## Modelling of Strong Ground Motion at Dholera Special Investment Region Using Empirical Green's Function Technique

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The Government of India has decided to develop Delhi Mumbai Industrial Corridor and in this connection various industrial zones and townships will be developed in various parts of the country including Gujarat. The Dholera Special Investment Region (Dholera SIR) in Gujarat is one of the sites identified for the above said purpose in the western part of India. It is essential to study the seismic behavior of Dholera SIR as there will be so many important commercial and life line buildings in this area in near future. For this purpose Institute of Seismological Research (ISR) has installed Broadband Seismographs at eleven sites in Dholera SIR to monitor the seismicity and to estimate the amplification at fundamental frequencies from earthquakes & micro-tremors. In present work, the simulation of strong ground motion is done using Empirical Green's Function Technique (Irikura, 1983, 1986) at Dholera site. An earthquake of Mw 4.1 from Kachchh region recorded by the seismic stations installed in Dholera region has been taken as an element earthquake. An earthquake of Mw 7.6 is generated using two stage simulation procedure. The predicted peak ground acceleration (pga) at Dholera from an earthquake of Mw 7.6 from Kachchh is 18.2 gals. The same procedure is followed to generate strong ground motion at other sites of Dholera SIR where element earthquake is available. This estimate will give us an idea of expected pga at Dholera SIR which will be useful in the safe designs of critical structures in the region.