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protection shelter" regarded in the activities at the headquarters of America's Army in 1954 to meet new phenomenon of intense surprise nuclear attack. Since then, the concept was developed and has found a special place over all factors related to human habitat, especially in the eld of architecture and urbanism. So that, today it is considered at all levels including the design of streets, applications, and even how to make doors, windows, glasses and their locations in the buildings. Its nal goal is to achieve sustainability in modern architecture and urbanism. Hence, any new technologies lead us towards sustainability in architecture and urban planning and their objectives can also be e ective in passive defense. Although power is an integral part of today's cities urban facilities, intelligent systems in the production and distribution of power in the topic of "smart grids"; is a movement towards sustainable urbanization [5].

P c e f a e defe e

Selecting the safe geographic areas of a country,

Determine the optimal scale of population and space activities,

Distribution of the functions with threats and geography,

Small and inexpensive construction and initiative in passive defense,

Economic feasibility of the project,

Parallelism associated support systems,

Retro tting structures,

Positioning of operations,

Crisis defensive management in scenes,

Camou age,

Destruction of enemy intelligence system,

Concealment using natural and geomorphologic features,

Initiativeness and diversity in all actions,

Protection of critical information systems,

Production of dual purpose structures [6].

E - e a De g

Table 1: Requirements of passive defense in design of the blast-resistant facade.

Factors with direct effect (related to the design of facades)	Openings	Windows	Ratio area windows to the surface of the façade	❖ Between 25% and 50% [15] ❖ The surface area of the openings is ≥10 / 1 surface area of the facade [15] ❖ Openings with large openings and adjacent to each other in the floor plan should be avoided [16]
			The position of the windows relative to the height of the façade	❖ whenever windows are closer to the ceiling is better [15]
			Window glass type	❖ The use of coatings with their main substrate is polyethylene (PET) polyester. One of the most cost-effective and most durable coatings, known as insulating glass. [12] ❖ It is recommended to split the large and integrated pieces of glass into the smaller components by window frames [3,12,13] ❖ It is recommended to keep the glass in the frame, a 6 mm thick seal (for example, silicon) and be embedded around the interior of the window [12] ❖ Each opening should be resistant to explosion [11]
	Aerodynamic view	Building form	Vertical section of the building	❖ In the case where the facade of the building decreases in proportion to its height, it behaves more appropriately than other modes [12]
			cross-sectional area	❖ Reducing the cross-sectional area of the primary form by increasing the height to achieve a stable and resistant to explosion wave [17,18]
		Three-dimensional building form	❖ The staircase shape of the building can have a great effect in preventing the debris falling [3,19] ❖ The form should be integrated, natural forms may be appropriate options [14]	
			cornice effect	❖ Open or graded angles are less effective than winding or sharpness angles in exacerbating the effect of the explosion wave [9].

Table 2: Requirements of passive defense in design of the blast-resistant facade.

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