Three Hotel Fires

ERNEST E. JUILLERAT, Manager, Fire Record Department

ROBERT E. GAUDET, Fire Investigator

National Fire Protection Association

The following hotel fires, two in low-rate hotels, illustrate many serious flaws in hotel building construction and operating procedures that can endanger the lives of guests and employees.

The Military Park, Newark. Four persons died in a fire that started at a dry, supposedly flameproofed Christmas tree in the lobby of the Military Park Hotel in Newark, New Jersey, on December 24, 1965. The fire, which was intense, but of short duration, spread to the story above by means of combustible decorations and interior finish, and smoke spread throughout the building by means of substandard stair towers and air conditioning ducts without automatic dampers.

The Building

The hotel occupied a 12-story-and-basement fire-resistant building built in 1922. The first five stories, containing the lobby (at second-story level), offices, meeting rooms, and dining rooms, had a great deal of combustible material, such as wooden paneling, wooden partitions, draperies, and furniture. The three passenger elevators near the center of the building (see the drawing, next page) were properly enclosed.

A stairway opposite the elevators (No. 1 in the drawing) leading from the first story to the roof was open from the first through the fifth story. Self-closing fire doors marked by illuminated exit signs enclosed this stairway from the sixth story upward, but there was no cutoff between the open and the enclosed portions of the stairway. Ten sprinklers — two above each flight of stairs — were installed in the open portion of the stairway. The sprinklers were mounted at the junction of the ceiling and the wall (see the photo, next page) at a 45-degree angle. They were connected to the domestic water system.

An enclosed stairway beside the elevators (No. 2) that ran from the basement to the roof was used as service stairs. Another service stairway (No. 3) extended from the first to the twelfth story. It was in a cutoff tower with a service elevator that ran only from the first to the fourth story. This tower was also marked in each story as an exit. Hotel personnel had removed the fire doors from the first- and fourth-story levels of this tower to facilitate carrying food from the kitchen to the elevator and various dining rooms.

The seventh-story door to the rear stair tower was kept locked from the corridor side because a large company had permanently leased a block of guest rooms in that end of the building. A door had been installed in the main corridor to cut off the company's block of rooms from the rest of the floor — which also cut off the rear stairway as a means of escape to anyone outside the leased block of rooms.

A number of air conditioning units served the building. The ducts pierced the floors, and none had automa-
tic dampers. The ducts from the units servicing the first to sixth stories were interconnected.

The building's two standpipe risers were located one on each side of the passenger elevators and had a fire department connection at the sidewalk on each side of the main entrance. Standpipes in each story were supplied with 2½-inch hose and nozzles.

Bells in every other story were connected to a local, manually operated fire alarm system, which could be operated only from the lobby desk. There was no connection to an auxiliary street fire alarm box or to a central supervisory station. Watchman service was provided only at night.

A 15-foot-high cut Christmas tree had been set up in the second-floor lobby on December 4 and decorated with electric lights, tinsel, and other materials. Reportedly the tree had been sprayed every day with a solution of two pounds of borax, one pound of boric acid, and five gallons of water. Two other trees, one in each of two function rooms remote from the lobby, are also said to have been treated daily, as were other decorations in the lobby and dining rooms.

**THE FIRE**

At about 3:30 pm guests in the lobby saw a wisp of smoke around the base of the Christmas tree. Before anyone could use a portable extinguisher, the tree burst into flames all over. Nearby draperies ignited and the flames rapidly spread to all the draperies across the front of the lobby. The burning draperies fell across the furniture and carpeting and ignited them. Then the wooden paneling in the lobby and open stairway ignited, and smoke and heat filled the stairway to the top of the building.

The fire extended from the open portion of the stairway to the lobby mezzanine (third-story level) and above that to a dining room and the dining room mezzanine (fourth- and fifth-story levels). The ten sprinklers in the stairway had no noticeable effect on the fire.

*The two sprinklers “protecting” one flight of stairs in the center, open stairway (No. 1 in drawing) did little to stop the progress of the fire up the stairway. Their spray pattern is well outlined on the wall and door. No spray pattern was found at three of the sprinklers, which apparently did not operate.*

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Three “before and after” pictures were taken in the main lobby of the hotel. The trunk of the Christmas tree that burned is shown standing in the corner of the lobby beside the fireplace (arrow). Flames spread from the tree to the draperies, which fell and ignited the furniture and carpeting.

A great deal of smoke penetrated the service stairway beside the elevators, possibly because the doors were propped open.

The air conditioning units spread smoke throughout the first six stories. The corridors in the upper stories also filled with smoke, which may have come from the stairways when doors were opened. Smoke spread through the lower stories and entered the rear stair tower at the fourth-story level where the door had been removed.

**THE OCCUPANTS**

The telephone operator, who stayed at her post at the lobby desk, was overcome by smoke. She was taken to the hospital but failed to respond to treatment. Three days later she died. Another woman died of smoke inhalation in a rest room on the lobby mezzanine.

Most of the guests in the upper stories, who were unable to use the smoke-filled stairways, were rescued from their rooms later by firemen. About 50 persons attending a party in a function room in the sixth story first saw smoke coming from air conditioning ducts. Most of them went out windows to an adjoining roof, but some followed exit signs to the rear stairway and tried to go down. When they saw the rising smoke they retraced their steps upward, stopping at several stories and finding smoke in the corridors. They were joined by others, until 20 persons reached the top of the stair tower to find the twelfth-story corridor also full of smoke.

First they tried unsuccessfully to reach the skylight above the stairs. Then they opened the small windows in the stairway, but this only created a better draft to pull the smoke upward, and within a short time they were all rendered unconscious by smoke. Firemen soon
arrived and removed all of them to hospitals. Two of the 20 died in the hospital, bringing the death toll to four.

The fire department had responded to a telephoned alarm, which apparently had been prompt. Upon arrival they started simultaneous rescue and fire-fighting. Three additional alarms were struck for additional apparatus and manpower. The firemen extinguished the fire in about 25 minutes.

Smoke entered the rear stairway (No. 3 in drawing) through this doorway at the fourth-story level. The half hinges in the door frame testify to the removal of the door to facilitate traffic to and from the kitchen and various dining rooms. Twenty persons, two of whom died, were overcome by smoke when they reached the top of the stairway.

The Carleton, St. Paul

The Hotel Carleton in St. Paul, Minnesota, was a 73-room firetrap. As a result, 11 persons died during an early-morning fire on January 6, 1966. Seventeen others were injured. Among the glaring invitations to disaster in the old building were a large light well in the center of the building, open stairways, insufficient exits, combustible interior finish, and inoperative fire doors on fire wall openings. The building had no automatic fire protection.

The Building

Erected in 1889, the building was an 85-foot-by-90-foot four-story brick, wood-jointed structure with mercantiles in the first story and the hotel occupying the upper three stories. The building was divided by a brick fire wall with two automatic-closing fire doors in each of the upper three stories (see drawing, next page). The building’s two open stairways and two of its three outside fire escapes were on the north side of the fire wall. The only exit from the south side was an outside fire escape at the rear of the building.

The interior partitions were wood lath and plaster on wood studs. The lower part of the corridor walls was covered with wood wainscoting. The doors and trim were wood, and there was a plain glass transom above each guest-room door.

The fire wall also divided the 15-foot-by-24-foot light well, topped with a plain glass skylight, that extended from the second story to the roof. In each story an open corridor surrounding the light well was separated from the well only by a wooden banister. The front stairway, which led from the sidewalk on St. Peter Street, connected with the corridor around the well at each story. The hotel portion of the building was virtually a balconied barn (see the photos).

The two bathrooms in each story of the hotel, one on each side of the fire wall and facing the open corridor, were used by the guests in that story who occupied rooms without private baths. The two large translucent plain glass windows in each bathroom admitted light from the center well. The pipe shafts serving the bathrooms were nonfirestopped from basement to attic.

The hotel had no automatic sprinkler or fire detection system. A manual local alarm system could be operated from a pushbutton at the hotel desk (it was unofficially reported that the alarm system was regularly used to call hotel personnel by means of coded signals). Dry standpipes were attached to each of the three outside fire escapes, but the standpipe on the north side of the building extended downward only to the second-story level, where for some undetermined reason it had been cut off, thus rendered it unusable.

The Fire

A reportedly inebriated guest reeled into the hotel at about 4 am and asked the night clerk for a towel so he could take a bath. He also asked the clerk and another man for a cigarette, but neither gave him one. The guest then went into the second-story men’s bathroom, which, as has been noted, was in the first story of the hotel portion of the building.

About half an hour later, the night clerk heard a
scream from the bathroom and ran to find out what was wrong. When he opened the door, the guest was sitting in the bathtub and the interior of the bathroom was heavily involved in flames. The clerk used a portable extinguisher, but the fire was already spreading from the bathroom into the corridor and up the nonfire-stopped pipe shafts to the attic. The clerk then called the manager, who was asleep in a room in the same story, and pushed the button on the local alarm system three times to alert the estimated 53 guests in the hotel.

Within three or four minutes, the fire had gone through windows and the door to the corridor and had spread upward via pipe shafts to the top of the building. A fire-gas explosion had blown out the skylight.
and the fire was propagating both upward and downward in the center light well. When the fire department arrived in response to a telephoned alarm from the hotel manager, fire was already through the skylight over the center well, and guests were leaning out windows and were on the fire escapes, some of them with their clothing afire. Fortunately the fire had started on the south side of the fire wall and did not cut off the stairways, both of which were on the north side. Two men who were hanging from third- and fourth-story windows on the south side of the building received severe injuries when they dropped to the ground while firemen were putting up a ladder to rescue them. The fire department rescue squad entering the front stairway with a booster hose to rescue occupants had to use the hose stream to extinguish the flames on the clothing of several persons. Other occupants, their clothing afame, were rescued from the rear fire escapes.

Although about half of the fire doors failed to operate, firemen bringing hose lines up the front stairway and up the rear fire escape on the north side of the fire wall discharged the hoses through the open doorways and kept the fire from spreading through the doorways. Meanwhile, other firemen laddered all four sides of the building to rescue guests who were hanging out the windows. Streams from the tops of four aerial ladders were directed through the skylight and through fourth-story windows.

The man in the bathtub was the only fatality in the first story of the hotel (the second story of the building). In the second story one person died in a room just off the center well, another in the center-well corridor, and a third near the end of the corridor that led to a rear fire escape. Two other persons from a second-story room died later in a hospital. In the third story three persons died in their rooms and two in the center-well corridor.

After the fire the city ordered the severely damaged building to be torn down.

The Paramount, Boston. At about 6:40 pm on Friday, January 28, 1968, a severe explosion shook the 11-story Paramount Hotel in downtown Boston, Massachusetts. The explosion and ensuing fire killed 11 persons and injured dozens. The old hotel building was damaged beyond reasonable repair, an adjoining hotel had to be closed because of severe smoke and water damage, and windows were broken throughout the downtown business block.

The Building

The Paramount was a low-rate hotel, accommodating both permanent residents and transients in what is called in Boston the “Combat Zone” — an area of many bars and cheap hotels and places of entertainment. The 11-story building, built in 1988, was of fire-resistive construction with basement and subbasement. The first story (see drawings) housed a small restaurant, a bar, and the narrow lobby of the hotel. The hotel bar-lounge occupied the second story and the third to eleventh stories contained guest rooms. The floors and partitions in the second to eleventh stories of the building were of hollow tile. The interior finish consisted of plastered walls and ceilings and wooden doors and frames. From the subbasement through the first story there was a maze of combustible partitions, enclosing storage rooms, equipment rooms, and narrow corridors under and around the area occupied by the bar and the restaurant. Natural gas service supplied the equipment in the restaurant and the bars, and steam for heating the building was piped in from an outside source.

While the explosion was the primary cause of the fatalities and the property damage, the building might be singled out as a lesson in piecemeal fire protection. It was interesting to note the effects of the fire prevention and safety codes adopted over recent years that required additional protection not originally built into the structure. The single open stairway had at some time been enclosed from the ninth to the eleventh stories with plain glass in wood frames and sliding (not self-closing) doors. In later years, asbestos board had

This report is based on information obtained by Mr. Juillerat, who personally visited the fire scene. The cooperation of officials of the Boston Fire Department is gratefully acknowledged.
been added to the enclosure. To use the stairway in these three upper stories it was necessary to enter the corridor at each story and then re-enter the stairway to proceed up or down another flight. Below the ninth story the stairway was open, but automatic-closing solid-core wooden doors had been installed to isolate the section of corridor in front of the elevator and stairway.

A spiral steel stairway in hollow-tile tower had been added to the rear of the building. The means of access to the tower from each story was a doorway protected by an automatic-closing metal clad fire door. The tower did not discharge to the outside, but into the rear of the first story of the building. To leave no dead-end corridors, Room 4 in each story was left unoccupied for use as a route to an outside fire escape. From the third story upward, one could exit to the stairway of the adjoining hotel by means of a metal clad fire door at one end of the front corridor in each story.

The cross shows the probable origin of the explosion at about the center of the basement. There were outside fire escapes on the left side of the building in the alleyway. A similar eight-story hotel adjoined on the right.

The transoms above the bedroom doors had been covered over, on the corridor side with sheet metal and on the inside with pressed paperboard. The installed fire protection equipment in each story included a standpipe and hose, a portable fire extinguisher, manual local fire alarm pull stations, and alarm bells.

Two major flaws in the protection were the nonfirestopped pipe shafts and an inadequately protected elevator shaft. In most cases the means of access to the pipe shafts serving the bathrooms consisted of ordinary double-hung wood-sash windows with plain glass, which had been painted over. Probably these windows had been installed in the bathrooms to comply with the building code requiring a window or other vent in each bathroom. The windows satisfied the existing code and also served as a means of easy access to the pipe shafts, which also carried telephone and electric service.

The old open-grilled elevator had been "enclosed" by fitting plywood over the outside of the grillwork. The plywood had been painted and decorated. The pipe shafts were vented at the top by loupered metal vents. The elevator shaft and the stair well were topped by skylights.

THE EXPLOSION AND FIRE

Natural gas accumulated in the basement of the hotel, apparently from a leaking main in the street. When the explosion occurred, the floor of the first story was thrown upward and the floor of the basement blown downward with considerable force. Almost everything in the basement and the first story landed in one gigantic heap, resting on the floor of the subbasement. Since the basement extended out under the sidewalk at the front and side of the building, the explosion caused the entire sidewalk and the granite curbstones in front of the building to be thrown into the street.

Fortunately, the explosion occurred at a time when most of the hotel guests were out of their rooms at the dinner hour and traffic was light on the narrow street in front of the building, thus probably reducing the death toll. Nine persons who had been in the first-story establishments died. One man perished in the second story and another in the eleventh story. Several survivors were rescued from the rubble in the basement through the opening where the sidewalk had been, and several escaped unaided. The man in the second story died of smoke inhalation at a front window, apparently after becoming stunned or panic; otherwise he could have escaped down the outside fire escape, as others did.

The elderly man who died in the eleventh story was a victim of the nonfirestopped pipe shafts and the inadequately enclosed elevator shaft. He died in his room (No. 1010 on the drawing), burned beyond recognition. The heat and fire gases from the blazing rubble in the bottom of the building went up the pipe shaft serving Room 6 in each story, and fire burst through the pipe shaft windows into the bathrooms in the upper stories. Heat and flames also rose through the elevator shaft and burst out in the upper stories. The rooms and corridors adjacent to and facing the elevator shaft in the top two stories were completely gutted. At the fifth story the fire in the pipe shaft burned only part of the
Below left: The layout of the eleventh floor, shown here, was the same on every floor above the second. The room numbers do not indicate the story of the building, since the second story was actually the first story of the hotel. The one fatality in the upper stories occurred in Room 1010. The elderly occupant had lived in the hotel for many years. He was either trapped, stunned, or asleep in his room during the fire. The basement of the building extended out under the sidewalk in front and on the alley side of the building. Although the stairway did not go up from this story, it is shown on the drawing to indicate its position on the lower floors. Right: The steel that supported the first-story floor was thrust upward, so that the joints snapped at the rivets.

Left: The first story of the Plymouth Hotel was occupied by a counter-and-stool restaurant (1), a bar (2), and the hotel entrance and lobby (3). The Paramount Hotel lounge occupied the second story. The entrance to the Plymouth Hotel (4) was adjacent to the entrance of the Paramount, and the front corridors of the two hotels communicated by a metal-landing fire door in the wall between the buildings at each story above the second story. The fire did not enter the Plymouth, but that hotel was severely damaged by smoke and water. The ladder (5) is resting in the portion of the basement that extended under the sidewalk. The entire sidewalk and the granite curbstones (6) were tossed into the street, as was a portion of the narrow sidewalk at the side of the building near the front. Falling chunks of granite and concrete crushed an automobile (7).

BOSTON Herald

RIGHT-SIDE PHOTO: BOSTON FIRE DEPARTMENT
wooden window frame, but as it spread upward in the shaft, it broadened horizontally, reaching into the bedroom at the seventh story and above.

The Boston Fire Department responded to the alarm at 6:41 pm and by 6:49 pm had ordered a fifth alarm, followed by several special calls for equipment and relief manpower. Although hampered by bitter cold, ice, and snow, fire fighters controlled the fire within 30 minutes and removed all the survivors and bodies except one woman, who was trapped under debris in the basement, up to her chin in freezing water from burst pipes and hose streams. She was rescued about 90 minutes after the explosion had occurred, but died later of her injuries.

_This photo was taken looking into the section of the basement that extended beneath the sidewalk in front of the hotel. The entire sidewalk and the granite curbing in front of the building were blown out into the street._

_BOSTON GLOBE_

_This photo was taken shortly after firemen arrived. The firemen in the foreground are calling for water to be turned on, while the firemen in the background begin rescuing people over a ground ladder to the second story. The man shown encircled was the only fatality in the second story._

_BOSTON GLOBE_