Kansas City Hyatt Regency Hotel Walkway Collapse

What caused the worst structural engineering disaster in the United States?

The hotel was designed and built with an atrium lobby with walkways above the lobby floor. The critical walkways were the 4th floor walkway, which was directly above the 2nd floor walkway. On July 17, 1981 at 7:05 PM the 4th floor walkway failed and collapsed onto the 2nd floor walkway. At the time there were 1,600 people in the atrium attending a tea dance completion. The collapse caused the death to 114 people.

The original design called for the 4th floor walkway and 2nd floor walkway to be hung from the atrium roof by single continuous steel rods that served as the hangers for the walkway supports to the beams under the walkway.

During the structural design review process, the single continuous steel rods got changed to steel rods, going from the atrium roof to the 4th floor beams, and then a second set of rods going from the 4th floor beams to the 2nd floor beams. This structural change effectively doubled the load on the connection at the 4th floor box beam holding up the 4th floor walkway. The 4th floor walkway collapsed over the 2nd floor walkway and they both continued to fall to the atrium floor.

Who is to blame for this engineering tragedy? The courts determined that the structural design engineers were liable for neglecting to properly review the structural shop drawings and allowing changes to occur.