EMERGENCY RESPONSE PLAN

TECHNOLOGICAL INSTITUTE BUILDING (TECH) FORD MOTOR COMPANY ENGINEERING DESIGN CENTER, WILLIAM A. and GAYLE COOK HALL AND SEELEY G. MUDD HALL

NORTHWESTERN UNIVERSITY

Updated November 2, 2021

The Technological Institute Building (Tech) at 2145 Sheridan Road, Evanston, IL 60208, Ford Motor Company Engineering Design Center, (Ford) 2133 Sheridan Road, William A. and Gayle Cook Hall (Cook) 2220 Campus Drive and Seeley G. Mudd Hall (Mudd) 2233 Tech Drive house offices, classrooms and labs for Northwestern University's (NU) McCormick School of Engineering and Applied Science and Weinberg College of Arts & Sciences. Various types of electromagnetic, biological and chemical research are conducted in the labs. All occupants are expected to learn building safety procedures and to follow the instructions of department safety contacts and searchers in any drill or evacuation.

Safety and Emergency Information

McC Director of Facilities and Planning (M-F, 9am-5pm) (312) 350-8507

Note: The material in this manual is approved annually by the Technological Institute Building Safety Committee. Revisions effective upon issuance, unless otherwise noted. Supersedes all previous documentation. The manual has been reviewed by NU Offices of University Police, Facilities, Risk Management, Research Safety and General Counsel. It supersedes previous versions of this document.

Signatures on file. Approved by Office Of Risk Management	Date
Reviewed by Office for Research Safety	Date
Reviewed by NU General Counsel	Date
Reviewed by Facilities	Date
Reviewed by University Police	Date

TABLE OF CONTENTS

Page

FACT SHEET 3 – Emergency Preparedness	7
FACT SHEET 4 – Active Shooter/Active Violence Safety Guidelines	9

EMERGENCY RESPONSE PLAN

I.	INTRODUCTION	11
II.	UNIVERSITY POLICY REGARDING SAFETY	11
III.	RESPONSIBILITY FOR SAFETY	11
IV.	EVACUATION DRILLS	15
V.	BUILDING SAFETY SYSTEMS	15
VI.	FIRE FIGHTING	18
VII.	CLOTHING FIRE	19
VIII.	CHEMICAL, BIOLOGICAL EMERGENCIES	19
IX.	POWER OUTAGE	19
Х.	BOMB THREAT	20
XI.	SUSPICIOUS PACKAGES	20
XII.	SUSPICIOUS PERSONS	20
XIII.	TORNADO PROCEDURE	20
XIV.	INJURY OR ILLNESS	21
XV.	WORKERS' COMPENSATION	21
XVI.	PERSONAL SAFETY	22
XVII.	SHOP SAFETY	22

APPENDIX

A.	ASSEMBLY AREA FIRE EXTINGUISHER INFO	23 24
В. С.	EMERGENCY GUIDELINES FOR INSTRUCTORS USING	24
	TECH CLASSROOMS	26
•		

FACT SHEET 1

Calling for Emergency Assistance

Fire, smoke, explosion, medical emergency, and life-threatening hazardous material spills/odors/leaks (including after hours, weekends, and holidays)	911
Non-emergency/not life threatening	456 from NU phone 847-491-3456
Lahandana Assistance (Office for	
Laboratory Assistance/Office for	1-5581 (Evanston) or 847-491-5581
Research Safety	3-8300 (Chicago) or 312-503-8300

- Calls to 911 are routed directly to the City Dispatch Center, which will arrange the dispatch of emergency equipment.
- For non-life-threatening (incidental) hazardous materials incidents that occur after hours, on weekends, and on holidays, call 456 and ask them to page Research Safety.
- Call Research Safety directly during regular business hours and report non-life-threatening hazardous materials/leaks incidents.

University Police (non- emergency) www.northwestern.edu/up/	Evanston Campus Chicago Campus	1-3456 3-3456
Emergency Voice Mail	Provides updated status on campus emergencies	1-1100
Office of Risk Management www.northwestern.edu/risk/ Accident Investigations 1-5610 Athletic Insurance 1-5582 Automobile Accidents 1-4434 Driver Training 1-5610 Emergency Plans 1- 3253 Ergonomics 1-7795 Facility Inspections 1-4936 Fire Protection 1-3253	Indoor Environmental Quality 1-4936 Noise Level Surveys 1-3253 Property Loss Claims 1-5084 Safety Training 1-4936 Student Hospitalization 1-5582 Visiting Scholars Insurance 1-5610 Workers' Compensation 1-5582	1-5610
Office of Research Safety www.researchsafety.northwestern.edu Laboratory Safety, Radiation Safety Emergency Response/Spill Clean-up	Evanston Campus Chicago Campus Biological Safety, Chemical Safety Hazard Communication	1-5581 3-8300
Facilities Management www.northwestern.edu/facilities- management/	Helpline	1-5201

FACT SHEET 2 Tech Emergency Procedures

FOR ANY INCIDENT REQUIRING EMERGENCY ASSISTANCE SUCH AS INJURY, FIRE, EXPLOSION, SMOKE OR LIFE-THREATENING HAZARDOUS MATERIALS RELEASE, **CALL EMERGENCY SERVICES USING THE YELLOW EMERGENCY PHONE OR CALL EXTENSION 911 FROM A SAFE PHONE.** IF NO TELEPHONE IS AVAILABLE AND THE NEED FOR ASSISTANCE IS URGENT, PULL THE NEAREST FIRE ALARM PULL STATION; IT TRANSMITS TO UNIVERSITY POLICE AND GETS HELP ON THE WAY. **DO NOT PUT YOURSELF AT RISK IN ORDER TO CARRY OUT THE PROCEDURES NOTED BELOW.**

INJURY

Call 911 (or emergency services from emergency phone) for ambulance or sit-up transportation.

FIRE/EXPLOSION/SMOKE

- 1. Evacuate the room or areas *immediately*.
- 2. Turn off equipment and close doors and windows, if this can be done safely on your way out.
- 3. Call 911. If no phone is nearby and the situation is life-threatening, pull the fire alarm at the red pull box station.
- 4. Do not use elevators during an emergency.
- 5. One person meet and inform emergency responders. Provide assistance as requested.

UNIDENTIFIED ODOR

- 1. During standard business hours, call Facilities Management at 1-5201 (847-491-5201).
- 2. After hours, call UP at 456 (847-491-3456).

CHEMICAL OR BIOLOGICAL SPILL

- 1. Notify persons in the immediate area.
- 2. Turn off ignition sources if a spill is flammable.
- 3. Establish or maintain exhaust ventilation
- 4. Call the Office for Research Safety (RS) at Ext. **1-5581**. If you cannot reach RS in an emergency, and after hours, call University Police at **456** (or use emergency phone) and ask them to page RS.
- 5. Confine and clean up the spill if you have had appropriate training, wearing designated protective clothing.

RADIATION SPILL

- 1. Notify persons in immediate area.
- 2. Wear gloves and protective clothing and confine the spill immediately.
- 3. Establish or maintain exhaust ventilation.
- 4. Call the Office for Research Safety (RS) at Ext. **1-5581**. If you cannot reach RS in an emergency, and after hours, call University Police at **456** (or use emergency phone) and ask them to page RS.
- 5. Decontaminate the area.
- 6. Monitor personnel involved.

PERSONAL EXPOSURE TO HAZARDOUS MATERIALS

- 1. Remove clothing and rinse contaminated skin under running water at safety shower for at least 15 minutes.
- 2. For eyes, rinse eyes and entire face at an eye wash in running water for 15 minutes. Ensure that the area under the eyelids is also rinsed.
- 3. Get medical attention.

Technological Institute Building Emergency Response Plan & Building Safety Systems MAJOR WATER SPILL/FLOODING

- 1. Do not walk in water
- 3. Do not enter a lab which is taking on water
- 3. During business hours contact Facilities Management 1-5201(847-491-5201) If you cannot reach FM and/or after hours, call University Police at **456** (847-491-3456) (or use emergency yellow phone in Tech hallway). FM will be on the scene immediately to turn off electric at the control box (to which only FM has authorization access).

FACT SHEET 3

Emergency Preparedness

WHAT EVERYONE SHOULD KNOW IN ADVANCE

I. <u>BEFORE AN EMERGENCY OCCURS</u>

1. KNOW your numbers: Emergency **911** or use the Yellow Emergency Phones

Non-emergency 456 (847-491-3456)

2. **KNOW** two means of egress from your area and where they lead. Know how to get to the assembly areas. Move away from the front concourse of Tech so that Emergency Responders have full access to the area.

3. **KNOW** the locations of fire alarm pull stations.

II. IF YOU HEAR AN ALARM

Always take alarms seriously. Unless an alarm has been immediately preceded by an announcement that it is a test, you should assume that an alarm is real and then follow appropriate protocol (instruction of the voice message).

The Tech building alarm is an "intelligent" system which means that every alarm device is monitored 24/7 by the master control panel. <u>Any alarm that is triggered automatically notifies University Police (UP)</u>. In accordance with City of Evanston requirements, a full functional test of the system is conducted annually.

A. <u>Fire Alarm</u> The fire alarm includes strobe lights, a whooping signal and voice messaging.

The Tech fire alarm system is zoned. The fire doors in Tech compartmentalizes the building. The trigger of an alarm in one zone prompts the automatic closing of all fire doors throughout Tech. Fire doors should not be opened. Occupants in areas not receiving an audible evacuation message do not need to leave the building. When in doubt, use common sense and take appropriate action.

1. Alarm In Your Zone If you are in the zone that is in crisis you will hear the alarm and a verbal message to evacuate the area. If time permits, do an orderly shutdown of your equipment or processes (DO NOT PUT YOURSELF AT RISK TO DO THIS). Close windows, close doors and leave the building by your primary or alternate evacuation route. Do not use the elevators. Go to your designated assembly areas and wait for further instructions. Do not wait in the front concourse of Tech.

Strobes will continue to flash until the control panel has been reset, even after the alarms have been silenced. Do not re-enter without official clearance by an authorized official.

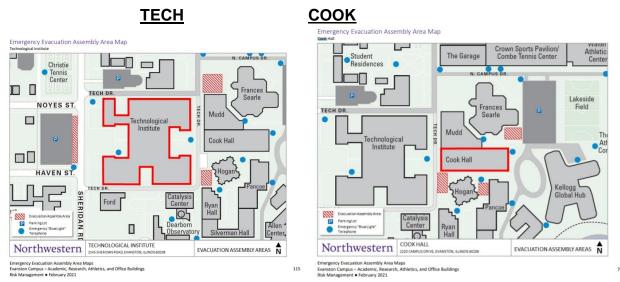
Text Director of Facilities and Planning for update/information (312) 350-8507

2. A Word About Fire Extinguishers Only NU-trained personnel should use fire extinguishers. Make sure someone sounds the alarm. Do not put yourself at risk.

Technological Institute Building Emergency Response Plan & Building Safety Systems

III. EVACUATION ROUTES

- A. <u>Primary and Alternate Routes.</u> The primary evacuation route is the nearest means of egress from the area. The alternate route is a route that can be used if the primary route is blocked by fire or smoke or is otherwise untenable. Means of egress to a safe location may be:
 - Directly outside by a door at ground level
 - Horizontally through a corridor
 - Vertically by stairways
- **B.** <u>Elevators and Stairways</u> Do not use elevators during emergencies. Use the stairways, which are both means of egress and places of refuge if needed.
- C. <u>Bridges to Ford, Catalysis, Hogan, Cook and Seeley Mudd</u> The bridges are not to be used as a refuge. Leave the building and move away from it.
- D. <u>Tech, Cook and Ford Assembly Areas</u> Once you have left the building you should proceed to your designated assembly area for your group or department. Students should proceed to the Sargent Hall or Garret parking lots.



<u>FORD</u> - All faculty, staff, students and visitors in Ford should be directed to the Garrett parking lot (aka Northwestern Place) south of Ford, east of Sheridan Road.

For more safety and emergency information visit <u>https://www.mccormick.northwestern.edu/faculty-staff-resources/safety-emergency-information/</u>

FACT SHEET 4

Safety Guidelines for Active Shooter/Active Violence Situations on Campus

Introduction

An active shooter is a person or persons who appear to be actively engaged in killing or attempting to kill people, most often in populated areas. An active violence situation is using a means of violence to inflict harm on multiple people (explosive devices etc.) In most cases active shooters use firearm(s) and display no pattern or method for selection of their victims. In some cases active shooters use improvised explosive devices to cause additional victimization and act as an impediment to law enforcement and emergency services responders. These improvised explosive devices may detonate immediately, have delayed detonation fuses, or may detonate on contact. Active shooter situations are dynamic and evolve rapidly, demanding immediate response by the community and immediate deployment of law enforcement resources to stop the shooting and prevent further harm to the community. This document provides guidance to faculty, staff, and students who may be caught in an active shooter/active violence situation, and describes what to expect from responding law enforcement officers. Be aware that the 911 system may become overwhelmed.

Guidelines

In general, how you respond to an active shooter or an act of active violence will be dictated by the specific circumstances of the encounter. If you find yourself involved in an active shooter/active violence situation, try to remain calm and **Call 911** as soon as possible.

If an active shooter is outside your building or inside the building you are in, you should:

- Try to remain calm.
- Try to warn other faculty, staff, students and visitors to take immediate shelter.
- Proceed to a room that can be locked or barricaded.
- Lock and barricade doors or windows.
- Turn off lights.
- Close blinds.
- Turn off radios or other devices that emit sound.
- Keep yourself out of sight, stay away from windows and take adequate cover/protection, i.e. concrete walls, thick desks, filing cabinets.
- Silence cell phones.
- Have one person **Call 911** and provide:
 - "This is Northwestern University (give your location) we have an active shooter on campus, gunshots fired."
 - If you were able to see the offender(s), give a description of the persons(s) sex, race, clothing, type of weapon(s), location last observed, direction of travel, and identity if known.
 - > If you observed any victims, give a description of the location and number of victims.
 - If you observed any suspicious devices (improvised explosive devices), provide the location observed and a description.

Technological Institute Building Emergency Response Plan & Building Safety Systems

- > If you heard any explosions, provide a description and location.
- Wait patiently until a uniformed police officer, or a university official known to you, provides an "all clear."
- Unfamiliar voices may be an active shooter trying to lure you from safety; do not respond to voice commands until you can verify with certainty that they are being issued by a police officer or university official.
- Attempts to rescue people should only be attempted if it can be accomplished without further endangering the persons inside a secured area.
- Depending on circumstances, consideration may also be given to exiting ground floor windows as safely and quietly as possible.

If an active shooter enters your office or classroom, you should:

- Try to remain calm.
- Try not to do anything that will provoke the active shooter.
- If there is no possibility of escape or hiding, only as a last resort when it is imminent that your life is in danger should you make a personal choice to attempt to negotiate with or overpower the assailant(s).
- Call 911, if possible, and provide the information listed in the first guideline.
- If the active shooter(s) leaves the area, barricade the room or proceed to a safer location.

If you are in an outside area and encounter an active shooter, you should:

- Try to remain calm.
- Move away from the active shooter or the sounds of gunshot(s) and/or explosion(s).
- Look for appropriate locations for cover/protection, i.e. brick walls, retaining walls, large trees, parked vehicles, or any other object that may stop bullet penetration.
- Try to warn other faculty, staff, students and visitors to take immediate shelter.
- Call 911 and provide the information listed in the first guideline.

What to expect from responding police officers

The objectives of responding police officers are:

- Immediately engage or contain the active shooter(s) in order to stop life threatening behavior.
- Identify threats such as improvised explosive devices.
- Identify victims to facilitate medical care, interviews and counseling.
- Investigation

Police officers responding to an active shooter/active violence situation are trained to proceed immediately to the area in which shots were last heard in order to stop the shooting as quickly as possible. The first responding officers may be in teams; they may be dressed in normal patrol uniforms, or they may be wearing external ballistic vests and Kevlar helmets or other tactical gear. The officers may be armed with rifles, shotguns or handguns. Do exactly as the officers instruct. The first responding officers will be focused on stopping the active shooter/active violence situation and creating a safe environment for medical assistance to be brought in to aid the injured.

TECHNOLOGICAL INSTITUTE BUILDING (TECH)

EMERGENCY RESPONSE PLAN

I. <u>INTRODUCTION</u>

This is the emergency response plan for the Technological Institute (Tech). Successful emergency evacuation of the building depends on prompt and correct decisions of the occupants and their immediate actions during the first minutes of the incident. In an emergency situation, building occupants are on their own until first responders arrive. First responders may include University Police (UP), Office of Research Safety (ORS) personnel, Facilities Management (FM) personnel, Risk Management (RM) and the Evanston Fire Department (EFD). In most cases, University Police are likely to arrive first.

This manual will provide you with information you should know concerning emergency response procedures and the Tech safety systems. Please read the entire manual so you will know how to respond to emergency situations. If you need more information about your local emergency plans, consult with your group safety contact, volunteer evacuation personnel, supervisor or your department's safety committee representative.

Each department must have a safety/evacuation plan containing all safety information specific to the department, including departmental emergency response procedures. The departments are encouraged to post this plan on their website. In addition, each principal investigator must have a Laboratory Safety Profile within LUMEN and is encouraged to have a Safety Desk Book. A hard copy version or links to the contents of the Safety Desk Book is acceptable.

For further information on general safety and fire protection, call Risk Management's Division of Safety and Loss Prevention, at 1-3266. To obtain a Safety Desk Book or for information regarding chemical, biological, or radiation hazards, contact the Office for Research Safety at 1-5581. To obtain a Safety Desk Book binder or for more information regarding chemical, biological, or radiation hazards, contact the Office for Research Safety.

II. UNIVERSITY POLICY REGARDING SAFETY

Northwestern University is committed to providing a safe and healthful environment in which teaching, research, and public service can flourish. The University is further committed to comply with federal, state, and local regulations relating to property standards, employee health and safety, and the protection of the environment.

This policy and the regulations and guidelines set up are applicable equally to all students, faculty, staff, and visitors. Each individual is responsible for adhering to the policy and carrying out the regulations and guidelines.

A. Deans

Deans responsible for departments having facilities in Tech shall see that Department Heads/Chairs and Center Directors fulfill their obligations, as described below.

B. Department Head Definition and Duties

The term "department head" means academic department chairs, research center directors and others with similar responsibility. The department head is responsible for compliance with Northwestern University safety procedures. The department head is responsible for providing a safe work place for faculty, staff, students, and visitors within the department's facilities. The department head shall ensure that supervisors, principal investigators, instructors, and others conduct training for their employees and students in the proper procedures to provide a safe environment.

9 Safety Duties for Department Heads

1. Review/learn the Tech Emergency Response Plan.

2. Maintain and post (bulletin boards/website) a current (annual) department evacuation plan (copy to McCormick Administration).

3. Advise the Office for Research Safety (RS) promptly of new faculty arrivals and ensure they submit lab safety plans as appropriate.

4. Ensure every PI/lab meets RS compliance re. Laboratory Safety Profile, annual inspection and MSDS posting.

5. Ensure your entire department is regularly trained for emergency evacuation and safety precautions appropriate to their duties (minimum annual review).

- a. Enforce safety training prior to allowing any employee or student to work at any hazardous task.
- b. Schedule fire extinguisher training with Risk Management (1-3253) for appropriate lab personnel (technicians, grad students).
- c. Participate in/comply with periodic evacuation drills or training.
- d. Provide safety orientation training for new faculty, staff, and students.

6. Ensure all staff in your department completes the <u>on-line safety certification survey</u>

7. In coordination with RS and Risk Management, enforce compliance with all federal, state, local and university regulations regarding safety and the handling of hazardous materials, including:

- a. Appropriate signage for hazardous materials/operations (Appendix B).
- b. Appropriate use of safety/personal protective equipment and adherence to safety precautions.
- c. Disclosure of presence and implementation of controls for toxic substances.

8. Remind faculty at the start of each academic quarter to review classroom safety and evacuation procedures with their students.

9. Promptly investigate accidents or hazardous situations and complete the RS Incident Report form with distribution to RS, Risk Management (Safety and Loss Prevention), and appropriate McCormick Deans (Administration/Research).

C. Principal Investigators (PI) and Supervisors

Principal investigators and supervisors are responsible to the department head to carry out the responsibilities listed above under the department head. Principal investigators and supervisors may assign responsibility for certain safety functions to subordinates, however, they may not delegate their accountability to the department head for the safety of their areas of operation.

Every PI is required to submit a Laboratory Safety Profile with the Office for Research Safety. MSDS Sheets are to be current, on file in the workplace and easily accessible during all working hours.

Every PI is required to be in compliance with the Office for Research Safety standards for laboratory operation including:

- 1) Submission of a safety profile
 - a. upon establishing a new lab
 - b. keep current as personnel, processes and locations change
 - c. submission of a current chemical inventory

2) Register for a ChemTracker account if in possession of a Homeland Security Chemical of Interest

3) Annual laboratory inspections.

D. Department Safety Building Representative/Safety Committee Member

Every McCormick and WCAS department head in Tech is to appoint a faculty member to the committee. Generally, this person is also the department safety representative. The safety representative must know the emergency procedures for his/her department, the Technological Institute Building, and the University. Safety representatives shall coordinate the department's program of accident prevention, safety training, and emergency response.

The chair of the committee is appointed by the deans responsible for departments having facilities in Tech. The committee roster can be found in Appendix A.

Ex officio members include representatives from Cook and Catalysis Center safety committees, the Office of Risk Management, the Office for Research Safety, University Police, and Facilities Management.

The safety committee is responsible for developing safety policies and procedures that affect all occupants of the building and each member it is responsible for ensuring the policies are implemented in each of their respective resident departments.

The committee wrote this manual and reviews it on an annual basis. When emergencies occur, the committee reviews the actions of both building occupants and emergency responders, identifies any deficiencies in the plan or its execution and recommends any changes to correct them.

F. Office for Research Safety (RS)

RS is responsible for coordination of the University's chemical, biological, radiation, and laser safety; general laboratory safety; and hazardous waste disposal programs. RS coordinates

Technological Institute Building Emergency Response Plan & Building Safety Systems general regulatory compliance with several OSHA standards including the laboratory standard, the hazard communication standard, and the blood-borne pathogens standard. RS also coordinates compliance with employee and community right-to-know laws. RS maintains compliance with the broad license issued by the State of Illinois under which all radioactive materials are used, and RS maintains the state registrations governing use of X-ray machines.

RS programs encompass a variety of services including pickup and disposal of hazardous wastes, safety training, laboratory surveys, Lumen PI data management, bioassay, industrial hygiene studies, incident investigation, and chemical fume hood evaluation.

The RS Emergency Response Team is trained and equipped to deal with spills of hazardous chemicals and radioactive materials. RS investigates accidents in laboratories and recommends follow-up action to prevent recurrence.

RS supports several University safety committees including the Chemical and Biological Safety, Radiation Safety, and Recombinant DNA, as well as local committees such as the Tech Safety Committee.

G. Facilities Management (FM)

The Facilities Management Department maintains the basic building facilities. This includes fire extinguishers, fire hoses, building fire alarm systems, ventilation systems, eyewashes, and safety showers in hallways, other public areas and labs, and the building electrical and piping systems. Facilities Management personnel respond to emergencies to help as needed in evacuation and handling building services and equipment.

H. Office of Risk Management (ORM)

Risk Management is responsible for general fire safety and the general safety of building occupants. ORM inspects the building and reports safety violations to the department head and/or Facilities Management, where appropriate, for correction. ORM investigates accidents. The Claims Division of Risk Management handles Workers' Compensation claims for occupational injuries and illnesses.

ORM is responsible for coordination and development of emergency response plans for buildings. They provide help in developing safety policies and procedures and general safety training programs. They provide advice on local and national codes related to facilities, materials handling, storage, and fire protection.

I. <u>University Police (UP)</u>

The Patrol Division of UP responds to emergency calls and alarms, and provides assistance and site control at an emergency. The UP communications officer will summon the fire department or ambulance when needed. Responding UP officers can provide emergency first aid and/or arrange transportation to the emergency room if needed.

J. Instructors Using Tech Classrooms

Instructors are responsible for the safety of their classes in Tech and must familiarize themselves with emergency responsibilities and procedures in Appendix A and C. Instructors should also be aware of specific exit routes from their classroom and hallway.

Technological Institute Building Emergency Response Plan & Building Safety Systems

K. The Individual - You

In an emergency situation, building occupants are on their own until first responders (usually University Police) arrive. Develop a safety-conscious attitude and be aware of emergency call numbers, Tech evacuation routes and Tech emergency equipment (emergency phones, alarm pull stations, safety showers, eye washes, fire doors, etc.)

Safety requirements are available for most basic work procedures. If they are not available, ask your supervisor. Your responsibility is to know the safety requirements and put them into practice in your work place. Safety requires the same attitude in a classroom, research laboratory, machine shop, studio, or office. Learn in advance what you can about the properties, hazards, and safety measures pertinent to the materials and equipment you will use. Always include safety considerations in planning and carrying out your work. Individuals who do not follow the safety plans and rules will be referred for disciplinary action that can include dismissal from the University.

IV. EVACUATION DRILLS

Building evacuation drills are to be conducted on a timely cycle. Drills will be coordinated between the safety committee, Tech Building Manager and Risk Management. Drills help in evaluating the plan, familiarize occupants with the sound of alarms and with evacuation routes, and provide a training opportunity for all building occupants. The Office of Risk Management and the Evanston Fire Department will observe the evacuation drills and provide an evaluation to the safety committee.

V. BUILDING SAFETY SYSTEMS

A. Fire/Other Emergency Alarm System

The Tech building alarm is an "intelligent" system which means that every alarm device is monitored 24/7 by the master control panel. Any alarm that is triggered automatically notifies University Police. In accordance with City of Evanston requirements, a full functional test of the system is conducted annually.

Fire alarm pull stations are located throughout the building, usually at or near a stairway or exit. If a phone is not nearby to call 911 and the situation is urgent, use the pull station to report any life-threatening fire, smoke, or other emergency. If you pull a fire alarm pull-station, an alarm sounds throughout that alarm zone or wing. The alarm control panel shows the location of the alarm source for the individual system and automatically transmits the alarm information to the University Police (UP). The alarm system has a battery back-up as well as a connection to an emergency generator. Power failure or a fault in the system wiring will transmit a "trouble" alarm to the UP and sound a buzzer at the alarm control panel.

The Tech fire alarm system is zoned. The fire doors in Tech compartmentalize the building. The trigger of an alarm in one zone prompts the automatic closing of all fire doors throughout Tech. Fire doors should not be opened. Occupants in areas not receiving an audible evacuation message do not need to leave the building. When in doubt, use common sense and take appropriate action.

As necessary, evacuation can be by wing/zone or several wings or the entire building depending on the nature of the emergency. Any alarm (manual pull station, smoke detector, heat detector, sprinkler or standpipe waterflow) will sound the evacuation message in that zone. An alert Technological Institute Building Emergency Response Plan & Building Safety Systems message can be triggered manually by the Fire Department to sound throughout the building or in any individually selected wing.

Strobes will continue to flash until the control panel has been reset, even after the alarms have been silenced.

Tech complies with existing fire codes. Separations of zones are by fire walls and doors to prevent the spread of fire, smoke, and heat. Also, automatic sprinklers protect the zones. Although some double doors at the connecting corridors at the end of each wing are not fire doors, they do have automatic sprinklers on both sides.

The main control panel is in room Tech L167 (located just northwest of the main entrance to the central auditorium). Equipment at the main control panel provides one-way and two-way voice communication by emergency personnel from the main control panel to any floor or area. Thus, emergency personnel at the main control panel may give instructions to building occupants via the loudspeakers located throughout the building, or they may talk to fire department personnel at selected locations by means of plug-in headsets.

Any alarm in a smoke detector in an elevator lobby other than the ground floor, elevator equipment room, or elevator shaft will cause that elevator to "recall" to the ground floor.

Activation of a smoke detector on the ground floor in an elevator lobby will cause that elevator to "recall" to the first floor. Activation of a heat detector in an elevator shaft or elevator equipment room will shut off power to that elevator.

Activation of a smoke detector in Ryan Family Auditorium will release the stage fire curtain.

Operation of the Fire Pump will send a direct signal to University Police. Direct signals are also sent to University Police from the Hazardous Material storage facilities on the loading dock and outside the E-Wing.

Pre-action sprinkler systems in the D&G wings operate as alarm causing devices.

B. <u>Security/Equipment Alarms</u>

Do not confuse equipment alarms with fire alarms. In certain offices or labs, there may be security alarms or incubator and freezer alarms, respectively, that sound similar to the fire alarms. It is best to prepare for emergencies by learning to distinguish these alarms from the main building system. Each lab that contains alarms for equipment is required to post an *Alarm Notification* sign on the door. This sign explains which alarms are inside, what they signify, what they are expected to sound like, and whom to contact if they are activated. Read the signs in your general work area and know where an alarm might go off. Ask personnel in nearby offices whether they have alarms on office equipment, e.g., printers that buzz when out of paper. This way you can be certain that you have the information to react properly when a specific type of alarm is signaling. Samples of the alarm signs are included in Appendix B.

C. Automatic Sprinkler System

An automatic sprinkler system protects the Technological Institute Building. Automatic sprinkler activation will trigger a fire alarm and transmit the alarm to the UP.

Some persons mistakenly believe that if one sprinkler head on a system is activated, the entire system will discharge water. Actually, only the head or heads that reach the predetermined temperature will activate and discharge water. Most sprinklers are set to discharge water when the temperature at the sprinkler head reaches 165°F. Some activation temperatures are set higher or lower because of special conditions in the protected area. For instance, the sprinklers in the

Technological Institute Building Emergency Response Plan & Building Safety Systems laser laboratories in DB 20 are set at 300°F. Only the fire department, after their arrival, can approve shutting off a sprinkler system.

Sprinkler heads must always be kept clear of high-piled storage or equipment. At least 18 inches of clear space shall be available below the line of sprinklers to prevent the water discharge from being deflected from a fire. Sprinkler heads need to be kept paint-free and must be protected from being struck and damaged or broken off. Report all problems or leaks with the automatic sprinkler systems to Facilities Management (FM) (491-5201); for after-hours emergencies, contact University Police at 456).

D. <u>Carbon Dioxide Fire Suppression Systems</u>

Carbon dioxide fire suppression systems protect the Chemistry Department's flammable liquid vault KG43 in the modular structure outside the southeast corner of the building, and Research Safety's chemical waste facility flammable liquid vault in Room MG98. Each system will automatically discharge carbon dioxide gas when the temperature in the respective vault reaches 135°F. Each system may also be discharged by pulling the manual pull station in the respective room. Activation of a system will shut down the exhaust ventilation in that room, activate the building alarm system, and transmit an alarm to the University Police.

After the carbon dioxide has been released, the room doors should be kept closed for at least ten minutes, while the gas suffocates the fire. Since the carbon dioxide displaces the air in the room, no one should enter the room until it has been vented and the fire department approves.

E. Fire Extinguishers

Fire extinguishers of various types can be found in hallways, laboratories, and other areas throughout the building. All rooms in which chemicals or other flammable or combustible materials are in use need to have one or more extinguishers of the proper type(s) for the specific hazards. These fire extinguishers need to be inside the room (near the entrance).

Only individuals trained by NU in using fire extinguishers should use them. Review your department's Emergency Plan section in the Safety Desk Book for the types and locations of fire extinguishers in your area. See the fire extinguisher chart at the back of this manual (Appendix B) for a selection guide. The label on each fire extinguisher shows the class or classes of fire that it will extinguish. Information on fire extinguishers is available from the Office for Research Safety or Risk Management. Department heads should contact Risk Management (1-3253) to schedule fire extinguisher training (held outside, weather permitting) for their personnel.

Regulations require fire extinguishers to be kept in specific locations, either in cabinets or mounted on wall brackets, and to be kept unobstructed and easily accessible. Report missing, empty, or damaged extinguishers to FM (491-5201) as soon as possible. If you use a fire extinguisher, do not return it to its cabinet or bracket; call Facilities to replace it as soon as possible.

F. Fire Doors

Fire door assemblies are specially constructed doors and frames that will withstand fire for a specific length of time. They are found at stairways, in corridors, and at openings in fire walls to prevent the spread of smoke, heat, and fire. If fire doors are to be effective, they always must be kept closed. Fire doors held open by magnetic devices that release the doors to close when the

Technological Institute Building Emergency Response Plan & Building Safety Systems fire alarm is activated can be left open if not obstructed. Stairways are a place of refuge and a means of egress during a fire, and stairway doors must not be propped open. Fire regulations require stairway doors to automatically close and latch. If a door needs the closer adjusted or if a door will not close and latch for another reason, report it promptly to Facilities (491-5201).

G. <u>Emergency Telephone System</u>

There are emergency telephones in the corridors throughout Tech, usually near a fire alarm pullstation. The emergency phones are yellow speaker phones with a push-to-talk button. Use these telephones only for emergencies. The emergency telephones automatically ring the University Police (UP) communications officer. For damaged or inoperable emergency telephones, immediately call Northwestern Technology Service Center at Extension 1-HELP (1-4357)

H. Emergency Generators

In case of electrical power outage affecting the Technological Institute Building, emergency generators in the penthouse of the Nanofab Building will start automatically and supply electricity. The emergency generator supplies power to the fire alarm systems, emergency lighting, sump pumps, and certain special research equipment.

VI. FIRE FIGHTING

Only if you have University training in fire extinguisher operation should you attempt to extinguish a small (one that requires only the use on one portable extinguisher to put out the fire) or incipient fire. All other fires are the fire department's responsibility. Do not use water on fires of flammable liquids, grease, or combustible metals. Using water on these fires can cause spattering or explosive spreading of the fire. Do not use water on fires involving energized electrical equipment. Putting water on energized electrical equipment creates a shock hazard. If possible without endangering yourself, turn off electrical equipment involved in a fire by turning off the switch or circuit breaker or by pulling the plug.

For flammable liquid or grease (class B) or electrical (class C) fires, use a carbon dioxide or multipurpose dry chemical fire extinguisher. The dry chemicals leave a great deal of residue and could damage delicate electrical equipment such as computers. Carbon dioxide is better, although it might cause some moisture to condense on the equipment. Combustible metal (class D) fires require special dry powder fire extinguishers or sand.

Some laboratories or other areas might have special fire extinguishers for protection of special equipment or processes. Check your department's special emergency plan for further information, and see the list of types and locations of fire extinguishers in your department's Safety Desk Book.

When fighting a fire:

- 1. Stay low and do not breathe any more vapors than are necessary.
- 2. Avoid exposure to extreme heat.
- 3. Stay between the fire and the exit to avoid getting trapped.
- 4. Aim the extinguisher at the fuel, rather than at the flame.
- 5. Do not stay in any room or area where there is any significant amount of smoke or where other toxic, biological, or radioactive vapors may be present.

Technological Institute Building Emergency Response Plan & Building Safety Systems

6. Report **all** fires to UP and the Evanston Fire Department even if the fire was extinguished without an activated alarm.

VII. <u>CLOTHING FIRE</u>

DO NOT RUN. If a safety shower is immediately nearby, get under the shower and let the water flow over the burned area until medical help arrives. Otherwise, the universal instruction is **STOP**, **DROP**, **AND ROLL**. Immediately drop to the floor and roll repeatedly to extinguish the flames, holding your hands over your face to protect it from the flames.

Get burned areas under cool water as soon as possible. Do not apply creams or other medications, but get help without delay. See your department Safety Desk Book and laboratory door Emergency Information sign for locations of safety shower and eyewash stations.

VIII. CHEMICAL, BIOLOGICAL, OR RADIATION EMERGENCIES

Post an "Emergency Procedures for Laboratories" sign inside each laboratory using hazardous materials and an "Emergency Information" sign outside on the closed door. (See Appendix F.) Copies are available from the Office for Research Safety (RS). Information related to the safety handling of hazardous chemicals, biological agents or radioactive materials should be contained in your Laboratory Safety Profile and your Laboratory and/or Department Safety Desk Book. Questions related to the safe handling of hazardous chemicals, biological agents, or radioactive materials should be directed to the PI.

In an emergency involving any of these types of agents, call RS (1-5581) and University Police (UP; extension 911). If a sudden accidental release of possibly hazardous vapors, particulates, or gas should occur, use the same alarm and evacuation procedures as for fire. Leave the area quickly and avoid breathing the vapors as much as possible. From a safe location, contact RS and UP. Do not return to the area until told that it is safe to do so. Help emergency responders by providing information as needed. Persons directly involved and principal investigators in the affected laboratories should go to the fire department command center (usually located in the shift commander's van, sometimes with a flashing green light on the top) if the fire department is involved. Ask a UP officer to direct you there.

In case of an accidental spill of hazardous material, notify all persons in the area and evacuate the area and the area to which it might spread. If it is an incidental spill, contact RS (1-5581). RS will provide information and equipment for containment, protection and clean up. Major spills require outside assistance and mandate calling 911.

Note: If you cannot reach RS in an emergency, and after hours, call University Police at Extension 456 and ask them to page Research Safety.

IX. POWER OUTAGE

Emergency generators in the Nanofab Building provide emergency power to the fire alarm system and emergency lighting in exit areas. However, in case of a power outage, two problems arise in individual work areas: (1) seeing well enough to maneuver and (2) possible damage to processes and/or equipment. Keep a flashlight located where it could easily be found in the dark or keep a Technological Institute Building Emergency Response Plan & Building Safety Systems plug-in battery-operated emergency light in the work place. Emergency planning should include what to do about shutting down or otherwise manipulating processes that might create a hazard during power failure and/or upon the restoration of power. This would include such things as chemical processes that require continuous heating, stirring, or other electrically operated devices.

X. BOMB THREAT

Take any bomb threat seriously, and report it immediately by calling 911 and the Associate Dean's office (extension 1-2739).

If you receive a written bomb threat, do not handle it any more than necessary, but place it in an envelope to preserve possible finger prints. If you receive a telephoned threat, note the exact time of the call and attempt to write down the exact words of the caller. Ask him/her to repeat information. Get as much information as possible by asking when the bomb is set to explode, what kind of bomb it is, where it is located, and what it looks like. Call 911 and the Dean's office and give them all of the information you obtain.

XI. SUSPICIOUS PACKAGES

Suspicious packages should be reported to the University Police (UP; extension 456) immediately. A suspicious package should not be touched or moved, and the immediate area surrounding the package should be cleared. Some letter and parcel recognition points are:

- Excessive weight; excessive postage or no postage
- Incorrect titles or titles, but no names
- Handwritten or poorly typed; misspelling of common words
- Oily stains or discolorations; protruding wires or foil
- Excessive securing materials such as masking tape, string, etc.
- No return address; restrictive markings such as confidential, personal, etc.
- Rigid or lopsided or uneven envelope
- Visual distractions; foreign mail, air mail, or special delivery
- Strange odor

XII. SUSPICIOUS PERSONS

Suspicious persons should not be directly confronted, but should be reported to University Police (**UP**; extension 456) immediately. Provide the UP communications officer with as much information as possible including a description of the person or persons, the nature of their activity, and their location and direction of travel. Remember, if it worries you, the UP need to know. They would rather be called and not needed than needed and not called.

XIII. TORNADO PROCEDURE

The City of Evanston will sound the Civil Defense sirens to warn the community if a tornado is sighted or we are in the path of a tornado. The sirens are positioned throughout the city and will sound a continuous three-minute unwavering blast. These sirens are tested on every first Tuesday of the month around 10 A.M.

Technological Institute Building Emergency Response Plan & Building Safety Systems If you are inside a building, go to an interior hallway or other enclosed area on a lower floor and away from windows. Avoid going into auditoriums, gymnasiums or other large rooms where roof collapse may be more likely. If you are outside when you hear the warning siren, seek inside shelter, preferably in a steel-framed or reinforced concrete building of substantial construction. Tech is such a building. AVOID WINDOWS.

Please provide disabled and elderly people assistance in seeking a safe location. In case of casualties, call 911.

XIV. INJURY OR ILLNESS

If someone has an injury or becomes suddenly ill and requires emergency medical attention, call 911. Advise the location of the victim and the nature of the injury or illness. Your department Safety Plan should list the locations of first aid kits and names of persons in the department who have training in first aid or CPR.

For any victims with potential contamination by radioactivity or a hazardous material:

- 1. Call 911 and call RS at 1-5581.
- 2. Keep the victim as comfortable as possible.
- 3. Do not move the victim any more than is necessary for his/her safety.
- 4. Never administer liquids to an unconscious victim.
- 5. Do not remove objects that may be imbedded in the victim's skin.

XV. WORKERS' COMPENSATION

Workers' Compensation covers employees of the University, including faculty, staff, and students working part-time on the University payroll, for work-related injury or illness. Students not on the University payroll are under the care of the University Health Services. However, Workers' Compensation may classify a student or other person doing work for the University and receiving a stipend from departmental funds or a contributing outside organization as an employee.

If you have an injury or illness as a direct result of work or a hazardous condition in your work place, report the incident to your supervisor. Also, you and your supervisor must report the injury or illness to the Claims Division of the Office of Risk Management. Call the Claims Division (491-5582) within 24 hours after an injury occurs or when you first become aware of an occupational illness or as soon as practical. It is important that you report any injury no matter how small. The Occupational Safety and Health Act and Illinois Workers' Compensation regulations require that the University report all work-related injuries.

Do not wait for complications to arise; get treatment as soon as possible.

If the injury is traumatic, and/or deemed to be life-threatening in nature, (i.e., hemorrhaging, chest pains, cessation of breathing, severe burns, open fractures, severe head injuries or other situations) it is recommended that the employee seek immediate emergency medical care at Evanston Hospital. For these life-threatening situations, call 911.

For non-life threatening work related injuries, employees and supervisors should contact the claims manager at (847) 491-5582 to arrange an appointment at an OMEGA Facility. Northwestern University has designated Occupational Medicine Evanston/Glenbrook Association (OMEGA) as the primary medical care facility for work-related injuries and illnesses. The general OMEGA phone is (847) 657-1700. OMEGA has 2 locations, one centrally located at 1000 Central Street,

Technological Institute Building Emergency Response Plan & Building Safety Systems Suite 840, Evanston, IL. Office hours are Monday, Wednesday, Friday, 8:00 a.m. through 11:30 a.m. The second facility is located at 2150 Pfingsten Road, Suite 3000, Glenview, IL. OMEGA hours in Glenview are 7:30 A.M. to 5:00 P.M. on Monday, Wednesday, or Friday. Tuesday and Thursday hours are 7:30 a.m. to 8:00 p.m. Saturday hours are 8:00 a.m. to Noon. Use Evanston Hospital emergency services after 5:00 P.M. or before 7:30 A.M. Monday through Friday and on weekends and holidays if your condition is too serious to wait until OMEGA reopens. Injured employees who go to Evanston Hospital shall identify themselves as Northwestern University OMEGA patients and show their Wildcard. OMEGA will coordinate any follow-up care, if needed, at one of their facilities.

When an employee receives any invoices for medical services rendered, send them to the Claims Division at 2020 Ridge Avenue, Evanston, IL 60208-4335. For further information on Workers' Compensation regulations and benefits, call the Claims Division, at (847) 491-5582.

XVI. PERSONAL SAFETY

The personal safety of every member of the Northwestern community is of high importance. Please see the <u>Office of Risk Management website</u>.

XVII. SHOP SAFETY

Northwestern University's shop safety guidelines outline a comprehensive program for shop safety developed by a Provost-appointed committee of senior faculty and staff members with experience in the wide range of shops at Northwestern. These guidelines cover the sciences, theater and Facilities Management shops.

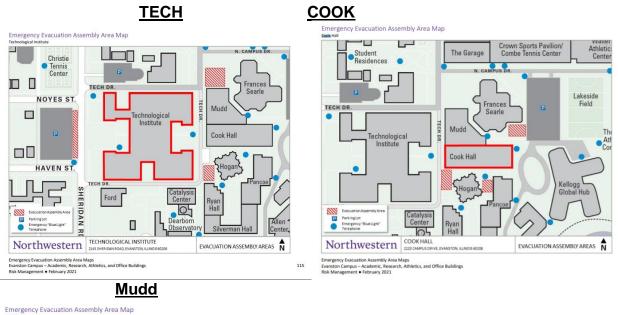
For purposes of these guidelines a shop is defined as any area where one or more of the following pieces of equipment are used by students and/or employees: lathes, surface grinders, milling machines, table saws, radial arm saws and/or nail guns.

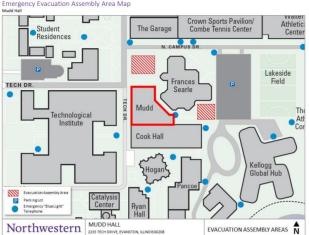
Each shop shall develop and implement a written safety policy. The safety policy must address various topics, including but not limited to: shop access, hours of operation, training, shop and safety equipment, rules of conduct, safety postings, emergency telephone numbers and incident reporting guidelines.

For additional information, please contact Office of Risk Management.

TECH – FORD – COOK–MUDD DEPARTMENT/CENTER ASSEMBLY LOCATIONS

C. <u>Tech, Cook and Ford Assembly Areas</u> Once you have left the building you should proceed to your designated assembly area for your group or department. Students should proceed to the Sargent Hall or Garret parking lots.

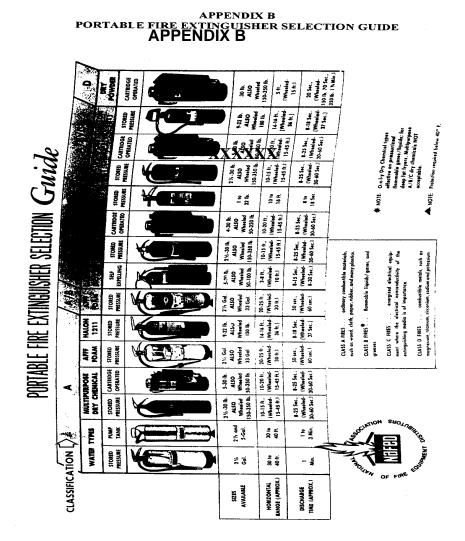




FORD - All faculty, staff, students and visitors in Ford should be directed to the Garrett parking lot (aka Northwestern Place) south of Ford, east of Sheridan Road.

Students in Tech should be directed north toward Sargent Hall (or during construction along east sidewalk of Sheridan Road) or south toward Garrett Seminary parking lots.

Questions during an evacuation, call Director of Facilities and Planning (312) 350-8507

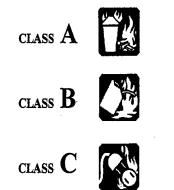




· ·	PRESSURIZED WATER (Class A)	CARBON DIOXIDE	A. B. C. POWDER
		(Class BC)	(Class ABC)
PAPER - CLOTH		SURFACE	
WOOD - RUBBISH	YES	FIRES	YES
COMBUSITBLES, ETC.	EXCELLENT	ONLY	EXCELLENT
VOLATILE LIQUIDS		YES	YES
GAS - OIL - PAINT, ETC.	NO	EXCELLENT	EXCELLENT
ELECTRICAL PANELS -		YES	YES
MOTOR APPARATUS,	NO	EXCELLENT	EXCELLENT
ETC.			
			21/2 LBS.
		5 LBS.	5 LBS.
CAPACITY	2 GALLONS	10 LBS.	10 LBS.
		15 LBS.	20 LBS.
		20 LBS.	30 LBS.
	BREAK SEAL,	BREAK SEAL,	BREAK SEAL,
OPERATING	PULL PIN,	PULL PIN,	PULL PIN,
METHOD	SQUEEZE	SQUEEZE	SQUEEZE
WETTOB	HANDLE	HANDLE	-
ripr.		TANULE	HANDLE
FIRE	MATER	040001	ALL
FIGHTING	WATER	CARBON	PURPOSE
AGENT		DIOXIDE	POWDER
APPROXIMATE			
HORIZONTAL RANGE	40-55 FEET	3-10 FEET	5-20 FEET
APPROXIMATE			
DISCHARGE TIME	1 MINUTE	8-30 SECONDS	8-25 SECONDS

NORTHWESTERN UNIVERSITY

LABEL SYMBOLS



TYPES OF FIRES

FOR WOOD, PAPER, CLOTH, TRASH AND OTHER ORDINARY COMBUSTIBLES.

FOR GASOLINE, GREASES, OIL, PAINTS, AND OTHER FLAMMABLE LIQUIDS.

FOR LIVE ELECTRICAL EQUIPMENT.

The label on the extinguishers show one or more of the above symbols designating the types of fires on which this extinguisher should be used.









3. SQUEEZE LEVER SWEEP SIDE TO SIDE

APPENDIX C

Emergency Responsibilities and Procedures for Instructors using Tech Classrooms

As an instructor, you are responsible for preparing the students in your class for responding to emergency situations in Tech. These guidelines are designed to assist you.

Class Preparation

1. Identify the exits nearest to your classroom and plan emergency evacuation routes. The primary evacuation route is the nearest means of egress from an area. If fire, smoke and/or other conditions block the primary route, use an alternate route.

If possible, avoid the front and rear concourses of Tech. If you must use it, please move away from the area as soon as possible so that Emergency Responders have full access to the concourses.

- 2. Review the evacuation routes and emergency procedures (see Fact Sheets 1, 2, and 3) with your class at the beginning of the quarter.
- 3. In advance/at the beginning of the quarter, determine a specific emergency plan for any class member(s) with disabilities.

Note that you *must* evacuate your class in response to any alarm (whether a drill, a false alarm, or a real emergency); the only exception is a previously-announced test of the alarm system. The safety of your class members is more important than any lost class time.

In the event of a tornado warning (a continuous three-minute unwavering blast of the Civil Defense sirens), go to an interior hallway or other enclosed area on a lower floor and away from windows. Avoid going into auditoriums or other large rooms where roof collapse may be more likely. AVOID BEING NEAR WINDOWS.