

GROUND VIBRATION MODELLING: AN ELASTIC HALF-SPACE SUBSTRATUM FOR THE THREE-DIMENSIONAL LAYERED GROUND MODEL

The report describes the extension of the three-dimensional layered ground model to include the effects of an elastic substratum. The substratum is include in the model by means of an exact dynamic stiffness matrix. The derivation of the matrix is shown. The use of the matrix in the global finite element system of the model is described and some results are produced. The results of the model agree with results from another model for the special case of a homogenous half-space ground.