

EARTHQUAKE DISASTER

A. A. MOINFAR

*Technical Research & Standard Bureau, Plan and Budget Organization,
Ministry of Planning, Tehran, Iran.*

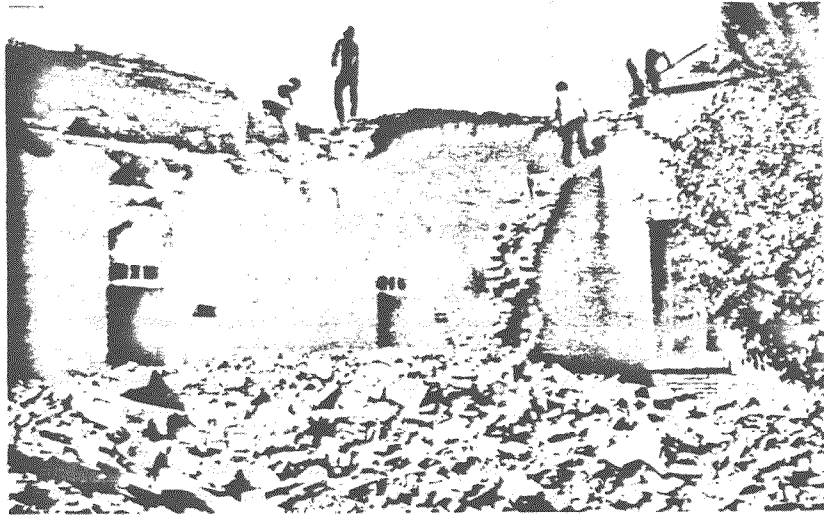
The word disaster is a small word, but has a great impact upon community. In general we can name many natural disasters such as Topological Accidents and Tectonic Disasters. The topic of my discussion is the earthquake disaster.

Earthquake is one of the most destructive hazards, if not to human life itself, most certainly to the work of mankind. The strong earthquake always causes the collapse of buildings and leaves behind many structural damages and losses of life.

What is an earthquake? Earthquake consists of a sudden release of stored energy in the ground. It consists of horizontal and vertical ground vibrations. The horizontal motion usually has much greater effects upon the structure than the vertical. The most destructive force is caused by horizontal earth motion in which the ground underneath a structure is moving suddenly to one side, and a building due to its inertia force tends to remain on its original position. In case of catastrophic earthquake the pattern of day to day life is disrupted, people are plunged into helplessness and need medical care, shelter, clothing and many other necessities of every day life. There is fear of epidemic disease, either in humans or in domestic animals, looting is spread and people need psychological and sociological relief. Most often earthquakes are followed by fire; fire prevention is very important in earthquake prone areas. There are many evidences which show that the fatalities of fire after an earthquake are much more greater than the earthquake itself. The shaking of the earth is not the greatest problem to be faced during the days and weeks after the initial event, it is rather the matter of human adjustment and human need.

In general there are many topics which can be mentioned in this discussion such as: general behaviour of people, panic, restlessness, fear, rescue operations, and psychological behaviour of people, and immediate necessities, blankets, tents, potable water, fuel, sanitary facilities, food, medical care, blood, problems of burial of dead bodies and issuance of death certificates.

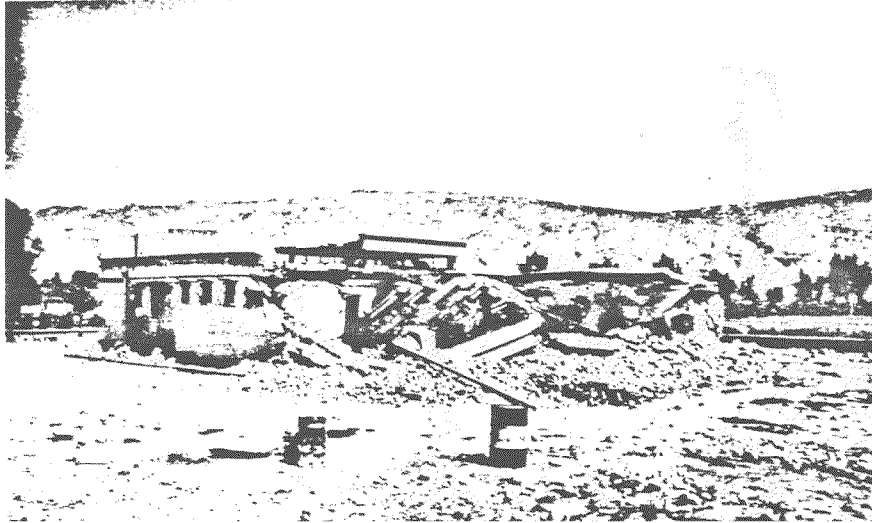
The above mentioned problems are common in every earthquake disaster, but there are also lots of other problems which could be mentioned, if the earthquake will occur in metropolitan areas, or large cities.



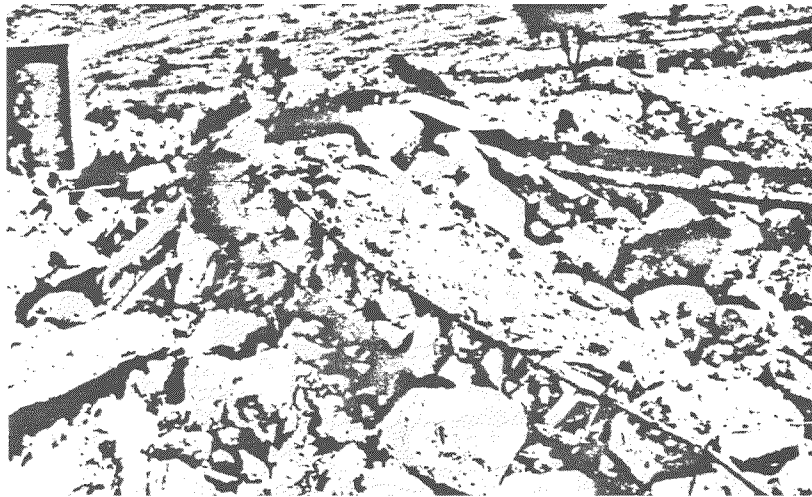
Collapse of typical building in earthquake of August 31, 1968 in Dashte-Bayaz earthquake



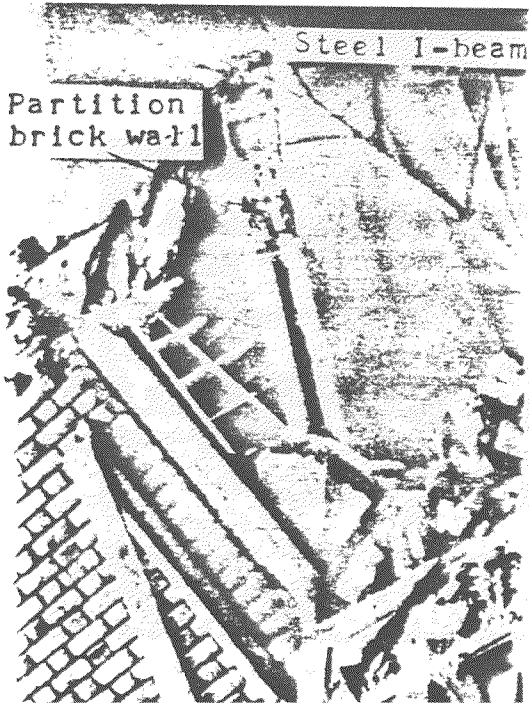
Behaviour of old building in earthquake of 1968 in Ferdous (Iran) September 1968



Collapse of medical center in Ghir (Iran) earthquake of April, 10, 1972



Behaviour of traditional buildings in earthquake of April, 10, 1972 in Ghir (Iran)

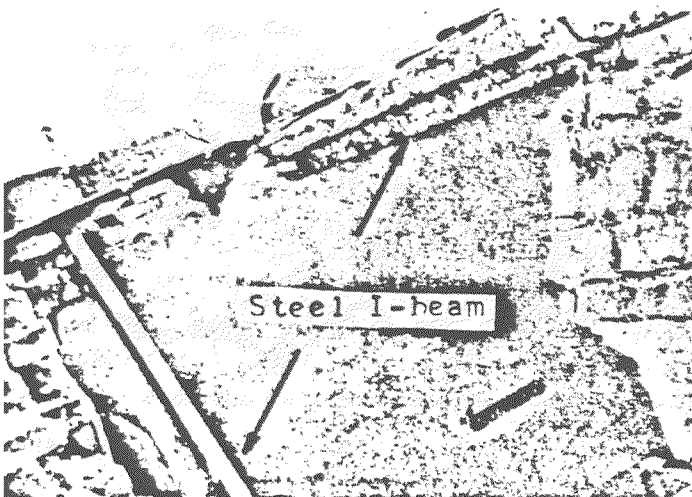


Partition
brick wall

Steel I-beam

Collapse of dispensary due to earthquake
of September, 1st, 1962 in Buin-Zahra (Iran)

Collapse of dispensary due to earthquake
of September, 1st, 1962 in Buin-Zahra (Iran)



Steel I-beam

Collapse of roof of dispensary of Buin-Zahra (Buin-Zahra Earthquake of September, 1st, 1962 — Iran)