

# Construction SAFETY Audit



**Frankenmuth**  
MUTUAL INSURANCE COMPANY

A member of the Frankenmuth Financial Group

Construction safety audits are necessary to check your operations against established expectations. This general construction safety inspection checklist is not designed to supersede existing safety inspection checklists. Rather, it should be used only as a general guideline. You are encouraged to customize this general guideline to accommodate your specific operations. Topics noted with an (\*) were taken from the OSHA website.

Date \_\_\_\_\_ Jobsite Location \_\_\_\_\_

Senior Site Representative \_\_\_\_\_

Person(s) Making Inspection \_\_\_\_\_

## GENERAL INSPECTION\*

- Posters and safety signs/warnings posted
- Safety meetings held periodically
- First aid kit available and adequately stocked
- Job related safety training
- Accident reporting procedures established
- Substance abuse policy in-place
- Injury records being kept
- Emergency telephone numbers posted
- Traffic routes identified
- New employee orientation completed

## SITE SECURITY\*

- Warning signs in-place
- Open ditches protected
- Drop-offs protected
- Ladders lowered
- Hazard lights utilized
- Equipment secured
- Utility ditches flagged or barricaded

## ORDERLINESS AND MATERIAL STORAGE

- General orderliness
- Regular disposal of waste and trash
- Trash containers
- Nails removed or bent down
- Spills cleaned up promptly
- Drinking water available
- Sanitary facilities
- Stability of materials in storage
- Fire lines maintained
- Control of combustibles
- Men lifting properly
- Correct use of material handling equipment
- Dust protection

## FIRE PROTECTION /PREVENTION\*

- Adequate number and type of fire extinguisher(s) available
- Fire extinguisher training accomplished
- Phone number of fire department posted
- Fire extinguisher(s) provided on appropriate equipment
- All flammable liquids in approved containers and correctly labeled
- Flammable liquids properly stored
- Fire alarm available/fire evacuation plan established

## FIRE PROTECTION /PREVENTION\* (continued)

- Fuel supplies protected from accidental impact
- Fire training to appropriate personnel
- Equipment shut down prior to refueling
- Equipment properly grounded to fuel trucks before refueling
- "No Smoking" signs posted and enforced
- Hydrants clear, access to public thoroughfare open.
- Flame & work permits

## PERSONAL PROTECTIVE EQUIPMENT (PPE)\*

- Hazard evaluation accomplished and certified
- Proper equipment adequate for exposure
- Employees issued PPE where needed
- PPE is being used where needed
- Employees trained in use of PPE
- Inspections being accomplished periodically/before and after use
- Adequate maintenance and sanitary storage available/ utilized
- Adequate fall protection, harnesses provided
- Eye Protection
- Face protection (glasses, goggles, shields)
- Respirators, Masks
- Respirators used for harmful dust, asbestos, sand blasting, welding (lead paint & galvanized zinc or cadmium)
- Hearing protection
- Foot protection
- Hand protection, gloves
- Head protection, hard hats
- Physicals accomplished as required

## CONFINED SPACE PROCEDURE

- Confined Space entry training conducted
- Signs posted to identify confined spaces
- Personal protective equipment specified
- Standby person
- Emergency equipment for standby person
- Permit required precautions taken
- All required signatures for entry/testing
- Permits posted prior to start of work
- Permits retained a minimum of two years

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## ENVIRONMENTAL

- Posting temporary waste area properly
- Hazardous Waste Management
- Hazardous waste storage
- Certified shipper and ultimate disposal site
- Proof of insurability of transporter and operations disposal
- Natural waterways protection
- Personnel training and records
- Personnel protection
- Container integrity and packaging
- Marking & labeling
- Communications for emergencies and operations
- Contingency plan
- Inspection procedures
- Waste storage and area fence integrity – Locked gates

## HEALTH HAZARD CONTROL

- Sampling & logging
- Times of exposures on time cards
- Medical records
- Personal protection

## HAZARD COMMUNICATIONS/RIGHT TO KNOW\*

- Written program
- MSDS on file or available
- Control and disposal measure(s) established
- Material properly stored and labeled
- Labels legible
- Log of all chemicals on site available
- Employees trained in Hazard Communications
- Documentation of training

## HOISTS, CRANES, DERRICKS, AND RIGGING

- Rented cranes inspected & all deficiencies corrected
- Operators properly trained/licensed
- Crane chart in cab
- Tag line in use
- Correct rigging & proper storage
- Equipment firmly supported
- Outriggers used fully extended
- Power lines de-energized, clearances maintained
- Signalmen work as instructed and trained
- Proper signals understood & posted
- Inspection and maintenance logs maintained
- Swing radius barricades
- Chokers, chains, slings & shackles inspected & maintained
- High wind operating restriction level (30 mph or mfg.'s limits)
- Elevator floor gates and signal system
- Chain fall used correctly

## HEAVY EQUIPMENT

- Proper operation
- Operators qualified/tested
- Regular monthly inspection, maintenance & service
- All personnel seated
- Correct parking procedures
- Wheels chocked when necessary
- Speed limit control
- Dump bed chocks and tie-downs

## HEAVY EQUIPMENT (continued)

- Compressed air safety valves
- Noise arrestors used
- Back-up alarms
- Flagmen where needed
- Fire extinguishers installed on gas fueled equipment
- Rollover protection and seatbelt use

## MOTOR VEHICLES

- Regular inspection, maintenance, and service
- Licensed operators, on and off road
- Current licenses maintained
- Local and state vehicle laws and regulations observed
- Speed limit control
- Weight limits and load sizes controlled
- All personnel seated and seats provided
- Glass in good condition
- Back up alarms
- Accident/incident report forms in glove compartment
- Fire extinguishers installed
- Parking not to obstruct traffic or work operations
- Control of personal cars on site

## ELECTRICAL SAFETY\*

- No exposed electrical wires
- No broken insulation on cords
- Controls are labeled
- No cracked or broken receptacle covers
- GFCI's in wet or damp areas
- No broken or bent ground prongs on plugs
- Power tools do not have broken or cracked casings
- Electrical PPE available for "authorized employees"
- Breaker panels have covers & breakers are labeled
- Electric utility rooms are posted "Authorized Employees Only"
- Employees trained to know that only authorized employees may conduct repairs;
- In the hazards of electricity;
- To inspect electrical tools before use;
- To report electrical hazards immediately;
- To inspect plug, cord and receptacles before plugging in equipment;
- Not use broken or damaged electrical tools or equipment;
- To use Lockout Tagout before repairs;
- To get specific authorization before working on energized equipment;
- To boundary-off electrical work areas;
- Electrical devices have current inspection and coding
- Electrical equipment properly maintained
- Equipment properly grounded
- Assured equipment grounding program established
- GFCI used and tested where required
- Fuses provided
- Electrical dangers posted
- Proper fire extinguisher(s) provided
- Terminal boxes equipped with required covers (covers used)
- To properly inspect and use electrical PPE;
- Electrical high voltage identification
- Terminal boxes covered

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## **ELECTRICAL SAFETY\* (continued)**

- Lighting, temporary light guards & bulbs provided
- Electric service designated 220 V or higher
- Equipment and structure grounding
- Protection insulation rubber protective equipment
- Rubber goods test program – gloves, sleeves, blankets, client/vendor

## **LOCKOUT TAGOUT\***

- No broken valve hand-wheels, controls or switches
- All control valves and switches are labeled
- Each authorized employee has been issued locks & tags
- Locks & tags are standardized throughout facility
- Locks & tags are identifiable to a specific employee
- Locks & tags are not used for other purposes
- Locking devices are available for every type isolation device
- Material used to affix tag rated at 50 pounds or greater – no strings allowed
- All breakers are labeled
- Workers trained that only authorized employees may attach a lock & tag;
- That only the person who attached the lock & tag may remove it;
- To verify isolation before beginning work;
- To notify “affected” employees before locking out equipment;
- To re-install machine guards before removing locks & tags;
- To notify “affected” employees before removing locks or re-starting

## **HAND TOOLS\***

- Proper tool for each job
- Correct use
- Inspection & maintenance
- Neat storage
- Safe carrying
- Tool defects – repair facilities

## **POWER TOOLS\***

- Proper operator protection
- Tools and cords in good condition
- Proper instruction in use
- Mechanical guards in place
- Tools stored properly
- Correct tools for the job
- Inspected – maintenance and repair
- Adequate protection for nearby personnel
- Properly grounded or double insulated
- Damaged or malfunctioning tools tagged out until repaired or replaced
- All operators qualified
- Tools protected from unauthorized use
- Cords included in electrical inspections

## **POWDER-ACTIVATED TOOLS**

- Laws and ordinances complied with
- Operators qualified – vendor trained
- Controlled storage
- Competent instructions & supervision
- Inspection & maintenance
- Protection of other workers
- Safety goggles or face shield

## **BARRICADES**

- Floor openings
- Roadways, sidewalks, and stairs
- Adequate lighting
- Traffic controls
- Trenches and excavations
- Special work – overhead, sandblasting, radiation, hydrolasing
- Signs as required
- Elevator shaft openings

## **LADDERS\***

- Ladders inspected & in good condition
- Ladders used properly for type of exposure
- Ladders secured to prevent slipping, sliding, or falling
- Siderails extended 36” above top of landing
- No ladders spliced
- Rungs or cleats not over 12” on center
- Proper maintenance and storage
- No painted ladders
- Ladders exceeding 20 ft have fall protection
- Aluminum ladders of sufficient strength for task
- Metal ladders not used near electrical equipment

## **SCAFFOLDING\***

- Erection properly supervised
- All structural members free from defects and meet safety factor
- All connections secure
- Scaffolds erected on solid footing
- Scaffold tied to structure
- Working areas free of debris, snow, ice, grease, etc.
- Workers protected from falling objects
- Scaffold plumb and square, with cross-bracing?
- Guard rails, intermediate rails, and toeboards in place
- Ropes and cables in place
- Fall protection available and in use

## **BACK INJURY PREVENTION\***

- Hand trucks, push carts & dollies are available, in good repair and properly used
- Cranes & hoists are available, in good repair and properly used
- Containers of over 10 pound capacity have well engineered grip points
- Large loads are broken down before manual lifting
- Loading & offloading points are adjustable to keep material between knees and shoulder level
- Worker do not have to bend or twist to get production material
- Awkward postures such as leaning forward or stooping are not required
- Heavy material is not carried up or down ladders
- Back belts are not worn continuously
- Workers are trained in proper lifting & carrying techniques
- Workers are trained in safe use of carts and hoists

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## **GARAGES AND SHOPS**

- Eye and face protection
- Fire hazards controlled
- Safe dispensing of fuels and lubricants
- Carbon monoxide protection
- Fuels and lubricants in proper containers
- Proper grounding and bonding
- Tools inspected and maintained
- Battery charging fire protection, "no smoking" signs posted and area well ventilated

## **WELDING AND CUTTING**

- Welding hoses and cords controlled – out of the way
- Shields and spark catches
- Goggles, gloves, clothing
- Electrical equipment grounded properly
- Power cables and hoses protected and in good repair
- Rods not left in holders
- Fire extinguishers
- Fire hazard inspections and protection/flame permits issued
- Gas cylinders secured upright
- Fuel gas and oxygen separation in storage
- Flow gages and regulators maintained, removed when not in use
- Cylinder caps as required
- Inert gas protection, sampling, and monitoring
- Reverse and straight polarity controlled
- Bulk gas manifold systems properly installed, routed, identified, and maintained

## **FLAMMABLE GASES AND LIQUIDS**

- Correct containers used
- Containers clearly identified
- Proper storage – fire rated cabinets
- Fire hazards checked – after hours inspections
- Grounding and bonding systems
- Fire extinguisher protection
- Carts for moving cylinders – secured upright during moves
- Dikes – bulk storage facilities

## **EVACUATION AND SHORING**

- Excavation permits executed
- Adjacent structures properly shored
- Shoring and sloping for soil type
- Adjacent roads and sidewalks supported and protected
- Soil material stored away from edge, minimum 2 feet
- Excavation barricaded and lighting provided
- Equipment kept a safe distance from edge of excavation
- Ladders and ramps every 25 feet
- Equipment ramps adequate
- Proper supervision – including competent person designated daily inspection
- Underground piping and electrical lines and identified – adequate support provided

## **EXPLOSIVES AND BLASTING**

- Licensed operators and supervision
- Transport fuses and explosives
- Local laws and regulations observed
- Storage magazines constructed per codes and distances maintained

## **EXPLOSIVES AND BLASTING (continued)**

- Blasting mats utilized as required
- Detonators tested before each shot
- Audible signals properly used – 5 minute, 1 minute, and all clear
- Area cleared of men and equipment
- Inspection after each shot
- Proper protection and accounting for all explosives at all times
- Proper disposition of wrappings and waste
- Preblast surveys of potential damage points before and after shots
- Check radio frequency hazards and post signs at all entrances and exits
- Applicable project permits
- Security and theft protection

## **PILE DRIVING**

- Proper storage of piles
- Material handling controlled
- Equipment inspected and maintained
- Piledriving rigs properly supported
- Ladders on frames and stirrups used – emergency access routes
- Cofferdams maintained and inspected
- Adequate pumping available
- Tag line use
- Safety harnesses and lifelines
- Proper signaling
- Barricades for piledriver work area and coffer dam edges
- Ear protection area posted

## **CONCRETE CONSTRUCTION**

- Forms properly installed and braced
- Adequate shoring, plumbed, and cross braced
- Concrete truck chocked - when required
- Hands away from chute pinch points
- Check heating devices; prevent fire and asphyxiation hazards
- Traffic planned and routed
- Adequate runways and scaffolds free of debris
- Protection from cement dust and concrete contact
- Hard hats, foot protection, shirts, splash goggles
- Stripped form material removed promptly
- Truck and crane signaling/flagging
- Pump guards in place while in operation
- Waste concrete placement

## **STEEL ERECTION**

- Perimeter guard rail
- Safety nets or platforms
- Taglines
- Containment of fire, sparks, and slag
- Floor openings covered or barricaded
- Ladders, stairs, or other access provided
- Floats, stages, boatswain chairs inspected, load capacities and reach distances calculated
- Safe man position while climbing, changing position or stationary
- No use of headache ball, hook or load for man raising

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## **STEEL ERECTION (continued)**

- 2 connecting bolts at each end prior to disconnect of hook and chocker from load line, line from steel members
- Steel grounded
- No work on wet steel/high wind – personnel and lifting equipment

## **DEMOLITION**

- Operation preplanned
- Shoring of Adjacent structures
- Trash chutes, hoppers, gondolas, barrels
- Sidewalk barricades; protection of public
- Clear operating space for truck and other vehicles
- Adequate access ladders or stairs
- Dust and falling debris control – headache covers
- Personal protective equipment
- Fire protection maintenance

## **INDUSTRIAL SAFETY AND HEALTH HAZARD SAMPLING INSTRUMENTS**

- Oxygen analyzer
- Explosimeter
- Detector tube sampler
- Air sampling pump
- Sound level meter
- Radiation dosimeter and film badges
- Electrical circuit tester
- Monitoring equipment and alarms
- Camera(s)
- Tape recorder/video camera