

Application of value engineering methodology in Sustainable Construction

Ali Katebi, Elahe Hamidpour *

1. Assistant Prof., Civil Engineering Department, Faculty of Engineering, Kharazmi University, Tehran, Iran
2. Construction Management graduate student, Kharazmi University, Tehran, Iran, elahe.hamidpour@yahoo.com

Abstract

Sustainability of current and new developments has become a major issue facing policymakers, developers, city and urban planners, and designers worldwide. Sustainability issues should be considered throughout all stages of decision-making to ensure that decisions made are in the best interest of the clients. Presently, engaging sustainability issues in construction projects face several challenges & problems that prevent the effective application. Therefore it is reasonable to continuously explore any opportunity which could contribute towards improving sustainability. Value engineering (VE) possesses many qualities which can be utilised to enhance the incorporation of sustainability issues within project plans, designs and decisions. The combination of the sustainability concept and value engineering for construction projects will benefit not only the client and project but will also help in generating ideas that will improve the environment and quality of lives of people now and in the future. The benefits include those of sustainable goals and objectives of value engineering. This paper aims to provide new insights to enhance understanding of value engineering and its usage in sustainable construction.

Key words: Value Engineering, Sustainable Construction, Value Methodology, Project improvement, sustainability issues

1. Introduction

In the contemporary era, one of the consequences of the rapid development of technology and industry is the immethodical growth of cities that are often developed based on the pattern of overcoming Man-made environments on existing green spaces. On the one hand, this is accompanied by an ever-increasing rise of polluting sources in the city & On the other hand, rising energy consumption per capita from sources such as fossil fuels has been the source of pollution in urban environments. Buildings play a major role in energy consumption, pollution generation and urban thermal insulation. One of the most