ABSTRACT

Simple walk-up flat for low income communities became slum. This condition occurs due to lack maintenance and regular evaluation of the existence of flats. Evaluation is a building management mechanism that aims to maintain the quality of building since construction planning, occupancy, and operation. One form of the building evaluation is Building Performance Evaluation. This study aims to formulate the concept of building performance optimization for walk-up flat design, with a case study Rumah Susun Sukaramai, Medan.

This study is limited by evaluating health, comfortable, and security achievement and optimizing. Building performance evaluation following the determination of various constraints that cause aspects of building performance is not optimum. Optimization of building performance against criteria of health, comfortable, and security is achieved by optimizing efforts various building performance aspects against building system with main focus to create a healthy, comfortable, and secure building.

Result shows that Rumah Susun Sukaramai, Medan has a low condition of building performance, in achieving health, comfortable, and security criteria. The factors that cause this are not optimum building performance in achieving the health criteria are the relationship and communication between the occupant, the term of inhabiting, space limitation, while for comfort is building imagination, status of tenure, and building age, and for security is simple walk-up flat occupant organization, building maintenance, sense of belongings, supervision, and building condition. Formulation of simple walk-up flat design optimization is the attainment of health, comfortable, and security through efforts to maximize the building system by considering the various constraints faced. Health criteria aspects cannot be optimized as a whole, while the aspects of comfort and security can be optimized as a whole.

Keywords: simple walk-up flat, building performance evaluation, optimization, building design.