The Canarsie Tenement

by Battalion Chief Frank Montagna

The 58 Battalion responds into Canarsie, Brooklyn. One type of building to which they respond is what has been dubbed the Canarsie Tenement, a two- or three-story, attached brick building that can extend the entire length of a block. Another is a two- or three-family, attached or semi-attached, brick split-level. While most often encountered in the 58 Battalion, they also exist in Queens and Staten Island. These buildings have features that are not addressed directly by FDNY's tactics bulletins.

After several fires in Canarsie Tenements, Battalion Chief Frank Montagna noticed several problems inherent to these buildings. Drawing from the experience of the firefighters who dealt with these buildings regularly, he started to compile a drill that addressed the problems. Frequent drills on the topic increased awareness of the inherent problems and minimized their impact on firefighting operations.

Then, there are promotions and rotations, new probies are assigned to the units and--daily--details from units in other areas come to work in the Battalion. They have a never-ending supply of firefighters who are unfamiliar with these buildings or with solutions to the problems presented. How to be sure that all firefighters working in the Battalion would become familiar with the 58's unique firefighting problems? Battalion Chief Frank Montagna used the company computer to cope with this ongoing training need.

Using the PowerPoint program on the office computer and with the aid of a digital camera and a scanner, the Chief was able to put photographs of these buildings into a PowerPoint presentation that described the problems of and suggested solutions to Canarsie Tenement firefighting. Simple drawings were added using the tools present in the PowerPoint program. (See the articles, "Using PowerPoint to Create On-Screen Company Training Drills" and "Laptop Training--Making FDNY Presentations," in the 1st/99 issue of WNYF*.) A copy of this program was put onto a computer in each of the Battalion firehouses where it is used to familiarize new or detailed firefighters and covering Officers with these buildings.*

Each area of the city has its unique problems and hazardous buildings. The company computer can be used to facilitate training firefighters and Officers on these and other topics. The Department already has included several such training programs on the new computers currently being distributed. Laptop training is conducted by the FDNY and is well-received by all who attend.

These buildings are not unique to Canarsie. Similar buildings can be found in many parts of the city.

all photos by or courtesy Battalion Chief Frank Montagna

With a little effort, you can learn to make your own effective, customized computer presentations. You can address your company's specific needs and periodically drill on them by simply clicking on your mouse. Firefighters and Officers can review the program anytime at their own pace. Most firehouses have a computer guru who would be happy to provide technical advice. Photos can be scanned into someone's home computer, transferred to a floppy disk and placed on the Company computer for inclusion into your training presentation. The possibilities for using the computer as a training tool are limited only by your imagination.

When viewed from the front, these buildings have three stories. But, when viewed from the rear, it becomes evident that they have four stories.

Many of us have buildings in our response areas that are somewhat unique. Repeated fires in these buildings reveal specific tactics that either work or do not work when fighting a fire in them. Because we are familiar with the tactical problems related with these buildings, we tend to think everyone else is, too, but that is not the case. When detailed firefighters or covering Officers work in your company, they may not be familiar with these unique buildings. Even though trained in all of our Department's SOPs and after studying all of our manuals, these buildings may be new to them and, if so, they won't know what you have learned about them.

We call some members "tenement" firefighters and others "high-rise" firefighters because their firefighting experience includes repeated fires in specific types of buildings. It is a descriptive term, recognizing that these firefighters have become experts in a particular type of building. "Tenement" firefighters know where the fire escape will be located in "their building"; they know where the windows and shafts are located; they know the room layout. They know just where to stretch each line, whether the ladder will reach the targeted window and what type locks to expect. Firefighters with years of experience fighting tenement fires wrote the tactical manuals and shared their knowledge with future generations of firefighters. The same is true for their "high-rise" counterparts.

Those who have developed an expertise in a particular building tend to think that all firefighters share this knowledge. That is not always true. Not all buildings have had manuals written about them. Look around your district. Is there a type of building that does not quite fit into our existing manuals? Have you developed an SOP for these buildings? Does a detailed firefighter or Officer know the SOP? If not, the operation may not go as intended.

When you look around 58 Battalion's district, Canarsie, Brooklyn, there are blocks and blocks of one-, two- and three-story, attached brick buildings. Originally designed for one or two families, many are now illegal multiple dwellings. Typically, they do not have a common cockloft, they are not prone to rapid horizontal fire extension nor are they balloon-frame construction. It would seem that they would present no unusual operational problems at fires. Unfortunately, this is not the case. These buildings,

in fact, have several features that can confuse and confound unsuspecting firefighters.

Building height depends on your perspective

The rear of these buildings has been excavated to a level below the front or the buildings have been built on a hill that slopes down from front to rear. What is actually the cellar may be totally above ground in the rear. This height differential between the front and rear results in an extra story when viewed from the rear, so that a building viewed from the front as having three stories can have four stories when viewed from the rear.

The same problem can exist with buildings that appear to be one or two stories high from the front. This height difference is not always present and buildings on one side of the street or on one block may have the height difference, while buildings on the other side of the street or on another block may not. From the front of these attached buildings, the height difference or lack of it is not evident.

The height difference and rear alley will, however, be visible at the corner as you enter the block and should be noticed by an alert OVM as he makes his way to the rear. If this height difference is not noted, however, it can result in miscommunication between firefighters operating in the rear of the building and those in front or inside.

For example, the OV firefighter, seeing a victim hanging out what appears to be a second-floor rear window, will transmit this information to the Chief. The Chief correctly will direct rescue efforts to the second-floor rear, but the victim actually is on the first floor when counting stories from the front.

Also, if the OVM enters the building from the rear entry door or from a ladder and becomes trapped, he will transmit a mayday. It might go something like this: "Mayday! Mayday! Mayday! Ladder 170 OV to Battalion 58. Mayday! I am trapped in the third-floor rear. I'm tangled in something and can't get free." The Chief will dispatch the FAST team to the third floor to effect rescue of the trapped firefighter. The problem is that they won't find the trapped firefighter there if the OV firefighter counted the three floors from the rear. He actually will be on the second floor when viewed from the perspective of a firefighter in front of the building. The confusion might result in another Department funeral.

Rear access

Access to the rear of these buildings is via a rear alley that runs the entire length of the block. Entrance to the alley typically is made down a steep hill from either one or both sides of the block. The slope is often too steep to allow ladder truck entry, so any laddering must be done by portable ladders. This presents an access problem for the OV firefighter. While he often can gain access to the rear through an adjoining building, it may not be possible to get the proper ladder to the rear. If the building is three or four stories high in the rear, the appropriate ladder for upper-floor access would be the 35-foot extension ladder. It may, however, be difficult--if not impossible--for a firefighter to maneuver the ladder through the building to the rear. As is the case with many residential buildings, the layout often makes it impossible, even with help, to navigate a ladder through the building and out the back.

A rear alley often runs the entire length of the block.

The only way to bring a ladder to the rear may be by going to the end of the block, turning the corner, entering the rear alley and bringing the ladder back to the rear of the fire building. Those buildings that do not have the height difference from front to rear often do not have a rear alley and, instead, each rear yard is fenced off.

In this case, the OVM will have to go to the end of the block, enter the rear yard of the corner building and maneuver himself and the ladder over the intervening fences to get to the rear of the fire building. Alternatively, a ladder can be brought to the roof and lowered down to the rear yard. These methods are time-consuming and difficult when operating alone. Additionally, there may be a one-story setback or deck present on some of these buildings, as well as parked cars, overhead wires and window awnings--all of which can hinder ladder placement.

Stair access

Another troublesome feature shared by some of these buildings is the presence of a stairway that may go from the top floor to the cellar. In some buildings, access to this stairway can be made from each story, while in other buildings, access is made only from certain floors. It is possible that access to the cellar exists only from the top floor. This means that while a cellar fire may not be accessible from the first-floor front entrance, it can spread up the stairs to the upper floors. Arriving firefighters, seeing smoke issuing from the front of the building, naturally will stretch into the entrance door to the first floor. They may or may not be able to attack the cellar fire. The only access to the burning cellar may be from the rear of the building or an upper floor that has stair access.

In any case, the first line will not be able to put water onto the fire. To attack the fire with the first line, firefighters would have to back the line out of the building, stretch around the block and then back up the rear alley to the cellar door. Another option for this line is to stretch through an adjoining building, out the back door if one is present and then down a flight of stairs to the rear grade-level cellar entry door. The direct approach--stretching in the front door and down interior cellar stairs--may, in fact, be an option if stair access is present, but because of the narrow stairs and high heat, it still may not be possible.

The dilemma is that you won't know which method will work and the resulting delay in attacking the fire allows for fire growth and extension, causing problems for the units above the fire, as well as anyone awaiting rescue in the cellar apartment. The first line usually will be needed on the first floor to protect the first- and upper-floor access. As a result, it will be the second or third line, after an arduous stretch, that puts first water on a cellar fire in these buildings.

Converted garages

The rear view of these buildings often contains a grade-level entrance door, window and garage door. The garages found at the rear of these buildings frequently are converted to living space with the garage doors still in place. Forcing the garage door will reveal a sheetrock or cement block wall behind it. There will be no indication of this from the exterior and the only access to this space may be from the rear entry door.

The garage door may be a garage or hide a living space. You won't know what it is until you gain access.

Rear apartment

Often, the cellar is con-

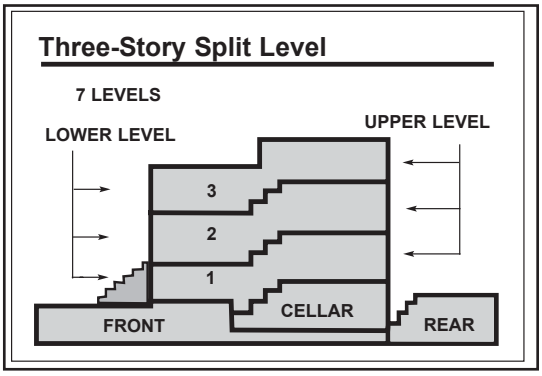
verted into an apartment, accessible only from the rear. The OVM likely will be the first to become aware of a cellar fire in these buildings. He must check the apartment for fire and report the findings to the Incident Commander. If he reports a cellar fire, a line must be stretched to the rear to attack the fire.

If the first line has been stretched to the first floor or up the front stoop to the second floor, members may not have access to the cellar fire. Even if there is access to the cellar, a well-developed fire may prevent this line from descending the narrow cellar stairs. A second line will have to be stretched to the rear, either through an adjoining building or via the alley access at the end of the block. Both of these stretches will be time-consuming and require two or more units working together to accomplish the task in a timely fashion. If the slope is not too steep, a pumper can pull into the alley after keying a hydrant on the street. This will shorten the required stretch and ensure good pump pressure.

A hidden room

A room accessible only from an upper floor may share the cellar with this rear apartment. There may be no cellar access to this hidden room and it will be easy for the OVM to miss it when searching the rest of the cellar. The access stairs on the floor above may be located behind what looks like a closet door and firefighters searching on the floors above also may miss this room. This will contribute to a delay in the recovery of victims or the discovery of fire. Any configuration is possible as a result of renovations and a thorough check must be made for the presence of such a hidden room.

Split-levels



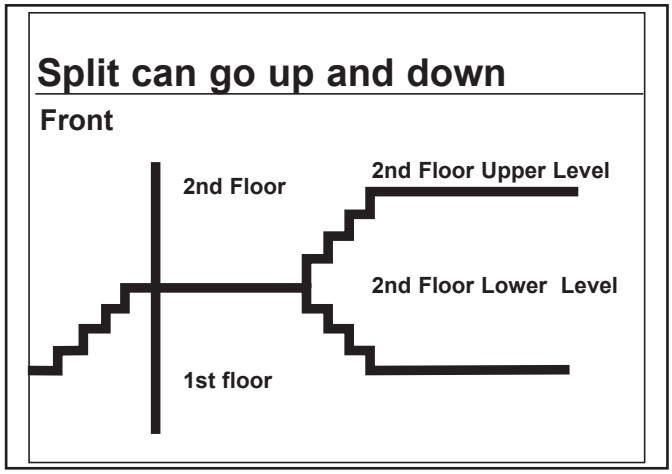
This three-story building has seven levels.

Some Canarsie Tenements contain split-levels. They may or may not have a height difference between the front and rear and may be attached, run the entire block, semi-attached or detached. Most frequently, they will not have a height difference nor a rear alley, but will have fences separating each yard. A split-level, three-story building can have as many as seven levels, including the cellar--prompting confusing fireground communications.

A firefighter unaware of the split-levels will be unable to identify accurately what floor he is on. He may call for help, thinking he is on the second floor when actually, he is on the upper level of the first-floor apartment. The FAST unit would be dispatched to the second floor to look for him, rather than to the upper level of the first floor. The result might be tragic.

Note the change in level of the roof and that the side windows are not all set at the same level on each floor.

Another problem created by the split-level is that the front and rear windows may give access to different levels, possibly different floors. The front second-floor window may give access to the lower level of the second floor, while the rear second-floor window gives access to the upper level of the first floor. It is also possible for a floor to split both up a level and down a level at the rear of the same apartment.



Most of these split-level buildings, however, do offer a hint of their presence. If you look at the side roof line, you will see a difference in height between the front and back of the roof line. The rear of the building will be 1/2-story higher than the front, but this will be visible only if the building is detached or at the corner if the buildings are attached. A quick look down the side alley of detached or semi-attached buildings will reveal the split roof line. If the building is attached to a row of similar buildings, you can see the split roof at the corner as you enter the block. Additionally, the side windows, if visible, will not be on the same level. They will jump up 1/2 story toward the rear of these buildings to compensate for the split-level floor. This, too, can be observed as you round the corner or look down the side alley.

Solutions

Enter unique buildings into the CIDS program. It is important that you be able to identify these buildings when you encounter them. The best way to do this is before you respond in on a fire. If you pick them up on building inspection or some other response to the building, enter them into the CIDS program. Then, all those responding will be aware of the height difference or the existence of split-levels.

Size-up If you have these kinds of buildings in your response area, always check the corner building as you turn into a block and get a look at the side of the building if it is detached or semi-detached. If you do this, you will not be surprised by a height difference nor the presence of split-levels.

The OVM is the key to identifying these buildings. At night, it may be difficult to note the telltale features as you enter the block or you may be distracted and forget to check for them. It is the OVM who is in the best position to note the height difference and the presence of the split roof line and uneven window levels. If the OVM is not observant and either does not notice these signs or fails to alert others of their presence, there will be confusion.

Communication is essential. The key to resolving the problems mentioned above is communication. If everyone at the fire scene is on the same page and aware of the building's anomalies, they will present a less severe problem. It is important for the OVM or anyone else who becomes aware of a height difference in these buildings to inform the Incident Commander. The Incident Commander then must ensure that all operating and responding units are aware of it.

The same must be done for split-level buildings. Whoever

The roofman can identify a split-level building by the telltale change of roof level.

recognizes the split-level must announce it to all and again, the Incident Commander must ensure that operating units and units arriving at a later time are cognizant. Firefighters operating inside the building can discover the presence of split-levels by counting stair treads as they go up or down them. A split-level typically will have only five or six steps and alert firefighters will be aware that they are operating in a split-level if they ascend such an abbreviated stairway. The roofman, too, can identify these buildings by the presence of an elevated roof at the rear of the building.

Counting floors down from roof level to identify a floor will work when dealing with buildings featuring a height difference from front to rear, but may not work for the split-level buildings. The top floor, when viewed from the rear, is the same as the top floor from the front at the different height buildings, but the front window of a split-level may give access to the lower level of the top floor, while the rear window gives access to the upper level of the floor below or the upper level of the top floor.

A window that appears to be on one floor below the top floor may, in fact, give access to the lower level of the top floor and not to the floor below the top floor. It will depend on how the levels split inside the building. Some buildings have floors that split up only, while others have floors that split up and down in the same apartment. There will be no way to determine this from the exterior. At a split-level, the inside team will have to determine which rear windows serve which floors and then convey the information to everyone else.

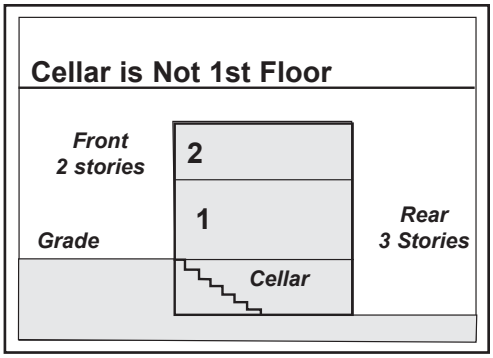
Use the same terminology. We must ensure that we all use the same terms when describing a building or identifying a floor. This can be a problem at some Canarsie Tenements, not just because of the height difference or split-levels, but also because of the presence of a front garage that extends underneath some of these buildings. (Typically, there is either a front or rear garage, not both.) The front garage can be, to varying degrees, below grade-level. Is this garage level the first floor, the cellar or the basement? If there is a high stoop leading up to the floor above the garage, which level would you call the first floor? Would the garage be the first floor or would the level at the top of the stoop be the first floor? If the garage was partially below grade, would you call the floor at the top of the stoop the first or second floor or would you call it the "parlor floor" because it presents a similar configuration to that of a brownstone building?

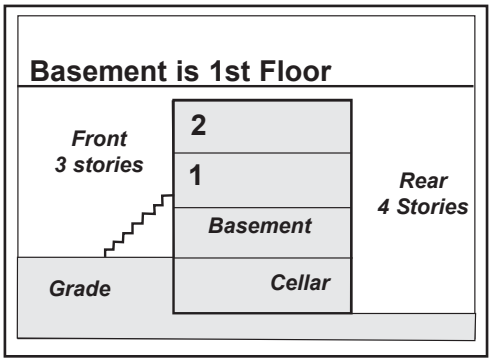
Consider the following definitions:

Cellar--A cellar is defined by the 1968 building code as a floor one half or more below grade level as measured from the front curb. We do not count this floor as a story when determining building height.

Basement--A basement is a floor less than 1/2 below grade. A basement is counted as a story.

The definitions are very specific. If more than one half of a floor is below grade, it is a cellar. While the definition is clear, what exactly comprises one half the height of a floor is not always evident from the street. The result is that well-meaning firefighters and Officers will differ in their opinions whether a floor is a cellar or a basement. As a result, it is common to hear several different terms used to identify the same floor of the fire building.





The garage can be called the first floor, basement, cellar or garage. The floor above the garage, reached by the stoop, is called the first floor, second floor or the parlor floor. As a result, the Chief standing outside, as well as the other firefighters operating at the fire, can find it impossible to identify what floor is in question.

To avoid this problem, the Chief should announce what he designates as the first floor and just as he did with the building height difference, make sure that all firefighters responding to and operating at the fire are aware of this designation. If the fire escalates and additional units are called, he may have to make this announcement several times as additional units arrive.

The Canarsie Tenement or buildings with some of their features can be found in many different areas of the city. They can be attached, semi-attached, detached and constructed of brick or wood. The problems encountered will be similar to those described. The key to avoiding the problems discussed above is familiarization with building features, communication and standardized terminology. These buildings must be identified, entered into the CIDS program and drills must be conducted to ensure all are aware of the potential problems and that all members use standardized terminology.

If you have unique buildings in your area, consider sharing the information by describing the building, its problems and your SOPs in an article that will be circulated job-wide. By writing such an article and having it published in *WNYF*, you can share your experience and knowledge with all of us and, as a result, when that detailed firefighter or Officer is working with you, there will be fewer surprises and the operation will go as intended.

About the Author...

Battalion Chief Frank C. Montagna is a 30-year veteran of the FDNY, the past 13 years of which have been as a Chief Officer. He currently is assigned to Battalion 58. He holds a degree in Fire Science from John Jay College, where he has taught fire science courses. He is a member of the editorial advisory board of Fire Engineering *and has published articles in that publication, as well as* WNYF. *He is the author of the recently published book,* Responding to "Routine" Emergencies.