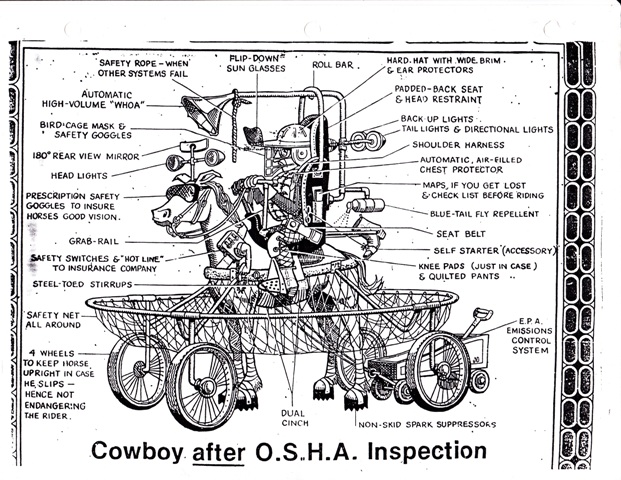
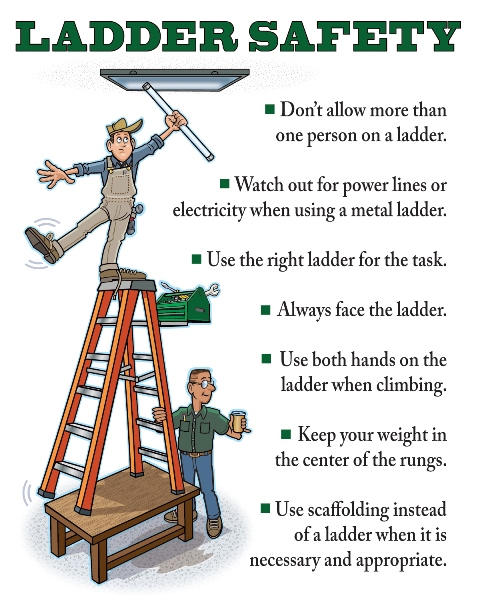
**Construction Safety**









### **Instructor Notes #1 (Week One)**

[Instructor Notes #1 (Week One)](https://faytechcc.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_61577_1&content_id=_9608336_1#)

Instructor Notes #1

1) The abbreviation OSHA stands for Occupational Safety and Health Administration. OSHA is a federal organization but every state has its own OSHA board and regulations. In North Carolina the Department of Labor determines OSHA regulations and compliances.

2) In the United States, accidents are the fourth leading cause of death following heart disease, cancer, and strokes.

3) Not including motor vehicle accidents, the leading cause of death for persons 25 to 44 years of age in the United States is accidents.

4) When we think about fear; many people fear natural disasters, however natural disasters only cause around 100 deaths per year in the United States. Workplace accidents on the other hand cause more than 10,000 deaths every year in the United States.

5) According to the National Safety Council there are approximately 35 million hours lost in a typical work year as a result of accidents.

6) The leading cause of workplace accidents is overexertion.

7) Construction ranks number 3 on the list for workplace related deaths when based on 100,000 workers in a given year.

8) Typically the most frequently injured part of the body is the back**.**

9) Between 1912 and 1998 the number of accidental work related deaths per 100,000 workers declined by 81 %.

\*\*Notes #2 thru #9 were taken from the book by David L. Goetsch entitled: Occupational Safety and Health for Technologists, Engineers, and Managers 6th Edition.

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### **Some Interesting Notes Concerning Workers Compensation**

[Some Interesting Notes Concerning Workers Compensation](https://faytechcc.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_61577_1&content_id=_9608339_1#)

What is Workers Compensation?

* It is insurance that covers employers from injury or death lawsuits from their employees or their employees’ families.
* This insurance pays wages to injured employees who otherwise may not be able to work and/or receive any other income.

Interesting notes concerning Workers Compensation Insurance

1) An employer must provide workers compensation when hiring more than two employees but are not required to carry it on themselves personally.

2) Included in the headcount of more than two employees are employees, laborers, part-time workers, full-time workers, subcontractors, and members of a cooperation. Partners in a business partnership are not included in the headcount.

3) Waivers are not allowed in lieu of having Workers Compensation.

4) Cooperations are required to carry Workers Compensation on those in their corporation if the total number of cooperate partners equals three or more.

5) Workers Compensation is a must in the Construction Industry with the potential of job-site injury.

6) If a homeowner hires anyone to do work on their home, they are acting by law as the hiring Contractor. If a worker gets hurt working on your house, you as a homeowner could be held liable for their injuries. It is important that a company working on your house have Workers Compensation or by law is not required to have Workers Compensation Insurance.

### **Falls from Roof**

[Falls from Roof](https://faytechcc.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_61577_1&content_id=_9608350_1#)

This is information that covers, "Falls from a Roof."

**Investigation Process**

***What triggers a fatality or catastrophe investigation by***

***the N.C. Department of Labor?***

• A worker’s death.

• Hospitalization of one or more employees.

• The department may also receive information of a

fatality or catastrophe from media reports or referrals

from other government agencies.

***How is NCDOL notified?***

• An employer must notify NCDOL within eight hours

of a worker’s fatality or the hospitalization of one

or more workers.

***What will the investigation focus on?***

• The investigation will usually be limited to the

events surrounding the accident unless observations

at the site indicate a broader investigation is needed.

***What will happen during the investigation?***

• An NCDOL investigator will go to the accident site

and collect physical evidence, including photographs.

• The investigator will interview employees, witnesses

and management officials about the accident to

determine its cause.

• Any violations of safety and health standards will be

noted and citations will be issued.

***How long will the investigation take?***

• An investigation can take anywhere from a few

weeks to six months, depending on the complexity

of the accident.

***When are investigation results disclosed?***

• Citations and penalties, if issued, can be released to

the public on the issuance date.

• Other contents of the file cannot be released until the

case is closed or final order on citations is rendered.

**The Investigation**

Investigators will seek to determine several factors,

including whether:

• Fall protection was provided for employees working

on roofs 6 or more feet above lower levels.

• Guardrail systems included a toprail and midrail.

• The employer developed a training program for

employees who might be exposed to fall hazards.

• Employees were trained on fall hazards.

• Personal protective equipment included slip-resistant

steel-toed work shoes, hard hat and a personal fall

arrest system.

• Ladders used to access a roof were inspected for

structural defects.

General Fire Safety

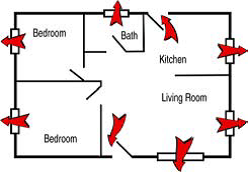
Make sure you have working smoke alarms on every level of your home and outside every

sleeping area. For maximum protection, place an alarm in each bedroom.

Check the batteries in your smoke alarm monthly and replace as necessary. Better

yet, replace your alarms with long-life, lithium battery-powered alarms. These alarms have a hush feature to silence nuisance alarms caused by cooking smoke or shower steam.

Draw a fire escape plan using a floor plan of your home including all doors and windows. Determine at least two exits from every room. Designate a meeting place outside the house where everyone can gather after exiting. Practice the plan with your children, preferably at night.



In case of an actual fire, get everyone out immediately and call 9-1-1 from a neighbor's phone.

Instruct small children about the dangers of playing with lighters, matches, and/or any other type of fire. Teach your child how to call for help in emergencies. Reward an understanding of safety

regarding fire.

Know how to extinguish small fires on the kitchen stove. (Simply sliding a lid over a skillet of burning grease often will extinguish a pan fire.

Learn the P-A-S-S Method

Portable Extinguishers

A fire extinguisher is basically a storage container for agents that put out fires. Common agents are dry chemicals and water. Portable fire extinguishers are designed to put out small fires, not large ones.

Extinguisher Classifications

The letters on the label of an extinguisher indicate what type of fire to use it on (see below). Make sure to use the right extinguisher for the type of fire.

TYPE A: Ordinary Combustibles

Cloth, Paper, Plastics, Rubber, Wood

TYPE B: Flammable Liquids

Gasoline, Grease, Lacquers, Oil, Paint

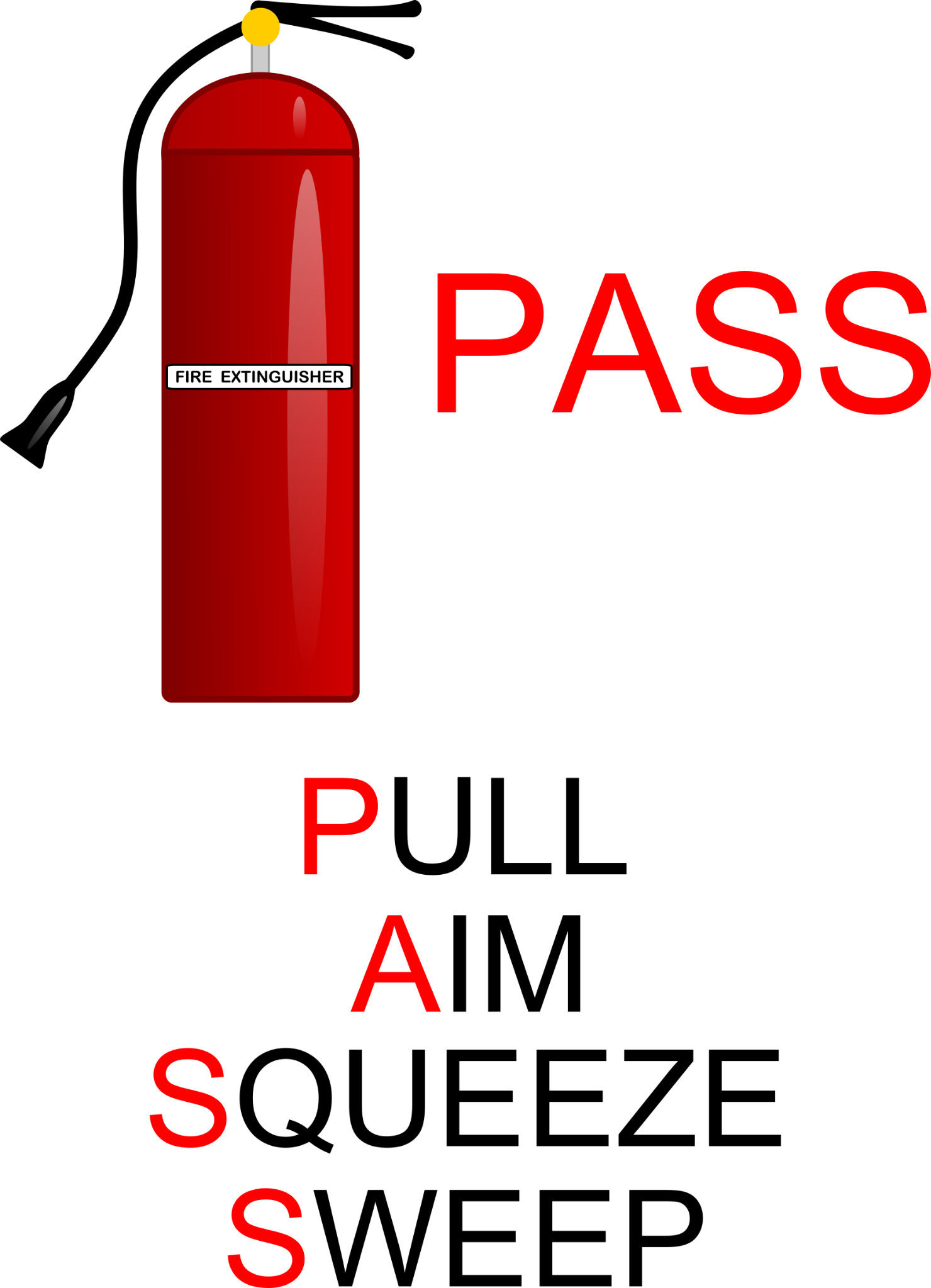
TYPE C: Electrical Equipment

Energized Electrical Equipment, Fuse Boxes, Wiring

TYPE D: Combustible Metals

Magnesium, Sodium

Stand 5 to 6 feet away from the fire with a clear path to an exit behind you.



Pull the pin.

Aim at the base of the fire.

Squeeze or press the handle.

Sweep from side to side at the base of the fire until it goes out.

Remember, fire extinguishers are designed

to put out SMALL fires!

Most portable extinguishers are designed to last about 10 to 18 seconds. If the fire gets large, do not attempt to extinguish it - get out and stay out! When exiting, close doors behind you to slow the spread of the fire. Call 9-1-1 from a safe place.

1) What type of fire extinguisher should be used to extinguish a gasoline fire? Is it Type A, B, C, or D? *Answer can be found on page 261 Table F-1 of your textbook Fire Extinguisher Data or under Instructor Pictorial Notes #2 from Week 4. Type B*

2) Accidents are the \_\_*4th\_*\_\_\_ leading cause of death in this country? Is it 2nd, 4th, 6th, 8th? *The answer can be found in Instructor Notes--Week One.*

3) Workers Compensation is required in North Carolina if a company employs \_\_*3 or more*\_\_\_\_ employees. Is the answer 3 or more, 1 or more, 2 or more, none of the above? *The answer can be found under the Assignment Manager for Week 2.*

4) The \_\_*employer*\_\_\_\_\_\_\_\_\_\_ is responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions. Is the answer employee or employer? *The answer can be found in the Textbook--page 185 Section 1926.28*

5) The contents of a first aid kit shall be placed in a \_\_\_*weatherproof*\_\_\_\_\_\_\_\_ container with individual \_\_\_*sealed*\_\_\_\_\_\_\_ packages for each type of item. *Answer can be found in the Textbook--Page 187 Section 1926.50 d (2)*

7) Workplace accidents cause more than \_\_\_*10,000*\_\_\_\_\_\_\_\_ deaths every year in the United States. *The answer can be found under Instructor Notes--Week 1.*

8) Are waivers allowed concerning Workers Compensation Coverage? Yes or No *Answer can be found in your assignment manager questions for Week 2. No*

9) Concerning potable water, water can be dipped from a container as long as the container is otherwise tightly closed or sealed. True or *False* *Answer can be found in the Textbook--page 187 Section 1926.51*

10) An adequate supply of potable water shall be provided in all places of employment. *TRUE* or FALSE *Answer can be found in Textbook--page 187 Section 1926.51*

11) Typically, the most frequently injured part of the body is the \_\_*back*\_\_\_\_\_\_. *The answer can be found in Instructor Notes--Week One.*

12) What type of fire extinguisher would be used for a wood-burning fire? Class A, B, C, or D *Answer can be found in Textbook page 261 Table F-1 Fire Extinguisher Data or in Instructor Pictorial Notes--Week 4. Class A*

13) A Safety and Health Officer does not always have the authority to enter into an area or place of employment even if they enter at reasonable times*.* TRUE or *FALSE* *Answer can be found in Textbook--page 1 Section 1903.3*

14) The common drinking cup may be used on the Construction job-site so long as it is labeled with the user’s name. True or *False* *Answer can be found in Textbook--page 187 Section 1926.51*

15) If Lifelines are needed they shall be safely secured and must be capable of supporting a minimum dead weight of \_\_\_\_*5,400*\_\_\_\_\_ pounds. *The answer can be found in Textbook--page 260 Section 1926.104*

16) The minimum number of toilet facilities required for 20 or more workers is? I could turn this question around and ask for 200 or more or 20 or less. *The answer can be found in Textbook--page 187 Section 1926.51 (Table D-1)*

1. *20 or more- 1 toilet seat and 1 urinal per 40 workers*
2. *200 or more- 1 toilet seat and 1 urinal per 50 workers*
3. *20 or less- 1*

17) If your company had ten or fewer employees at all times during the last calendar year, you do or do not need to keep OSHA injury and illness records, unless otherwise required by OSHA or the BLS. *The answer can be found in Textbook--page 9 Section 1904.1 do not*

18) No combustible material shall be stored outdoors within \_\_*10*\_\_\_ feet of a building or structure. *The answer can be found in Textbook--page 290 Section 1926.151 (c)*

19) Portable fire extinguishers, rated not less than 2A, shall be placed so that the maximum travel distance to the nearest unit shall not exceed \_\_*100*\_\_\_\_\_\_ feet. *The answer can be found in Textbook--page 262 Section1926.151 (c)*

20) What government division handles Workers Compensation claims? *The answer can be found under Assignment Manager questions (Week 2) North Carolina Industrial Commission*

21) When objects at the workplace are overhead \_\_*head protection, protective helmets*\_\_\_\_\_\_ must be worn to protect from falling objects. *The answer can be found in Textbook--page 259 Section 1926.100.*

22) For General Construction the minimum illumination required is \_\_*5*\_\_\_\_ foot-candles (also know the entire table--as I might ask for something other than General Construction). *The answer can be found in Textbook--page 196 Section 1926.56 Table D-3*

23) Plain cotton is not acceptable when used for hearing protection. True or False *Answer can be found in Textbook--page 259 Section 1926.10 True*

24) No more than \_\_\_*25*\_\_\_\_ gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet. *The answer can be found in Textbook--page 263 Section 1926.152 (b)*

25) Workplace accidents cause more than \_\_\_*10,000*\_\_\_\_\_\_deaths every year in the United States*. The answer can be found in Instructor Notes--Week One*

26) An employee working on a job with noise exposures of 97 dBA can work for \_*3*\_\_\_ hours per day. *Answer can be found in Textbook--page 176 Table D-2*

1) What are the penalties for not having required Workers Compensation in North Carolina--(found under the website for [Workers Compensation](http://www.ic.nc.gov/)*.* Also found under answers to Assignment Week 2.)

*1) Face stiff financial penalties;*

*2) Be charged with a misdemeanor;*

*3) Be charged with a felony; and*

*4) Be imprisoned.*

2) Brick stacks should never be more than \_\_*7*\_\_\_\_ feet high. (Found in Textbook Subpart 1926.250 Section (b)(6).

3) What does the abbreviation OSHA stand for? (Answer found in Instructor Notes--Week One or front cover of Textbook.)

*Occupational Safety and Health Administration*

4) When standing a ladder in place it should be placed at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately \_\_*1/4* \_\_\_\_ of the working length of the ladder. . (Answer found in Textbook--Subpart 1926.1053 Section (b) (5) (i)

5) The contents of a first aid kit shall be placed in a \_\_*weatherproof*\_\_\_\_\_\_ container with individual \_\_\_*sealed*\_\_\_\_\_ packages for each type of item. (Answer can be found in Textbook--Medical services and first aid Subpart1926.50 Section (d)(2)

6) Whenever materials are dropped more than \_\_*20*\_\_\_' to any point lying outside the exterior walls of the building, an enclosed chute of wood or equivalent material shall be used. (Answer found in Textbook--Subpart 1926.252 Section (a)

7) When objects at the workplace are overhead \_\_*protective helmets*\_\_\_\_\_\_ must be worn to protect from falling objects. (Textbook Subpart 1926.100 Section (a)

8) The use of electric cords for hoisting or lowering tools is permitted if the cord is appropriately tied. (True or False) (Answer found in Textbook--Subpart 1926.302 Section (a)(2) *False*

9) Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is \_\_*6*\_\_\_' or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems. (Answer can be found in Textbook--Subpart 1926.501 Section (b)(1)

\*\*10) For a general simple slope excavation 20' or less in-depth it shall have a maximum allowable slope of \_*3/4*\_\_to\_\_*1*\_\_\_. (Answer can be found in Textbook--1926 Subpart P Appendix B Figure B-1)

11) You must know the classifications of portable fire extinguishers based on their capability to put out certain fires. (Answer can be found in Textbook--Subpart 1926.150 Table F-1 Fire Extinguisher Data.)

*Class A- Wood, Paper; Class B- Gas, Grease; Class C- Electrical; Class D- Metals*

12) When a job-site injury occurs an employee has a maximum of \_\_*30*\_\_\_\_ days to report it (according to NC Workers Compensation Laws). (Answer can be found under the NC Industrial Commission Website or under your Assignment for Week 2).

13) Typically the most frequent injured part of the body is the \_\_\_*back*\_\_\_. (Answer can be found in Week One Instructor Notes)

14) Signed waivers are allowed in place of having Workers Compensation. True or False (Answer can be found under the web-site for the NC Industrial Commission or under Assignment for Week 2.) *False*

15) You will need to know how many toilets and or urinals will be required per so many workers. (Answer found in Textbook Subpart 1926.51 Table D-1)

1. *20 or more- 1 toilet seat and 1 urinal per 40 workers*
2. *200 or more- 1 toilet seat and 1 urinal per 50 workers*
3. *20 or less- 1*

16) A work-related death of any employee must be reported by phone or in-person within \_\_*8*\_\_\_ hours to the Area OSHA Department or Department of Labor that is nearest to the site of the incident. (Answer can be in Textbook--Subpart1904.39 Section (a).

17) Workers Compensation is required when a company has two or more employees. True or False (Answer can be found under the web-site for the NC Industrial Commission or under Week 2 Assignment Manager.) *False, more than 2*

18) Portable fire extinguishers, rated not less than 2A, shall be placed so that the maximum travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed \_\_*100*\_\_\_\_\_ feet. (Answer can be found in Textbook--Subpart 1926.151 Section (c)(6).

19) Each employee on a walkway located within a scaffold shall be protected by a guardrail system with a minimum \_\_\_*200*\_\_ lb. top rail capacity installed within \_\_\_*9 1/2*\_\_\_" of and along at least one side of the walkway. (Answer can be found in Textbook--Subpart 1926.451 Section (g)(1)(v)

20) The leading cause of workplace accidents is **\_\_\_***overexertion***\_\_\_\_\_\_\_**. (Answer found under Instructor Notes--Week One)

21) Fixed ladders shall be used at a pitch no greater than \_\_*90*\_\_\_ degrees from the horizontal, as measured to the backside of the ladder. (Answer can be found in Textbook--Subpart 1926.1053 Section (b)(5)(iii)

22) Accidents are the \_\_\_*4th*\_\_\_\_ leading cause of death in the United States overall. (Answer can be under Instructor Notes--Week One)

23) All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operates at more than \_\_\_*100*\_\_\_\_ p.s.i. the pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners unless the muzzle is in contact with the work surface. (Answer can be found in Textbook--Subpart 1926.302 Section (b)(3)

24) Worn or frayed electric cords must be discarded and not used period. True or False (Answer found in Textbook--Subpart 1926.416 Section (e)(1) *True*

25) According to the National Safety Council there are approximately **\_\_\_***35 million***\_\_\_\_\_\_\_\_\_**hours lost in a typical work year as a result of accidents. (Answer found under Instructor Notes--Week One.)

26) Employees working over or near water, where the danger of drowning exists, shall be provided with US Coast Guard--approved \_\_*life jacket*\_\_\_\_\_or \_\_\_*buoyant work vests*\_\_\_\_\_\_\_. (Answer can be found in Textbook--Subpart 1926.106 Section (a).

**Section 1903.3, Authority for Inspection**

-Department of Labor officers can enter any site or business with employees to inspect and investigate anytime, anything on the premise; may question owners and employees; and review records and regulations

-Secretary of Health, Education, and Welfare officers may also inspect and review; Section 8 and 1903, State can still inspect under Section 18

-security clearance needed for classified offices

**Section 1903.4, Objection to Inspection**

-Compliance and Safety Officer, Section 1903.3, representative of employees Section 1903.8, either terminate the inspection or confine to other areas if objection

-Compliance and Safety Officer asks reasons for refusal, then reports to Area Director, who reports to the Regional Solicitor, to take appropriate action, compulsory process

-compulsory process may be sought in advance of preinspection process for warrantless inspection: 1) employer’s past history 2) inspection far from office 3) inspection includes special equipment or experts, difficulties and costs

-compulsory process may be obtained by Area Director or designee with approval from Regional Administrator and Regional Solicitor

-compulsory process, ex parte inspection, any appropriate action

**Section 1903.7, Conduct of Inspections**

-times and place Area Director or Compliance Officer subject to Section 1903.3

-present credentials, state purpose and nature, scope, records specified in Section 1903.3, also additional records

-Compliance Officers may take environmental samples or photos, other reasonable investigative techniques, and privately question anyone

-other reasonable investigative techniques- devices to measure employee exposures, personal sampling equipment, dosimeters, pumps, badges

-photographs and samples, watch for flashes or spark producing, hazardous equipment, comply with all employer health and safety rules, wear personal protective equipment

-inspections should preclude unreasonable business disruptions

-conclusion of inspection, Compliance Officer tells employer of any violations, and employer can add information

**Section 1903.11, Complaints by Employees**

-any employee or representative may request inspection to the Area Director or Compliance Officer

-in writing, grounds for inspection, signed, copy to employer no later than time of inspection, and if the whistleblower requests, their name shall not be referenced

-if Area Director thinks a violation exists, schedule an inspection as soon as practicable, not limited to the complaint

-prior or during any workplace inspection, employees may notify Compliance Officer in writing of violations

-no discrimination, whistleblower protections

**Section 1903.12, Inspection not Warranted, Informal Review**

-if Area Director determines that no inspection is warranted under Section 1903.11, he should inform the complaining party in writing

-complaining party may appeal in writing to the Assistant Regional Director, and provide employer with copy via certified mail; employer may submit opposing statement, and provide complaining party with copy via certified mail; if either requests, Assistant Regional Director may hold informal conference with both parties; Assistant Regional Director decision final, consider written and oral testimony, and either affirm, modify, or reverse Area Director

**Section 1903.13, Imminent Danger**

-Compliance Officer determines death or serious physical harm, may request civil action if before his inspection

-even if employer fixes imminent danger, may still be subject to fines and penalties

**Section 1903.14, Citations**

-Area Director reviews citation report from Compliance Officer

-if Area Director believes that Section 5 or Section 6 have been violated, or Section 1903, may consult with Regional Solicitor and issue citations or de minimis violations with no direct or immediate effect on safety or health

-citations may still be issued if employer abates, reasonable time after inspection, within 6 months

-citations: nature, section, and time to fix

-Section Section 1903.11(a) or (c), copy of citation sent to employee or representative

-if Area Director determines that there is no citation under Section 1903.11(a) or (c), Section 1903.12(a) shall be applicable

-Assistant Regional Director either affirm Area Director, order reinspection, or issue citation; furnish employer and complainant of ruling, his ruling final

-every citation must state that citation does not mean a violation of Act occurred, unless failure to contest or affirmed by Review Commission

-no citation may be issued for rescue activity in imminent danger unless: 1) employee is designated for rescue operations, employer fails to provide training and rescue equipment to the rescue employee 2) employee is designated for rescue operations in job duties, employer fails to provide training and rescue equipment to the rescue employee 3) imminent danger jobs, like confined spaces, hazardous waste, emergency situations response, excavations, construction over water, and employee not designated for rescue operations tries to rescue and the employer

failed to instruct employees not to rescue

**Section 1903.15, Proposed Penalties**

1. Willful violation- $11,162 to $156,259; Section 17(a), 29 USC 666(a)
2. Repeated violation- up to $156,259, Section 17(a), 29 USC 666(a)
3. Serious violation- up to $15,625, Section 17(b), 29 USC 666(a)
4. Other than serious violation- up to $15,625, Section 17(c), 29 USC 666(a)
5. Failure to correct violation- up to $15,625 per day, Section 17(d), 29 USC 666(a)
6. Posting requirement violation- up to $15,625, Section 17(i), 29 USC 666(a)

**Section 1903.17, Employer and Employee Contests Before the Review Commission**

-when employer gets a citation or notice of proposed penalty, under Section 10(a) may request to Area Director before Review Commission; 15 working days, either citation or proposed penalty, or both; Area Director transmits to Review Commission

-under Section 10(c), any employee or representative of employees or employer may request time abatement if unreasonable, 15 working days; Area Director transmits to Review Commission

**Section 1903.18, Failure to Correct a Violation for which a Citation has been Issued**

-additional penalty for noncompliance under Section 1903.15(d), Area Director consults with Regional Solicitor, notify employer by certified mail or Compliance Officer personal service; wait until final order, in good faith to fix penalties by employer

-Section 10(b) employer may notify Area Director that he contests additional penalty before the Review Commission, 15 working days

-each notification of failure to correct a violation and proposed additional penalty is final order of Review Commission, not subject to review by any court or agency, unless employer has 15 working days to notify Review Commission of appeal

**Section 1904.1, Partial Exemption for Employers with 10 or Fewer Employees**

-10 or fewer employees, do not need to keep OSHA injury and illness records, unless informed in writing by OSHA under Section 1904.41 and Section 1904.42

-Section 1904.39, all employers covered by OSH Act must report to OSHA worker injuries

-10 or more employees, must keep records, unless partially exempt under Section 1904.2

-partial exemption for size based on number of employees in total company; peak employment during last calendar year

**Appendix A to Subpart B of Part 1904 "Partially Exempt Industries (Non-Mandatory)**

-North American Industry Classification System codes (NAICS), unless asked in writing to do so by OSHA, Bureau of Labor Statistics, or state agency operating under

-fatality, in-patient hospitalization, amputation, loss of eye

**Section 1904.5, Determination of Work-Relatedness**

-work-related, event or exposure in work environment caused or contributed condition or pre-existing; unless exception in Section 1904.5(b)(2) applies

-work environment includes physical locations, equipment, materials

-member of general public, signs at symptoms that appear at work but not related to work, voluntary participation in wellness activity or recreation activity, food for personal consumption (choking) not workplace supplied, personal tasks outside of working hours, personal grooming, self medication, or self-inflicted, vehicle accident commuting to or from work, common cold or flu (contagious diseases contracted at work apply), mental illness

-if not obvious, evaluate case

-significantly aggravated pre-existing condition- death, loss of consciousness, days away from work or restricted work, medical treatment

-pre-existing condition- arose from non-work related activity outside work environment

-travel status, travel to and from customer contacts, conducting job tasks, transact, discuss or promote business, entertainment at direction of employer

-not travel related, motel or hotel, commuting to and from job site, home away from home, personal side trip for personal reasons

-work from home, determine if work related

**Section 1904.6, Determination of New Cases**

-new case if employee has not previously had injury of same type on same body part, or recovered completely then reexperienced injury

-recurring symptoms, only record once: occupational cancer, asbestosis, byssinosis, silicosis

-occupational asthma, record each new event, result of event or exposure in work place

-may use doctor’s recommendation for new case or old case, if using 2 doctors, use judgement

**Section 1904.7, General Recording Criteria**

-recordable: death, days away from work, restricted work, transfer to new job, medical treatment beyond first aid, loss of consciousness, injury or illness diagnosed by doctor

1. ***Death-*** record check mark on OSHA 300 log, report within 8 hours to OSHA, Section 1904.39
2. ***Days away from work-*** record check mark on OSHA 300 log, and estimate days away from work, start counting day after, if doctor makes recommendation for days away, and worker shows up anyways, still record doctor recommendation, 2 or more doctors, most authoritative; when doctor recommends return and employee stays home, use doctor recommended days; calendar days not business days; if injured on Friday, and returns on Monday, and not scheduled to work weekend, use doctor recommended days; days off for holiday, plant closure, planned vacation, only record injury if doctor recommends; 180 day max; if employee retires or quits, do not record days, if quits because of injury, estimate days; if injury stretches into 2 calendar years, only record once, update annual summary, then update initial entry log at 180 day cap
3. ***Restricted work or job transfer-*** record check mark on OSHA 300 log, and enter days in restricted workdays column; employee kept rom performing job functions, or full day; doctor recommendation, routine functions regularly performs in a week, if only for 1 day, do not record; if doctor recommends work restriction, it has to affect the employee’s daily routine; partial work shifts recorded as 1 day; if produces fewer goods or services while still performing all essential duties, not recorded; if doctor says ‘light duty’ or ‘take it easy for a week’, ask the employee if he needs to be restricted, if unable to obtain additional information from doctor, record as restricted work; if doctor recommendation for restricted work and employee still works, make sure employee complies with order, still record as restricted work, if 2 or more doctors, most authoritative; transfer is when employee does a different job, whole or partial, do not record day of injury; job transfer and restricted work recorded in same box; days count for job transfer/restricted work same as days off, if transfer permanent, may stop counting, count at least 1 day
4. ***Medical treatment beyond first aid-*** record check mark on OSHA 300 log,, if no death, days off, restricted/transfer, record box for relevant case; medical treatment does not include observation or counseling, diagnostic procedures, first aid; first aid: non-prescription medication at non-prescription strength, tetanus immunizations, surface wounds, band-aids, hot or cold therapy, non-rigid means of support like elastic bandages, temporary immobilization devices like splints springs neck collars and back boards, drilling fingernail or toenail to relieve pressure, draining blister, eye patches, flushing eyes with water or cotton swabs, removing splinters from areas other than eye, finger guards, massages, drinking fluids for heat stress; even if doctor performs first aid, still first aid; if doctor recommends treatment, and employee does not follow, must still record
5. ***Loss of consciousness-*** every case, regardless of length of time
6. ***Significant diagnosed injury or illness-*** cancer, chronic irreversible disease, broken bones, punctured eardrum, must be recorded

**Section 1904.31, Covered Employees**

-all employees on payroll, labor, executive, hourly, salary, part-time, full-time, seasonal, migrant; and employees you supervise if not on payroll; if sole proprietorship or partnership, owners are not included employees

-self-employed people doing work for someone else are not recorded

-record temporary help service, employee leasing service, personnel supply company, of you supervise

-if contractor’s employee, the contractor is responsible, and you are too if you supervise; only record once

**1904.39, Reporting Fatalities and Multiple Hospitalization Incidents to OSHA**

-report death within 8 hours of fatality to OSHA

-report within 24 hours of in-patient hospitalization, amputation, or loss of eye

-report by telephone to OSHA Area Office, OSHA toll-free central number, or email on [www.osha.gov](http://www.osha.gov)

-if Area Office closed, must use other 2 options; may not leave message, fax, or email

-information: establishment name, location of work-related incident, time, type (fatality, amputation, eye, in-patient), number of employees, names of employees, contact person, brief description of incident

-if in construction work zone, must report; if on public street or commercial or public transportation, do not report; record on OSHA log

-heart attack, report, OSHA will determine whether to investigate

-fatality must occur within 30 days of incident; in-patient, amputation, loss of eye within 24 hours of incident

-if do not know right away, or do not know if was related to work-place incident, report within 8 hours of knowing for fatality, and 24 hours for others

-in-patient- formal admission to hospital or clinic for in-patient care

-amputations do not include: avulsions, enucleations, deglovings, scalpings, severed ears, or broken teeth

**Section 1926.16, Rules of Construction**

-prime contractor and subcontractors may make arrangements to appropriately address on jobsite rather than individually; first-aid and toilets, prime contractor cannot be relieved of overall responsibility

-Section 107, by contracting for full performance

-prime contractor assumes overall responsibility and subcontractor assumes responsibility for his work, tiers, joint responsibility

**Section 1926.20, General Safety and Health Provisions**

-no working conditions that are: unsanitary, hazardous, or dangerous

-employer initiate accident prevention programs, frequent and regular inspections of job sites, materials, and equipment; machinery, tools, equipment identified as unsafe by tagging or locking the controls to render inoperable or physically removed; only qualified employees with training and experience can operate tools

-American states and territories; specific standards apply over general standards; if a standard protects larger class of people, only applicable to employees at job site

-PPE, personal protective equipment, and training

**Section 1926.21, Safety Training and Education**

-secretary establishes and supervises programs for training, employer use all programs of the secretary, employer instruct each employee on unsafe hazards and exposure to illness or injury

-poisons and caustics, safe handling

-harmful plants and animals

-flammable gases, liquids, and toxic materials

**Section 1926.23, First Aid and Medical Attention**

-made available for every employee

-regulations Subpart D

**Section 1926.25, Housekeeping**

-all debris kept clear from work areas, passageways, and stairs

-combustible scrap and debris removed at appropriate intervals

-containers for collection and separation of garbage, oily and used rags, lids

**Section 1926.28, Personal Protective Equipment**

-employer is responsible for requiring the wearing of PPE

-regulations, Subpart E

**Section 1926.32, Definitions**

1. Act means section 107 of the Contract Work Hours and Safety Standards Act, commonly known as the Construction Safety Act (86 Stat. 96; 40 U.S.C. 333).
2. ANSI means American National Standards Institute.
3. Approved means sanctioned, endorsed, accredited, certified, or accepted as satisfactory by a duly constituted and nationally recognized authority or agency.
4. Authorized person means a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite.
5. Administration means the Occupational Safety and Health Administration.
6. Competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
7. Construction work. For purposes of this section, Construction work means work for construction, alteration, and/or repair, including painting and decorating.
8. Defect means any characteristic or condition which tends to weaken or reduce the strength of the tool, object, or structure of which it is a part.
9. Designated person means "authorized person" as defined in paragraph (d) of this section.
10. Employee means every laborer or mechanic under the Act regardless of the contractual relationship which may be alleged to exist between the laborer and mechanic and the contractor or subcontractor who engaged him. “Laborer and mechanic” are not defined in the Act, but the identical terms are used in the Davis-Bacon Act (40 U.S.C. 276a), which provides for minimum wage protection on Federal and federally assisted construction contracts. The use of the same term in a statute which often applies concurrently with section 107 of the Act has considerable precedential value in ascertaining the meaning of “laborer and mechanic” as used in the Act. Laborer generally means one who performs manual labor or who labors at an occupation requiring physical strength; mechanic generally means a worker skilled with tools. See 18 Comp. Gen. 341.
11. Employer means contractor or subcontractor within the meaning of the Act and of this part.
12. Hazardous substance means a substance which, by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful, is likely to cause death or injury.
13. Qualified means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
14. Safety factor means the ratio of the ultimate breaking strength of a member or piece of material or equipment to the actual working stress or safe load when in use.
15. Secretary means the Secretary of Labor.
16. SAE means Society of Automotive Engineers.
17. Shall means mandatory.
18. Should means recommended.
19. Suitable means that which fits, and has the qualities or qualifications to meet a given purpose, occasion, condition, function, or circumstance.

**Section 1926.34, Means of Egress**

-building organized to provide free and unobstructed egress from all parts at all times when occupied

-no lock or fastening except in mental, penal, or corrective institution, fires

-exits marked by signs

-maintenance and workmanship, maintained egress

**Section 1926.50, Medical Services and First Aid**

-employer provide medical personnel for advice and consultation

-provisions made prior to commencement of project for first-aid issues

-if hospital not close, certified doctor with Bureau of Mines or American Red Cross on site

-first aid easily accessible, weatherproof container, individual sealed items, checked by employer weekly

-proper equipment for prompt ambulance transportation; no 911, post doctor numbers

-with 911, employer must ensure communication system works, if latitude and longitude not directed to 911, must post latitude and longitude, or other location information; does not apply to work sites with 911 land lines

-where eyes are exposed to corrosive materials, facilities for eye drenching

**Section Appendix A, First Aid Kits (Non-Mandatory)**

-minimal contents of first-aid kit are ANSI Z308.1-1978, Minimum Requirements for Industrial Unit-Type First-aid Kits

-unique problems, change first-aid kit, note change on OSHA 300 or OSHA 301 Logs; consultation with fire rescue or doctors

**Section 1926.51, Sanitation**

–adequate potable water at job site, portable containers tightly closed, cannot dip water, clearly marked water cups, common drinking cup prohibited, single service cups need sanitary container for unused cups and receptacle for used cups; potable water meets state requirements or U.S. Environmental Protection Agency’s National Primary Drinking Water Regulations (40 CFR part 141)

-nonpotable water, industrial or fire fighting, clearly marked with sign unsafe to drink, no cross-connection between potable and nonpotable water systems

-toilets, 20 or less (1), 20 or more (1 toilet seat and 1 urinal per 40 workers), 200 or more (1 toilet seat and 1 urinal per 50 workers)

-temporary field conditions, not less than 1 toilet is available

-without sanitary sewer, use privies, chemical toilets, recirculating toilets, combustion toilets

-does not apply to mobile crews who can drive to a toilet

**Section 1926.52, Occupational Noise Exposure**

-when sound levels exceed Table D-2 when measured on A-scale (Page 176)

-when sound levels exceed D-2, feasible administrative or engineering controls; if controls fail, use PPE

-continuous, variations in noise level involve maxima at intervals of 1 second or less

-effective hearing conservation program implemented

-different levels at different times, use combined noise, not individuals

Fe= (T1/L1) + (T2/L2)

Fe= equivalent noise exposure factor

T= period of noise exposure at any essentially constant level

L= duration of permissible noise exposure (D-2)

-if value of Fe exceeds units, 1, the exposure exceeds permissible levels  
-exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level

**Section 1926.56, Illumination**

-Table D-3 while work in progress: construction areas, ramps, runways, corridors, offices, shops, and storage areas

-American National Standard A11.1-1965, R1970, Practice for Industrial Lighting

**Section 1926.95, Criteria for Personal Protective Equipment**

-PPE eyes face head extremities, protective clothing, respiratory devices, protective shields and barriers; necessary by hazards of processes or environment, chemical hazards, radiological hazards, mechanical irritants; causing injury or impairment through absorption, inhalation, or physical contact

-employee owned equipment, employer responsible for maintenance and sanitation

-all PPE of safe design for work

-provided by employer at no cost to employees

-employer not pay for steel-toed boots or specialty eyewear, if can be worn off job site

-when employer provides metatarsal guards, and employee buys boots with metatarsal guards, not required to compensate

-employer not pay for everyday clothing or weather protection clothing or creams

-employer must pay for replacement PPE, except when employee loses or intentionally damages PPE

**Section 1926.96, Occupational Foot Protection**

-safety-toe footwear, American National Standard for Men’s Safety-Toe Footwear, Z41.1-1967

**Section 1926.100, Head Protection**

-protective helmets, impact, falling or flying objects, electrical shock or burns

1. American National Standards for Industrial Head Protection, American National Standards Institute (ANSI), Z89.1-2009
2. American National Standards for Industrial Head Protection, American National Standards Institute (ANSI), Z89.1-2003
3. American National Standard for Personal Protection, American National Standards Institute (ANSI), Z89.1-1997

-exposed to high-voltage electric shock meet specification in Section 9.7, Electrical Insulation

-OSHA approved head protection devices

**Section 1926.102, Eye and Face Protection**

-when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, potentially injurious light radiation

-side protection from flying hazards, may be detachable

-glasses, must incorporate prescription

-eye and face PPE must clearly identify manufacturer

-adequate protection, comfortable, fit snugly, not interfere with movement, durable, disinfected, cleanable

1. ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices
2. ANSI Z87.1-2003, Occupational and Educational Personal Eye and Face Protection Devices
3. ANSI Z87.1-1989 (R-1998), Practice for Occupational and Educational Eye and Face Protection

-protection against radiant energy, selection of shade numbers for welding filter, Table E-1, page 246

-laser safety goggles for laser beams, specific wavelength of the laser and optical density adequate for energy involved, Table E-1; include laser wavelengths data, optical density, visible light transmission

**Section 1926.104, Safety Belts, Lifelines, and Lanyards**

-used only for employee safeguarding; any one used for in-service loading, not static load testing, shall be removed from service and not used again for employee safeguarding  
-lifelines secured above the point of operation to an anchorage or structural member capable of supporting a minimum dead weight of 5,400 pounds

-lifelines used on rock-scaling operations, or where subject to cutting ot abrasion, ⅞ inch wire core manilla rope, all others ¾ inch manila or equivalent, minimum breaking strength of 5,000 pounds

Safety belt lanyard minimum of ½ inch nylon, provide for fall maximum length no greater than 6 feet, nominal breaking strength of 5,400 pounds

-all safety belts and lanyard hardware must be drop forged or pressed steel, cadmium plated Type 1, Class B plating Federal Specification QQ-P-416, smooth and free of sharp edges

-all safety belts and lanyard hardware, except rivets, tensile loading of 4,000 pounds without cracking, breaking, or taking permanent deformation

**Section 1926.105, Safety Nets**

-needed when workplaces are more than 25 feet above ground or water surface, or where ladders, scaffolds, catch platforms, temporary floors safety lines, or safety belts are impractical

-safety net must be in operation and tested before operations can commence

-extend 8 feet beyond edge of work surface, and as close to work surface as practical, no more than 25 feet below, sufficient clearance to clear items below, impact load testing for clearances

-only 1 level of nets is required for bridge construction

-mesh size of nets not exceed 6 inches by 6 inches; 17,500 foot-pounds minimum impact resistance, determined and certified by manufacturer, label of proof test, edges ropes minimum breaking strength of 5,000 pounds

-forged steel safety hooks or shackles used to fasten net to its supports

-connections between net panels shall develop the full strength of the net

**Section 1926.106, Working Over or Near Water**

-where danger of drowning exists, supplied with Coast Guard approved life jacket or buoyant work vests

-prior to use and after use inspect vests or preservers for defects which would alter strength or buoyancy

-ring buoys with 90 feet of line, distance between ring buoys not exceed 200 feet

-1 lifesaving skiff when employees working over or adjacent to water

**Page 261-262 Section 1926.150, Fire Protection**

-fire protection program by employer, all phases of work, fire fighting equipment, no delay in responding to fire hazards

-access to fire fighting equipment at all times, conspicuously located, periodically inspected, maintained in operating condition, replace defective equipment, Fire Brigade

-temporary or permanent water supply available as soon as combustible materials accumulate; underground water mains

-fire extinguisher rated 2A for each 3,000 square feet, 100 feet travel distance between; 100 feet or less of 1 ½ inch fire hose can be substituted for 2A at 25 gallons per minute; or 55 gallon drum of water with 2 fire pails; ½ inch garden hose, not over 100 feet in length, with nozzle, 5 gallons per minute, 30 feet horizontally stream, mounted on conventional rack or reels

-at least one 2A on each floor, and near stairway

-protect water from freezing

-10B fire extinguisher for 50 feet of 5 gallons of flammable or combustible liquids, or 5 pounds of flammable gas, not vehicle fuel tanks

-carbon tetrachloride and other toxic vaporizing liquid fire extinguishers are not allowed

-Maintenance and Use of Portable Fire Extinguishers, NFPA No. 10A-1970, nationally recognized testing laboratory

-Table F-1, Page 247

-place sprinklers into operation as soon as finished, retain sprinklers for demolitions or alterations, properly authorized persons for sprinklers, return to service quickly, check sprinklers at end of each day

-standpipes as soon as ready, and maintained through job, Siamese fire department connections, outside, street level, conspicuously marked, 1 standard hose outlet each floor

-alarm system at job site to alert employees and fire department; alarm code and instructions conspicuously posted at phones and employee entrances

-fire walls and exit stairways for completed buildings given construction priority; fire doors, with automatic closing devices, hung on openings quickly

-fire cutoffs retained in demolitions or alterations until needed to remove

**Section 1926.151, Fire Prevention**

-electrical wiring and equipment for light, heat or power, Subpart K

-internal combustion engines located with exhaust away from combustible materials, 6 inches between piping and combustible materials

-no smoking with fire hazards, No Smoking or Open Flame

-portable battery powered lighting equipment, used with flammable gases or liquids, approved for hazardous locations

-nozzle of air, inert gas, and steam lines or hoses, used for cleaning and ventilation of tanks and vessels with hazardous gases or vapors, bonded to tank or vessel shell, bonding devices not attached or detached in hazardous concentrations of flammable gases or vapors

-no temporary buildings erected where adversely affect exits; either noncombustible construction or combustible construction of not less than 1 hour; not less than 10 feet from another building or structures; group of buildings is 1 building if less than 2,000 square feet

-open yard storage, combustible materials stacked no higher than 20 feet; driveways 15 feet wide, maintained free from accumulation, maximum grid system 50 feet by 150 feet; entire storage site kept clean, periodic maintenance plan, grass and weeds; underground fire, no combustible materials on land; method of piling is solid, orderly and regular piles, no combustible material within 10 feet of building; portable fire extinguishers, 2A, 100 feet travel distance between

-indoor storage- storage cannot obstruct exits; all materials stored and piled regarding their fire characteristics; noncompatible materials which could create fire hazard, segregated by barrier having fire resistance of 1 hour; material piled to minimize spread of fire and access to firefighting, stable piling, aisle space for widest vehicle for firefighting; 36 inches clearance between top of stored material and sprinklers; clearance between lights and heating units to prevent ignition of combustible materials; clearance of 24 inches around path of fire doors unless a barricade, no materials stored within 36 inches of fire door opening

**Section 1926.152, Flammable liquids**

-approved containers and portable tanks, safety cans and Department of Transportation approved containers, 5 gallons or less, not for highly viscous liquids (hard to pour) original shipping containers; 1 gallon less, original container may be used

-not store flammable liquids in exit areas, stairways, or safe passage

-no more than 25 gallons of flammable liquids may be stored in a room outside of an approved storage cabinet; liquified petroleum gas Section 1926.153

-excess 25 gallons: wooden storage cabinets, bottom sides and top plywood 1 inch thick, not delaminate or break down under fire test conditions, joints rabbeted and fastened in 2 directions with flathead wood screws, more than one door rabbeted overlap not less than 1 inch, steel hinges cannot lose holding capacity due to loosening or burning of screws during fire, painted inside and out with fire retardant paint; approved metal storage containers, cabinets labeled with conspicuous lettering (Flammable-Keep Away from Open Flames)

-not more than 60 gallons of Category 1,2,3 flammable liquids or 120 gallons of Category 4 in any 1 cabinet; 3 cabinets in a storage area, excess quantities stored in storage room

-inside storage rooms fire-resistant testing, Standard Methods of Fire Test of Building Construction and Material, NFPA 251-1969

-automatic extinguishing system, approved manner; openings to other rooms or buildings shall be provided with noncombustible liquid-tight raised sills or ramps at least 4 inches high, or the floor in the storage area shall be at least 4 inches below the surrounding floor; openings provided with approved self-closing fire doors; room is liquid tight where walls join floor; open-grated trench, instead of ramps or sills, which drains to safe location; windows Standard for Fire Doors and Windows, NFPA No. 80-1970, Class E or F openings; wood 1 inch nominal thickness used for shelving, racks, dunnage, scuffboards, floor overlay

-materials which react with water and create fire hazard not stored in same room as flammable liquids

-storage in inside storage rooms, Table F-2, Page 249

-electrical wiring and equipment in inside storage rooms, Class 1 Division 1 Hazardous Locations

-every inside storage room, gravity or mechanical exhausting system, 12 inches above floor, complete change of air 6 times per hour; mechanical system, controlled by switch located outside door; ventilating equipment and lighting fixtures operated by same switch; electric pilot light adjacent to switch if Category 1 2 3 flammable liquids; gravity ventilation, fresh air intake and exhausting outlet located on exterior of building in which room is located

-inside storage room, 1 clear aisle at least 3 feet wide; containers over 30 gallons not stacked on top of each other

-quantity, enough for 1 day or 1 shift; bulk storage of portable containers of flammable liquids in separate building

-storage outside buildings; not more than 60 gallons each, not exceed 1,100 gallons in any one pile or area; piles or groups separated by 5 foot clearance; 20 feet away from building

-within 200 feet of each pile of containers, 12 foot wide access way to permit approach of fire control apparatus

-storage area graded in a manner to divert spills from buildings, curb of earth dike 12 inches high; curbs or dikes,, must drain ground or rain water, or spills; drains terminate at safe location and accessible under fire conditions

-outdoor portable tank storage; not nearer than 20 feet from building; 2 or more portable tanks, grouped together, excess of 2,200 gallons, separated by 5 foot clear area; individual tanks of 1,100 gallons separated by 5 foot clear area; within 200 feet of each portable tank, 12 foot wide access for fire control apparatus

-storage areas kept free of weeds, debris, and combustible material not necessary to storage

-portable tanks, not exceeding 660 gallons, emergency venting, Chapter III and IV NFPA 30-1969, The Flammable and Combustible Liquids Code

-portable tanks excess 660 gallons, emergency venting, Chapter II and III NFPA 30-1969, The Flammable and Combustible Liquids Code

-at least one portable fire extinguisher 20-B units, outside of, not more than 10 feet from, door opening, for storage of 60 gallons of flammable liquid

-outside, 20-B units, at least 1, 25-75 feet

-Standard for the Installation of Sprinkler Systems NFPA 13-1969

-trucks and vehicles for transporting flammable liquids, 20-B:C units

-25 feet distance or fire resistance of 2 hour for areas for transferring flammable liquids greater than 5 gallons; drainage to control spills; natural or mechanical ventilation to maintain at 10 % of lower flammable limit

-transfer of Category 1 2 3 only when containers are electrically interconnected (bonded)

-flammable liquids transferred into vessels containers tanks only through closed piping system, from safety cans, device drawing through the top, or from a container or portable tanks through gravity or pump, through an approved self-closing valve; cannot transfer by means of air pressure

-dispensing units protected against collision damage

-dispensing devices and nozzles for Category 1 2 3 approved type

-Category 1 2 3 kept in closed containers when not in use

-leakage or spillage disposed of promptly and safely

-Category 1 2 3 used only when no open flames or ignition sources within 50 feet of the operation, unless greater clearance warranted

-service and refueling areas, flammable liquids kept in approved closed containers, underground tanks, or aboveground portable tanks

-tank trucks, Standard for Tank Vehicles for Flammable and Combustible Liquids, NFPA No. 385-1966

-dispensing hose approved type

-dispensing nozzle approved automatic-closing type without sa latch-open device

-underground tanks not abandoned

-switch at remote location for power shut off

-heating equipment in lubrication or service area where no Category 1 2 3, if bottom of heating unit is 18 inches above floor and protected

-heating equipment in lubrication or service areas with Category 1 2 3, garages approved, 8 feet above floor

-no smoking or open flames in fueling areas, internal combustion engines; smoking signs

-motors of equipment shut off during fueling operation

-1 fire extinguisher 20-B:C units, 75 feet of each pump, dispenser, underground fill pipe opening, and lubrication or service area

-flammable liquids at below 199.4 degrees F (93 degrees C)

-does not apply to bulk transportation of flammable liquids, or storage and handling of fuel oil tanks and containers connected with oil burning equipment

**Section 1926.250, General Requirements for Storage**

-all materials stored in tiers properly stored

-weight of stored materials not exceed safe load limits; employers conspicuously post safe load limits, in pounds per square foot, except on floor or slab on grade, single family or multiple family wooden

-aisles and passageways kept clear

-difference in road or working levels, use ramps, blocking or gradient to ensure safe travel

-material stored inside buildings under construction, not within 6 feet of hoistway or indoor floor openings, nor within 10 feet of exterior wall which does not extend above the top of material

-personal fall arrest equipment for silos, hoppers, tanks

-noncompatible materials segregated

-bagged materials stacked by stepping back the layers and cross-keying the bags every 10 high

-scaffolds and runways only enough material stored for immediate operations

-brick stacks, 7 feet high; at 4 feet, tapered back 2 inches every foot over 4 feet

-masonry blocks stacked higher than 6 feet, tapered back one-half block per tier above 6 feet

-remove nails from used lumber before stacking

-lumber stacked on level and solidly supported sills, stable and self supporting, lumber piles not more than 20 feet high, handled manually not more than 16 feet high

-steel, poles, pipes, bar stock, cylindricals stacked and blocked to prevent spreading or tilting

-keep storage areas free from tripping, fire, explosion, or pests, vegetation

**Section 1926.301, Hand Tools**

-no use of unsafe hand tools by employer

-wrenches not used when jaws are sprung and slippage occurs

-impact tools, drift pins, wedges, chisels, free of mushroomed heads

-wooden handles kept free from splinters and cracks and kept tight in tool

**Section 1926.302, Power-Operated Hand Tools**

-electric power operated tools, either double insulated or grounded subpart K

-no electric cords for hoisting or lowering tools, not permitted

-pneumatic power tools, secured to hose by whip or positive means to prevent accidental disconnection

-safety clips and retainers used for pneumatic impact percussion tools to prevent attachments from accidental expelled

-pneumatic nailers, staplers, with automatic fastener feed, more than 100 psi, safety device on muzzle, unless muzzle in contact with work surface

-compressed air for cleaning lower than 30 psi, with effective chip guarding and PPE; 30 psi for cleaning not apply to concrete form, mill scale

-do not exceed manufacturer’s safe operating pressure for hoses, pipes, valves, filters

-no hoses for hoisting or lowering tools

-hoses exceeding ½ inch inner diameter safety device at source of supply or branch line to reduce pressure in case of hose failure

-airless spray guns for atomize paints and fluids, high pressures, 1000 pounds per square inch, have manual safety devices to prevent trigger pulling or paint release; or a diffuser nut while the nozzle tip is removed, plus a nozzle tip guard for operator protection

-abrasive blast cleaning nozzles, operating valve which must be held open manually, nozzle support mounted when not in use

-fuel powered tools, turned off when refueling or maintenance or transporting; enclosed spaces PPE

-hydraulic power tools, fluid fire resistance per Schedule 30 of U.S. Bureau of Mines, DOI, retain operating characteristics at most extreme temperature

-do not exceed manufacturer’s ratings for operating pressures for hoses, valves, pipes

-powder-actuated tools, only trained employees; test each day before loading per manufacturer; remove immediately any defective tool; PPE; tools not loaded until firing time, do not point tools at people, hands kept clear at barrel end; do not leave loaded tools unattended; fasteners not driven into hard or brittle material, like cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, hollow tile; driving into easily passible materials needs a backing substance; no fastener driven into spalled area caused by unsatisfactory fastening; no tools in explosive or flammable atmosphere; use correct shield, guard, attachment; American National Standards Institute, A10.3-1970, Safety Requirements for Explosive-Actuated Fastening Tools

**Section 1926.304 Woodworking Tools**

-all woodworking tools need a disconnect switch, locked or tagged in off position

-operating speed etched or marked on circular saws 20 inches in diameter or over 10,000 peripheral feet per minute; only operate at marked speed, when new speed, new marking

-self-feed, automatic feeding devices on machines work permitting, feeder attachments have feed rolls covered or guarded

-guarding, portable power driven circular saws need guards above and below base plate or shoe, upper guard to depth of teeth, except for minimum arc required for bevel cuts, lower guard to depth of teeth, except for minimum arc needed for proper retraction and work contact, when tool is withdrawn from work, lower guard automatically return to covering position

-PPE, American National Standards Institute, 01.1-1961, Safety Code for Woodworking Machinery

-radial saws, upper hood completely enclose upper portion of blade down to end of saw arbor, upper hood constructed to protect operator from flying splinters, broken saw teeth, sawdust, sides of the lower exposed portion of the blade guarded to full diameter of the blade that automatically adjusts to the thickness of the stock

**Subpart 1926.451, General Requirements--Scaffolds**

-scaffolds must support their own weight plus 4 times maximum load

-direct connections to roofs and floors, counterweights, resist 4 times tipping moment at rated load of hoist, or 1.5 times tipping moment at stall load of hoist, whichever greater

-suspension ropes must support 6 times maximum load

-suspension ropes to roofs and floors, counterweights, support 6 times tipping moment at rated load of hoist, or 2 times tipping moment at stall load of hoist, whichever greater

-stall load of any scaffold not exceed 3 times rated load

-scaffolds designed by qualified person

-each platform fully planked between front uprights and guardrail supports

-each platform unit (scaffold plank, fabricated plank, fabricated deck, fabricated platform) space between adjacent units and between platform and uprights no more than 1 inch wide, 2.5 cm, unless a wider space is necessary, which can be 9 ½ inches, 24.1 cm; not for walkways or scaffold erection or dismantling

-each scaffold platform and walkway at least 18 inches wide, 46 cm

-each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold at least 12 inches wide, 30 cm; no minimum width requirement for boatswain chairs

-not 18 inches wide, as wide as possible, and fall protection, guardrails and PFAS  
-front edge of platforms not more than 14 inches, 36 cm, from face of work, unless fall prevention

-maximum distance from face for outrigger scaffolds 3 inches, 8 cm

-maximum distance from face for plastering and lathing 18 inches, 46 cm

-each end of platform, unless cleated or restrained by hooks, extend over centerline 6 inches, 15 cm

-each end of platform 10 feet or less not extend over support more than 12 inches, 30 cm, unless cantilevered part of platform can support employees, or has guardrails

-each end of platform greater than 10 feet not extend over support more than 18 inches, 46 cm, unless cantilevered part of platform can support employees, or has guardrails

-scaffolds with abutted planks each rest on separate support; T sections and hooks can be used

-where platforms are overlapped, overlap only over supports, not le4ss than 12 inches, 30 cm, unless platforms nailed together

-where platform changes direction, corners, non right angles laid first, right angles second on top of first platform

-wood platforms not covered with opaque finishes, except edges for identification; platforms may be coated periodically with finished, flame retardant, not obscure top or bottom surfaces

-different manufacturers not mixed, unless they fit, not modified unless competent person agrees

-dissimilar metals not used together unless competent person determines that galvanic action will not reduce strength

**Subpart 1926.501, Duty to Have Fall Protection**

-employer determine if walking/working conditions need fail protection, requisite strength and structural integrity

-6 feet or more, 1.8 meters, fall protection; leading edges same, unless employer can demonstrate not necessary; leading edges under construction, control line may be used instead of guardrail if control zone established; 6 feet, 1.8 meters, hoist areas, PFAS if guardrails removed; falling through holes, same; tripping in or stepping through holes, objects falling through holes, including skylights; formwork and reinforcing steel; ramps, runways, other walkways; excavations edge; edge of well, pit, shaft; less than 6 feet for dangerous equipment guardrails or equipment guards, 6 feet or more for dangerous equipment guardrails, PFAS, or safety net systems; overhand bricklaying

-employee reaching more than 10 inches 25 cm below walking/working surface, guardrails, PFAS

-roofs, fall protection; roofs 50 feet or less in width, safety monitoring system

-steep roofs, guardrail systems with toeboards, safety net systems, or PFAS

-precast concrete erection, 6 feet or more, fall protection, unless not feasible; residential construction same

-wall openings, outside bottom edge 6 feet or more above lower levels, and inside bottom edge is 39 inches, 1 m, above the walking/working surface, fall protection

-falling objects, hard hat; toeboards, screens, guardrail systems, canopy structure, barricades

**1926.502, Fall Protection Systems Criteria and Practices (Guardrail Systems)**

-Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches (1.1 m) plus or minus 3 inches (8 cm) above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of this paragraph.

-Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge.

-When guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.

**Subpart P-Excavations**

**Subpart 1926.1053, Ladders (Use)**

–portable ladders, side rails extend 3 feet, 0.9 m above upper landing surface; secured at top with grabrail; extension cannot cause the ladder deflection to buckle under load

-free of oil, grease, slipping hazards

-maximum load, manufacturers rated capacity

-only for purpose they are built

-non-self supporting ladders, angle horizontal distance top to bottom ¼ of working length of ladder

-wood job-made ladders, spliced side rails, horizontal distance ⅛ working length

-fixed ladders, 90 degrees from horizontal, back side

-stable and level surfaces, slippery surfaces, secured to prevent accidental displacement, slip resistant feet not a substitute for placing, lashing, or holding ladder

-in displaced by work activities locations, passageways, doorways, driveways, secured, barricade

-keep clear area around top and bottom

-top of non-self supporting ladder, 2 rails supported equally or single support attachment

-not moved, shifted, or extended while occupied

-nonconductive siderails, exposed energized electrical equipment

-dont use top step

-cross-bracing on rear of stepladders not used for climbing, unless steps for climbing on front and rear

-inspected by competent person, before use and after incidents

-Do Not Use, withdrawn from service until repaired, portable ladders with structural defects, broken missing rungs, cleats, steps, broken split rails, corroded components

-Do Not Use, Marked Defective, Blocked, fixed ladders with structural defects, broken missing rungs, cleats, steps, broken split rails, corroded components, withdrawn from service until repaired

-ladder repairs restore to original condition

-no single-rail ladders

-face the ladder when ascending or descending

-use at least 1 hand to grasp the ladder

-dont carry loads that could cause the employee to lose balance and fall