

COLLAPSE POTENTIAL FOR RAILINGS ON BALCONIES

Safety Bulletin – Lessons Learned #1



On Sunday, April 1, 2007, at 11:15 in the morning, there was a three-alarm structure fire at 4220 W. Northgate. A single apartment building was heavily involved and the fire was well-contained by the time the accident occurred. The building in question was a three-story garden apartment that had been built in 1982.



As you can see in the first picture the roof was quickly burned off the building and crews were utilizing the balconies to reach the hotspots along the remaining walls. In order to reach the fire via hose line and pike pole it was necessary to lean out to work effectively from the balcony.

In the second picture you will see a crew using a hose line to lob water into the adjacent burned-out apartment. Although this is often a safe manner of operation if the structure of the building allows it is noted that individuals using the apartment balconies as a work platform trusted that the railing around the edge of the balcony was built solidly and would hold the weight of them and their equipment.



Unfortunately the railings had a number of problems. The units were not built very well to start with and they suffered from years of



deferred maintenance. The railings are only designed to resist a 40-pound side load when they are built.

The existing railings were barely strong enough to stay in place but when a firefighter, with all of the gear that we wear, stressed a railing even more the inevitable happened. The fire was almost out but at 12:53:19 Command sent the message that we all hate to hear; “Firefighter Down.”

Mike Sanford told us. “I was trying to pull down the fascia board under the edge of the roof, but I knew not to lean on the rail. I made an effort to stay off that rail but when I pulled on the pike pole it pulled my body up against the rail. The next thing I knew I was in mid-air, I must have pushed off with my right foot to keep my feet under me. People tell me that I was running in mid-air until I hit the air conditioner and then I rolled into a ball as I hit the wall. There was an awesome noise when I hit the compressor unit and then I hit my head. The next thing I knew Chief Sherburn was yelling “Mike don’t move!” but I couldn’t answer him at first; I was stunned. Next I felt pain in my legs and knew that I was hurt.”



It was a wonder that Mike was not hurt worse than he had been. In the picture to the left you can see the third floor balcony where he was working. When the railing collapsed he apparently tried to jump to the raised flowerbed that was some ten feet away when measured horizontally. Mike landed on one of the air conditioning compressors at the rear of the raised flower bed.

Mike’s feet hit the top of the compressor that you see to the right. The unit absorbed some of the energy from his fall before Mike pitched forward and struck the fence with his head. He spent one day in the hospital and walked out the next day under his own power. He is sore and bruised but Mike Sanford will soon be back to work. His reflexes, superior conditioning, and protective clothing all combined to minimize the effects of a three-story fall.



What we could have done differently - Mike was quick to mention that trusting the railing was the cause of this accident. As has been discussed earlier this is a common occurrence at fires but it is dangerous due to the poor construction and maintenance of

the railings. A properly set and heeled ground ladder would have provided a good working platform for pulling the fascia board in this instance. We hope that you will consider the condition of any railing before you trust it. Put safety first and we'll all go home at the end of every shift.