

# Personal Safety

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## **Personal Safety**

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### **Personal Safety**

You will encounter many potentially hazardous conditions during your employment with Connect/One. Knowing how to identify these hazardous conditions and taking the correct precautions will help to minimize the risk of injury. This module will discuss some of the potential hazards you may encounter and how to maintain a safe working environment. Topics in this module are as follows:

- Governing agencies
- Dog encounters
- Plants and insects
- Working environment hazards
- Health hazards
- Personal protective equipment
- Customer-created hazards
- Safety accountability
- Safety equipment
- Hand tools
- Vehicle and equipment safety inspection

### **Safety Accountability**

In order to prevent personal injury as well as potential damage to the environment and equipment, personnel must follow all safety rules and procedures. You are accountable for your actions with regard to safety. How well employees maintain a safe working environment reflects how seriously they perceive all aspects of their jobs. Any willful disregard for safety is subject to disciplinary action up to and including dismissal. Real safety performance begins and ends with each individual's awareness of and attitude toward safety.

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## Governing Agencies

This section discusses the Occupational Safety and Health Administration (OSHA), the National Electrical Code (NEC), and the National Electrical Safety Code (NESC) roles in establishing safety regulations. Connect/One's safety policies are based on OSHA regulations and may be stricter than OSHA regulations. Following all safety policies ensures compliance with the governing authorities' regulations.

### Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Administration (OSHA) is the authority governing all occupational safety regulations. OSHA uses the Occupation Safety and Health Act to establish regulations pertinent to occupational safety. OSHA regulations are enforceable as federal laws. Any employer found in violation of any OSHA regulation could be subject to severe penalties including fines, imprisonment or both.

OSHA regulations related to telecommunication work, including CATV installers, are found in OSHA standard 1910.268. Other OSHA regulations pertaining to your work are located in the General Industrial Safety Orders.

While Connect/One can establish policies, provide equipment, conduct safety training, and check to see that safe practices are being followed at the job sites; it is your responsibility to ensure that safety is your first priority in the field, Failure to follow company safety policies and to manage your daily work practices in a safe and professional manner could result in injury or equipment damage. Your failure to comply with these requirements could lead to termination of your employment.

### National Electrical Code (NEC)

Given the potentially dangerous environment created by electricity and electrical work, several national agencies have developed regulations, codes, and standards. The National Electrical Code (NEC) is a list of safety regulations and procedures for the installation of electrical wiring and equipment in the United States. It was created for the "practical safeguarding of persons and property from hazards arising from the use of electricity." The NEC is not actually a law, but a code of practice. In order for the code to be legally enforced, the state, county, and/or community must first adopt the NEC.

### First Aid

Instructions for administering first aid are located in the first aid kit. Employees will need to determine whether an injury warrants calling 911 or other local emergency number.

*Report all injuries/medical conditions experienced on the job to your supervisor immediately!*

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### Dog Encounters

Whenever you enter a customer's home or property, there is a possibility that you may encounter the family dog. Be alert to indications that there may be a dog on the property. Look for dog toys, food bowls, and patterns in the lawn; shake the gate latch; and ask the owner if he/she owns a dog. Even if the owner states the dog is not harmful, politely ask that the dog be restrained in a place away from your work area. While many dogs appear friendly, always be alert to the possibility that the dog may be dangerous.

If confronted by a dog, proceed cautiously at every step of the encounter. Determine the type of dog and the best course of action based on the dog type. There are three types of dogs that may threaten you.

- Dominant dogs - very dangerous
- Prey dogs
- Defensive dogs

The table below describes how to identify the different dog types, what to do to avoid triggering a dog attack, and the best actions to take to try to avoid a confrontation.

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<b>Dog Encounters</b>		
<b>Dominant Dogs</b>		
<b>Body Language</b>	<b>Triggers to Avoid</b>	<b>How to Handle</b>
<ul style="list-style-type: none"> <li>• Ears erect</li> <li>• Tail up - wagging stiffly or held straight</li> <li>• Standing on tip toes</li> <li>• Eyes staring straight ahead</li> <li>• Hair probably not up</li> </ul>	<ul style="list-style-type: none"> <li>• Shouting</li> <li>• Gesturing</li> <li>• Sudden movements</li> <li>• Staring</li> </ul>	<ul style="list-style-type: none"> <li>• Do not threaten the dog.</li> <li>• Talk calmly.</li> <li>• Face the dog.</li> <li>• Do not look at the dog's eyes.</li> <li>• Give commands such as good boy and sit.</li> <li>• Try to avoid confrontation - move away in a submissive posture.</li> <li>• If you have to confront a dominant dog, have something in your hand for protection or to keep the dog away from you.</li> </ul>
<b>Prey Dogs</b>		
<b>Body Language</b>	<b>Triggers to Avoid</b>	<b>How to Handle</b>
<ul style="list-style-type: none"> <li>• Ears up</li> <li>• Excited - may be crouched in anticipation</li> <li>• Eyes wide and focused on you</li> <li>• Tail wagging</li> <li>• Hair down</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden movements</li> <li>• Gesturing</li> <li>• Loud noise</li> <li>• Threats</li> </ul>	<ul style="list-style-type: none"> <li>• Move calmly.</li> <li>• Shield yourself.</li> <li>• Talk very softly.</li> <li>• Move away.</li> <li>• Try to distract the dog by gently throwing a rock or stick.</li> <li>• Give the dog some food.</li> </ul>
<b>Defensive Dogs</b>		
<b>Body Language</b>	<b>Triggers to Avoid</b>	<b>How to Handle</b>
<ul style="list-style-type: none"> <li>• Ears back</li> <li>• Lips back</li> <li>• Displays of threat</li> <li>• Dog's barking sounds tense</li> <li>• Dog moves a great deal</li> <li>• Dog appears nervous or uneasy</li> <li>• Hair up</li> <li>• Eyes may be averted or staring at you</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden movements</li> <li>• Direct threat</li> <li>• Loud noise</li> <li>• Gesturing</li> </ul>	<ul style="list-style-type: none"> <li>• Move confidently and calm.</li> <li>• Talk softly and calm.</li> <li>• Give commands.</li> <li>• Try to ignore the dog.</li> <li>• Do not turn your back on the dog.</li> <li>• Do not trust this dog, even if it acts friendly.</li> <li>• Do not try to scare this dog off, unless you are sure it has an escape and you are not close enough to panic the dog.</li> </ul>

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### Procedures for Animal Attacks

If the dog attacks, do not lose control of the situation. Look for hidden dangers that could result in you tripping, falling down, or getting boxed in. Do not spray mace at the dog. This will only make him angrier. Take actions to protect yourself as follows:

- Shield your body from the dog with any item available. If nothing is available, use your arm (preferably the left arm if you are right handed or the right arm if you are left handed).
- Kick at the dog, but stay on your feet.
- Move to a gate, door, or car door.
- Attempt to get the dog on one side of a barrier with you on the other and make the dog let go.

All wounds resulting from an animal bite must be thoroughly washed with soap and warm water, disinfected (hydrogen peroxide) and covered with a sterile dressing/bandage. Precautions listed on the below table must be followed after an animal attack/bite:

Animal	Immediate Treatment	Follow Up Procedures
Domestic Dog	Wash wound with soap and warm water, disinfect (hydrogen peroxide) wound and cover with sterile bandage.	Confirm whether the animal has been inoculated against rabies; then consult a doctor or a medical professional as soon as possible.
Rat, Raccoon, Bat, Wild Dog or Cat	Wash wound with soap and warm water, disinfect (hydrogen peroxide) wound and cover with sterile bandage.	Immediately consult a doctor or medical professional.
Snake	Wash wound with soap and warm water, disinfect (hydrogen peroxide) wound and cover with sterile bandage. Do not apply cold compress and is possible, keep the wound below the level of the heart.	Seek immediate medical attention.

*Report all animal bites and attacks to your supervisor immediately; describe the location where the attack occurred, a description of the animal (size, color, breed, type of ears, hair, etc.) and injuries sustained.*

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### Plants and Insects

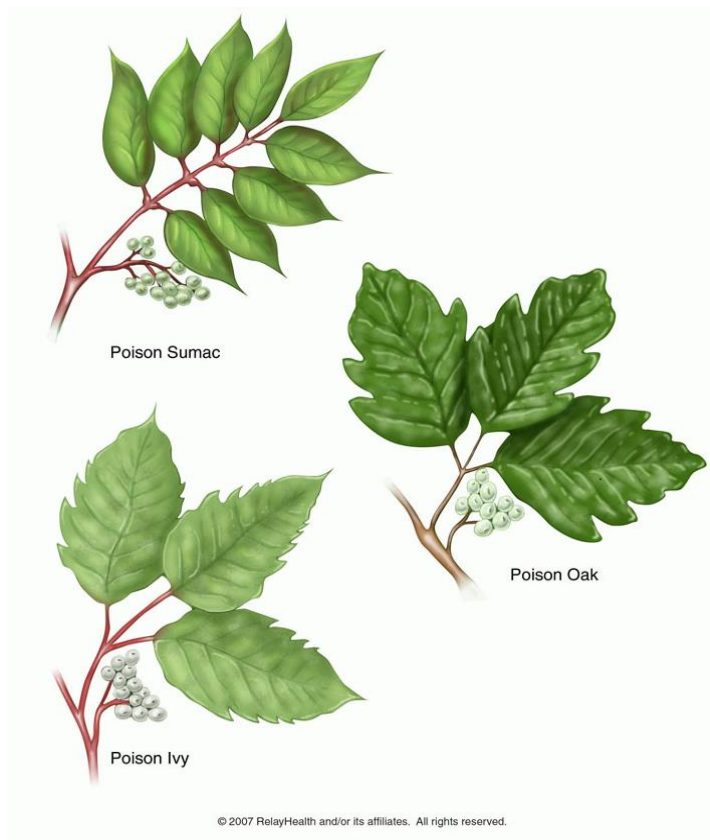
This section discusses the different types of poisonous plants and harmful insects.

#### Plants

The best protection from poisonous plants such as poison ivy, poison oak, and poison sumac is recognition, avoidance and covering all exposed body parts. (i.e. long sleeved shirts, gloves)

The figure below shows these common poisonous plants.

*Poison ivy, poison oak, and poison sumac take on different forms in different places. The leaflets may vary from groups of three to groups of five, seven, or even nine leaves. It is best to learn what these poisonous plants look like where you live.*



The oil of these poison plants, called urushiol [oo-roo-shee-awl], is a sticky substance that stays active a long time. It can be easily transferred to your skin by touching your clothing, from a pet, or even from burning poison ivy leaves. Just covering up against poison ivy with clothing and gloves is not enough but does help to avoid direct contact. If exposure does occur, the first step is to apply rubbing alcohol to the affected skin and wash with soap and water. If a rash/itch develops, apply calamine lotion and consult a physician as needed.



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### Insects

Another hazard encountered in the field is insects. There are two categories of insect bites/stings: venomous and non-venomous. The table below identifies the types of insects in each category.

<b>Biting/Stinging Insects</b>	
<b>Venomous</b>	<b>Nonvenomous</b>
Wasp Hornet Yellow Jacket All Bees Fire Ants	Chiggers Fleas Lice Scabies Bed Bugs Ticks Mosquitoes

Venomous insects attack in defense. These insects inject painful, toxic venom through a stinger. Venomous stings are always painful, red, and swollen. This type of reaction is called a local reaction. In sensitive individuals, a more severe whole body reaction may occur. Allergic reactions, such as hives and swelling away from the sting site, are called systemic reactions. These systemic reactions can become life threatening if they involve the airways or circulation systems.

Nonvenomous insects bite and usually inject anticoagulant saliva in order to feed on your blood. Some local reactions occur due to insect bites, such as itching and swelling, but generally insect bites are not dangerous. It is extremely rare to suffer an allergic reaction to insect bites. Insects can spread diseases like Lyme disease, encephalitis, and malaria through their bites. However, this also is extremely rare, and most bites will result in only local reaction.

There are two methods for preventing insect bites and stings: repellents and avoidance. Insect repellents work well for biting insects but are not very effective against stinging insects. The most effective insect repellent ingredient available is DEET, which is available in most sprays and lotions. There are no proven effective insect repellent products that may be taken orally.

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The table below summarizes some techniques to avoid stinging and biting insects:

<b>Insect Avoidance Techniques</b>	
<b>Stinging Insects</b>	<b>Mosquitos, Chiggers and Ticks</b>
<ul style="list-style-type: none"><li>• Don't wear cologne, perfume or scented lotions.</li><li>• Control odors at picnics, garbage areas. etc.</li><li>• Avoid brightly colored clothing outdoors.</li><li>• Destroy or relocate all known hives or nests near your home.</li></ul>	<ul style="list-style-type: none"><li>• Cover as much of your skin as possible with clothing, hats, socks etc.</li><li>• Pay special attention to cuff areas at ankles, wrists and neck.</li><li>• Avoid swamps or standing water.</li><li>• Examine exposed skin and scale areas for clinging ticks.</li><li>• Use insect repellent.</li></ul>

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### Working Environment Hazards

The environments that you work in have a significant effect on the potential for occurrence of accidents. Knowing the hazards associated with your environment allows you to take the necessary precautions to keep your working environment safe.

### Working at Night

Low visibility at night presents several potential hazards including the following:

- Inability of oncoming traffic to see workers
- Inability of the worker to see hazards in the work area
- Increased crime
- Threatening feeling of the unknown in the dark

To ensure your safety when working at night, the following guidelines should be followed:

- Make sure you are as visible as possible.
  - Wear your reflective vest.
  - Place the Men Working sign well ahead of your work zone.
  - Use cones with visi-flares to enhance the visibility of your work zone.  
Turn on the emergency flashers and roof beacon light on your truck.
- Use the buddy system, and check in with the office regularly.
- Never enter a customer's home if you feel uncomfortable with the customer or situation, e.g., illegal activities ongoing, only a minor is at home, or indication of domestic violence.
- Climbing a ladder at night is dangerous. Refrain from climbing ladders at night whenever possible. Always use adequate lighting when you do have to climb at night.
- Do not stay out on the street if you feel threatened by people or a dangerous situation.
- Make sure there is proper lighting to allow you to do your job safely and correctly. A flashlight might be sufficient in some cases, but a freestanding spotlight or a miner's light on your hat should be part of your equipment for night work.

**If you are unable to perform your job competently in the dark or you are uncomfortable with the situation, contact your supervisor before continuing.**

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### Bad Weather

The weather will create safety hazards that you must be aware of when performing work outside. Ice, snow, rain, fog, wind, and lightning are all hazards created due to the weather.

#### Snow and Ice

Along with the cold and wet conditions, which will be discussed later in this module, the biggest hazard created due to snow and ice is the slippery conditions. Extreme care must be taken while driving, walking, or climbing due to reduced traction. The following are some suggestions to help keep you safe during snow and icy conditions:

- When driving, leave extra distance between you and the vehicle in front of you (use the 4- second rule). Always brake slowly and smoothly to avoid sliding out of control.
- Be prepared for slippery roads and deep snow by carrying a shovel, sand, and/or chains.
- Keep extra clothing and water in your truck if you are going to be in rural areas.
- Make sure your heater and defroster are working properly and that you have an ice scraper in the truck.
- Be careful when walking on icy ground.

#### Rain and Fog

Rain and fog present a slip hazard as well as a visibility hazard. The following should be followed when working in rainy or foggy conditions:

- Use your truck's parking lights to mark your position.
- Remember that roads are the most slippery when rain begins to fall because the oil and grease on the surface have not yet washed away.
- Reduce your speed and allow twice the normal following distances (use the 4- second rule).
- When raining, drive with your lights on even during the daytime.
- When driving in fog, reduce your speed and turn on your headlights (low beams) to help improve visibility.
- If the fog is too dense to see through, pull completely off the road and stop at a safe and legal place until visibility improves.

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### High Winds

High winds can cause objects to be blown over, creating severe hazards on the work site. Objects such as ladders, tree limbs, and trash can be blown over, striking and injuring the worker. The following guidelines should be followed to minimize injuries during high wind conditions:

- Extreme caution should be used when carrying large objects, such as ladders, during windy conditions. A gust can knock you off balance, causing you to fall and possibly resulting in an injury.
- Do not stand on a ladder during windy conditions unless you are properly belted-off. If the winds cause your ladder to be unstable, stop work until winds calm down.
- Remove the ladder when not in use, even if only for a few minutes.
- Wear your chinstrap with your hard hat.

### Hot and Dry Weather

In hot and dry weather, the higher air temperatures increase the heat-stress risk factors. With these increased risk factors, employees must take special precautions to prevent the occurrence of heat-stress conditions. The table below lists the heat-stress conditions.

<b>Heat-Stress Conditions</b>	
<b>Heat-Stress Disorders</b>	<b>Possible Signs and Symptoms</b>
<b>Heat rash</b> Usually the earliest and least serious form of heat stroke.	Excessive sweating, muscle spasms, prickly heat bumps, irritability, mild dizziness or weakness.
<b>Heat Exhaustion</b> A more serious form of heat stroke.	Excessive sweating, cold, moist, clammy, pale skin, thirst, headaches, nausea or loss of appetite, dilated pupils, dizziness or giddiness, rapid or weak pulse.
<b>Heat stroke</b> A serious, life-threatening medical emergency	Lack of sweat and hot, dry, flush skin, deep, rapid breathing, rapid, weak, and possibly irregular pulse, headache, nausea, dizziness or confusion, convulsions or loss of consciousness.

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If you or a coworker is suffering from heat-stress disorder, the following actions should be taken:

- Heat fatigue - notify supervisor immediately. Then, move the victim to a cool place out of the sun and give him/her water to drink.
- Heat exhaustion- Notify supervisor immediately. Then, move victim to a cool place and watch for signs of shock. Place the victim on his/her back with the feet slightly elevated. Use wet cloths to cool the victim, and give him/her a small glass of water about every 15 minutes.
- Heat stroke- Notify supervisor immediately. Then, get victim out of the heat quickly, and call for medical assistance.

The following are some guidelines to help prevent heat stress:

- Know your environment - recognize that high temperature, high humidity, and a high exertion level can increase the risk of heat stress. For example, working in a hot attic can place you at an increased risk for heat stress.
- Drink plenty of water - increasing the amount of water you drink replenishes the water lost due to sweating. Drink small amounts of water frequently throughout the day.
- Take appropriate breaks - monitor air temperature, humidity, sun exposure, and physical exertion and take breaks as often as needed.
- Wear proper clothing - when possible; wear loose, lightweight clothing that allows the body heat to escape.
- Acclimate yourself to the heat - work short periods of time in the heat, and increase the work periods gradually.
- Stay or get in shape - people in good condition tend to adapt to heat better because their cardiovascular system responds better.
- Eat wisely - avoid heavy meals during the day.
- Know special risks - alcohol, caffeine, medications such as those used to control high blood pressure or allergies, and increased age all increase your risk of heat stress.

Sunburn is another hazard of working in hot, dry conditions. The best treatment for sunburn is the use of a sunscreen prior to exposure. If you do become sunburned, using various sunburn ointments and limiting exposure of the affected areas to air can relieve the burning sensation. Medical assistance should be obtained in cases of severe sunburn.

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### Cold and Wet Weather

When working in cold weather, you must stay aware of the cold-related risk factors and illnesses. The table below describes the cold-related illnesses:

<b>Cold Weather Illness</b>	<b>Possible Signs and Symptoms</b>	<b>Treatment for Cold Weather Illnesses</b>
<b>Hypothermia:</b> A condition in which the body core temperature drops below normal. This can occur at temperatures above or below freezing.	<ul style="list-style-type: none"><li>• Feeling of excessive cold, especially in the abdomen and back.</li><li>• Slurred speech.</li><li>• Shivering.</li><li>• Fumbling hands.</li><li>• Tingling or pain usually in the nose, cheek, ears, fingers or toes.</li><li>• Reduced mental alertness.</li><li>• Poor coordination.</li><li>• Loss of consciousness.</li><li>• Sleeping.</li></ul>	<ul style="list-style-type: none"><li>• Get the victim to a warm place as soon as possible.</li><li>• Warm the victim slowly; do not rub or massage the affected areas.</li><li>• Loosely bandage any frostbite areas.</li><li>• If the victim is suffering from hypothermia, do not give the victim anything to eat or drink.</li><li>• Monitor vital signs.</li></ul>
<b>Frostbite:</b> The freezing of body tissue that occurs when the temperature drops below freezing.	<ul style="list-style-type: none"><li>• Rigid skin.</li><li>• White or gray color.</li><li>• Numbness, tingling or aching in the affected area. Typically the feet, hands, ears or nose.</li><li>• Pain that later subsides because the skin and nerves are damaged.</li><li>• Blisters appearing in 12 to 36 hours.</li></ul>	

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The following guidelines can reduce cold weather illnesses or injury:

- Keep arms, legs, face, and ears well covered.
- Keep dry.
- Keep others informed of where you are and when you will return.
- Dress in layers. The layers of clothes trap air between them helping to insulate your body.
- Wool and hollow-fill clothing provide the best insulation in cold weather.
- Wear a hat to help keep you warm.
- Protect yourself from the wind, and use extra caution during windy conditions.
- Wear proper footwear.
- Go indoors when you become fatigued or sweaty.

*\*Refer to Power Point Presentation (Frostbite & Slip and Fall)*



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### Health Hazards

During the course of your work, you may encounter hazards, such as gas leaks, asbestos, creosote, and unsanitary conditions that could be detrimental to your health. The following sections describe how to identify and protect yourself from these hazards.

#### Gas

Gas leaks may be present in basements, crawl spaces, near furnaces, or by the outside gas meter. A gas leak can be recognized by the natural gas odor in the area. If exposed to the gas leak, you may become suddenly nauseated, suffer a headache, or feel tired.

If you suspect a gas leak, inform the customer of your suspicion and recommend he/she have the gas company check for leaks. Avoid the area of the leak and inform your supervisor. If necessary, reschedule the work after the gas line repairs are completed.

#### Asbestos

Asbestos may be present in basements, crawl spaces, or insulation for a furnace room or exterior walls. In homes built prior to 1972, asbestos could have been used in floor tiles, carpeting, dry wall, hot water pipe wrapping, or anything that may require a flame-retardant makeup.

When evaluating conditions for an asbestos hazard, look for indications that asbestos fibers have been disturbed; indications such as torn paper covering over old insulation, scratched paint, and exposed drywall chalk could indicate a condition that may result in your exposure to asbestos fibers.

If you suspect an asbestos problem, inform the customer. Attempt to reroute the installation to avoid disturbing the asbestos. If the problem is severe, inform your supervisor and reschedule the install if necessary.

#### Creosote

Creosote is used on utility poles, wooden foundations, decks, porches, landscaping ties, and fence posts. It can be recognized by the dark discoloration of the wood and its distinct odor.

When working around creosote, wear leather gloves, long sleeved shirts, and leatherwork boots to protect against exposure to your skin. If you receive a splinter or get creosote on exposed skin, remove the entire splinter and thoroughly clean the area.

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### Unsanitary Conditions

You may have the occasion to service a house where the sanitary conditions are less than expected. This may occur in homes that have several pets that are primarily confined to the house. In this case, proceed with the installation if possible and stay clear of the problem areas. If you are unable to continue, inform the customer and report the incident to your supervisor.

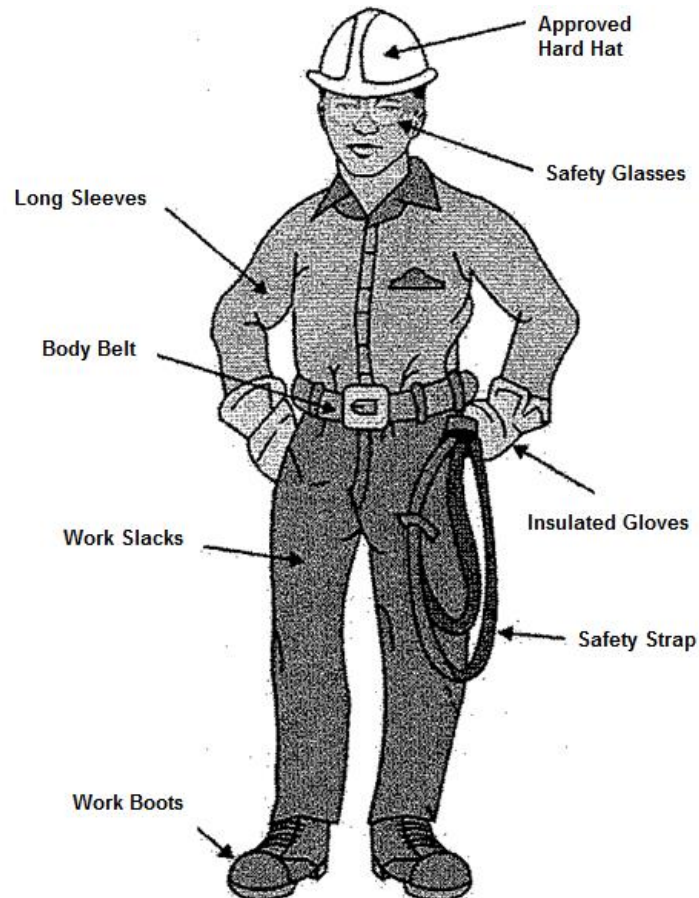
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### Personal Protective Equipment

CATV installation requires a number of items of personal protective equipment (PPE). In addition to an ammeter and voltage detector, some common PPE items (shown in the Figure below) used during CATV installation include the following:

- Hard hat
- Eye protection (safety glasses, safety goggles and face shields)
- Long sleeves
- Body belt
- Gloves (leather work gloves, insulated gloves)
- Safety strap
- Work slacks
- Work boots



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### Use and Inspection of Personal Protective Equipment

Connect/One will ensure that the required PPE to perform your job safely is available to you. It is your responsibility to inspect and maintain each PPE item before use to ensure that each item is in serviceable condition. Most importantly, it is your responsibility to properly use the equipment when necessary.

#### Inspection

Daily inspections are performed to ensure that the hard hat is in good working condition. The shell is checked for cracks, soft spots, or badly faded areas. If any defects are found, the hat must not be used and must be replaced.

The suspension cradle and headbands must also be checked daily for deterioration. Items to be checked include twisted, cut or frayed straps, and cuts or tears on the plastic clips. Check the suspension system for broken pieces, and check that all pieces are in place according to the design requirements. Only use the suspension system designed for your model hard hat. Never alter or modify the suspension system. The clearance between the suspension and the shell must be maintained in order to provide proper protection.

#### Hard Hat

A hard hat is worn to protect your head from impact injuries or at least to reduce the seriousness of a sustained injury. A properly fitted and adjusted hard hat can absorb up to 75% of the force of a blow. A hard hat should be worn whenever there is a potential for injury due to falling objects or when working in areas such as attics, basements, or crawl spaces. A hard hat must be worn when working from a ladder or climbing a pole, when working near electrical lines or equipment to protect against electrical shock hazards.

Hard hats must be the insulated type and must meet ANSI Z-89.1 Class E & G or A & B standard. Metal hard hats are not allowed since they are not as impact resistant as plastic hard hats and are not safe around electrical hazards or lightning. A hard hat is shown in the figure below:



**Hard Hat**

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### Proper Use

Hard hats must be worn correctly to be effective. Never wear the hat backwards. Wearing the hat incorrectly reduces the protection afforded. The hard hat should fit snugly on the top of the head with the brim no more than 1 inch above the upper edge of the ear. Always make sure the hat fits. Never place the hood of any hooded garment over or under a hard hat. If the hood is wet, it could become a conductor of electricity if it comes in contact with a power line.

### Maintenance and Care

Hard hats should be cleaned regularly using mild soap and water. Never use a solvent to clean your hard hat. Solvents may make the shell brittle and more susceptible to cracks. The suspension liner and headband may be machine-washed.

Never paint, place decals on, or attach unauthorized material to the hard hat. Paints and glue may reduce the strength of the hard hat, reducing your protection. Do not bore or punch holes through any part of the hard hat to improve circulation. This again will reduce the impact resistance and the electrical insulating ability of the hard hat.

Never throw, kick, or drop a hard hat, and never use it as a seat or a support for other material. If a hard hat is dropped, the shell should be re-inspected for any cracks or soft spots prior to reuse.

## Eye Protection

The purpose of safety glasses is to keep debris out of your eyes and to protect your eyes from falling objects. Eye protection equipment is available as goggles, face shields, and safety glasses. All glasses must be made of impact-resistant materials and must meet ANSI standard ANSI Z-87. Field personnel wearing prescription eyeglasses should make sure the lenses and frames are rated as safety glasses, not just tempered. Cover-all goggles are required for prescription glasses that do not meet ANSI Z-87 standard.

The graphic below is an example of safety glasses:



**Safety Glasses**

## Personal Safety

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Approximately 90% of all eye injuries are preventable. It Is Connect/One's policy that eye and face protection be worn while working in the field or when exposed to an eye or face hazard, such as flying particles, liquid chemicals, or light radiation. Specifically, eye or face protection must be worn when performing any of the following work activities:

- Hammering
- Using power tools
- Drilling
- Scraping
- Working in areas where dust is present
- Working near tree branches, shrubs, and thorn bushes
- Welding or using a propane torch
- Handling creosote material
- Working with chemicals including vehicle and power supply batteries
- Performing any activity that has the potential to result in an eye injury
- 

### Gloves

Leather-faced work gloves must be worn when handling and/or working with coarse material such as cable, wire, ropes, wood, or chemicals. Leatherwork gloves are used to protect the hand from exposure to wood and fiberglass splinters, irritating chemicals such as creosote, and hazards related to power tools and sharp instruments.

Rubber-insulated safety gloves, or hot gloves, are worn to prevent electric shock in the event you contact an energized electric line. The rubber-insulated safety gloves used by Connect/One's field operation are a low-voltage Class "00." rubber glove. The rubber-insulated safety gloves are never worn alone. A pair of leather protectors (leather outer gloves) must be worn to protect the rubber glove against excessive abrasion and tears that could degrade the insulating abilities.

Cotton inserts may be worn under the rubber glove for comfort. The leather and rubber-insulate safety gloves have an insulation value or rating of 500 volts. Always wear rubber-insulated safety gloves when there is a possibility of contacting electrical voltage. The Class "00" rubber-insulated safety gloves and protectors must be worn at the onset of any job or task that has a potential energy source. This includes all active and passive equipment such as:

- All pole work
- Grounding at house
- Drop connection at ground point
- Drop removal and disconnection
- Working on a power supply
- Working on an amplifier

## Personal Safety

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- Plant maintenance (splicing feeder/trunk)
- Aerial and underground construction
- During storm restoration
- Any location where there is a difference in electrical potential

The rubber-insulated safety gloves must be worn until all potentially energized components are tested and found to be de-energized. If working on a system or component that is normally energized, rubber-insulated safety gloves must be worn through the completion of the job.

***Wearing a rubber-insulated safety glove does not mean you can intentionally grab a hot wire.***



## Boots

Proper footwear is worn to protect your feet from injury and to ensure proper footing when climbing. Boots worn for CATV fieldwork should meet the following minimum requirements:

- Must have steel or fiberglass arch support, should have safety toes; but steel toes are not required
- Must have leather tops that protect the ankle and nonconductive rubber soles.
- Must have well-defined heel (at least 1 inch is recommended)

## Personal Safety

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Employees are responsible for properly maintaining and polishing their boots in order to present a professional image and extend the life of the boots.

### Dust Mask

Dust masks are available for all field and warehouse employees. Wearing a dust mask is voluntary. Employees are encouraged to wear a dust mask whenever working in a condition that poses a high concentration of dust. This may include drilling or disturbing insulation material. The figure below shows a dust mask:



**Dust Mask**

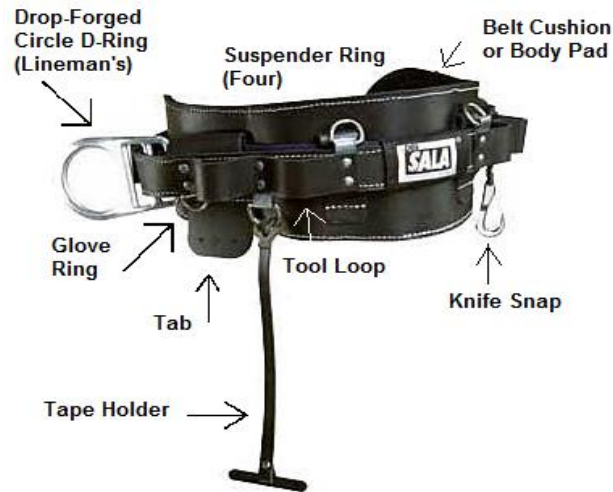


## Personal Safety

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### Fall Protection Equipment

The body belt, shown in the figure below, is an assembly of many parts. Its primary function is to connect with the safety strap and support the worker when working aloft on a pole or ladder. The safety strap connects to the body belt with spring-loaded snaps.



The body belt is inspected prior to the start of each work shift. The inspection should look for the following conditions:

- Cracks, cuts, and/or tears must not be present.
- Ensure that there are no excessive large buckle holes.
- The buckle must be properly functioning.
- Both D-rings must not be worn or deformed.
- Chemical damage from acids, flammables, and combustibles must not be present.
- Fraying (internally and externally) from normal wear.

## **Personal Safety**

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### **Customer Created Hazards**

This section discusses customer-created hazards technicians might encounter.

#### **Criminal Behavior**

If criminal behavior or activity is present at the work site (drugs, theft, etc.), immediately exit the area and contact your supervisor.

#### **Hazardous Material**

If any hazardous material or chemicals are stored or located within the work area, you should make every effort to either avoid the material or request the customer to remove the material from the work area. When running cables; avoid insulating material whenever possible. Wear dust masks if disturbing insulating material is unavoidable. Observe any warning signs that may indicate "restricted" or "controlled environment" such as asbestos removal areas.



## Personal Safety

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The following six safety practices can eliminate most accidents related to hand tools:

- Wear the proper personal protective equipment.
- Select the right tool for the job.
- Know if a tool is in good condition, and keep it in good condition.
- Use tools correctly.
- Keep tools in a safe place. Do not store on or in an open overhead shelf or compartment.
- Do not leave the cutting edges of knives, chisels, or any other sharp tools exposed when carrying them; use the proper pouches, belt holsters or other safe forms of transport.

When working with portable power tools, special care must be taken to ensure your safety while working. The following additional precautions must be observed when working with portable power tools:

- Ensure that electrical cords are not cracked, scraped, cut, or show any signs of other physical damage.
- Ensure that all plugs are not damaged and the ground pin is in place.
- Portable power tools must be disconnected when making repairs, adjustments, or tool bit changes.
- Safety glasses/eye protection is mandatory when using a power tool.
- Loose clothing must be secured or removed.

Whenever a tool is damaged or unsafe, it must be replaced. See your supervisor for a replacement.

# Personal Safety

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## Safety Inspection

The following are a few safety guidelines when working on a ladder:

- Do not exceed the maximum weight limit of the ladder or the strand.
- Never throw equipment or tools to an individual working on a ladder.
- Both hands must be free of materials, such as tools, when climbing.
- In order to prevent equipment damage, never place strand hooks over cable system components such as amplifiers, taps, line extenders, or drops.
- Never place the ladder base on the street side of the strand where it is subject to vehicle movement.
- Park your truck between the ladder location and oncoming traffic when working in the street. Ensure that your truck is at least 6 feet away from the ladder.

## Disconnecting Aerial Drops

Prior to disconnecting a drop, always test the line and strand for the presence of any current or voltage using a Clamp-on YOM (Volt/Ohm/Ammeter) and Tic Tracer. When removing a drop, always disconnect the house end first. Never attempt to disconnect the drop from the strand first. Place the ladder on the opposite side of the strand from the drop. This prevents unnecessary pressure on the drop from your weight and the weight of your ladder.

## Utility Poles

### Inspection

As a CATV technician, you will be required to work on and around utility poles. Never attempt to climb or set a ladder against a pole that may be unsafe. This is also true for setting a ladder on a strand supported by a pole that may be unsafe. There are a few checks you should perform to check the condition of the utility pole to verify that it is safe.

First, test the pole for the presence of any hazardous voltage using the tic tracer. Next, the condition of the pole should be checked for any hazards and signs that the pole may be damaged. These checks include:

- Check for deep or severe cracks, knots, knotholes, drilled holes, or gaff cuts.
- Check for rotted outer surfaces.
- Check for bird and insect nests.
- Check for nails, conduit, ground wires, metal pole numbers, guy wires, vines, or any other material attached to the pole that may present a hazard.
- Check for warning tags indicating that the pole was previously identified as being unsafe.

If you suspect the pole is unsafe, do not climb the pole. Contact your supervisor.

### **Hazard Communication (Right to Know)**

#### **Chemical Awareness - Right to Know**

You have the right to know about the chemicals you work with and how to take precautions against any potential negative effects associated with these chemicals. The Hazard Communication (Hazcom) Training Program (Right to Know) is designed to educate the employee on the hazards and the precautions associated with these chemicals.

#### **Why Hazard Communication?**

Employees are sometimes injured while using chemicals on the job because they are unaware of the proper safety precautions that should be taken to protect themselves from the harmful chemical effects. Communicating the proper information is therefore important so that employees will know how to work safely with chemicals.

This is primarily accomplished by the procurement and availability of Material Safety Data Sheets (MSDS), which are documents concerning a hazardous chemical, which is prepared by the manufacturer and provided upon request to the user.

Technicians/Employees are responsible for reviewing and understanding the information and adhering to policies and procedures stated in this module.

## Personal Safety

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<b>Definitions</b>	
<b>Chemical</b>	Any element, chemical compound or mixture of elements and/or compounds.
<b>Chemical Name</b>	The scientific designation or name of a chemical, which clearly identifies the chemical for the purpose of conducting a hazard evaluation.
<b>Common (Trade) Name</b>	The name used by the retail distributor who sells hazardous chemicals.
<b>HMIS Label: (Hazardous Material Information System)</b>	Identifies the potential health hazards associated with a specific chemical. The hazard terms listed on the HMIS can have 1 of 4 numbers indicating its severity.
<b>Hazardous Chemical</b>	Any chemical that is a physical hazard or a health hazard.
<b>Hazardous Material</b>	A material that releases hazardous components (e.g. dust vapor, fumes) during operations or processes. Examples are metals and welding rods during welding, metals or concrete during cutting, and exhaust fumes.
<b>Label</b>	Any written, printed or graphic material displayed on or affixed to containers of hazardous chemicals.
<b>NFPA Diamond</b>	A hazard warning labeling system that rates the hazard severity according to a numbered system. Zero (0) means no hazard and three (3) means the most severe hazard. The bottom section of the label is also used for other hazards, such as not to mix with water. (See example in this section).
<b>Material Safety Data Sheet (MSDS)</b>	Document concerning a hazardous chemical, which is prepared by the manufacturer and provided upon request to the user.

## Personal Safety

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### Procedure

When hazardous chemicals or materials are received, the Area Safety Manager (ASM) will obtain material safety data sheets (MSDS) for each item. MSDSs can be requested from the supplier, distributor or manufacturer. Contact your Area Safety Manager (ASM) should you have a problem obtaining an MSDS.

- MSDS will be kept in an accessible location for employees. (Example: tech rooms, lunchrooms, near eye wash stations etc.)
- MSDS must be readily accessible during each work shift to employees when they are in their work area(s). Therefore, technicians working in the field must be provided copies of MSDSs for chemicals they will use at the job site. These MSDSs can be kept at the dispatcher's office.
- Prior to the initial use of a chemical or material, employees will familiarize themselves with the precautions needed to work safely with these chemicals and materials by reviewing applicable material safety data sheets.
- Employees must contact their regional Area Safety Manager and/or supervisor before engaging in any non-routine task(s) requiring the use of a chemical.
- Employees shall follow the safety precautions on the MSDS, including, but not limited, to proper use of personal protective equipment, proper storage, and proper disposal.
- If respiratory protection is needed, the employee must notify his or her supervisor.
- Employees will not remove or deface any labels on hazardous chemicals/materials.
- If a hazardous chemical is transferred to a secondary container, the employee will properly label the secondary container in accordance with labeling system discussed in this section. Use of unlabeled secondary containers is prohibited to prevent the misuse or inadvertent application of a hazardous chemical.



## Personal Safety

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### Material Safety Data Sheet (MSDS)

Injuries resulting from chemical exposure can largely be attributed to their improper use and storage. Material Safety Data Sheets (MSDS) are chemical fact sheets that provide technical information about a chemical. Different manufacturers may arrange MSDSs differently, but they all contain the same basic information. A MSDS must contain:

- The chemical or common name
- Physical and chemical characteristics (e.g., vapor pressure, flashpoint, etc.)
- Physical hazards associated (e.g., potential for explosion, fire, reactivity)
- Health hazard including symptoms, common routes of entry, the permissible limit to the exposure, etc.
- Precautions for safe handling
- Spill or leak procedures including proper disposal
- Applicable control methods (e.g., work practices, protective equipment, engineering control, etc.)
- Emergency and first aid procedures
- Manufacturer's name, address, and phone number

An MSDS must be obtained for all new products brought into the facility. The MSDS is good for each product name and not just for each chemical. MSDSs must be readily available to those workers whose job function involves the use and/or potential contact of a hazardous chemical.

You should always check the MSDS for any chemical that you use, especially if you are unsure of the hazards of that chemical. MSDSs are available through your supervisor.

# Personal Safety

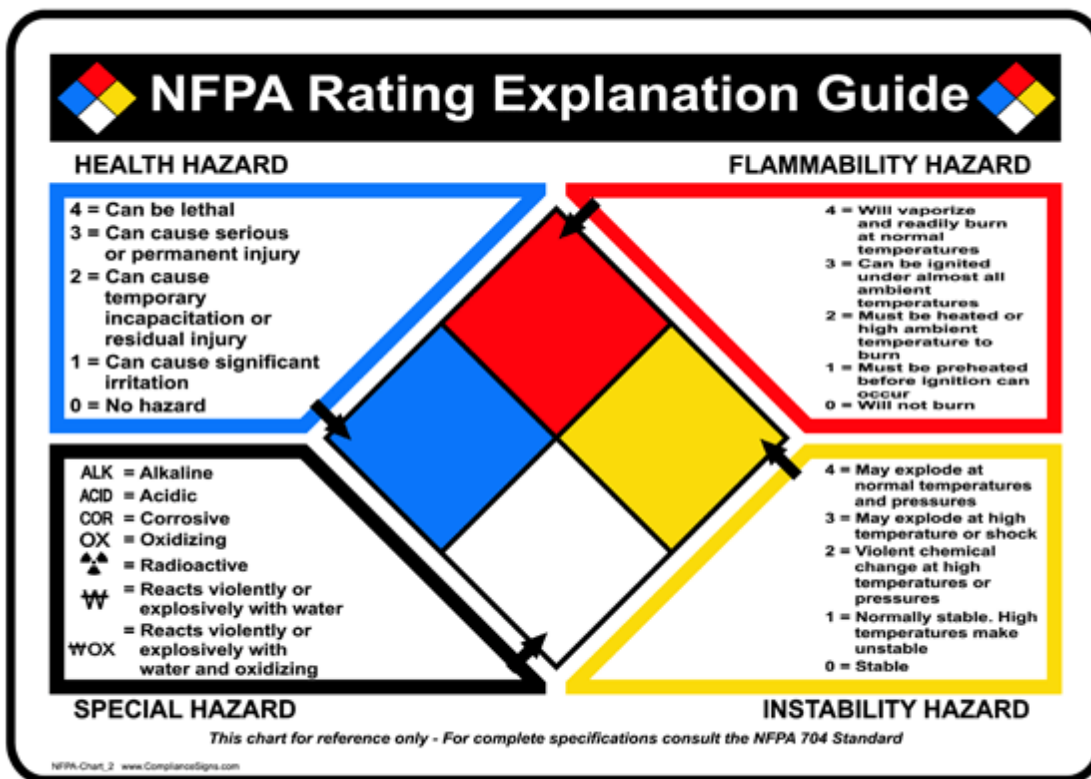
## Labeling System

All chemical containers must have a label properly identifying the chemical. The label must contain the following information:

- Name of chemical
- Hazard warnings
- Name and address of the chemical manufacturer, distributor, or other responsible party

### NFPA Chemical Hazard Label

The National Fire Protection Association (NFPA) has developed a system for indicating the health, flammability, and reactivity hazards of chemicals. In addition, a special precaution symbol may be used where necessary. The figure below shows the NFPA Chemical Hazard Label:



## Personal Safety

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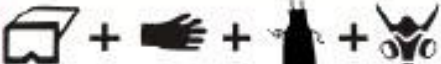



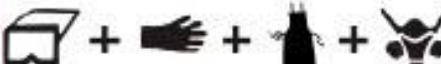














### Hazardous Materials Identification Systems Label (HMIS)

Another frequently used marking system is the Hazardous Material Identification System (HMIS). The identity of the chemical is shown at the top of the label. Colored bars indicate the hazards: red for flammability, yellow for reactivity, and blue for health. The degree of hazard is expressed using the same numeric coding as described for the NFPA Chemical Hazard Label.

A white bar at the bottom contains a letter for the personal protective devices that must be used when handling the chemical. The figure below shows an example of a HMIS label for methanol. The table on the next page is a listing of the possible letters that can be displayed in the Personal Protection block.

Chemical Name	
<b>HEALTH</b>	0
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	0

# Personal Safety

PERSONAL PROTECTION INDEX											
<b>A</b>			<b>G</b>								
<b>B</b>			<b>H</b>								
<b>C</b>			<b>I</b>								
<b>D</b>			<b>J</b>								
<b>E</b>			<b>K</b>								
<b>F</b>			<b>X</b>	Consult your supervisor or S.O.P. for "SPECIAL" handling directions							
<b>A</b>		<b>n</b>		<b>p</b>		<b>q</b>		<b>r</b>		<b>s</b>	
Safety Glasses	Splash Goggles	Face Shield & Eye Protection	Gloves	Boots	Synthetic Apron	Full Suit					
<b>t</b>		<b>u</b>		<b>w</b>		<b>y</b>		<b>z</b>		<b>Additional Information</b>	
Dust Respirator	Vapor Respirator	Dust & Vapor Respirator	Full Face Respirator	Airline Hood or Mask							