03 I SESSION PLANS
FRAME SCAFFOLDS

SESSION 1: OVERVIEW
FRAME SCAFFOLDS

SESSION PURPOSE

The purpose of this session is to familiarize trainees with frame scaffold components and accessories, typical uses for frame scaffolds, and providing them with guidelines for selecting and inspecting frame scaffold equipment.

LEARNING OUTCOMES

By the end of this session, your trainees should be able to:

- Identify frame scaffold components and accessories
- List the areas where there may be possible incompatibility between frame scaffold equipment from different manufacturers
- List some typical uses of frame scaffolds
- Discuss what factors need to be considered when selecting frame scaffold equipment
- Inspect frame scaffold equipment for damage or decay

DURATION

Approximately 30 minutes

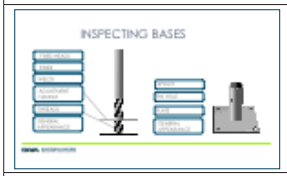
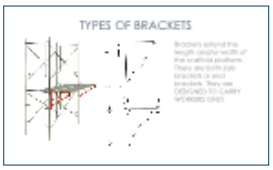
PREPARATION REQUIRED

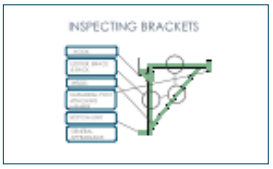
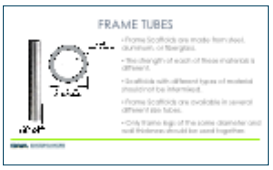
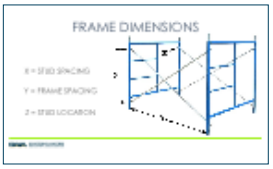
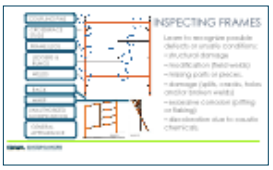
- Read Section 1 of the Study Guide and familiarize yourself with the Key Points
- Review the PowerPoint slides for Section 1 and the Trainer Notes
- (*Optional*) Gather a selection of some basic frame scaffold components to be able to show trainees and demonstrate their use.

FLEXIBILITY

The instructions in this Trainer Manual are a recommended delivery option. You may need to adapt the activities and timings to suit the needs of trainees.

SESSION 1: SESSION PLAN

SLIDE(S)	INSTRUCTIONS
	
	• FRAME SCAFFOLDS: Intro Slide
	• Briefly go over the Learning Outcomes for the Frames portion of the course. • •
	• Describe the range of uses for Frame Scaffolds
	• Discuss the various potential incompatibilities of Frame Scaffolds and/or components and the possible consequences.
	• Discuss the importance of inspecting equipment before beginning to build a scaffold.
	• Point out the different types of bases and describe when/how they are used.
	• Describe what to look for when inspecting bases.
	• Describe the different types of brackets and how they are attached to frames. Make sure to emphasize that they are only meant to carry workers.

SLIDE(S)	INSTRUCTIONS
	• Point out the parts of brackets and explain what to look for when inspecting them.
	• Describe the different types of frames and list some typical sizes. Explain the importance of using compatible frames (size-wise) and the problems you can face if you use incompatible frames.
	• Discuss frame tubes and the differences in materials and strength. Explain why only frames with compatible tubes should be used together.
	• Explain the significance of the frame dimensions shown.
	• Point out the different parts of scaffold frames and explain what to look for when inspecting them.
	• Describe the different crossbrace end types and briefly list advantages/disadvantages of each.
	• Describe what to look for when inspecting crossbraces.
LEARNING ACTIVITY	
	• Have trainees get up and go inspect the equipment that is to be used for the Practical Assessment.
	• Review the KEY POINTS from this session.

KEY POINTS

The most important information you must cover in this session:

- ☐ While all Frame Scaffolds may look alike, there are important variations. Intermixing of equipment from different manufacturers is discouraged to minimize the potential hazards.
- ☐ The incompatibility of scaffolds usually occur in the following areas: Frame height and/or width, type or strength of material, tube wall diameter or thickness, retainer pins, crossbrace stud connections, spacing and location, bases and other components.
- ☐ ***Brackets*** are a common component used to extend the length and/or width of the scaffold platform. They are designed to carry workers only.
- ☐ A Frame Scaffold can be constructed in three fundamental ways: ***A Single Bay (Tower) Scaffold, Scaffold Runs*** or ***Area Scaffolds***
- ☐ Selecting the right equipment for the job is very important for the safe and efficient use of Frame Scaffolds. Jobsite conditions, equipment availability, and user requirements will determine what equipment must be used. If the scaffold's basic characteristics are unsuited to the task, or if all the necessary components are not available, workers are forced to make do with what is available which could lead to accidents.
- ☐ Thoroughly inspect scaffold equipment or components before each shift to ensure they are safe. Learn to recognize possible defects or unsafe conditions present in scaffold frames and accessories.
- ☐ Scaffold components should be inspected for: structural damage, modification, missing parts or pieces, damage, excessive corrosion, discoloration and other types of damage or physical defects..

NOTES

SESSION 2: OVERVIEW
BUILDING FRAME SCAFFOLDS

SESSION PURPOSE

The purpose of this session is to familiarize trainees with the process of building a basic Frame Scaffold.

LEARNING OUTCOMES

By the end of this session, your trainees should be able to:

- Recognize and identify the different Frame Scaffold components scaffolds.
- Explain how to select and inspect frame scaffold equipment.

DURATION

Approximately 25 minutes

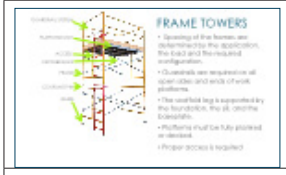
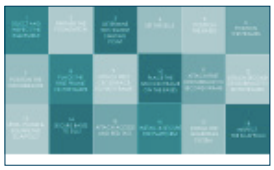
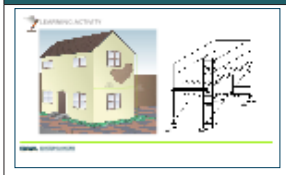
PREPARATION REQUIRED

- Read Section 2 of the Study Guide and familiarize yourself with the Key Points
- Review the PowerPoint slides for Section 2 and the Trainer Notes
- Review the scenario in the Learning Activity in the Study Guide and the answers to the questions (provided in this manual on page 77)

FLEXIBILITY

The instructions in this Trainer Manual are a recommended delivery option. You may need to adapt the activities and timings to suit the needs of trainees.

SESSION 2: SESSION PLAN

SLIDE(S)	INSTRUCTIONS
	• BUILDING FRAME SCAFFOLDS: Intro Slide
	Point out the different components of the basic Frame Scaffold and discuss the importance of including guardrails, fully-planked platforms and providing proper access
	• Briefly describe each step in the process of building a basic Frame Scaffold unit. •
	• Discuss the importance of ensuring that the scaffold is level, plumb and square. Describe the process of squaring the scaffold (as shown in the image above)
	• Discuss proper access and best practices when installing access. Refer to any relevant regulations related to access (these should already have been discussed in Scaffold Fundamentals Section 2 so just a brief reminder). Discuss the importance of 3 points of contact when climbing ladders.
LEARNING ACTIVITY	
	• Discuss the learning activity as a group or have trainees work in pairs to answer the questions on page 38.
	• Review the KEY POINTS from this session.

LEARNING ACTIVITY

Analyze the following scaffolding scenario to get an idea of the reasons certain choices were made in terms of the scaffold design and equipment chosen. Fill in the details in the Job Requirement Checklist and answer the questions on page 38.

FRAME TOWER SCAFFOLD

SCENARIO: *A plasterer must repair a wide patch on the exterior upper wall of a two-story house. He needs a working platform of at least 5ft (1.52m) wide to have room for his materials and to be able to get across the entire space that needs repair without having to reach or move the scaffold. There is a small strip of garden at the base of the wall that the owner does not want disturbed so the scaffold must be built on the paving stone driveway 1ft (0.3m) out from the wall. The load will include the plasterer, a 25lb bag of dry plaster mix, and his tools.*

LEARNING ACTIVITY

Analyze the job scenario on page 36 to understand why certain equipment choices were made for this scaffold:

Why was a 5ft x 5ft (1.5 m x 1.5 m) frame chosen for the scaffold in this scanario?
To comply with the requirement that the scaffold deck is to be 5ft (1.5m) wide. The 5ft. (1.5m) high frame was selected so the finished scaffold is 6ft (1.8m).

What (if any) preparation of the foundation would be necessary in this scenario?
(This example directs you to assume that the base is concrete. It can be reasonably assumed that the concrete will be strong enough to support the scaffold and the intended load. Consequently, no preparation of the foundation is necessary.)

If the concrete foundation was level, why would screwjacks be needed in this scenario?
Screwjacks were selected to be used with the base plates so that 12in (305mm) could be added to the 5ft. (1.5m) frame height to obtain the 6ft (1.8m) platform height requirement and to provide leveling.

Why were 7ft (2.1m) crossbraces selected?
7 ft. (2.1 m) braces were selected to conform to the requirement that the frame spacing would be 7ft. (2.1 m).

Why were 8ft long planks required for the platform in this scenario?
The plank was determined to be 8ft (2.4 m) long so that the plank overlapped each support at by 6 in. (152 mm). It is important to ensure that the plank will not slip off the header of the frame during use.

Why was a guardrail attached on all open sides of the platform?
The platform had to be more than 14in (metric) from the wall.Obviously, if the platform is next to a wall, only three sides will need guardrails.

Why was a clamp-on ladder and access gate panel used?
A clamp-on ladder and access gate panel was chosen to provide access to the platform. A stairway, could have been chosen but stairways are not normally used for scaffolds that are only 6 ft. (1.8 m) high.

KEY POINTS

The most important information you must cover in this session:

- ☐ A basic Frame Scaffold unit is the building block for all Frame Scaffold configurations.
- ☐ Frame Scaffolds must be built according to the steps provided to ensure that the scaffold is structurally sound, strong, safe, and in compliance with the regulations and the practices of the industry.
- ☐ The size and type of frame will depend on the application, the height of the scaffold, the required platform size, and the available space for the scaffold.
- ☐ Select crossbrace size to accommodate the specific frame chosen.
- ☐ A guardrail system must be installed on all open sides of working platforms above 10ft (3m) or according to local regulations. Toeboards and/or other falling object protection should be installed if required.
- ☐ All working platforms must be fully planked or decked. Platform materials should be securely attached to the scaffold.
- ☐ Climbing up and down scaffold frames and braces has resulted in numerous injuries and fatalities. To prevent this, provide adequate ladders or scaffold stairs for workers to use.
- ☐ Pick the highest ground level for the starting point to simplify later adjustment. It helps if the screwjack adjusting handle is about a hand width above the bottom of the thread.
- ☐ Make sure to level, square, and plumb the scaffold.
- ☐ The three-color tag system is widely recognized and used on many job sites to let workers know when the scaffold is and isn't safe to use.
- ☐ Before the scaffold can be used, the Competent Person must review applicable regulations, the SAIA Codes of Safe Practices (or SIAC Codes of Safe Practice in Canada) and manufacturers' literature and inspect the scaffold to ensure that it is safely constructed and will support the intended loads.
- ☐ Scaffold inspections must be made after the scaffold has been built and before it is used and at minimum it should inspected once per shift, at the beginning of each shift, or after an event that could have altered the scaffold or affected its structural stability.

NOTES

SESSION 3: OVERVIEW
ROLLING TOWER SCAFFOLDS

SESSION PURPOSE

The purpose of this session is to prepare trainees to build Rolling Tower Scaffolds safely and how to prepare an equipment list.

LEARNING OUTCOMES

By the end of this session, your trainees should be able to:

- Identify components of a basic rolling tower Frame Scaffold.
- Describe how to build a rolling tower scaffold
- Prepare an equipment list

DURATION

Approximately 15 - 20 minutes

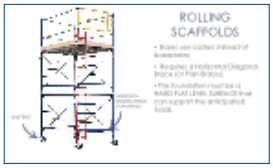
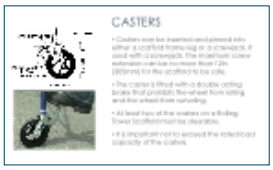
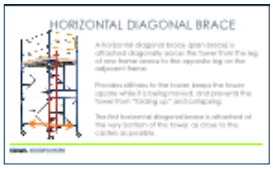
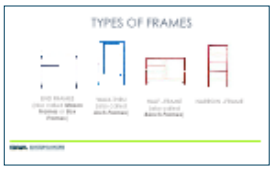
PREPARATION REQUIRED

- Read Section 3 of the Study Guide and familiarize yourself with the Key Points
- Review the PowerPoint slides for Section 3 and the Trainer Notes

FLEXIBILITY

The instructions in this Trainer Manual are a recommended delivery option. You may need to adapt the activities and timings to suit the needs of trainees.

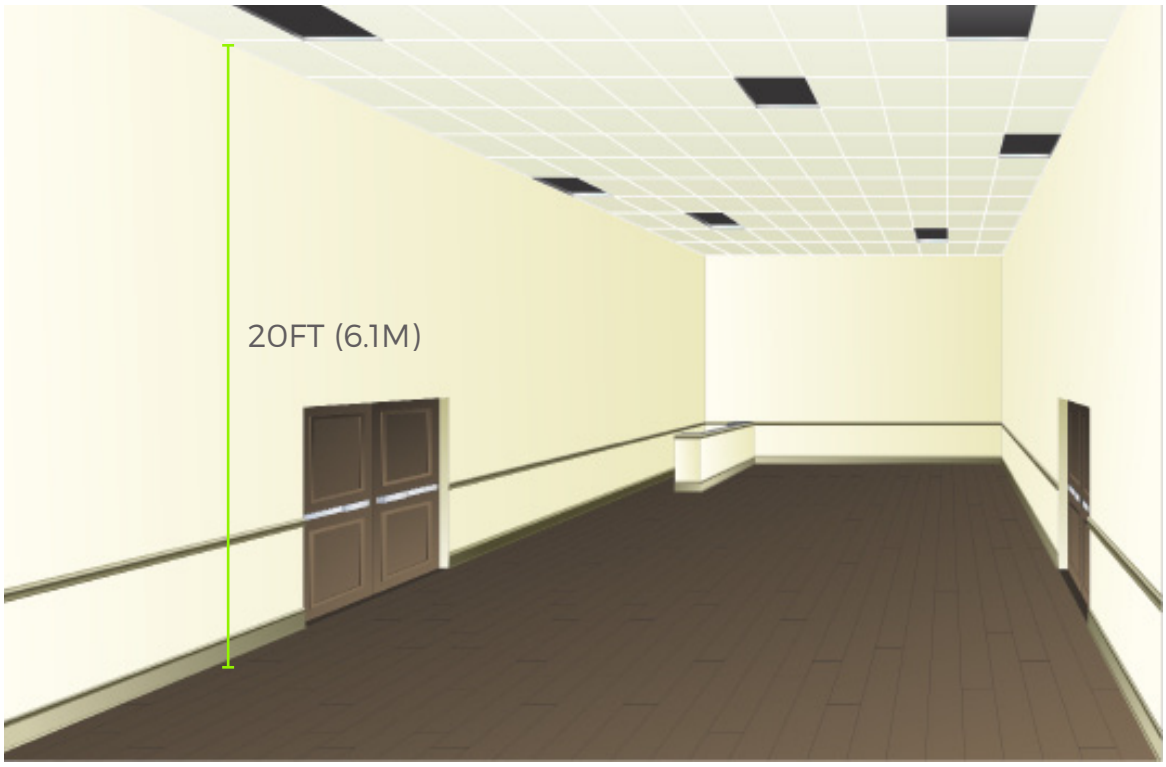
SESSION 3: SESSION PLAN

SLIDE(S)	INSTRUCTIONS
	• ROLLING TOWER SCAFFOLDS: Intro Slide
	• Describe situations when it is advantageous to use a Rolling Scaffold Tower. Point out the elements that differ from a stationary Frame Scaffold tower.
	• Describe the features of a proper scaffold caster. • Explain the proper way to attach casters to Frame Scaffold legs. •
	• Explain the purpose of a horizontal brace and why it is needed for Rolling Towers. •
	• Describe each type of frame and when they are typically used.
	• Explain the purpose of outriggers and how they help stabilize scaffolds and when they should be used. • Describe the proper placement and process for installing outriggers.
LEARNING ACTIVITY	
	• Go through the Learning Activity with the group and discuss the equipment required (referring to the equipment list on page 52).
	• Review the KEY POINTS from this session.

3

LEARNING ACTIVITY

Use the details in this scenario to complete the Job Requirement Checklist. A sketch of the required scaffold has been provided to help you figure out your equipment list. Use the sample equipment list on page 52 to select your equipment.



ROLLING TOWER SCAFFOLD

SCENARIO: *A worker must replace certain ceiling tiles in different locations, in the suspended ceiling of a rather large ballroom. The ceiling is exactly 20ft (6.1m) above the flat level hardwood floor of the ballroom. The worker can stand and reach 6ft (1.8m) above a work platform, a scaffold platform is required 14ft (4.3m) above the floor. The load will include one worker, two boxes of ceiling tiles that weigh 50 lb (22.7kg) each, and miscellaneous hand tools.*

FRAME SCAFFOLD EQUIPMENT LIST:

	Quantity	Item Description	☑
FRAMES		5ft x 6ft 6in (1.5m x 2m) Open	
		5ft x 6ft 6in (1.5m x 2m) End	
		5ft x 5ft (1.5m x 1.5m) End	
		5ft x 4ft (1.5m x 1.2m) End	
		5ft x 3ft (1.5m x 0.9m) End	
		5ft x 2ft (1.5m x 0.6m) End	
		3ft x 6ft 6in (0.9m x 2m) Open	
		3ft x 6ft 6in (0.9m x 2m) End	
		3ft x 5ft (0.9m x 1.5m) End	
CROSSBRACES		1ft x 5ft (0.30m x 1.52m)	
		1ft x 7ft (0.30m x 2.13m)	
		1ft x 10ft (0.30m x 3.04m)	
		2ft x 5ft (0.6m x 1.52m)	
		2ft x 7ft (0.6m x 2.13m)	
		2ft x 10ft (0.6m x 3.04m)	
		3ft x 5ft (0.91m x 1.52m)	
		3ft x 7ft (0.91m x 2.13m)	
		3ft x 10ft (0.91m x 3.04m)	
		4ft x 5ft (1.21m x 1.52m)	
		4ft x 7ft (1.21m x 2.13m)	
		4ft x 10ft (1.2m x 3.04m)	
BASES		Screwjack with Baseplate	
		Screwjack with Socket	
		Screwjack with U-Head	
		Baseplate or Extension Baseplate	
		Sills *Length:*	
BRACKETS		20in (508mm) Side	
		24in (609.4mm) Side	
		30in (760mm) Side	
		20in (508mm) End	
		30in (760mm) End	

	Quantity	Item Description	☑
ACCESS		Ladder 3ft (0.9m)	
		Ladder 6ft (1.8m)	
		Bracket	
		Stair Unit	
		Inside Handrail	
		Outside Handrail	
GUARDRAILS		5ft (1.5m) Guardrail	
		7ft (2.1m) Guardrail	
		10ft (3m) Guardrail	
		Guardrail Post	
		Guardrail Access Panel	
		Toeboards	
PLATFORM		9ft (2.74m) - 2x10 solid sawn plank	
		12ft (3.7m) - 2x10 solid sawn plank	
		16ft (4.9m) - 2x10 solid sawn plank	
		9ft (2.74m) - 2x10 laminated plank	
		12ft (3.7m) - 2x10 laminated plank	
		16ft (4.9m) - 2x10 laminated plank	
		7ft (2.1m) Scaffold deck	
		8ft (2.4m) Scaffold deck	
		10ft (3m) Scaffold deck	
OTHER			

KEY POINTS

The most important information you must cover in this session:

- ☐ The steps for building a Rolling Tower Frame Scaffold are very similar to a stationary Frame scaffold except for two main differences: 1) the bases use ***casters*** instead of baseplates 2) **a *horizontal diagonal*** (or ***plan brace***) is required.
- ☐ The caster must be pinned to the leg or screwjack so it doesn't fall out of the frame. If the caster is used with a screwjack, the maximum screw extension can be no more than a 12in (305mm).
- ☐ The caster is fitted with a double acting brake that prohibits the wheels from rolling and also prohibits the wheel from revolving (or swiveling). At least two of the casters on a Rolling Tower Scaffold must be steerable.
- ☐ A ***horizontal diagonal*** brace is attached diagonally across the tower from the leg of one frame across to the diagonally opposite leg on the adjacent frame. This brace provides stiffness to the tower, keeps it square while it is being moved, and prevents it from racking (folding up) and collapsing.
- ☐ Adding levels (called ***lifts***) above the first level requires workers to hand scaffold components up to a worker on the platfom. As you build higher, a hoisting line or a wheel pulley may be required to lift the scaffold components higher.
- ☐ Various sizes of frames are available, so you can achieve your desired height using different combinations of frame sizes. Usually it is best to use the minimum number of components to achieve the desired result, assuming that the equipment is available.
- ☐ Frame sizes and configurations are available for various trades and job-specific uses. Frames are made in various widths and heights and for various load capacities.
- ☐ Outriggers are an important safety device designed to provide stability when a scaffold height-to-base width ratio exceeds 4:1 or 3.1 (depending on your local regulations).
- ☐ Toeboards and/or other falling object protection should be used (if required).
- ☐ Horizontal Diagonal braces must be specifically chosen to match the frame width and crossbrace length.

NOTES

SESSION 4: OVERVIEW
MULTI-BAY SCAFFOLDS

SESSION PURPOSE

The purpose of this session is to prepare trainees to build larger scaffolds by adding bays and to show them how to sketch a scaffold design.

LEARNING OUTCOMES

By the end of this session, your trainees should be able to:

- Build area scaffolds and scaffold runs by adding additional bays lengthwise and widthwise
- Sketch a scaffold design

DURATION

Approximately 20 minutes

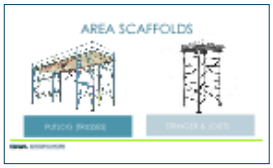
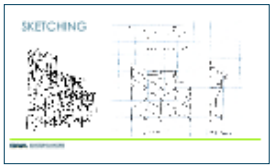
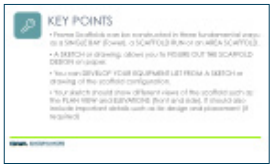
PREPARATION REQUIRED

- Read Section 4 of the Study Guide and familiarize yourself with the Key Points
- Review the PowerPoint slides for Section 4 and the Trainer Notes
- Review the Learning Activities for Section 4 and determine how you will facilitate these with the trainees. Make sure you work through them yourself so you are able to answer any questions they may have.

FLEXIBILITY

The instructions in this Trainer Manual are a recommended delivery option. You may need to adapt the activities and timings to suit the needs of trainees.

SESSION 4: SESSION PLAN

SLIDE(S)	INSTRUCTIONS
	• MULTI-BAY SCAFFOLDS - Intro Slide
	• Describe a scaffold run and where it is typically used.
	• Describe the two ways that area scaffolds can be built. Explain the steps and point out the components involved. •
	• Explain how sketching a plan of the scaffold can be helpful when preparing equipment lists and communicating with scaffold builders and users. • Point out the different types of views shown here (elevation, plan view, side view etc.)
LEARNING ACTIVITIES	
	• Discuss the Learning Activity on page 68 • Show the trainees what the design of the scaffold for this scenario should look like. • Discuss what equipment will be needed for this scaffold.
	• Discuss the Learning Activity on page 72 • Show the trainees what the design of the scaffold for this scenario should look like. • Discuss what equipment will be needed for this scaffold.
	• Review the KEY POINTS from this session.

LEARNING ACTIVITY

1) Read the following scenario to determine the job requirements. Write these in the Job Requirement Checklist.

2) Sketch out your scaffold design using the graph paper on pages 70 & 71
3) Write out your equipment list based on the sketches of the required scaffold.

SCAFFOLD RUN

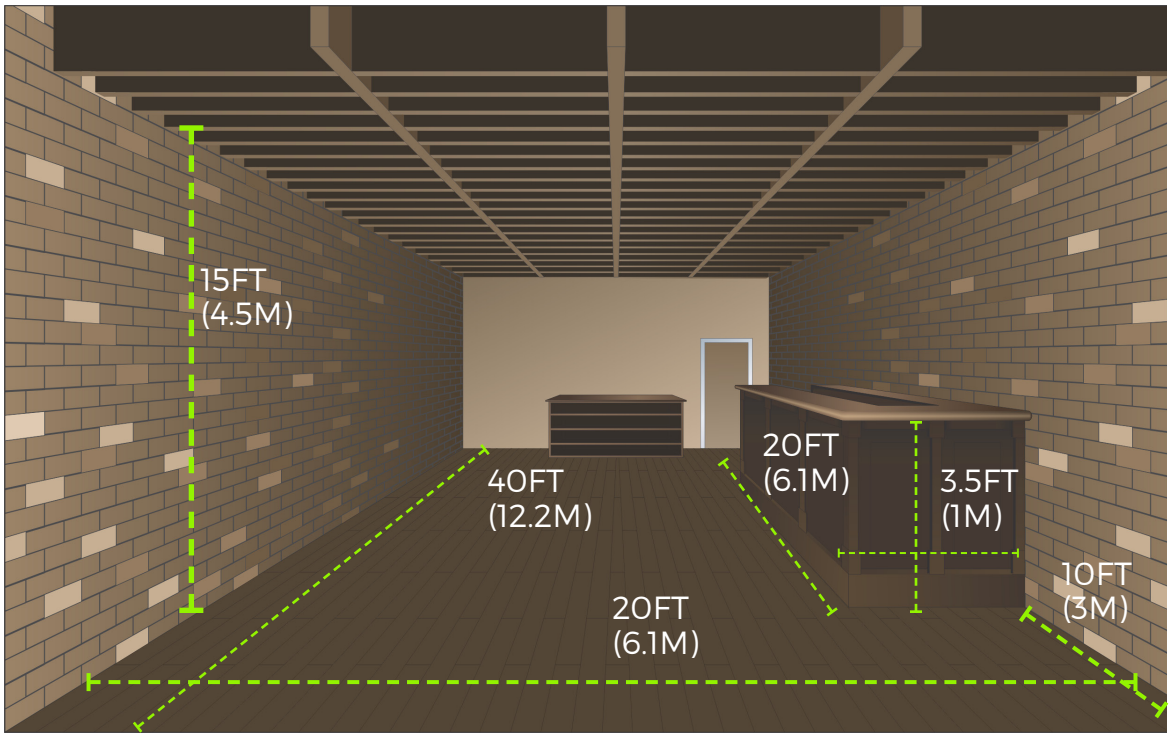
SCENARIO: *Five workers must repaint brickwork on the top level of a building that runs about 100ft (30m) long. The scaffold will be built on a concrete sidewalk that is 6ft -6in (2m) wide. There are street lights on the sidewalk which will be off for the duration of time the scaffold is in use. There is 5ft-6in (1.6m) of space between the street lights and the front of the building. There are shops on the lower level of the building - each of them is 20ft (6m) wide with 6ft-6in (2m) doorways. The shop doors must be accessible and the scaffold must be able to allow for pedestrian traffic on the sidewalk. The owner wants the work to be completed in 3 days. The loads will include the workers, their paints and rollers/brushes.*

LEARNING ACTIVITY

1) Read the following scenario to determine the job requirements. Write these in the Job Requirement Checklist.

2) Sketch your scaffold design

3) Write out your equipment list based on the sketches of the required scaffold.



AREA SCAFFOLD

SCENARIO: *A new restaurant is being built in an older building. There is some work to be done on the ceiling including installing ducts, lighting and painting the ceiling. The owners hope to open in a few days so several different tradesmen may need access to the ceiling to do their work at the same time. The floor of the restaurant is wood on top of concrete. The height of the ceiling is 15ft (4.57m) and the restaurant measures 20ft x 40ft (6.1m x 12.2m). The bar is 20ft (6.1m) long and 3.5ft (1m) high and 3.5 ft (1m) wide. There is 10ft (3m) of space on each side of the bar.*

KEY POINTS

The most important information you must cover in this session:

- ☐ Frame Scaffolds can be used in varying widths, lengths and heights to suit your particular application. A Frame Scaffold can be constructed in three fundamental ways: as a Single Bay (Tower), a Scaffold Run or an Area Scaffold.
- ☐ Once you know all the requirements of the project, you can develop a plan. This plan, in the form of a sketch or drawing, allows you to figure out the scaffold design on paper.
- ☐ You can develop your equipment list from a sketch or drawing of the scaffold configuration.While it is possible to make an equipment list from a mental picture of what is required, errors can easily result from such an approach.
- ☐ Your sketch doesn't have to be perfect but it should show different views of the scaffold such as: the plan view and elevations (front and side). It should also include important details such as tie design and placement (if required)
- ☐ Graph paper can be a really helpful tool to allow you to draw your scaffold to scale. Depending on the size of the scaffold you have to draw, you can choose graph paper with large or small squares.
- ☐ Adding additional lifts and bays to a basic frame scaffold unit simply involves building onto this basic scaffold.
- ☐ The first lift of the scaffold is the most critical because it will determine if the scaffold will be plumb, level, and square.
- ☐ Each frame must be braced to at least one other frame. This means that both the "front" and "back" braces are to be installed.

NOTES

SESSION 5: OVERVIEW
MULTI-BAY & LIFT SCAFFOLDS

SESSION PURPOSE

The purpose of this session is to prepare trainees to safely build higher scaffolds and ensure they are stable through the use of ties. Trainees also learn about enclosed scaffolds and precautions that must be taken when building and working on enclosed scaffolds.

LEARNING OUTCOMES

By the end of this session, your trainees should be able to:

- Describe how to stabilize higher scaffolds using ties
- Identify important considerations when building enclosed scaffolds

DURATION

Approximately 15 minutes

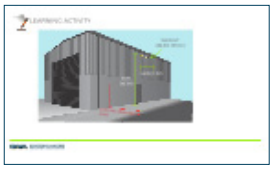
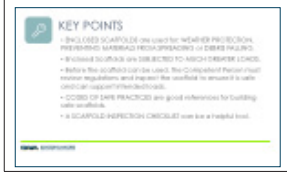
PREPARATION REQUIRED

- Read Section 5 of the Study Guide and familiarize yourself with the Key Points
- Review the PowerPoint slides for Section 5 and the Trainer Notes
- Familiarize yourself with the Learning Activities in Section 5 and prepare your sketches of the scaffolds required for the scenario.

FLEXIBILITY

The instructions in this Trainer Manual are a recommended delivery option. You may need to adapt the activities and timings to suit the needs of trainees.

SESSION 5: SESSION PLAN

SLIDE(S)	INSTRUCTIONS
	
	• Discuss the different types of ties and the different ways ties can be constructed. Emphasize the importance of ties for stabilizing higher multi-lift scaffolds.
	• Discuss the increased loads that enclosed scaffolds are subjected to and the importance of having a qualified person design the scaffold (including the ties required). •
	• Clearly outline the Competent Person's responsibilities regarding scaffold inspections. • Explain how often scaffolds must be inspected and that this is a MINIMUM. • Describe the three colour tag system and how it works. •
LEARNING ACTIVITY	
	• Discuss the Learning Activity on page 80. If possible sketch out the scaffold design (on a whiteboard) and the type of tie that should be used in this scenario.
	• Review the key points from this session.

LEARNING ACTIVITY

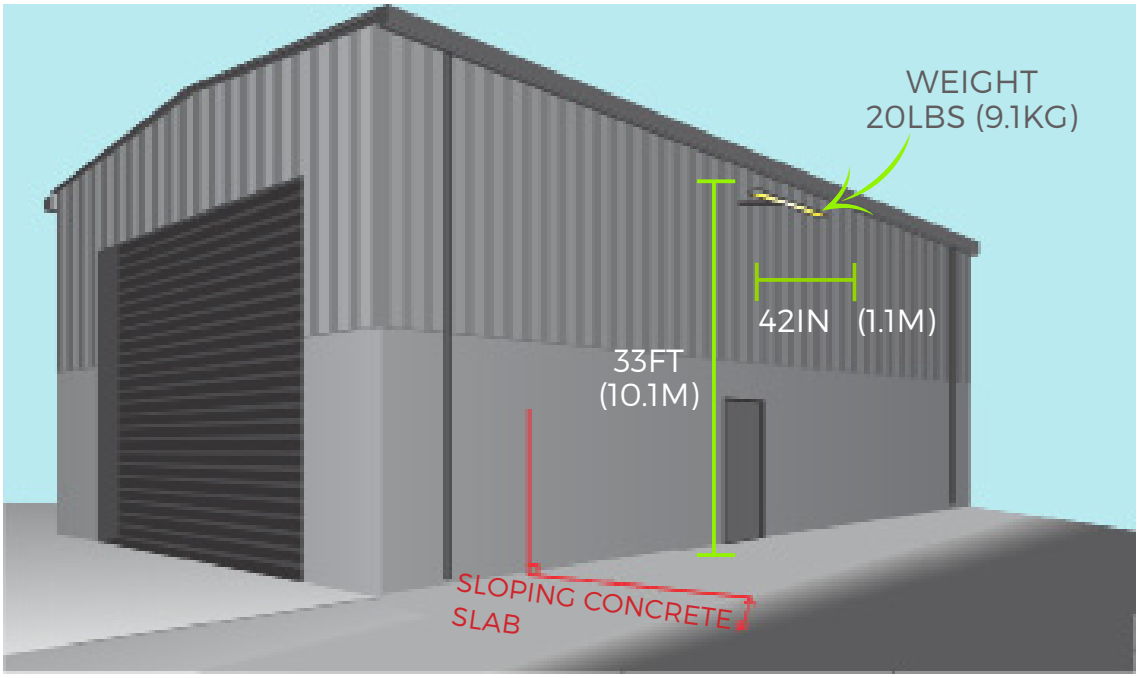
For the following two scenarios complete the following exercises:

1) Analyze the scenario and complete the Job Requirement Checklist

2) Based on the Equipment List provided, sketch out the design of the scaffold that is needed (assuming the only materials you have available are those listed in the Equipment list).

3) Determine the number and location of ties that are required according to your local regulations and indicate these locations on your sketches.

4) Sketch out a design for the tie you plan to use.



MULTI-LIFT FRAME SCAFFOLD TOWER

SCENARIO: *A worker must repair an outdoor lighting fixture extending 42in (1.1m) out from the face of a warehouse wall. The light fixture, which weighs approximately 20 lb. (9.1kg), is 33ft. (10.1 m) above a slightly sloping concrete slab. The worker can stand and reach 6ft. (1.8 m) above a work platform, so the scaffold platform must be approximately 27ft. (8.2 m) above the concrete slab.*

JOB REQUIREMENT CHECKLIST:	
Type of work or activity:	
Type and shape of structure:	
Conditions:	
Length of time needed:	
Intended loads:	

EQUIPMENT NEEDED:

8	5ft x 6ft 6in (1.52m x 2m) frames
8	4ft x 7ft (1.2m x 2.1m) crossbrace
4	Screwjacks with baseplates
4	Sills: 2in x 10in x 18in (51mm x 254mm x 457mm)
3	7ft (2.1m) scaffold decks
2	5ft (1.5m) guardrails
4	7ft (2.1m) guardrails
2	5ft (1.52m) toeboards
2	7in (178mm) toeboards
2	Guardrail posts
1	Guardrail access panel
4	6ft 6in (2m) clamp-on ladders
1	5ft (1.52m) clamp-on ladder
6	Ladder brackets
16	Coupling pins
20ft	Wire (for tie-in)
2	2in x 4in x 12in wood block (for tie-in)
2	Anchors (for tie-in)
4	Locking Pins for Guardrail posts

KEY POINTS

The most important information you must cover in this session:

- ☐ Ties to an existing structure are an important requirement to ensure the stability of a scaffold. They are required when the scaffold is enclosed or exceeds a permissible height relative to the minimum base width.
- ☐ There are a variety of methods that can be used for securing the scaffold to the structure. The most common method utilizes wire for tension (the scaffold falling away from the structure), and either tube or a piece of wood to resist compression (the scaffold falling into the structure).
- ☐ Check your local regulations for the required spacing of ties based on the dimensions of your scaffold. Make sure all the required ties are in place.The best location for the ties is near the top bearer or horizontal member of the frame.
- ☐ Enclosed Scaffolds are used for weather protection, or to prevent materials such as sandblasting grit, asbestos or other undesirable materials from spreading into the environment, or to prevent debris from falling into areas below the scaffold.
- ☐ Enclosed Scaffolds are subjected to much greater loads than standard scaffolds. Additional ties and/or bracing may be required. Consult a qualified person for assistance.
- ☐ Scaffold equipment used for hazardous material abatement must be protected from contamination.

NOTES

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SESSION 6: OVERVIEW
DISMANTLING & STORAGE

SESSION PURPOSE

The purpose of this session is to familiarize trainees with the process of safely dismantling a scaffold and how to properly store Frame Scaffold equipment.

LEARNING OUTCOMES

By the end of this session, your trainees should be able to:

- Demonstrate how to prepare for and dismantle scaffolds safely.
- Store scaffold equipment properly to prevent damage.

DURATION

Approximately 70 minutes (Includes Practical Assessment and Dismantling)

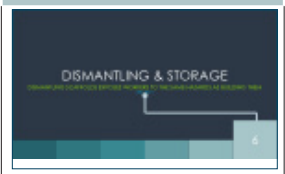
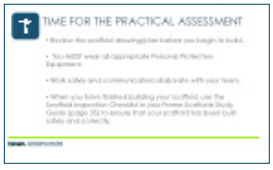
PREPARATION REQUIRED

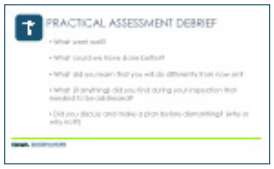
- Read Section 6 of the Study Guide and familiarize yourself with the Key Points
- Review the SAIA or SIAC Codes of Safe Practices section on Dismantling Scaffolds
- Review the Scaffold Dismantling Checklist
- Review the PowerPoint slides for Section 6 and the Trainer Notes

FLEXIBILITY

The instructions in this Trainer Manual are a recommended delivery option. You may need to adapt the activities and timings to suit the needs of trainees.

SESSION 6: SESSION PLAN

SLIDE(S)	INSTRUCTIONS
	• DISMANTLING & STORAGE: Intro Slide
	• Discuss the most important points to remember when dismantling Frame Scaffolds. • Remind the trainees that the dismantling of the scaffold is as important a part of the PRACTICAL ASSESSMENT as the building and you expect them to work safely and remove components in the correct order.
	• Explain that while trainees may not be responsible for the storage of the equipment they are using, it is still important to stack equipment neatly and group similar sized components together for easy pick-up and storage. It may be important to compare what is there with the original shipment list to ensure nothing has gone missing. • Emphasize the importance of separating and tagging any damaged components so they are not re-used.
	• Review the KEY POINTS from this session.
PRACTICAL ASSESSMENT	
	• Stop the presentation here and review the requirements of the Practical Assessment with the trainees. • Provide them with a drawing or plan for the scaffold you want them to build. • Ensure they are wearing all appropriate Personal Protective Equipment. • After the scaffold(s) have been built – have the trainees inspect their scaffold using their Inspection Checklists.

SLIDE(S)	INSTRUCTIONS
	• Divide the trainees into teams based on how many scaffolds were built. (If only one scaffold was built work as one group). • Instruct the teams (or group) to discuss the process of dismantling the scaffold. (*What should be done before dismantling?, Which components should be removed first? Etc.*) • Use the Dismantling Checklist provided (as well as the Dismantling section of the SAIA Code of Safe Practices or SIAC Code of Safe Practice) as guidance • Store or pack up the equipment following best practices. Remove or separate any damaged equipment. • Share your observations of the build with the trainees (what you saw that they did well and what you feel they could have improved). Allow them the opportunity to share their answers to these debrief questions.
	• Review briefly the course content before the exam. • REMEMBER – THIS IS YOUR OPPORTUNITY TO CORRECT ANY UNSAFE OR INCORRECT PRACTICES.

SAFETY FIRST

No matter how late it gets, do NOT allow trainees to rush the dismantling process. Make sure the scaffold is dismantled safely and no equipment is damaged.

IMPORTANT!

Even if the Practical Assessment did not go very well, it is important to debrief with the trainees. This is their best opportunity to learn from what went wrong to prevent them from making similar mistakes on the job.

LEARNING ACTIVITY

*Discuss with your team the process of dismantling the scaffold that you constructed in class. Use the following checklist (as well as the Dismantling section of the Code of Safe Practices - in the Appendix of **Scaffold Fundamentals** manual) as guidance:*

Dismantling checklist:

- ☐ Wear proper protective equipment including: Hard hat, safety glasses, hand protection and appropriate footwear.
- ☐ Correct Fall Arrest Equipment is worn as required by local Health and Safety regulations.
- ☐ Dismantling crew understands the purpose and design of the scaffold.
- ☐ Scaffold inspected for missing or damaged parts, prior to dismantling. Missing or defective parts replaced prior to dismantling.
- ☐ Intended procedures were discussed with the dismantling crew.
- ☐ Proper access is correctly used to reach upper platform.
- ☐ Equipment is dismantled with care, in the reverse order of how it was built.
- ☐ Materials are passed safely.
- ☐ Equipment and materials are returned to storage neatly.
- ☐ Correct safety procedures are followed.

Comments:

KEY POINTS

The most important information you must cover in this session:

- ☐ Dismantling should be done carefully to ensure that the scaffold will come down in a controlled, safe, logical manner. Begin dismantling the scaffold from the top.
- ☐ Dismantlers must understand how the scaffold was erected, how loads are transferred, and the best sequence for dismantling the scaffold, BEFORE beginning the dismantling process.
- ☐ It is very important that workers at lower levels not get ahead of the dismantlers by removing braces, planking, or guardrails to "speed up the job."
- ☐ A Competent Person must inspect the scaffold and scaffold components before dismantling to make sure the scaffold is stable and has not been dangerously modified.
- ☐ As with the building and use of scaffold equipment, it is important to wear the proper personal protective equipment as required by the jobsite conditions.
- ☐ It is very important to Inspect the scaffold to make sure it is structurally stable. Make sure platform units are safe and secure and ensure that both ends of all planks and platforms are resting on load-bearing members and all critical bracing is intact.
- ☐ Make sure to inspect all working platform areas for loose items that could accidentaly fall on a worker as the scaffold is being disassembled. Remove all loose items before disassembling the scaffold.
- ☐ Remove the guardrails and posts first (workers should be tied off to prevent falls). Workers below should stand in a safe position when scaffold components above are being lowered down.
- ☐ Never leave partially dismantled platform unguarded or without proper barricades.
- ☐ Examine components for damage and separate them for later disposal or repair.
- ☐ Once all the scaffold components have been inspected it is important to store them properly.

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