2.5. RESPONSE HISTORY ANALYSIS METHOD

2.5.1. Linear Response History Analysis

Linear response history analysis based on *mode-superposition procedure* may be performed in lieu of multi-mode response spectrum analysis described in **2.4**.

2.5.1.1 – The analysis shall be based on a set of earthquakes comprising three or seven earthquake records with simultaneously acting two horizontal components to be selected and scaled according to **1.2.3**.

2.5.1.2 – Sufficient number of vibration modes shall be used as described in **2.4.3**.

2.5.1.3 – In each analysis, linear response histories of design quantities obtained for each typical mode (n) shall be reduced by the corresponding Seismic Load Reduction Factor $q_{\mathrm{R}}(T_{\mathrm{n}})$ given by **Eqs.(2.1)** based on elastic spectrum corner period T_{S}.

2.5.1.4 – If three ground motions are used in the analysis, the maxima of the results shall be considered for design. If at least seven ground motions are used, the mean values of the results may be considered for design.

2.5.2. Nonlinear Response History Analysis

Nonlinear response history analysis may be performed by direct integration of nonlinear equations of motion in lieu of multi-mode response spectrum analysis described in **2.4** and linear response history analysis described in **2.5.1.** Nonlinear analysis requirements shall be the same as those given in **Chapter 5.**