

DIVISION 28—FIRE PROTECTION – ALARM/MASS NOTIFICATION

FORMAT

1. Technical Specifications content and numbering system shall be based on the 2004 version of CSI MasterSpec.

BASIS OF DESIGN

1. BGSU Construction Standards shall not replace fully developed, project specific technical specifications. The Associate shall utilize the Standards as a minimum, to guide the design and execution in the field. Exceptions to these standards are allowed provided they are approved by Design & Construction department of the University.
2. All submitted substitute products shall be brought to the attention of Design & Construction prior to approval. Provide fully functional samples upon request.

RELATED SECTION

26—ELECTRICAL

27—COMMUNICATIONS

GENERAL PROVISIONS

1. Existing devices & wiring shall be removed completely after new devices & wiring have been installed. Nothing abandoned shall be left in place.
2. Shop drawings shall be prepared by person trained and certified by manufacturer in fire-alarm system design. Submittals shall be approved by authorities having jurisdiction prior to submitting them to Architect/Engineer. Shop drawings shall include, but not limited to: plans, elevations, sections, details, conductor sizes, voltage-drop calculations, termination locations and requirements, and battery-size calculations.

3. The Contractor shall be responsible for compliance with NFPA 70, NFPA 72, Ohio Building Code, Ohio Fire Code and AHJ performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for drawing preparation.
4. Installers shall be qualified and licensed by the State of Ohio to Service, Test, Repair and Install Fire Alarm / Detection Systems.
5. Existing Campus fire alarm network is fiber optic with a graphic PC (TSW) located in the BGSU Police Department's Dispatch Office in the College Park Office Building. Renovations or new networked Fire Alarm Control Panel shall include floor plan graphic updates to the graphic PC floor plans with initiating devices located.
6. The preferred fire alarm manufacturer and system shall be SimplexGrinnell 4100ES Voice panel networked via six (6) strand multi-mode optical fiber cable and two (2) copper communication cables in raceway to the Data room. Cabling as specified by BGSU ITS Department. Amplifier shall be minimum 100W with backup amplification.
7. The fire alarm panel is required to receive tornado warnings and other emergency messages received over the fire alarm fiber network from one of the two campus receivers or from a BGSU source.
8. Fire alarm speakers shall be round ceiling mounted in lay-in ceilings. In University Residences student rooms and apartments without lay-in ceilings, install square Wheelock E70-W speakers with manufacturer backboxes. Speakers shall be 70V. The Fire alarm addressable speaker model for wall mounting is 4906-9251. The Fire alarm addressable speaker model for ceiling

mounting is 4906-9254 which is to be used in all areas other than sleeping areas. Sleeping area audibility requirements for audible appliances per NFPA 72.

9. Fire alarm strobes shall be wall or ceiling mounted and installed in accordance with NFPA 70, NFPA 72, Ohio Building Code and ADA Guidelines. Combination speaker/strobes shall be used where applicable. Addressable notification devices shall be used for wiring flexibility.
10. Fire alarm pull stations shall be mounted on recessed outlet box and installed in accordance with NFPA 70, NFPA 72, Ohio Building Code and ADA Guidelines. If indicated as surface mount, provide manufacturer's surface back box.
11. For University Residences fire alarm pull stations, provide indoor protective shields, factory-fabricated, clear plastic enclosure hinged at the top to permit lifting for access to initiate an alarm. Lifting the cover actuates an integral battery-powered audible horn intended to discourage false-alarm operation.
12. In University Residences student rooms and apartments, system smoke detectors are required. Sounder bases are not required in University Residence Hall student rooms and apartments.
13. Surge protection shall be provided at each Fire Alarm Control Panel and anywhere wiring leaves or enters a building.
14. The Fire Alarm Control Panel shall connect to generator power in buildings that have a generator.
15. ALL-Hazards (such as tornado, evacuation, etc.) Mass Notification upgrade capability shall be included in the Fire Alarm system design.

16. Smoke detectors shall be photoelectric type.
17. All valves controlling water supply for automatic sprinkler system and water-flow switches on all sprinkler systems shall be electronically supervised according to the Ohio Building Code and NFPA 72.
18. -Exposed conduits in all buildings will be painted as directed by the Engineer/Architect. Covers of junction boxes used for the fire alarm system will be painted red.
19. Open cabling shall be permitted above lay-in ceilings in bridge rings or cable trays separated by a factory divider.
20. Warranty period including maintenance of fire alarm equipment shall be one year from date of Substantial Completion.
21. Following project completion, provide a complete set of fire alarm drawings to BGSU in AutoCAD format for future use.
22. All work related to Communication Cables shall be installed per BGSU ITS Standards.
23. Alarm functions for fire pumps shall be per NFPA 20.
24. Alarm functions for sprinkler systems shall be per NFPA 13.
25. Fire alarm system programming shall include sprinkler valves and riser labeling that matches that which is indicated on fire equipment.

End of Section