



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Tactical Considerations when Dealing with Fires in Vacant Structures





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# Tactical Considerations when Dealing with Fires in Vacant Structures

This drill is intended to be an interactive discussion on

- Factors to consider before making tactical decisions
- The GOAL is to *get members thinking - before committing*

The factors we'll discuss should be considered at all incidents and not just fires in Vacant Structures.





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### Tactical Considerations when Dealing with Fires in Vacant Structures

Although some factors that we'll be discussing, to some, will seem obvious or common sense but under fire conditions these items commonly get overlooked.

We tend to get tunnel vision - our focus is to get our jobs done as quickly as possible or newer members get lost in overwhelming incident.

**This drill will hopefully get members thinking, seeing the big picture**





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N.F.F. Near Miss Incident # 10-1078



### Event Description :

*While working as a firefighter of an engine company, I responded to a reported structure fire in a commercial building. Upon arrival, we found heavy smoke coming from an **abandoned commercial building**. My crew was assigned to make entry on the 3 side of the building. Prior to entry, the crew cut a 4x4 hole through a 4x8 sheet of plywood . Once inside the building with a 2 ½ inch hose line, I observed heavy smoke with visibility less than 10-15 feet. My Captain , using the thermal image camera , identified the fire to be located in the mezzanine area. After taking approximately five steps towards the fire, I fell into a hole that was approximately 10 feet deep. After landing, I tried to notify the incident commander of my condition and location. There was so much radio traffic it was difficult to communicate with anyone. My crew, aware of the situation, lowered a ladder into the hole and I was able to remove myself.*



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NFF – Near Miss Incident # 10-1078

**Could This Happen In Westbury?**

(remember every incident is filled with a list of unknowns)



**Are there Vacant Structures in the district?**

(Yes- Working fires: 2/8/11, 10/20/11, 10/23/11 & 12/24/11  
all Vacant Residential Fires – reason for topic of this drill)

**Does a Vacant Structure impose  
More or Less Dangers  
then the one that is Not Vacant ?**



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### NFPA - Vacant Building Fires Fact Sheet



Between 2003-2006, U.S. fire departments responded to an Estimated average of 31,000 structure fires in vacant buildings.

These fires resulted in an average of 50 civilian deaths, 141 civilian injuries, and \$642 million in direct property damage per year.

- 4,500 firefighters were injured annually at these incidents. (1 every – 6.5 incidents)
- Only 6% of all reported structure fires were at vacant buildings, but they accounted for 13% of the firefighter injuries at structure fires.
- From 1998 to 2007, 15 firefighters were fatally injured at vacant building fires.



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Vacant Structure usually imposed additional hazards because:

We **may** be dealing with:

- Unstable structures, construction defects
- More Fall and Trip hazards
- Increased rapid spread of fire
- Falling objects or partial collapses
- Doors removed – limiting protection areas
- Standing water in Basement
- Vermin – Mice, Rats, Raccoons, Fleas...
- Hazardous Materials – dumped or storage  
( also: urine, fecal mater, needles ...)
- Unauthorized occupants
- Criminal Activities
- No one's telling us what we have : Bedroom fire, propane tank in garage, everyone's out...



**\*\*All Adding Additional Risk\*\***



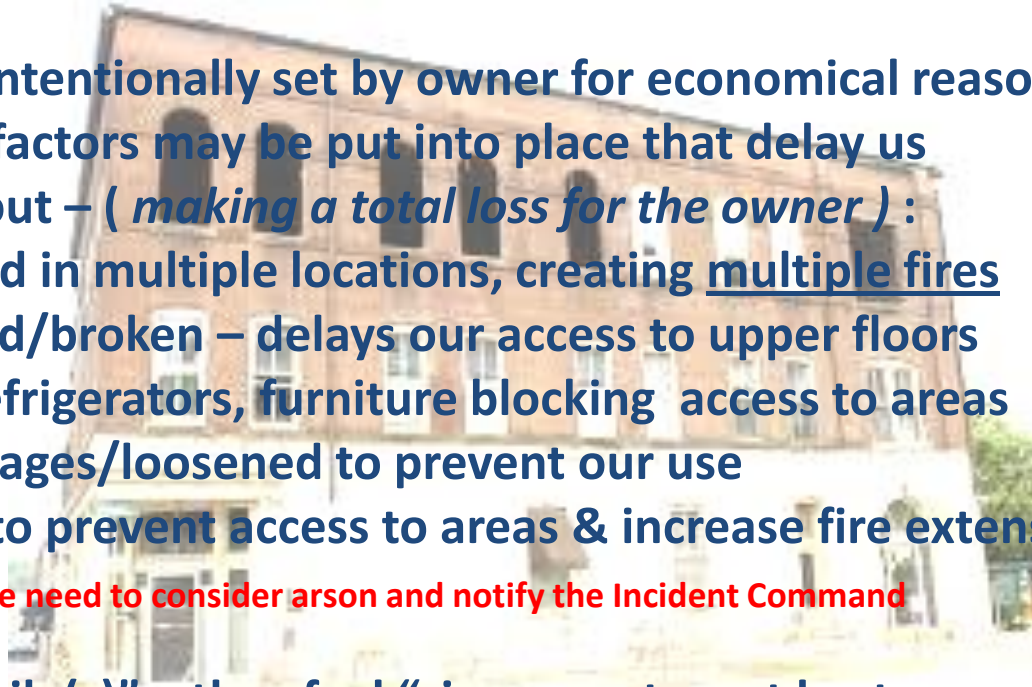
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**We need to understand fire in a Vacant Structures don't "just happen":**  
( in most case the gas & electric service will be disconnected )

1. The fire maybe intentionally set by owner for economical reasons  
In these cases – factors may be put into place that delay us putting the fire out – ( *making a total loss for the owner* ) :
  - accelerants placed in multiple locations, creating multiple fires
  - Staircase removed/broken – delays our access to upper floors
  - Heavy object – refrigerators, furniture blocking access to areas
  - Fire escapes damages/loosened to prevent our use
  - Holes in floors – to prevent access to areas & increase fire extension

If we find these items, we need to consider arson and notify the Incident Command
2. Fire set by “juvenile(s)” – they feel “since empty, not hurt anyone”
3. Fires are accidentally set by persons occupying the location







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Knowing this :

What Incident Factors should effect our  
**Tactical Decisions making**  
when we deal with a fire in Vacant Structure?





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What Incident Factors should effect our decision making when dealing with Vacant Structures?

**Time, Life, Area, Height, Construction, Occupancy, Location & Extent of Fire, Water Supply, Street Conditions, Auxiliary Appliance, Weather, Apparatus & Equipment, Exposures & Communications.**

*We'll discuss how Each should effect our Decision Making*



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### Time:

How does “TIME” effect our operation?





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### Time:

- How **long** was the fire burning before we were called?
- Are fires reported faster during **day** or **night**?
- How is any **delays** in reporting going to effect us?
- Is the life hazard greater during the **day** or **night**?
- Is our response to the alarm going to be better at **7 am** or **7 pm**?
- Is our FAST TEAM going to get there faster at **7 am** or **7 pm**?
- Is or Mutual Aid Assistance getting there faster at **7 am** or **7 pm**?
- What's the **manning** on the rigs.... (Light crew or our "A" Team ...)  
for that **time of day**?
- Where in district is the fire & **how long** does it take to get there?

**Time is a significant factor at all Incidents.**



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### Time:

- How long was the fire burning before we were called?

### Will Effect the Duration of burn:

- how much fire will be meeting us at the front door
- a possible back draft situation or it puts us going inside as the fire is about to flash? (*evolution of a fire*)
- the structural integrity of the building
- the less likelihood we'll be rescuing a survivable victim

**Statistically** Fire will double in size every 30 seconds in residential fires – until controlling factors come into play.

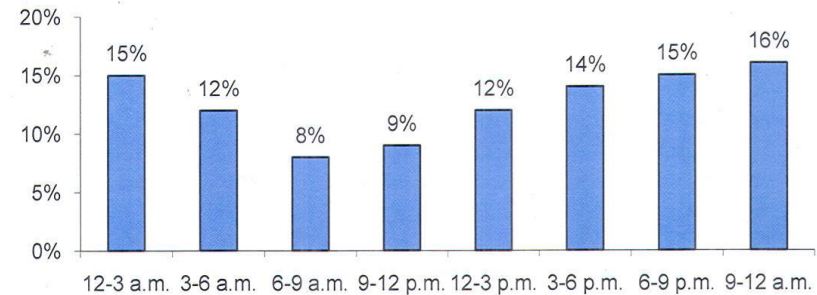
*With structures w/ Heavy fire loads this could increase to every 15 sec.*



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Figure 9. Structure Fires in Vacant Buildings by Alarm Time: 2003-2006



### Time:

Are fires reported faster during the day or night?

#### The Day:

- More people are up and about to notice them. — 43% are during daylight

#### Night Fires in a vacant are usually reported after:

- a Window blows out awaking a neighbor
- Neighbor awoken by odor of burning in their own home
- Someone see glow in the sky...

*This means duration of burn will be usually be much greater at a night fires in a vacant opposed to a day fire.*



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### Time:

- How is a delayed in reporting the fire, going to effect us?

### More fire, weaker structure & possible body recovery opposed to a Rescue:

- More Fire = We'll probably need More Water/Hose Lines
- **More** Risk and **Less** Reward ( Risk vs Reward )
- Operations **maybe** Defensive to Offensive **opposed to**  
Offensive to Defensive - if it was not vacant

These are typically Transitional Event ( Our Strategies: Offensive/Defensive/Transitional)

Could our tactics include searches with TI cameras from the exterior  
before we commit personnel inside? ( **absolutely** )

The amount of fire or lack of fire will provide signs to our tactics.



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### Time:

• **Is the life hazard greater during the day or night?**

**Night** – since a majority of population sleeps at night.

\* we should never assume there is “no ones inside” during the day, unless we’re told from a occupant(s) inside “everyone’s out”

- Squatters live in vacant structures – We’re not going to have your typical signs:
  - Car(s) in driveway
  - Shoes at the front door
  - Lights on inside
  - Front or back door was unlocked ...

***\* Remember they don’t want anyone knowing they are in there!***





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### Time:

Where in districts is the fire & how long does it take to get there?

Again this **will effect the duration** of burning...

- Will it take the same amount of time to get to SUNY Old Westbury at 2am as it would 8am or 5pm...?
- Will we get to 175 Maple Ave faster then Roosevelt Field?

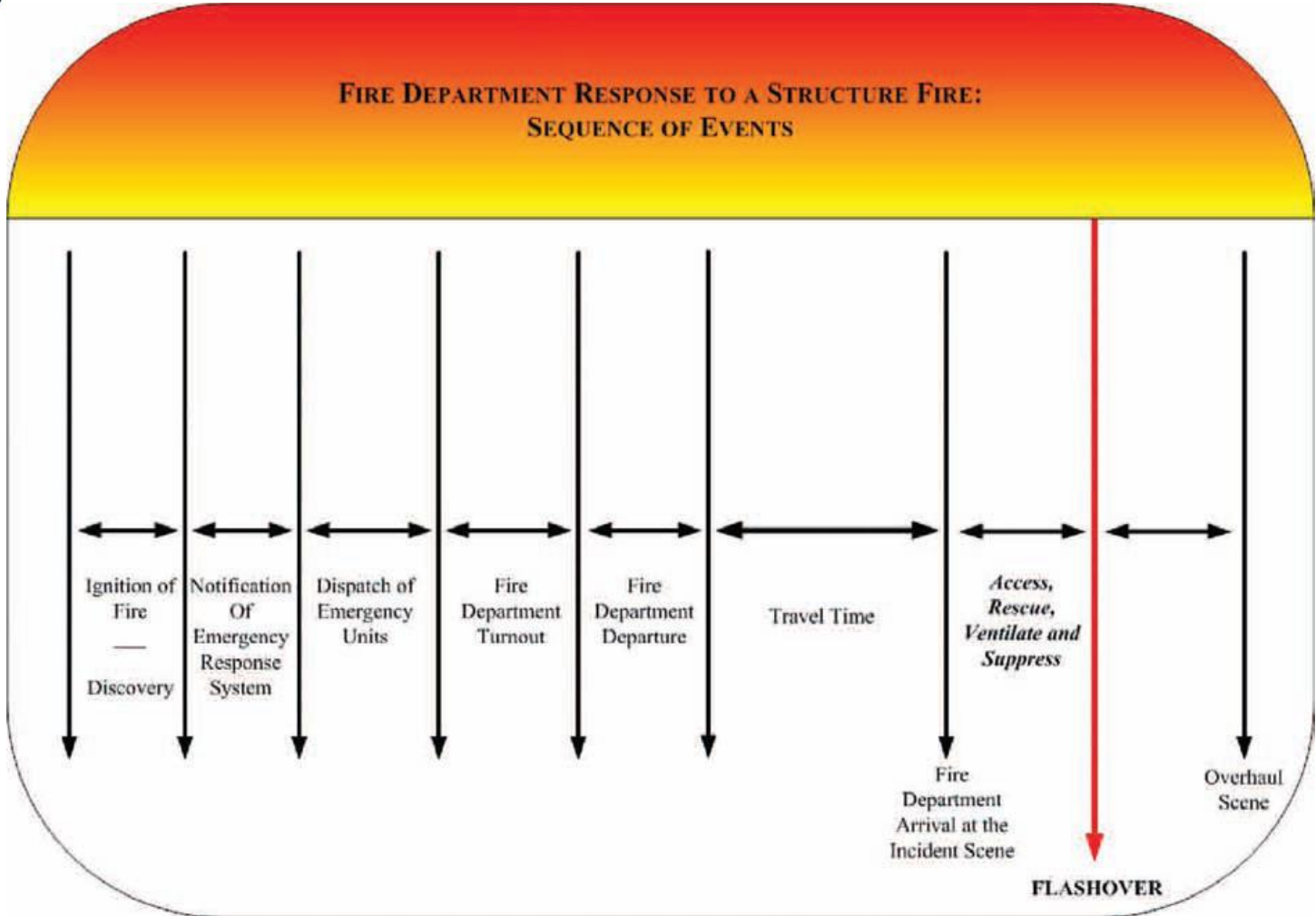
What happened to the fire or conditions in this difference in time?

-*What has happened to that call for "smell of smoke", 2-3 minutes opposed to 6-8 minutes later? ( remember the video )*



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### Time:

- Is our response to the call going to be faster at 7 am or 7 pm?
- Is our FAST TEAM going to get there faster at 7 am or 7 pm?
- Is or Mutual Aid Assistance getting there faster at 7 am or 7 pm?
- What's the manning on the rigs for that time of day?

Most members of a Volunteer FD work 7-3, 8-4 or 9-5 jobs :

- this will not only effect **our response time** but our back up's.
- It will also effect the quantity & quality of personnel on the apparatus
  - crews instead of being 5 or 6 - may become 3 or 4
  - crews of 6 class A's may now be 3 A's and 2 B's...
  - 2<sup>nd</sup> due instead of 1-2 minutes out, may be 4-6...

*A 32, because of a limited response to 1<sup>st</sup> alert, what's happening to our fire?*

All these Time factors, should effect how we approach our tactics.



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### Life:

*Is the Life hazards in a Vacant Structure  
Greater or Less than if it was Not a Vacant Structure?*





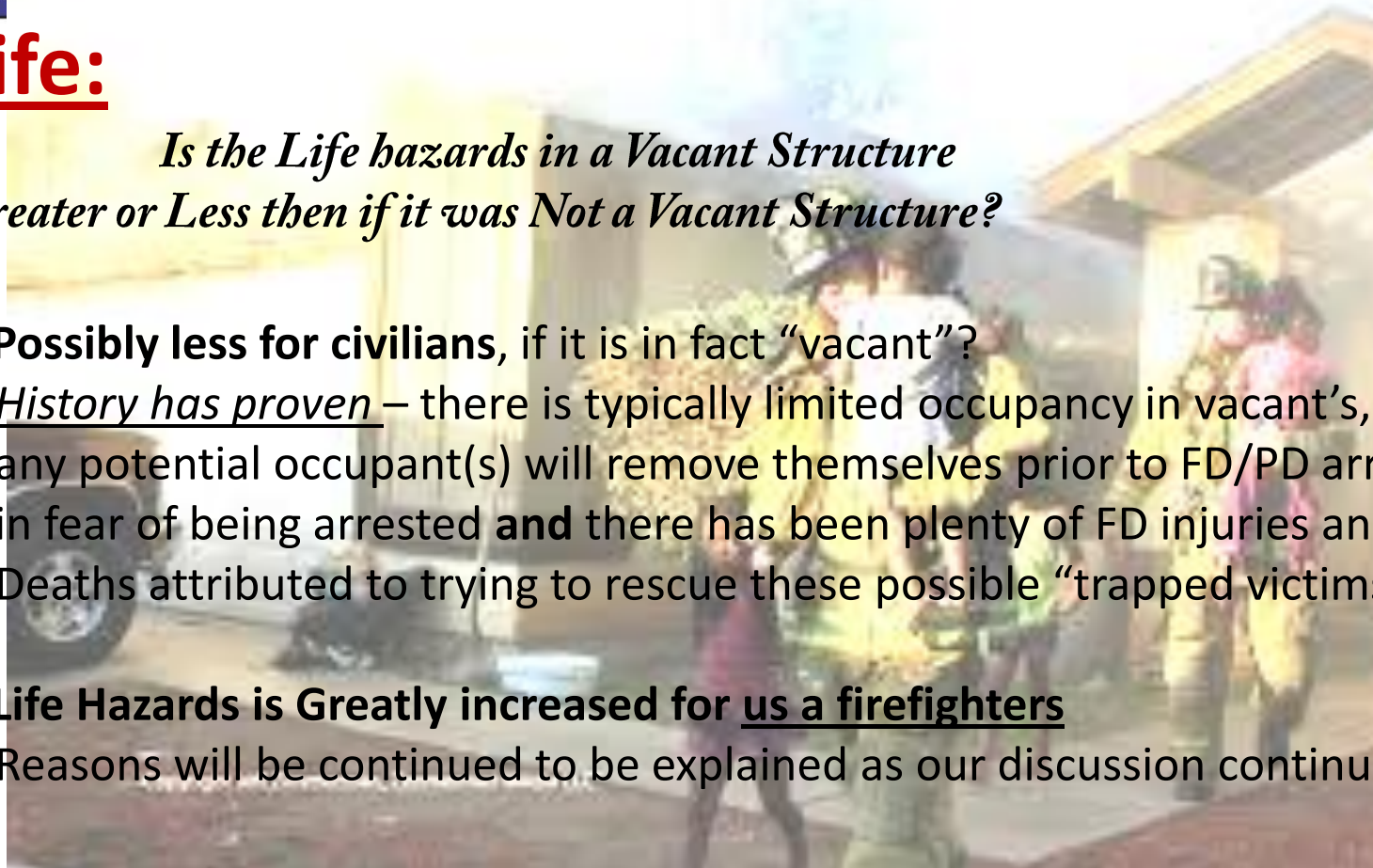
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### Life:

*Is the Life hazards in a Vacant Structure  
Greater or Less then if it was Not a Vacant Structure?*

- **Possibly less for civilians**, if it is in fact “vacant”?  
History has proven – there is typically limited occupancy in vacant’s, any potential occupant(s) will remove themselves prior to FD/PD arrival in fear of being arrested **and** there has been plenty of FD injuries and Deaths attributed to trying to rescue these possible “trapped victims”
- **Life Hazards is Greatly increased for us a firefighters**  
Reasons will be continued to be explained as our discussion continues





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### Life:

*As with most fires, our biggest life hazard may be the choices we make or the choices made for us by our officers.*

*It should be the goal of every officers or team leader to assure everyone under their control goes home the same way they arrived – SAFE!*

### Never FORGET!

***Risk a lot to Save a lot - Risk a little to Save a little***

*Protecting yourself or your crew all starts with Sizing up what you have, considering all the factors and comprehending the big picture before performing appropriate and safe tactics.*

**What doesn't seem right, probably isn't : Probie to Chief**

**Use your instincts to your advantage and don't be afraid to communicate to your leader or partner!**

**IF YOU ARE TOO HOT IN ALL YOUR GEAR - MAYBE YOU SHOULD BE WHERE YOUR AT!**

***Remember the only thing we may be saving at these vacant structures is ourselves.***



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### Area:

*How should the building area (or "footprint") effect us?*





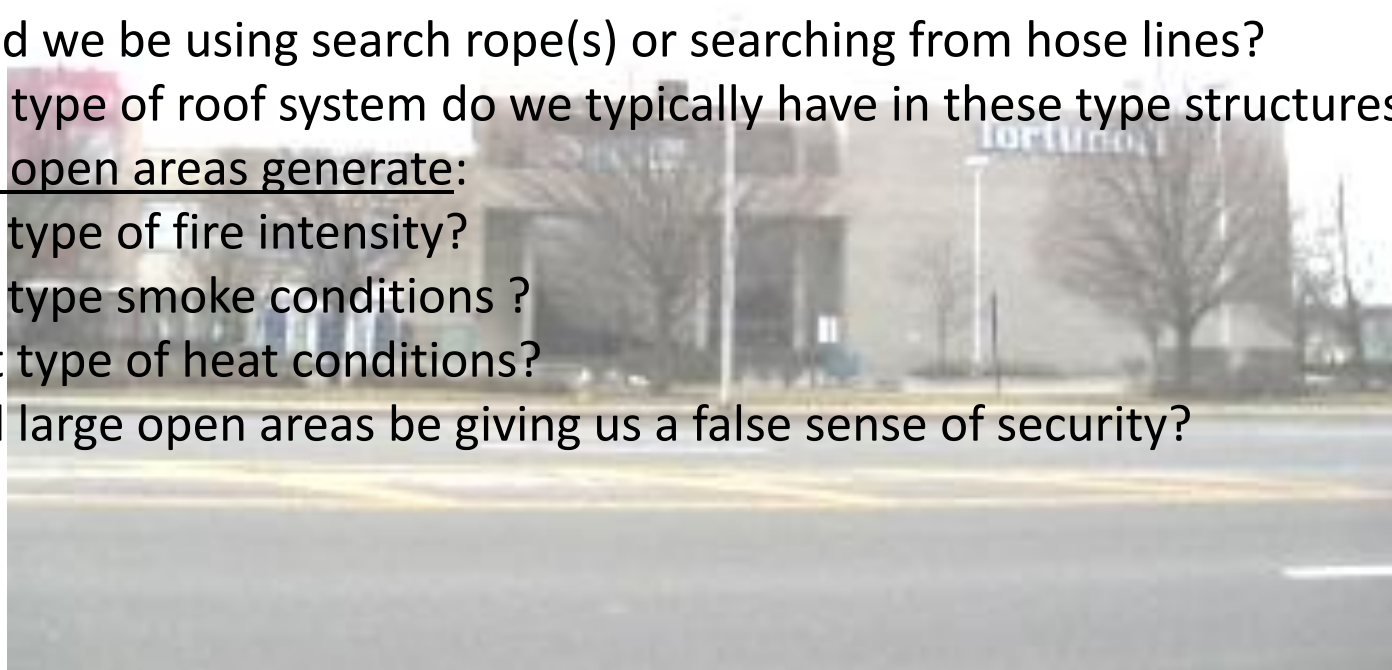
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### Area:

*How should the building area (or “footprint”) effect us?*

- Should we be using search rope(s) or searching from hose lines?
- What type of roof system do we typically have in these type structures?
- Large open areas generate:
  - what type of fire intensity?
  - what type smoke conditions ?
  - What type of heat conditions?
- Could large open areas be giving us a false sense of security?







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### Area:

*How should the building area (footprint) effect us?*

Our tactics at a fire in a building with a large footprint should be the same whether it's Vacant or Occupied:

- Searches should be done using search rope(s) or from a hose line and not just the use of a TI Camera.
- We need to understand – we're probably dealing with some type of Truss in our roof system. ( either bow or bar joist )
- These Large open areas generate a large amount of free burning fire, **very intense fires**, especially if it has the fuel the structure doesn't have operating sprinkler system or provision such as fire doors to keep the fire contained to an area have been removed...



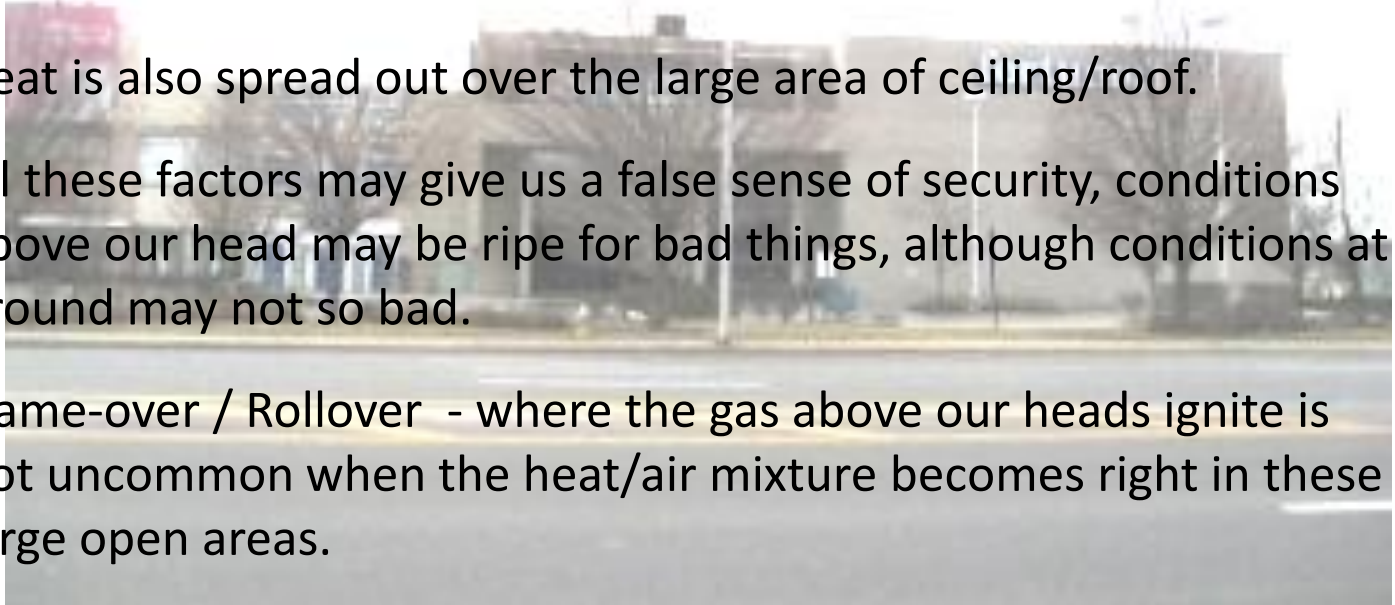
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### Area:

*How should the building area (footprint) effect us?*

- Smoke is spreads over a large area, so it may not immediately bank down make conditions inside intolerable for us.
- Heat is also spread out over the large area of ceiling/roof.
- All these factors may give us a false sense of security, conditions above our head may be ripe for bad things, although conditions at ground may not so bad.
- Flame-over / Rollover - where the gas above our heads ignite is not uncommon when the heat/air mixture becomes right in these large open areas.





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### Height:

*How will the building's height effect us?*





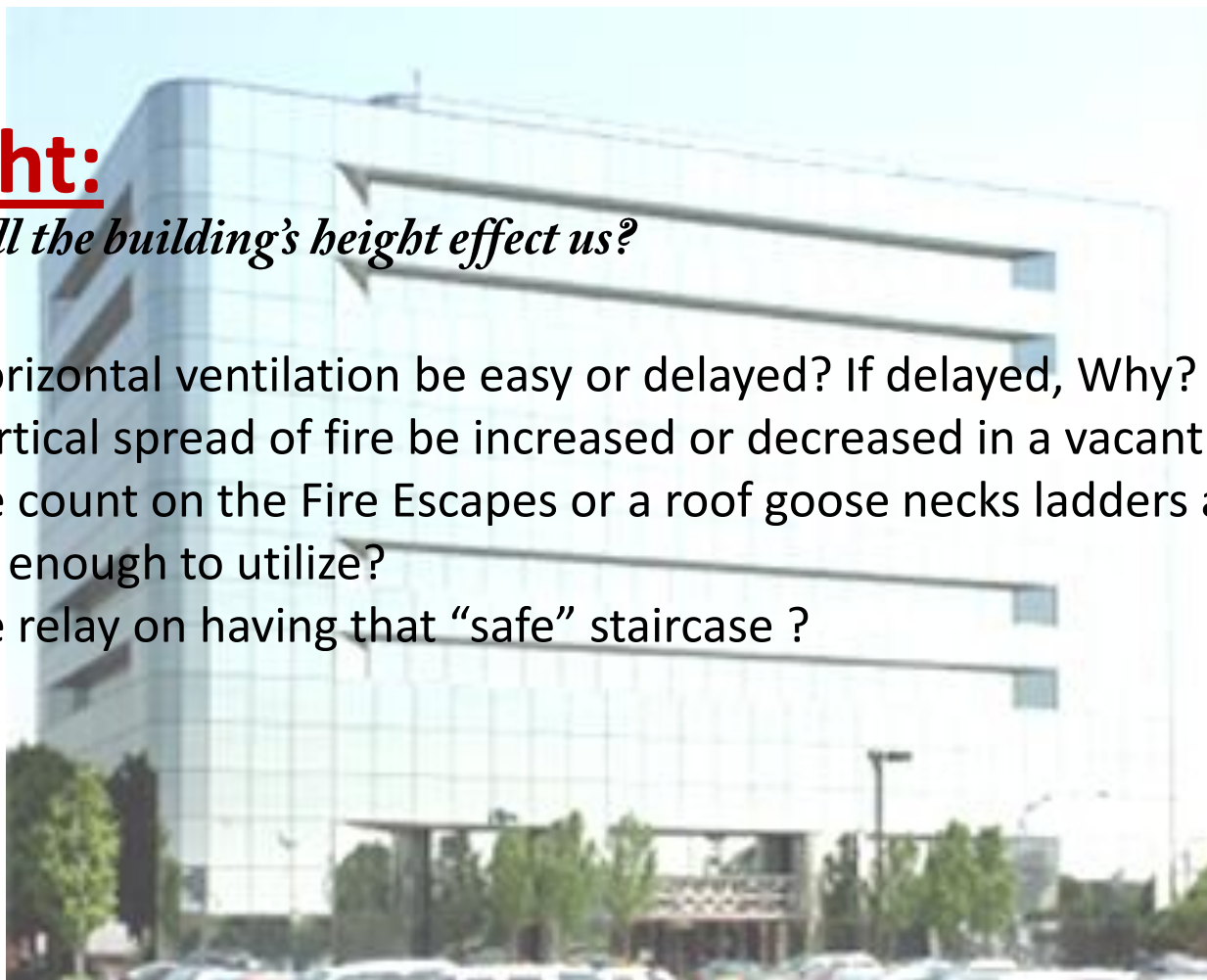
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### Height:

*How will the building's height effect us?*

- Will Horizontal ventilation be easy or delayed? If delayed, Why?
- Will vertical spread of fire be increased or decreased in a vacant?
- Can we count on the Fire Escapes or a roof goose necks ladders as being secure enough to utilize?
- Can we rely on having that “safe” staircase ?





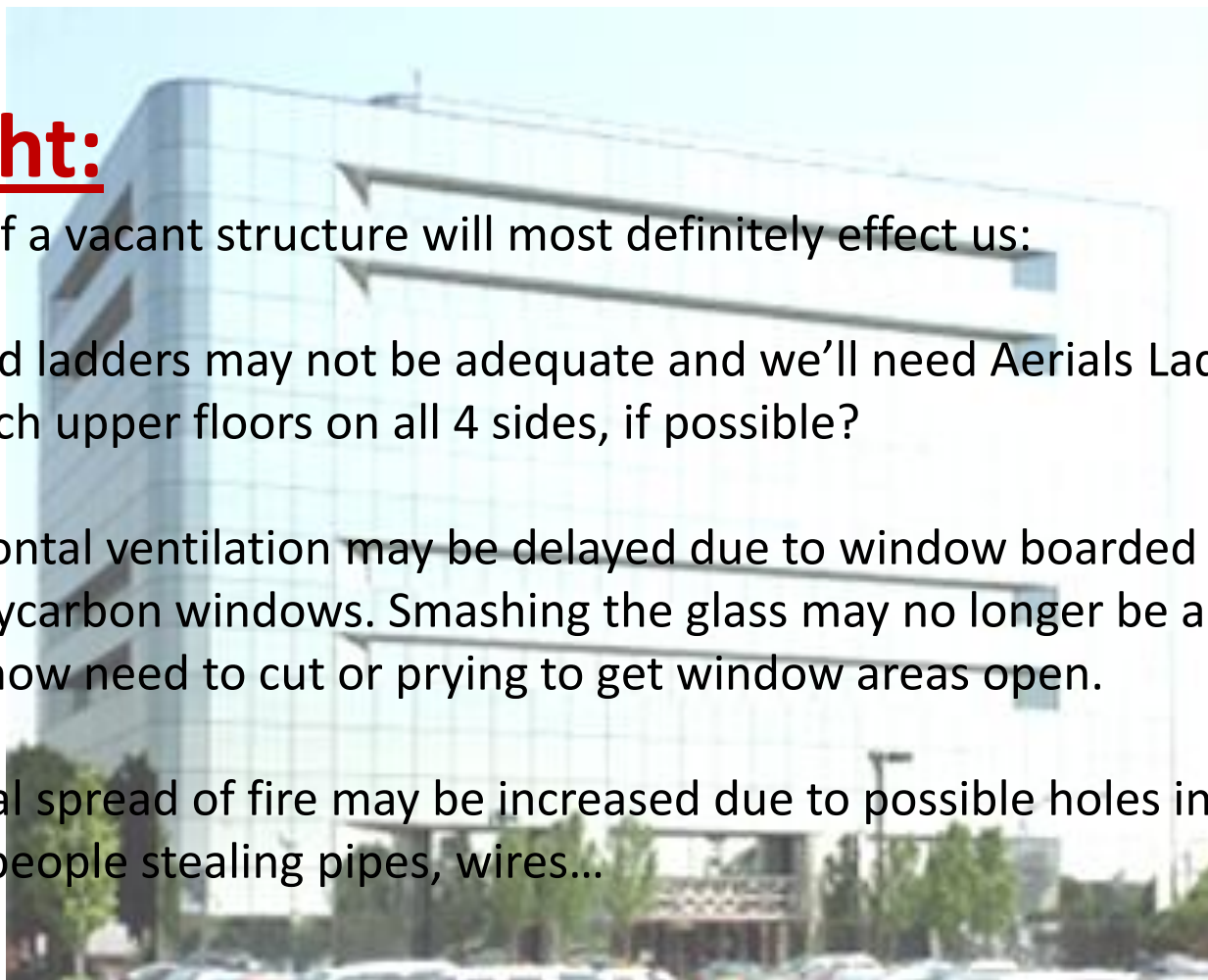
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### Height:

Height of a vacant structure will most definitely effect us:

- Ground ladders may not be adequate and we'll need Aerials Ladders to reach upper floors on all 4 sides, if possible?
- Horizontal ventilation may be delayed due to window boarded ups or polycarbon windows. Smashing the glass may no longer be an option, we'll now need to cut or prying to get window areas open.
- Vertical spread of fire may be increased due to possible holes in floors from people stealing pipes, wires...



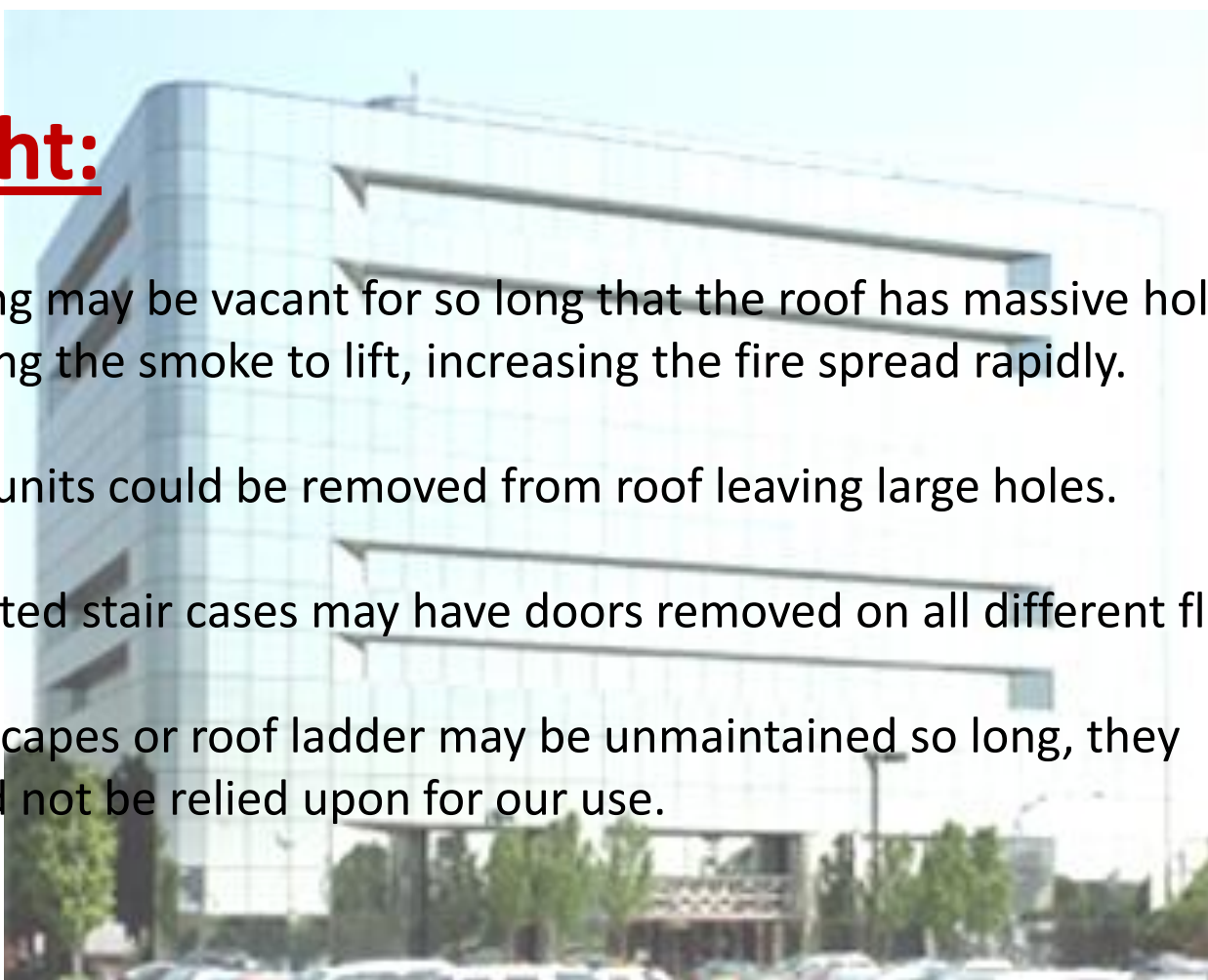


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### Height:

- Building may be vacant for so long that the roof has massive holes, allowing the smoke to lift, increasing the fire spread rapidly.
- HVAC units could be removed from roof leaving large holes.
- Protected stair cases may have doors removed on all different floors...
- Fire escapes or roof ladder may be unmaintained so long, they should not be relied upon for our use.





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### Construction:

*How will the building construction effect us?*





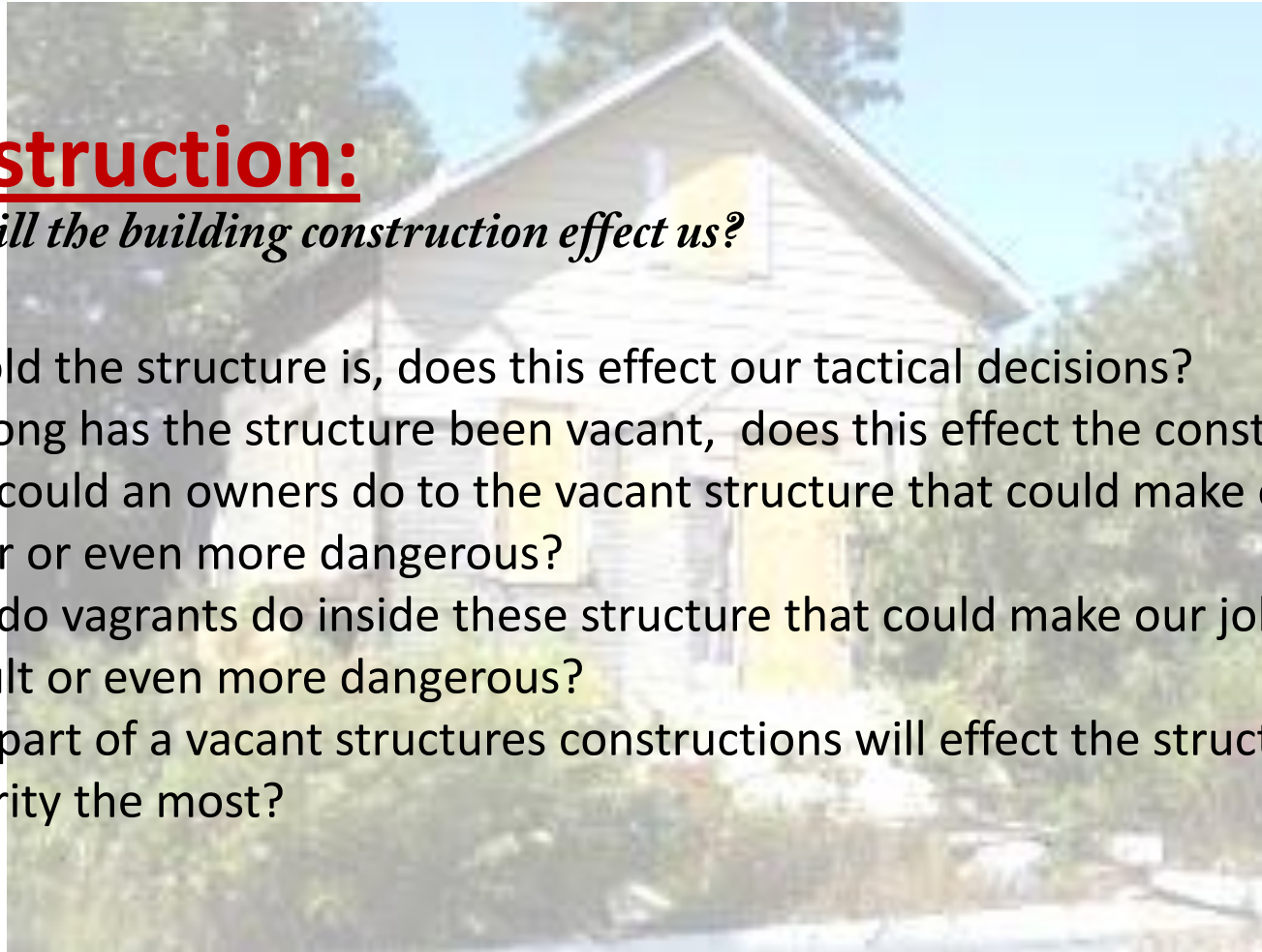
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### Construction:

*How will the building construction effect us?*

- How old the structure is, does this effect our tactical decisions?
- How long has the structure been vacant, does this effect the construction?
- What could an owners do to the vacant structure that could make our job harder or even more dangerous?
- What do vagrants do inside these structure that could make our job more difficult or even more dangerous?
- What part of a vacant structures constructions will effect the structural integrity the most?







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### Construction:

When was the building built – will effect our operations:

- Per WWII – Balloon constructions ( basement – attic fire extension )
- Post WWII (1945) – Platform – We Loose that extension factor **but:**  
Weaker building materials – 2"x4" is now 1.5"x3.5"  
 $\frac{3}{4}$ " tongue and grove planking is now  $\frac{1}{2}$ " plywood

Newer the building: the cheaper the construction material  
1980s ...

tin metal studs/Styrofoam w/ plaster over it – appearance of concrete

Engineered I beams

wood Truss Floors & Roof systems

Flake board sheathing

Micro laminated Beams

**All under a fire conditions fail very very quickly!**



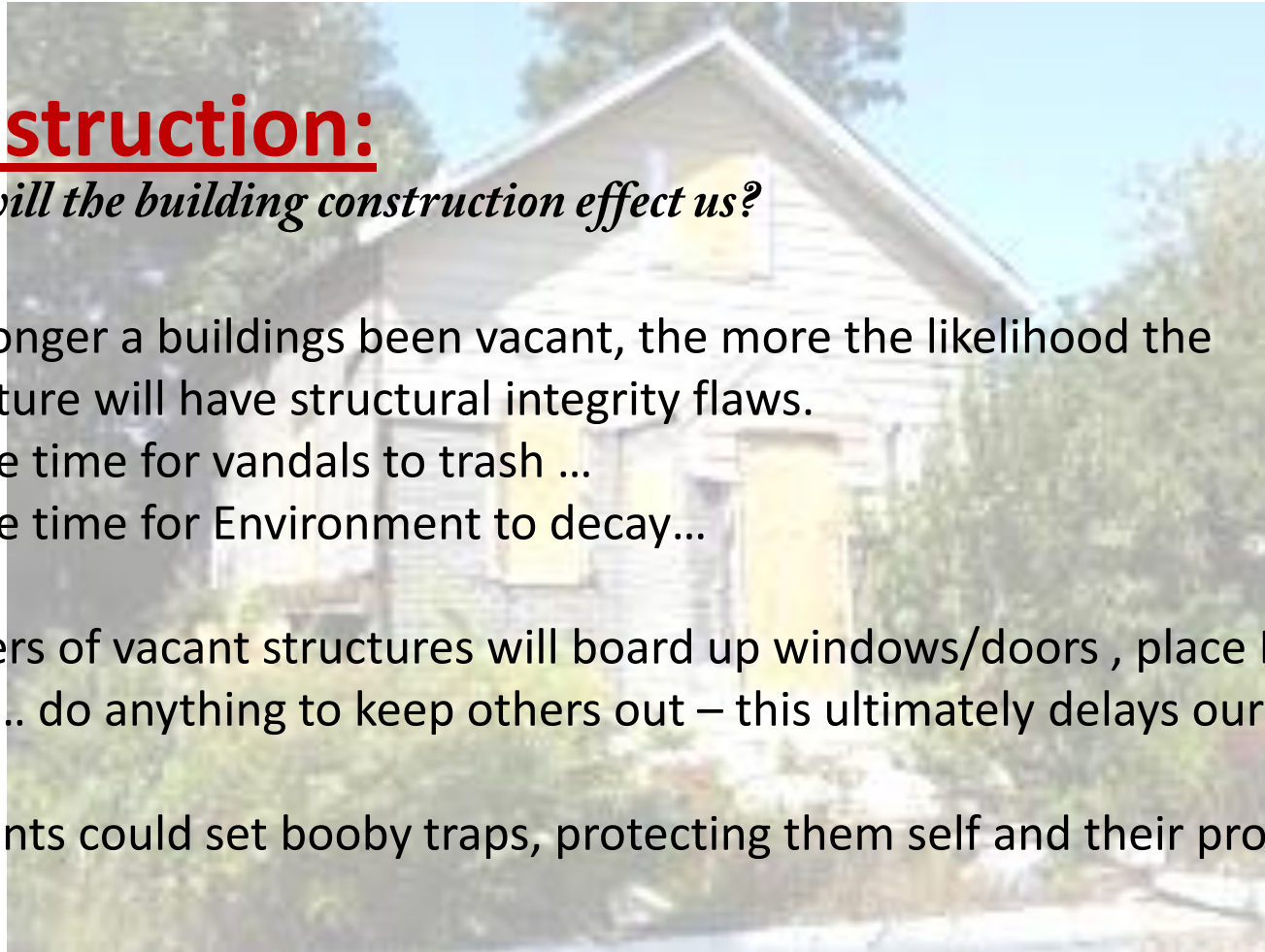
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### Construction:

*How will the building construction effect us?*

- The longer a buildings been vacant, the more the likelihood the structure will have structural integrity flaws.
  - More time for vandals to trash ...
  - More time for Environment to decay...
- Owners of vacant structures will board up windows/doors , place Barb Wire... do anything to keep others out – this ultimately delays our entry.
- Vagrants could set booby traps, protecting them self and their property.





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### Construction:

*How will the building construction effect us?*

What part of a vacant structures constructions will effect the structural integrity the most? **THE ROOF**

When sizing up a vacant – always look at the roof !

- The roofs condition will tell you a lot of what is inside.
- The worst the roof is, the worst the structural conditions will be inside!
- Holes in the roof will allow weather in, weakening floors, walls ....





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### OCCUPANCY:

*How will the buildings "possible" occupancy effect us?*





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### OCCUPANCY:

*How will the buildings "possible" occupancy effect us?*

- Do we have a bigger occupancy possibility in a vacant strip mall, multiple dwelling, industrial factory or a single family dwelling?
- Will the neighborhood of the vacant have an effect in the occupancy?





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### OCCUPANCY:

*How will the buildings possible occupancy effect us?*



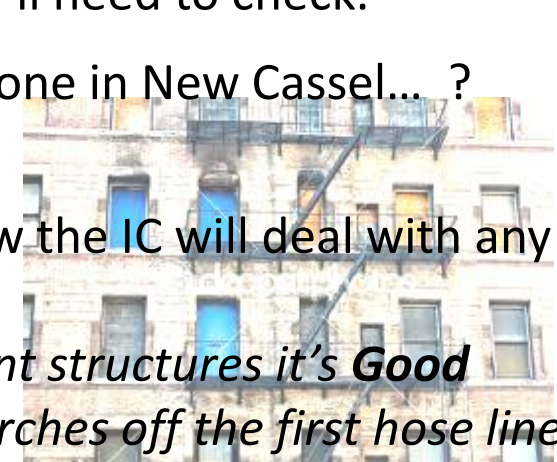
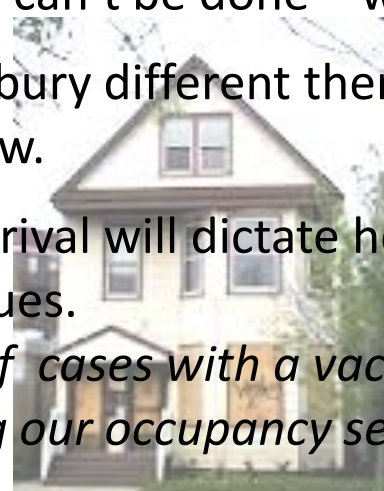
There is no difference – we can't assume any structure is vacant or occupied unless it's verified by an occupant - "everyone is out and accounted for" - if this can't be done – we'll need to check.

Is a vacant in Old Westbury different then one in New Cassel... ?

No - We just never know.

Conditions found on arrival will dictate how the IC will deal with any possible occupancy issues.

- *In a good number of cases with a vacant structures it's **Good Practice** to be doing our occupancy searches off the first hose line.*





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### OCCUPANCY:

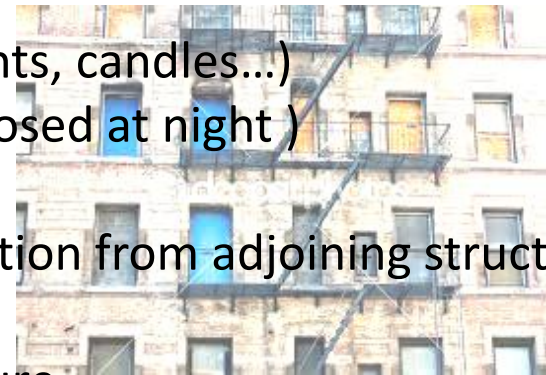
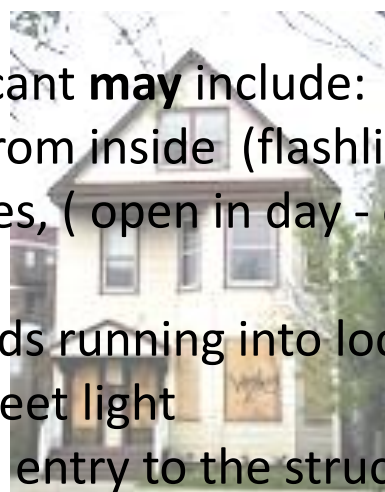
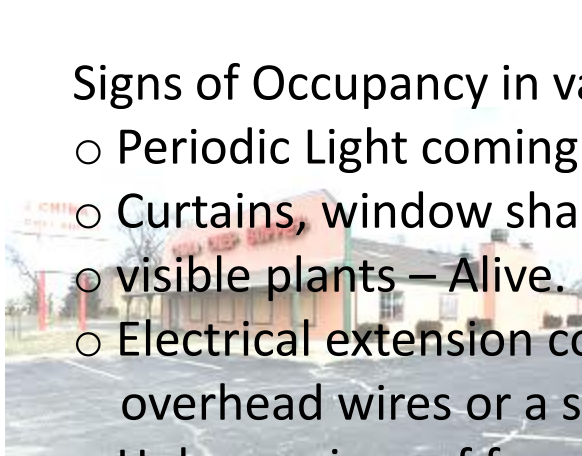
*How will the buildings possible occupancy effect us?*

Occupancy will also effect the structures condition:

If the Utilities are off , What are the occupants doing to the structure, to keep warm or cool, for light...

Signs of Occupancy in vacant **may** include:

- Periodic Light coming from inside (flashlights, candles...)
- Curtains, window shades, ( open in day - closed at night )
- visible plants – Alive.
- Electrical extension cords running into location from adjoining structure, overhead wires or a street light
- Holes or signs of forced entry to the structure





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### Location & Extent of Fire:

*How will the location or extent of fire effect us?*







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### Location & Extent of Fire:

*How will the location or extent of fire effect us?*

- Is a basement fire dealt with the same as a top floor fire?
- Is a fire that has self vented handled the same as one that presents with possible back draft conditions?
- Is the fire blowing out every window going to be handles the same as a one with fire blowing out 1 window?
- When should we consider Flashover or Rollover conditions?





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### Location & Extent of Fire:

*How will the location or extent of fire effect us?*

Location and Extent of fire always effects our strategies and tactics, we need to execute our tactics with **greater awareness** in a vacant:

- Fire extension may be quicker and more intense – (may flash quicker)
- Inside smoke conditions may present as not so bad, because of voids in walls, open ceilings or holes in roof lifting the smoke





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### Location & Extent of Fire:

*How will the location or extent of fire effect us?*

We need to be more aware of what the fire is doing to the structural integrity of the building. ( beams and studs may be exposed )

- We need to be more aware of all our access and egress points, the front door may not always be the best point of **entry** or rapid **exit**?





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### Location & Extent of Fire:

*How will the location or extent of fire effect us?*

*In a vacant we always need to be more conscious of the fire flashing or rolling over our heads – If we're too hot in our gear... maybe we shouldn't be there.*

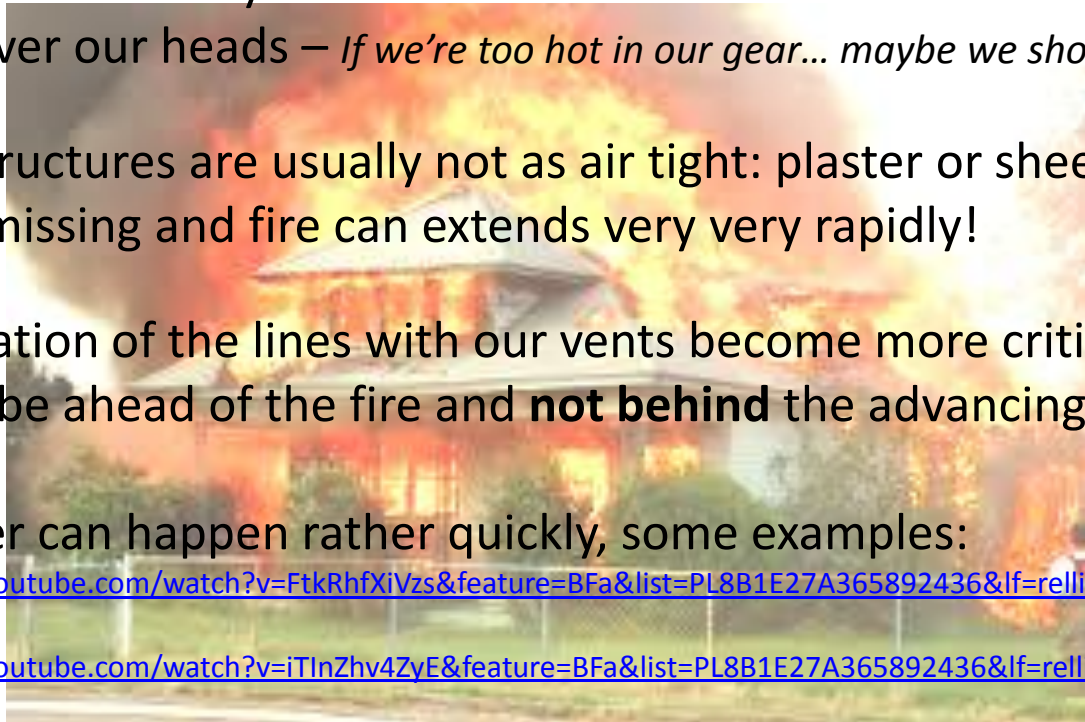
These structures are usually not as air tight: plaster or sheet rock is usually missing and fire can extends very very rapidly!

Coordination of the lines with our vents become more critical. Our vent need to be ahead of the fire and **not behind** the advancing teams.

Flashover can happen rather quickly, some examples:

<http://www.youtube.com/watch?v=FtkRhfXiVzs&feature=BFa&list=PL8B1E27A365892436&lf=rellist&index=15> ( @ :45 )

<http://www.youtube.com/watch?v=iTlnZhv4ZyE&feature=BFa&list=PL8B1E27A365892436&lf=rellist&index=2>





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Water Supply:

*How will water supply effect us?*





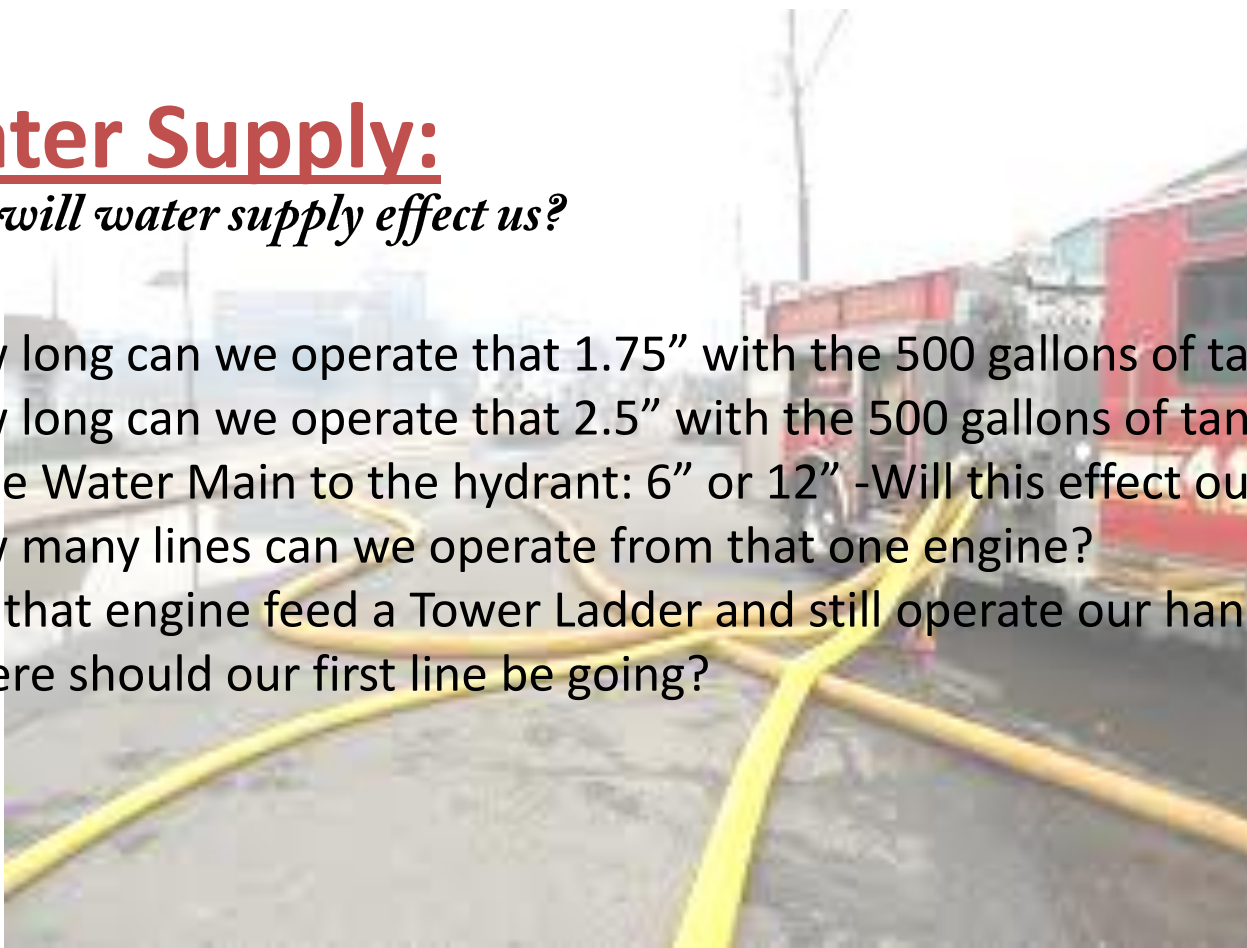
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Water Supply:

*How will water supply effect us?*

- How long can we operate that 1.75" with the 500 gallons of tank water?
- How long can we operate that 2.5" with the 500 gallons of tank water?
- Is the Water Main to the hydrant: 6" or 12" -Will this effect our operations?
- How many lines can we operate from that one engine?
- Can that engine feed a Tower Ladder and still operate our hand lines?
- Where should our first line be going?





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Water Supply:

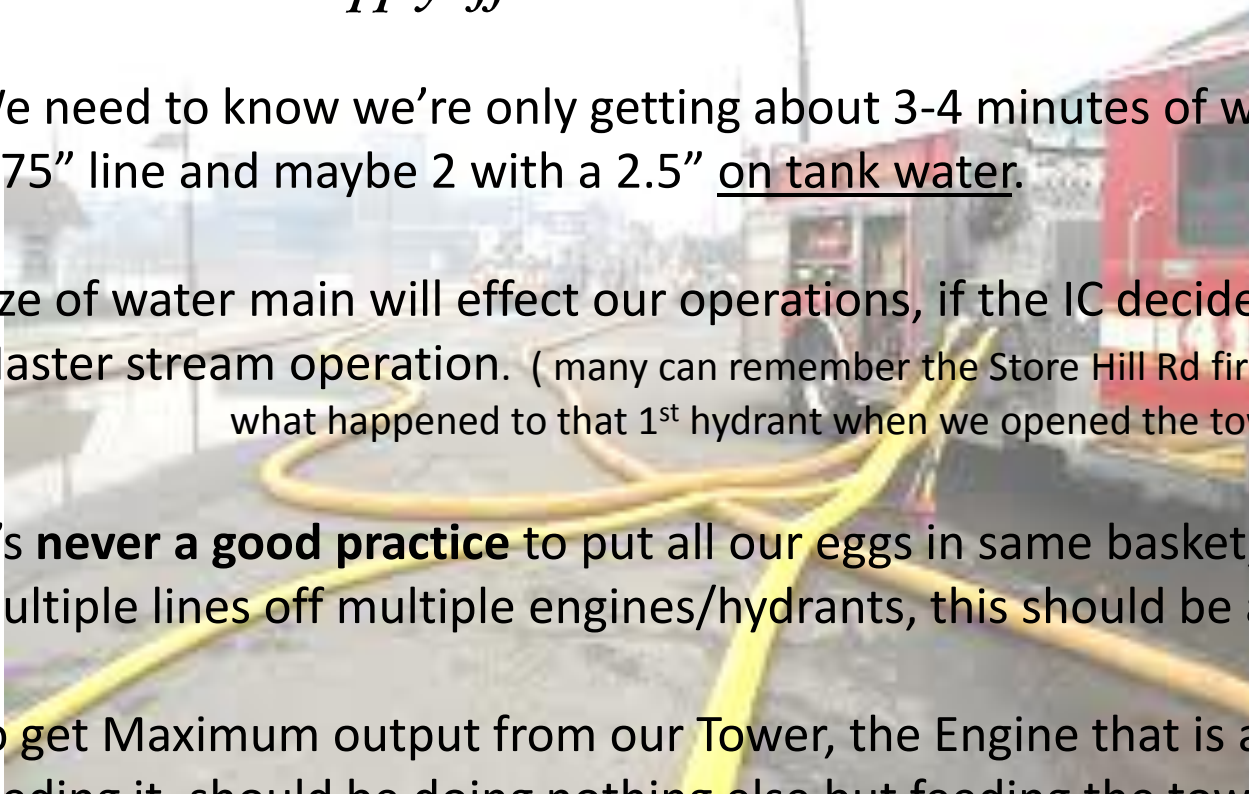
*How will water supply effect us?*

We need to know we're only getting about 3-4 minutes of water from a 1.75" line and maybe 2 with a 2.5" on tank water.

Size of water main will effect our operations, if the IC decides to go to a Master stream operation. ( many can remember the Store Hill Rd fire 2/8/11, what happened to that 1<sup>st</sup> hydrant when we opened the tower ladder )

It's **never a good practice** to put all our eggs in same basket, if we can get multiple lines off multiple engines/hydrants, this should be achieved.

To get Maximum output from our Tower, the Engine that is assigned to feeding it, should be doing nothing else but feeding the tower.





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Water Supply:

*How will water supply effect us?*

We need to understand our first line should be positioned **between** the fire area and the most severe **life exposure**, not always “to the fire”!

When there is no life exposure, the first line should be positioned where it can protect the greatest amount of property and advance to fire.



Toronto Fire from PSS training where first line went directly to fire leave search team unprotected, trapping them





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Street Conditions:

*How will street conditions effect us?*





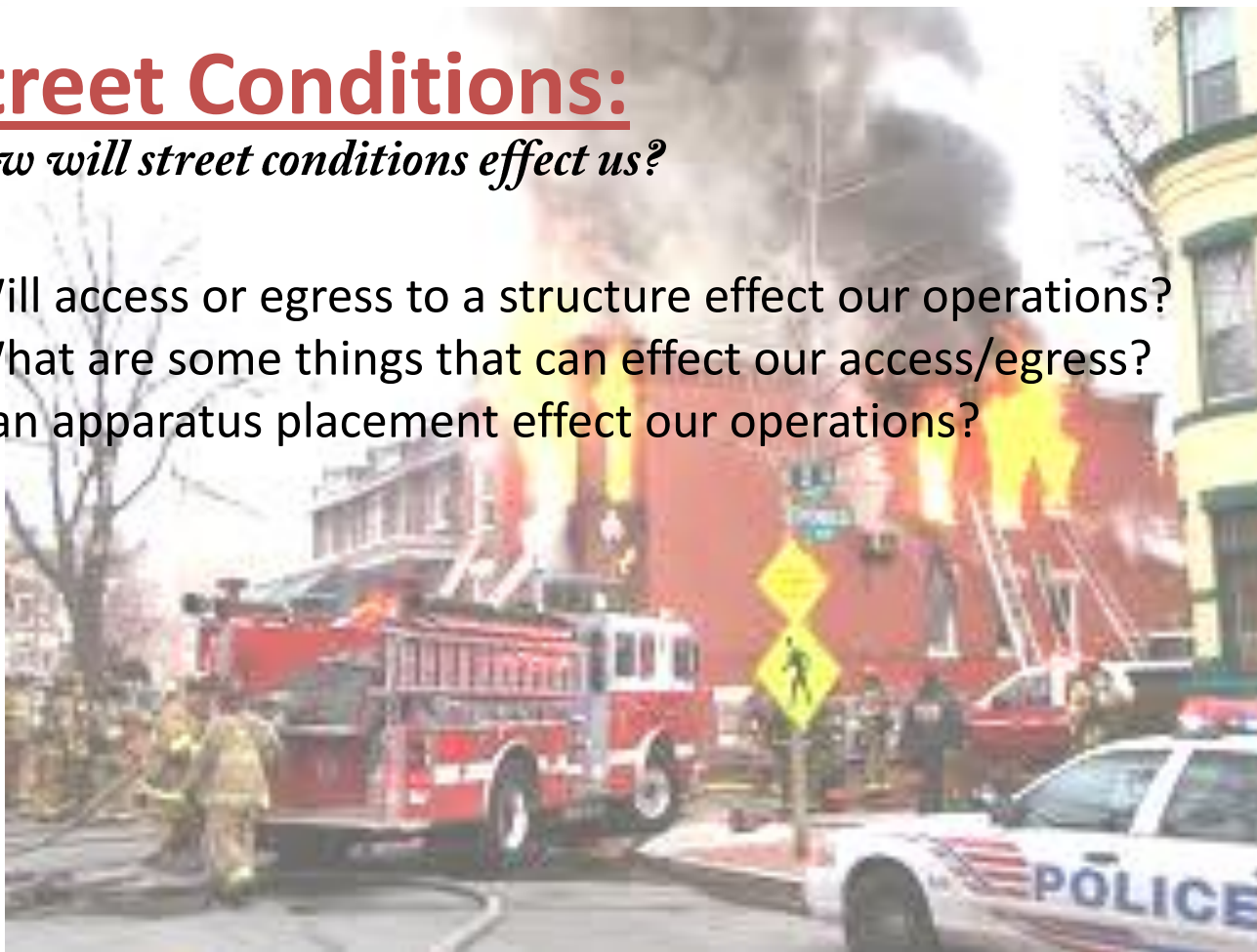
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Street Conditions:

*How will street conditions effect us?*

- Will access or egress to a structure effect our operations?
- What are some things that can effect our access/egress?
- Can apparatus placement effect our operations?





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Street Conditions:

*How will street conditions effect us?*

Having easy access the structure will allow us to get water on the fire quicker, a key component to a successful fire event.

- Long stretches ( supply line or attack line ) usually delay this.

Having the ability to properly position apparatus:

- allows the ladder truck to hit the roof and 2 sides..
- allow our master streams proper positioning, were most effective
- FAST teams easy access for deployment ( ex- Jericho on store hill rd fire)
- Medical easy access & rapid egress if needed
- A location where relief personnel can stage at the ready, close by as members exit they can easily be deployed to replaced them.



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

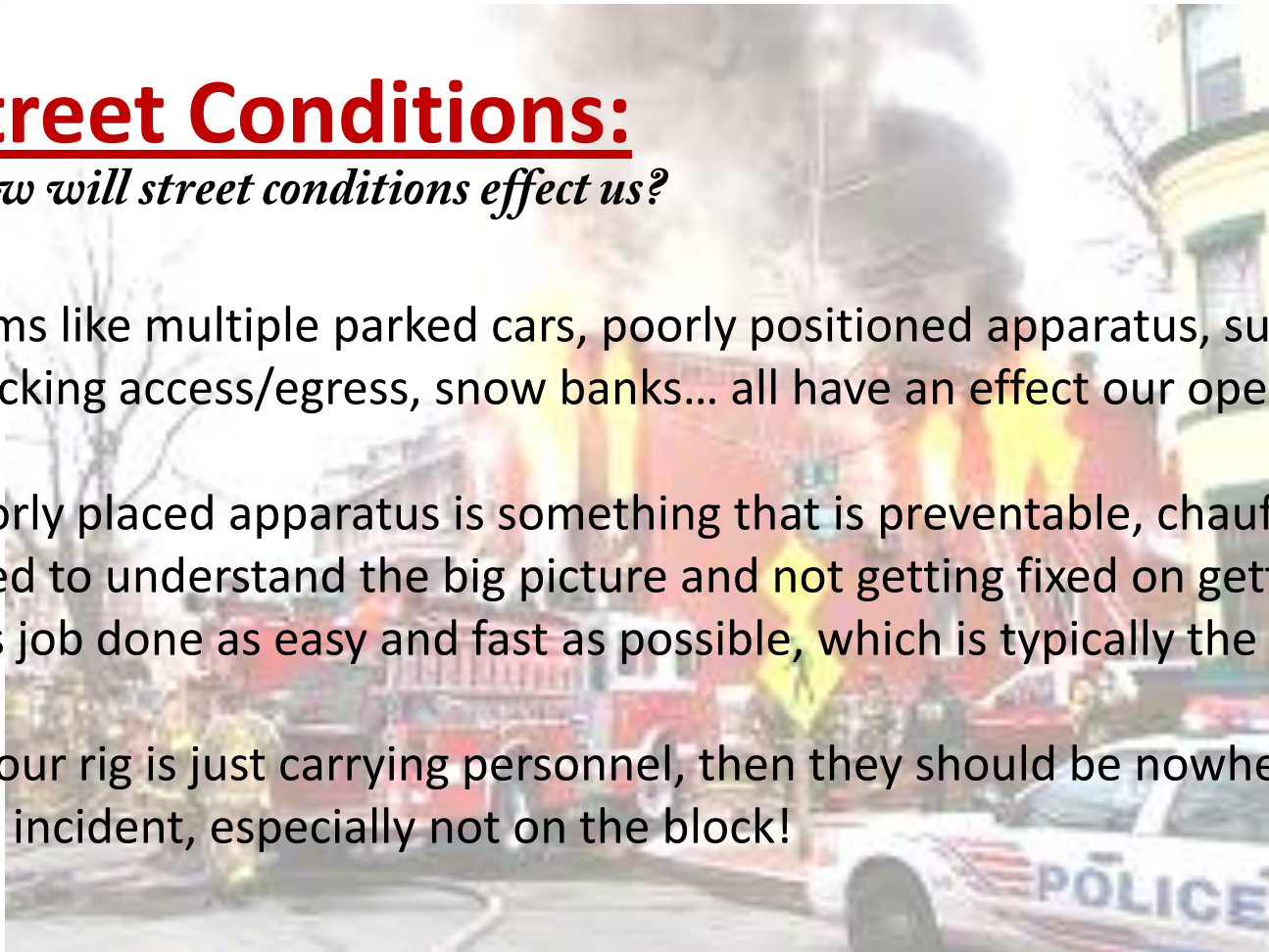
### Street Conditions:

*How will street conditions effect us?*

Items like multiple parked cars, poorly positioned apparatus, supply lines blocking access/egress, snow banks... all have an effect our operations.

Poorly placed apparatus is something that is preventable, chauffeurs need to understand the big picture and not getting fixed on getting their rigs job done as easy and fast as possible, which is typically the case.

If your rig is just carrying personnel, then they should be nowhere near the incident, especially not on the block!





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Auxiliary Appliances:

*How will auxiliary appliance such standpipes and sprinklers effect us?*





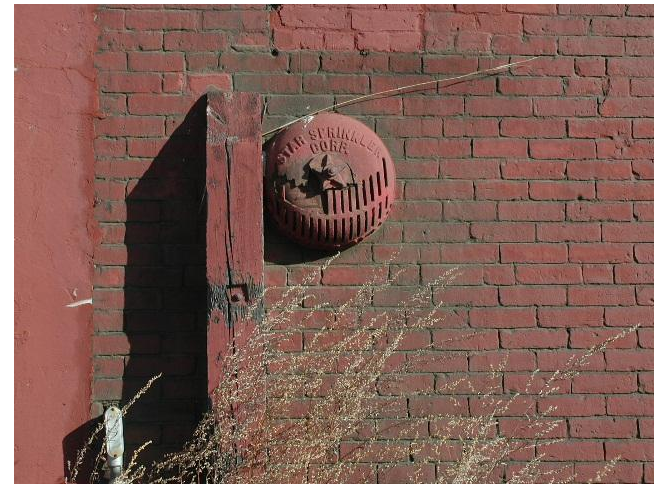
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Auxiliary Appliances:

*How will auxiliary appliance such standpipes and sprinklers effect us?*

In vacant structures, can we count on these fire protection systems as being operational, If not why?





# HOSE CO.2 WESTBURY FIRE DEPT.

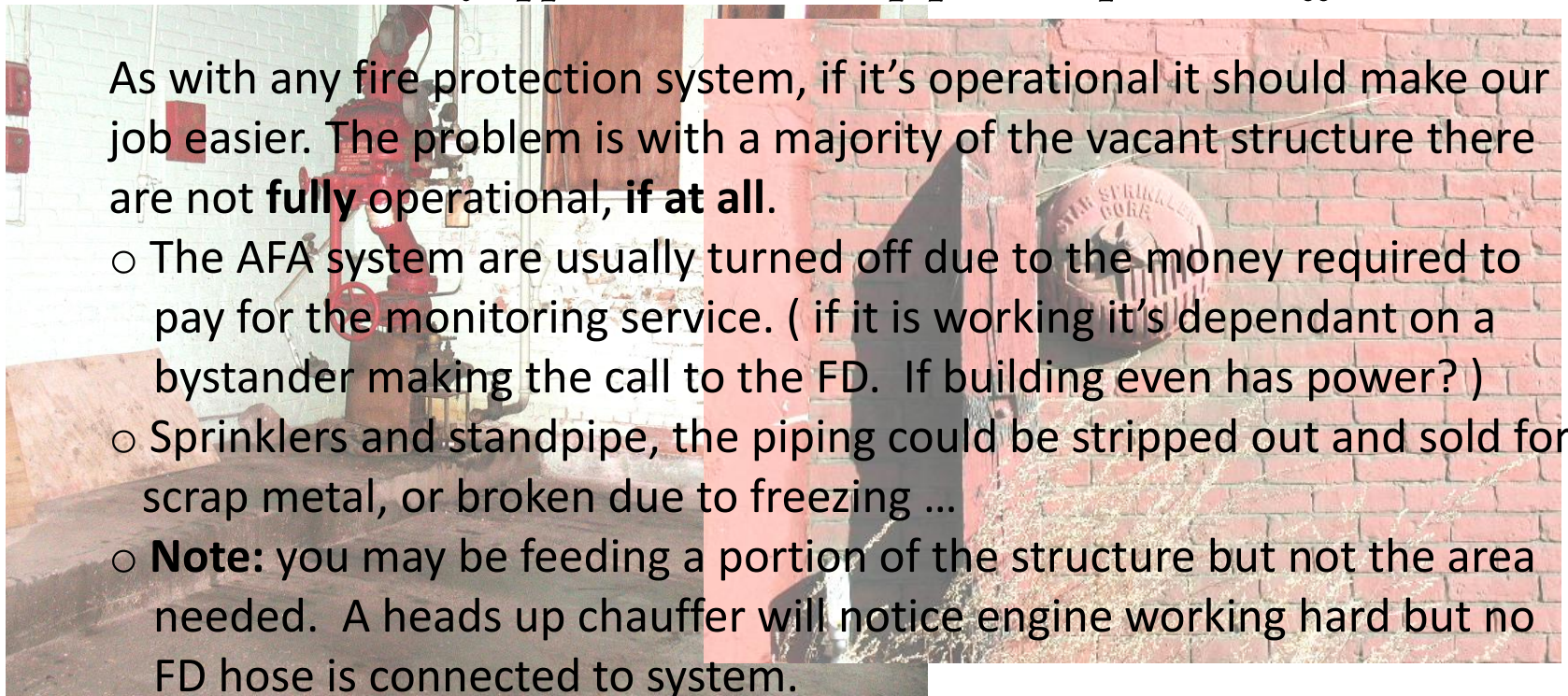
## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Auxiliary Appliances:

*How will auxiliary appliance such standpipes and sprinklers effect us?*

As with any fire protection system, if it's operational it should make our job easier. The problem is with a majority of the vacant structure there are not **fully** operational, **if at all**.

- The AFA system are usually turned off due to the money required to pay for the monitoring service. ( if it is working it's dependant on a bystander making the call to the FD. If building even has power? )
- Sprinklers and standpipe, the piping could be stripped out and sold for scrap metal, or broken due to freezing ...
- **Note:** you may be feeding a portion of the structure but not the area needed. A heads up chauffer will notice engine working hard but no FD hose is connected to system.





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Weather:

*How will the weather effect us?*







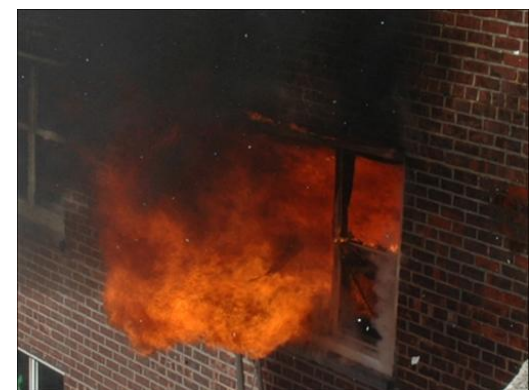
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Weather:

*How will the weather effect us?*

- Does extreme Heat and extreme Cold weather effect our operations?
- Does Rain & Snow effect our operations?
- Does wind effect our operations?





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

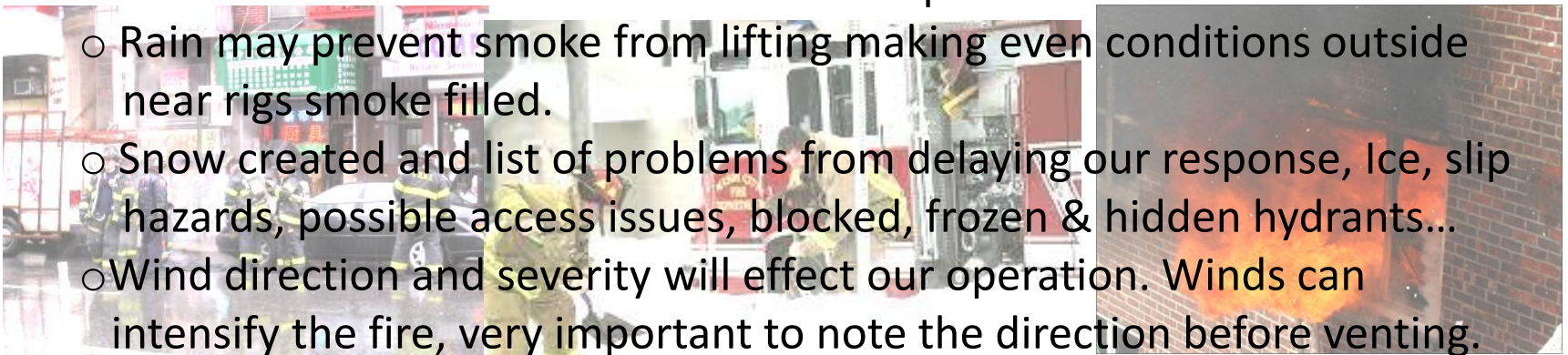
### Weather:

*How will weather effect us?*

Weather is key factor in our operation.

- Heat will drain us, kicking our butts quicker. Overall less performance and more down time rehydrating. *Ultimately More Personnel will be needed.*
- Extreme Cold conditions also effects our personnel's effectiveness.
- Rain may prevent smoke from lifting making even conditions outside near rigs smoke filled.
- Snow created and list of problems from delaying our response, Ice, slip hazards, possible access issues, blocked, frozen & hidden hydrants...
- Wind direction and severity will effect our operation. Winds can intensify the fire, very important to note the direction before venting.

*(what happened in 2<sup>nd</sup> flashover clip when fan was started, now say it a wind gust instead)*





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Weather:

*How will weather effect us?*

Note: Long term subjecting of the weather on an unsecured structure will weaken the structural integrity also effecting our operations





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Apparatus & Equipment:

*How will having the adequate Apparatus or Equipment on scene effect us?*





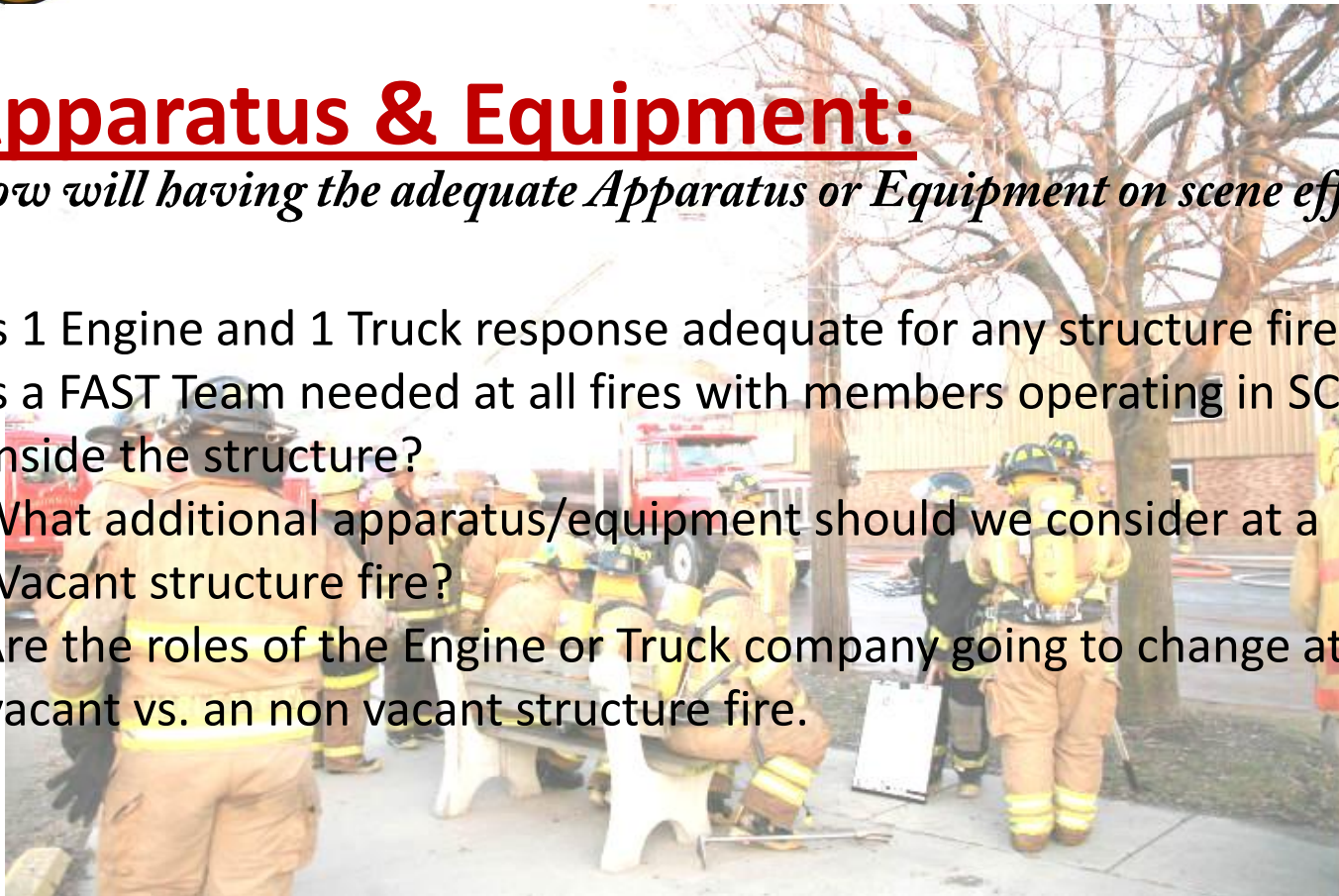
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Apparatus & Equipment:

*How will having the adequate Apparatus or Equipment on scene effect us?*

- Is 1 Engine and 1 Truck response adequate for any structure fire?
- Is a FAST Team needed at all fires with members operating in SCBA inside the structure?
- What additional apparatus/equipment should we consider at a Vacant structure fire?
- Are the roles of the Engine or Truck company going to change at a vacant vs. an non vacant structure fire.





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

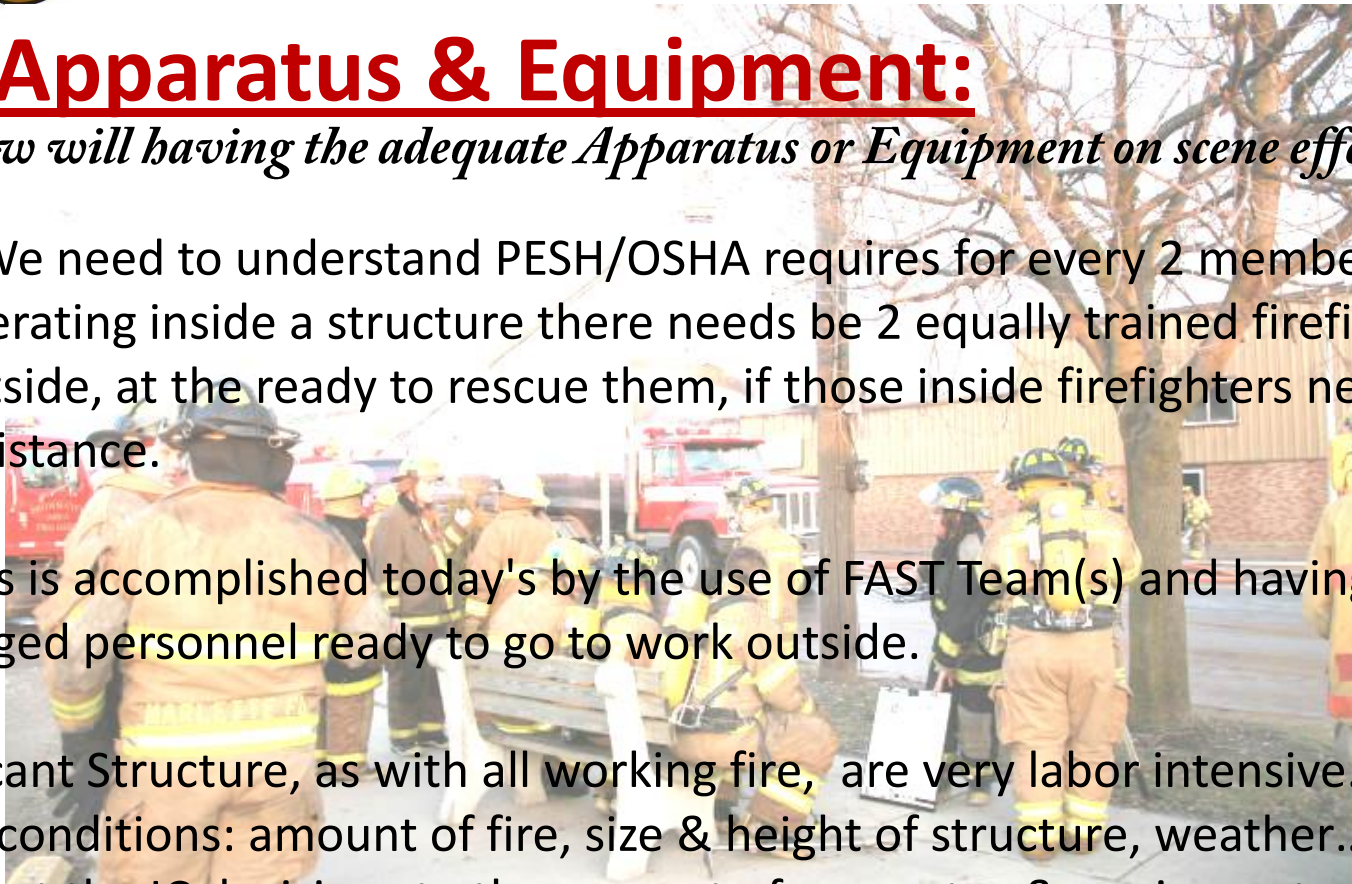
### Apparatus & Equipment:

*How will having the adequate Apparatus or Equipment on scene effect us?*

○ We need to understand PESH/OSHA requires for every 2 members operating inside a structure there needs be 2 equally trained firefighters outside, at the ready to rescue them, if those inside firefighters needs assistance.

This is accomplished today's by the use of FAST Team(s) and having staged personnel ready to go to work outside.

Vacant Structure, as with all working fire, are very labor intensive. All conditions: amount of fire, size & height of structure, weather... will effect the IC decisions to the amount of apparatus & equipment needed on that scene.





# HOSE CO.2 WESTBURY FIRE DEPT.

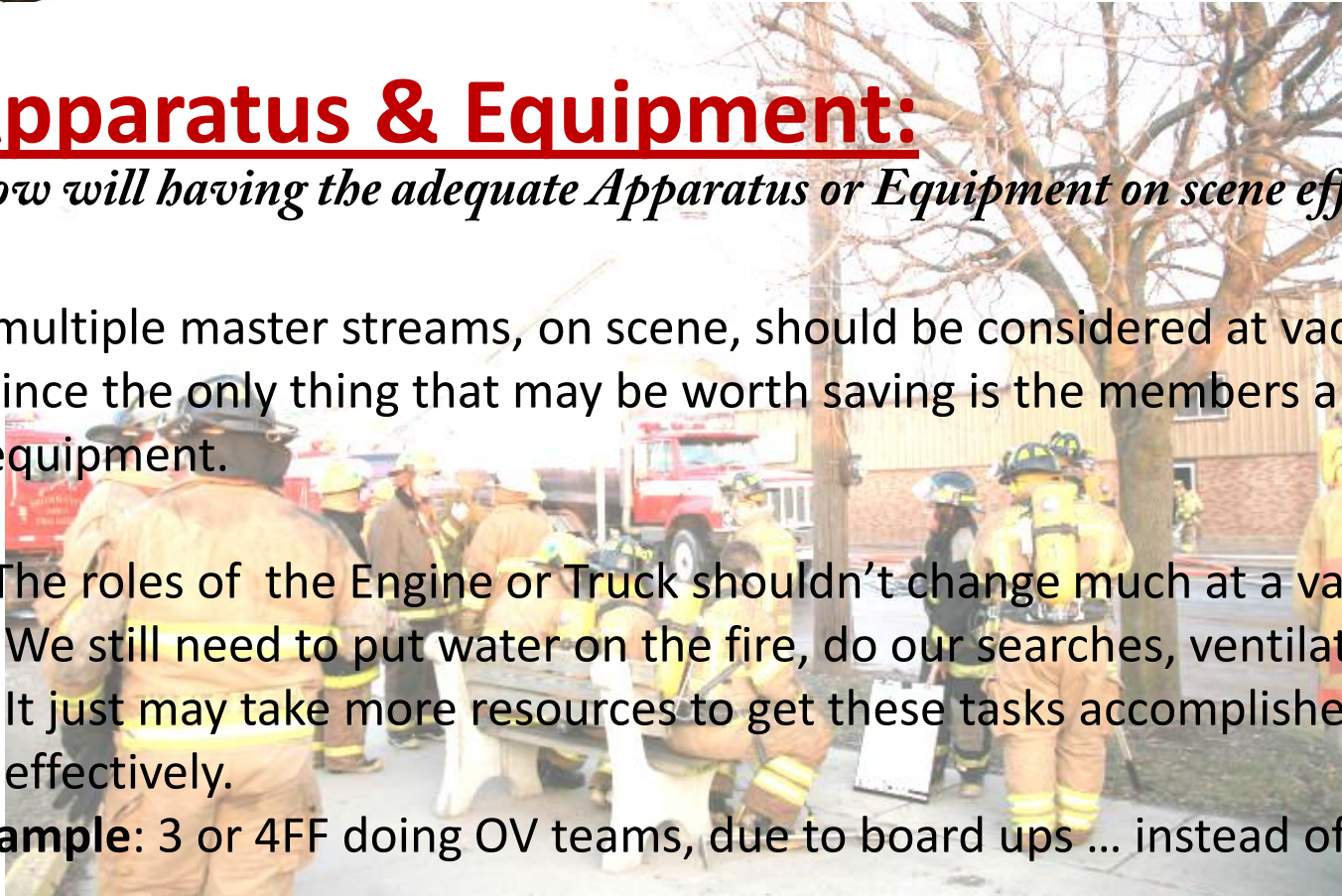
## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Apparatus & Equipment:

*How will having the adequate Apparatus or Equipment on scene effect us?*

- multiple master streams, on scene, should be considered at vacant fires, since the only thing that may be worth saving is the members and equipment.
- The roles of the Engine or Truck shouldn't change much at a vacant. We still need to put water on the fire, do our searches, ventilate.... It just may take more resources to get these tasks accomplished effectively.

**Example:** 3 or 4FF doing OV teams, due to board ups ... instead of just 2





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Exposures:

*How will exposures affect us?*







# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Exposures:

*How will exposures affect us?*

- Will an occupied exposure problem take priority over fully involved confirmed unoccupied vacant?
- How can fire spread to an exposure?
- What tactics can we use to protect our exposures?





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Exposures:

*How will exposures effect us?*

Exposure protection can be an important factor in Vacant Structure fires. Again, a good amount of time, we'll be dealing with large amounts of fire that can easily auto expose to a nearby structure.

- Protecting these exposures may become our top priority, especially if they are occupied. ( **remember - 1<sup>st</sup> line always protects biggest life exposure** )
- Putting a line into place, keeping the fire away from these exposures, may be more usefully then committing resources into a building with nothing worth saving, *especially when our resources may be limited for a period of time.* ( remember 7am or 7 pm? )



# HOSE CO.2 WESTBURY FIRE DEPT.

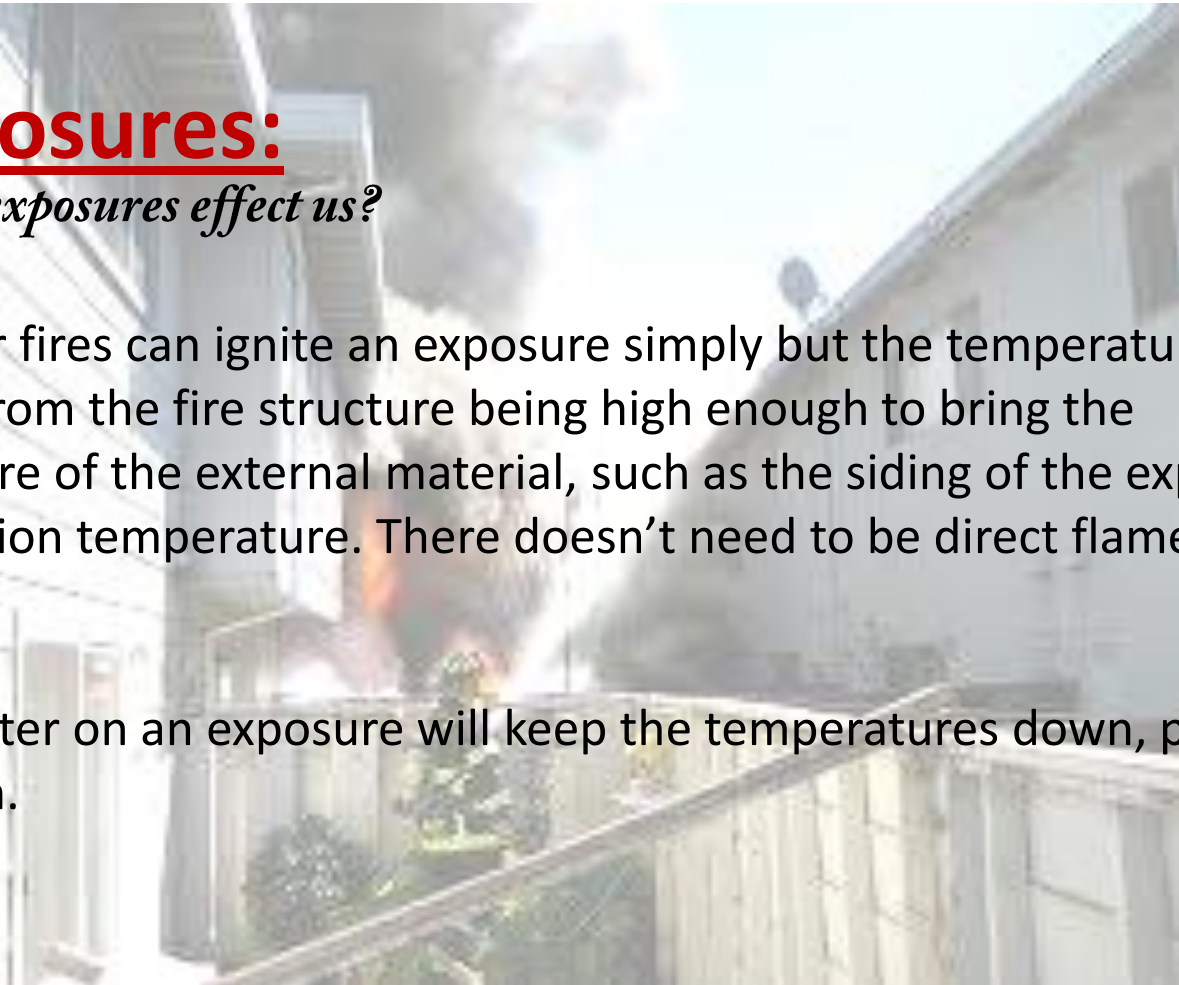
## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Exposures:

*How will exposures effect us?*

Remember fires can ignite an exposure simply but the temperatures radiating from the fire structure being high enough to bring the temperature of the external material, such as the siding of the exposure, to it's ignition temperature. There doesn't need to be direct flame contact.

Putting water on an exposure will keep the temperatures down, prevents it's ignition.





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Communications:

*How will communications effect us?*





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Communications:

*How will communications effect us?*



- How will knowing the engine is on a hydrant effect you as the 1<sup>st</sup> line?
- How will the Can & Irons team letting the IC know there is a large hole in the 1<sup>st</sup> floor effect you as the 1<sup>st</sup> hose line team?
- How will the 1<sup>st</sup> line letting the IC know there is a large hole in the 2<sup>nd</sup> story floor in 2/3 corner effect you as 2<sup>nd</sup> due truck?
- How will the mayday of “firefighter through the floor” effect the operation?



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

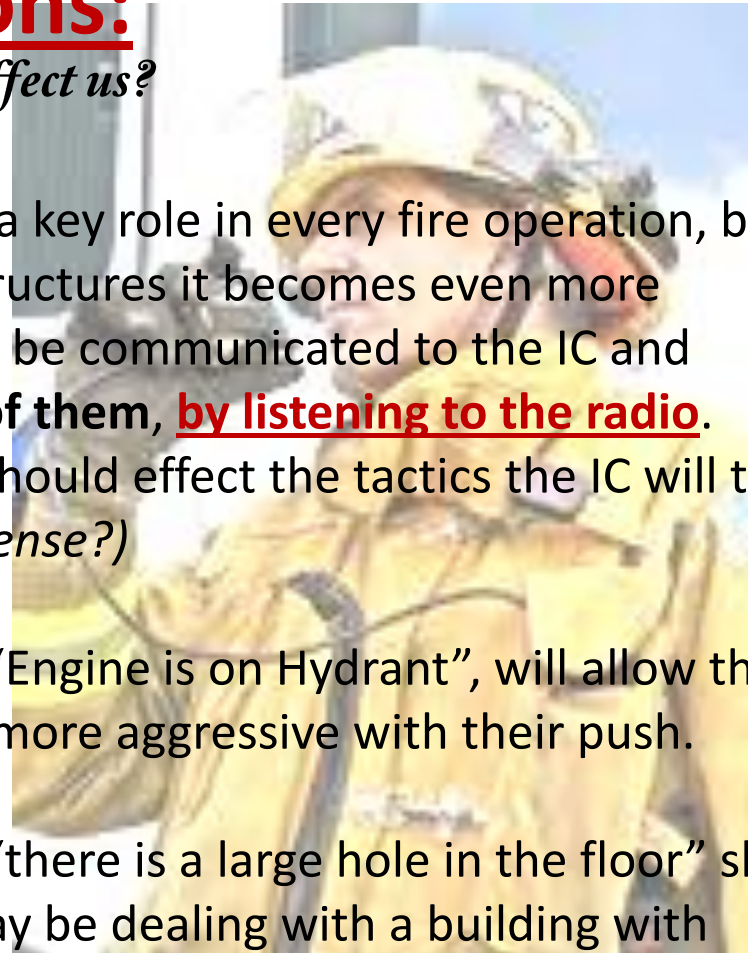
### Communications:

*How will communications effect us?*

Fire ground communication plays a key role in every fire operation, but due to added hazards in vacant structures it becomes even more important. Found hazards need to be communicated to the IC and **everyone on scene made aware of them, by listening to the radio.** If there are enough hazards, this should effect the tactics the IC will take in fighting this fire. (*Offense – Defense?*)

Information broadcasted such as “Engine is on Hydrant”, will allow the hose line(s) to know they can get more aggressive with their push.

Information broadcasted such as “there is a large hole in the floor” should let the teams inside know they may be dealing with a building with compromised structural integrity and to be even more cautious!





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

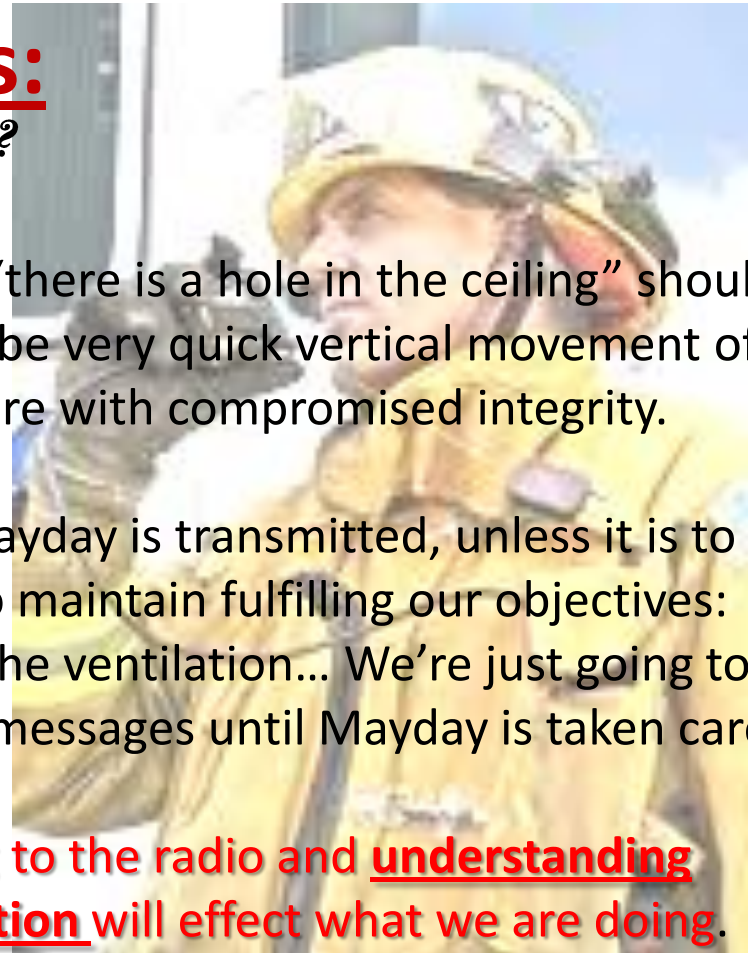
### Communications:

*How will communications effect us?*

Information broadcasted such as “there is a hole in the ceiling” should let the teams inside know there may be very quick vertical movement of fire and again they may have a structure with compromised integrity.

We need to remember, when a Mayday is transmitted, unless it is to evacuate immediately, we need to maintain fulfilling our objectives: getting water on the fire, getting the ventilation... We’re just going to limit radio communications to priority messages until Mayday is taken care of.

**We all should be listening to the radio and understanding how any given communication will effect what we are doing.**





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### ALL FACTORS:

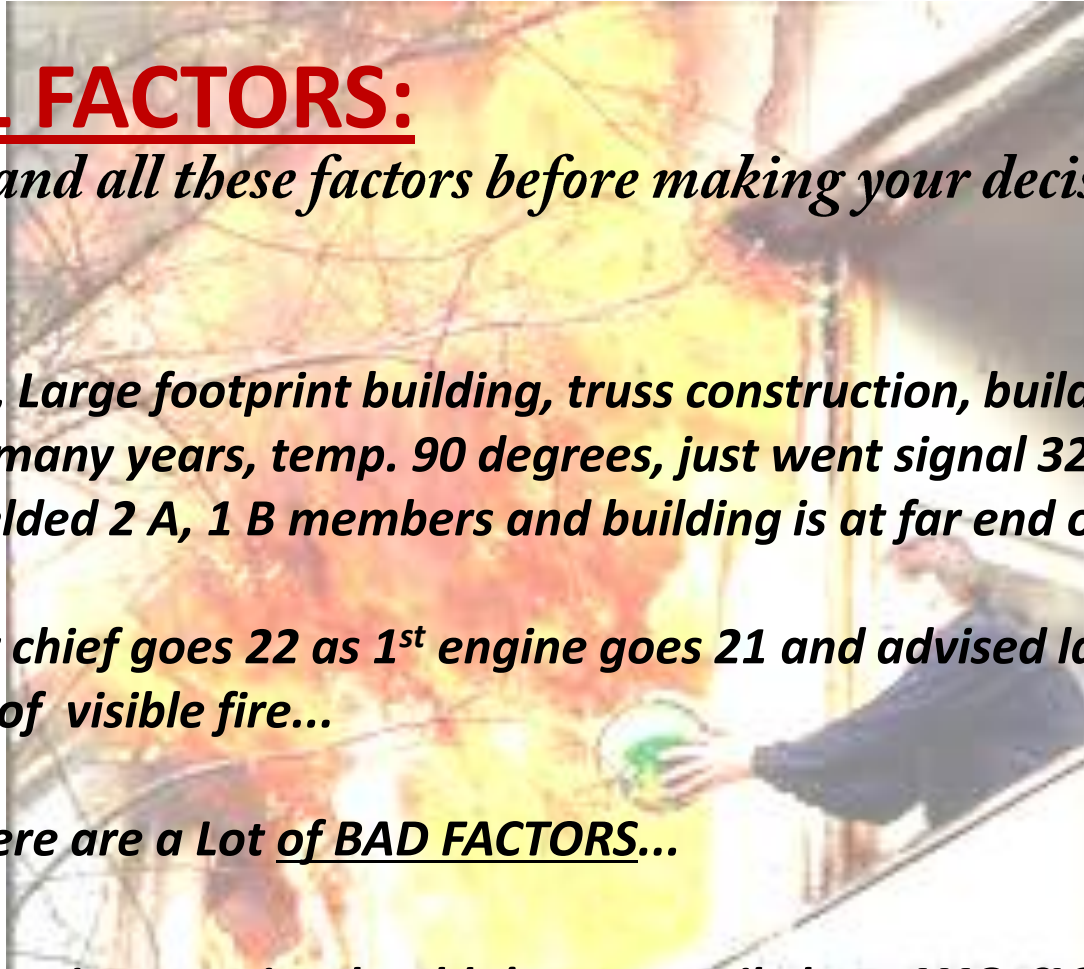
*Understand all these factors before making your decisions*

#### Example:

- *It's 6am, Large footprint building, truss construction, building vacant for few many years, temp. 90 degrees, just went signal 32 since 1<sup>st</sup> alert yielded 2 A, 1 B members and building is at far end of district.*
- *the first chief goes 22 as 1<sup>st</sup> engine goes 21 and advised large volume of visible fire...*

*Note - There are a Lot of BAD FACTORS...*

*The First Engines Tactics shouldn't necessarily be ... we got this!*







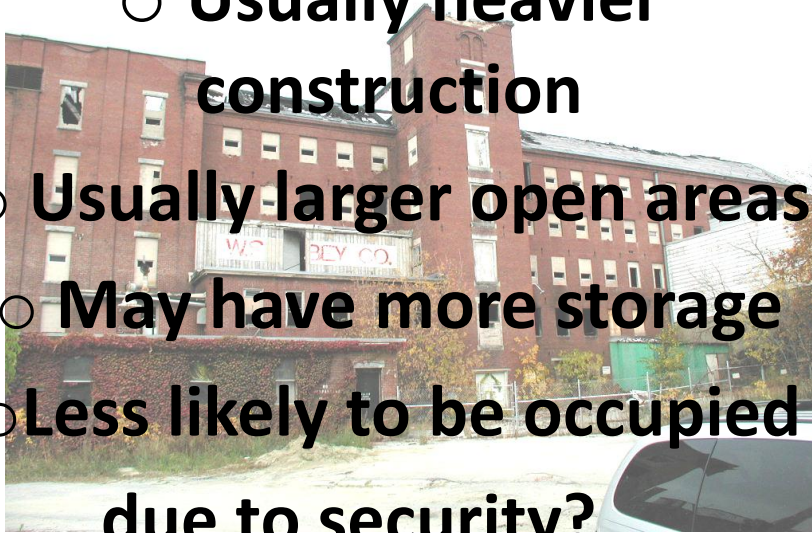
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Review: Commercial vs. Residential

#### Commercial Vacant's

- Usually heavier construction
- Usually larger open areas
  - May have more storage
  - Less likely to be occupied due to security?



#### Residential Vacant's

- Usually lighter construction
- Generally smaller areas, more individual spaces and confinement
- Better chances to be occupied





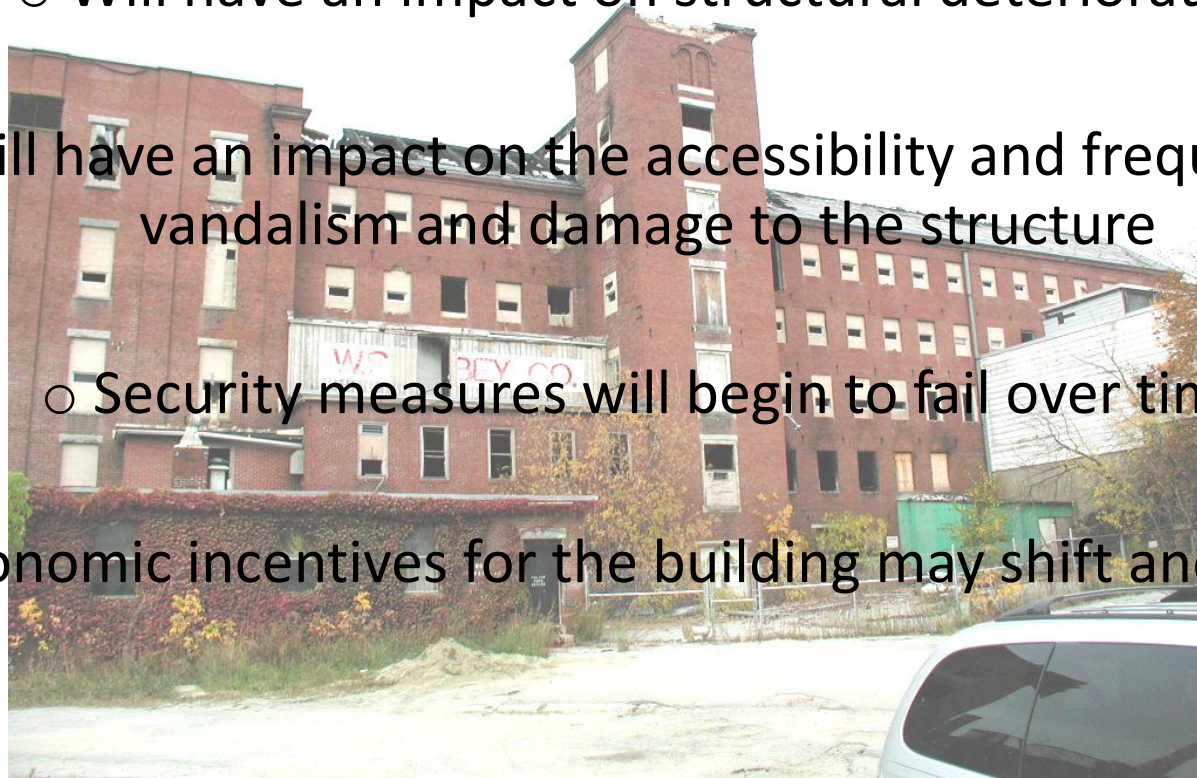
# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Review:

#### Length of Time Abandoned

- Will have an impact on structural deterioration
- Will have an impact on the accessibility and frequency of vandalism and damage to the structure
- Security measures will begin to fail over time
- Economic incentives for the building may shift and change





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

**Note:** What has been left behind inside for us?





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

**Note:** What has been left behind inside for us?





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

**Note:** How secure is the premise?



**Easy entry for us - mean easy entry for everyone else.**



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

**Note:** How secure is the premise?

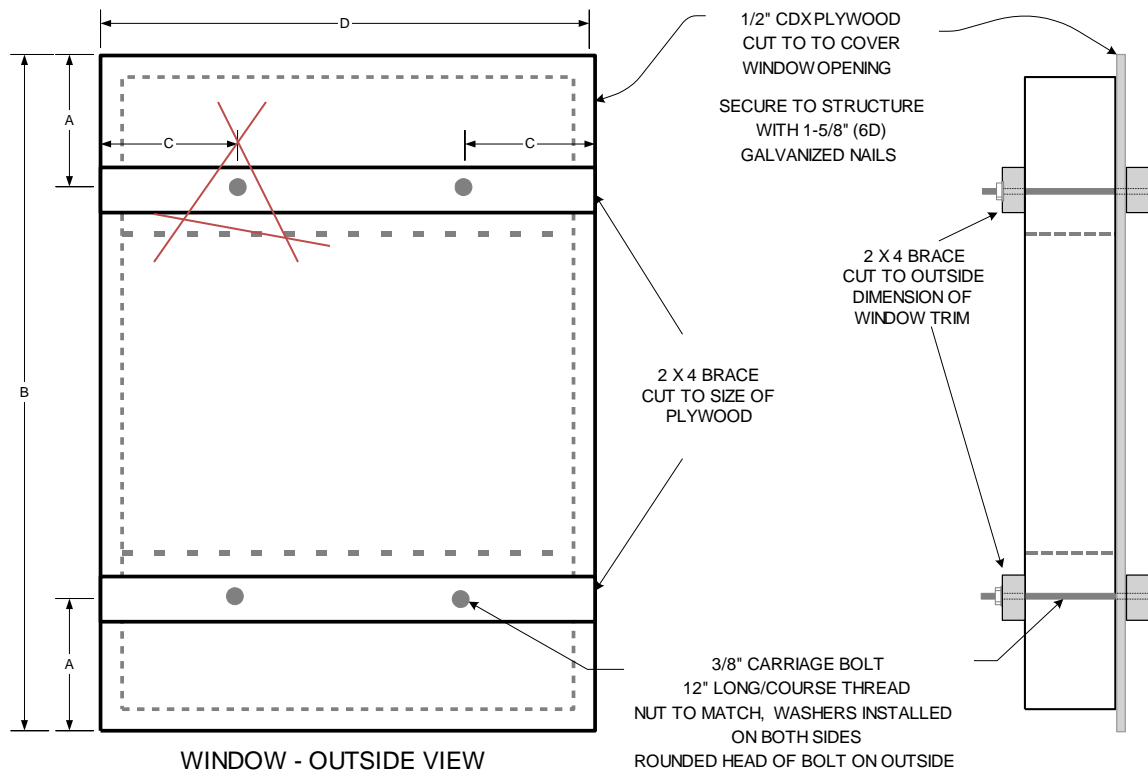




# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### U.S. Fire Administration – Standard for Board up





**NOTES:**

1. FOR DOUBLE HUNG WINDOWS, SLIDE SASH TO CENTER OF UNIT AND PASS BOLTS THROUGH OPENINGS AT TOP AND BOTTOM.
2. STORM WINDOWS SHOULD BE REMOVED AND STORED INSIDE STRUCTURE.
3. OUTSIDE TRIM MAY HAVE TO BE REMOVED TO ACCOMMODATE A FLUSH AND TIGHT FIT.
4. TIGHTEN NUTS FROM INSIDE ENOUGH TO SLIGHTLY COMPRESS 2X4 BRACE.
5. BRACE LOCATIONS: A = 1/3 B (SEE DIMENSION LOCATIONS ON DRAWING)
6. LOCATION OF BOLT HOLES: C = 1/3D (SEE DIMENSION LOCATIONS ON DRAWING)

**USFA National Arson Prevention Initiative**  
Board Up Procedures

**Window Detail**

IAAI/USFA Abandoned Building Project



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### What Are Some Thoughts & Considerations







# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### What Are Some Thoughts & Considerations



- Where is the fire?
- What is the different board up and smoke stain 1<sup>st</sup> floor telling us?
- How long has this fire been burning or do we have rapid advancement?
- Do we have occupancy issues?
- What are weather factors, that could effect us?
- Any issues with apparatus use?
- What about ventilation ?



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### What Are Some Thoughts & Considerations





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### What Are Some Thoughts & Considerations



- Do we have a back draft conditions?
- What about flashover ?
- What is this building condition,
- Why do you make this determination?
- What kind of fire condition can we expect and why?
- Is weather going to play a roll?
- Is access/egress a factor?
- What about a bail out?
- What about fire protection systems?



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

**What Are Some Thoughts & Considerations**





# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### What Are Some Thoughts & Considerations



- Rolling up to this what are you first concern?
- Where does the 1<sup>st</sup> line go?
- How long has this fire been burning?
- Is occupancy an factor ?  
If so how many possible at least?
- Weather – conditions?
- What does the front side look like? (360)



# HOSE CO.2 WESTBURY FIRE DEPT.

## TABLE TOP TRAINING EXERCISE VACANT STRUCTURES - Strategies & Tactics

### Final Thoughts with Vacants

Remember to take all factors into consideration before making tactical decisions,  
*Each will have a direct impact on the operation and safety*

Have a “**NO RUSH**” approach with Vacants, ( slower, more cautious)  
the greatest life hazard is to us the firefighters

**Risk a little to save a little      Risk a lot to save a lot**  
No firefighters life is worth a building that is getting  
Bulldozed once we leave!