

debris impact damage application. The figure shows a downward displacement of up to 8 in. (about 1/900 of the total building height) on the south face toward Zone 1 damage due to column removal. The analysis shows that the building remained stable and that columns and floors above the damaged zone were able to redistribute the loads through Vierendeel truss action.

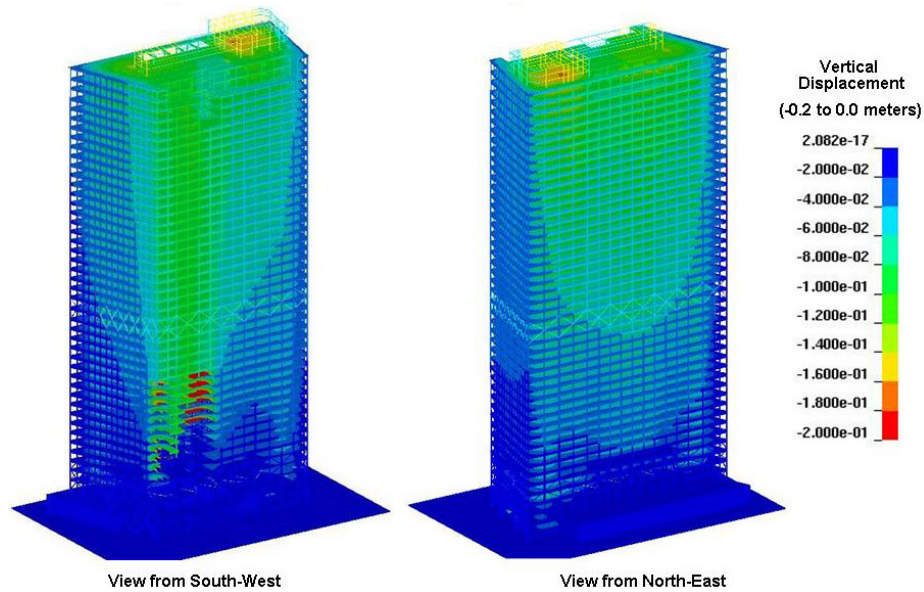


Figure 12-39. Calculated vertical displacements after impact damage.

12.4.3 Building Response to Temperatures

Figure 12-40 shows the subsequent change in vertical displacement after Case B, 4.0 hour temperatures were applied. Detail views illustrating the vertical displacements of the lower floors, up to Floor 14, are shown in Figure 12-41 (a) after debris impact damage application and Figure 12-41(b) after full

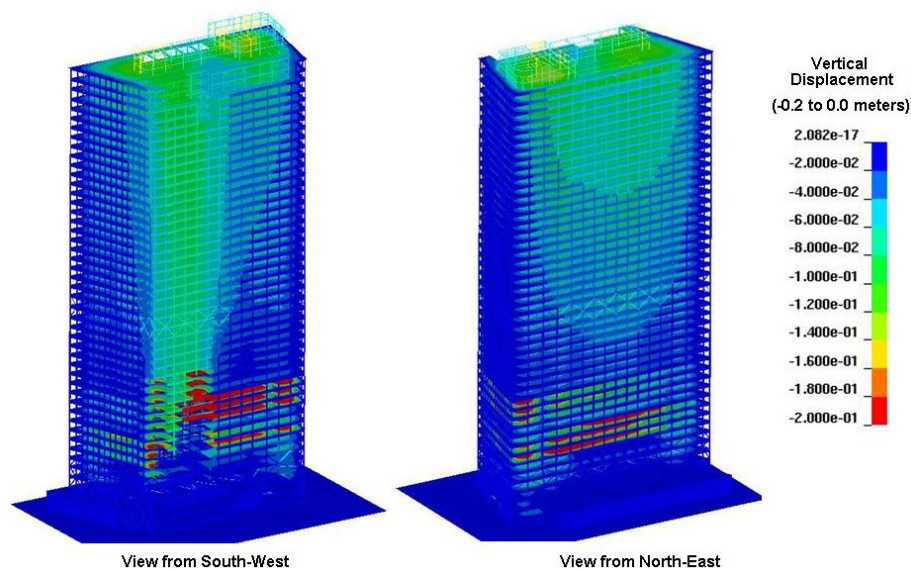


Figure 12-40. Calculated vertical displacements after temperature initialization.