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Comparison of the Performance of Structures with a Special Lateral Bearing System of a Special Reinforced Concrete Frame with Special Shear Wall based on the Third Edition and the Draft of the Version No.4 of the Iranian Earthquake Code

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ABSTRACT

In this article the performance of structures with lateral bearing system of special reinforced concrete frame with special shear wall based on the third edition and draft of the fourth edition of the Iranian Earthquake Regulations has been studied. For this purpose, three structures of 10, 15 and 20 three-dimensional floors under linear dynamic dynamics analysis was performed, in which the 15-story structure is irregular. The structure is then analyzed with both of the above-mentioned regulations and then designed according to the ninth section of the National Building Regulations; Frame A of the three-dimensional structures is then subjected to push-up analysis. In the third version, taller structures, i.e. 15 and 20-storey structures, perform better than the fourth edition 2800, but this fact is the opposite for the shorter structure, i.e. 10-storeys, i.e. the 10-storey structure designed based on 2800 fourth edition has better performance than the same structure. But it is designed with the third edition. It should be noted that the structures are examined in the area away from the fault.

Keywords:

Special moment frames, shear walls, especially, shift, the earthquake, structural performance.