

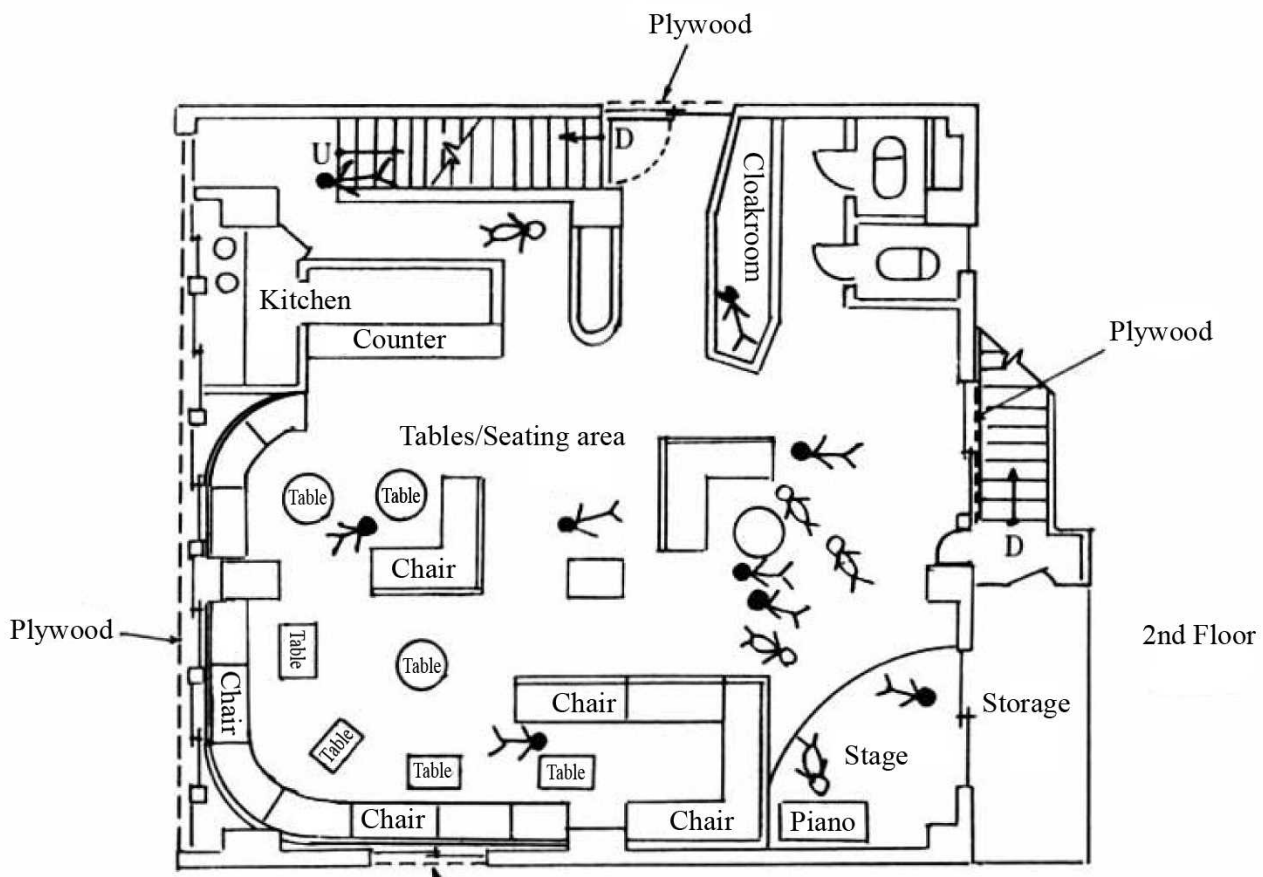
Building Name Address	Use (as per FSA Annexed Table 1)	Date and Time of Incident	Structure and Stories Area	Extent of Damage (Damaged Area/ Total Area)	No. of Casualties
<b>Misawa Building (Hostess Bar "Raku Raku")</b>	Complex (16) a	Dec. 26, 1976	Fire resistive	All, <b>Half</b> , Partial, Small  256 m <sup>2</sup>  (69%)	Fatalities 15
		Breakout at 01:30 (approx) Detected at 01:35 Notified by emergency call Extinguished by 02:25	3 stories above ground and 1 below		
3-6 Takashima-machi Numazu SHIZUOKA			Building area 120 m <sup>2</sup>		Injured 8 ( )
			Total floor area 369 m <sup>2</sup>		

I. Summary of Fire Incident							
(1) Summary  (2) Conditions per Floor	The fire emerged from the 1st-floor landing of the stairwell whose interior was finished with combustible material. The 2nd floor of the small multi-tenant building was windowless because the windows were all closed off from inside. The intensive combustion and heavy smoke of this fire resulted in 15 fatalities (9 guests and 6 employees on the 2nd floor).						
	Floor	Total area	Damaged area	Use (Purpose)	No. of persons	No. of fatalities	Fire escape equipment
	m <sup>2</sup>	m <sup>2</sup>					
R	17.8					1 set of inside stairs (1st to Roof floors)	Fire extinguishers
3	112.5	112.5	Office, Locker room				
2	118.4	118.4	Hostess bar ( <i>Raku Raku</i> )	22 (9 guests)	14	1 set of outside stairs (1st to 2nd floors)	Guiding lights
1	119.8	25.1	Retail, Bookstore		1		
Total	368.5	256.0		22	15		
(3) Origin of Fire	(Floor, Room, Part, Combustibles, Habitable/Non-habitable Rooms, Present/Absent)  <u>From the 1st floor landing of the stairwell</u>  The stairwell was comprised of walls and ceilings that were made of combustible-wallpapered plywood and a floor that was carpeted.				(4) Cause of Fire	(Suspected arson)  *During the investigation, the cause of fire was identified when a possible suspect accused of arson was arrested. He deliberately set fire to a cardboard box that he brought inside the entrance door of the 1st-floor landing of the stairwell.	

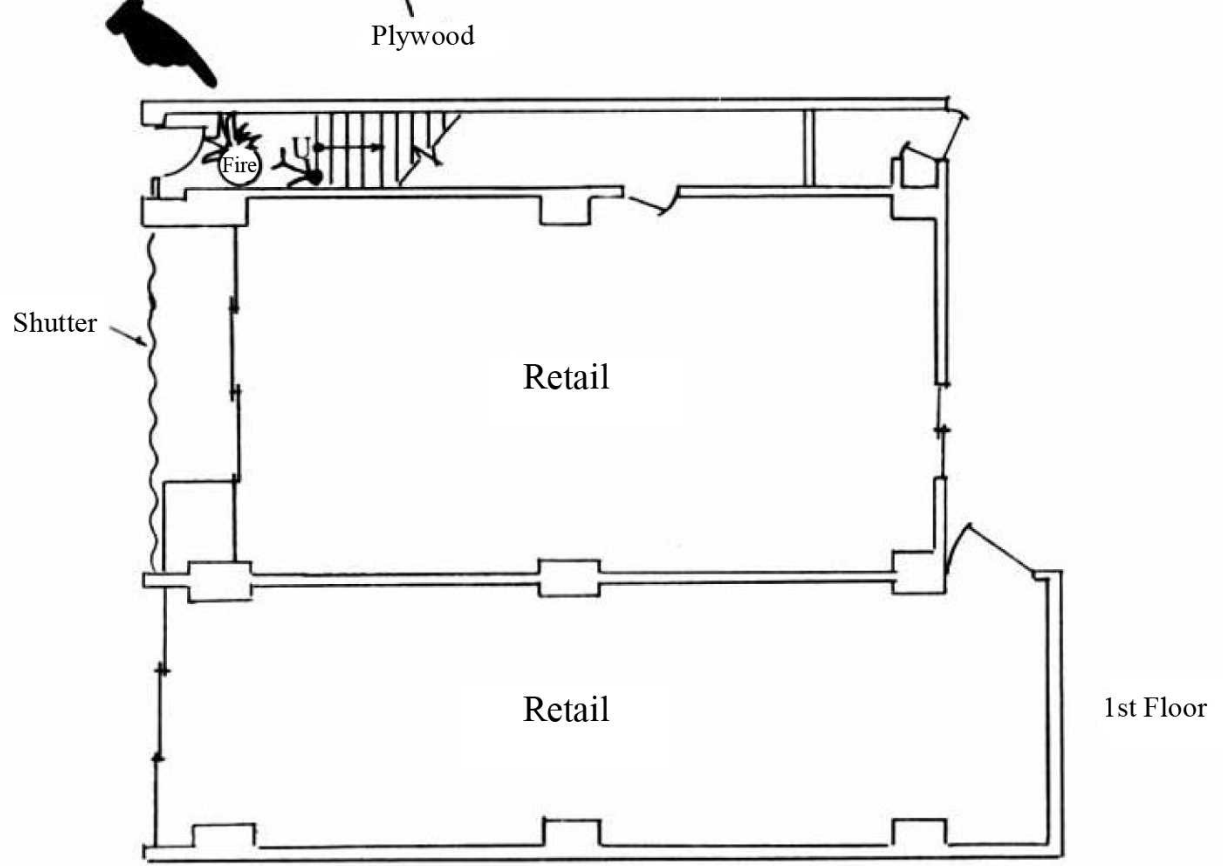
<b>(5) Fire Propagation Path</b>	(Location of Fire Source)	(Propagation from Source)	(Propagation to Adjacent Zones)	(Propagation to Upper Floors)
	Stairwell	A cardboard box was set on fire, which spread to the combustible interior finishing of the stairwell and the carpet.	Spread through unsealed clearances around the shutter and the partially wooden exit door.	Spread inside the bar via the stairwell and wooden door to the 2nd floor
	<p>The fire that started on the 1st-floor landing of the stairwell ignited combustible wallpaper on the wall, which combusted intensively, and spread to the hostess bar on the 2nd floor. (A passerby who was near the 1st-floor entrance suffered burns because of the intense combustion.) In addition, the fire spread to the ceiling and walls of the retail shop through the entrance door (wooden door covered by galvanized sheet) and the unsealed clearances around the shutter that was installed between the stairwell and retail shop.</p> <p>○ Main Reasons for Propagation of the Fire  The wall and ceiling were made of wallpapered plywood and the floor was covered in carpet, which were all combustible. The wooden door to the 2nd floor was also combustible.</p> <p>○ Smoke Propagation Path  The smoke that was produced by the fire on the 1st floor landing filled the stairwell. Although the door to the 2nd floor was closed, the smoke penetrated gradually through the clearances. Once the door was opened by someone who noticed the smoke, a large amount of smoke surged onto the floor.</p>			
<b>II. Summary of the Building</b>				
<b>(1) Built</b>	Construction, Completion, and Major Renovations (Completion) August 24, 1964			
	<b>(2) Vertical Shafts</b>		<b>(3) Fire Prevention</b>	
<b>Fire Prevention Management</b>	Stairwells	[X]	Duct spaces	[ ]
	Elevators	[ ]	Pipe shafts	[X]
	Escalators	[ ]	Other ( )	[ ]
The interior of the stairwell was made of wallpapered plywood, and the fire compartment was incomplete.		<ul style="list-style-type: none"> <li>○ No fire-prevention manager.</li> <li>○ No fire defense plan.</li> <li>○ Furniture and plants were blocking the door to the outside stairs and interfered with the evacuation.</li> <li>○ The 2nd-floor windows were all covered by interior finishing materials.</li> </ul>		
<b>(4) Fire Compartment</b>		<b>(5) Firefighting Equipment</b>		
<ul style="list-style-type: none"> <li>○ There were unsealed clearances around the shutter between the stairwell and retail shop.</li> <li>○ The 2nd-floor door to the stairs was made of wood.</li> <li>○ The 2nd-floor door to the outside stairs was made of plywood.</li> </ul>		There was 1 fire extinguisher and 1 guiding light on the 2nd floor. (During the fire, the guiding light for the indoor stairs was functioning.)		

III. Actions Taken after the Fire was Detected		
(1) First Detected	<ul style="list-style-type: none"> <li>◦ <b>Detected by</b> ( Owner of <i>Raku Raku</i> )</li> <li>◦ <b>How and why</b> ( Smoke drifting from the door )</li> <li>◦ <b>Action taken</b> ( Shouted out "Fire!" )</li> </ul>	
	<p>Right before closing time, the bar owner went to the cash register and saw smoke drifting from the door clearance. He told the supervisor to check on the smoke. When the supervisor came closer to the door, a large amount of smoke started to enter the bar, so he alerted the owner by shouting "Fire!" The manager who heard him checked the kitchen to find out if smoke was emerging from there, but it was not. On the way back to the cash register, the power went off. He walked along the wall to the counter to get a flashlight. He pointed to the emergency exit with the flash light and told people, "The emergency exit is right here" while he was running toward to the exit.</p>	
(2) Emergency Call	<p><b>Emergency Call</b> Yes [ ] ( ) Time elapsed since detection ( ) minutes            No [X] (a female passerby made a 119 call from a pay phone)</p>	
	<p>The waitress of a restaurant which was 150 m away from the fire building was on her way home. When she was about to turn a corner, she saw an arch-shaped flame in a few buildings down on the north side of Recreation Center S. She wondered a while until she realized that it was fire and made a 119 call from the pay phone near by. While she was on the phone with the fire station operator, she heard a sound similar to the backfire in an automobile engine, so she stated there was " an explosion as well" to the operator. No call came from the fire building.</p>	
(3) Initial Firefighting Activities	<p>Successful [ ] Failed [ X ]</p>	<p><b>(Reasons or Conditions)</b></p> <p>The detection of the fire was late and so people barely escaped. The smoke entered the bar all at once when the exit door was opened, and people panicked.</p>
	<p><b>Initiated</b></p> <ul style="list-style-type: none"> <li>◦ Extinguished timing [ ]</li> <li>◦ Firefighting difficulties [ ]</li> <li>◦ Firefighting method [ ]</li> </ul>	
	<p><b>Not Initiated</b></p> <ul style="list-style-type: none"> <li>◦ Extinguished timing [ ]</li> <li>◦ Firefighting difficulties [ ]</li> <li>◦ Firefighting method [ ]</li> <li>◦ Other [ ]</li> </ul>	
(4) Summary of Firefighting Activities	<p><b>(Obstacles or Difficulties in Fire Control)</b></p> <ul style="list-style-type: none"> <li>◦ When the firefighters arrived, they had a hard time assessing the situation because no one was able to provide reliable information regarding the evacuees in need of rescue.</li> <li>◦ Since the windows on the 2nd floor were blocked off from inside, it some time for the firefighters to knock them down in order to enter the building.</li> </ul>	

<b>(5) Evacuation</b>	Means of Escape (No. of Persons)	Obstacles to Evacuation
	<ul style="list-style-type: none"> <li>◦ Stairs [ X ] (4)</li> <li>◦ Elevators/Escalators [ ] ( )</li> <li>◦ Escape equipment [ ] ( )</li> <li>◦ Directly to ground from windows or openings [ X ] ( 3 )</li> <li>◦ Rescued [ ] ( )</li> <li>◦ Other ( ) [ ] ( )</li> </ul>	<ul style="list-style-type: none"> <li>◦ No windows [X]</li> <li>◦ Barred openings [ X ]</li> <li>◦ Locked emergency doors (Exits) [ ]</li> <li>◦ Alarm system [ ] (Poorly controlled, Malfunctioned, Not installed)</li> <li>◦ Power outage [X]</li> <li>◦ Other [X]</li> </ul>
	<ul style="list-style-type: none"> <li>◦ The manager with a flashlight came to the exit door to the outside stairs. After he moved the furniture that was blocking the exit, he opened the door (plywood, inward opening) and 3 hostesses escaped from the exit, and he used the flashlight to guide people from inside for a while, but had to evacuate because of smoke.</li> <li>◦ The supervisor and 2 hostesses went to the 3rd-floor landing of the inside stairs and from the window on the stairwell they jumped down to the roof of an adjacent 2-story wooden building to escape.</li> </ul> <p>* Those who exited the building were employees who knew the layout of the building, and all of the guests were left behind and died.</p>	
<b>(6) Casualties</b>	Healthy individuals 15 (Drunk persons ) Individuals in need of assistance Infants Elderly Handicapped Patients/ill persons	Obstacles to Evacuation <ul style="list-style-type: none"> <li>◦ No windows [X]</li> <li>◦ Barred openings [ X ]</li> <li>◦ Locked emergency doors (Exits) [ ]</li> <li>◦ Alarm system [ ] (Poorly controlled, Malfunctioned, Not installed)</li> <li>◦ Power outage [X]</li> <li>◦ Other [X]</li> </ul>
	<ul style="list-style-type: none"> <li>◦ This fire resulted in 15 fatalities (the owner, 5 hostesses, and 9 guests).</li> <li>◦ 7 people (3 males and 4 females) were found near the exit where the manager was pointing with his flashlight. Presumably they followed his voice and tried to escape from there.</li> <li>◦ The owner who was at the counter had walked away from the exit and was found in the center of the floor. The guests who were found inside the bar were: 1 inside the cloakroom, 3 in the center of the floor, and 1 in the stairway behind the counter. One of the hostesses was found at the corner of the counter.</li> <li>◦ One of the guests came down the burning stairs and died near the 1st-floor exit.</li> </ul>	
<b>IV. Issues and Lessons Learned</b>		
<ol style="list-style-type: none"> <li>1. When the fire spread it burned the cardboard box with which the fire was initially set at the bottom of the stairwell and the fire propagated to the interior walls, where the stairwell was filled with flammable gas (product of the combustion). Also, air was being consumed completely because the doors to each floor were tightly closed. Under such conditions, when someone opened a door to let fresh air in, the natural reaction would inevitably be explosive combustion. That is what happened in this fire when a passerby opened the door slightly to the 1st floor.</li> <li>2. The openings (windows) were all closed off by decorative interior materials, which interfered with the evacuation and firefighting operations.</li> <li>3. The exit to the outside stairs was blocked by furniture and plants, which also interfered with the evacuation.</li> <li>4. The interior of the stairwell was finished with combustible materials, which facilitated the fire spreading to the upper floors.</li> <li>5. The 1st floor had a fire wall against the stairwell, but the clearance of the shutter case and the unsealed clearance around the shutter became the propagation path.</li> <li>6. Building management failed to comply with the fire-prevention manager requirement and inadequately handled fire prevention matters. As a result, the employees failed to guide the guests to evacuate safely.</li> <li>7. The guests were probably all intoxicated, which led to their slow reaction in the emergency situation.</li> </ol>		



2nd Floor



1st Floor

