Somboon Santong 2015: Evacuation Times Calculation ; Case Study High-rise Building Business Occupancy. Master of Engineering (Safety Engineering), Major Field: Safety Engineering, Faculty of Engineering. Thesis Advisor: Assistant Professor Supat Patvichaichote, D.Eng. 115 pages.

The research is the study, evacuation time calculation case study high-rise building business occupancy**.** The new building has 11 floors. Purpose for calculate the number of building users. And analysis of fire exit routes capabilities following NFPA 101, Life Safety Code Edition , requirement, including evacuation time calculation by using detailed of Hydraulic flow calculation, method that is defined in the manual of the SFPE (Society of fire protection engineer). Then make suggestions for improvement. To ensure that the occupancy in the building to evacuate people to safe places in a short time in case of emergency.

The study found building is multiple occupancy consists of gathering people assembly, business and residential. There are three fire exit route can accommodate all the refugees have sufficient and appropriate .Evacuation time is approximated 31.43 minutes. However, the queues at the five and seven floor, causing a bottleneck. Because the number of immigrants has more than any other class .While the migratory routes are the same size.

The researcher also recommends to reduce the bottleneck by expand exit door size at the five and seven floor. Evacuation time is approximated 28.83 minutes this is reduce time form.

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