

## **A Proposal Matrix to Apply the Life Safety Code to Readjust Existing Assembly Occupancy closed Buildings**

### **Abstract:**

Although Architects focus on applying various requirements in designing different types of buildings & projects to achieve human, functional, economics...etc. needs, it is obvious that human safety needs concerning fire protection codes are mostly neglected, which, over time, threatens the safety of buildings.

Therefore, many buildings do not fulfill life safety codes, either due to poor implementation or because of legislation causing an immediate danger to society, which requires checking all existing buildings, especially the ones implemented before issuing & applying the life safety code in Egypt.

Hence, this paper aims to set a reference matrix to redesign existing buildings, focusing on “Assembly Occupancy Buildings”, being one of the most buildings that deal with a diverse number of users and for their common existence in many places.

Furthermore, the paper aims to apply the matrix on a selected building and redesigning it according to the life safety code requirements.

The paper also presents two buildings in the Faculty of Engineering at Fayoum university and another building at the Administrative Capital University. It is also applies the matrix on the Multi-purpose hall of one of the mosques in New Cairo (5<sup>th</sup>. Settlement).

The paper concludes a matrix that includes a set of design decisions to adjust or redesign existing buildings to meet the life safety code requirements.

**Key words:** Life safety code - assembly occupancy buildings - readjust designs – existing buildings.