

## 71 – Fire Protection

354th Civil Engineering Squadron

OPR: CES/CEF

ISSUED: 16 August 2017

### Purpose

This design guide has been developed to provide additional fire protection criteria specific to Eielson AFB and shall be used in conjunction with Unified Facilities Criteria (UFC) 3-600-01, Fire Protection Engineering for Facilities, most current version, other UFC's, the International Building Code, Air Force Instructions and National Fire Protection Association (NFPA) standards as applicable. It shall be utilized for all phases of any construction or renovation project for facilities that fall under the purview of the Eielson Fire Emergency Services Flight, Fire Prevention Office review process. No part of this document should be considered inclusive to all government requirements.

Any questions specific to the contents of this document shall be referred to the Eielson AFB Fire Emergency Services (FES) Flight, Fire Prevention Office at 377-3204, 377-1293 or by email at 354ces.ceffirepreventionoffice@us.af.mil.

### 1. Fire Department Access / Fire Lanes

- 1.1. When swing arm gates or other devices are utilized to secure areas that are required for fire department access, mark with signage that reads "Fire Lane, No Parking In Front of or Beyond Barrier". For fire lanes, mark with signage that reads "No Parking Fire Lane". See examples below.



- 1.2. Coordinate the marking of required Fire Department Access or Fire Lanes with the Fire Prevention Office.

### 2. Fire Hydrants

- 2.1. All paint information is to be used as a guide so that the appearance of the fire hydrants across the base are consistent. Paint brand and colors have been stated in this design guide, but in all cases an equivalent paint or color from another manufacturer can be utilized.
- 2.2. Fire hydrants will be primed with one coat of Sherwin-Williams, Kem Kromik Universal Metal Primer or approved equivalent. All paint will be Sherwin-Williams, Urethane Alkyd Enamel Gloss or approved equivalent.
- 2.3. All new fire hydrants will be painted Sable Brown #SW 6083 or approved equivalent.
- 2.4. The discharge caps will be painted high visibility or reflective colors IAW NFPA 291 requirement for GPM available as follows:

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- 2.4.1. Safety Blue #SW 4086 = 1500 GPM or more
  - 2.4.2. Safety Green #SW 4085 = 1000-1499 GPM
  - 2.4.3. Safety Orange #SW 4083 = 500-999 GPM
  - 2.4.4. Safety Red #SW 4081 = Below 500 GPM
- 2.5. Any hydrant that is installed within five (5) feet of a road or parking lot or a space that has vehicle access that could be damaged will be protected by bollards. Bollards will be painted color Safety Yellow #SW4084.

### **3. Fire Department Connection (FDC)**

- 3.1. Ensure FDCs are installed on the gable end of the building if possible. If it can't be installed on the gable end, steps must be taken to protect it from snow and ice such as constructing an overhang above it.
- 3.2. Drain or other utility lines that could discharge water shall not be installed above the FDC.
- 3.3. Mark all FDCs with a brass ring or brass plate mounted above the FDC labeled "Fire Department Connection".
- 3.4. Provide Knox caps for the FDCs.
- 3.5. If an FDC is installed in such a way that any vehicles can obstruct its access, measures must be taken to prevent this such as installing "Fire Access - No Parking" signs or bollards.

### **4. Knox Box / Keys**

- 4.1. A Knox Box will be mounted 5'-0" to 5'-6" off the ground at the main facility entrance to the right side of the door when possible.
- 4.2. Knox Boxes shall not be placed on fences unless authorized by the Eielson AFB FES. Multiple Knox Boxes are not required for a single facility except in rare instances and shall be determined by the Eielson AFB FES.
- 4.3. For facilities with elevators, contractors shall provide a minimum of three spare keys for operating the elevator key switches, and any other keys, to the Eielson AFB FES for each elevator. Each key shall be marked with identification corresponding to the elevator the key serves.
- 4.4. Spare keys for the fire alarm system shall be distributed to the fire alarm shop and in turn will be given to the Eielson AFB FES as needed.

### **5. Labeling**

- 5.1. The Fire Alarm Control Panel will be labeled "Fire Alarm Control Panel" or "FACP".

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- 5.2. FACPs that are in a room and rooms that contain fire suppression risers or other critical fire alarm panels or equipment shall be labeled with a placard or self-adhesive label with the verbiage “FD Controls”. The intent is not to label all components, i.e. NAC booster panels. The label will be 4”x4” with black lettering on a red background. It will be placed under the primary signage for the door. If the room is not marked, it will be placed at a similar height and location as the other signage for the facility. Normal location is approximately 4’-6” to 5’ from the finished floor to the left or the right of the door. Rooms marked as a “Fire Room” or similar verbiage do not require this additional label. See example below.



## **6. Exit Signs / Emergency Lights**

- 6.1. All new exit signs will be LED, green lettering and will be the self-diagnostic type.
- 6.2. All emergency lights installed will be LED and self-diagnostic type.
- 6.3. Provide a copy of the exit light and/or emergency light paperwork to the Fire Prevention office that shows the status indicator chart.

## **7. Training and Documentation**

- 7.1. Training shall be provided to Eielson AFB FES personnel that covers the operations of the fire alarm system, the mass notification system, the fire suppression system and any other specialty training that might be of assistance during an emergency response. An example of this would be training on the firefighter operations of an elevator or a kitchen fire suppression system. Training typically consists of two hour training blocks that are conducted on two separate days for maximum training attendance. Training may be longer as needed on more specialized systems such as hangar fire suppression systems. Coordinate training dates with the Fire Prevention Office.
- 7.2. A copy of the Fire Protection Engineer final acceptance test report on all fire protection/detection systems shall be provided electronically (if possible) to the Eielson AFB FES Fire Prevention Office for their records as well as any as-builts for fire protection systems.