



BRIGHTON AREA FIRE AUTHORITY

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June 19, 2018

Fire Alarm Contractors

RE: Fire Alarm Credential & Submittal Requirements

To Whom It May Concern:

The following applies to all fire alarm projects in the City of Brighton, Brighton Township and Genoa Township. The State of Michigan adopts the Michigan Building Code 2015 edition, which references NFPA 72, National Fire Alarm, and Signaling Code, 2013 edition and NFPA 70, National Electric Code (NEC) 2014 as amended by Part 8 – Rules. Other standards may be referenced, Mechanical Code and Fire Code; however, the system shall be designed and installed per these requirements.

All alarm contractors performing any alteration work on a fire alarm system, which is not regular maintenance, shall submit for plan review and apply for an electrical permit. The submittal documents shall be prepared by a professional engineer or architect registered in the State of Michigan; or a person who has achieved NICET Level III certification (or higher) in fire alarm system layout (information can be found at www.nicet.org). A Level II is acceptable if supervised by a Level III or higher, or a professional engineer. (See MBC section 107). Supporting documentation shall be included with all submittals and shall comply with Chapter 7 of NFPA 72.

Submittals:

Submittals shall be collated and assembled as complete sets. The sorting of **ALL** documents shall be completed by the submitting contractor, prior to submission. Plans shall be properly folded, not rolled. Special circumstances apply, regarding size of project (Please make notification ahead of time).

Additional administrative fees will apply to the review for lack of compliance.

The title page shall contain the job name and address, whom the submittal is being sent to and the name and address of the company submitting the information.

All submittals shall include appropriate supporting information on the fire alarm system, including written scope of work, manufacturer installation instructions, clarifications and notes to support the design of the system.

Each submittal shall include One Electronic (.pdf) and Three (3) Paper copies of each drawing sheet, and all specifications, cut sheets and details, etc.

Minimum Requirements:

Submittal documents for fire alarm systems (and sprinkler supervisory systems) shall include the following items:

- Written scope of work, indicating the design standards, overview of the installation, and intent of the system.
- A floor plan indicating the use of all rooms.
- Location of all alarm initiating and notification appliances.
- Location of all alarm control and trouble signaling equipment.
- Remote Annunciator Location(s) (if necessary).
- Power connection (Panel & Circuit ID).
- Battery calculations.



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- Conductor type and sizes.
 - Voltage drop calculations.
 - Manufacturers, model numbers and listing information for equipment, devices and materials. (Provide details and cut sheets.)
 - Details of ceiling height and construction.
 - The interface of fire safety control functions
 - Copy of Monitoring Certificate
 - Communication Lines/Means of Communication

This is designed to guide fire alarm contractors through the general process of fire alarm submittals. This is not intended to be all inclusive; merely a guide of what is required. The information included in the submittal that is prepared by an appropriate system designer is crucial during the application period. The submitting design professional shall prepare drawings in accordance with the MBC 2015, NFPA 72, and IFC 2018.

Drawings:

- All sheets to be same size ("C" size 24" x 36" preferred).
- All sheets to be same scale, except site plan.
- Preferred scale 1/8" minimum.
- Drawing number, revision and date.
- Name and address of project.
- Name and address of installing contractor.
- Reviewed by section on title block showing NICET certification sub-field, level, number, and expiration date if applicable.
- Compass points. Plan & Sheet orientation if different
- Sheet title.
- Clear and legible plans suitable for photocopying.
- Name and address of building owner.
- Name and telephone number of installation company contact person.
- Contractor's license classification and number.
- Name and address of general contractor. (if applicable)
- Name and address of electrical contractor. (if applicable)
- Square footage of each building and total.
- Building occupancy type.
- Type of system: Fire Alarm, conventional hardwired, wireless, addressable, analog addressable, Class "A", Class "B".
- List applicable codes and standards with editions used in the system design.
- Sequence of operation.
- Identify if wiring is enclosed in conduit, open wiring, power limited or non-power limited.
- Contractor notes with reference to this project.
- Fire Department notes with reference to this project.
- Name and location of monitoring company.
- Scope of work (written).
- Box for AHJ approval stamp.
- Wiring legend.



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- Symbol list with manufacturer, part number and back box, etc.

Site Plan Sheet:

- Site plan.
- Scale of site plan.
- Scale bar graph.
- Main control panel and all sub-control panel locations.
- Fire Alarm annunciators.

Floor Plan Sheets:

- Building floor plan.
- Sheet title.
- Scale of sheet 1/8" minimum.
- Scale bar graph.
- Location of all doors, windows, walls (interior and exterior).
- Intended use of each room (i.e. storage, classroom, restroom, vestibule).
- Location of all air supply and return registers.
- Ceiling heights, ceiling details and configuration. May be shown on an additional sheet with reference key.
- Full height cross section of building. May be shown on an additional sheet with reference key.
- Mounting heights of devices.
- Location of main fire alarm control panel.
- Show location and source of emergency standby power.
- Location of all annunciator panels, sub-fire alarm panels, notification panels.
- Location of all power sources, panel numbers and breaker numbers for each piece of equipment.
- Show location of all fire alarm detection and notification devices along with temperature ratings and candela ratings (if applicable).
- Show location of all ancillary devices, (i.e. door holders, door closers, gas shut-off, fan shutdown, smoke dampers, etc.).
- Show location of all fire sprinkler risers, water flow switches and tamper switches.
- Show locations of all fire pumps and fire pump controllers.
- Show all remote indicators for hidden devices.
- Show zoning if a conventional system.
- Show wiring type, size, number of conductors and approximate wiring layout.
- Show all fire-rated or smoke-barrier walls.

Additional Sheets As Required:

- Show all areas of the building.
- Show all floors and all configurations.
- Cross sections.
- Ceiling details.
- Device wiring details.
- Device spacing.
- Mounting heights, show detail.

Riser Diagram Sheet:



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- Full riser diagram showing all devices as connected in the circuit, device addresses, room numbers and or names.
 - Include communication lines

Details Sheet:

- Circuit wiring diagram.
- Typical device and ancillary device wiring.

Voltage Drop Calculations Sheets:

- Voltage drop calculations for each notification appliance circuit showing wire size, circuit current, and voltage drop.
- Stand-by Battery Calculation Sheets (secondary power)
- Stand-by battery calculations for each control panel, sub-panel, power booster, central station transmitter, power supply. Details shall be sufficient to verify from the manufacturer installation sheet, floor plan and riser diagram.

Completion:

- If necessary, electronic As-Built drawings shall be submitted prior to request for final inspection.
- A record of completion will be required to be completed at time of final inspection.

If you have any questions on these requirements please do not hesitate to contact us at (810)229-6640

Yours in Fire Safety,

Rick Boisvert

Rick Boisvert

Fire Marshal