

SCAFFOLDING INTERMEDIATE SAFETY AND LICENCE GUIDE



Training support material for:

CPCCLSF3001
Licence to erect, alter
and dismantle scaffolding
intermediate level

Produced by:



CONTENTS

About this guide	4
Language – Literacy – Numeracy (LLN)	5
Introduction to intermediate scaffolding	7
High risk licensing and the law	19
Element 1 Plan task	29
Element 2 Select and inspect equipment	71
Element 3 Set up task	89
Element 4 Undertake intermediate scaffolding activities	97
Element 5 Complete task	145
Test yourself – Learning tasks	155
Glossary	173

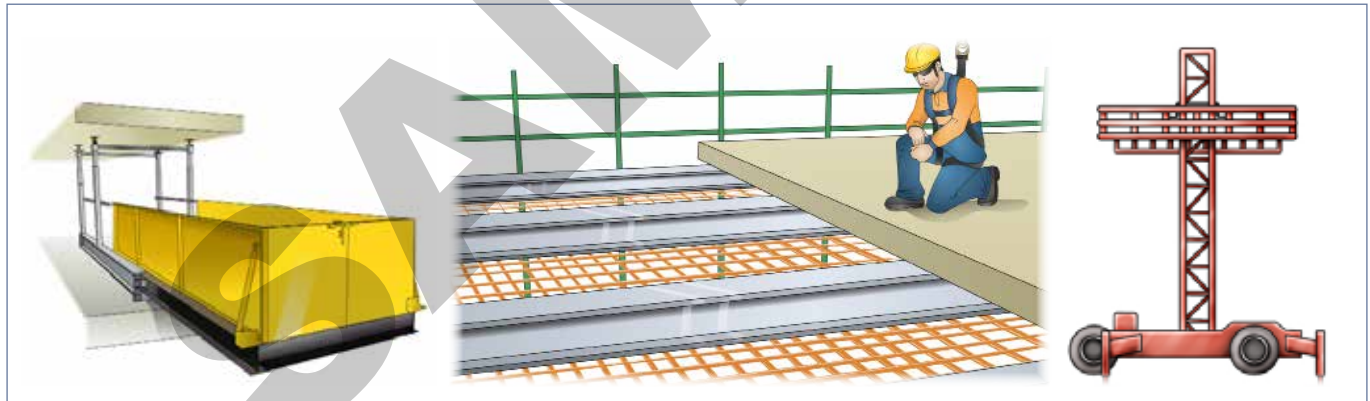
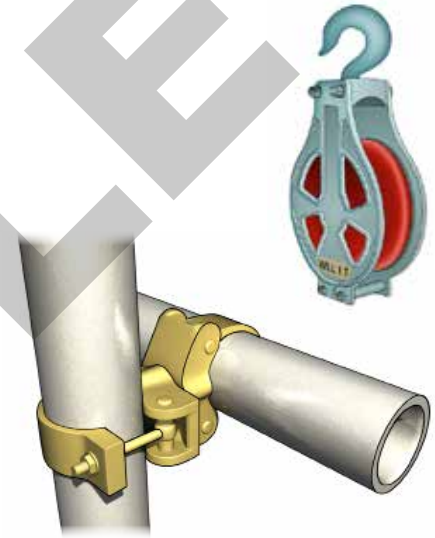
INTRODUCTION TO INTERMEDIATE SCAFFOLDING



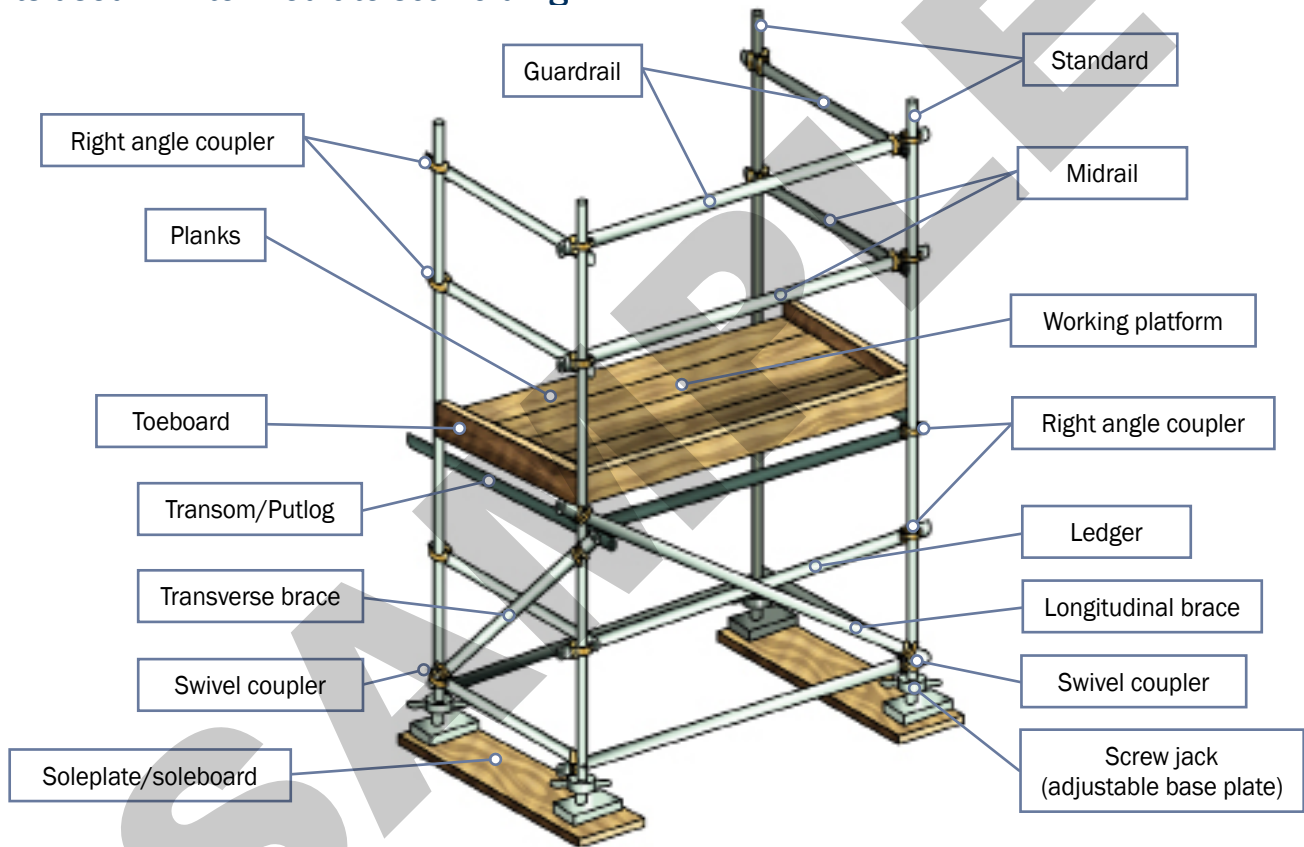
What is intermediate scaffolding?

Intermediate scaffolding is scaffolding work associated with:

- Prefabricated scaffolds
- Tube-and-coupler scaffolds including tube-and-coupler covered ways and gantries
- Cantilevered hoists with a working load limit not exceeding 500 kg (materials only)
- Scaffolding associated with perimeter safety screens and shutters
- Ropes
- Gin wheels
- Safety nets and static lines
- Bracket scaffolds (tank and formwork)
- Cantilevered crane loading platforms
- Cantilevered and spurred scaffolds
- Barrow ramps and sloping platforms
- Mast climbers



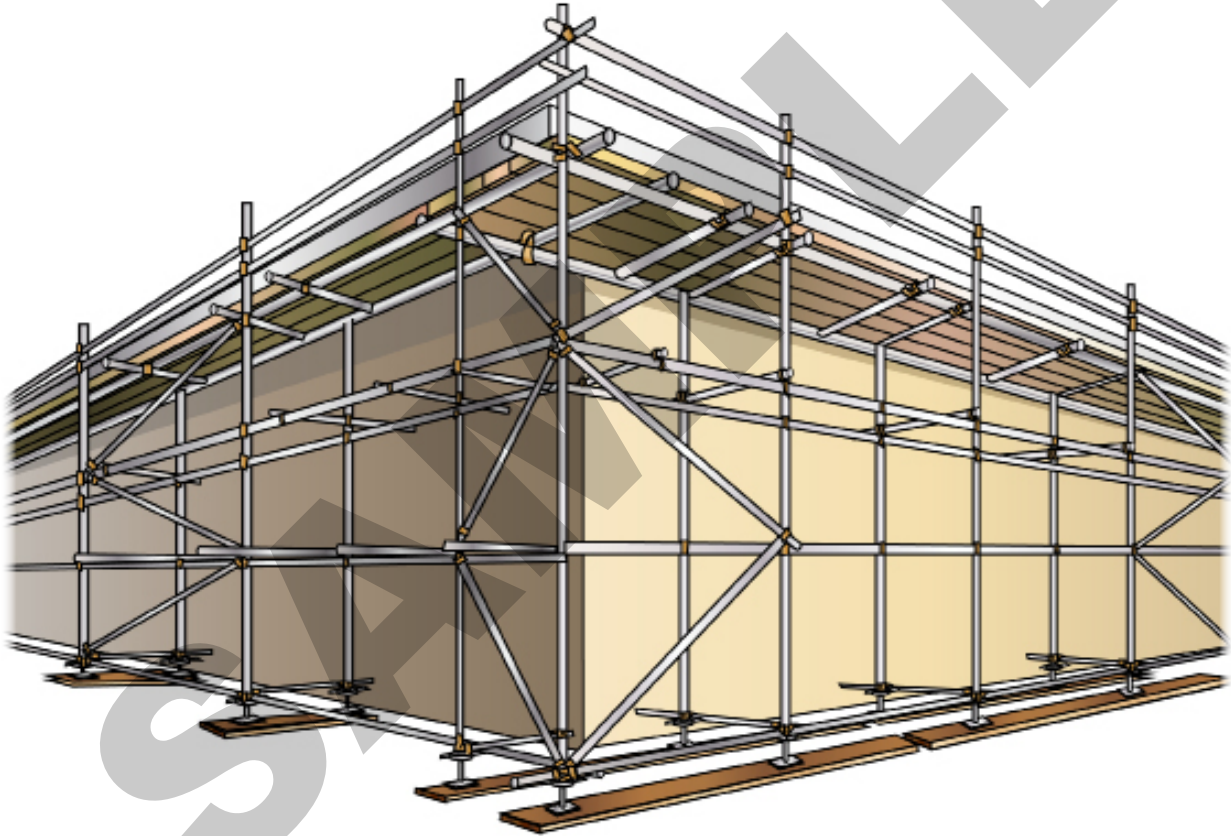
Parts used in intermediate scaffolding



Note: Throughout this guide certain aspects have been left off scaffold images for clarity purposes.

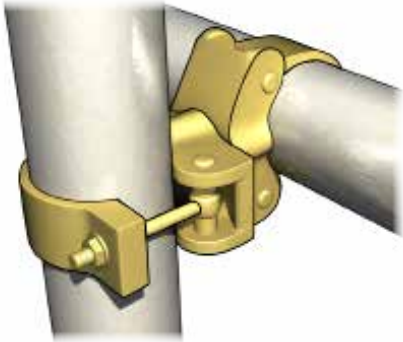
Tube-and-coupler scaffolding

A tube-and-coupler scaffold is constructed with standards, ledgers, braces and ties that are steel tubes joined together with purposed-designed couplers.

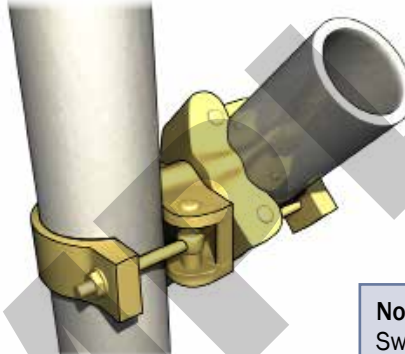


Examples of couplers

Right angle coupler - 90°

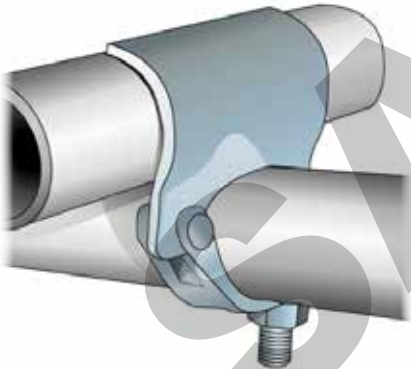


Swivel coupler - tubes at 45° or any angle required

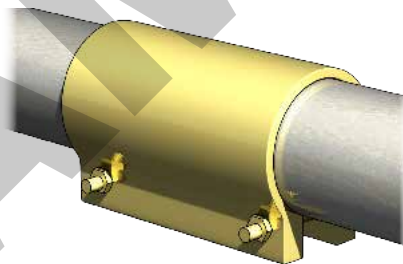


Note:
Swivel couplers are **not** load bearing

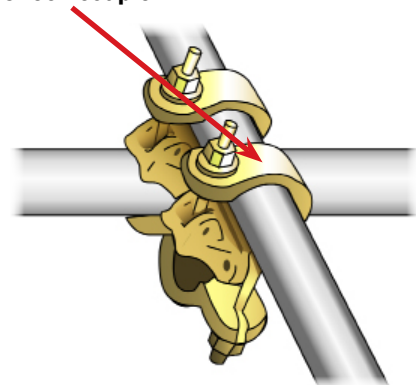
Putlog coupler



External joiner



Check coupler



PLAN TASK

Element 1



Ground conditions

Ground stability

It is important to check the ground conditions where you will erect/put up the scaffolding.

Make sure the ground is firm and level so the scaffolding will be stable.

You should check for recently filled trenches as the ground may be soft and scaffolding may sink, resulting in a collapse.



Be aware of potential non-weight bearing surfaces such as trench covers when erecting scaffolding.



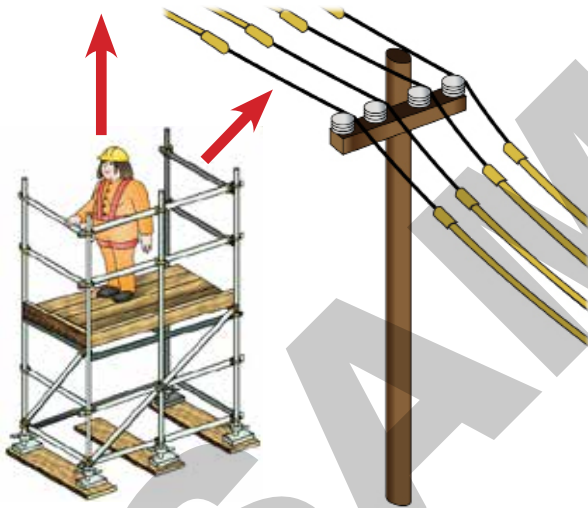
Overhead services

Before you start any scaffolding, **look above you** for such things as gas and water service pipes and electrical cables.

Make sure there is enough clearance for anyone using the scaffolding.

Always check the site for overhead powerlines so you **do not** hit them with any equipment.

Look up and live!



Always check the powerline distances for your state or territory before you begin work, as they may be different.

Too dark

You must be able to see clearly.

Ask your boss to have the area properly lit up. They may need to set up temporary lighting while you work.



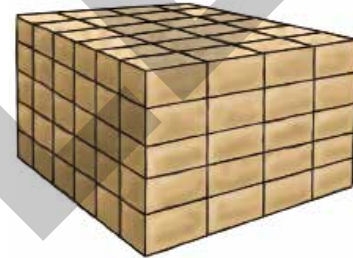
QUESTION 17

You need to plan for different forces and loads.

What do these terms mean?

- Static load
- Dynamic load
- Dead load
- Live load
- Wind load
- Environmental load.

Static load is the weight that's always on the scaffold.



Dynamic load is the dynamic force created when the scaffold moves.



...CONTINUES ON NEXT PAGE

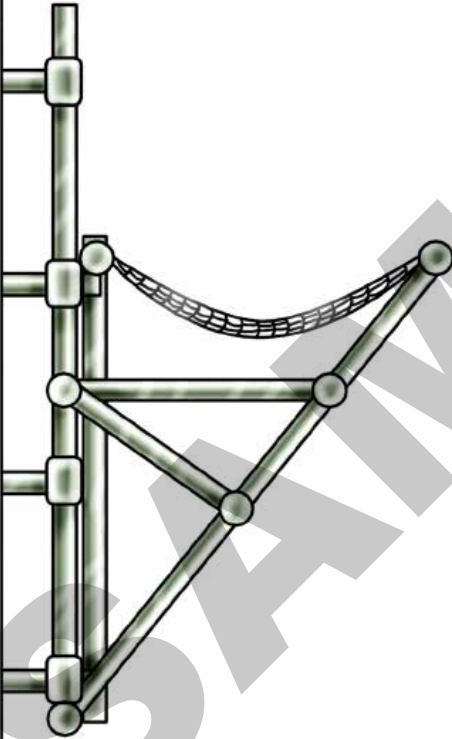
SELECT AND INSPECT PLANT AND EQUIPMENT

Element 2

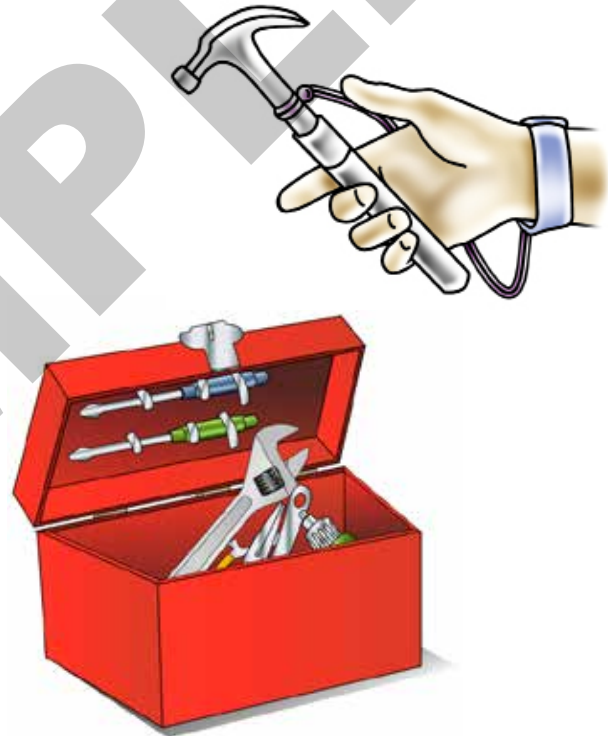


Hazard prevention and control measures (continued)

Install a safety net on scaffold to prevent tools or materials falling on people below.



Use a tool belt and wrist straps to avoid dropping any tools. Keep any tools in a toolbox when you are **not** using them.

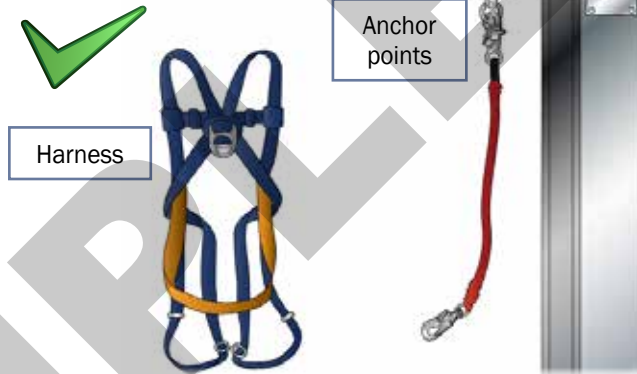


QUESTION 22

You are erecting scaffolding and need to wear a fall arrest harness (safety harness).

What checks need to be made?

Check the condition of the harness and anchor points.



Check the harness is correctly fitted.



Check the harness is correctly attached to the anchor point, for example the static line.



QUESTION 25

Why do you need to check the scaffolding equipment before you use it?

It is important to check scaffolding equipment so you know that it is:

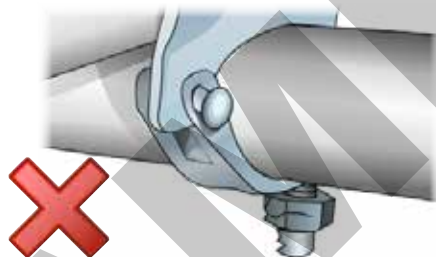
- Safe to use
- It is the right equipment for the job.

**QUESTION 26**

You inspect a coupler.

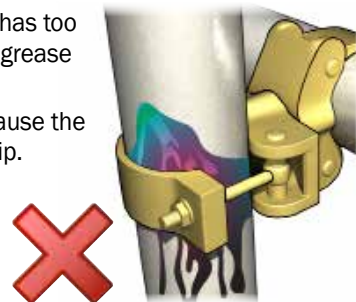
What would stop you from using it?

Damaged hinges on the coupler.

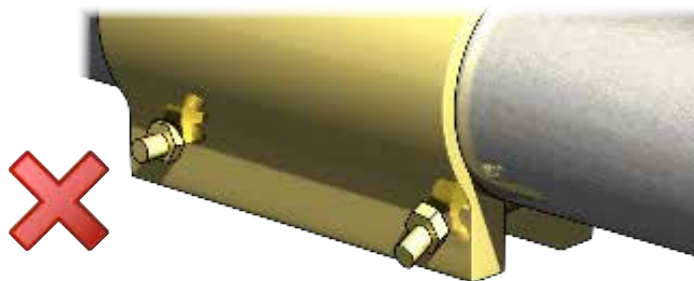


The coupler has too much paint, grease or oil.

This could cause the coupler to slip.



The coupler has damaged threads or nuts.



QUESTION 27

Name some problems that stop you from safely using metal scaffold planks.

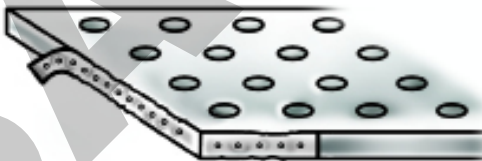
Crushed



Broken welds



No end cap



Twisted or distorted



SET UP TASK

Element 3



QUESTION 35

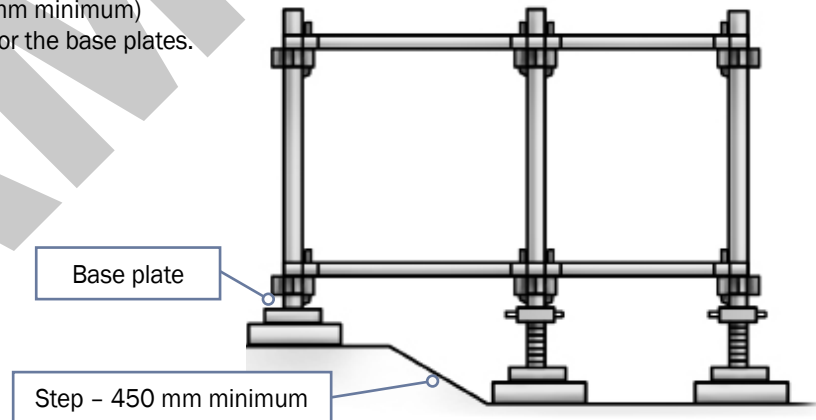
Why do you need to know about the ground strength and stability before you start working?

So you can be sure that the ground can support the weight of the scaffold and any load placed on it.

**QUESTION 36**

What can be done to prepare the footings if you are erecting a scaffold on uneven ground?

Cut steps (450 mm minimum) into the ground for the base plates.



Prepare footings

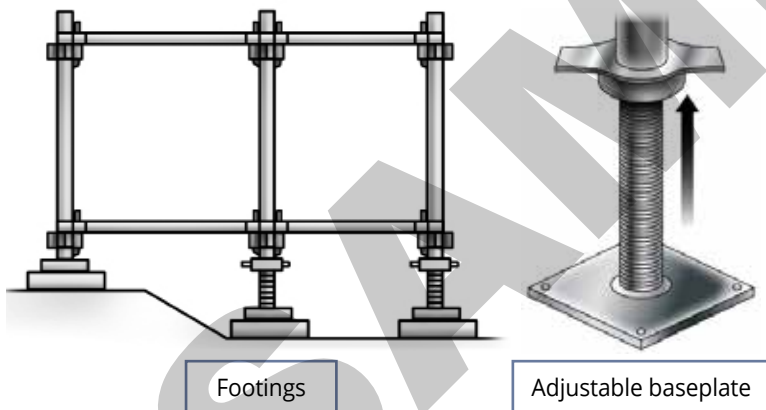
Good foundations are essential. Often scaffolding needs more than baseplates to safely support and distribute the load. For softer or more doubtful surfaces like pavements or tarmac, you must use soleplates (or soleboards).

Soleplates must be strong and rigid enough to support the weight of the structure (see AS/NZS 1576.1).

Baseplates and adjustable baseplates

You may need to use adjustable baseplates if the ground is uneven.

On uneven ground you must cut steps for the baseplates with a minimum step size of 450 mm. To keep a scaffold stable, make sure the footings are properly prepared.

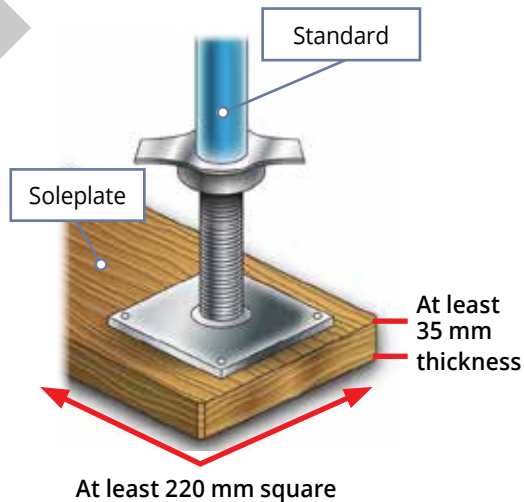


Elements of scaffold have been removed for clarity

Soleplates/Soleboards

You must use soleplates when the ground is **not** strong enough to support the scaffold.

Beneath a single standard, a soleplate should be at least 220 mm square and a thickness of at least 35 mm.

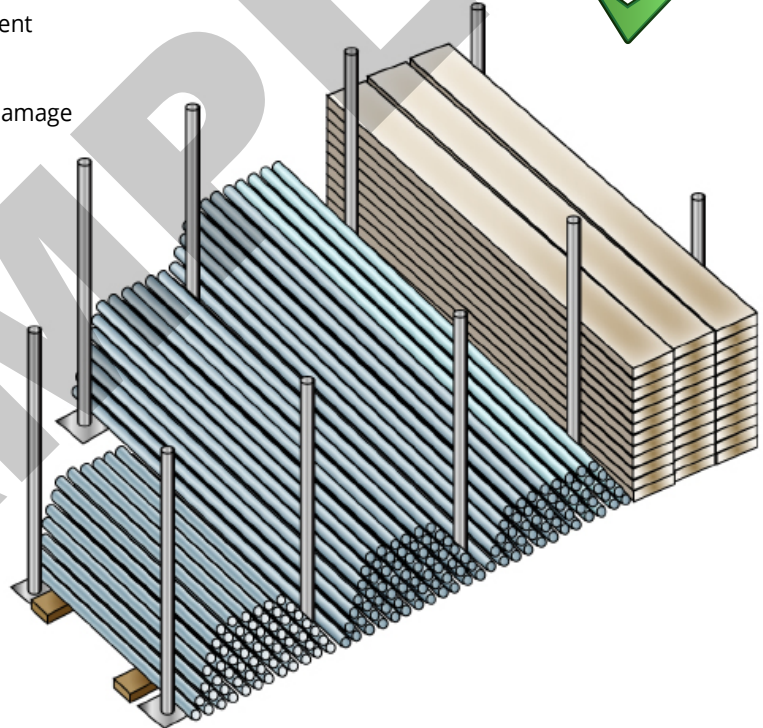


Position scaffolding equipment

Once you've checked you have the right scaffolding equipment, you can put it into place ready to erect.

When positioning the scaffold equipment make sure:

- The work area is free of debris
- There is enough room to deliver and place equipment
- The ground is stable and as level as possible
- Scaffolding equipment is **neatly** stacked to avoid damage
- The equipment is ready to use.



UNDERTAKE INTERMEDIATE SCAFFOLDING ACTIVITIES

Element 4

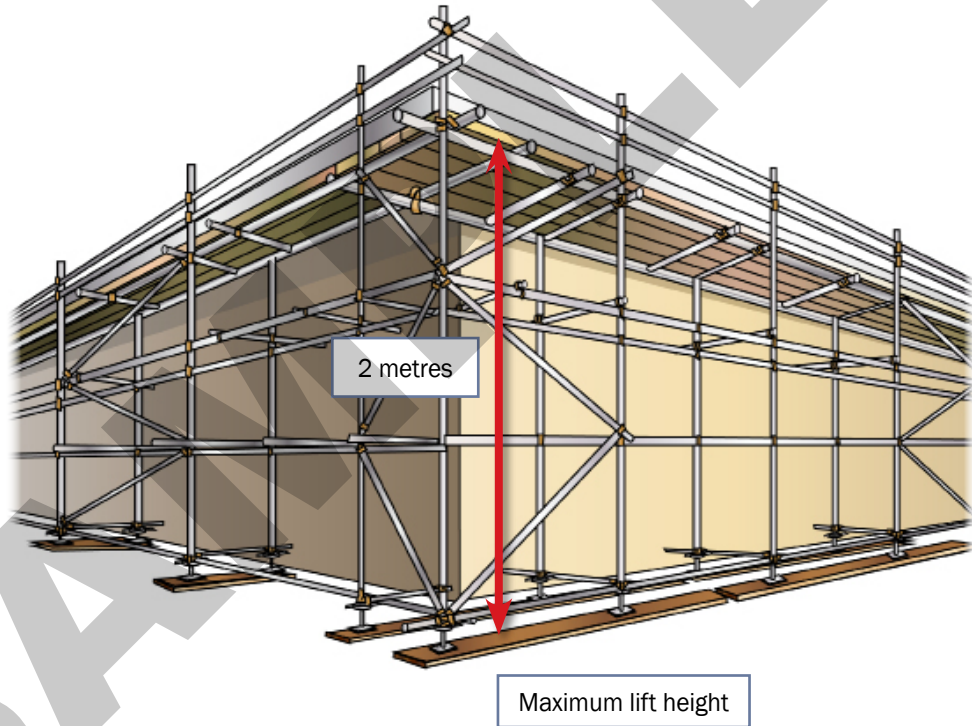


QUESTION 44

You are building an independent scaffold.

What is the maximum lift height?

The maximum lift height of an independent scaffold is 2 metres.

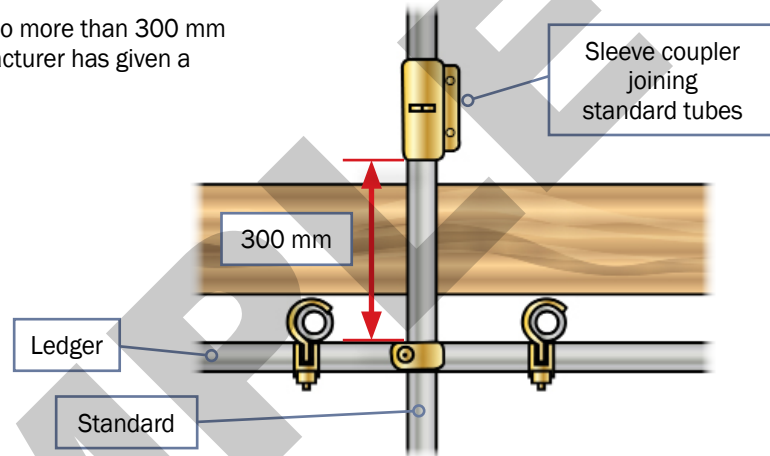


QUESTION 45

You need to join two **standards**.

How far can the join be from a **ledger**?

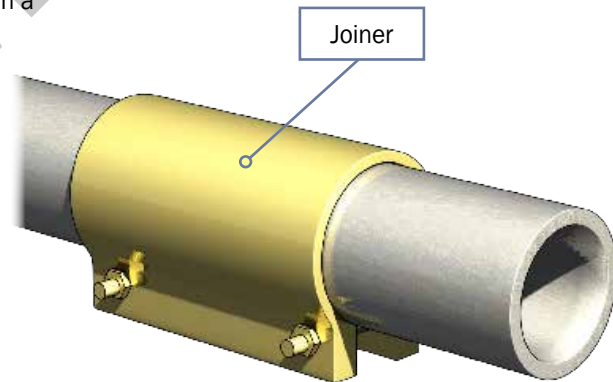
The join must be no more than 300 mm unless the manufacturer has given a different distance

**QUESTION 46**

You need to join two pieces of tube to make a **ledger**.

How far can the join be from a **standard**?

The join must be no more than 300 mm unless the manufacturer has given a different distance

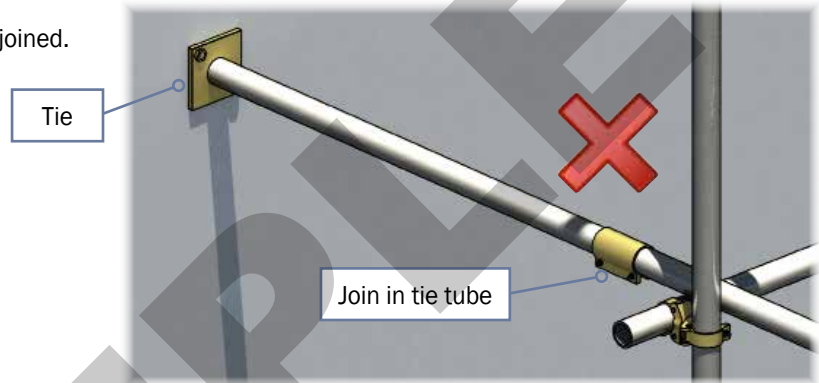


QUESTION 49

The scaffold you are building will be tied into an existing building.

Are you allowed to have a join in the tie tube?

No.
Ties cannot be joined.

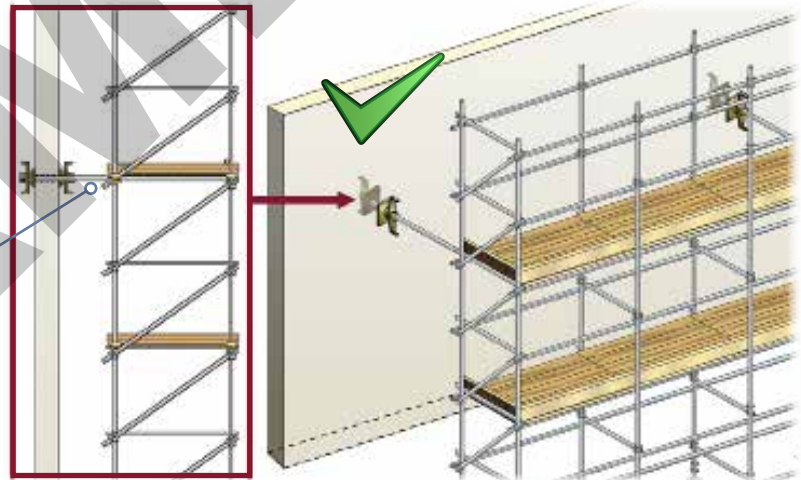
**QUESTION 50**

You need to tie the scaffold in and have been instructed to use an extended transom.

Is this allowed?

Yes.
An extended transom can be used as a tie on a scaffold.

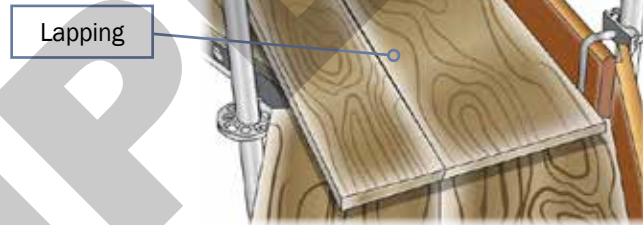
Extended transom/
putlog



QUESTION 56

On a scaffold, where can planks be lapped?

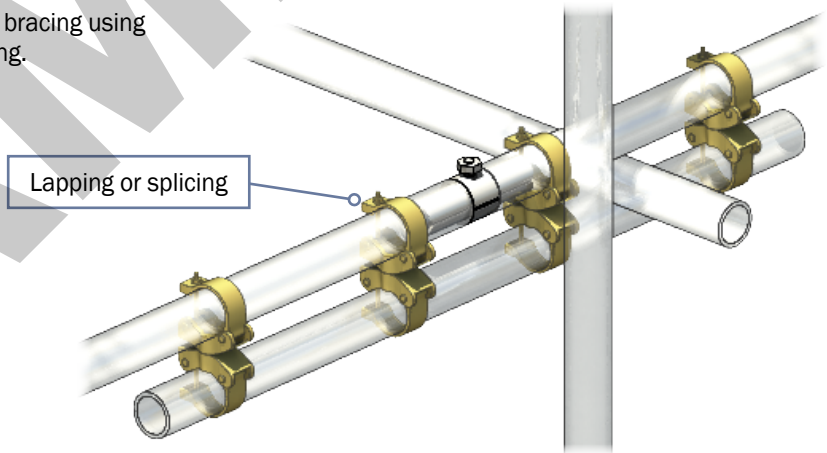
Planks can be lapped on returns and irregular profiles.

**QUESTION 57**

You need to join bracing on a tube and coupler scaffold.

How do you join the bracing?

You can join the bracing using lapping or splicing.

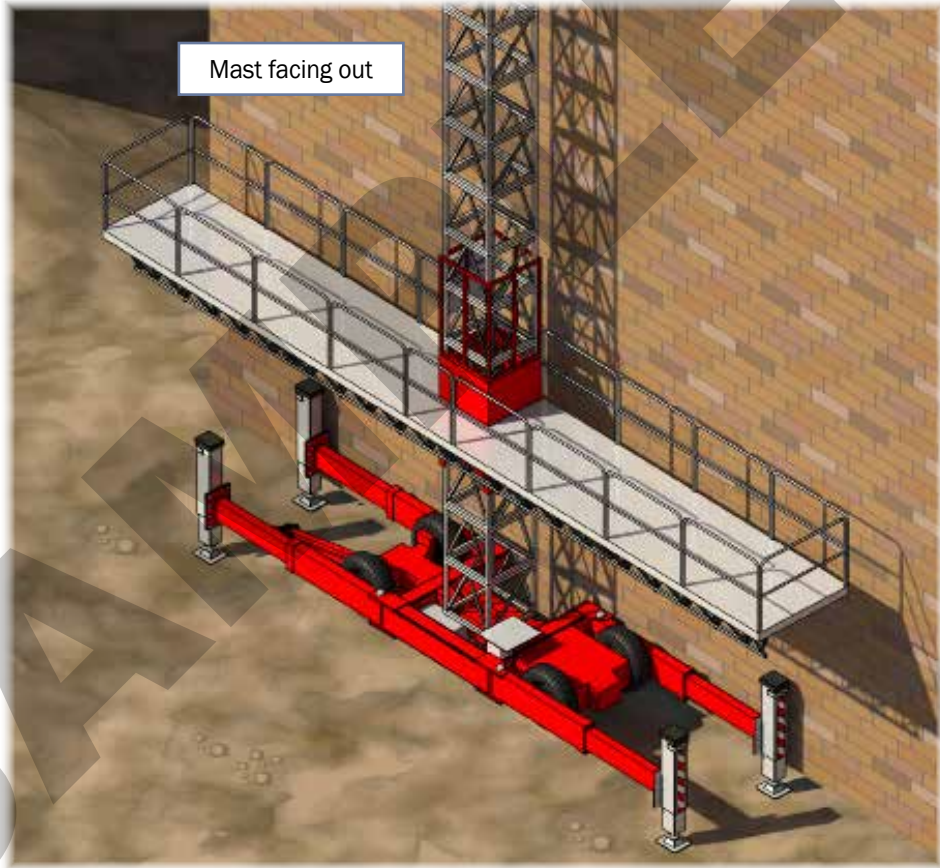


QUESTION 76

You are setting up a freestanding mast climber.

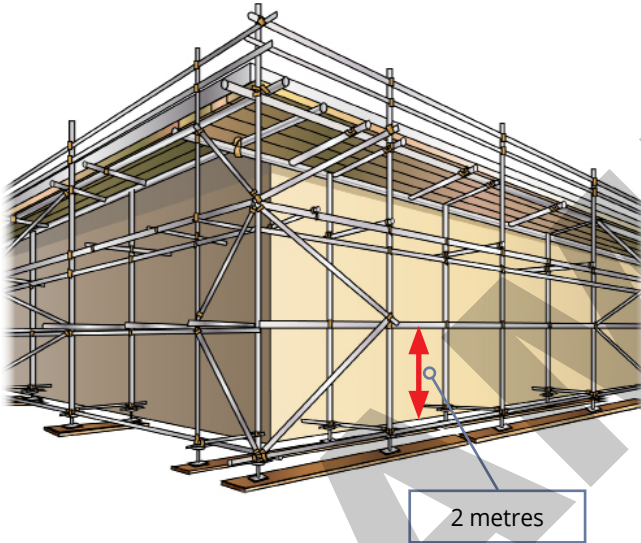
Does the mast have to be facing out or in?

A freestanding mast climber can have the mast **outwards**.

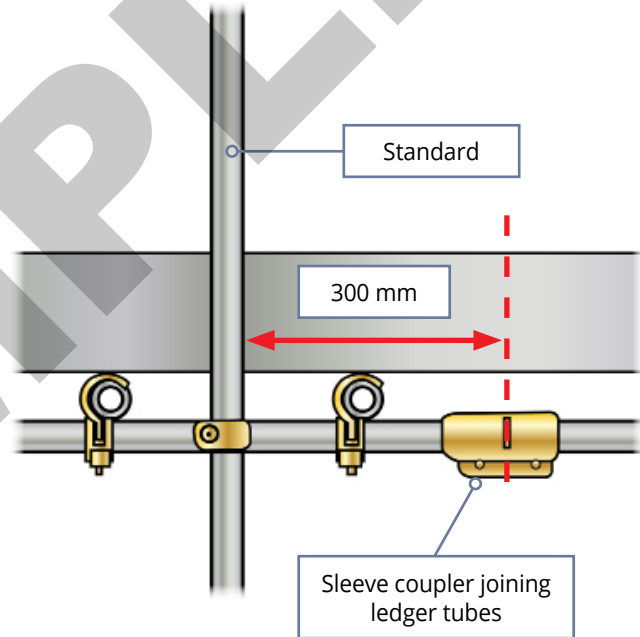


Tube-and-coupler scaffold specifications (continued)

The maximum lift height for a normal independent scaffold is 2 metres.



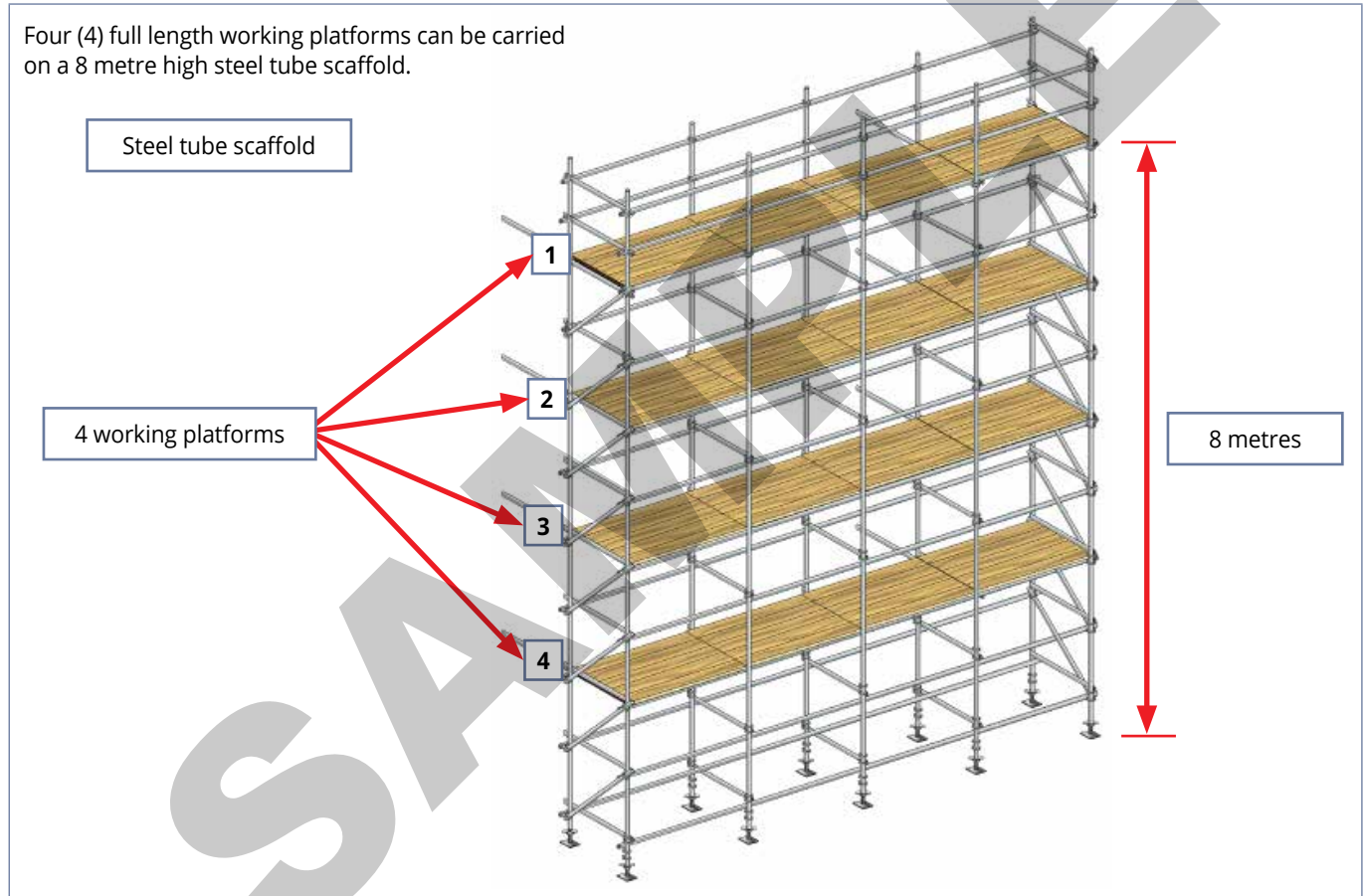
The maximum distance that a ledger can be joined from a standard is 300 mm.



Elements of scaffold have been removed for clarity

Tube-and-coupler scaffold specifications (continued)

Four (4) full length working platforms can be carried on a 8 metre high steel tube scaffold.



COMPLETE TASK

Element 5



QUESTION 84

What must be done at the work site when you have finished your scaffolding work?

Clean up any unused scaffolding parts, tools and rubbish so they dont become a hazard.



Handover Certificate

Complete handover certificate. Send it to the relevant person

Bill's Scaffolding Pty Ltd HANDOVER CERTIFICATE

Number: 9999

Each of the following items must be completed by the responsible scaffolder:

Note: Height is measured to top lift - NOT guardrail

- 1) Client: **Acme Constructions**
- 2) Site Address: **101 National Hwy,
Satellite City**
- 3) Scaffold location: **North Face**
- 4) Type of scaffold: Tube and coupler / Frame / Tower
Frame Modular / Other
(Circle the appropriate type.)
- 5) Number of working platforms: **1**
- 6) Duty category of working platforms:
Light / Medium Heavy / Special
(Circle the appropriate type.)
- 7) Number of lifts above base life: **6**
- 8) Scaffold height: **12 m**
- 9) Number of bays long: **10**
- 10) Scaffold length: **24 m**
- 11) Type of access: Ladder / Stair / Ramp
/ Other (Circle the appropriate type.)
- 12) Design drawing reference: **VFS/0123**
- 13) Date of handover: **As stated** (day, month, year)
- 14) Time of handover: **As stated** (AM or PM or
24 hour time)
- 15) Name of responsible scaffolder:
The applicant's name
- 16) Signature responsible scaffolder:
The applicant's signature

Scaffold tags

After you have you have completed the handover certificate, complete and attach the scaffold tag/s.

OK

THIS SCAFFOLD HAS BEEN ERECTED TO MEET FEDERAL/STATE OSHA SPECIFICATIONS AND IS SAFE FOR ALL CRAFT WORK

DO NOT ALTER

DATE: _____

AUTHORIZED SIGNATURE: _____

COMMENTS: _____

Front

SAFE FOR USE

DO NOT ALTER DO NOT OVERLOAD

SEE OTHER SIDE

Back

SCAFFOLD # _____

SCAFFOLDING IDENTIFICATION TAG

Date Erected: _____

Expected Removal Date: _____

Job Number: _____

I have inspected and approved the Scaffold built and consider it to be safe and adequate for completion of the work specified.

Inspected By: _____

Date: _____

REINSPECTED

NAME	DATE

MODIFICATION DATE

NAME	DATE

Front

SCAFFOLDING IDENTIFICATION TAG

The following client company representative authorizes the use of this scaffold subject to fulfillment of the conditions listed under the preventive measures section of this tag.

NAME: _____

CAUTION POTENTIAL OR UNUSUAL HAZARD

WHAT IS THE POTENTIAL HAZARD: _____

PREVENTIVE MEASURES TO BE TAKEN: _____

Back

Green tags are hung on scaffolds that have been inspected and are safe for use.

A green **"SAFE FOR USE"** tag(s), and should be attached to the scaffold at each access point after the initial inspection is complete.

Yellow CAUTION tag(s), will replace all green "Safe Scaffold" tag(s), whenever the scaffold has been modified to meet work requirements, and as a result could present a hazard to the user.

This tag indicates special requirements for safe use.