عنوان مقاله:

Staircase effects on the behavior of concrete and steel structures and its earthquake load analysis

محل انتشار:

کنگره بین المللی علوم مهندسی و توسعه شهری پایدار (سال: 1397)

تعداد صفحات اصل مقاله: 12

نویسندگان:

MOHSEN SAEIDI, - *Student of M.A Structural Engineering of Azad University, DAMGHAN, IRAN*,

HOJATOLLAH RAMEZANI, - *Structural Engineer, Graduate of Islamic Azad University of DAMGHAN, IRAN*,

خلاصه مقاله:

As residents leave the building after the earthquake, it is said that the stairs play an important role in the building and its seismic behavior is important. This research involves a ten story building's staircase model including (staircase without bracing , staircase with bracing , staircase in the shape of a slab (diaphragm) that amount of displacements, Vs. the total energy of an earthquake by has been calculated by using ETABS software. For a better outcome, this program dynamically examines the acceleration speed of the Earth, which is recorded in the acceleration in Iran with the horizontal axis (x and y), and has been compared with its effects. The magnitude of an earthquake, the other way is to consider these elements and its impact on the seismic behavior of the structure with respect to Stranger s plain, without considering the linear analysis. In addition to, suggestive model for repairing damaged staircase was modeled by ABACUS software. The lack of research on static seismic behavior and even its modeling in structural computing performance by our engineers is an important point to be noted. The results of linear analysis shows that the stringers of the staircase behave like semi-braced system as it increases the stiffness of structure in that area , resulting the bigger force absorption by this elements of staircase. This behavior also changes considerably the center of stiffness in the system.

کلمات کلیدی:

Seismic behavior, finite element modeling, time history analysis, stairs sword