



Memorandum

TO: MAYOR AND CITY COUNCIL

FROM: Councilmember Rose Herrera
Councilmember Xavier Campos
Councilmember Johnny Khamis
Councilmember Kansan Chu

SUBJECT: Ordinance Implementing 2013
California Building and Fire
Standards

DATE: November 1, 2013

APPROVE

Rose Herrera (A.C.) XC
Johnny Khamis DS
JS

11/1/13

RECOMMENDATION:

Approve the staff recommendations, with the following amendments:

1. Adopt item 4.1, Ordinance Implementing 2013 California Building and Fire Code Standards, requiring a Firefighter Air Replenishment System in addition to the requirements for the Fire Service Access Elevators for all high rise buildings in San José
2. Remove exception language in section 901.4.4.1.1 sub-section 1 and under General in section 901.4.4.2.1, respectively, as follows: ~~“Exception: Where Firefighter designated elevator is provided per Section 901.4.4.2 or as required by the California Building Code Section 403.6.1” and “Except where required elsewhere in this Code, a designated firefighter elevator may be installed in lieu of a firefighter breathing air replenishment system as required in Section 901.4.4.1. of California Fire Code. and When a Firefighter Elevator is installed according to this section, the building will be considered to meet the Fire Service Access Elevator requirement of the California Building Code.~~
3. Explore opportunities to partner with a manufacturer to install a Firefighter Air Replenishment System in a City of San José Fire Training Facility at no cost to the City of San José, and institute a comprehensive training program

BACKGROUND:

A Firefighter Air Replenishment System (FARS) is literally a standpipe for air, permanently installed within a building. The system provides firefighters with quick access to a safe and reliable source of breathing air throughout complex structures such as high-rise buildings, large horizontal structures and tunnel systems. These types of structures present unique risks to communities. When firefighters have almost instant access to air to replenish their air cylinders, they can fight fires faster, more effectively, and with a higher degree of safety.

In a building that is not equipped with a FARS, firefighters depend on a mule train of personnel to hand-carry air bottles up the stairs to the fire crews, and down again to be refilled. The average air bottle contains just 15 minutes worth of air. A major fire may require as much as a third of the personnel on the scene working this mule train. There is no way the hand-carry method can deliver air in the volume needed, or as quickly as needed in a major fire. It is analogous to using hand buckets in place of hoses as a delivery system for water.

Manual delivery of air bottles is a misuse of highly trained personnel, who could be on the front lines of fire attack, performing the critical tasks of saving lives and property. During the First Interstate Bank fire in Los Angeles, 383 firefighters from 64 companies used 600 air bottles in 3 hours and 39 minutes to bring the fire under control. The general consensus is FARS brings a readily available supply of air within close proximity to the fire scene allowing for the safer and more efficient use of manpower.

During the One Meridian Plaza fire in Philadelphia, approximately 100 firefighters were used for support operations including refilling self-contained breathing apparatus (SCBA) cylinders. Three firefighters from Engine Company 11 died when they ran out of air on the 28th floor. The fire started on the 22nd floor of the 38-story building. The three firefighters that perished were attempting to ventilate the center stair tower when they became disoriented and exhausted their air supply before they could reach safety. The crew from Engine Company 11 was six floors above the fire, but heavy smoke conditions filled the upper floors. Eight members of a search team ran out of air on the 38th floor while trying to exit to the roof; they too had run out of air and became disoriented. Fortunately, they were rescued by a crew that was helicoptered to the roof.

During a Chicago high rise fire at the La Salle Building (2004), the fire department had to manually transport more than 400 air cylinders, despite having functional elevators. Chief Ron Coleman, California State Fire Marshal (retired) states in a report that,

“The old way of doing business in fighting high-rise fires involved a considerable amount of support being required from fire companies that were never involved in actually fighting the fire, but rather with the task of maintaining logistical support. As buildings become higher and more complicated, technological solutions have been sought to provide for safer, more effective, and efficient operations... The rationale for installing a firefighter air replenishment system within a high-rise building is to provide a method of access to firefighters to be able to refill their air bottles within a reasonable travel distance to the point of attack and to support firefighters above the fire floor performing search and rescue. This is based on years of experience in combating high-rise fires that demonstrate that the physical exertion of firefighting in high-rise buildings places a very high demand upon breathing apparatus. This leads to the second rational reason for installing an air replenishment system and that is to preserve the limited resources performing combat operations instead of having to serve as manual labor to merely replenish bottles near the fire floor. Lacking an air replenishment system, the bottles have to be manually transported to the ground level to be refilled or bottles brought manually to the fire floor to replenish breathing apparatus.”

In January 2005, San José became one of the first cities in the country to progressively deal with firefighter and public safety in high rise buildings when the Council approved Ordinance No. 27341, which amended the San José Fire Code to require the installation of FARS in high rise buildings. To date, ten high rise buildings, including City Hall, have installed FARS.

In January 2011, Council adopted exception language to provide an option to developers to install FARS or a Fire Service Access Elevator (FAE). To date no FAE has been installed in San José. On May 15, 2012, as agenda Item 4.2, the San José City Council voted to approve Downtown High Rise Incentives in order to entice developers to begin projects in the city core. At that time, the Council did not debate the deletion of the FARS requirement from the municipal code.

City staff recommended that, in addition to providing incentives, the City Council direct the City Attorney to draft an ordinance to delete from the Municipal Code the requirements for FARS. Effective January 2014, the California Fire Code will require the use of Fire Service Access Elevators (FAE) in high rise buildings. Fire Elevators were designed in the wake of 9-11. Their purpose is to provide firefighters and their equipment faster access to fire staging areas and to assist in evacuating occupants. The FAE does not provide an efficient and continuous source of air, however. Elevators stop one to two floors below the fire floor which can create an issue with search and rescue on floors above the fire. Fire Service Access Elevators are not the equivalent of a FARS.

Robert Sapien, Jr., President of IAFF, Local 230, stated in a letter to the Public Safety, Finance & Strategic Support Committee "Elevators are not reliable under fire conditions." Mr. Sapien also stated that "FARS is an effective tool for firefighters and is a long-term solution for a real problem in combating fires in high rise buildings."

The FARS requirement is contained in the Uniform Plumbing Code and has been ratified for inclusion by the International Code Council to become part of the International Fire Code in 2015. The installation of the Firefighter Air Replenishment System is supported by a variety of fire service organizations, including: San José Firefighters Union Local 230, the California State Fire Marshall, the National Association of State Fire Marshals, the California Professional Firefighters, the International Association of Fire Firefighters, the International Association of Fire Chiefs, and the California Fire Chiefs Association.

In San José the average cost to install a FARS system has been \$210,000, far less than the million dollar price tag that had been previously stated, and about 1/8th of 1 percent of the cost of the average high rise building project in San José. It is also important to note that the cost of the FARS is borne by the builder and not by the City of San José or its taxpayers.

CONCLUSION

San José has always been a cutting edge city and that same vision and resolve that has made it the Capital of Silicon Valley should apply to firefighter and high rise occupant safety. On this basis we urge support for the above recommendations.