LEVEL I – General Work Elements

Core Work Elements:

41001 INSPECTION PROCEDURES
Assist in the inspection and testing of water-based fire protection systems. Record observations and data. (NFPA 13, NFPA 25)

41002 NFPA STANDARD DEFINITIONS
Understand NFPA standard definitions, including "authority having jurisdiction", "approved", "inspect", "listed", "maintenance", "shall", "should", "test", etc. as they apply to water-based fire protection systems. ("Definition" and "Scope" sections of NFPA standards)

41003 BASIC COMPONENTS
Based on manufacturer’s literature and fire protection texts, understand operation and use of sprinklers, dry/alarm/deluge valves, and other related devices. Know the purpose of product approval and testing standards organizations such as ASTM, FM, UL, and ULC.

41004 BASIC METRIC UNITS AND CONVERSIONS
Perform conversions to and from basic metric (SI) units. (IEEE/ASTM SI 10)

41005 SYSTEM APPURTENANCES
Recognize correct piping arrangements pertaining to water supply connections, fire department connections, water supply test pipes, gauges, valves, inspector’s test connection, drains, etc. (NFPA 13)

41006 ROLE OF THE INSPECTOR
To inspect, test, report and document any and all system abnormalities. To instruct the owner’s representative on conducting inspection and testing procedures. (NFPA 25)

41007 ON-SITE INSPECTION AND TESTING PREPARATION
Know the proper tools for inspection and testing of water-based systems. Know the frequency and methodology for inspection and testing. Know what forms and documents the owner or his/her representative must be given upon completion of the inspection and testing.

41008 GENERAL SYSTEM TERMINOLOGY
Comprehend the general and special terms used in the water-based extinguishing systems vocabulary. Understand the specific meaning of terms frequently used in the inspection and testing of water-based systems. (NFPA 13, NFPA 14, NFPA 20, Detection, Treatment and Prevention of Microbiologically Influenced Corrosion in Water-Based Fire Protection Systems)

41009 INSPECTOR’S SAFETY CONCERNS
Recognize hazardous materials and environments. Know and use appropriate safety precautions. (OSHA 29 CFR, Parts 1910 and 1926)

Non-Core Work Elements

41013 FIRE PROTECTION DESIGN SYMBOLS
Recognize standard design symbols common to the fire protection industry. (NFPA 13, NFPA 170)
STANDPIPE AND HOSE SYSTEM COMPONENTS
Recognize the characteristics of standpipe and hose system components, including their purpose, function, and operation. Understand basic system terminology. (NFPA 13, NFPA 14)

CLASSIFICATION OF OCCUPANCIES
Recognize hazard classification and occupancy classification concepts as defined in NFPA standards. (NFPA 13)

FIELD IDENTIFICATION OF SPRINKLERS
Recognize the temperature rating, orifice size, and orientation of sprinklers. Identify the various types of sprinklers available. Determine if decorative sprinklers were factory coated to meet their listing and/or approval. (NFPA 13, NFPA 25, UL Fire Protection Equipment Directory)

AUTHORITIES HAVING JURISDICTION
Recognize the role of state and local health authorities, fire departments, and insurance companies. Know the requirements for reporting system conditions. (NFPA 25)

LEVEL I - Special Work Elements

CONTRACTS AND FORMS
Recognize the role of contracts and forms in determining the scope of work to be performed. Understand the inspector’s scope of responsibility. Understand the owner’s responsibility.

PRIVATE FIRE SERVICE MAIN SYSTEM COMPONENTS
Recognize the characteristics of private fire service mains and their appurtenances, including their purpose, function, and operation. Understand basic system terminology. (NFPA 13, NFPA 24)

LEVEL II - General Work Elements

Core Work Elements

SPRINKLER OBSTRUCTION, POSITION, AND CONDITION
Verify proper location and position of sprinklers with respect to obstructions, heat sources, and other special building features. Understand installation requirements for special sprinkler types (extended coverage, large-drop, ESFR), and know the minimum/maximum allowable distances permitted by codes and standards in effect presently and/or at the time of original installation. Report on condition of sprinkler heads. Report observations. (NFPA 13)

WET PIPE SYSTEMS
Verify proper installation of wet pipe systems. Report observations. (NFPA 13)

DRY PIPE SYSTEMS
Verify proper installation of dry pipe systems. Report observations. (NFPA 13)

TESTING OF GENERAL SYSTEM COMPONENTS
Understand the test requirements for water-based fire suppression system testing. Understand what must be tested as well as the frequency and methodology. (NFPA 25)

GENERAL PURPOSE VALVES INSPECTION
Inspect and test general purpose valves such as OS&Y valves, post indicator valves, roadway box valves, check valves, butterfly valves, detector check valves, relief valves, hydrants, and preaction valves. Record observations and data. Report findings. (NFPA 13, NFPA 25)
43006  WATER SUPPLY REQUIREMENTS
Verify that the water supply type, location and arrangement satisfies system requirements.
Report observations. (NFPA 13, NFPA 24)

43007  INSPECTION OF GENERAL SYSTEM COMPONENTS
Understand inspection requirements for water-based fire suppression systems, recognize
typical fire sprinkler system components. (NFPA 13)

43008  IMPAIRMENT PROCEDURE
Recognize the conditions for temporary impairment of water-based fire protection systems
and the appropriate notification and tagging procedures. (NFPA 25)

43009  INSPECTION PREPARATION
Plan the inspection and testing of water-based fire protection systems. Understand the tools
necessary for inspection and testing. Understand proper notification protocol. (NFPA 25)

Non-core Work Elements

43011  STANDPIPE AND HOSE SYSTEMS INSPECTION AND TESTING
Verify that the standpipe and hose systems being inspected conform to the requirements of
NFPA and other standards in effect presently and/or at the time of original installation.
Report observations. (NFPA 13, NFPA 14, NFPA 25)

43012  NO-FLOW TRIP TESTS
Perform no-flow trip tests on dry, pre-action, and deluge systems. Record data and report
findings. (NFPA 25)

43015  LOCAL ALARM DEVICES INSPECTION
Inspect and test local alarm devices. Record observations and data. (NFPA 25)

43016  SUPERVISORY ALARM DEVICES INSPECTION
Inspect and test supervisory alarm devices. Record observations and data.
(NFPA 25, NFPA 72)

Level II - Special Work Elements

44001  RESIDENTIAL SYSTEMS INSPECTION
Verify proper installation of residential sprinklers for one- and two-family dwellings, multi-
story buildings, and manufactured homes. Report observations.
(NFPA 13, NFPA 13D, NFPA 13R)

44012  PREACTION AND DELUGE SYSTEMS INSPECTION
Verify proper installation. Report observations. (NFPA 13, NFPA 25)

44013  FULL FLOW TESTS OF DRY-PIPE SYSTEMS
Perform full flow trip test of dry-pipe valve(s), including reset of system to operational
condition. Record data and report findings. (NFPA 25)