

PART 5 - FIRE ALARM AND DETECTION SYSTEM

5.1 GENERAL REQUIREMENTS

- A. Provide remote panels at Fire Department access points.
- B. Every fire alarm control panel shall be protected with an automatic detection device in accordance with NFPA 72 1-5.6.
- C. Verify edition of NFPA 72 in effect at time of the project design and construction.
- D. Identification:
 - 1. All fire alarm conduits shall be identified by national color coding standards.
 - 2. All junction boxes shall be permanently labeled.
 - 3. All alarm wiring shall be identified by tags at every enclosure.
 - 4. A standard fire alarm tag shall be placed on the fire alarm control panel each time a contractor installs, repairs, modifies, or inspects a fire alarm system. The old tag shall be removed prior to placing the new tag. The tag must be punched and not just marked with a pen.
- E. A "Certificate of Completion" shall be prepared for each system when it is installed or improved. A standards form as shown in NFPA 72 Figure 1-7.2.1 shall be used. A copy of this form shall be forwarded to:

**University of Medicine and Dentistry of New Jersey
Environmental and Occupational Health and Safety Services
65 Bergen Street
Newark, NJ 07107**

An inspection and testing report shall be completed each time a contractor modifies, repairs, and/or tests a fire alarm system. The "Inspection and Testing" report shall be similar to the one shown in NFPA 72 Figure 7-5.2. The report shall also be sent to UMDNJ EOHSS, at the address listed above.

- A. All site specific software and programming utilized in the system must be the property of UMDNJ and shall be turned over to Physical Plant prior to project completion.
- B. Contractor to provide site and software training; minimum of 4 hours each.
- C. Include all interconnects and wiring to each unit for fan system shutdown, smoke dampers, elevator recall, and all other devices/systems as required by code.
- D. Fire alarm systems shall be digital, multiplexed and provide a minimum of 2 channels to allow transmission of at least 2 different voice over alarm messages simultaneously.
- E. The Department of Community Affairs is the regulatory body with jurisdiction over all UMDNJ fire alarm system installations.
- F. Provide at least 5 additional points of auxiliary annunciation in addition to the code required connection to a central station or direct fire department connection (Newark Campus). These points will report auxiliary annunciation to other owner systems at the owner's discretion.
- G. Final "as - built" plans to be provided on AutoCAD, owners latest format.

5.2 PRODUCTS:

A. ALARM SYSTEM:

1. Specify only Edwards EST 3 components.

B. SMOKE DETECTORS:

1. Specify Edwards EST 3 photoelectric smoke detectors.

C. HEAT DETECTORS:

1. Specify Edwards Rate-of-Rise heat detectors with fixed temperature settings.

D. MAGNETIC DOOR HOLDERS:

1. Specify Edwards magnetic door holders on fire and smoke doors where Owner has the need to keep doors open for traffic flow.

5.3 INSTALLATION:

A. All fire alarm system contractors shall be state certified "EC" or "EF" contractor by the New Jersey Electrical Contractor's Licensing Board and shall be certified Edwards Dealers.

1. The above licensed contractor shall be responsible for installing all parts of the fire alarm system including, but not limited to, conduit, wiring, fire alarm control panels, initiation devices, audible/visual devices, and smoke/heat detectors.
2. The above licensed contractor shall connect devices such as fire sprinkler tamper and flow switches as provided by the other trades.
3. Contractors other than "EC" or "EF" are not permitted to install any portion of the fire alarm system.

B. MOUNTING STANDARDS:

1. Combination horn/strobe devices shall be mounted such that the bottom of the strobe lens is 80" above the finished floor.
2. Strobe only devices shall be mounted such that the bottom of the strobe lens is mounted at 80" above the finish floor.
3. Horn or other audible devices shall be mounted such that the bottom of the device lens is mounted at 90" above the finish floor.
4. A construction tolerance of +/- 1/2" shall be permitted. Devices mounted outside of this range shall be relocated prior to acceptance of the project.