

**Tempe Fire Department Policies and Procedures**  
**Off-Site Live Fire Training**  
**408.02**  
**Rev 05-01-09**

**PURPOSE**

This procedure establishes standard guidelines for conducting structural training fires.

Burning of abandoned buildings for training purposes is an important and valuable technique for training probationary firefighters, and for sharpening the skills of seasoned firefighters under realistic conditions. Structural training fires present the same hazards as any other structural fire. The Incident Commander is responsible for managing the training session with safety of the participants his/her primary function.

**PROCEDURE**

Burning of abandoned buildings for training purposes requires the following:

- A. An "Authorization to Burn Abandoned Buildings" statement fully completed and signed by the property owner and Deputy Chief of Training.
- B. A current demolition permit must be in force, as issued by the City of Tempe, Building Safety Department.
- C. A complete inspection of the premises must be conducted by Fire Prevention, Department Safety Officer and the Training Staff.
- D. Owner must provide a certified "Asbestos Survey" to the Deputy Chief of Training.
- E. The Maricopa County Health Department Air Quality Control Office must be notified due to environmental considerations (258-6381, Ext. 372).
- F. Notify Alarm Headquarters - location, time, type of burn, companies being utilized.
- G. Notify Tempe Police Department - consider crowd and traffic control.
- H. Notify property owners adjacent to abandoned building to be burned.
- I. Notify Traffic Operations for street closures and barricades.

The initial inspection includes the following criteria and must be completed prior to entering into an agreement to burn a structure.

Site inspection includes:

- . Building construction type, age and use
- . Building layout
- . Building condition
- . Exposures (type and distance)
- . Power lines
- . Water supply
- . Trees and other obstructions
- . Vehicle access and spotting areas
- . Anticipated spectator traffic
- . Detailed drawing of the structure will be prepared and utilized by the "IC" during the training exercise

Preparation for the drill will include the following building preparation:

- . Curtains removed
- . Floors made safe
- . Necessary doors are in place
- . Loose wallpaper removed
- . Linoleum removed
- . Stairways made safe, railings in place
- . All inside debris cleaned up and rooms swept
- . All interior contents shall be arranged to permit free access to and egress from all rooms
- . All outside debris cleared away from entrances and areas of egress
- . Porches and outside steps made safe
- . Insect hives or toxic weeds removed
- . Cistern, cesspool, well, or other ground openings protected or filled
- . Window openings closed as necessary
- . Holes in walls and ceilings sealed as necessary
- . Openings made in end gables, for observation and fire extinguishment
- . At least one 4' X 4' hole in each separate roof area for ventilation, with a removable cover installed to help control interior fire conditions
- . Utilities such as electric, gas, phone, and water disconnected at remote locations
- . Multiple exit points accounted for - attempt to insure multiple exits from any significant fire area
- . Removal of all bars from windows and doorways

Preparation for the training exercise will include:

- . Post department training sign
- . The use of gasoline and other low flash-point liquids prohibited
- . Use of rubber tires for fuel prohibited
- . Fuel supplies for burning, obtained and in-place; such as old furniture, cardboard boxes, and similar combustibles
- . Briefing of personnel and site walk-through
- . Downwind ember patrol planned and assigned
- . Lines for exposure protection/emergency action in-place, charged, and manned
- . Announcement of "All Clear" to interior of building, and inspection to insure no unauthorized individuals are in the building prior to ignition

During the training exercise the following guidelines will be followed:

- . Structural training fires present the same hazards as any structure fire incident. The fireground management system utilized at actual fire incidents will be standard operating procedure at all structural training fires.
- . Building is cleared of personnel immediately prior to ignition.
- . Fires ignited only on authority of Incident Commander.
- . Assigned safety officer in appropriate position to observe conditions.
- . Total entry and exit head count maintained at all times.

One officer on the scene will be designated as "Incident Commander" and will assume the Command functions.

The IC is responsible for establishing radio communications with each company officer involved in the drill. Radio channel assignments will be determined by the Alarm Room. All companies operating at the drill will continuously monitor the assigned radio channel.

The number of personnel involved in training fires often exceeds the number normally assigned at actual incidents. Sectors must be established to coordinate all fire ground activities and personnel.

Sector assignments should include: interior safety, roof, rescue/exposure, and rehab. Interior safety officer and crew will have charged line ready to protect firefighting company.

Do not exceed a five student to one instructor ratio.

Interior Safety, instructor and RIC team shall utilize thermal imaging cameras.

## **PRE-BURN PLAN**

The officer in charge will develop a pre-burn plan based upon information obtained during the pre-plan and building preparation stages.

The pre-burn plan shall include:

- . Identifying the location of the fire
- . Establishing the fire load
- . Establishing the position of attack lines
- . Establishing the position of back-up lines
- . Development of a rescue plan
- . Development of emergency evacuation assembly area
- . Identifying medical treatment area
- . Rehab location

## **ACCOUNTABILITY**

All personnel involved in the drill shall be instructed on each element of the pre-burn plan prior to fire ignition. To enhance accountability and to improve tracking of firefighters in the Hazard Zone, the "PASSPORT" system shall be used.

Personnel Accountability Report or "PAR" and a low air reading shall be requested at the following accountability benchmarks:

- Prior to attack team entry
- Any report of a trapped or missing firefighter
- With report of an "All Clear"
- At the conclusion of each evolution
- Upon exiting the structure
- Any sudden hazardous event or mayday
- Upon receipt of lapsed time
- At the discretion of the IC

Passports will remain with the designated accountability officer near the "point of entry" to the Hazard Zone. Upon entry, crews will turn in their PASSPORT. Upon exit, the crew must retrieve their PASSPORT. The accountability status board will contain only the PASSPORTS of those crews in the Hazard Zone. The Hazard Zone shall be clearly understood by all participants.

## **CHECKLIST**

The following checklist is an appendix to NFPA Standard 1403, Live Fire Training Evolutions in Structures, and is included here for informational purposes, to aid in the planning for and management of structural live fire training.

### **Permits, Documents, Notifications, Insurance**

- 1. Written documentation received from owner:
  - . Permission to burn structure
  - . Proof of clear title
  - . Certificate of insurance cancellation
  - . Acknowledgment of post-burn property condition
  - . Asbestos survey report
  - . Notification of termination of utilities
- 2. Local burn permit received
- 3. Permission obtained to utilize fire hydrants
- 4. Notification made to appropriate dispatch office of date, time, and location of burn
- 5. Notification made to all affected police agencies:
  - . Received authority to block off roads
  - . Received assistance in traffic control
- 6. Notification made to owners and users of adjacent property of date, time, and location of burn
- 7. Liability insurance obtained covering damage to other property

### **Pre-Burn Planning**

- 1. Pre-burn plans made, showing the following:
  - . Site plan drawing, including all exposures
  - . Building plan, including overall dimensions
  - . Floor plan detailing all rooms, hallways, and exterior openings
  - . Location of Command Post
  - . Position of all apparatus
  - . Position of all hoses, including backup and RIC lines
  - . Location of emergency escape routes
  - . Location of emergency evacuation assembly area
  - . Location of ingress and egress routes for emergency vehicles
- 2. Available water supply determined
- 3. Separate water sources established for attack and backup hoselines
- 4. Periodic weather reports obtained
- 5. Parking areas designated and marked:
  - . Apparatus staging
  - . Ambulances
  - . Police vehicles
  - . Press vehicles
  - . Private vehicles
- 6. Operations area established and perimeter marked
- 7. Communication frequencies established, equipment obtained

### **Building Preparation**

- 1. Building inspected to determine structural integrity
- 2. All utilities disconnected (acquired buildings only)
- 3. Highly combustible interior wall and ceiling coverings removed
- 4. All holes in walls and ceilings patched
- 5. Materials of exceptional weight removed from roof area (or area sealed from activity)
- 6. Ventilation openings of adequate size pre-cut for each separate roof area
- 7. Windows checked and operated, openings closed
- 8. Doors checked and operated, opened and closed as needed
- 9. Building components checked and operated:
  - . Roof scuttles

- . Automatic ventilators
- . Mechanical equipment
- . Lighting equipment
- . Manual or automatic sprinklers
- . Standpipes
- 10. Stairways made safe with railings in place
- 11. Chimney checked for stability
- 12. Fuel tanks and closed vessels removed or adequately vented
- 13. Unnecessary inside and outside debris removed
- 14. Porches and outside steps made safe
- 15. Cisterns, wells, cesspools, and other ground openings fenced or filled
- 16. Hazards from toxic weeds, hives, and vermin eliminate
- 17. Hazardous trees, brush, and surrounding vegetation removed
- 18. Exposures such as buildings, trees, and utilities removed or protected
- 19. All extraordinary exterior and interior hazards remedied
- 20. Fire "sets" prepared:
  - . Class A materials only
  - . No flammable liquids
  - . No contaminated materials

### **Pre-Burn Procedures**

- 1. All participants briefed:
  - . Building layout
  - . Crew and instructor assignments
  - . Safety rules
  - . Building evacuation procedure
  - . Evacuation signal (demonstrate)
- 2. All hoselines checked:
  - . Sufficient size for the area of fire involvement
  - . Charged and test flowed ( 125 gpm minimum )
  - . Supervised by qualified instructors
  - . Adequate number of personnel
  - . Two different hydrant supplies
- 3. Necessary tools and equipment positioned
- 4. Participants checked:
  - . Approved full protective clothing
  - . Self-contained breathing apparatus
  - . Adequate SCBA air volume
  - . All equipment properly donned

### **Post-Burn Procedures**

- 1. All personnel accounted for
- 2. Remaining fires overhauled, as needed
- 3. Building inspected for stability and hazards if more training is to follow (see "Building Preparation")
- 4. Training critique conducted
- 5. Records and reports prepared, as required:
  - . Accounting of activities conducted
  - . List of instructors and assignments
  - . List of other participants
  - . Documentation of unusual conditions or events
  - . Injuries incurred and treatment rendered
  - . Acquired building release
  - . Certificates of completion
- 6. Building and property released to owner, release document signed

### **Instructor-In-Charge**

- 1. Plan and coordinate all training activities.
- 2. Monitor activities to ensure safe practices.
- 3. Inspect building integrity prior to each fire.
- 4. Assign instructors:
  - . Attack hoselines (125 gpm minimum )
  - . Backup hoselines ( 125 gpm minimum )
  - . RIC team hoselines ( 125 gpm minimum )
  - . Functional assignments
  - . Teaching assignments
- 5. Brief instructors on responsibilities:
  - . Accounting for assigned students
  - . Clothing and equipment inspection
  - . Monitoring safety
  - . Achieving tactical and training objectives
- 6. Assign coordinating personnel, as needed:
  - . Emergency medical services
  - . Communications
  - . Water supply
  - . Apparatus staging
  - . Equipment staging
  - . Breathing apparatus
  - . Personnel welfare and rehab
  - . Public relations
- 7. Ensure adherence to this standard by all persons, within the training area.

### **Safety Officer**

- 1. Prevent unsafe acts.
- 2. Eliminate unsafe conditions.
- 3. Intervene and terminate unsafe acts.
- 4. Supervise additional safety personnel, as needed.
- 5. Coordinate lighting of fires with Instructor-in-Charge.
- 6. Ensure compliance of participants' personal equipment to applicable standards:
  - . Protective clothing.
  - . SCBA.
  - . Personal alarm devices, if used.
- 7. Ensure that all participants are accounted for, both before and after each evolution.
- 8. Ensure no members are enlisted to act as victims during live fire training.