The above study indicated the importance of improving the design methodologies for embankments. Hence, attempts were made to understand the performance of embankment system using finite element tool. It was inferred that there is a need to consider the influence of subsoil on the overall performance. Natural frequency of embankment system will be very different from the available empirical equation prepared in the Indian standard code which holds good for embankment resting on hard strata only. A series of coefficients have been proposed in the present study for varying thicknesses of subsoil. Further, response spectrum charts were prepared for embankment subsoil system considering variation in the earthquake motions and damping coefficients. These charts will help in rational design of embankment subsoil system under earthquake loading.

In summary, the present study helps in understanding the behavior of embankment subsoil system during earthquake loading, proposing a suitable mitigation measure to improve its performance and developing schemes for rational design of embankment subsoil system during earthquake.
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