUDE ALL TECHNICAL DETAILS, INCLUDING (BUT NOT LIMITED TO):**

- Hazard classification.
- Water source, operating duration, flow rate, and capacity.
- Type of sprinklers used and the spacing between them based on hazard classification.
- Pipe diameters and pipe types as shown in the drawings, including underground piping.
- Zone control valves (Z.C.V) and alarm control valves (A.C.V).
- Hydraulic calculations, including identification of the operating area.

#### **4.4 FIRE ALARM SYSTEM REQUIREMENTS INCLUDING (BUT NOT LIMITED TO):**

1. Indication of the fire alarm system on the architectural drawings.
2. Identify the location of the fire alarm control panel and any repeater panels, if available.
3. Fire detectors and their types.
4. Manual alarm call points.
5. Notification systems (audible and/or visual, voice evacuation).
6. Loudspeakers and microphones.

##### **4.4.1 PROVIDED THAT THE TECHNICAL REPORT SHALL INCLUDE ALL TECHNICAL DETAILS, INCLUDING (BUT NOT LIMITED TO):**

- Type of fire alarm system and control panel, including a zoning diagram identifying fire zones on the fire alarm panel.
- Clarification of the interface/integration of the fire alarm system with fire suppression systems, mechanical systems, doors, and elevators (if applicable).

#### **4.5 REQUIREMENTS FOR EMERGENCY LIGHTING AND EXIT SIGNAGE INCLUDING (BUT NOT LIMITED TO):**

1. Indication of emergency lighting and signage systems on the architectural drawings.
2. Locations of emergency lighting fixtures.
3. Locations of directional signage locations and emergency exit signs.

##### **4.5.1 PROVIDED THAT THE TECHNICAL REPORT SHALL INCLUDE ALL TECHNICAL DETAILS, INCLUDING (BUT NOT LIMITED TO):**

- Clarification of the power source of emergency lighting and illuminated exit signage, including associated wiring and distribution.

#### **4.6 REQUIREMENTS FOR VENTILATION, SMOKE EXHAUST , AND SMOKE CONTROL SYSTEMS, INCLUDING (BUT NOT LIMITED TO):**

- 1 Indication of these systems on the architectural drawings.
- 2 Layout and distribution of air ducts.

- 3 Clear identification and labeling of smoke exhaust ducts, return air ducts, and supply air ducts.
- 4 Location of the system control panel.
- 5 Locations of fans, dampers, and associated components.
- 6 Staircase pressurization fans.

#### **4.6.1 PROVIDED THAT THE TECHNICAL REPORT SHALL INCLUDE ALL TECHNICAL DETAILS, INCLUDING (BUT NOT LIMITED TO):**

- Identification of the type of ventilation (natural or mechanical) and the smoke exhaust and smoke control methods, where applicable, including air change rates and system operation. Each system shall be described separately.
- Details and specifications of fans, ducts, dampers, and related components.
- Details of staircase pressurization fans, including their capacity and mode of operation.
- Results of CFD analysis, including all key input parameters (such as fire load, time, height, etc.), with full supporting technical details provided where required.

### **5.0 General Provisions:**

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#### **5.1 GENERAL**

1. This guideline does not replace the Saudi Building Code (SBC) and its related codes; the SBC remains the primary and governing reference.
2. The applicant, through the accredited Fire Safety Engineering Consultants office, shall bear full responsibility for ensuring that all design documents comprehensively address fire prevention and fire protection requirements, and that all drawings are complete and fully compliant with the Saudi Building Code, applicable codes, standards, and Civil Defense regulations.
3. The General Directorate of Civil Defense reserves the right to apply and take appropriate regulatory actions against the engineering consulting office in the event of technical observations or non-compliance with the Saudi Building Code or Civil Defense regulations.
4. The safety officer is entitled to request additional information to the technical report within the scope of the consultancy office's duties and responsibilities, based on the nature of the project.
5. This guideline shall be updated whenever necessary.

#### **5.2 DESIGN STAGE AND SUBMISSION OF DRAWINGS TO CIVIL DEFENSE:**

1. The reference for fire prevention and fire protection requirements shall be the Saudi Building Code, issued under Royal Decree No. (M/43) dated 26/4/1438 H, together with all relevant design standards and approved specifications.
2. Compliance with Civil Defense regulations is mandatory, including the Regulation Governing the Practice of Engineering and Technical businesses and Contracting, as well as the Regulation for Private Firefighting Brigades.



3. Fire prevention and fire protection drawings, technical study reports, and supporting documents shall be submitted by official channels.
4. Submission of a technical study, includes, but not limited to, the fire prevention and protection strategy, detailed engineering calculations, and explicit references to the applicable provisions of the Saudi Building Code for each requirement, together with bills of quantities and material specifications, as well as risk analysis and hazard assessment. This document shall be designated as the Technical Report, with pages numbered in the format "Page # of #," and supported by proper documentation appended at the end of the report.
5. Submission of a report specifying the fire prevention and fire protection requirements that must be complied with during the construction stages in accordance with the Saudi Building Code. This report shall be referred to as the (Fire Prevention and Protection Requirements During Construction Report).
6. Completion of drawings details in accordance with the attached form (Form No. 3).
7. Submission of drawings in accordance with the attached form (Form No. 2).
8. If any code requirement is exempted, or additional requirements not stipulated in the code are imposed on the facility, such matter shall be clearly explained by completing the attached form (Form No. 1).
9. All fields in the forms and drawings shall be completed electronically and officially stamped by the accredited Fire Safety Engineering Consultants office. (Handwritten entries or manual amendments shall not be accepted.)
10. Official contact details of the engineering consultancy office shall be provided, including the contact number and email address.
11. The owner shall be provided with a copy of the drawings and documents for permanent record at the facility.
12. The engineering consultancy office for fire prevention and protection shall retain a soft copy of the drawings and documents.
13. Submission of a supervision contract with an accredited Fire Safety Engineering Consultants office.
14. Linking occupancy with building permit.
15. Resubmission of documents in the event of any modification, addition, or deletion to the drawings, under the same drawing reference number.

## 6.0 Appendices:

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- 6.1 Form No. 1 (1.1) Request for Exemption from Code Requirements, (1.2) the Addition of Requirements to the Facility (Not Specified in the Code). This form shall be prepared and completed by the consultancy office and shall be clear, comprehensive, and include all information required in the form.
- 6.2 Form No. (2): Drawing Title Block. Compliance with the information provided in the form is required as a minimum.
- 6.3 FORM NO. (3): FACILITY INFORMATION. THIS FORM SHALL BE PREPARED AND COMPLETED BY THE CONSULTANCY OFFICE AND SHALL BE CLEAR, COMPREHENSIVE, AND INCLUDE ALL INFORMATION REQUIRED IN THE form.

**FORM (1.1)**  
(REQUEST FOR EXEMPTION FROM CODE REQUIREMENTS)

|                                               |  |
|-----------------------------------------------|--|
| <b>Requirements Requested to be Exempted:</b> |  |
| <b>Legal justifications:</b>                  |  |
| <b>Technical justifications:</b>              |  |
| <b>Engineering Solutions:</b>                 |  |

**Owner's Certification:**

|                                  |                  |                                |                  |
|----------------------------------|------------------|--------------------------------|------------------|
| <b>Project</b>                   |                  | <b>Drawing Number and Date</b> | <b>Owner</b>     |
|                                  |                  |                                |                  |
| <b>Authorized Representative</b> | <b>ID Number</b> | <b>Nationality</b>             | <b>Job Title</b> |
|                                  |                  |                                |                  |
| <b>Date</b>                      |                  | <b>Signature</b>               |                  |

**Engineering Consultancy Office Certification:**

|                                          |                                       |                       |                      |
|------------------------------------------|---------------------------------------|-----------------------|----------------------|
| <b>Consultancy Office Name</b>           | <b>Commercial Registration Number</b> | <b>License Number</b> | <b>Date</b>          |
|                                          |                                       |                       |                      |
| <b>Consultancy Office Representative</b> | <b>Engineering Membership Number</b>  | <b>Signature</b>      | <b>Official Seal</b> |
|                                          |                                       |                       |                      |
| <b>Drawing Number:</b>                   | <b>Date:</b>                          |                       |                      |

**Civil Defense approval based on Engineering Consultancy Office Accreditation:**

|                      |                 |                               |
|----------------------|-----------------|-------------------------------|
| <b>Rank and Name</b> | <b>Position</b> | <b>Signature and Stamping</b> |
|                      |                 |                               |

**FORM (1.2)**

(REQUEST TO ADD REQUIREMENTS (NOT SPECIFIED IN THE CODE))

|                                                  |  |
|--------------------------------------------------|--|
| <b>Requirements Requested to be Added:</b>       |  |
| <b>Legal justifications:</b>                     |  |
| <b>Technical and Engineering justifications:</b> |  |

**Owner's Certification:**

|                                  |                  |                                |                  |
|----------------------------------|------------------|--------------------------------|------------------|
| <b>Project</b>                   |                  | <b>Drawing Number and Date</b> | <b>Owner</b>     |
|                                  |                  |                                |                  |
| <b>Authorized Representative</b> | <b>ID Number</b> | <b>Nationality</b>             | <b>Job Title</b> |
|                                  |                  |                                |                  |
| <b>Date</b>                      |                  | <b>Signature</b>               |                  |

**Engineering Consultancy Office Certification:**

|                                          |                                       |                       |                      |
|------------------------------------------|---------------------------------------|-----------------------|----------------------|
| <b>Consultancy Office Name</b>           | <b>Commercial Registration Number</b> | <b>License Number</b> | <b>Date</b>          |
|                                          |                                       |                       |                      |
| <b>Consultancy Office Representative</b> | <b>Engineering Membership Number</b>  | <b>Signature</b>      | <b>Official Seal</b> |
|                                          |                                       |                       |                      |
| <b>Drawing Number:</b>                   | <b>Date:</b>                          |                       |                      |

**Civil Defense approval based on Engineering Consultancy Office Accreditation:**

|                      |                 |                               |
|----------------------|-----------------|-------------------------------|
| <b>Rank and Name</b> | <b>Position</b> | <b>Signature and Stamping</b> |
|                      |                 |                               |

## Form (2) Title Block

|                                                                                                                                                                                                                                                                                              |                      |                      |                                                                                     |                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|-------------------------------------------------------------------------------------|------------------------------------|
| <b><u>Project Details</u></b>                                                                                                                                                                                                                                                                |                      |                      |                                                                                     |                                    |
| Facility Name:                                                                                                                                                                                                                                                                               |                      |                      |                                                                                     |                                    |
| Site Area:                                                                                                                                                                                                                                                                                   |                      |                      |                                                                                     |                                    |
| GFA                                                                                                                                                                                                                                                                                          |                      |                      |                                                                                     |                                    |
| Number of Floors:                                                                                                                                                                                                                                                                            |                      |                      |                                                                                     |                                    |
| City:                                                                                                                                                                                                                                                                                        |                      |                      |                                                                                     |                                    |
| District:                                                                                                                                                                                                                                                                                    |                      |                      |                                                                                     |                                    |
| Street:                                                                                                                                                                                                                                                                                      |                      |                      |                                                                                     |                                    |
| Plot No:                                                                                                                                                                                                                                                                                     |                      |                      |                                                                                     |                                    |
| National Address:                                                                                                                                                                                                                                                                            |                      |                      |                                                                                     |                                    |
| Site Boundaries: North:    South:                                                                                                                                                                                                                                                            |                      |                      |                                                                                     |                                    |
| East:    West:                                                                                                                                                                                                                                                                               |                      |                      |                                                                                     |                                    |
| <b><u>General Notes:</u></b>                                                                                                                                                                                                                                                                 |                      |                      |                                                                                     |                                    |
| <b><u>Map Key</u></b>                                                                                                                                                                                                                                                                        |                      |                      |  |                                    |
| <b><u>drawing Legend</u></b>                                                                                                                                                                                                                                                                 |                      |                      |                                                                                     |                                    |
| <b><u>Responsibility</u></b>                                                                                                                                                                                                                                                                 |                      |                      |                                                                                     |                                    |
| <p>The consultancy office _____ shall be fully responsible for ensuring that the design documents include all fire prevention and fire protection requirements, and that all design drawings are complete and compliant with the Saudi Building Code and applicable codes and standards.</p> |                      |                      |                                                                                     |                                    |
| <b><u>Drawing Title:</u></b>                                                                                                                                                                                                                                                                 |                      |                      |                                                                                     |                                    |
| <b><u>Drawing Scale</u></b>                                                                                                                                                                                                                                                                  | <b><u>Design</u></b> | <b><u>Review</u></b> | <b><u>Project Name:</u></b>                                                         | <b><u>Safety Consultant:</u></b>   |
| <b><u>Issue Number</u></b>                                                                                                                                                                                                                                                                   | <b><u>Date</u></b>   |                      | <b><u>Owner:</u></b>                                                                | <b><u>Stamp and Signature:</u></b> |
|                                                                                                                                                                                                                                                                                              |                      |                      | <b><u>Designer:</u></b>                                                             |                                    |



**Inclusion of the International Designed Engineering Office (for Critical Projects only)**

**Form (3)**

**Details of the Approved Fire Prevention and Fire Protection Drawings (No..... Date:.....)**

|                           |  |                                          |                             |    |
|---------------------------|--|------------------------------------------|-----------------------------|----|
| <b>Building Name</b>      |  | <b>Building Permit</b>                   | <b>Date/</b>                |    |
| <b>Location</b>           |  | <b>City/</b>                             | <b>District and Street/</b> |    |
|                           |  | <b>Plot No//</b>                         | <b>National Address /</b>   |    |
| Occupancy Classification  |  |                                          | Yes                         | NO |
| Building Type             |  | High Rise Building                       |                             |    |
| Area (m2)                 |  | Atrium Provided                          |                             |    |
| Number of Floors          |  | Underground Building                     |                             |    |
| Building Height (m)       |  | Windowless Building                      |                             |    |
| Number of basement levels |  | Electrical Earthing System Provided      |                             |    |
| Underground Depth (m)     |  | Lightning protection system provided     |                             |    |
| Number of exits           |  | Emergency Generator Provided             |                             |    |
| Number of staircases      |  | Code Requirements Added or Exempted      |                             |    |
| Number of Escalators      |  | Dedicated Fire and Rescue teams required |                             |    |
| Number of elevators       |  | Number of Civil Defense Elevators        |                             |    |

**List of Submitted Documents:**

|   |                                                                |  |    |                                                                                   |  |
|---|----------------------------------------------------------------|--|----|-----------------------------------------------------------------------------------|--|
| 1 | Completed application form with full documentation             |  | 8  | Technical Report                                                                  |  |
| 2 | General Site drawings                                          |  | 9  | Requirements report during the construction phase                                 |  |
| 3 | Architectural Drawings and Safety of Lives                     |  | 10 | Drawings prepared in accordance with Form (2)                                     |  |
| 4 | Fire Systems Drawings                                          |  | 11 | Soft and hard copies                                                              |  |
| 5 | Emergency lighting and exit signage drawings                   |  | 12 | Request for exemption from code requirements or addition of requirements Form (1) |  |
| 6 | Fire Alarm System Drawings                                     |  | 13 | Others :                                                                          |  |
| 7 | Ventilation, Smoke Exhaust, and Smoke Control Systems Drawings |  |    |                                                                                   |  |

**Certification:**

- The applicant (Consultancy Office: '.....') undertakes to maintain a soft copy of all drawings and documents, and to provide the owner with a copy to be kept permanently at the facility.
- The applicant (Consultancy Office: '.....') shall be fully responsible for ensuring that the design documents include all fire prevention and fire protection requirements, and that all design drawings are complete and compliant with the Saudi Building Code and applicable codes and standards.

|                                                           |                                           |                                      |              |
|-----------------------------------------------------------|-------------------------------------------|--------------------------------------|--------------|
| <b>Designer Office<br/>(for Vital Projects)</b>           | <b>Commercial<br/>Registration Number</b> | <b>Designer's<br/>Representative</b> | <b>Stamp</b> |
|                                                           |                                           |                                      |              |
| <b>Name of Engineering<br/>Consultancy Office</b>         | <b>Commercial<br/>Registration No</b>     | <b>License No</b>                    | <b>Date</b>  |
|                                                           |                                           |                                      |              |
| <b>Approved Engineer(s) of the<br/>Consultancy Office</b> | <b>Engineering<br/>Membership No</b>      | <b>Signature</b>                     | <b>Stamp</b> |
| 1.<br>2.<br>3.                                            |                                           |                                      |              |
| <b>Drawing Reference:</b>                                 | <b>Date:</b>                              |                                      |              |

