



Figure 5–202. Cropped frames from the Camera 2 video clip in Figure 5–185 and the Camera 3 video clip in Figure 5–186, showing the north face of WTC 7 8.1 s $\pm$ 0.1 s after the east penthouse began to move downward.

The intensities have been adjusted.

Camera 2 and Camera 3 views of the north face of WTC 7 recorded 0.9 s after those in Figure 5–202, i.e., 9.0 s after the east penthouse began to move, are shown in Figure 5–203. By this time, the entire north face that is visible above the foreground buildings was clearly falling as a unit. By counting the visible floors above the foreground building in the view from West Street, it was found that WTC 7 had fallen nearly two stories in the 2.1 s since the global collapse started. The façade damage on the west side of the face has increased and seems to extend over most of the visible floors between Columns 54 and 55. What appears to be dust has begun to flow from the open windows. A few additional windows have opened near the center of the face since the frame in Figure 5–202 was taken. The distribution of open east-side windows looks similar at the two times. The rotation of the east edge of the north face has become more evident, and a distinct kink has begun to develop just to the left of the east end of the louvers on the 46th and 47th floors. This location is close to perimeter Column 47.

In the distant view in Figure 5–203 it can be seen that all of the screenwall and most of the west penthouse have disappeared below the north parapet. The roofline of the west penthouse that is still visible is sloping down steeply from its western edge. The dust cloud rising through the roof opening on the east side of the building has grown.

By utilizing video clips from the Camera 3 and Camera 4 videos it was possible to characterize the motions of the northeast and northwest edges of WTC 7 in more detail. A sequence of images from the Camera 4 video is shown in Figure 5–204. This camera was hand held, and during the collapse the camera moved and the operator began to zoom in. As a result, the line corresponding to the pre-collapse location of the northeast edge of WTC 7 moved within the video frames with time. However, the two buildings in the foreground were fixed and provided a means to identify this location in frames after the collapse began. In the first image of Figure 5–204, a vertical line has been drawn tracing the northeast edge of WTC 7, and a horizontal line was drawn to the two buildings in the foreground. Using the foreground building edges as guides, these same lines were imposed on subsequent frames, in effect