

## عنوان مقاله:

Study of Foundation Rigidity and Flexibility Effects in Seismic Behavior of Moment Frame, Shear wall and Combination of Frame and Shear Wall

## محل انتشار:

ششمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1390)

تعداد صفحات اصل مقاله: 8

## نویسندگان:

a Eslami Amirabadi - Graduate Student of Soil Mechanics and Foundation Engineering, Faculty of Civil Engineering  
University of Tehran

S.R Mirghaderi - Assistant Professor, Faculty of Civil Engineering, University of Tehran

b Gatmiri - Professor, Faculty of Civil Engineering, University of Tehran

s.a Razavi - PHD Candidate of Structural Engineering, Faculty of Civil Engineering, University of Tehran

## خلاصه مقاله:

In conventional designs, engineers use fixed base assumption for the analysis of structure. The base reactions are applied to the footing and soil in a separate analysis. Based on the results of the latter analysis, the structural design of footing, soil bearing capacity and settlement control can be performed. In this procedure the effects of the structure on the foundation, and on the contrary, the effects of the foundation on the structure are not considered precisely. As a result, this might cause a heavy design for a new structure or an inappropriate retrofit layout of an existing building. In this study, a comparison has been made between the seismic behavior of structures with fixity assumption and flexibility assumption. In the flexibility assumption the structure, footing and soil are considered in a single analysis. For this purpose, three types of 2D conventional structures have been modeled by SAP2000. These structures have been analyzed using linear static and nonlinear static (Pushover) methods. These models include moment frame, shear wall and dual system composed of frame and shear wall. Based on the achievements of this study, preliminary design recommendations for the structures and substructures interactive effects will be presented

## کلمات کلیدی:

Rigidity and Flexibility of Foundation - Soil-Structure Interaction - Seismic Structure behavior Pushover Analysis

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/115011>

