

## عنوان مقاله:

Comparison between Seismic Behavior of Suspended Zipper Braced Frames and Various EBF Systems

## محل انتشار:

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## خلاصه مقاله:

Zipper frames are intended to improve on the behavior of conventional inverted-V-braced frames, which show poor performance taking place from the early buckling of braces in the lower story. A zipper frame affords better performance by forcing simultaneous buckling of all braces. In this article, seismic behaviors of zipper braced frames and three types of eccentrically braced frames are evaluated using finite element simulation. Two dimensional finite element models have been created for three-story onebay frames for various bay lengths and different arrangement of braces. Seismic response of frames subjected to near-fault ground motions (LA21) has been studied through dynamic analysis, considering nonlinearity of geometry and materials. For this purpose, SAP2000 has been used. Results have been compared and structural response of steel frames and some other parameters such as ductility of frames, maximum base shear and optimized link length have been investigated. Against other researches, in this article, the ratio of maximum shear over the weight of structure and its relation to behavior of structure has also been studied. It was found that optimized link length in EBF systems which caused to maximum ductility of frame is about 30 percent of the bay length. Moreover, the results showed that zipper frames provide desirable post buckling behavior and exhibit more ductility.

## کلمات کلیدی:

;Suspended Zipper braced frames; eccentrically braced frames; near fault; dynamic analysis

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/121357>

