



Burlington Fire Department

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Section: 01 - Suppression	
SOG Number: 01.52	Effective Date: Jan. 1, 2019
Subject: Residential Building Fires	
By Order of Fire Chief Steven A. Locke	

I. Purpose:

To provide an awareness of the hazards inherent to residential building fires and to set forth guidelines for safe and efficient firefighting operations in these occupancies.

II. Scope:

This guideline applies to all Burlington Fire Department (BFD) personnel who respond to residential building fires. This guide is not intended to cover responses to residential fires in mid-rise or high rise occupancies. As with any emergency, the authority to deviate from this guideline rests with the Incident Commander (IC) or Chief Engineer.

III. Definitions:

Condominium: (Condo). A residential structure divided into individually owned units where the common areas and surrounding grounds are collectively owned and maintained by an association of the individual unit owners. These structures are commonly an example of Type V, wood frame construction and often may have components utilizing modern lightweight construction materials such as steel studs, steel open web bar trusses and lightweight concrete floor decks. They may appear as large structures with multiple units, smaller 2-3 unit structures or may be created within old factory and mill buildings.

Dwelling: A house, apartment, or other place of residence.

Garden Apartments: A complex of a cluster or clusters of low rise residential buildings with landscaping, pathways and open lawns. These features may be extensive and include pools, playgrounds, clubhouses, etc. These structures are commonly an example of Type V, wood frame construction and may also utilize modern lightweight construction materials.

Multi-Family Dwelling: A residential building where multiple separate housing units for inhabitants are combined within one building or several buildings within a complex.

Single Family Dwelling: A stand-alone detached house which is a free-standing residential building where one family unit may reside.

Townhouse: Typically a single-family dwelling of multiple floors and small footprints, arranged in rows of similar houses that may have shared sidewalls, foundations, and roofs. These structures are commonly an example of Type V, wood frame construction.

Type V Construction: Also known as wood frame construction. Characterized by the predominant use of dimensional lumber, plywood and engineered wood products such as trusses, I-joists and oriented strand board (OSB). This is the typical construction type of single family homes and may be found often in low rise residential and commercial structures.

IV. Guidelines:

A). Special considerations

1. Life safety hazards
 - a. Occupants
 - (1) Large number of occupants
 - (2) Physical condition of occupants
 - (a) Injured
 - (b) Disabled
 - (c) Trapped
 - b. Primary search patterns may need to be adjusted to reflect the need to search areas near the fire
 - (1) In multi-family dwellings, the fire unit should be given the initial priority

- (2) Units beside and above the fire unit should be given secondary priority
 - (3) Primary searches should commence in the area closest to the fire, cover areas of egress, and other survivable spaces
 - c. Secondary searches should include all units in the building.
2. Construction
- a. These structures are typically type V, wood frame construction.
 - (1) Heavy fuel load
 - (2) Rapid fire spread
 - (3) Early failure of components
 - (a) Collapse
 - b. Condominium/Garden Apartments/Townhomes may have shared common areas and building components
 - (1) Attics
 - (2) Basements
 - (3) Foundations
 - (4) Roofs
 - (5) Sidewalls
 - (a) These features will promote widespread, rapid movement of the products of combustion
 - (6) Kitchens and bathrooms are typically arranged so that plumbing pipes are in a straight column floor to floor
 - c. You may have multiple structure complexes spread over a large area.
 - (1) Extensive landscaping
 - (2) Pools
 - (3) Ponds
 - (4) Other structures
3. Fire suppression and rescue operations
- a. Apparatus placement
 - (1) Limited access points. Be sure to *position* apparatus, not park apparatus
 - (2) In multi-family dwelling fires, there is the possibility for large areas between the fire location and the attack apparatus
 - (a) Extra personnel to carry equipment.
 - (b) Area may be unpaved, rough and extensively landscaped
 - (i) Patient/Victim removal from scene may be difficult
 - b. Water supply
 - (1) Hydrants may be a considerable distance
 - (a) Relay pumping

(b) Long hose lays for supply and attack lines

B). First alarm response

1. Actions taken

a. First arriving apparatus shall:

- (1) Take command
- (2) Give a brief initial report (See SOG 06.21) that includes:
 - (a) Apparatus name & location
 - (b) Type of construction present
 - (c) Description of the amount and area where smoke and fire are visible
 - (d) Number of structures involved and to what extent
 - (e) Exposures
 - (f) Immediate life safety concerns
 - (i) Visible victims
 - (ii) Reported victims
- (3) Complete a 360-degree reconnaissance of the structure where practicable.
This may be hindered by
 - (a) The size of the building
 - (b) Dividing fences and walls
 - (c) Extensive landscaping
 - (d) Other structures
- (4) Convey information gathered, a plan of actions to be taken, as well as equipment needed to all responding units and command if established or assumed by other personnel. Actions may be:
 - (a) Investigation mode
 - (b) Rescuing trapped occupants
 - (c) Offensive fire attack (Stretching an attack line)
 - (d) Defensive operations

b. Battalion 1, upon arrival, shall assume command and establish an Incident Command post

- (1) If arriving prior to the first due engine or truck, Battalion 1 shall provide the brief initial report
- (2) Regardless of order of arrival, the officer of Battalion 1 shall conduct a 360 reconnaissance of the structure where practicable
- (3) Consider the need for additional resources/or additional alarms
- (4) Maintain fireground accountability

- c. Second arriving engine shall:
 - (1) Establish a water supply
 - (2) Deploy a second attack/backup hoseline
 - (a) Consider stretching the backup hoseline between the fire and the long end of the building, usually the next apartment over or above, to prevent extension through voids
 - (3) Assist the first arriving apparatus with their identified needs
 - (4) Be utilized for aerial operations if appropriate for apparatus type and situational requirements

- d. Tower 1, if not the first arriving apparatus, shall be utilized at the discretion of Command. Roles may include:
 - (1) Position for aerial operations
 - (2) Forcible entry
 - (3) Controlling the flow path of the fire
 - (4) Search and rescue
 - (5) Ground ladders
 - (a) Front and rear of the building, upper floors/balconies.
 - (6) Ladder the roof
 - (7) Assisting other crews with ongoing tasks

- e. Second arriving ladder company, shall be utilized at the discretion of Command. Roles may include:
 - (1) Position near the rear of the building (or location designated by the Incident Commander)
 - (2) Ladder the rear of the building
 - (3) Place egress ladders
 - (4) Provide for control of the utilities.

- f. Third arriving engine, at the discretion of Command, shall:
 - (1) Identify a secondary water supply
 - (2) Stretch a second attack/backup hoseline
 - (3) Assist other crews

- g. Fourth arriving engine company, at the discretion of Command, shall:
 - (1) Establish a RIC

- h. First arriving BFD ambulance that is not the first arriving apparatus to the scene shall be utilized at the discretion of Command for:
 - (1) Providing medical care for those in need
 - (2) If arriving at the same time as the initial engine, assisting the first due engine crews with hoseline deployment
 - (3) Supplement the RIC
 - (4) Establish a rehabilitation area
 - (5) Stand by as primary EMS providers

- i. Second arriving BFD ambulance, at the discretion of Command, may be used for:
 - (1) Providing medical care for those in need
 - (2) Supplementing the fourth due engine company on the RIC team
 - (3) Assisting other crews with fire suppression
 - (4) Establishing a rehabilitation area
 - (5) Stand by as primary EMS providers

- j. First arriving non-BFD ambulance may be used for:
 - (1) Providing medical care for those in need
 - (2) Establishing a rehabilitation area
 - (3) Stand by as primary EMS providers

- k. Additional resources will be acquired through the activation of additional alarms.
 - (1) The BFD Multiple Alarm Response Matrix will determine which resources will be responding
 - (a) Arriving units shall be utilized at the discretion of Command

V. Responsibility:

It is the responsibility of all members to read, understand and follow this Standard Operating Guideline.

Revision History			
Revision Date	Section	Summary	Principal Author
12.07.2018	All	Initial release of document.	Lt. P. Luedee DC Collette



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Residential Building Fire Matrix - Task Sheet

Burlington, Vermont Fire Department

Tasks to be completed.

1st Engine Company	2nd Engine Company	3rd Engine Company	4th Engine Company	1st Ladder Company	2nd Ladder Company	1st Battalion Chief -or- Shift Commander	2nd Battalion Chief	1st EMS Transport	2nd EMS Transport	1st Deputy Chief - or- Chief Engineer
Establish Command	Establish Water Supply for 1st Due Engine	Establish Second Water Supply	Rapid Intervention Crew	Position near front of building or location designated by IC	Position near Rear of building or location designated by IC	If arriving prior to first due Engine or Truck; Initial Size Up, Brief Initial Report	May assume the role of Staging Area Manager	Provide Medical Care to those in need	Provide Medical Care to those in need	Assume Command from Battalion Chief, Initial BC becomes Operations Section Chief
Initial Size Up, Brief Initial Report	Establish Back Up Line	Report to Incident Command		Forcible Entry, Primary Search, Control Flow Path	Ladder the rear	Conducts 360. Assumes or Establishes Command		Assist first due engine if simultaneous arrival	Operate at the discretion of the IC	Typically will not occur unless incident has escalated to a 2nd alarm or greater.
Conducts 360 of Building		Stretch a 2nd attack or backup line		Ladder the Roof	Place Egress ladders	Consider the need for additional alarms		Supplement the RIC	Assist with Fire Suppression	
Declare Operational Mode				Place egress ladders	Utility Control	Maintain Fireground Accountability		Establish Rehab/Provide Standby EMS	Establish Rehab/Provide Standby EMS	
Stretch Initial Attack Line								Operate at the discretion of the IC	Establish Rehab/Provide Standby EMS	

RULES:

- 1). Ladder Company Defined: Tower 1, Ladder 2 or Ladder 4 (when not utilized as an engine), or Rescue 1 (Heavy Rescue)
- 2). The 3rd arriving quint becomes the 2nd Truck Company.