Understanding Fire Alarm
Requirements & Inspections

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Fire Alarm Requirements are structured through a system of codes. Codes provide guidance and uniformity. They ensure Life Safety and protection of property by regulating Fire Alarm System standards. The main standard for codes in the Fire Safety Industry is the NFPA.
What Is NFPA?

- The National Fire Protection Agency.
- Originated in 1896 by a group of insurance firms to standardize fire sprinkler systems.
- Today they minimize risk & effect of fire by setting a standard criteria of regulations.
NYS & LI Municipalities have adopted NFPA 72 as their Guideline for Fire Code Regulation. However, there are occasions whereby a Municipality will differ from NFPA 72 on specific code regulation.

An Example would be Full Area Smoke Detection.
Code can be driven by technology changes and the constant flurry of changes in technology and terminology can make it confusing to keep up with. It is important to have a basic understanding of some of these changes. We will start by taking a look at Central Station Monitoring codes.

Here is a short list of some of the terminology being used today.

- POTS- Plain Old Telephone Service
- VOIP_ Voice Over Internet Provider
- MFVN – Managed Facilities Based Voice Network
- PSTN- Public Switched Telephone Network
NFPA and local AHJ’s (Authorities having jurisdiction) recognized that new technologies such as VOIP, are increasingly being used to connect to Fire Alarms. Some of their concerns were reliability of the voice service and continuing operation during power outages. Performance requirements for voice communications technology and providers are the main concern and not so much the specific voice communication technology.
What is MFVN?

A Managed Facilities-Based Voice Network is a physical network owned and operated by a service provider that delivers traditional telephone service via a loop start analog telephone interface. They are interconnected with public switched telephone network (PSTN) and provide dialtone to end users.

MFVN providers include cable operators and telephone companies, but do not include internet based providers such as Vonage and Magic Jack.
A Managed Facilities-Based Voice Network (ie. Cablevision Systems) is, as of this date, an acceptable means of fire alarm signal transmission by fire alarm systems located within the Town of Brookhaven.

New And Existing Approved Fire Alarm Systems

A change to an MFVN signal transmission path or request submitted with a permit for application to install, requires the submission of documentation on the MFVN providers letterhead attesting that:

- The signal transmission path utilizes an approved method that is listed and tested in accordance with UL864 for fire alarm signal transmissions.
- The MFVN communications equipment installation at the premises is compliant with all of the functionality equivalence requirements set forth in Annex A.3.3.141 of NFPA 72 2010 Edition.
- A manufacturer’s cut sheet for the MFVN communications equipment installed must also be submitted.
All Plans and drawings must be prepared by a NY State licensed PE.

Permits must be obtained prior to the start of work.

Plans must be filed with a licensed Installer/Contractor on Record.

Contractor information and Equipment specified is regarded differently in the various jurisdictions.

For Example in Nassau County, changes require resubmission of plans.

In most Suffolk County Towns, comparable can be substituted.
Key Points For Building Owners

- Approved plans must be obtained first before installing, modifying, altering, replacing renovating or remodeling any fire alarm system.
- It is unlawful to operate or maintain any fire alarm system without first obtaining a fire alarm system permit.
- New plans are needed if a change of occupancy use for a building occurs and this requires a manual or automatic fire alarm system.
A reconstruction project in a building which would require a manual or automatic fire alarm system. A reconstruction project is one where the reconfiguration of space, as indicated on the construction documents, is such that it adversely impacts the means of egress shared with spaces outside the work area; affects the entire occupancy; or totals more than two thirds of the building area. This value shall not include the cost of the land and shall relate to the structure only.
Key Points For Building Owners

When Plans are Needed

- Any fire alarm or fire & smoke detection system is installed, modified, altered, replaced, renovated or remodeled.
Fire Alarm System Testing & Inspection Procedures

Why Do We Inspect and Test Fire Alarm Systems?

The most important factor in performing this service is to ensure the equipment performs as required. This guarantees Life Safety.

Also, to ensure the installation of the system meets all of the code requirements and the manufacturer’s instructions.
It is important for building owners and property managers to know what to expect from their service providers inspection process, so that they can ensure the inspections are being performed properly. Ultimately the building owner is responsible for the fire alarm system functioning properly and meeting code requirements. Failure to do so can result in Violations, Summonses and Fines.
Preventing For Inspections And Tests

- Inspections should be scheduled according to the frequencies listed by NFPA and municipal requirements.
- Inspections require the testing of the Fire Alarm System and its devices.
- Appropriate notification to Building Occupants including Tenant Spaces, Security etc.
Preparation For Inspections And Tests cont.

- Verify that all areas to be inspected are open and accessible including protected areas such as Sprinkler Room, Boiler Room, Electrical Room etc.

- The Monitoring Central Station must called so the system can be taken offline. Verify the account #, name, and address. Note the operators ID and be sure to note it in the Fire Log Book.
The Fire Alarm Service Provider will check the FACP and Devices.

The FACP is checked for:

- Physical Damage
- AC & Battery Power
- Lamps and LEDs are working
- Trouble Conditions Visual and Audible
- Supervisory and Supply Circuits
- Wire terminations are secure
Actual Fire Inspection

- All Remote Annunciators are checked.
- Look at Devices and Circuits for proper and secured mounting.
- Check for painted over, substance damage, tampering and abuse.
- Clean Smoke Detectors, replace when necessary and make sure there are no obstructions.
Actual Fire Inspection

- Test Automatic Evacuation Signal.
- Ensure sounding devices are audible and can be heard throughout the location.
- Ensure visual devices can be easily seen.
Actual Fire Inspection

- Visually inspect Manual Pull Stations so they can be clearly seen by occupants and test at appropriate intervals.
- Check fixed extinguishing systems connected to the alarm.
- Automatic Door Releases are tested.
- Fan Shut Down Circuits are tested.
- Water Flow And Tamper Switches are tested.
- Gas shut offs are tested.
NFPA recommends that a log book be kept noting all tests, inspections and maintenance. It must remain in the building for the Fire Departments review. Records shall be retained until the next test and for 1 year thereafter.
There are significant benefits to having staff members educated as to how a Fire Alarm System Works. It will ensure life safety of building occupants and save money, by knowing what services should be completed by vendors and to help remain compliant with municipal codes to avoid fines.

In our efforts to give back to the community, Briscoe Protective Systems offers a Free basic class on Fire Alarm Systems to help train your staff.

Contact us to set up an appointment.
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