

Site Effect in Archaeological City Jerash in Jordan

Abstract In this study we determined the local site effect by means of the horizontal-to-vertical (H/V) spectral ratios. The Nakamura's concept (Nakamura Y. 1989) is applied in JERASH city in order to determine the resonance frequencies and amplification factors for, finding the dynamic characteristics for structural engineering purposes. Results obtained in this study shows that; dominant frequencies F varies between 2.35 Hz and 3.19 Hz in the city area, while, the amplification factor A varies "between" 0.87 to 23.47. This means that structural culture in most localities of the study area might be seriously affected by any of eventually major short periodic earthquakes released by the nearby seismologic active sources westward, except of localities characterized by long periodic dominant frequencies of the study areas, considering that most structures of the study area are characterized by one to three story profiles

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