The Certification Program offers two (2) levels of fully accredited Firefighter certification.

NFPA 1001: Firefighter I

1. Firefighter I Training completion
   a. Minimum Requirements – Applicant must:
      i. complete and report 'Courage to be Safe' coursework;
      ii. complete and report 'Traffic Incident Management' coursework;
      iii. complete and report all required objectives from the 1001: Live Fire Training Prerequisite section;
      iv. complete and report all remaining objectives from the SFFMA Firefighter I curriculum; and
      v. hold or apply concurrently for 1072: HazMat Awareness/Operations.
   b. Previously issued certifications are "grandfathered" to the Firefighter I level as follows:
      i. Intermediate Firefighter certifications with an effective date prior to January 1, 2012; or
      ii. Module 3: Firefighter I (Completion) certifications with an effective date prior to January 1, 2015.
   c. The Austin office will issue an Eligibility Endorsement letter stating that the trainee is qualified to take the Board-approved examination.
2. Full Firefighter I Certification
   a. Minimum Requirements – Applicant must:
      i. successfully complete the required Board-approved written and skill examinations (HazMat and Firefighter I).
   b. Previously issued certifications are "grandfathered" to the Firefighter II level as follows:
      i. Accredited Intermediate Firefighter certifications with an effective date prior to January 1, 2012; or
      ii. Firefighter I certifications with an effective date prior to January 1, 2015.
   c. The Austin office will:
      i. issue a full Firefighter I certificate and shoulder patch; and
      ii. maintain a permanent record of the certification.

NFPA 1001: Firefighter II

1. Firefighter II Training completion
   a. Minimum Requirements – Applicant must:
      i. complete and report 'Courage to be Safe' coursework;
      ii. complete and report 'Traffic Incident Management' coursework;
      iii. complete and report all required objectives from the 1001: Live Fire Training Prerequisite section;
      iv. complete and report all remaining objectives from the SFFMA Firefighter I curriculum;
      v. complete and report all Firefighter II objectives;
      vi. hold or apply concurrently for 1072: HazMat Awareness/Operations and Firefighter I training completion certificates.
   b. Previously issued certifications are "grandfathered" to the Firefighter I level as follows:
      i. Advanced Firefighter certifications with an effective date prior to January 1, 2012; or
      ii. Module 4: Firefighter II (Advanced) certifications with an effective date prior to January 1, 2015.
   c. The Austin office will issue an Eligibility Endorsement letter stating that the trainee is qualified to take the Board-approved examination.
2. Full Firefighter II Certification
   a. Minimum Requirements:
      i. SFFMA Firefighter I certificate; and

ii. successfully complete the required Board-approved written and skill examinations (HazMat, Firefighter I, and Firefighter II).

b. Previously issued certifications are “grandfathered” to the Firefighter II level as follows:
   i. Accredited Advanced Firefighter certifications with an effective date prior to January 1, 2012; or
   ii. Firefighter II certifications with an effective date prior to January 1, 2015.

c. The Austin office will:
   i. issue a full Firefighter II certificate and shoulder patch; and
   ii. maintain a permanent record of the certification.

SECTION 1 ORIENTATION & FIRE SERVICE HISTORY

Live Fire Training Prerequisite

1-I.01 Trainee shall identify the organizational structure of the fire department and his/her role in it.
NFPA 1001 4.1.1

1-I.02 Trainee shall identify the size of the fire department, the scope of its operation, and the Standard Operational Procedures (SOPs).
NFPA 1001 4.1.1

1-I.03 Trainee shall identify the fire department rules and regulations as they apply to all members of the department.
NFPA 1001 4.1.1 A-B

1-I.04 Trainee shall identify the mission of the fire service
NFPA 1001 4.1.1

1-I.05 Trainee shall identify the role of other agencies as they relate to the fire department.
NFPA 1001 4.1.1

1-I.06 Trainee shall describe the components of the department's member assistance program.
NFPA 1001 4.1.1

1-I.07 Trainee shall identify the importance of physical fitness and a healthy lifestyle to the performance of duties of a firefighter
NFPA 1001 4.1.1

1-I.08 Trainee shall identify the critical aspects of NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program*.
NFPA 1001 4.1.1

1-I.09 Trainee shall identify activities on a national level required by FEMA to meet its responsibilities to establish and maintain comprehensive and coordinated emergency management in the United States.
Completion of ICS-700 meets the requirements of this objective.
NFPA 1001 4.1.1

1-I.10 Trainee shall identify, by title, the official responsible for emergency management in the state.
Completion of ICS-800 meets the requirements of this objective.
NFPA 1001 4.1.1

1-I.11 Trainee shall identify, by title, the official responsible for emergency management in a county or parish.
Completion of ICS-800 meets the requirements of this objective.
NFPA 1001 4.1.1

1-I.12 Trainee shall identify, by title, the city official who is responsible for emergency management in a city.
Completion of ICS-800 meets the requirements of this objective.
NFPA 1001 4.1.1

1-I.13 Trainee shall identify department procedures for potential disasters in the area of their response.
Completion of ICS-800 meets the requirements of this objective.
NFPA 1001 4.1.1

1-I.14 Trainee shall have knowledge of the Incident Management System
NFPA 1001 4.1.1

Firefighter I – There are no objectives required for this certification level.

Firefighter II

1-II.01 Trainee shall identify and describe the purposes of an Incident Command System (ICS).
Completion of ICS-100 meets the requirements of this objective.
NFPA 1001 5.1.1

A. Common terminology
B. Modular organization
C. Integrated communications
D. Unified command structure
E. Consolidated action plans
F. Manageable span of control
G. Pre-designated incident facilities
H. Comprehensive resource management

1-II.02 Trainee shall describe the procedure for implementing the Incident Management System
Completion of ICS-200 meets the requirements of this objective.
NFPA 1001 5.1.1

A. Hazard and risk analysis
    1. What has occurred?
    2. What is the current status of the emergency?
    3. Is anyone trapped or injured?
    4. Can the emergency be handled with the resources on scene or en route?
    5. Does the emergency fall within the scope of the individual's training?
B. Risk vs. benefit

1-II.03 Trainee shall define the functions necessary to manage an incident effectively and the responsibilities within the Incident Management System
Completion of ICS-200 meets the requirements of this objective.
NFPA 1001 5.1.2

A. Command
B. Safety
C. Liaison
D. Information
E. Operations
F. Planning
G. Logistics
H. Finance/Administration

1-II.04 Trainee shall list components and functional areas of the operations section within Incident Management System.
Completion of ICS-200 meets the requirements of this objective.
NFPA 1001 5.1.1

A. Incident Command
B. Staging
C. Branches
D. Divisions and Groups
E. Strike Teams and Task Forces
F. Single Resources

1-II.05 Trainee shall describe the procedure for establishing command and the transfer of command Completion of ICS-200 meets the requirements of this objective.
NFPA 1001 5.1.1

A. First on scene
    1. Investigation
    2. Command
    3. Pass command for fast attack/rescue
B. Considerations for transfer of command
    1. Arrival of senior staff
    2. Specialized incident
    3. Resource requirements
    4. Time restraints
    5. Demobilization
C. Methods of transferring command
    1. Face-to-face
    2. Via radio

1-II.06 Trainee shall demonstrate the procedure for Transferring command
Completion of ICS-200 meets the requirements of this objective.
NFPA 1001 5.1.1

A. Situation status report (Sit Stat)
B. Communicating transfer of command

SECTION 2 FORCIBLE ENTRY

Live Fire Training Prerequisite

2-I.01 Trainee shall identify and demonstrate the use of various types of manual and/or powered forcible entry tools used in the AHJ

NFPA 1001 4.3.4.A-B

A. Cutting tools
B. Prying tools
C. Pushing/Pulling tools
D. Striking tools

2-I.02 Trainee shall identify the method and procedure of proper cleaning, maintenance and inspection of various types of the following forcible entry tools and equipment.

NFPA 1001 4.5.1.A-B

A. Axe heads and cutting edges
B. Wooden handles
C. Fiberglass handles
D. Plated surfaces
E. Unprotected metal surfaces
F. Power equipment

2-I.03 Trainee shall identify basic construction of typical doors, windows, and walls within the AHJ.

NFPA 1001 4.3.4.A

A. Doors
    1. Swinging doors
        a. Inward opening
        b. Outward opening
        c. Double swing
    2. Wooden doors
    3. Metal doors
    4. Tempered plate glass doors
    5. Revolving doors
    6. Sliding doors
    7. Overhead doors
    8. Fire doors
B. Windows
    1. Checkrail windows (double-hung)
    2. Casement windows (hinged)
    3. Projected windows (factory)
    4. Awning and jalousie windows
    5. Plastic windows (high security)
    6. Screened or barred windows

C. Walls
    1. Masonry and veneered walls
    2. Metal walls
    3. Wood frame walls
    4. Partition walls

2-I.04 Trainee shall demonstrate operation of doors, windows, and locks;
NFPA 1001 4.3.4.A

A. Doors
    1. Swinging doors
        a. Inward opening
        b. Outward opening
        c. Double swing
    2. Wooden doors
    3. Metal doors
    4. Tempered plate glass doors
    5. Revolving doors
    6. Sliding doors
    7. Overhead doors
    8. Fire doors
B. Windows
    1. Checkrail windows (double-hung)
    2. Casement windows (hinged)
    3. Projected windows (factory)
    4. Awning and jalousie windows
    5. Plastic windows (high security)
    6. Screened or barred windows
C. Locks
    1. door locking devices
    2. window locking devices

2-I.05 Trainee shall identify and the dangers associated with forcing entry through doors, windows, and walls.
NFPA 1001 4.3.4.A, 4.3.10.A

2-I.06 Trainee shall identify the method and technique of forcible entry through any door, window, ceiling, roof, floor and vertical barrier.
NFPA 1001 4.3.4.B

Firefighter I – There are no objectives required for this certification level.

Firefighter II – There are no objectives required for this certification level.

SECTION 3 FIRE SERVICE LADDER PRACTICES

Live Fire Training Prerequisite

3-I.01 Trainee shall identify each type of ladder and define its use.
NFPA 1001 4.3.6.A-B

A. Single ladders
B. Roof ladders
C. Folding ladders
D. Extension ladders
E. Pole ladders
F. Combination ladders

3-I.02 Trainee, operating as an individual and as a member of a team, shall demonstrate or explain properly picking-up, carrying, raising, and lowering a ladder using the following methods:
NFPA 1001 4.3.6, 4.3.6.A-B, 4.3.12.A-B

A. One-firefighter carry
    1. 10' collapsible
    2. 14' combination
        a. Low-shoulder
        b. Flat-Shoulder
    3. 14' with folding hooks
        a. Low-shoulder
        b. Flat-Shoulder
    4. 14' with folding hooks, for carrying up a ladder
        a. Low-shoulder
B. Two-firefighter carry
    1. 24' 2-section extension ladder
        a. Low-shoulder
        b. Arm's length on-edge
C. Three-firefighter carry
    1. 35' or extension ladder
        a. Flat-shoulder
        b. Flat arm's length
D. Four-firefighter carry
    1. 35' or extension ladder
        a. Flat carry
E. Roof
F. Attic

3-I.03 Trainee shall identify the load capacities for ground ladders, according to NFPA 1931.
NFPA 1001 4.3.6, 4.3.6.A

A. Trainee shall identify the load capacities for folding ladders, pompier ladders, single roof ladders, all extension ladders, and combination ladders, according to NFPA 1931.
B. Trainee shall identify "ladder load."

3-I.04 Trainee shall mount, ascend, dismount, and descend each of the following types of ground ladder:
NFPA 1001 4.3.6, 4.3.12, 4.3.12.B

A. 10' folding ladder
B. 14' combination ladder
C. 14' with folding hooks
D. 24' extension ladder
E. 35' extension ladder

3-I.05 Trainee shall identify, describe, and demonstrate the techniques of cleaning ladders.

NFPA 1001 4.5.1, 4.5.1.A-B

A. Trainee shall identify the requirements pertaining to the frequency for cleaning ground ladders.
B. Trainee shall describe and demonstrate the procedures for cleaning ground ladders.

3-I.06 Trainee shall identify and name the parts of various fire service ladders.
NFPA 1001 4.3.6.A

A. Beam
B. Bed Section
C. Butt
D. Butt Spur
E. Fly section
F. Guides
G. Halyard
H. Heat sensor label
I. Hooks
J. Pawls (dogs)
K. Protection plates
L. Pulley
M. Rail
N. Rung
O. Staypole
P. Stops
Q. Tie rod
R. Tip

3-I.07 Trainee shall identify the safety aspects of handling, raising, and climbing techniques for mounting, ascending, dismounting, and descending ladders:
NFPA 1001 4.3.6

A. Trainee shall describe the following hazards associated with carrying a ground ladder:
    1. moving/guiding
    2. other personnel
    3. obstacles
B. Trainee shall describe the following hazards associated with raising a ground ladder:
    1. exposure to heat or flame
    2. stability of building
    3. uneven terrain
        a. Flat, stable surface
        b. Non-skid surface
        c. Soft Spots
    4. overhead obstruction(s):
        a. electricity
        b. windows
        c. falling debris
        d. overhangs
    5. High traffic areas (doorways)
C. Raising and Climbing
    1. full protective equipment
    2. proper lifting methods
    3. ladder angle and spacing
    4. pawls locked and halyard tied
    5. heel person and tying ladder
    6. hand placement and positioning
    7. climbing techniques to mount, ascend, dismount, and descend with same hand and foot
D. Trainee shall describe and demonstrate the following techniques of working from ground ladders with tools and equipment
    NFPA 1001 4.3.12
    1. working off a ladder with a pike pole using a leg lock.
    2. working off a ladder with an axe using a leg lock.
    3. working off a ladder with a pike pole using a safety harness.

4. working off a ladder with an axe using a safety harness.
5. deployment of a roof ladder on a pitched roof.
6. climbing techniques to mount, ascend, dismount and descend with and using hoses.

E. Aerial Ladders (if found in AHJ)
1. overhead obstacles
2. zone of collapse
3. proper placement

3-I.08 Trainee shall identify how to select the proper ladder for the job to be done, and the maximum working heights for fire service ladders.

A. Trainee shall identify and select the appropriate length ladder for a given task.
NFPA 1001 4.3.6.A-B

B. Trainee shall identify the reach for the following ground ladders set at the proper climbing angle.
NFPA 1001 4.3.6, 4.3.6.A-B, 4.3.9, 4.3.10
1. 10' folding ladder
2. 14' combination ladder
3. 14' with folding hooks
4. 24' extension ladder
5. 35' extension ladder

3-I.09 Trainee shall identify the proper placement and positioning of each type of fire service ladder for different types of jobs.

A. Trainee, given intended use, shall describe and demonstrate the proper placement of a ground ladder.
NFPA 1001 4.3.6, 4.3.12
1. Ventilation
2. Rescue
3. Vantage Point
4. Roof
5. Other factors

B. Trainee shall identify the proper "angle of inclination" for climbing techniques for mounting, ascending, dismounting, and descending ground ladders.
NFPA 1001 4.3.6
1. Roof
2. Window
   a. Entry
   b. Ventilation or working
   c. Rescue set

3-I.10 Trainee shall identify the materials used in ladder construction and list the advantages and disadvantages of each type of material.
NFPA 1001 4.3.6

A. Metal ladder construction
B. Wooden ladder construction
C. Fiberglass ladder construction

3-I.11 Trainee shall identify, describe, and demonstrate inspection and maintenance procedures for different types of ground ladders.
NFPA 1001 4.5.1

A. Trainee shall identify the requirements pertaining to the frequency of inspection and maintenance of ground ladders.

B. Trainee shall describe and demonstrate the inspection and maintenance procedures for ground ladders, according to NFPA 1932.
   1. Metal ground ladders
   2. Wood ground ladders
   3. Fiberglass ground ladders

3-I.12 Trainee shall identify and explain the annual service test for ground ladders.
NFPA 1001 4.5.1

3-I.13 Trainee shall, with or without a safety harness, climb the usable length of each type of ground and aerial ladder available to the AHJ and demonstrate:
NFPA 1001 4.3.10, 4.3.12

A. Carrying fire fighting tools or equipment, while ascending or descending.
B. Bringing an injured person down.
C. The techniques of working from ground and aerial ladders with tools and appliances.

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 4 FIRE HOSE PRACTICES

Live Fire Training Prerequisite

4-I.01 Trainee shall identify the sizes, types, amounts, and use of hose carried on fire apparatus.
NFPA 1001 4.3.10

4-I.02 Trainee shall demonstrate the use of nozzles, hose adapters, and hose appliances carried on the local fire apparatus.
NFPA 1001 4.3.10.A-B

A. Nozzles
   1. Solid stream nozzle
   2. Fog nozzle
   3. Cellar nozzle
   4. Applicator nozzle
   5. Master stream device (Playpipe)

B. Water Valves
   1. Gate
   2. Ball
   3. Butterfly
   4. Clapper
   5. Piston

C. Hose Adapters
   1. Double male
   2. Double female
   3. Reducers
   4. Increasers
   5. Elbows
   6. Caps
   7. Plugs
   8. Blindcaps

D. Hose Appliances
   1. Manifold
   2. Water thief
   3. Wye
   4. Siamese
   5. In-line relay valve
   6. Intake relief valve

E. Hose Tools
   1. Spanner wrench
   2. Hydrant wrench
   3. Hose strap
   4. Hose rope
   5. Hose chain
   6. Hose roller
   7. Hose jacket
   8. Hose clamp
   9. Suction hose strainer
   10. Hose bridges
   11. Hose wringers

4-I.03 Trainee, given the necessary equipment and operating as an individual and as a member of a team, shall advance dry and charged hose lines of two different sizes, both 1½" or larger, from fire apparatus:
NFPA 1001 4.3.10.A-B, 4.3.13.A-B

A. into a structure
B. up a ladder into an upper floor window
C. up an inside stairway to an upper floor
D. up an outside stairway to an upper floor
E. down an inside stairway to a lower level
F. down an outside stairway to a lower level
G. to an upper floor by hoisting

4-I.04 Trainee shall demonstrate the techniques for cleaning fire hose, couplings, and nozzles; and inspecting for damage.
NFPA 1001 4.5.2

4-I.05 Trainee shall connect a fire hose to a hydrant, and fully open and close the hydrant.
NFPA 1001 4.3.15.A-B

4-I.06 Trainee shall demonstrate the loading of fire hose on fire apparatus and identify the purpose of at least three types of hose loads and finishes.
NFPA 1001 4.5.2.A-B

4-I.07 Trainee shall demonstrate three (3) types of hose rolls.
NFPA 1001 4.5.2.A-B

A. Straight roll
B. Donut roll
C. Twin donut roll
    1. Method one
    2. Method two
D. Self-locking twin donut roll

4-I.08 Trainee shall demonstrate two (2) types of hose carries.
NFPA 1001 4.3.10.A-B, 4.5.2

A. Working line drag
B. Wyed lines
C. Accordion or flat shoulder method
D. Pre-connected flat load
E. Minuteman load
F. Triple layer load
G. Horseshoe shoulder carry

4-I.09 Trainee shall demonstrate coupling and uncoupling fire hose.
NFPA 1001 4.3.10.A-B

A. Trainee, given fire hose used for fire attack, 1½" or larger, and water supply hose, 2½" or larger, shall describe and demonstrate the one-person methods of connecting hose lines.
    1. One firefighter foot-tilt method
    2. Between-the-feet method
    3. Across-the-leg method
B. Trainee, operating as a member of a team, given fire hose used for fire attack, 1½” or larger, and water supply hose, 2½" or larger, shall describe and demonstrate the two person methods of connecting hose lines.
C. Trainee, operating as an individual or a member of a team, shall describe and demonstrate the methods of breaking a tight screw-thread connection.
    1. One firefighter knee-press method
    2. Two firefighter stiff arm method
    3. Spanner wrench

4-I.10 Trainee shall work from a ladder with a charged attack line, 1½" or larger.
NFPA 1001 4.3.10.A-B

4-I.11 Trainee, given fire hose used for fire attack, 1½" or larger, and water supply, 2½" or larger, shall demonstrate the method for extending a hose line.
NFPA 1001 4.3.10.A-B

4-I.12 Trainee shall demonstrate the techniques of carrying hose into a building to be connected to a standpipe, and of advancing a hose line from a standpipe (if found in AHJ).
NFPA 1001 4.3.10.B

4-I.13 Trainee, given fire hose used for fire attack, 1½" or larger, and water supply, 2½" or larger, shall describe and demonstrate replacing a burst section of hose line.
NFPA 1001 4.3.10.A-B

4-I.14 Trainee shall demonstrate all hand hose lays.
NFPA 1001 4.3.15.B

4-I.15 Trainee shall demonstrate inspection and maintenance of fire hose, couplings, and nozzles, and recommend replacement or repair as needed.
NFPA 1001 4.5.2.A-B

4-I.16 Trainee shall demonstrate all hydrant-to-fire apparatus hose connections.
NFPA 1001 4.3.15

4-I.17 Trainee shall select the proper adapters, appliances, nozzles, and hose, given different fire situations.
NFPA 1001 4.3.10

4-I.18 Trainee shall identify hose classifications by use and construction.
NFPA 1001 4.3.8, 4.3.10

A. Use
    1. Attack hose
    2. Relay-supply hose
    3. Intake hose
    4. Extinguisher hose
B. Construction
    1. Woven-jacket hose
    2. Rubber-covered hose
    3. Braided hose
    4. Wrapped hose

4-I.19 Trainee shall identify types of fire hose couplings.
NFPA 1001 4.3.10.B

A. Threaded couplings
B. Storz-type couplings (Sexless couplings)

4-I.20 Trainee shall identify the methods of constructing fire hose couplings.
NFPA 1001 4.3.10

4-I.21 Trainee shall identify the methods of attaching couplings to fire hose.
NFPA 1001 4.3.10.B

Firefighter I – There are no objectives required for this certification level.

Firefighter II

4-II.01 Trainee shall select the proper adapters, appliances, nozzles, and hose, given different fire situations.
NFPA 1001 5.3.1.A, 5.3.2.A, 5.3.3

A. Simulated ignitable liquid fire
B. Simulated residential structure fire
C. Simulated flammable gas cylinder fire

4-II.02 Trainee shall conduct an annual service test for fire hose.
NFPA 1001 5.5.5.A-B

SECTION 5 SALVAGE & OVERHAUL

Live Fire Training Prerequisite

5-I.01 Trainee shall identify the purpose of salvage, and its value to the public and the fire department.
NFPA 1001 4.3.14

5-I.02 Trainee, as an individual and as a member of a team, shall demonstrate folds and rolls of salvage covers.
NFPA 1001 4.3.14

A. one-firefighter roll
B. one-firefighter double roll
C. one-firefighter fold
D. one-firefighter donut roll
E. one-firefighter accordion fold
F. two-firefighter accordion counter-payoff fold
G. two-firefighter fold

5-I.03 Trainee, as an individual and as a member of a team, shall demonstrate salvage cover throws.
NFPA 1001 4.3.14

A. balloon throw
B. single-edge snap throw
C. double-edge snap throw

5-I.04 Trainee shall demonstrate the techniques of inspection, cleaning, and maintaining salvage equipment.
NFPA 1001 4.5.1

A. Salvage covers
B. Hand tools

5-I.05 Trainee shall identify the purpose of overhaul.
NFPA 1001 4.3.13

5-I.06 Trainee shall demonstrate searching for hidden fires.
NFPA 1001 4.3.13

5-I.07 Trainee shall demonstrate exposure of hidden fires by opening ceilings, walls, floors, and pulling apart burned materials.
NFPA 1001 4.3.13

5-I.08 Trainee shall demonstrate how to separate and remove charred material from unburned material.
NFPA 1001 4.3.13

5-I.09 Trainee shall define and describe the following duties of firefighters left at the scene for fire and security surveillance, and identify the proper procedures for restoration of the premises after a fire.
NFPA 1001 4.3.14

A. Making the building safe
B. Making the contents safe
C. Making the area safe
D. Restoring fire protection systems
E. Restoring utility services
F. Securing the building
G. Deodorizing the premises
H. Releasing the premises

5-I.10 Trainee, given salvage equipment, operating as an individual and as a member of a team, shall demonstrate the following skills:
NFPA 1001 4.3.14

A. use of a water chute
B. construction of a water chute
C. use of a water catchall
D. construction of a water catchall

5-I.11 Trainee shall demonstrate the removal of debris, and removal and routing of water from a structure using the following techniques.
NFPA 1001 4.3.13, 4.3.14

A. Water vacuums
B. Existing drains
C. Portable pumps
D. Brooms and squeegees
E. Buckets, mops, and shovels

5-I.12 Trainee shall demonstrate and describe the covering or closing of the following building openings made during fire fighting operations.
NFPA 1001 4.3.13

A. Roofs
B. Doors
C. Windows
D. Floors

5-I.13 Trainee shall list the procedures to follow during overhaul.
NFPA 1001 4.3.13

5-I.14 Trainee shall identify precautions to be followed when overhauling targeted hazards.
NFPA 1001 4.3.13

A. Trainee shall identify and describe the necessary precautions to maintain safety of firefighters and others during overhaul.
B. Trainee shall describe appropriate safety equipment and clothing for performing overhaul activities.
C. Trainee shall describe hazards associated with overhaul operations.

5-I.15 Trainee shall list four (4) indicators of fire in walls or ceilings.
NFPA 1001 4.3.13

A. Sight
B. Touch
C. Sound
D. Electronic instruments

5-I.16 Trainee shall demonstrate restoration of the premises after a fire.
NFPA 1001 4.3.14

A. Restoring fire protection systems
B. Restoring utility services
C. Deodorizing the premises
D. Releasing the premises

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 6 FIRE STREAMS

Live Fire Training Prerequisite

6-I.01 Trainee shall define a fire stream.
NFPA 1001 4.3.10

6-I.02 Trainee shall manipulate a nozzle so as to attack a Class A and a Class B fire.
NFPA 1001 4.3.10

6-I.03 Trainee shall define water hammer and at least one method for its prevention.
NFPA 1001 4.3.10

6-I.04 Trainee shall demonstrate how to open and close a nozzle and how to adjust its stream pattern and flow setting when applicable.
NFPA 1001 4.3.10

6-I.05 Trainee shall define the following methods of water application:
NFPA 1001 4.3.10

A. direct
B. indirect
C. combination

6-I.06 Trainee, given specific fire situations, shall select the proper nozzle and hose size for each.
NFPA 1001 4.3.10

6-I.07 Trainee shall identify characteristics of all types of fire streams.
NFPA 1001 4.3.10

6-I.08 Trainee shall identify precautions to be followed while advancing hose lines to a fire.
NFPA 1001 4.3.10

6-I.09 Trainee shall identify three (3) conditions that result in pressure losses in a hose line.
NFPA 1001 4.3.10

6-I.10 Trainee shall describe the operating principles of fog and solid stream nozzles.
NFPA 1001 4.3.10

6-I.11 Trainee shall describe the advantages and disadvantages of solid and fog streams.
NFPA 1001 4.3.10

6-I.12 Trainee shall identify four (4) special stream nozzles and demonstrate at least two (2) uses or applications for each.
NFPA 1001 4.3.10

6-I.13 Trainee shall identify three (3) observable results that are obtained when proper application of a fire stream is accomplished.
NFPA 1001 4.3.10

6-I.14 Trainee shall identify three (3) types of fire streams and shall demonstrate each.
NFPA 1001 4.3.10

A. Solid
B. Fog
C. Broken

6-I.15 Trainee shall diagram the types of fog nozzles, identify the major parts, and trace water flow through each.
NFPA 1001 4.3.10

6-I.16 Trainee, given a selection, pictures or diagrams, of nozzles and tips, shall identify the type, design, operation, nozzle pressure, and flow of each.
NFPA 1001 4.3.10

6-I.17 Trainee shall identify, select, and demonstrate the use of any nozzle.
NFPA 1001 4.3.10.A-B

A. Solid stream nozzle
B. Fog nozzle
C. Cellar nozzle
D. Applicator nozzle
E. Master stream device (Playpipe)

Firefighter I - There are no objectives required for this certification level.

Firefighter II

6-II.01 Trainee shall identify and define foam making appliances and shall demonstrate a foam stream from each (if available in AHJ)
NFPA 1001 5.3.1

6-II.02 Trainee shall define the methods by which foam prevents or controls a hazard.
NFPA 1001 5.3.1

6-II.03 Trainee shall define the principle by which foam is generated.
NFPA 1001 5.3.1

6-II.04 Trainee shall define common causes for the poor generation of foam and identify the procedures for correcting each.
NFPA 1001 5.3.1

6-II.05 Trainee shall define the difference between hydrocarbon and polar solvent fuels and identify the type of foam concentrate required for each fuel.
NFPA 1001 5.3.1

6-II.06 Trainee shall define the advantages, characteristics, and precautions for use of the following types of foam:
NFPA 1001 5.3.1

A. protein
B. fluoroprotein
C. film forming fluoroprotein (FFFP)
D. aqueous film forming foam (AFFF)
E. hazardous materials vapor mitigating foam
F. medium- and high-expansion foam
G. Class A foams
H. Alcohol Type Concentrate (ATC)

6-II.07 Trainee, given the size of the fuel surface, the types of fuel involved, and the type of foam concentrate being used, shall determine the minimum application rate necessary for extinguishment of a fire.
NFPA 1001 5.3.1

6-II.08 Trainee shall define the precautions that must be taken when using high expansion foam to attack structural fires.
NFPA 1001 5.3.1

SECTION 7 VENTILATION PRACTICES

Live Fire Training Prerequisite

7-I.01 Trainee shall define the principles of ventilation, and identify the advantages and effects of proper ventilation.
NFPA 1001 4.3.11

7-I.02 Trainee shall identify the dangers present, and the precautions to be taken in performing ventilation.

A. Trainee shall describe the considerations involving basic size-up.
NFPA 1001 4.3.11, 4.3.12.A-B
   1. Life safety hazards
   2. Determining the location and extent of the fire
   3. Identifying building construction features

B. Trainee shall describe the considerations affecting the decision to ventilate.
NFPA 1001 4.3.11
   1. Assessing the need for ventilation
   2. Deciding where ventilation is needed
   3. Deciding how ventilation should be accomplished

7-I.03 Trainee shall demonstrate opening various types of windows from inside and outside, with and without fire department tools.
NFPA 1001 4.3.11

7-I.04 Trainee shall demonstrate breaking window or door glass, and removing obstructions.
NFPA 1001 4.3.11

7-I.05 Trainee shall describe and safely demonstrate, using both hand and power tools, the ventilation of a roof and a floor.
NFPA 1001 4.3.12

7-I.06 Trainee shall identify and describe the signs, causes, and effects of a back draft explosion.
NFPA 1001 4.3.11

7-I.07 Trainee shall demonstrate ventilation using a water fog.
NFPA 1001 4.3.11

7-I.08 Trainee shall identify characteristics of a flashover.
NFPA 1001 4.3.11

7-I.09 Trainee shall identify the characteristics of and describe the necessary precautions when ventilating the following roof types.
NFPA 1001 4.3.12

A. Pitched
   1. Hip
   2. Lantern
   3. Shed
   4. Mansard
   5. Gambrel
   6. Butterfly

B. Flat

C. Arched

7-I.10 Trainee shall identify the size and location of an opening for ventilation, and the precautions to be taken during ventilation.
NFPA 1001 4.3.11, 4.3.12

A. Existing roof openings
B. Location of the fire
C. Direction in which the fire will be drawn
D. Type of building construction
E. Wind direction
F. Progress of the fire
G. Condition of the building
H. Safety precautions
I. Relative efficiency of large vs. small openings

7-I.11 Trainee shall identify and demonstrate natural and mechanical methods for horizontal ventilation of a structure.
NFPA 1001 4.3.11, 4.3.12

A. Trainee shall identify horizontal ventilation tools and equipment.
B. Trainee shall describe structural characteristics of buildings which aid in natural or mechanical ventilation.
    1. Scuttle hatches
    2. Bulkheads
    3. Skylights
    4. Monitors
    5. Light and ventilation shafts
C. Trainee shall identify and describe obstructions to horizontal ventilation.
    NFPA 1001 4.3.11
D. Trainee shall describe weather conditions which affect horizontal ventilation.
    NFPA 1001 4.3.11

7-I.12 Trainee shall demonstrate the removal of skylights, scuttle covers, and other covers on rooftops.
NFPA 1001 4.3.11

7-I.13 Trainee shall demonstrate the types of equipment used for forced mechanical ventilation.
NFPA 1001 4.3.11

A. Trainee shall identify fire ground situations where forced ventilation procedures may be required.
    1. Positive pressure method
    2. Negative pressure method
B. Trainee shall describe and demonstrate the use and proper placement of gasoline or electric powered fans to effect positive pressure ventilation.
C. Trainee shall describe and demonstrate the use and proper placement of gasoline or electric powered fans to effect negative ventilation.

7-I.14 Trainee shall identify the location of the opening, the method to be used, and the precautions to be taken when ventilating a basement.
NFPA 1001 4.3.11

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 8 RESCUE OPERATIONS

The Trainee is not expected to be proficient in technical rescue skills. The Trainee should be able to help technical rescue teams in their efforts to safely manage structural collapses, trench collapses, cave and tunnel emergencies, water and ice emergencies, elevator and escalator emergencies, energized electrical line emergencies, and industrial accidents

Live Fire Training Prerequisite – There are no objectives required for this certification level.

Firefighter I

8-I.01 Trainee shall, given victims and the proper equipment, demonstrate the proper techniques for removal of injured person(s) from hazards by the use of the following carries, drags and stretchers:
NFPA 1001 4.3.9.A

A. one/two person victim standing
B. seat carry
C. extremities carry
D. chair carry
E. three-person carry
F. lift and carry
G. blanket drag

8-I.02 Trainee shall demonstrate searching for victims in burning, smoke-filled buildings, or other hostile environments:
NFPA 1001 4.3.9.B

A. given the proper information, shall list two (2) objectives to be achieved while searching for victims in a building on fire:
   1. Finding victims
   2. Obtaining information on the extent of the fire
B. given a small one-story building filled with simulated smoke, shall demonstrate the establishing of a search pattern for the building and multiple rooms that are involved:
   1. With a rope or hose line
   2. Without a rope or hose line

8-I.03 Trainee, given the proper information, shall list the life threatening injuries that need to be observed in the proper order of priority.
NFPA 1001 4.3.9

8-I.04 Trainee shall demonstrate the techniques of packaging a victim for emergency transportation by:
NFPA 1001 4.3.9.B

A. given a short/long spine board and wrapping materials, demonstrate the stabilizing of a victims spine and cervical area of the body, and
B. given a packaged victim and stretcher, demonstrate the transfer procedures of victims from their rescue scene.

8-I.05 Trainee, given a 20' length of ½" rope, shall demonstrate the following knots as used in repelling:
NFPA 1001 4.3.21

A. figure-eight
B. figure-eight follow through
C. bowline
D. clove-hitch
E. half-hitch

Firefighter II

8-II.01 Trainee shall define safety procedures as they apply to rescue.
NFPA 1001 5.4.1.A

8-II.02 Trainee shall define the uses of a lifeline.
NFPA 1001 5.4.2

8-II.03 Trainee shall explain search and rescue procedures for safe rescue of open water and swift water victims.
NFPA 1001 5.4.2

8-II.04 Trainee shall describe or demonstrate the use of water rescue tools including:
NFPA 1001 5.4.2

A. personal flotation devices
B. pike poles
C. shepherd's hook
D. ring buoy
E. rescue tube
F. towel reach
G. ladders
H. dragging devices

8-II.05 Trainee shall assist rescue team with the techniques and safety procedures as they apply to the following rescue activities:
NFPA 1001 5.4.2

A. structural collapses
B. trench collapses
C. caves and tunnels
D. water and ice emergencies
E. elevators and escalators
F. emergencies involving energized electrical lines
G. industrial accidents
H. motor vehicle accidents
I. other hazards particular to the local jurisdiction

8-II.06 Trainee shall demonstrate the use and care of the following rescue tools:
NFPA 1001 5.4.1

A. cribbing and shoring material
B. block and tackle
C. hydraulic devices
D. pneumatic devices
E. trench jacks
F. water rescue devices
G. ratchet device

8-II.07 Trainee shall raise and lower a simulated victim 20 vertical feet (6m) using a rope rescue system.
NFPA 1001 5.4.2

8-II.08 Trainee shall demonstrate extricating a victim entrapped in a motor vehicle as part of a team, given stabilization and extrication tools, so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.
NFPA 1001 5.4.1

8-II.09 Trainee shall demonstrate inspection and don a life safety harness.
NFPA 1001 5.4.2

SECTION 9 FIRE & LIFE SAFETY INITIATIVES

A fire safety survey is intended to be a basic survey of the property to identify major hazards such as locked exits, nonoperational fire protection and detection systems, a lack of smoke alarms in residential occupancies, non-operational water supplies, hazardous interior finishes, hazardous storage, and other items identified on the survey form. It is not intended to be a fire inspection conducted to the job performance requirements of a Fire Inspector as identified in NFPA 1031.

Live Fire Training Prerequisite – There are no objectives required for this certification level.

Firefighter I

9-I.01 Trainee shall explain steps taken during fire and life safety program development.
NFPA 1001 4.5.1

9-I.02 Trainee shall describe the components involved in fire and life safety program delivery.
NFPA 1001 4.5.1

9-I.03 Trainee shall explain the impact of safety hazards, messages, and target audiences on creating fire and life safety education programs.
NFPA 1001 4.5.1

9-I.04 Trainee shall indicate ways to identify and prevent firesetter development.
NFPA 1001 4.5.1

Firefighter II

9-II.01 Trainee shall identify the common causes of fires and their prevention.
NFPA 1001 5.5.1

A. Housekeeping practices
B. Smoking
C. Open burning
D. Electrical sources of ignition

9-II.02 Trainee shall identify life safety programs for the home.
NFPA 1001 5.5.1

9-II.03 Trainee shall identify local and state fire codes concerning subjects to be noted in the fire company inspection.
NFPA 1001 5.5.1

9-II.04 Trainee shall identify the fire hazards commonly found in manufacturing, commercial, residential, and public assembly occupancies.
NFPA 1001 5.5.1

A. Common Hazards
    1. Fuel Supply
    2. Heat Source
B. Special Hazards
C. Target Hazards

9-II.05 Trainee shall identify common deficiencies in electrical services and equipment.
NFPA 1001 5.5.1

9-II.06 Trainee shall identify local code requirements covering the proper storage and use of flammable liquids and gases.
NFPA 1001 5.5.1

9-II.07 Trainee shall identify storage codes and practices contributing to fire safety in buildings, including proper piling, aisles, clearances, access to fire equipment and exits.
NFPA 1001 5.5.1

9-II.08 Trainee shall identify proper outside storage and how it affects fire fighting, including aisles, roadways, access to hydrants, access to buildings, and exposure hazards.
NFPA 1001 5.5.1

9-II.09 Trainee shall identify water and smoke damage potential to goods, to office and manufacturing machinery, and other valuable objects.
NFPA 1001 5.5.1

9-II.10 Trainee shall identify legal issues concerning fire prevention inspections.
NFPA 1001 5.5.1

A. Trainee shall identify and define the authorities and conditions giving fire service personnel the right to enter a property and perform fire prevention inspections.
B. Trainee shall identify and define conditions or circumstances that would limit the right of fire service personnel to enter a property and perform fire prevention inspections.
C. Trainee shall identify and define proper procedures for gaining code compliance.
D. Trainee shall define the legal liability of fire service personnel when conducting fire prevention inspections

9-II.11 Trainee shall identify the fire inspection procedures.
NFPA 1001 5.5.1

9-II.12 Trainee shall define the importance of public relations relative to inspection programs.
NFPA 1001 5.5.1

9-II.13 Trainee shall define dwelling inspection procedures.
NFPA 1001 5.5.1

A. Scheduling
B. Approach and introduction
C. Conducting the inspection
D. Final interview
E. Follow-up
F. Inspection report and map

9-II.14 Trainee shall identify the procedure for preparing a pre-fire plan.
NFPA 1001 5.5.3, 5.5.4

9-II.15 Trainee shall prepare diagrams or sketches of buildings to record the locations of items of concern during pre-incident planning operations.
NFPA 1001 5.5.1

A. Trainee, when given examples of map symbols, shall be able to identify the meaning of symbols.
B. Trainee, when preparing a sketch of a facility, shall draw the standard map symbol for:
    1. Single hydrant
    2. Double hydrant
    3. Triple hydrant
    4. Sprinkler riser
    5. Fire Department Connection
    6. Automatic sprinklers
    7. Not sprinklered
    8. Vertical pipe or standpipe
    9. Public water service
    10. Private water service
    11. Fire escape
    12. Skylight
    13. Automatic fire alarm
    14. Fire pump
    15. Stairs

C. Trainee shall identify and define the types of diagrams or sketches used in pre-incident planning and prepare a pre-incident plan from information gathered in a survey.
   1. Plot plan
   2. Floor plan
   3. Elevation drawing

9-II.16 Trainee shall collect and record in writing, information required for the purpose of preparing a report on a building inspection or survey.
NFPA 1001 5.5.3

9-II.17 Trainee shall identify common fire hazards and make recommendations for correction.
NFPA 1001 5.5.1

9-II.18 Trainee shall complete a building inspection report.
NFPA 1001 5.5.1

9-II.19 Trainee shall identify the types of fire extinguishers in an occupancy and ensure that they conform to the fire prevention requirements for that occupancy.
NFPA 1001 5.5.1

9-II.20 Trainee shall identify the procedures to be used whenever fire hazards, or suspected fire hazards, are encountered during inspections.
NFPA 1001 5.5.1

9-II.21 Trainee shall identify the fire exit requirements for different types of occupancies.
NFPA 1001 5.5.2

9-II.22 Trainee shall inspect standpipe systems for fire protection, including visual inspection of the following equipment:
NFPA 1001 5.5.1
A. Standpipe systems
B. Hose and hose threads
C. Nozzles
D. Fire Department Connections

9-II.23 Trainee shall identify a private water system for fire protection, including fire pumps, yard hydrants, hose houses, gravity and pressure types of water storage tanks, reservoirs, and draft sources.
NFPA 1001 5.5.1

9-II.24 Trainee shall identify smoke, flame, and heat-detection alarm systems.
NFPA 1001 5.5.1

9-II.25 Trainee shall identify standard types of chimneys and flues, and recognize deficiencies likely to cause fires.
NFPA 1001 5.5.1

9-II.26 Trainee shall identify five (5) common causes of fire and their prevention.
NFPA 1001 5.5.1

9-II.27 Trainee shall define the importance of public fire education and inspection programs as they relate to the fire department public relations and to the community.
NFPA 1001 5.5.1

9-II.28 Trainee shall identify and demonstrate procedures for conducting a fire station tour.
NFPA 1001 5.5.2

9-II.29 Trainee shall identify and demonstrate the “Stop, Drop and Roll” technique for extinguishing clothing fires.
NFPA 1001 5.5.2

9-II.30 Trainee shall identify and demonstrate inspection procedures for private dwellings.
NFPA 1001 5.5.1

9-II.31 Trainee shall identify and demonstrate the proper placement, testing and maintenance of smoke detectors in private dwellings.
NFPA 1001 5.5.2

9-II.32 Trainee shall identify the elements of a home fire escape plan.
NFPA 1001 5.5.2

SECTION 10 WATER SUPPLIES

Live Fire Training Prerequisite

10-I.01 Trainee shall identify the water distribution system, and other alternate water sources in the area of responsibility.
NFPA 1001 4.3.15.A

10-I.02 Trainee shall identify a:
NFPA 1001 4.3.15.A

A. dry-barrel hydrant
B. wet-barrel hydrant

10-I.03 Trainee shall demonstrate hydrant to pumper hose connections for forward and reverse hose lays.
NFPA 1001 4.3.15.B

A. Forward hose lay
B. Reverse hose lay
C. Split hose lay

10-I.04 Trainee shall define, explain, and demonstrate where applicable, the use of a rural dry fire hydrant system and static water supply source.
NFPA 1001 4.3.15.A-B

10-I.05 Trainee shall define a tanker shuttle.
NFPA 1001 4.3.15

10-I.06 Trainee shall identify the apparatus, equipment, and appliances required to provide water at rural locations by relay pumping, large diameter hose, or a tanker shuttle.
NFPA 1001 4.3.15.A

10-I.07 Trainee shall demonstrate deployment of a portable water tank.
NFPA 1001 4.3.15.B

10-I.08 Trainee shall identify the following parts of a water distribution system:
NFPA 1001 4.3.15

A. distributors
B. primary feeders
C. secondary feeders

10-I.09 Trainee shall identify the following terms as they relate to water supply:
NFPA 1001 4.3.15

A. normal operating pressure of a water distribution system
B. residual pressure of a water distribution system
C. the flow pressure from an opening that is flowing water
D. static pressure

10-I.10 Trainee shall identify the following types of water main valves:
NFPA 1001 4.3.15

A. indicating
B. non-indicating
C. post indicator valve (P.I.V.)
D. outside screw and yoke (O.S. & Y.)

10-I.11 Trainee shall identify and explain the four (4) fundamental components of a modern water system.
NFPA 1001 4.3.15

A. Sources of supply
    1. Surface water
    2. Ground water
B. Means of moving water
    1. Direct pumping system
    2. Gravity system
    3. Combination system
C. Treatment facilities
D. Storage facilities and distribution systems

10-I.12 Trainee, given a pitot tube and gauge, shall use, read, and record several flow pressures.
NFPA 1001 4.3.15

10-I.13 Trainee shall identify the recommended minimum pipe sizes used in the following areas:
NFPA 1001 4.3.15

A. Residential
B. Business
C. Industrial

10-I.14 Trainee shall identify two (2) causes of increased resistance or friction loss in water mains.
NFPA 1001 4.3.15

A. Mineral encrustation or tuberculation
B. Sedimentation

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 11 FIRE PROTECTION SYSTEMS

Live Fire Training Prerequisite - There are no objectives required for this certification level.

Firefighter I - There are no objectives required for this certification level.

Firefighter II

11-II.01 Trainee shall identify a fire department sprinkler connection and water motor alarm.
NFPA 1001 5.5.3

11-II.02 Trainee shall connect hose line(s) to a fire department connection of a sprinkler or standpipe system.
NFPA 1001 5.5.3

11-II.03 Trainee shall define how the automatic sprinkler activates and releases water.
NFPA 1001 5.5.3

A. Fusible Link
B. Glass (Frangible) Bulb
C. Chemical Pellet

11-II.04 Trainee shall temporarily stop the flow of water from a sprinkler head.
NFPA 1001 5.5.3

11-II.05 Trainee shall identify the main control valve on the system.
NFPA 1001 5.5.3

11-II.06 Trainee shall operate a main control valve on the system from open to closed and back to open.
NFPA 1001 5.5.3

11-II.07 Trainee shall define the value of automatic sprinklers in providing safety to the occupants in a structure.
NFPA 1001 5.5.3

11-II.08 Trainee shall identify and define the dangers of premature closure of sprinkler main control valve, and of using hydrants to supply hose streams when the same water system is supplying the automatic sprinkler system.
NFPA 1001 5.5.3

11-II.09 Trainee shall identify the difference between an automatic sprinkler system that provides complete coverage and a partial sprinkler system.
NFPA 1001 5.5.3

11-II.10 Trainee shall identify at least three sources of water for supply to an automatic sprinkler system.
NFPA 1001 5.5.3

11-II.11 Trainee shall identify the following:
NFPA 1001 5.5.3

A. wet sprinkler system
B. dry sprinkler system
C. deluge sprinkler system
D. residential sprinkler system

11-II.12 Trainee, given an alarm valve of an automatic sprinkler system, shall identify the operation of the valve.
NFPA 1001 5.5.3

11-II.13 Trainee shall identify the types, components and operation of standpipe systems.
NFPA 1001 5.5.3

11-II.14 Trainee shall identify various types of special extinguishing systems.
NFPA 1001 5.5.3

11-II.15 Trainee shall identify various types of supervisory circuits.
NFPA 1001 5.5.3

11-II.16 Trainee shall identify the function of a fire annunciator panel.
NFPA 1001 5.5.3

11-II.17 Trainee shall identify various alarm initiating devices.
NFPA 1001 5.5.3

SECTION 12 FIRE BEHAVIOR (FIRE SCIENCE)

Live Fire Training Prerequisite

12-I.01 Trainee shall define heat and fire.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.02 Trainee shall define the fire triangle and tetrahedron.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.03 Trainee shall identify two (2) chemical, mechanical, and electrical energy heat sources.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.04 Trainee shall define the following:
NFPA 1001 4.3.10, 4.3.11, 4.3.12

A. incipient
B. flame spread
C. hot smoldering
D. flashover
E. steady state
F. clear or free burning
G. back draft explosion

12-I.05 Trainee shall define the four (4) methods of heat transfer.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

A. Conduction
B. Convection
C. Radiation
D. Direct Flame Impingement

12-I.06 Trainee shall define the three (3) physical states of matter in which fuels are commonly found.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

A. solid
B. liquid
C. gaseous

12-I.07 Trainee shall define the hazard of finely divided fuels as they relate to the combustion process.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.08 Trainee shall define:
NFPA 1001 4.3.10, 4.3.11, 4.3.12

A. flash point
B. fire point
C. ignition temperature
D. upper and lower explosive limits

12-I.09 Trainee shall define concentrations of oxygen in air as it affects combustion.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.10 Trainee shall identify three (3) products of combustion commonly found in structural fires which create a life hazard.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.11 Trainee shall identify characteristics of water as it relates to its fire extinguishing potential.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.12 Trainee shall define the following units of measurements:
NFPA 1001 4.3.10, 4.3.11, 4.3.12

A. British Thermal Unit (BTU)
B. Fahrenheit (F°)
C. Celsius (C°)
D. Calorie (C)
E. Joule, the SI unit for energy

12-I.13 Trainee shall define thermal balance and imbalance.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.14 Trainee shall identify chemical by-products of combustion.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.15 Trainee shall define the fire extinguishment theory.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

12-I.16 Trainee shall identify pressure and velocity.
NFPA 1001 4.3.10, 4.3.11, 4.3.12

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 13 FIRE DEPARTMENT COMMUNICATIONS

Live Fire Training Prerequisite – There are no objectives required for this certification level.

Firefighter I

13-I.01 Trainee shall define the procedure for a citizen to report a fire or other emergency.
NFPA 1001 4.2.1.A

13-I.02 Trainee shall demonstrate receiving an alarm or a report of an emergency and initiate action.
NFPA 1001 4.2.1.B

13-I.03 Trainee shall define the purpose and function of all alarm-receiving instruments and personnel-alerting equipment provided in the fire station.
NFPA 1001 4.2.1, 4.2.3.A

13-I.04 Trainee shall identify traffic control devices installed in the fire station to facilitate the response of apparatus.
NFPA 1001 4.2.1

13-I.05 Trainee shall identify procedures required for receipt and processing of emergency and non-emergency calls.
NFPA 1001 4.2.2

13-I.06 Trainee shall define and demonstrate prescribed fire department radio procedures including:
NFPA 1001 4.2.1

A. routine traffic
B. emergency traffic
C. emergency evacuation signals

13-I.07 Trainee shall define policy and procedures concerning the ordering and transmitting of multiple alarms of fire and calls for special assistance from the emergency scene.
NFPA 1001 4.2.1, 4.2.1.A

13-I.08 Trainee shall define all fire alarm signals, including multiple alarms and special signals, governing the movements of fire apparatus, and the action to be taken upon the receipt of each signal.
NFPA 1001 4.2.1.A

Firefighter II

13-II.01 Trainee shall identify areas assigned for first-alarm response.
NFPA 1001 5.2.2

13-II.02 Trainee shall demonstrate both mobile and portable radio equipment.
NFPA 1001 5.2.2

13-II.03 Trainee shall demonstrate the ordering of multiple alarms and other calls for assistance from the fire ground, (i.e., mutual aid).
NFPA 1001 5.2.2

13-II.04 Trainee shall identify the fire incident reporting systems: NFIRS and TEXFIRS.
NFPA 1001 5.2.1

13-II.05 Trainee shall identify the scope, purpose and benefits of the Texas and National Fire Incident Reporting Systems.
NFPA 1001 5.2.1

13-11.06 Trainee shall identify the three (3) elements of a fire reporting system.
NFPA 1001 5.2.1

13-11.07 Trainee shall identify report forms used by the local AHJ: incident report form and casualty report form.
NFPA 1001 5.2.1

SECTION 14 FIRE CAUSE & ORIGIN

Live Fire Training Prerequisite - There are no objectives required for this certification level.

Firefighter I

14-I.01 Trainee shall explain the ways to recognize obvious signs of the area of origin.
NFPA 1001 4.3.8, 4.3.14

14-I.02 Trainee shall describe the relationship between the fire cause classifications and cause determination.
NFPA 1001 4.3.8, 4.3.13

14-I.03 Trainee shall identify factors indicating arson.
NFPA 1001 4.3.13

14-I.04 Trainee shall identify the importance of protecting evidence and explain the different techniques of protecting evidence at a fire scene.
NFPA 1001 4.3.8, 4.3.14

Firefighter II

14-II.01 Trainee shall identify the roles and responsibilities of a firefighter in determining point of origin.
NFPA 1001 5.3.4

14-II.02 Trainee shall identify factors indicating fire cause.
NFPA 1001 5.3.4

14-II.03 Trainee shall identify observations important to determining events of a fire.
NFPA 1001 5.3.4

14-II.04 Trainee shall define the importance of securing a fire scene to prevent unwarranted access.
NFPA 1001 5.3.4

SECTION 15 FIRE CONTROL

Live Fire Training Prerequisite

15-I.01 Trainee shall identify the current edition of NFPA 1403: *Standard on Live Fire Training Evolutions* and shall:

NFPA 1403

A. identify the purpose of NFPA 1403
B. define evolution
C. define student
D. define instructor
E. define training center burn building
F. identify subjects required prior to participating in live fire training
G. identify the minimum flow, in gallons per minute, required by each hose line used in live fire training
H. identify the protective equipment required during live fire training

Firefighter I

15-I.02 Trainee, operating as the nozzle person and as a member of a team, shall control and/or extinguish the following live fires using appropriate protective equipment, fire fighting tools, and extinguishing agents:

NFPA 1001 4.3.7

A. a one (1) room fire
B. a two (2) room fire
C. piles/stacks of Class A combustible materials (exterior)
D. open pans of combustible materials (exterior)
E. vehicle fires
F. ground cover fire

15-I.03 Trainee, operating as a member of a team, shall perform vertical ventilation during live fire training.

NFPA 1001 4.3.12

15-I.04 Trainee, operating as a member of a team, shall perform horizontal ventilation during live fire training.

NFPA 1001 4.3.11

15-I.05 Trainee, operating as an individual or a member of a team, shall carry and raise ladders during live fire training.

NFPA 1001 4.3.6

15-I.06 Trainee shall extinguish a Class B fire with a portable fire extinguisher.

NFPA 1001 4.3.16

Firefighter II

15-II.01 Trainee shall describe the considerations to be taken when coordinating fire ground operations

NFPA 1001 5.1.1, 5.1.2, 5.3.2

15-II.02 Trainee shall explain fire ground roles and responsibilities a firefighter II may need to coordinate

NFPA 1001 5.1.1, 5.1.2, 5.3.2

15-II.03 Trainee shall discuss the process of establishing and transferring command
NFPA 1001 5.1.1, 5.1.2, 5.3.2

15-II.04 Trainee shall describe the hazards that may be present at fires in underground spaces
NFPA 1001 5.3.2

15-II.05 Trainee shall list the safety precautions to be taken at Flammable/Combustible liquid fires incidents
NFPA 1001 5.3.1, 5.3.3

15-II.06 Trainee shall recognize methods used when coordinating operations at a property protected by a fire suppression system
NFPA 1001 5.3.2

15-II.07 Trainee shall explain how to use water to control Class B fires
NFPA 1001 5.3.1

15-II.08 Trainee shall compare methods used to suppress bulk transport vehicle fires and flammable gas incidents
NFPA 1001 5.3.3

15-II.09 Trainee shall establish incident command and coordinate interior attack of a structure fire
NFPA 1001 5.1.2, 5.3.2

15-II.10 Trainee shall control a pressurized flammable gas container fire
NFPA 1001 5.3.3

THESE LIVE FIRE TRAINING EVOLUTIONS SHOULD CONSIST OF A COMBINATION OF VARIOUS STAGES OF HOSE HANDLING, FIRE STREAMS, VENTILATION, ETC., NECESSARY IN THE ACTUAL EXTINGUISHMENT OF A FIRE. THE TRAINING CONDUCTED UNDER THIS SECTION MUST BE CARRIED OUT AS A PREPLANNED OPERATION WITH REFERENCE TO THE STANDARDS OF NFPA 1403: *STANDARD ON LIVE FIRE TRAINING EVOLUTIONS*. UNDER NO CIRCUMSTANCES SHALL RESPONSE TO ACTUAL ALARMS BE COUNTED AS TRAINING.

SECTION 16 FIREFIGHTER SAFETY & HEALTH

Live Fire Training Prerequisite

16-I.01 Trainee shall identify dangerous building conditions created by fire.
NFPA 1001 4.3.10

16-I.02 Trainee shall define fire service lighting equipment.
NFPA 1001 4.3.17.A

16-I.03 Trainee shall identify and describe safety procedures given the following fire service lighting equipment:
NFPA 1001 4.3.17.A

A. Power supply (portable or mounted)
B. Lights
C. Auxiliary equipment

16-I.04 Trainee given fire service lighting equipment, power supply, and an assignment, shall operate emergency scene lighting equipment so that designated areas are illuminated.
NFPA 1001 4.3.17.B

16-I.05 Trainee shall define safety procedures as they apply to emergency operations, specifically:
NFPA 1001 4.1.2, 4.3.2.A-B, 4.1.1

A. protective equipment
B. team concept
C. portable tools and equipment
D. riding on apparatus
E. hazardous materials incidents

16-I.06 Trainee shall identify the safety purpose of the 2 in 2 out rule per NFPA 1403.
NFPA 1403

16-I.07 Trainee shall identify the safety procedures and precautions during fire apparatus operations:
NFPA 1001 4.3.2.A

A. attire to be worn while riding on apparatus responding to an alarm and,
B. describe/list safety precautions required while riding fire apparatus.

16-I.08 Trainee shall define techniques for action when trapped or disoriented in a fire situation or in a hostile environment.
NFPA 1001 Annex 5.3.9

16-I.09 Trainee shall identify the elements and purpose of a Rapid Intervention Team/Crew per NFPA 1407
NFPA 1407

16-I.10 Trainee shall define procedures to be used in electrical emergencies.
NFPA 1001 4.3.3, 4.3.18

A. identifying four (4) agents for extinguishing fires in electrically energized equipment.
B. identifying minimum safe distances from which he can apply water fog pattern to electrically energized equipment as determined by the voltage.
C. identifying safe and unsafe areas for the placement of ground ladders near electrically energized wires.
D. identifying types of conductive vs. non-conductive ladder construction materials.
E. explaining the safest action to be taken when aerial apparatus may come into contact with electrically energized overhead wires.
F. defining procedures for extinguishing transformer fires on utility poles.
G. identifying photovoltaic power systems, battery storage systems.

16-I.11 Trainee shall identify the 16 life safety initiatives.
NFPA 1001 4.1.1
Completion of "Courage to be Safe" meets the requirements of this objective.

16-I.12 Trainee shall identify the signs and symptoms of behavioral and emotional distress
NFPA 1001 4.1.1

Firefighter I - There are no objectives required for this certification level.
Firefighter II - There are no objectives required for this certification level.

SECTION 17 GROUND COVER FIRE FIGHTING

Live Fire Training Prerequisite – There are no objectives required for this certification level.

Firefighter I

17-I.01 Trainee shall correctly define wildfire terms as used in the fire service:
NFPA 1001 4.3.19

A. mop-up
B. direct attack
C. indirect attack
D. fuel
E. backfire/burnout
F. barrier
G. topography
H. suppression
I. ground fires
J. parts of wildland fire
K. fire behavior
L. incident commander
M. incendiary fire
N. mutual aid
O. fire season
P. convection column
Q. tools used in ground cover fires
R. crown fires
S. surface fires

17-I.02 Trainee shall, given a specific wildland fire situation, describe the effect of fuel, weather and topography on wildland fire, and predict the direction and speed of the fire spread.
NFPA 1001 4.3.19

17-I.03 Trainee shall, given a specific wildland fire situation, construct hand and wet fire lines using safe and effective both direct and indirect line construction techniques to control the fire within less than 10% increase in the perimeter.
NFPA 1001 4.3.19

17-I.04 Trainee shall, given a specific wildland fire situation as reported, locate the fire relative to his present location and describe the factors involved to respond safely to that location within the response time standards of the department.
NFPA 1001 4.3.19

17-I.05 Trainee shall, given a specific wildland fire situation, analyze (size up) the situation and using proper procedures, shall organize this information into a clear, concise report of conditions necessary to develop an initial plan of action to control the fire within 2 hours.
NFPA 1001 4.3.19

17-I.06 Trainee shall, given a specific wildland fire situation with control lines established, insure complete extinguishment of the fire by employing recognized mop-up techniques.
NFPA 1001 4.3.19

17-I.07 Trainee shall, given a residence within a wildland area, identify typical fire hazards and recommend corrective actions which are within his authority and ability to do.
NFPA 1001 4.3.19

17-I.08 Trainee shall, given a specific wildland fire situation, list and describe recognized safety practices and corrective actions to be taken to ensure that the department does not have any injuries due to the wildfire suppression effort.
NFPA 1001 4.3.19

Firefighter II - There are no objectives required for this certification level.

PLEASE NOTE: IT IS RECOMMENDED THAT THE TEXAS A&M FOREST SERVICE COURSE "WILDLAND FIRE SUPPRESSION FOR VOLUNTEER DEPARTMENTS", OR ITS EQUIVALENT, IS USED AS REFERENCE MATERIALS IN MEETING THE OBJECTIVES OF THIS SECTION.

SECTION 18 HAZARDOUS MATERIALS

Effective February 1, 2020 all objectives transferred to HazMat Awareness & Operations certification.

SECTION 19 FIREFIGHTER PPE & SCBA

Live Fire Training Prerequisite

19-I.01 Trainee shall identify the various types of fire service protective clothing such as structural, wildland, and ARFF. Trainee shall also identify their components:
NFPA 1001 4.1.2, 4.3.9

A. turnouts
B. helmets
C. gloves
D. boots
E. SCBA

19-I.02 Trainee shall identify procedures for inspecting, cleaning, and maintaining the components of a personal protective ensemble after each use.
NFPA 1001 4.1.2

19-I.03 Trainee shall describe the limitations of personnel working in a personal protective ensemble.
NFPA 1001 4.3.1.A

19-I.04 Trainee shall identify at least four (4) hazardous respiratory environments encountered in fire fighting.
NFPA 1001 4.3.1.A

19-I.05 Trainee shall demonstrate the use of SCBA in conditions of obscured visibility.
NFPA 1001 4.3.5, 4.3.5.A-B, 4.3.9

19-I.06 Trainee shall identify the physical requirements of the wearer, the limitations of the self-contained breathing apparatus, and the safety features of types of SCBA available to local AHJ.
NFPA 1001 4.3.1.A-B

19-I.07 Trainee shall demonstrate donning SCBA while wearing protective clothing:
NFPA 1001 4.3.2.A-B

A. in a seated position on an apparatus with a seat belt on
B. Compartment Method
C. Overhead Method
D. Coat Method

19-I.08 Trainee shall demonstrate that the SCBA is in a safe condition for immediate use.
NFPA 1001 4.3.1

19-I.09 Trainee shall perform field reduction of contaminants.
NFPA 1001 4.5.1

19-I.10 Trainee shall demonstrate the use of SCBA in conditions of restricted passage.
NFPA 1001 4.3.1.A-B

19-I.11 Trainee shall demonstrate replacement of an expended cylinder on an SCBA assembly with a full cylinder.
NFPA 1001 4.3.1.B

19-I.12 Trainee shall identify the procedure for daily inspections and maintenance of SCBA.
NFPA 1001 4.3.9.A, 4.5.1, 4.5.1.A-B

19-I.13 Trainee, given each type of SCBA, shall demonstrate the correct procedure for recharging.
NFPA 1001 4.3.1.A-B

19-I.14 Trainee shall demonstrate the following emergency techniques using SCBA to:
NFPA 1001 4.3.5.B

A. Emergency Preparedness
B. Control Breathing Techniques
C. Communications Procedures

19-I.15 Trainee shall identify and define the operational components of all types of self-contained breathing apparatus.
NFPA 1001 4.3.1, 4.3.1.A

19-I.16 Trainee, without compromising the rescuers respiratory protection, shall demonstrate rescue procedures for the following:
NFPA 1001 4.3.9.B

A. a firefighter with functioning respiratory protection
B. a firefighter without functioning respiratory protection
C. a civilian without respiratory protection

19-I.17 Trainee shall demonstrate the operation of a Personal Alert Safety System (PASS) device.
NFPA 1001 4.3.1.B

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 20 ROPES

Live Fire Training Prerequisite – There are no objectives required for this certification level.

Firefighter I

20-I.01 Trainee, when given name, picture, or actual knot used by the AHJ, shall identify it and describe the purpose for which it would be used:

NFPA 1001 4.3.20.A

A. Becket (sheet) bend
B. bowline
C. clove hitch
D. bowline on a bight
E. half hitch
F. figure-eight
G. figure-eight on a bight
H. figure-eight follow through

20-I.02 Trainee shall identify rope safety procedures.

NFPA 1001 4.1.2

20-I.03 Trainee shall identify and/or demonstrate the terms used when tying a knot or hitch used by the AHJ:

NFPA 1001 4.1.2, 4.3.20.A

A. standing part when tying a knot or hitch
B. running part when tying a knot or hitch
C. a bight when tying a knot or hitch
D. a loop when tying a knot or hitch
E. a round turn when tying a knot or hitch
F. half hitch when tying a knot or hitch

20-I.04 Trainee shall identify the construction characteristics and appropriate uses of both natural and synthetic fiber ropes:

NFPA 1001 4.1.2, 4.3.20.A

A. Characteristics of natural fiber (manila) ropes for utility use only:
    1. moisture retention
    2. floatability
    3. resistance to rot, mildew and attack by marine organisms
    4. resistance to surface abrasion
    5. resistance to acids, alkalis and solvents
    6. safe working strength of new rope: 3/8" manila, ½" manila, 5/8" manila, ¾" manila
B. Characteristics of synthetic ropes:
    1. moisture retention
    2. floatability
    3. resistance to rot, mildew and attack by marine organisms
    4. resistance to surface abrasion
    5. resistance to acids, alkalis and solvents
    6. safe working strength of new rope of:
        a. ½" nylon, Dacron, polypropylene, braided nylon cover with nylon core;
        b. 5/8" nylon, Dacron, polypropylene, braided nylon cover with nylon core;
        c. ¾" nylon, Dacron, polypropylene, braided nylon cover with nylon core
C. Uses of ropes:
    1. hoisting tools and equipment
    2. securing tools and equipment to immovable objects

3. rescue

20-I.05 Define a life safety rope and one and two-person life safety rope including:
NFPA 1001 4.1.2, 4.3.20.A

A. maximum working load
B. safety factor
C. minimum breaking strength

20-I.06 Trainee, when given the proper size and amount of rope, shall demonstrate tying the following knots used by the AHJ:
NFPA 1001 4.1.2, 4.3.20.A

A. Becket (sheet) bend
B. bowline
C. clove hitch
D. bowline on a bight
E. half hitch
F. figure-eight
G. figure-eight on a bight
H. figure-eight follow through

20-I.07 Trainee, using an approved knot, shall hoist any selected forcible entry tool, ground ladder, or appliance to a height of at least 20':
NFPA 1001 4.1.2; 4.3.20.A

A. a 1½" or 1¾" dry hose with nozzle attached
B. a 2½" or 3" dry hose with nozzle attached
C. a 1½" or 1¾" charged hose
D. an axe
E. a 6' or 8' pike pole
F. a single 14' or 16' (wall) ladder
G. a 10' collapsible ladder
H. a 14' combination ladder
I. working as a member of a team, a 24' extension ladder
J. a 15 lb. CO_2 fire extinguisher
K. a 20 lb. dry chemical fire extinguisher
L. an electric smoke ejector
M. a pair of bolt cutters

20-I.08 Trainee shall demonstrate the technique of inspection, cleaning, maintaining, storage, safety procedures, and reasons for placing a rope out of service.
NFPA 1001 4.1.1, 4.3.20.A

20-I.09 Trainee shall use a rope to tie ladders, hose, and other equipment so as to secure them to immovable objects as follows:
NFPA 1001 4.1.1; 4.3.20.A

A. secure a ladder tip to a building,
B. secure a 1½" or larger charged line to a ladder
C. secure a hose roller

20-I.10 Trainee shall select and tie a rope between two objects at least 15' (4.6m) apart, which will support the weight of a firefighter on the rope.
NFPA 1001 4.3.20.A

20-I.11 Trainee, given 20' tubular webbing, shall demonstrate the proper tying of a Swiss seat.
NFPA 1001 4.3.20

20-I.12 Trainee, given the proper information, shall list the equipment needed to complete rappelling procedure.
NFPA 1001 4.3.20

Firefighter II - There are no objectives required for this certification level.

SECTION 21 PORTABLE EXTINGUISHERS

Live Fire Training Prerequisite

21-I.01 Trainee shall identify the classification of types of fires as they relate to the use of portable extinguishers as follows:

NFPA 1001 4.3.16.A

A. Identify the five (5) classes of fire:
   1. Class A
   2. Class B
   3. Class C
   4. Class D
   5. Class K

B. Identify examples of fuels for each class of fire:
   1. Class A
   2. Class B
   3. Class C
   4. Class D
   5. Class K

21-I.02 Trainee, given a group of differing extinguishers, shall identify the appropriate extinguishers for each class of fire as follows:

NFPA 1001 4.3.16.A

A. Class A fire:
   1. pump tank water extinguisher
   2. stored-pressure water
   3. foam
   4. dry chemical (multi-purpose agent)

B. Class B fire:
   1. dry chemical (ordinary base)
   2. dry chemical (multi-purpose)
   3. CO_2 (carbon dioxide)
   4. foam
   5. Halon 1211

C. Class C fire:
   1. dry chemical (ordinary base)
   2. dry chemical (multi-purpose)
   3. CO_2 (carbon dioxide)
   4. Halon 1211

D. Class D fire:
   1. powder extinguishing agents for metal fires.

E. Class K
   1. wet chemical systems

21-I.03 Trainee shall identify the portable fire extinguisher rating system (Underwriters Laboratories, Inc.):
NFPA 1001 4.3.16.A

A. the basic symbols for the classes of fires
B. the picture-symbol labeling system for the selection of fire extinguishers
C. the numerical rating system for Class A & B fire extinguishers
D. the test procedure for rating Class C portable extinguishers
E. the test procedure for rating Class D portable extinguishers
F. portable extinguishers suitable for more than one class of fire
G. the test procedure for rating Class K portable extinguishers

21-I.04 Trainee shall demonstrate the use of portable extinguishers for each class of fire as follows:
NFPA 1001 4.3.16.B

A. extinguish a class A fire using a pump tank water extinguisher
B. extinguish a class B fire using a dry chemical extinguisher
C. extinguish a class B fire using a CO_2 extinguisher

21-I.05 Trainee shall identify and explain the extinguishing effect needed for each class of fire as follows:
NFPA 1001 4.3.16.B

A. Class A fire:
    1. cooling
    2. smothering
B. Class B fire:
    1. smothering
    2. blanketing
C. Class C fire:
    1. smothering & non-conductive
D. Class D fire:
    1. must be non-reactive with burning material
E. Class K fire:
    1. oxygen depletion & vapor suppression

21-I.06 Trainee shall identify and explain fire extinguisher characteristics and operations of:
NFPA 1001 4.3.16

A. Pump tank water extinguishers, stored-pressure water extinguishers, aqueous film forming foam extinguishers, Halon 1211 extinguishers, CO_2 extinguishers, dry chemical extinguishers (ordinary base agent), and dry chemical extinguishers (multi-purpose base) as to their:
    1. size
    2. applicable to what class of fires
    3. stream reach under normal conditions
    4. discharge time under normal conditions
    5. protection from freezing
    6. methods of operation

Firefighter I - There are no objectives required for this certification level.

Firefighter II - There are no objectives required for this certification level.

SECTION 22 BUILDING CONSTRUCTION

Live Fire Training Prerequisite

22-I.01 Trainee shall describe the relationship of building construction to fire behavior by:
NFPA 1001 4.3.4.A, 4.3.12.A

A. identifying the types of loads placed on a structure
B. identifying loads as to the direction in which they are placed on structural members
C. describing the effect of loads on various materials
D. identifying terms associated with building construction

22-I.02 Trainee shall identify the various types of building construction characteristics:
NFPA 1001 4.3.12.A

A. Type 1 – Fire Resistive
B. Type 2 – Noncombustible or limited combustible
C. Type 3 – Ordinary
D. Type 4 – Heavy Timber
E. Type 5 – Wood

22-I.03 Trainee shall describe the various structural elements in building construction by:
NFPA 1001 4.3.4.A, 4.3.12.A

A. defining fire resistance
B. identifying foundation assemblies, foundation walls, floor assemblies, ceilings and ceiling assemblies, various types of wall construction, roof types, roof coverings, roof supports
C. identifying potential hidden spaces in structural elements that would allow for communication of fire and smoke

22-I.04 Trainee shall identify the various building services for:
NFPA 1001 4.3.4.A, 4.3.12.A

A. movement of people throughout a structure; elevators and stairways
B. mechanical operations of a building; heating, ventilating and air conditioning systems, utility chases and vertical shafts
C. emergency accessibility in buildings; windowless walls, access panels, roof hatches, smoke and heat vents, and skylights

22-I.05 Trainee shall identify door and window assemblies by:
NFPA 1001 4.3.4

A. various types
B. describing fire doors and their method of operation
C identifying typical types of door construction
D. identifying various window assemblies
E. identifying types of windows

22-I.06 Trainee shall identify signs of potential collapse of a structure:
NFPA 1001 4.3.12.A

A. cracks in walls
B. sagging roof
C. walls out of line

22-I.07 Trainee shall define the following terms as they relate to building construction:
NFPA 1001 4.3.4

A. veneer wall (exterior)
B. party wall
C. fire wall
D. partition wall
E. cantilever or unsupported wall
F. load bearing

Firefighter I - There are no objectives required for this certification level.

Firefighter II

22-II.01 Trainee shall identify causes of potential collapse in buildings:
NFPA 1001 5.3.2

A. deterioration
B. forces associated with the violence of a fire
C. structural modifications found during pre-fire planning

22-II.02 Trainee shall describe at least three (3) hazards associated with light-weight truss construction.
NFPA 1001 5.3.2

22-II.03 Trainee shall describe the effects of fire and fire suppression activities on the following building materials:
NFPA 1001 5.3.2

A. wood
B. masonry, i.e. brick, block, stone
C. cast iron
D. steel
E. reinforced concrete
F. gypsum wall board
G. glass
H. plaster on lathe