Manasquan Fire Department
Manasquan Fire District #1
Standard Operating Guideline

210.04

Title: Structural Firefighting – Special Considerations for Garden Apartment/Condo type Complexes

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Purpose: To establish a higher level of awareness of the difficulties presented by the layout and construction of facilities called "Garden Apartment/Condo" with regards to structural firefighting. To point out special construction features of these types of buildings and the special hazards they present during firefighting activities.

Scope: This procedure shall be followed by all members of this department. It shall be the responsibility of the Incident Commander and the Company Officer to educate their personnel to the special considerations "Garden Apartment/Condo" complexes pose to the firefighter.

General: The term "Garden Apartment/Condo" describes common Multi-Family "low-rise" dwellings and can even be featured in some small business complexes. Structures are usually constructed of lightweight combustible material and can range from 1 to 3 stories in height. The lack of access to structures in these complexes is common due to poor layout designs. Remote parking areas often keep the distance from some buildings to the location of fire apparatus over 250 feet. Additional hose lines are required to reach buildings in the inner-core of these complexes. Lakes, pools and other facilities often add to the access problem for the firefighter. Add to this the problem that these buildings are often built with non-protected wood or of ordinary construction. This construction allows for rapid fire spread from building-to-building. A fair rule-of-thumb is that the newer the building the more rapid the fire spread. In addition, fire stops in the attics of most Garden Apartment/Condo types are inadequate to contain fire to the units of origin.

210.04.01. Special Hazards for Garden Apartment/Condo type Structures:

A. Life Hazards

The life hazard is great in these types of structures due to the large number of occupants and the type of construction that leads to rapid fire spread. Loss of life may occur within the building as a result of the occupant's inability to escape. Products of combustion will spread to remote areas of the structure far beyond the immediate fire area. Primary search patterns may need to be adjusted to reflect the need to search areas near the fire. Units aside and above the unit of origin should be given priority. Secondary searches should include all units in the building of origin.

B. Construction Hazards

The type of construction used in Garden Apartment/Condo facilities lends itself to large, unchecked voids and vast areas of combustible materials. In most applications, these materials comprise the roof structures which when exposed to heat and fire failure can be catastrophic.

Fire can spread in the following ways:

1. Vertically

Plumbing Shafts
Vent Shafts
Fireplace Enclosures
Window to Window and Balcony to Balcony
Stairwells
Siding
Partitions - Exterior and Interior
Ventilated Sofits from Windows

2. Horizontally

Entire Building through Common Attic
Common Cornice or Sofits
Between Floors through joist voids
Poor wall construction between units
Wood and Vinyl Siding
Windows and Balconies

3. Downward

   Burning materials falling through voids, pipe chases, etc.

C. Collapse

The construction of these buildings is such that structural collapse is very likely in fire situations. A fire of any consequence has the potential of attacking the structural integrity of the building. Roofs and floors are dangerous working platforms (lightweight truss design common). Continuous safety evaluations must be made to ensure early warning of a failure.

A partial collapse can be as hazardous as a full collapse. When working in or around these types of structures you must be mindful of veneered surfaces such as stucco and brick. These walls may fail and leave the major structural components standing. Heat may separate these walls from the main structure allowing it to fall away from the building and onto firefighters and equipment.

210.04.02. Engine Company Tactical Operations:

A. First Arriving Engine Company

1. Size-Up and make an accurate arrival report. If Command has not been established.

2. Advance attack lines as needed utilizing 1.75 and 2.5 lines as needed.
   NOTE: Consideration should be given to utilizing a 3.0 line and a gated "Y" or water thief appliance to enable multiple hand line deployment and flexibility.

3. Attempts should be made to initiate an aggressive interior attack as soon as possible. Interior attacks should be coordinated with proper ventilation procedures. Attacks should be directed from the unburned area to the area of major involvement. Interior hallways should be protected to maintain a means of egress for civilians and firefighters.

4. Evaluate extent of life safety hazards.

5. Determine necessity of establishing a water supply.

6. Advise Command when the Primary and Secondary searches have been completed.

B. Second Arriving Engine Company

1. Secure a water supply for attack Engine.

2. Advance a second 1.75" line or larger if necessary between the major involvement of fire and the longer end of the building. This line should be positioned so that it will prevent the horizontal extension of fire. The attic space on the long end of the building and the second floor above the fire are normally the most severe exposures and should be covered first by the second attack line.

3. Assist in performing the secondary search of areas most in danger of fire and smoke spread.

C. Third Arriving Engine Company or crew

1. Advance a third 1.75 or larger attack line between the major involvement of fire and the short or opposite end of the building. The idea of this line is to prevent the extension of fire into the units on the opposite side of the fire.

   NOTE: All attempts should be made to keep this line from forcing the fire back into the unit of origin. Forcing the fire back into the unit of origin could prove dangerous to those firefighters inside. Constant communications and coordination is required before these lines are utilized. Additional lines should be stretched to back up the above initial attack lines in order deployed.

D. Truck Company Operations

1. Rescue - Assist the initial attack crew with primary search and removal of occupants.

2. Secure the utilities as required.

3. Ventilation - Establish ventilation sector and coordinate ventilation of structure with attack crew though Command.

210.04.03. Special Considerations:

a. Due to the lightweight construction and the potential for rapid fire spread, **CAUTION MUST BE EXERCISED WHEN ASSIGNING PERSONNEL TO VENTILATION TASKS ON THE ROOFS OF GARDEN APARTMENT/CONDO TYPE STRUCTURES. SPECIAL**

CONSIDERATION MUST BE MADE BEFORE PUTTING PERSONNEL ON LIGHT TRUSS ROOFS.

b. Trench Ventilation (strip ventilation) and interior attack may prevent the spread of fire. Note: This type of ventilation is time consuming and should be performed after initial above fire, 2'x4' or larger type roof ventilation has been completed.

c. If master streams are utilized, they should only be used when all personnel have been removed to the exterior of the building. This action should only be used during DEFENSIVE ATTACKS.

d. Determine location and extent of fire. All information should be relayed to Command.

e. Provide support for Interior Operations being performed by the Engine Companies. Ventilate openings as needed and as you go.