

# Big Four Construction Hazards: Struck-by Hazards



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# Introduction

The following presentations have been developed in both Spanish and English for the construction industry. These presentations focus on the Big Four Construction Hazards – **falls, electrocution, caught-in and struck-by.**

All training materials will cover the four hazards seen regularly on construction sites and will focus on the methods for the recognition and the prevention of these common hazards.

# Struck-by Hazards Overview

## A. Hazard Recognition

1. Struck-by Falling Objects
2. Struck-by Flying Objects
3. Struck-by Swinging/Slipping Objects
4. Struck-by Objects on Ground Level

## B. Accident Prevention

1. Personal Protective Equipment
2. Material Storage
3. Proper Materials Handling
4. Work Zone Safety

# Struck-by Hazards

- Struck-by hazards are one of the four most deadly hazards found at construction sites.
- This program will help you recognize common struck-by hazards.
- The symbol will tell you if the situation in the picture is either safe or not safe.



*Safe*



*Not safe*

# Struck-by Statistics

❑ Each year workers die from 'struck-by' accidents.

During the year 2007:

- Total deaths from 'struck-by' cases: 504
- Deaths in construction: 311
- Approximately 26% of deaths in construction are from 'struck-by' accidents
- Approximately 10% of all occupational deaths are from 'struck-by' accidents



# Hazard Recognition

- ❑ Struck-by hazards exist any time a worker could be struck or hit by an object.





# Struck-by Falling Objects

- ❑ Working or walking below elevated work surfaces may expose you to falling objects.



# Struck-by Falling Objects

- ❑ Materials being moved overhead expose you to falling objects.





# Struck-by Falling Objects

- ❑ Keep a safe distance from suspended loads.



# Struck-by Falling Objects

- ❑ Store materials properly.



# Struck-by Flying Objects

- ❑ Power tools and activities such as pushing, pulling, or prying can create flying objects.



# Struck-by Flying Objects

- ❑ Grinding or striking materials can create flying object hazards.



# Struck-by Flying Objects

- ❑ Air pressurized above 30 psi can drive oils and other particles through your skin.





# Struck-by Swinging/Slipping Objects

- Do not work under loads as they are being lifted.



# Struck-by Swinging/Slipping Objects

- ❑ Secure all loads and lift them evenly to prevent them from slipping.



# Struck-by Objects on Ground Level

- ❑ You may be struck by moving materials.



# Struck-by Objects on Ground Level

- ❑ Heavy equipment can create serious struck-by hazards.



# Struck-by Objects on Ground Level

- ❑ All traffic on construction sites can create struck-by hazards.





# Struck-by Objects on Ground Level

- ❑ Workers in work zones are exposed to struck-by hazards from construction equipment and motorist vehicles.



# Struck-by Objects on Ground Level

- ❑ Never work near vehicle traffic without barricades.



# QUIZ

- You will be presented with a specific hazard recognition question to test your understanding of this material.



# Question 1

Struck-by hazards cause only minor injuries and are not a big concern to construction workers.

A - True

B - False

# Question 1

Struck-by hazards cause only minor injuries and are not a big concern to construction workers.

The correct answer is:

**B - False**



# Question 2

A struck-by hazard can be described as:

- A - Not wearing a seatbelt while driving a forklift
- B - Anytime a worker has the potential to be struck or hit by an object
- C - Anytime a worker can get any part of his body caught in or in between objects
- D - Falling off a roof

# Question 2

A struck-by hazard can be described as:

The correct answer is:

B - Anytime a worker has the potential to be struck or hit by an object

# Question 3

\_\_\_\_\_ is an example of a stuck-by hazard.

- A - A spark from a grinder sets grass on fire
- B - A worker falls through a skylight
- C - A steel member is being flown to the next level and swings, hitting a worker
- D - A worker is crushed by an excavator

# Question 3

\_\_\_\_\_ is an example of a stuck-by hazard.

The correct answer is:

C - A steel member is being flown to the next level and swings, hitting a worker

# Question 4

When working on interior jobs on construction sites hardhats are not required.

A – True

B - False



# Question 4

When working on interior jobs on construction sites hardhats are not required.

The correct answer is:

**B - False**

# Question 5

When working near vehicles and equipment, you must:

- A - Never place yourself between a vehicle and an immovable object such as a building
- B - Make eye contact with the operator before crossing the path of the vehicle
- C - Always watch for operators who may not be watching you
- D - All the above

# Question 5

When working near vehicles and equipment, you must:

The correct answer is:

D - All the above

# Accident Prevention

- ❑ A willing, positive attitude towards safety will help make a safer work environment.



# Accident Prevention

- Plan your work and look for potential hazards.
- Each task will have different hazards.



# Personal Protective Equipment (PPE)

- Wear a hard hat if overhead hazards exist.



# Personal Protective Equipment (PPE)

- Wear safety glasses or a face shield if flying hazards exist.





# Personal Protective Equipment (PPE)

- ❑ A highly visible reflective vest will allow motorists and equipment operators to see you.





# Material Storage

- ❑ Secure materials so they do not fall on workers.



# Material Storage

- ❑ Maintain proper house-keeping in all storage areas.



# Proper Materials Handling

- ❑ Inspect all rigging before using.



# Proper Materials Handling

- Never walk or work under a load.



# Proper Materials Handling

- ❑ Never lift a load that is greater than the crane's lifting capacity.





# Work Zone Safety

- ❑ Use extreme caution when approaching heavy equipment.



# Work Zone Safety

- ❑ Traffic work zones must be clearly marked to make motorists aware of the work ahead.





# Work Zone Safety

- Use physical barriers to protect workers from vehicle traffic.



# QUIZ

- You will be presented with a specific accident prevention question to test your understanding of this material.



# Question 1

Hardhats are the only personal protective equipment required on construction sites.

A – True

B - False

# Question 1

Hardhats are the only personal protective equipment required on construction sites.

The correct answer is:

**B - False**

# Question 2

On a construction site you should store materials:

- A - Anyway you want to
- B - So they do not fall
- C - As high as you can
- D - Only on the roof

# Question 2

On a construction site you should store materials:

The correct answer is:

**B - So they do not fall**

# Question 3

All rigging used to lift materials must be inspected:

A – Daily

B - Before each use

C – Monthly

D - When you think about it



# Question 3

All rigging used to lift materials must be inspected:

The correct answer is:

**B - Before each use**

# Question 4

To prevent materials from slipping when lifted, you should:

- A - Tightly secure them
- B - Lift the load evenly
- C - Both A and B
- D - Neither A or B

# Question 4

To prevent materials from slipping when lifted, you should:

The correct answer is:

C - Both A and B

# Question 5

Workers are exposed to what types of vehicle traffic in a work zone?

- A - Heavy equipment and motorist traffic
- B - Motorist traffic
- C - Heavy equipment traffic
- D - Air traffic

# Question 5

Workers are exposed to what types of vehicle traffic in a work zone?

The correct answer is:

A - Heavy equipment and motorist traffic

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# **Big Four Construction Hazards: Struck-by Hazards**

**This concludes the  
Struck-by Hazards Module**

**“The End”**