Chapter 22
SEISMIC GROUND MOTION LONG-PERIOD TRANSITION AND RISK COEFFICIENT MAPS

Contained in this chapter are Figs. 22-1 through 22-6, which provide the risk-adjusted maximum considered earthquake (MCE_R) ground motion parameters S_S and S_1; Figs. 22-17 and 22-18, which provide the risk coefficients C_{RS} and C_{R1}; and Figs. 22-12 through 22-15, which provide the long-period transition periods T_L for use in applying the seismic provisions of this standard. S_S is the risk-adjusted MCE_R, 5 percent damped, spectral response acceleration parameter at short periods as defined in Section 11.4.1. S_1 is the mapped MCE_R ground motion, 5 percent damped, spectral response acceleration parameter at a period of 1 s as defined in Section 11.4.1. C_{RS} is the mapped risk coefficient at short periods used in Section 21.2.1.1. C_{R1} is the mapped risk coefficient at a period of 1 s used in Section 21.2.1.1. T_L is the mapped long-period transition period used in Section 11.4.5.

These maps were prepared by the United States Geological Survey (USGS) in collaboration with the Building Seismic Safety Council (BSSC) Seismic Design Procedures Reassessment Group and the American Society of Civil Engineers (ASCE) 7 Seismic Subcommittee and have been updated for the 2010 edition of this standard.

Maps of the MCE_R ground motion parameters, S_S and S_1, for Guam and American Samoa are not provided because parameters have not yet been developed for those islands. Therefore, as in the 2005 edition of this standard, the parameters S_S and S_1 shall be, respectively, 1.5 and 0.6 for Guam and 1.0 and 0.4 for American Samoa. Maps of the mapped risk coefficients, C_{RS} and C_{R1}, are also not provided.

Also contained in this chapter are Figs. 22-7 through 22-11, which provide the maximum considered earthquake geometric mean (MCE_G) peak ground accelerations as a percentage of g for Site Class B.