

Activity Hazard Analysis (AHA)

Activity/Work Task: Concrete-Concrete Forming 03.11.00	Risk Assessment Code (RAC) Rating Matrix					
Project Location:						
Contract Number:	Severity	Probability				
Date Prepared:		Frequent	Likely	Occasional	Seldom	Unlikely
Prepared by (Name/Title):	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
Reviewed by (Name/Title):	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
Notes: (Field Notes, Review Comments, etc.) All activities are performed less than 6 feet above or below ground level.		Step 1: Review each "Hazard" with identified safety "Controls" and determine RAC rating (above). "Probability" is the likelihood to cause an incident, near miss, or accident and identified as: Frequent, Likely, Occasional, Seldom or Unlikely. Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible Step 2: Identify the RAC (Probability/Severity) rating as E, H, M, or L for each "Hazard" on AHA. Annotate the overall highest RAC at the top of AHA.			RAC Rating E = Extremely High Risk H = High Risk M = Moderate Risk L = Low Risk	

Job Steps	Hazards	Controls	RAC
All	Injuries due to low awareness of work environment hazards, controls and safety policies.	Indoctrination training reviews activity hazards, controls, and safety policies. AHA posted at jobsite. Preparatory meeting trains site personnel on AHA. Regular staff meetings increase awareness of safety topics.	L
	Cuts, lacerations, eye injury, head injury, hearing injury.	Wear appropriate PPE at all times. REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Hardhats, safety-toed shoes, and safety glasses are required at all times. Hearing protection available at all times.	L
	Falls from debris, cords, strings	Cleanup policies, regular inspections	L
Material delivery by forklift	Fork lift, falling loads	Pallets correct and undamaged; Operator awareness of lift specifications; Correct bonding and stacking of lift loads	L
	Falling fork lift load, crushing	Lowest safe CG during operations; Correct material stacking, wrapping, bonding; Work area barricades; inspected equipment	L
	Material handling, manual, cuts and strains	Awareness of material types and specific hazards; Added personnel to lighten individual loads	L

Job Steps	Hazards	Controls	RAC
	Forklift or load impacting personnel , vehicles or structures	Qualified operator; Personnel awareness.	L
Formwork	Electrocution, faulty cords, damaged or missing insulation, bad repairs	Inspect all extension cords regularly; Discard or repair damage immediately; No tape repairs	L
	Eye Injury, flying chips and slivers	Identification of hazardous activities and materials; Correct eye protection; tool guards functional	L
	Hand tools, cuts, impacts, punctures and abrasions	Tools appropriate for jobs, well maintained, sharpened and lubricated;	L
	Hand tools, repetitive stress injury	Symptom awareness; Regular breaks; Vary work type	L
	Hand tools, slips and breaks	Proper balance stance and grip; Correct work surface and clamps; Hazard awareness and personnel self-protection	L
	Tool guards, faulty, removed or tampered (defeated)	Post and enforce tool guard policy; Personnel hazard instruction; Tamper penalties enforced	L
	Hearing impairment	Awareness of personnel noise protection. Availability of hearing protection.	L
	Nails and Staples, penetrating through material after installation	Remove, clinch, cut or grind projections to eliminate snag cut and tear hazards	L
Equipment to be Used	Training Requirements/Competent or Qualified Personnel name(s)	Inspection Requirements	
Forklift	Forklift operator must have valid forklift operator company certification.	Operator inspects all tools prior to use. Daily superintendent survey inspection includes visual inspection of forklifts in use. Health and Safety officer includes forklift inspection in site safety audits.	
Tools; power and hand	Use, hazards and hazard controls included in project indoctrination training. All employees participate in project safety indoctrination training before beginning work.	Operator inspects each tool prior to use. Daily superintendent survey inspection includes power tool condition and use. Health and Safety officer includes forklift inspection in site safety audits.	

Master Hazard List

ID	Hazard/ Injury	Correction/ Control
1	Airborne particles, explosive	Air filtration;; Exhaust fans; Wetting dusts; Dust collection systems and hoods for equipment; Airborne particle concentration detectors and alarms
2	Airborne particles, inhaled	Use correct respirator, mask, helmet or hood type
3	Anchor points, fall protection, loose, insufficient quantity or strength	Close inspection; Load testing; Snag and sharp edge free path for tethers; Proper netting installation; Personnel instruction in use and maintenance
4	Anchor points, temporary scaffolding, loose, insufficient quantity or strength	Verify fasteners, design and spacing; Concrete at design strength; Adequate strength of materials; Load testing;
5	Attention:, lack of personnel focus	Situational awareness training; coffee breaks; task variation
6	Barriers and rails, temporary, missing, damaged or insecure	Planning; robust construction; Regular inspections and maintenance
7	Biological Hazards, medical waste/needles, molds, bird feces	Hazard survey and management policy; Proper containers; Cleanup/removal and Remediation
8	Bolt-up work hazards, injuries when aligning bolts and flanges	Drift pin use, vs. fingers; Bolt installation, sequencing and torquing plan
9	Bolt-up work hazards, sudden movement of pipes and structural members	Body parts clear of joints; Communication between installer and lift/crane operators; Escape route for installer
10	Burns, sun	Proper clothing; Sun screen; Equipment roof and umbrella; Shade cloth; water mist systems
11	Burns, welding, skin and retinal exposure to UV light	No exposed skin while welding; Proper mask
12	Burns, welding, sparks, hot parts	Proper clothing, clean orderly workspace; welding screens; pants outside boots
13	Cables, ropes and wires, breaks when over stressed	Verify tensile strength; inspect connections; check for damage; Personnel safety instruction
14	Cleanup, individual trade responsibility, undone or incomplete	Posted general policy; subcontract clauses; backcharge enforcement
15	Cleanup, site, general, lax or undone	GC policy with assigned procedures and responsibilities
16	Communication, telephone, cell and land line, Interruption, wiretapping	Protected wires, secure boxes; identified, marked lines
17	Confined spaces, suffocation or engulfment	Personnel training, Entry supervision and attendant; Safety tests; Safety lockouts; Rescue plans and retrieval equipment
18	Corrosion, chemical/rust, fasteners, reinforcing, structural members, roofing	Protective coatings, rain protection;
19	Corrosion, electro-galvanic. fasteners, reinforcing, structural members, roofing	Sacrificial anodes; electrical isolation; protective coatings; proper material selection;
20	Crane collapse, sudden tilt or lift failure	Proper setup; maintaining specification limits; scheduled maintenance and inspections;
21	Crane counterweight motion, collision with vehicles or personnel	Barriers, audible alarms, personnel hazard awareness;
22	Crane load, injury during manual and tag line placement	Clear view of load and personnel by crane operator; Personnel never under load
23	Crane loads, swinging, impacting personnel , vehicles or structures	Qualified operator; Personnel awareness; Weather envelope policies per crane mfr.
24	Crane, communication, radio. faulty or dead battery	Assigned channels/frequencies; Operator/tender agreement on verbal commands; range check; daily battery check; communication loss policy
25	Crane, visual hand signaling, obstructed or distant view	Clear understanding between operator and tender before work
26	Data Line failures, hardwired and wireless, temporary and permanent	Protected wires or fibers; secure boxes; firewall and password protection; line conditioners and battery backup
27	Demolition, Falls, strains, punctures	Demolition-specific personnel instruction
28	Demolition, hazardous materials exposure	Pre-demolition site and structure survey; Sampling and testing program
29	Demolition. Structural collapse	Pre-demolition analysis and planning
30	Electrical circuits improper connection; back feeds	Circuit and continuity testing before energizing
31	Electrical explosion, faulty high voltage connections	Torque, voltage and continuity test all connections; proper boxes, enclosures and fasteners;
32	Electrical labels, missing or incorrect	Qualified electrician cross-check before energizing

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33	Electrical test equipment faulty or inappropriate	Cross check with multiple meters; Meters rated for voltage and amperage
34	Electrical wires projecting during rough-in	Wires compressed into boxes, ends taped or wire-nutted after stripping
35	Electrical, temporary supply interruption	Emergency lighting, generator and battery backups for critical equipment
36	Electrocution, accidental cutting of wires and cables with tools and equipment	Wires and cables installed and protected per NEC, Non-electrical subcontractors aware of energized circuits
37	Electrocution, conductive ladders and booms, contact with wires	Non-conductive ladders and booms; Personnel awareness of overhead site hazards
38	Electrocution, conductive materials (foils, metal sheets, rods)	Care when handling materials to avoid accidental contact or damage to electrical wires and boxes
39	Electrocution, faulty cords, damaged or missing insulation, bad repairs	Inspect all extension cords regularly; Discard or repair damage immediately; No tape repairs
40	Electrocution, faulty or missing GFCI	GFCIs installed per plans and specifications; GFCI testing schedule compliance
41	Electrocution, misused/damaged temporary service and wires	Robust, well-maintained poles, panels and adequate type and number of outlets, with spares; Locked panels with labeled breakers and weather-protected outlets
42	Emergency exits, access blocked; storage of flammable materials	Posted policies and hazard notifications; Frequent inspections; Personnel and sub-contractor instruction
43	Emergency exits, unidentified or locked	Lit signs, posted exit routes; panic hardware functional
44	Excavation cave in, crushing and suffocation	Engineered angle of wall repose for soil type; rock barriers and hazardous rock removal; trench shields and sheet piling;
45	Excavation damage to existing utilities and services	Public utilities pre-located and marked with flags or lime
46	Excavation damage to private, buried electrical data and water lines.	Warning tapes above burial, detectors, verify locations with property owner, mark with flags or lime
47	Excavation falls, bank collapse	Correct angle of repose for banks;
48	Excavation falls, improper barricades	Barricade planning, prompt installation, regular inspection and maintenance
49	Exhaust, engines, burns	Guards, shrouds and hoods in place; engine cooling before maintenance; prohibit personnel "hitch hiking";
50	Exhaust, engines, hazardous atmosphere in interior spaces	Avoid combustion engine operation (vehicles, generators, mixers, power trowels) in enclosed, unventilated spaces,
51	Exhaust, engines, proximity to flammable materials and fumes	Operator and personnel hazard awareness
52	Explosion, pressure tanks, fluids and gasses	Functioning gauges; Redundant gauges, Relief valves, pressure testing, protection from mechanical injury, tank inspection
53	Explosive spalling injuries, concrete and rock	Analysis of potential conditions; Avoidance of high heat application to susceptible materials; Rock netting in tunnels
54	Explosives, formerly used defense sites (FUDS)	Research; Federal liaison; Site Scanning and Testing
55	Explosives, improper storage, handling and application	Strict policies; inspected locked storage; signage and audible alarms; protective barriers and matting
56	Explosives. fuses and blasting caps, accidental detonation	Fire protection; Radio Frequency caging; Warning signage; Post detonation analysis and inventory
57	Eye injury, airborne particles (fiberglass, cement, dusts)	Correct eye protection, masks or glasses, dust control policy and equipment (wetting, exhaust fans and filters)
58	Eye Injury, chemical splashing and misting	MSDA, hazard specific masks and eyewear, chemical specific filtered air supply to helmets if required
59	Eye Injury, flying chips and slivers	Identification of hazardous activities and materials; Correct eye protection; tool guards functional
60	Eye injury, high pressure leaks (hydraulic, steam, piped fluids)	Care when opening and closing valves and removing fittings; Care not to damage pressurized systems; Awareness of potential for unexpected failures
61	Eye Injury, powder, air and combustible gas actuated tools	Proper tool settings and charges; Personnel instruction in self protection[Tools correctly seated with guards in place before activating
62	Eye Injury, projecting electrical wires, reinforcing wires	Responsibility assigned to individual trades to protect others from their work
63	Eye Injury, sparks	Welding screens when practical; "Watch your eyes" warning by welders before striking arcs; instant-on helmets for welders and supervisors
64	Eye Injury, welding, laser and plasma cutter flashes	Laser rated eye protection for all personnel in work areas
65	Falling crane load, crushing	Personnel awareness of lift and swing radius areas; Rigger and tender instruction and supervisory monitoring

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66	Falling crane load, incorrect rigging, hooks, slings and cables	Known load sizes, trained riggers, rated crane and tackle, inspected for wear
67	Falling crane load, property and material damage	Remove valuable materials from risk zones; Crane operator awareness of high value fixed assets in risk zones
68	Falling fork lift load, crushing	Lowest safe CG during operations; Correct material stacking, wrapping, bonding; Work area barricades; inspected equipment
69	Falling fork lift load, property damage	Qualified operator; Personnel awareness; Weather envelope policies per crane mfr.
70	Falling materials, during installation	Safe handling instruction and supervision; Extra personnel if needed to assure safe handling if needed
71	Falling materials, improper stacking and storage	Regular inspections of delivered materials for compliance with manufacturer's suggested bonding and stacking methods
72	Falling tools	No unattended tools on scaffolds, lifts or ladders; tool containment systems, correct tool belts and pouches
73	Falls from debris, cords, strings	Trade and subcontractor cleanup policies, regular inspections
74	Falls from heights, carrying sheet materials	Safe, clean footing; Stop work in windy conditions
75	Fatigued personnel	Regular work breaks, Supervisory monitoring of performance
76	Fire Alarms, temporary and permanent	Placement planning; Type selection; Scheduled testing and maintenance
77	Fire doors and dampers, not functional or incorrect	Ratings verified; Auto-closing mechanisms tested; Doors, seals and tracks unobstructed
78	Fire extinguishers, suppression and sprinkler systems inadequate	Unobstructed systems, regular inspections
79	Fires and open flames, intentional, unsafe or unsupervised	Fire hazard analysis, plans and policies; Regular risk assessment; Firefighting equipment and notifications; Evacuation policies
80	First Aid , supplies, facilities, inadequate or poorly marked	Clearly marked locations; Supplies up to date; Medical personnel contact information posted; Personnel training; OSHA compliance for specific work types
81	First Aid, policies, procedures, reporting, ill-specified and unformed personnel	Management administered, supervisor implemented policies and reporting methods
82	Flues and Vents, blocked damaged or incorrect	UL Rated or engineered, Correct fireblocking and combustible spacing, supports and caps; Correct joints and flashings; Inspect for obstructions and proper flow
83	Fork lift, personnel exposure to exhaust fumes	Exhaust pipes correct height to protect operator; Joints and gaskets leak free; Operation in enclosed spaces requires ventilation
84	Fork lift, falling loads	Pallets correct and undamaged; Operator awareness of lift specifications; Correct bonding and stacking of lift loads
85	Fork lift, fork impact damage to materials	Operator awareness, caution and accountability
86	Fork lift, rollover	Load transport at lowest practical center of gravity; Terrain and driving surfaces prepared and maintained for safe operation;
87	Fork lift, personnel riding on forks or loads	Absolute prohibition of personnel on forklifts and loads
88	Fumes, flammable	Detectors and alarms; Scheduled inspections; Spark control; Grounded equipment and work surfaces
89	Fumes, toxic, general	Symptom awareness; Avoid mixing of chemicals; Well ventilated workspaces
90	Fumes, welding	Welder awareness of materials; Supervisory awareness of short and long term exposure symptoms;
91	Gasses, compressed, damage to pipes, tanks and hoses	Proper gauges, Regular inspections and logging; replace or repair damaged or worn lines and fittings
92	Gasses, leaks, toxic and suffocating	Detection systems and alarms as appropriate
93	Gasses, compressed gas, bottled, faulty bottles, broken valves	Pressure and soap test hoses, valves; gauges and fittings; Inspect bottles for wear and corrosion
94	Gasses, compressed gas, bottled, flammable/accelerant	Vented storage; Non-flammable greases (oxygen)
95	Gasses, high pressure leak injuries	Avoid checking for leaks with hands; Warning labels on pipes and fittings
96	Gasses, liquid gas, cold, frostbite	Proper containers; Equipment and handling procedures to avoid frostbite
97	Glass, clear, unmarked, accidental impact	Noticed by manufacturer's label or protective coating; Field applied, removable tape by installer
98	Glass, untempered, breaks and shards	Temporary or permanent protective coatings to minimize shards, if broken
99	Grinders, portable, wheel and disk disintegration	Guards in place; damaged disks and wheels replaced;

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100	Grinders, portable, work binding	Tool selection for material size and type; Work rests and guards properly adjusted; Work pieces clamped if needed;
101	Hand tools, cuts, impacts, punctures and abrasions	Tools appropriate for jobs, well maintained, sharpened and lubricated;
102	Hand tools, repetitive stress injury	Symptom awareness; Regular breaks; Vary work type
103	Hand tools, slips and breaks	Proper balance stance and grip; Correct work surface and clamps; Hazard awareness and personnel self-protection
104	Hazard Information, incorrect, incomplete or not posted	Specialist consultation (e.g. insurance carriers, OSHA, consultants, vendors, OEMs); In-house inspections, reports and reviews; Post signs and distribute results;
105	Hazard Reporting, policies, procedures, ill-specified or unformed personnel	Posted MSDS; signs and labels, secure, correct storage
106	Hazardous chemicals, construction related, personnel and materials exposure	Posted policies; general personnel instruction; specific trade instruction; streamlined reporting; suggestion boxes; rewards and incentives
107	Hazardous chemicals, unidentified, on-site, not construction related	Pre-construction survey and tests for soil; pipes; barrels; tanks
108	Hearing damage, chemical	Limit exposure to metal fumes, solvents, gasoline, exhaust fumes
109	Hearing damage, noise	Sound level check decibel meter; Equipment sound abatement; Move equipment from work areas if possible;
110	Hearing impairment, PPE	Awareness of personnel noise protection that limits conversation and audible alarms
111	Horseplay, tricks and jokes	Clearly defined policy regarding hazard potential
112	Housekeeping, site, general	Policies, procedures and assignments; Schedules; Waste containers and dumpsters; Recycling containers;
113	Hydraulics, improper use or sudden failure	Operator understanding of equipment use and specifications; Regular inspections for wear and leaks; Retire equipment needing repairs;
114	Hydraulics, leaks and spills, toxins leaked to environment or personnel slips	Immediate cleanup with approved methods and materials; Proper disposal
115	Hydraulics, maintenance schedule not implemented	Fitting, Seal and O-ring maintenance as required;
116	Illness, Epidemic	Worksite hygiene policies and procedures; Added precautions during outbreaks; Considered sick personnel policies
117	Impairment/ Intoxication, drugs and alcohol	Drug Testing; Personnel awareness and instruction; Policies and penalties posting
118	Inspections, incomplete, unlogged	Management and supervisory audits; Posted policies and schedules
119	Insubordination/ personal conflicts	Pre-emptive staff meetings; Posted reporting procedures
120	Labels, electrical, incorrect or incomplete	Clear, legible and durable; Redundant Labeling; Logs with backup copies
121	Labels, fuel tanks, lines and containers, missing, damaged or incorrect	Regular inspections; Immediate repair or replacement; Color coding
122	Labels, product pipes and plumbing, missing, damaged or incorrect	Regular inspections; Immediate repair or replacement; Color coding
123	Ladders, damaged or improper use	Employee awareness of use hazards; Warning labels legible; Immediate repair or replacement for defects; Safe footing
124	Language, lack of communication	Translator or poly-lingual personnel as required for safe work and proper instruction
125	Lasers, cutting, personnel exposure to beams	Proper work enclosures; Posted hazard and safety data and signs;
126	Lasers, survey and level, eye exposure	Eye protection for operators; Warning signs and labels in use areas
127	Lashing cables, ropes or wires breaking when over stressed	Employee awareness of hazardous areas and practices; Known loads and capacities;
128	Lighting, emergency, untested, inadequate	Calculation to provide safe egress after power outage; Regular testing schedule
129	Lighting, temporary, inadequate	Planning and calculation to ensure adequate lighting for all work areas; Regular light inspection and replacement; Safe installation and protection; Work flow and permanent lighting transition planning
130	Literacy and mathematical skills inadequate for job comprehension and execution	Testing to ensure reading and math skills are sufficient for work tasks
131	Load transport, binders, tarps, chains, straps and tie-downs, faulty or inadequate	Pre-transport capacity calculations; Frequent driver inspection during transport; Care when unbinding and unloading
132	Locks, faulty, improper use	Lock plan and schedule; Key and code policy; Assigned responsibilities and inspection policy

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133	Low awareness of work environment	Regular staff meetings; Bulletin Boards; PA system; Radio communications;
134	Material delivery, unbinding and unloading spills or collapses	Cargo shift and binder stress awareness when unbinding and unloading; Eye protection; Immediately stow binding systems and discard straps and wrappings; Beware cargo shifts and load collapse
135	Material handling, manual, cuts and strains	Awareness of material types and specific hazards; Added personnel to lighten individual loads
136	Material handling, mechanical, inadequate	Correct handling systems for material types; alarms and barriers as required for safe handling
137	Material wrapping and packaging failures	Inspect deliveries for damaged wraps and packaging; leaking contents prior to accepting delivery or opening/unpacking
138	Material wrapping and packaging, not cleaned up	Discard all straps, bags, plastic wraps and strings from work areas as they are removed from materials
139	Medic Alerts, personnel medical conditions unreported	Disclosure by personnel of potential job related issues; Management and supervisory awareness; Emergency procedures and medical contacts on file and accessible to supervisors, management;
140	Motors, incorrect or missing disconnects and circuit breakers	No operation or energizing circuits until installation complete
141	Motors and pumps, safety lockouts unused	Supervised policy implementation; Spares available; No key or code sharing with unauthorized personnel
142	Motors, unprotected belts, shafts and pulleys	Shroud, sleeve and cage inspection prior to operation; Inspection schedule for damage, contamination and loose fasteners
143	Moving machinery, crush/ pinch point injuries	Route planning by operator; Unloaded test runs for clearance gauging; Safety lighting, audible alarms and horns; Mirrors covering obstructed views; Barriers, Tenders/flag persons;
144	Moving machinery, property damage	Route planning by operator to avoid asset risk; Test runs for clearance gauging; Mirrors covering obstructed operator views; Barriers, Tenders/flag persons;
145	Nails and Staples, penetrating through material after installation	Remove, clinch, cut or grind projections to eliminate snag cut and tear hazards
146	Nails and Staples, penetrating through material, flying projectiles	Personnel cautions and awareness of safe operations and potential material defects and knots; Safety mechanisms and guards functional; Appropriate fastener type and tool pressures
147	Nails, Screws and Staples, dropped or lost	Regular site cleanup with magnetic device; Personnel and trade retrieval policy
148	Noise, distracting and impaired communication	Sound reduction devices and systems for equipment; Radio (entertainment) policy; Distancing noisy equipment from work areas; Noise cancelling ear protection if indicated
149	Noise, ear injury, loud, repetitive, low and high frequency	Sound hazard inspections; Audiologist consultation; Personnel reporting
150	Oversized/Overweight Load Delivery	Pre-route inspection and planning; Escorts; Pre-delivery site preparation (clearing and compaction); personnel and subcontractor notification
151	Personnel clothing and Jewelry, inappropriate	Restrictive, loose-fitting, conductive and distractive clothing prohibited; Jewelry hazard instruction
152	Poisons; soil termite poisoning, vegetation and pest control., personnel exposure	Herbicide and pesticide applied by qualified personnel; MSDS on file; Evacuation of work area during application
153	PPE, inadequate, wrong size, worn/frayed, unfastened	Personnel and supervisory awareness policy; Available spares to prevent work stoppage
154	Punctures, air actuated nailers and staplers	Personnel cautions and awareness of safe operations and potential material defects and knots; Safety mechanisms and guards functional; Appropriate fastener type and tool pressures
155	Punctures, nails and wires in site debris	Specialized, puncture resistant shoes, boots and gloves in high hazard areas; Regular cleanup
156	Radiation producing test equipment personnel exposure	Strict protocol for use; Badges and meters for at risk personnel;
157	Radioactive materials storage inadequate or unsecure	Planned, approved, labeled, secure and monitored
158	Repetitive stress Injury, seating	Lumbar supports in chairs and vehicles, work breaks, limbering and stretching exercises
159	Repetitive stress injury, tools	Appropriate gloves, cushioned grips, back supports. knee pads
160	Revisions of plans and specifications undistributed	Change orders, modified plans and specifications, advisories to all relevant personnel
161	Sabotage	Suspicious activity and conditions reporting;
162	Scaffold Frames, Stairs, Planks and Decks, weak, slick surfaces	Clear, clean and unobstructed; No unattended tools; Well maintained

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163	Scaffold Setup, missing or mismatched parts	Solid ground bearing; Assembly staged and phased to maximize stability during erection
164	Scaffold, misused, capacity overload	Focus on load capacities and balanced loads; Restrict or protect personnel or pedestrians under or near scaffold; Awareness of wind loads
165	Security phone and email notifications, undelivered	Regular list checks and updates for law enforcement, fire, in-house security personnel
166	Security Personnel, unqualified	Screened personnel only; Polygraphs; Drug testing; Weapons permits if required
167	Security Systems, faulty, tampered	Regular testing plan and schedule; Prohibition of personnel defeat for convenience
168	Security Systems, system or plan disclosure	Plans only distributed on need-to know basis; Controls, junction boxes secured; all labels coded; Manuals secured; code change by owner
169	Security video and data storage. unsecured or inadequate	Blind spot coverage; Off-site redundant backup
170	Slips, Spilled oils, water, soaps, coatings, plastic sheeting	Immediate spill cleanup; Sand and sorbent application; Correct concrete finishes; Care when walking on wet plastic sheeting and smooth metal surfaces
171	Slips, wet or loose clays, loam and gravel	Footing maintenance on temporary construction walkways; Proper shoes, boots and soles; Clean footwear as required
172	Soil boring/drilling/impact testing, electrocution and utilities damage	Utilities and sub-surface hazards pre-located, stop work with lightning potential
173	Soil compaction and grading, rough, potholed site	Eliminate hazards for personnel and vehicles; Ensure site drainage; Subcontractor trench policy
174	Soil compaction, backfilled wall collapse	Regular, prompt; Balanced on both sides of green walls to equalize lateral pressure to avoid collapse
175	Soil Stabilization, dewatering, freezing or grouts. Inadequate strength	Monitoring for temporary systems; stability testing for permanent systems
176	Spills, oils, water, hazardous materials	Containment and remediation supplies and equipment available as required; Designated personnel for emergency response
177	Spraying and sandblasting cuts, abrasion and skin impregnation	Strict adherence to recommended PPE; Prompt medical attention if required;
178	Supervision, general, Inadequate	Management review; Personnel surveys
179	Temporary heat, unvented fumes and accidental fires	Planned and monitored temporary heat systems; Venting as required by manufacturer's specifications; Care to maintain safe distance to combustibles; Shielding or barriers to prevent accidental burns
180	Temporary walks, stairs and ramps, under-built or damaged	Safe, well-supported and ergonomic; Ample width and bearing capacity for work activity; Rails as appropriate
181	Tension rods and wires, drill or saw damage	Extreme caution for damage to stressed rods and wires with drills and cutting tools; Awareness of design strength changes over time
182	Tension rods and wires, breaks during tension application	Extreme caution during tension application process; Awareness of potential hazards to personnel;
183	Tests, compression, concrete, incomplete or mislabeled	Test protocol pre-defined and followed by technicians and personnel;
184	Tests, Pressure, fluids and gasses. System failures	Test protocol pre-defined and followed by technicians and personnel;
185	Tests, site pollution, undone or inadequate sampling	Sampling protocol adequate; Tests performed by qualified personnel
186	Tests. X-ray, welds, radiation exposure	Approved radiological procedures; Control unessential personnel exposure
187	Theft, materials, tools, vehicles	Security systems (intrusion, video); Guards; Fencing and Barriers; Prosecution warning signs; Night lighting
188	Theft, materials, tools, vehicles, inside job by personnel	Prosecution warnings; Incident reward policy; Material and tool marking; Vehicle alarms
189	Tool guards, faulty, removed or tampered (defeated)	Post and enforce tool guard policy; Personnel hazard instruction; Tamper penalties enforced
190	Tools, power, hand, defective, poorly maintained	Immediate repair or replacement of defective tools
191	Tools, power, hand, improper use	Supervisory checkout before use; Manual review
192	Tools, power, floor (drills, lathes, shears, cutters, threaders)	Designated, marked work spaces; Safety lockouts; Proper disconnects; Inspected and maintained equipment; Functioning emergency shutoffs
193	Trade interference, commingled job types and phases	Proper sequencing and supervision to avoid mixing activities where one trade may endanger another.
194	Traffic control, temporary, poorly planned or maintained	Well planned and maintained routes; Clear demarcation and signage; Designated parking areas;
195	Training program inadequate	Constant review and revision; Personnel feedback;

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196	Trash and debris removal, infrequent, sloppy, incomplete	Appropriate containers; Regular schedule; As needed removal for excess
197	Trash and Debris storage, overflows and inadequate containers	Adequate for construction process needs with reserve capacity;
198	Trips from debris, cords, obstructions, uneven surfaces	Regular site inspection; Removal as required
199	Vandalism and tampering	Control site access; Surveillance video; Trespass and Warning signs; Employee alert and reporting policies
200	Vegetation, poisonous and/or thorny	Pre-clearing survey; Smoke hazard awareness if burned; Well-cleared site
201	Vegetation, dry, not cleared fire hazard	
202	Vehicles, backup alarms, ROP, seatbelts, cages and safety lighting	Daily operator checklist and logging
203	Vehicles, collisions and pinch points	Planning for separation and routing of personnel, visitor and construction traffic; Demarcation and signage for traffic patterns and parking areas
204	Vents and Flues, hot/flammable, unprotected or blocked	UL Rated or engineered, Correct fireblocking and combustibile spacing, supports and caps; Correct joints and flashings; Inspect for obstructions and proper flow
205	Vermin, Snakes, Spiders, Ticks, Ants, Mosquitoes, Wasps, personnel exposure	Site survey by qualified pest expert; habitat removal and pest control as required
206	Vision, obscured, smoke, particles, fog	Stop work; Filter or exhaust particles; Correct or eliminate smoke source; Wait for fog clearing
207	Waste disposal, ignition of flammables	Approved containers; Approved locations; No temporary storage
208	Waste Disposal, hazardous, sharp, cuts and tire punctures	Glass, metal off cuts, in puncture resistant containers
209	Waste disposal, toxic, personnel exposure	Containers for specific types of toxins; Avoid mixing of toxic materials
210	Water drainage, damage to retention, channels, control structures and ground cover	Safety margins for projected requirements; Repair or restore erosion damage;
211	Water, excess, electrical shock risk	Non conductive, waterproof gloves and footwear; Disconnect wet circuits and equipment; GFCIs;
212	Water, excess, flooding	Standby pumps; Site drainage monitoring and maintenance; Excess water control contingency plans
213	Water, excess, materials damage	Weather protection for heat, freezing, water and wind; Risk/return calculation for protection costs; Employee awareness of hazards and protection methods
214	Water, excess, slips and falls	Personnel avoidance of slick, wet surfaces
215	Water, high pressure, pipes and hose leaks and bursts	Pressure regulators to protect pipes; Personnel control of nozzles to prevent whipping; Gauges to prevent overpressure; Relief valves
216	Water, high pressure sprayers, cuts, impregnation and abrasions	Backflow prevention for sprayers; Seal, gasket and fitting maintenance; Replace worn hoses;
217	Water, potable, polluted with chemicals or bio-hazards	Wells and off-site supplies tested; Approved piping, sealants and solders for potable water; Regular testing schedule; Backflow preventers; Pipe labels and color coding;
218	Water, Thrust and hammer breaking pipes and fittings	Pipe joint restraints and thrust blocks; Water hammer arresters
219	Weather protection temporary, structural, damaged or incomplete	Temporary bracing for framing and green concrete or masonry walls;
220	Weather, cold, ice and frost, slips, falls and vehicle accidents	Salt and sand supply; Supervisory inspection of work surfaces and materials before work; Personnel warnings;
221	Weather, cold, loss of dexterity, frostbite	Temporary weather protection and heat
222	Weather, cold, materials, water supply freezing	Temperature-vulnerable materials protected; Pipes and hoses insulated, heated or drained
223	Weather, high winds, airborne materials and personnel falls	Policies and procedures for work stoppage and securing materials
224	Weather, hot, heatstroke and dehydration	Potable water and salt supplies; proper clothing; Employee instruction on symptoms, risks and remedies
225	Weather, lightning, electrocution and fires	Stop work; Disconnect equipment; Evacuate at-risk work spaces;
226	Weather, severe, tornados, hurricanes and high winds, structural collapse	Monitoring for potential weather hazards; Secure loose materials and potential flying debris; Extra bracing for partially completed structures; Stop work