

LIFE SAFETY DIVISION 28 40 00

The UVU Standards are provided in CSI format for ease of locating requirements from UVU. These requirements are in addition to the State of Utah Division of Facilities and Construction Management (DFCM) Design Requirements. In the event of any discrepancy between the DFCM Design and UVU Standards requirements, the Architectural/Engineering Team shall use the more stringent UVU Standards over the DFCM Design Requirements.

Items below are not intended to specify all the requirements needed for the completion of a project. The Engineer of Record shall provide their expertise for full completion. Items below that UVU does currently give direction on, are left to the discretion of the Engineer of Record.

SECTIONS

Section 28 40 00 Life Safety.....	2
Section 28 42 00 Gas Detection Alarm	4
Section 28 44 00 Refrigerant Detection Alarm	4
Section 28 45 00 Water Detection Alarm	4
Section 28 46 00 Fire Detection Alarm.....	5

SECTION 28 40 00 LIFE SAFETY

1. GENERAL

1.1. Campus Life Safety System Description

- 1.1.1 The campus life safety system is Honeywell Gamewell FCI system. The system is interconnected to the main supervisor system.

1.2. Workmanship

- 1.2.1 Life Safety work performed for Utah Valley University must be executed in a professional manner. Careful consideration should be taken to minimize the disruption of campus operations while performing work during normal operating hours.
- 1.2.2 Life Safety contractors hired to perform work for Utah Valley University are always required to have at least one certified installer on site while work is being performed

1.3. Deviations for Standards

- 1.3.1 Any deviation from these standards can be allowed if written permission is obtained from ALL of the following individuals:
 - (A) UVU Construction Project Manager – Changes per Project
 - (B) UVU Fire Marshall
 - (C) State Fire Marshal - Chris Hendrickson
 - (i) 385-302-5411 or cahendrickson@utah.gov

1.4. Materials and Equipment

- 1.4.1 All life safety system materials and equipment must be NEW. Re-furbished or re-purposed materials and equipment of any kind are not acceptable. Utilization of existing, unused materials and equipment must be approved by a representative of UVU.

1.5. Applicable Codes and Standards

- 1.5.1 The most recent of any code adopted by the state of Utah shall be followed. The most recent handbook of the standards referenced here-in shall be followed.
 - (A) NFPA 70 – National Electrical Code
 - (B) NFPA 72 – National Fire Alarm and Signaling Code
 - (C) IBC – International Building Code
 - (D) International Fire Code

1.6. Interruption of Existing Life Safety System Service

- 1.6.1 Do not interrupt life safety systems service to facilities occupied by the owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated.

- 1.6.2 Notify the owner no fewer than 40 working days' in advance for outages involving two or more buildings, 20 working days' in advance for outages involving one building, and 10 days' in advance for outages involving a portion of one building in advance of proposed interruption of Fire Alarm.
- 1.6.3 Do not proceed with any interruption of fire alarm service without the owner's written permission.
- 1.6.4 To gain permission please provide the following to the UVU Construction Project Manager, and UVU Fire Marshall (contact information is outlined under Deviation of Standards):
 - (A) Date and time of the interruption
 - (B) Duration of the interruption
 - (C) Equipment associated with the interruption
 - (D) Fire Watch Plan
- 1.6.5 Interruptions shall only be approved for Sundays and during the week between 10:00 PM and 6:00 AM. M-F during normal hours is allowed if the interruption only affects small areas and with approval.

2. PRODUCTS

- 2.1. None

3. EXECUTION

- 3.1. None

SECTION 28 42 00 GAS DETECTION ALARM

1. GENERAL

1.1. None

2. PRODUCTS

2.1. Carbon Monoxide (CO) devices shall be compatible with the Honeywell Gamewell FCI System.

3. EXECUTION

3.1. (CO) sensor shall be tied to Fire Alarm System.

SECTION 28 44 00 REFRIGERANT DETECTION ALARM

Per Engineer

SECTION 28 45 00 WATER DETECTION ALARM

Per Engineer

SECTION 28 46 00 FIRE DETECTION ALARM

1. GENERAL

1.1. None

2. PRODUCTS

2.1. Approved Manufacturer: Honeywell- Gamewell-Fire Control Instruments

2.2. Approved Installer: Nelson Fire Systems

3. EXECUTION

3.1. The system alarm operation subsequent to the alarm activation of any manual station automatic detection device or sprinkler flow switch shall be as follows:

- 3.1.1 All audible alarm-indicating appliances shall sound until silenced by the alarm silence switch at the control panel.
- 3.1.2 All visual alarm-indicating appliance strobes shall display a continuous pattern until a system is silenced or reset.
- 3.1.3 A supervised signal to notify the Campus Central Station shall be activated via the "Uni-Net" interface device (NION.)
- 3.1.4 Alarm status shall be displayed on an LCD display consisting of point address label and device type identifier with English annotation. It shall not be necessary to translate zone numbers or address numbers to identify the exact unit in alarm. LED annunciation is not considered equivalent to LCD. All alarms and troubles shall be logged into archive memory that may be called up by technically competent service personnel at any time. The system alarm shall be visible on the control panel and remote annunciator(s).
- 3.1.5 A pulsing alarm tone shall occur within the control panel until acknowledged.
- 3.1.6 The activation of any initiating devices shall be processed immediately.

3.2. Raceways

- 3.2.1 All conduit is to be a minimum 3/4" conduit and all junction boxes shall be 4" square x 2-1/8" deep or 4 11/16" x 2 1/8" when needed and using blank covers (plaster rings etc.) as required unless otherwise approved.
- 3.2.2 Fire Alarm shall only be in Hard Conduit (EMT, IMC, RMC). MC Cable is not allowed throughout the system.
 - (A) Exception for remodel areas: Where the remodel portion of the building does not exceed 50% AND the area being remodel already contains MC Fire Alarm Cabling throughout area.
 - (B) Areas being remodeled that do not use MC Cable or Conduit (free air wiring) shall be redone with conduit only and not MC Cable.
- 3.2.3 Couplings for conduit shall be painted red.

3.3. Wiring

- 3.3.1 All wiring shall be done as a Class A system.

3.4. Cleanliness

- 3.4.1 Shipping Caps or Covers shall remain on until 3 days before Fire Marshall testing and after all (final clean) dust has been removed from the area.
- 3.4.2 Fire Alarm Panels interior control boards shall not be installed until all dust is removed from the area.

3.5. Devices

- 3.5.1 Only use speaker strobes. All new systems shall use voice annunciation.
- 3.5.2 Use horn strobes in buildings with existing horn strobe device.

3.6. Labeling

- 3.6.1 Every device shall have an address label on it.

3.7. Locations of Panels

- 3.7.1 Main Fire Alarm Panel shall be in an electrical, IDF, or MDF room. Electrical rooms are preferred by the owner.
- 3.7.2 Annunciator shall in a public space within 20' of a main entrance as approved by the UVU Fire Marshal.

3.8. Extra Material

- 3.8.1 Furnish extra materials that match products installed, are packaged with protective covering for storage and identified with labels describing contents.
 - (A) Smoke Detectors Heat Detectors and Pull Stations:
 - (i) Quantity equal to 10 percent of the amount of each type installed but no less than 2 units of each type.
 - (B) Detector Bases:
 - (i) Quantity equal to 2 percent of the amount of each type installed but no less than 2 unit of each type.
 - (C) Smoke Beam Detectors Flame Detectors:
 - (i) One of each type installed.
 - (D) Keys and Tools:
 - (i) One extra set for access to locked and tamper proofed components.
 - (E) Audible and Visual Notification Appliances:
 - (i) Two of each type installed.
 - (F) Fuses
 - (i) Four fuses of each type in the system.