

EXECUTIVE SUMMARY

The Soho high rise condominium project consists of 13 above grade stories and two below grade stories. The building encompasses roughly 175,000 SF stretching from 28 feet below grade to 175 feet above grade. The first floor houses highly marketable retail spaces while the remaining 12 stories are condominium units. A sub-cellar level is set aside for resident parking and the cellar level contains a pool lounge, exercise facility, resident storage spaces and mechanical rooms. There are also roof terraces and Jacuzzi pools located at the 6th Floor step back. The floor system of the Soho high rise is typically a 10-1/2" two-way normal weight concrete flat plate with bays range in size from 13 feet by 21 feet to 25 feet by 25 feet. Typical concrete columns of 20 x 14 and 12x 19 carry the gravity loads down to the 4' thick mat foundation where they are transferred to the ground.

In the third technical report the existing lateral system was investigated. The shear walls of the Soho High Rise were found to be adequate to resist both the imposed wind and seismic loads. The total deflections resulting from seismic and wind loading were all well under the generally accepted standard of H/400 and most were in the H/800 to H/1000 range. A more detailed analysis will be carried out using ETABS in the upcoming reports. This analysis has not accounted for the redistribution of forces between shear walls that will occur as their relative stiffnesses change throughout the building, particularly at the tower transfer level. The interaction of the shear walls via link beams was also neglected in this analysis for simplification purposes. This may result in the shear walls acting as more of contiguous section throughout the building rather than individual shapes as has been assumed for this report.

ASCE 7-05 was used to determine all wind and seismic loads. For wind loads Method 2 (analytical procedure) of ASCE 7-05 section 6 was used. Seismic design loads were established using the equivalent lateral force procedure set forth in ASCE 7-05.