

Seismic Retrofitting of Historical Buildings

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ABSTRACT

Monuments have been preserving cultural identity of ancient people; hence, these valuable works should be retrofitted to resist earthquake. Note that each monument has its own features; it needs special contemplations according to its properties. The vulnerable parts of important places must be identified and recognized; finally the retrofitting and maintenance procedures would be presented. New technologies can effectively help historical buildings to be truly retrofitted with minimum or no changes in their external appearances. The main goal of this paper is to introduce devastating impacts of earthquake on monuments and seismic retrofitting methods.

Key Words: (Monument, Historical Building, Retrofitting, Earthquake Resistant).

1 INTRODUCTION

Monuments and historical buildings are the identities of a nation and people who live in there and show the cultures, customs and traditions of people who already inhabited there since many years ago. The importance of these heritages has very close relationship with their antiquity which shows the existence of a nation since centuries ago, for example “Persepolis” in Shiraz, Iran or “Ghal’e Rudkhan” and “Masuleh” in Guilan province, Iran.



Figure 1-Masuleh, photo by M.Saffari



Figure 2-Ghal'e Rudkhan, photo by M.Saffari

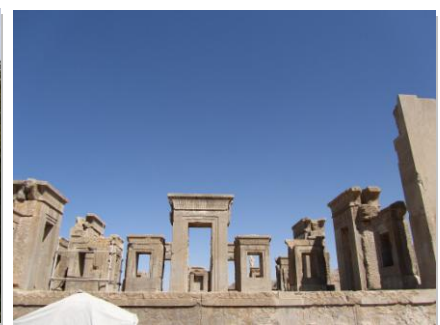


Figure 3-Persepolis, photo by M.Saffari

Monumental buildings are existing constructions having important cultural values (historical meanings, typological aspects and material aspects within a general architectural interest), namely having valuable testimony of ancient times, which deserve to be preserved. [1]

Furthermore, cultural heritage conservation helps a community not only protect economically valuable physical assets, but also preserve its practices, history, and environment, and a sense of continuity and identity. [2] Also they help us to understand the construction techniques and