Construction of soil profile model and evaluation of site amplification of ground motion

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Experiences of damaging earthquakes have demonstrated that earthquake damage varies at site by site and is controlled by ground motion amplification due to local site conditions. Therefore, it has been recognized that a ground shaking map should be prepared as the basis for better planning of the disaster mitigation. One of the pioneer works is ground shaking maps of Tokyo and Osaka by Imamura (1913). Then, in 1960's, some of local governments began to try preliminary earthquake damage assessments. In 1970's, many of them started the damage assessments regularly. This paper introduces construction of soil profile model and evaluation of site amplification of ground motion carried out in recent damage assessments by national and local governments.