

SECTION	IV.	Fire/Life Safety
Chapter	2.	Life Safety
Revision Date		07/24/97
Review Date		01/2007

CONSTRUCTION/INTERIM LIFE SAFETY

INTRODUCTION

PURPOSE

Duke University shall take every precaution to provide a safe environment for its employees, patients, visitors, students, and construction workers in all occupied areas during alteration or new construction to buildings or grounds. This standard shall pertain to all construction or renovation projects, whether by outside contractors or by Duke University personnel.

RESPONSIBILITIES

Project Managers/Construction Coordinators from the University Architect's Office, Facilities Management Department, Medical Center Facilities Planning, Design and Construction Office, or Medical Center Engineering and Operations shall:

- Ensure that the construction areas are maintained in a safe manner.
- Review the construction sites on a regular schedule to ensure compliance.
- Contact the Occupational and Environmental Safety Office (OESO) as early in the project planning process to discuss safety, health, and environmental aspects which may need control.
- Observe all work to ensure compliance with all applicable safety and health regulations.
- Inspect construction sites daily to ensure that means of egress are kept free of all obstructions.
- Report deficiencies, hazards, and noncompliance to the OESO.

The OESO shall:

- Provide support on matters of health and safety during the project planning process as well as situations which arise during construction.

- Specify the level and type of additional fire suppression devices and alarm systems necessary during construction.
- Conduct periodic fire drills.
- Conduct periodic inspections of construction sites to ensure that the safety or health of Duke employees, patients, or visitors is not impacted.

PROCEDURES

MEANS OF EGRESS

- Exits and exit egress shall be continuously maintained free of all obstructions or impediments to allow full instant use in case of fire or emergency.
- All personnel working in the facility shall be informed of exits and provided evacuation instructions.
- Temporary closing of any exit or exit passageway must be approved by the OESO-Fire Safety Division.

FIRE ALARM/FIRE SUPPRESSION SYSTEMS

Existing fire detection or suppression alarm systems shall not be impaired unless impractical. If impairment is necessary, the Contractor shall:

- Provide, install, and maintain temporary fire extinguishers throughout the work until the permanent system is in operation. All temporary systems shall be approved by the OESO-Fire Safety Division prior to installation.
- Notify the OESO-Fire Safety Division at least 24 hours prior to the work start date to determine what action is necessary to protect the building fire alarm system, whether smoke detectors should be removed or protected in accordance with this policy or if other actions and notifications are necessary.

FIRE PROTECTION

To ensure that adequate measures are taken to comply with all applicable fire codes to reduce fire hazards and prevent fires, the Contractor shall:

- Establish procedures to minimize storage of combustible and flammable materials on site. Combustible trash shall be removed from the site daily.
- Keep all construction vehicles, equipment, trailers and machinery clear of the fire lanes and fire hydrants. Ensure that deliveries of equipment or supplies in the fire lanes are quickly unloaded and the vehicles moved as soon as possible.
- Notify OESO-Fire Safety Division to remove Duke portable fire extinguishers located in any existing building/structure prior to the start of construction. In addition, the contractor shall provide the approved type and size of fire extinguisher required at the job site.
- Obtain a "Hot Work Permit" from the OESO-Fire Safety Division prior to beginning work that involves welding, cutting or open flames and ensure that all regulations are followed by all personnel. See Supplement S for additional information.

CONSTRUCTION HAZARDS

Hazardous conditions, when anticipated or discovered, shall be eliminated or controlled as soon as possible. The Project Manager/Contractor shall:

- Install job site fencing or other barricades around the construction perimeter to include areas of grading, excavation and trenching as well as the building to ensure that unauthorized personnel do not enter.
- Install signs, signals, barricades and overhead protection to warn and protect employees, patients, visitors, and students.
- Ensure that the contractor has obtained a permit and is following all regulations and recommendations prior to blasting operations.
- Install a "Construction Safety Bulletin Board" with pertinent information inside or as near as possible to the construction site. Further information regarding the specifications of this board can be found in Supplement G.

PATIENT CARE AREAS

In construction projects within Patient Care Areas, the Project Manager/ Contractor shall:

- Maintain unobstructed access to the Emergency (Trauma) service area, and for emergency forces throughout the work.
- Propose for OESO approval, an equivalent temporary system for fire protection, if compromising a fire detection or suppression system is unavoidable to complete work. Testing and inspection of this system will be performed by Engineering and Operations personnel in coordination with OESO.

- Describe, in the construction documents, the details for and planned temporary fire-rated or smoke partitions. Other temporary partitions shall be of non-combustible materials.

Two fire drills per shift per quarter will be conducted by the OESO Fire Safety Division. The Contractor's superintendent shall complete Duke's standard form documenting participation in the drill affecting the construction site or sites.

CONTRACTOR AWARENESS

Contractors will be made aware of Life Safety issues by OESO - Fire Safety personnel. This will be accomplished at pre-construction meetings and as-needed during construction. Major topics will include:

- Fire Alarm System Deactivation.
- Fire extinguisher location and use.
- Fire drill requirements and procedures.
- Exits and passageway obstruction.
- Hot Work Permits.
- Construction Safety Bulletin Boards (for Patient Care Areas).
- R-A-C-E Procedures.

TRAINING

Employees who will work in or adjacent to an area where structural or compartment features of fire safety are compromised, will be provided Life Safety information specific to the circumstances.

REFERENCES

National Fire Protection Association (NFPA) 101, *Life Safety Code*
JCAHO Accreditation Manual, Standard 2.6, *Interim Life Safety Measures*
Code of Federal Regulations, Title 29, Part 1910.35 (OSHA), *Means of Egress*
Code of Federal Regulations, Title 29, Part 1926.150-.151 (OSHA), *Fire Protection & Prevention*
Duke University Design Guidelines
Duke University Contractor Safety Guidebook