



TCM 2430 – Construction Safety

Week 5 – Construction Accident Prevention Techniques



Dr. Tommy Tafazzoli

What do we mean by construction Accident Prevention Techniques (APT)?

- Construction Accident Prevention Techniques (APT) are **strategies** and **practices** implemented in construction sites to **reduce** the **likelihood** of **accidents**, **injuries**, and **fatalities** among **workers** and **visitors**.
- These techniques aim to **create a safe working environment** by identifying and addressing **potential hazards** and **risks** associated with **construction activities**.



What are the common construction accident prevention techniques? *(Slide 1 of 3)*

1. Train and Educate

- Properly trained and informed workers are more likely to recognize potential hazards and use safety measures effectively. Regular training sessions on safety protocols, equipment operation, emergency procedures, and hazard identification are crucial.

2. Provide Appropriate Personal Protective Equipment (PPE)

- Providing appropriate PPE, such as helmets, safety goggles, gloves, steel-toed boots, and high-visibility vests, ensures that workers are adequately protected from various hazards like falling objects, debris, and hazardous materials.

3. Develop and Enforce Safety Plans and Procedures

- Developing and enforcing comprehensive safety plans and procedures specific to each construction project helps ensure that everyone on the site understands the protocols for handling different tasks safely.

4. Inspect, Identify and Assess Hazards

- Regularly inspecting the construction site to identify potential hazards, such as uneven terrain, unstable structures, and exposed electrical wires, helps in taking preventive measures before accidents occur.

5. Protect against Falls

- Falls from heights are a common cause of construction accidents. Implementing guardrails, safety nets, and personal fall arrest systems can greatly reduce the risk of falls.

What are the common construction accident prevention techniques? *(Slide 2 of 3)*

6. Ensure Scaffolding and Ladder Safety

- Proper installation and maintenance of scaffolding and ladders, as well as following guidelines for safe use, help prevent accidents related to working at elevated levels.

7. Maintain Machine and Equipment Safety

- Regular maintenance, operator training, and clear guidelines for operating heavy machinery and equipment reduce the risk of accidents caused by equipment malfunction or improper operation.

8. Ensure Electrical Safety

- Ensuring that electrical systems and equipment are properly installed, grounded, and inspected can prevent electrocution and fire hazards.

9. Implement Excavation and Trenching Safety Systems

- Implementing protective systems, such as shoring, sloping, or shielding, for excavations and trenches helps prevent collapses and cave-ins.

10. Train for Material Handling Safety

- Providing proper training and equipment for handling, transporting, and storing construction materials reduces the risk of injuries caused by mishandling heavy objects.

What are the common construction accident prevention techniques? *(Slide 3 of 3)*

11. Prepare for Emergencies

- Having clear emergency response plans, including first aid kits, evacuation routes, and communication protocols, is essential for addressing accidents promptly.

12. Establish High Quality Housekeeping

- Maintaining a clean and organized construction site reduces the chances of tripping hazards and makes it easier to identify potential dangers.

13. Inspect the Site Regularly

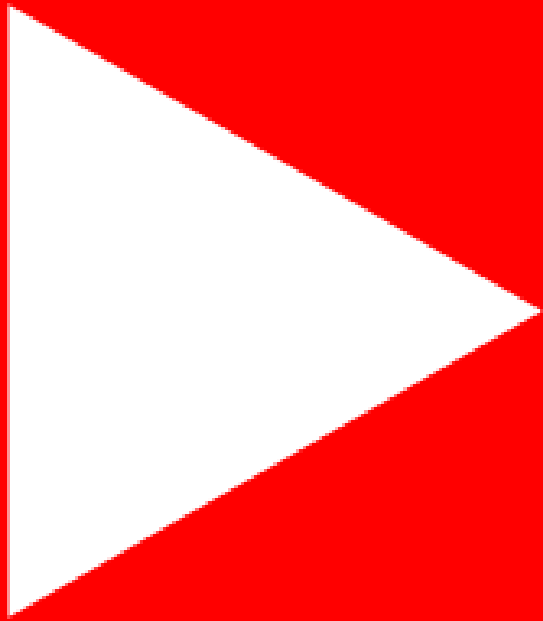
- Conducting routine safety inspections and audits helps identify issues that might have been overlooked and allows for timely corrective actions.

14. Communicate Effectively and Clearly

- Effective communication among workers, supervisors, and management about potential hazards, safety procedures, and changes in the work environment is crucial for accident prevention.

15. Establish Incentive Programs

- Establishing programs that recognize and reward workers for following safety protocols can foster a culture of safety and encourage responsible behavior.



Watch the video
Job Hazard Analysis (JHA) |
Hazard Identification, OSHA
Safety and Health Training

https://www.youtube.com/watch?v=d1bC4PRKLR8&ab_channel=CRSolutions

What is a hazard hunt form?



A form to identify, document, and address potential hazards and risks within the construction environment.



It is a proactive approach to improving safety by involving workers, supervisors, and management in identifying and mitigating hazards before they lead to accidents or injuries.



The hazard hunt form serves as a checklist or template that guides individuals through the process of observing and noting any unsafe conditions, practices, or situations that could pose a threat to workers' health and well-being.

HAZARD HUNT FORM

Worker's Name (Optional): _____

Date: _____

Jobsite: _____

Job Titles: _____

1. Describe the hazard that exists.

2. Has the hazard been discussed with your supervisor? When? (Date)

_____ Yes _____ No

3. What preventive action needs to be taken?

4. Do you know what state or federal safety regulations is being violated?

_____ Yes _____ No

(Please list it if your answer is yes.)

5. Have there already been injuries or illnesses caused by the hazard?

_____ Yes _____ No

(List the names, dates, events, or symptoms)

6. How long has the hazard been present?

Manager's or Supervisor's Response to Hazard Concern Identified.

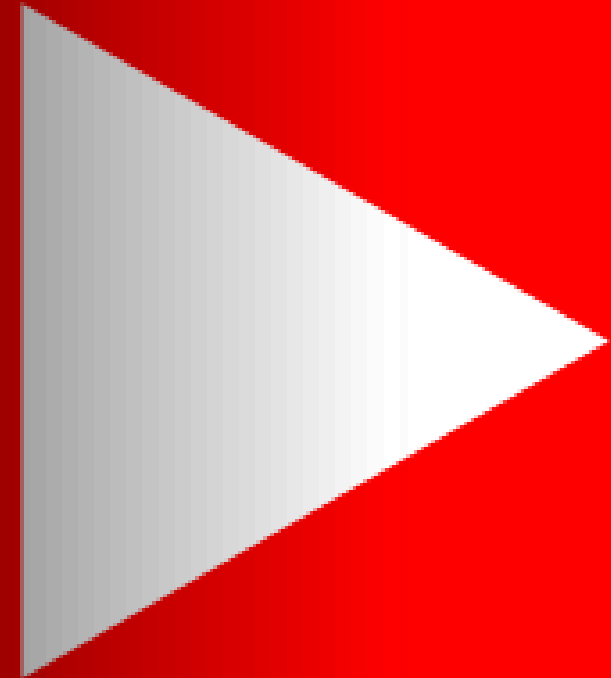
NOTE: Use a Separate Form for Each Hazard Identified.



Watch the video

4 Tips for Preventing Accidents on Construction Sites

- https://www.youtube.com/watch?v=rOa-z2FjKno&ab_channel=OregonOccupationalSafety%26Health%28OregonOSHA%29



What are SAFE/STANDARD OPERATING PROCEDURES (SOPs)?

- Workers may not automatically understand a task just because they have experience or training.
- Many jobs, tasks, and operations are best supported by a Safe or Standard Operating Procedure (SOP).
- The SOP walks the worker through the steps of how to do a task or procedure in a safe manner and calls attention to the potential hazards at each step.



SOP for an excavator



SAFE OPERATING PROCEDURES FOR AN EXCAVATOR

WHAT TO DO (Steps in sequence)	HOW TO DO IT (Instructions)	KEY POINTS (Items to be emphasized)
1) Climb onto engine compartment.	1) Place hand on rail of operator's compartment and foot on step of track frame. Gently pull yourself up onto track. Continue around operator's compartment following the steps and rails.	1) Be sure to use rails and steps or a fall may occur causing serious injury. Make sure shoes are free of mud for proper traction.
2) Unlock engine compartment and check all fluids. (Engine oil, hydraulic oil, coolant, and batteries.)	2) Place key in lock of engine compartment handle. Turn key and remove. Turn handle and lift to open. Remove dip sticks to check fluids. Fluid should register in the shaded area of the stick. If low, fill immediately. Wear safety glasses while checking fluids.	2) Engine compartment is spring loaded. Be sure to stand back while opening. Fluid levels are very important. Low fluid levels means machine will not operate properly and could cause injury or loss of productivity.
3) Unlock and open operator's door.	3) Place key in lock and turn. Open door and securely latch it so that it doesn't slam closed during operation.	3) Machine can be operated with door closed, but will not be able to hear coworkers outside which is very important due to the number of blind spots while operating.
4) Climb into operator's seat.	4) Grab handle and place foot on step of track frame and pull yourself up onto the track. Step inside operator's compartment and sit in seat.	4) Seat should be adjusted to fit operator's posture.
5) Check warning lights on instrument panel.	5) Place key in ignition and push test button to illuminate all warning lights and sound all warning buzzers.	5) Warning signals are very important and should always be carefully checked. They will alert the operator to problems or failures within the machine itself. They could prevent serious injury from occurring.

FIGURE 6.3 A safe operating procedure for an excavator

When are SOPs recommended?

There are times when an SOP or step-by-step checklist is useful. Some of these times are when

- a new worker is performing a job or task for the first time;
- an experienced worker is performing a job or task for the first time;
- an experienced worker is performing a job which he/she has not done recently;
- a mistake could cause damage to equipment or property;
- a job is done on an intermittent or infrequent basis;
- a new piece of equipment or different model of equipment is obtained.

When do we need an engineer to inspect safety? (Slide 1 of 2)

Structural Integrity	High-Risk Activities	Excavations and Trenching	Heavy Machinery and Equipment:	Electrical Systems	Fire Safety
When dealing with the construction or modification of structures, such as buildings, bridges, or towers, an engineer is often required to assess the structural integrity and stability. This is especially crucial during critical phases like foundation work, structural framing, and load-bearing elements.	Construction activities involving high-risk elements, such as scaffolding, formwork, and elevated platforms, should be inspected by an engineer to ensure proper design, installation, and safety measures are in place to prevent collapses and falls.	For projects involving excavations and trenching, an engineer's expertise is needed to assess soil stability, design protective systems (such as shoring), and ensure worker safety from potential collapses.	When using heavy machinery, cranes, or specialized equipment, an engineer should be involved to ensure proper setup, operation, and safety measures are in place to prevent accidents.	Engineers with electrical expertise are necessary to inspect and approve electrical installations and systems to prevent electrocution hazards and ensure compliance with electrical codes.	Construction sites need fire protection measures and systems. Engineers with fire safety knowledge can evaluate fire detection, suppression systems, and safe evacuation plans.

When do we need an engineer to inspect safety?

(Slide 2 of 2)

Hazardous Materials	Demolition	Unique Design or Challenges	Emergency Preparedness	Compliance with Codes and Regulations	Third-Party Verification
• When working with hazardous materials or substances, an engineer can assess containment measures, ventilation, storage, and disposal procedures to prevent environmental and health risks.	• Prior to demolishing structures, an engineer's evaluation is important to determine the safest methods, sequences, and precautions to prevent unintended collapses and hazards.	• For projects involving unique designs, innovative construction methods, or challenging environments, an engineer's input is crucial to ensure that safety considerations are properly integrated.	• Engineers can help develop emergency response plans, evacuation routes, and safety protocols for various scenarios, improving the site's readiness to handle unexpected situations.	• Engineers are well-versed in local, national, and international building codes and safety regulations. They can verify that construction practices align with these standards.	• In some cases, third-party verification by an engineer is required by regulatory authorities or project owners to ensure impartial evaluation of safety measures.

ENGINEERING CHECKLIST

The following checklist is provided as a reference to the construction standards that may require the services of a professional engineer. Use this checklist as a guide to help plan for and implement the engineer requirements for various construction activities.

Yes No NA

Process Safety Management

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | 1. Process safety information on equipment design — 1926.64(d)(2)(iii) |
| ☐ | ☐ | ☐ | 2. Quality assurance for mechanical integrity tests — 1926.64(j)(6)(ii) |

Fire Protection and Prevention

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | 1. Design of automatic extinguishing systems for indoor flammable/combustible liquid storage areas — 1926.152(b)(4)(ii) |
| ☐ | ☐ | ☐ | 2. Tank design for flammable/combustible liquids — 1926.152(i)(1)(i)(C)–(D) and (F), (i)(5)(ii)–(vii), (8)(7) |
| ☐ | ☐ | ☐ | 3. Design of piping, valves, and fittings for flammable/combustible liquids — 1926.152(j)(1)(i) |
| ☐ | ☐ | ☐ | 4. Design of LPG storage container systems using non-DOT containers — 1926.153(m)(3)(vi) |

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| ☐ | ☐ | ☐ | 4. Design of LPG storage container systems using non-DOT containers — 1926.153(m)(3)(vi) |

Scaffolds

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | 1. Scaffold capacity — 1926.451(a)(6) |
| ☐ | ☐ | ☐ | 2. Scaffold components from different manufacturers not intermixed — 1926.451(b)(10) |
| ☐ | ☐ | ☐ | 3. Supporting surfaces on suspension scaffolds able to support loads — 1926.451(d)(3)(i) |
| ☐ | ☐ | ☐ | 4. Use of scaffolds in accordance with design — 1926.451(f)(3), (5) |
| ☐ | ☐ | ☐ | 5. Design of pole scaffolds — 1926.452(a)(10) |
| ☐ | ☐ | ☐ | 6. Design of tube and coupler scaffolds — 1926.452(b)(10) |
| ☐ | ☐ | ☐ | 7. Design of fabricated frame scaffolds — 1926.452(c)(5)(iii), (6) |
| ☐ | ☐ | ☐ | 8. Design of outrigger scaffolds — 1926.452(i)(8) |
| ☐ | ☐ | ☐ | 9. Design of two point adjustable scaffolds — 1926.452(p)(1) |
| ☐ | ☐ | ☐ | 10. Design of interior hung scaffolds — 1926.452(t)(2) |

Fall Protection

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | 1. Design of safety net systems — 1926.502(c)(4)(ii) |
| ☐ | ☐ | ☐ | 2. Design of personal fall arrest systems — 1926.502(d)(8), (19), Appendix C (II), Appendix E (IV)(A)(4) |

Cranes, Derricks, Hoists, Elevators, and Conveyers

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | 1. Cranes and Derricks, compliance with manufacturers specifications and limitations — 1926.550(a)(1) |
| ☐ | ☐ | ☐ | 2. Design, inspection, and use of crane or derrick-suspended personnel platforms — 126.550(g)(2), (4)(i), (5)(iv), (5)(vi), (6) |
| ☐ | ☐ | ☐ | 3. Material hoists, personnel hoists, and elevators, compliance with manufacturers specifications and limitations — 1926.552(a)(1) |
| ☐ | ☐ | ☐ | 4. Design of material hoists — 1926.552(b)(7) |
| ☐ | ☐ | ☐ | 5. Design of personnel hoists — 1926.552(c)(16), (17)(i) |

Motor Vehicles, Mechanized Equipment, and Marine Operations

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | 1. Stability of pile driving equipment — General — 1926.603(a)(12) |
|--------------------------|--------------------------|--------------------------|--|

Excavations

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | 1. Design of access and egress ramps — 1926.651(c)(1)(i) |
| ☐ | ☐ | ☐ | 2. Protection from water accumulation hazards — 1926.651(h)(1) |
| ☐ | ☐ | ☐ | 3. Stability of adjacent structures — 1926.651(i)(1) — (3) |
| ☐ | ☐ | ☐ | 4. Design of sloping and benching systems — 1926.652(b)(3)(i), (iii), (4)(i), (ii), and Appendix B (c)(3)(iii) |
| ☐ | ☐ | ☐ | 5. Design of support systems — 1926.652(c)(3)(i), (iii), (4)(i), (iii)(B) |
| ☐ | ☐ | ☐ | 6. Inspection of damaged materials and equipment — 1926.652(d)(3) |
| ☐ | ☐ | ☐ | 7. Installation and removal of support systems — 1926.652(e)(1)(iii) |
| ☐ | ☐ | ☐ | 8. Design of aluminum hydraulic shoring for trenches — 1926.652 Appendix D, Tables D1.3 and D1.4, and (d)(3)(ii)(A) |
| ☐ | ☐ | ☐ | 9. Design of protective systems — 1926.652 Appendix F |

Concrete and Masonry

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | 1. Inspection of concrete structures prior to loads being placed on them — 1926.701(a) |
| ☐ | ☐ | ☐ | 2. Concrete pumping systems provided with pump supports — 1926.702(e)(1) |
| ☐ | ☐ | ☐ | 3. Design of formwork for cast-in-place concrete — 1926.703(a)(1) |
| ☐ | ☐ | ☐ | 4. Damaged or weakened shoring and reshoring equipment — 1926.703(b)(4) |
| ☐ | ☐ | ☐ | 5. Design of vertical slip forms — 1926.703(c)(1)–(8) |
| ☐ | ☐ | ☐ | 6. Support of precast concrete walls — 1926.704(a) |
| ☐ | ☐ | ☐ | 7. Design of lift-slab construction operations — 1926.705(a), (k)(1), and Appendix |

Steel Erection

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | 1. Anchor rods (anchor bolts) shall not be repaired, replaced or field-modified without the approval — 1926.755(b)(1) |
| ☐ | ☐ | ☐ | 2. During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified — 1926.756(a)(1) |
| ☐ | ☐ | ☐ | 3. Solid web structural members used as diagonal bracing shall be secured by at least one bolt per connection drawn up wrench-tight or the equivalent — 1926.756(b) |
| ☐ | ☐ | ☐ | 4. No modification that affects the strength of a steel joist or steel joist girder — 1926.757(a)(7) |
| ☐ | ☐ | ☐ | 5. The erection of systems-engineered metal buildings except 1926.755 (column anchorage) and 1926.757 (open web steel joists) — 1926.758(a) |

Watch the video How to effectively carry out workplace inspections - Safety Training

- <https://www.youtube.com/watch?v=qRXKupvndrE>





What are Preventive Maintenance Programs (PMP)?

- PMP depends heavily on an inspection form or checklist to assure that a vehicle or equipment inspection procedure has been fully accomplished and its completion documented.
- Incorporating a comprehensive equipment preventive maintenance program not only ensures the longevity and efficiency of construction equipment but also plays a pivotal role in creating a safer construction site for everyone involved.

What are the benefits of Preventive Maintenance Programs?

Reduction of Equipment Failures

Minimized Downtime

Consistent Performance

Optimal Safety Features

Enhanced Operator Confidence

Reduction in Accidents

Improved Efficiency

Decreased Risk of Fire or Explosions

Mitigation of Environmental Hazards

Longer Equipment Lifespan

Regulatory Compliance

Cultivating a Safety Culture

Cost Savings

Insurance Benefits



Sample of a PMP for equipment

PRESHIFT EQUIPMENT CHECKLIST

Check any of the following defects prior to operating equipment or vehicles and report those defects to your supervisor or maintenance department.

Type of Equipment: _____ Identification Number: _____

Date: _____

1. Walk Around:

- | | |
|---|---|
| ☐ Broken Lights | ☐ Fuel Level |
| ☐ Oil Leaks | ☐ Instrument Panel |
| ☐ Hydraulic Leaks | ☐ Windshield Wipers or Washers |
| ☐ Tires | ☐ Heater or Defroster |
| ☐ Tracks | ☐ Mirrors |
| ☐ Damaged Hose | ☐ Seat Belts |
| ☐ Bad Connections/Fittings | ☐ Steering Wheel Play or Alignment |
| ☐ Cracks in Windshields or Other Glass | |
| ☐ Damaged Support Structures | |
| ☐ Damage to Body Structures | |
| ☐ Fluid Levels | |
| ☐ Oil | |
| ☐ Hydraulic | |
| ☐ Brake | |
| ☐ Mirrors | |

3. While Underway:

- | |
|---|
| ☐ Engine Knocks, Misses, Overheats |
| ☐ Brakes do not Operate Properly |
| ☐ Steering Loose, Shimmy, Hard, etc. |
| ☐ Transmission Noisy, Hard Shifting, Jumps Out of Gear, etc. |
| ☐ Speedometer |
| ☐ Speed Control |

2. Operation:

- | |
|---|
| ☐ Engine Starts |
| ☐ Oil Pressure |
| ☐ Air Pressure or Vacuum Gauge |
| ☐ Brakes |
| ☐ Parking Brakes |
| ☐ Horn |
| ☐ Front Lights |
| ☐ Back Lights |
| ☐ Directional Lights |
| ☐ Warning Lights |
| ☐ Back-up Alarm |
| ☐ Noises or Malfunctioning |
| ☐ Engine |
| ☐ Clutch |
| ☐ Transmission |
| ☐ Axles |

4. Emergency Equipment:

- | |
|--|
| ☐ First Aid Kit |
| ☐ Fire Extinguisher |
| ☐ Flags, Flares, Warning Device |
| ☐ Reflectors |
| ☐ Tire Chains if Needed |

5. Cargo Related Equipment:

- | |
|-------------------------------------|
| ☐ Tie Downs |
| ☐ Cargo Nets |
| ☐ Tarps |

6. Other Items:

- | |
|--------------------------------------|
| ☐ Hand Tools |
| ☐ Spare Parts |
| _____ |
| _____ |

No Defects Noted: Operator Signature: _____ Date: _____ Time: _____

Describe Any Defects Notes: _____

Defects Corrected:
(Initials)

Defect Correction Unnecessary:
(Initials)

Defects Corrected By:
(Signature)

Date:

Defects Corrected:

☐ Yes ☐ No

Operators Signature:

Date:

Watch the video

Heavy Construction Equipment Maintenance Tips

<https://www.youtube.com/watch?v=hdq9d6amMso>



What is a fleet safety program?

- A fleet safety program in a construction project is a comprehensive set of policies, procedures, and practices designed to ensure the safe and responsible operation of vehicles and equipment within the project's fleet.
- This program aims to reduce the risk of accidents, injuries, and property damage associated with the use of construction vehicles, such as trucks, bulldozers, cranes, and other heavy equipment.
- Fleet safety programs are crucial for maintaining a safe work environment for construction workers, operators, and the public.



What are the key components of a fleet safety program in a construction project?



Slide 1 of 2

1. **Driver Training:** Providing thorough training for vehicle operators on safe driving techniques, proper equipment operation, and understanding the specific risks and challenges of operating construction vehicles.
2. **Licensing and Certification:** Ensuring that operators possess the appropriate licenses and certifications required for operating specific construction vehicles. Regular checks of credentials and renewals should be part of the program.
3. **Vehicle Inspections:** Establishing a routine inspection schedule for all fleet vehicles and equipment. Regular inspections help identify and address any maintenance or safety issues promptly.
4. **Maintenance Protocols:** Defining maintenance procedures, including regular servicing, repairs, and maintenance checks. Well-maintained vehicles are less likely to experience mechanical failures that could lead to accidents.
5. **Safety Equipment:** Ensuring that all vehicles are equipped with necessary safety features, such as seat belts, backup alarms, lights, mirrors, and any additional safety equipment relevant to the vehicle type.
6. **Vehicle Load Safety:** Providing guidelines for safe loading and unloading of materials and equipment onto vehicles, preventing overloading, and securing loads properly to prevent shifting during transport.
7. **Driving Policies:** Establishing rules for safe driving behaviors, including speed limits, proper following distance, no-phone policies, and adherence to traffic laws.

What are the key components of a fleet safety program in a construction project?



Slide 2 of 2

8. **Fatigue Management:** Implementing policies to prevent driver fatigue, including limits on driving hours and mandatory breaks for operators.
9. **Incident Reporting:** Creating a reporting system for accidents, incidents, and near-misses. This helps identify trends and areas where additional safety measures might be necessary.
10. **Emergency Procedures:** Outlining procedures for handling emergencies, including vehicle breakdowns, accidents, and medical incidents involving fleet vehicles.
11. **Driver Accountability:** Defining consequences for violating safety policies, which may include additional training, suspension of driving privileges, or other appropriate disciplinary measures.
12. **Driver Monitoring:** Implementing mechanisms to monitor driver behaviors, such as telematics systems that track speed, braking patterns, and other driving habits.
13. **Regular Review and Improvement:** Continuously reviewing and updating the fleet safety program based on feedback, incident reports, and changes in regulations or technology.
14. **Communication and Training:** Regularly communicating safety updates and changes to all vehicle operators and providing ongoing training to reinforce safe driving practices.
15. **Public Safety:** Ensuring that construction vehicles are operated safely around pedestrians, cyclists, and other road users, particularly in areas adjacent to the construction site.

How do we perform accident investigation?

- Performing an accident investigation on a construction job site is crucial to understand the causes and contributing factors of an incident, with the goal of preventing similar accidents in the future.
- Proper accident investigations help identify shortcomings in safety procedures, equipment, training, and work practices.





What are the steps to perform an effective accident investigation on a construction site? (Slide 1 of 3)

1. **Ensure Immediate Safety:** Before starting the investigation, ensure that the accident scene is safe for investigators and that any injured individuals receive prompt medical attention.
2. **Gather Information:**
 - Identify the involved parties: Determine who was directly affected by the accident, including workers, witnesses, and supervisors.
 - Gather evidence: Collect photographs, videos, sketches, and any physical evidence related to the accident scene.
 - Interview witnesses: Interview individuals who witnessed the accident to gather their firsthand accounts of what happened.
3. **Secure the Accident Scene:** Preserve the accident scene as much as possible to maintain the integrity of evidence. This may involve restricting access to the area or marking off hazardous zones.
4. **Document the Scene:** Take detailed notes, measurements, and photographs of the accident scene, including the positioning of equipment, machinery, and any relevant conditions.
5. **Identify Root Causes:**
 - Use the "5 Whys" method: Ask "why" multiple times to dig deeper into the chain of events and uncover underlying causes.
 - Consider human factors: Examine whether factors like lack of training, fatigue, stress, or inadequate communication contributed to the accident.
 - Analyze equipment and procedures: Evaluate whether faulty equipment, inadequate maintenance, or improper procedures played a role



What are the steps to perform an effective accident investigation on a construction site? (Slide 2 of 3)

6. Review Safety Procedures:

- Examine relevant safety protocols and procedures to determine if they were followed or if there were deficiencies.
- Consider if there were any deviations from standard operating procedures and whether these deviations contributed to the accident.

7. Examine Training Records:

- Review training records to determine if workers involved in the accident had received proper training for their tasks.
- Identify any gaps in training that might have contributed to the accident.

8. Review Equipment and Materials:

- Check equipment involved in the accident for defects or malfunctions that might have contributed to the incident.
- Inspect materials used and assess their condition and storage.

9. Interview Involved Individuals:

- Interview individuals directly involved in the accident to gather their accounts of the events leading up to the incident.
- Ask open-ended questions to encourage detailed responses and avoid leading the witnesses.

10. Compile Findings:

- Organize the information gathered during the investigation into a coherent report.
- Clearly outline the sequence of events, contributing factors, root causes, and recommendations for preventing future accidents.



What are the steps to perform an effective accident investigation on a construction site? (Slide 2 of 3)

11. Develop Corrective Actions

- Propose specific actions to address the identified root causes and prevent similar accidents.
- Prioritize actions based on their potential impact on safety.

12. Implement Recommendations

- Ensure that the corrective actions are communicated to relevant parties and that responsible individuals or departments are assigned to implement them.

13. Monitor and Follow Up

- Regularly review the effectiveness of implemented corrective actions.
- Make adjustments as needed based on feedback and ongoing safety assessments.

14. Learn and Improve

- Share the lessons learned from the accident investigation with the entire construction team to promote a culture of safety and continuous improvement.

Remember, the goal of an accident investigation is not to assign blame but to uncover the underlying factors that led to the incident. By identifying and addressing these factors, you can prevent similar accidents and promote a safer construction work environment.