## 1.0 INTRODUCTION

This standard provides criteria for erecting, dismantling and use of scaffolds which is a high-risk activity, not only to those carrying out the work, but to other workers working in the vicinity.

## 2.0 SCOPE

This standard applies to those who erect, inspect or work on or around scaffolding.

## 3.0 REFERENCES

| | |
|---|---|
| NB OHS General Regulation 91-191 | New Brunswick Occupational Health and Safety Regulation 91-191 Part XI: Section: 131(1) - 145(2) |
| CSA Z797-18 (reaffirmed 2023) | Code of Practice for Access Scaffold |
| CSA Z271-20 | Design of Suspended Access Equipment |
| HSEE-03-51 | Line of Fire |
| HSEE-03-12 | Rigging & Lifting Operations |
| HSEE-03-16 | Fall Protection Working at Heights |

## 4.0 TERMS AND DEFINITIONS

| | |
|---|---|
| Engineered scaffold | A scaffold that is erected and loaded according to the design drawings |
| Frame | A scaffold in which the standards and transoms with associated bracing are manufactured as integral units called “frames” |
| Gin-wheel | A pulley assembly attached to a scaffold, used with a rope to manually hoist material. |
| Scaffold | A temporary elevated or hanging platform used to support materials and/or workers during construction, repair, or maintenance operations. |
| Scaffold plank | A plank that is designed and manufactured to serve as a scaffold plank. Laminated lumber, Manufactured or Sawn Lumber planks are all types of scaffold plank. |
| Supervisor | A person authorized by an employer to supervise or direct the work of employees regardless of title (lead, foreman, senior, etc.) |
| Swing Staging | A work platform suspended by two ropes from an overhead fixed support, equipped with equipment that permits vertical movement. |
| Toe Board | A protective barrier installed on the edges of work platforms or other raised areas to prevent objects from falling to a lower level and potentially harming someone or causing damage to property. |

| | |
|---|---|
| Tube-and-clamp | A scaffold in which the standards, ledgers, transoms, and braces are lengths of tubing that are connected by clamps. |
| Working Load | The total weight of worker, equipment, materials and all loads (e.g. Wind loads, snow loads). |

## 5.0 ROLES AND RESPONSIBILITIES

### 5.1 Management:

- Ensure adequate resources and processes are available

### 5.2 Supervisor / Contractor

Ensure that personnel who erect or use scaffold are competent (demonstrate knowledge and ability in the application of the rules and regulations, safe operational procedures, and emergency plans for the type of access scaffold systems being used).

- Shall ensure that all personnel engaged in scaffold work, except the ground person, shall use appropriate fall arrest equipment.
- Shall ensure inspections are completed as required.
- Shall ensure the scaffold is built in accordance with the design or erection drawings, as applicable and manufacturer's specifications and supplier's literature.

### 5.3 Employee

- Competent in the work they are asked to perform
- Employees working on a scaffold shall ensure that only materials for current use are kept on the scaffold
- Monitor work areas for hazards and take the necessary precautions
- Ensure that scaffolding is set up according to safety standards and regulations
- User of scaffolding shall review scaffold tag prior to use
- User of scaffold must notify supervision of any safety concerns associated with the scaffolding
- Users must utilize the appropriate fall protection equipment were indicated

## 6.0 STANDARD

**General**

Scaffolding consists of a temporary elevated platform that is used to support materials and employees while they work at heights.

### 6.1 Pre-planning

Proper pre-planning and appropriate controls help make sure the scaffold is erected safely and used properly. This includes the following:

- Choose the type of scaffold appropriate for the job.
- Determine the maximum load of the scaffold.
- Assure a good foundation.

- Maintain appropriate distances to avoid electrical hazard refer to MAD.
- When working around electrical components determine if grounding and bonding is required.
- a scaffold will not impede access to emergency equipment, exit door, sprinklers, or an electrical panel;
- Inspect all components of the scaffold for defects.
- If using a manufactured frame scaffold, ensure it is erected, used, maintained, and dismantled in accordance with the manufacturer's specifications.

## 6.2 Inspection

### 6.2.1 Visual inspection by user before use

A scaffold shall be inspected before initial use by the user in accordance with the requirements, to determine that;

- a tag exists that may have special instructions for review.
- there are no missing or improperly fitted components.
- there is no part or component that is damaged or unusable.
- the loading and use of the scaffold are in accordance with the duty rating

### 6.2.2 Rolling Scaffolding Inspection

A rolling scaffold shall be inspected daily by a qualified scaffold erector. The user shall inspect it before initial use and after modifications;

- there are no missing or improperly fitted components;
- there is no part or component that is damaged or unusable;
- the loading and use of the scaffold are in accordance with the duty rating and
- a method is in place for the communication of the results of the inspection. A record of this inspections shall be kept and readily available.

### 6.2.3 Periodic inspection

The requirements for periodic inspection are as follows:

- A competent person shall inspect the scaffold at a minimum of 28 days., or more frequently as required. (Ex. Shutdowns, or site specific), to ensure
  - the scaffold is being properly maintained and is not undergoing deformation and that all connections are secured
  - the scaffold can withstand all loads based on design capacity; and
  - the duty rating of the scaffold has been communicated to the user via the scaffold tag.
  - Any defects that are found will deem the scaffold unsafe and removed from service until all deficiencies are repaired or replaced.
- the required inspection frequency and the dates of inspections shall be documented on the tag and communicated to the user.
- a record of this inspection shall be kept by the contractor and/or scaffold lead.

### 6.2.4 Inspection of engineered scaffold

- Prior to being placed in service, an engineered scaffold shall be inspected by the person responsible for the design drawings or their delegate to ensure

compliance with this standard and the design drawings. A record of this inspection shall be kept at site and/or with the contractor.

### 6.2 General Requirements:

- a means of access and egress are installed as erection takes place;
- ensure that tie-ins, bracing, and connections are installed in sequence as erection progresses and base plates and mud sills are installed when require to ensure that no excessive settlement takes place;
- Scaffold planks are secured to prevent movement in any direction that may endanger an employee and has a slip resistant surface. Ensuring locking clips and pins are in the closed position.
- the scaffold system is capable of withstanding
- all erection loads, including eccentric loads, as erection progresses;
- all anticipated working loads, including workers, materials, and equipment
- a scaffold will not restrict the width of a permanent surface that is used as a walkway to less than 0.56 m (22 in);
- scaffold components, such as tube ends, do not create a hazard by protruding into areas used for work or access/egress;
- the scaffold is protected from contact by vehicles or machines;
    - a scaffold erected on or within 1.5 m (5 ft) of a fixed or overhead crane is checked for interference with stationary structures and the crane's own travel by means of a "crane travel test run". If a test run cannot be performed, or the scaffold is in the crane's path, arrangements shall be made to lock the crane out of service prior to further scaffold work;
- if cutting of metal scaffold material is necessary, all sharp edges and burrs shall be removed;
- Gin Wheel System is a pulley mounted on a support that extends from the scaffold. A rope is rigged from grade up to the pully and back to grade. A worker at grade level pulls on the rope to hoist the load.
    - Gin Wheel safe practices include the following:
    - Load should be no more than 50 kg (110 lb)
    - The gin wheel system shall be
        - Installed on a frame leg or standard, as near to a tie as possible;
        - Not installed on a guardrail system
        - The bracket holding the gin wheel must be secured to ensure it does not disconnect during lifting operations.
- Prevented from slipping along its means of support and positioned such that the work on the scaffold will not need to extend his or her torso beyond the guardrail when handling the load.
    - The worker pulling on the rope should stand close the load but not directly under it, in order to minimize the lateral load applied to the scaffold.
    - The worker on the scaffold who handles the load should be positioned behind the scaffold member for balance and shall be protected by personal fall protection

- Rope for manual hoisting shall be the proper material and size to meet the load requirements
- Regular inspection of the rope's exterior and interior for signs of excess wear such as broken strands, gaps or separations between strands, etc.
- Allowance for 50% reduction of rope strength for knots and bends and 25% for hitches
- Proper selection and tying of knots and hitches to secure ethe load
- Bundling of tubes or braces in amounts of odd numbers so they are interlock tightly together;
- Securing of small parts by carrying them in a collapsible bucket (canvas bag) or by fastening them to larger components such as tubes; and
- Ensuring that loads are secure before beginning a lift.

### 6.3 Hazard Awareness

Hazards to be considered when planning for the safe erection and use of an access scaffold include:

a) fall hazards for workers erecting, accessing, or working on the scaffold;
b) overturning of the scaffold;
c) collapse of all or part of the scaffold;
d) hazards involving material loading, handling, and storage;
e) contact with energized electrical sources; and
f) work in confined spaces.

- Line of Fire incidents occur when the path of a moving object or the release of hazardous energy intersects with an individual's body. Individuals shall remain outside of the line of fire at all times when hand balming equipment.
- Where an employee is working on a scaffold above another employee, the employee working above shall ensure that the employee below is protected from the hazard of objects falling from the higher level by overhead protection or by such means as tying off tools and other unsecured objects on the higher level.
- When handling scaffold components or other material in the vicinity of energized electrical conductors such as powerlines, precautions shall be taken to maintain the minimum safe approach distance
- Where there is a hazard from an induced electrical charge, the following measures shall be taken:
  - The scaffold shall be effectively grounded and bonded when required.
  - Any induced electric charge on a load that is being hoisted shall be dissipated by applying grounding cables or other effective means before workers contact the load.
  - Flammable materials shall be removed from the immediate work area.

- Where the height of a scaffold will exceed three times the smallest lateral base dimension, the scaffold shall be stabilized by:
  - attachment to a building or structure by means of ties; or
  - attachment to the support surface by means of guy wires or,
  - by an approved method.

- If there is a danger of drowning, workers shall wear an approved life jacket or personal flotation device.

### 6.4 Weather:

- increased caution is exercised when erecting a scaffold in adverse weather conditions, such as:
  - wind, ice, or snow;
    - all means of scaffold access, guardrails, and platforms are kept free of accumulated ice and snow while the scaffold is in use;
  - heavy rains, that they do not adversely affect soil or base stability;

### 6.5 Barrier Tape / Tag:

- When a scaffold is being constructed or dismantled, or when work is carried out overhead, the work area shall be secured by a barrier and posted with a tag as follows:
  - Scaffolds where the height, to the highest scaffold component, will be at or less than 15', the work area shall be identified either by using a spotter(s) or with yellow caution barrier tape and barrier tag(s) requiring permission for access by unauthorized personnel.
  - Scaffolds where the height, to the heights scaffold component, will be greater than 15', the work area shall be identified with red danger barrier tape and barrier tag(s) requiring permission for access by unauthorized personnel.

### 6.6 Guardrail system

Scaffolds 3 m (10 ft) in height, or a mobile rolling scaffold, a guardrail system and toe board along all open sides and ends of platforms other than access points, must be installed.

- The top rail of a handrail for a walkway or platform shall not be less than 900 mm (2.95 ft) and not more than 1.07 m (3.51 Ft) above the floor level of the walkway or platform. A second rail shall be placed at the midpoint between the top rail and the floor level of the walkway or platform unless the intervening space is closed by a screen or other suitable means. The handrail shall be capable of withstanding a load applied to the rail of at least 90 kg applied in any direction.
- When a toe board is installed, it shall extend from the floor of the walkway or platform and not be less than 120 mm (4.72 in) in height

### 6.7 Ladders / Gates/ Stairway:

Ladder cages are required where the ladder height exceeds 3 m (10 ft). Ladder height is measured from grade, rest platform, or work platform to the elevation of the next rest or work platform.

- Vertical ladders shall be securely fastened to the scaffold at the top and bottom of the ladder and at intervals according to the requirements of the manufacturer.
- Auto closing gates must be present at all openings.
- The ladder cage shall begin not more than 2.2m (7’2”) and not less than 1.98m (6’6”) above grade (or platform) and continue at least 0.9 m (3 ft) above the uppermost platform that is accessed.

- The minimum inside horizontal opening dimensions shall be maintained at 0.71 m to 0.76 m (28 in to 30 in) and horizontal braces shall be installed at maximum 1.2 m (4 ft) vertical spacing.
- If the ladder cage is constructed with tube-and-clamp material, the vertical tubes should be located on the inside of the cage. Vertical tube spacing should not exceed 305 mm (12 in) center to center.
- Rest platforms must be at intervals not more than 9 m (30 ft) and be offset at each rest platform; Cross-bracing is not to be used as a means of access.
- If less than 6 m (20 ft) in height, is equipped with a continuous access ladder or stairway commencing at ground level.
- If greater then 6 m (20 ft) in height, is equipped with a continuous access stairway commencing at ground level or if the circumstances do not permit the metal scaffold to be equipped with a continuous access stairway, with a continuous access ladder commencing at ground level.

## 6.8 Swing Staging

A supervisor and/or contractor shall ensure every employee who works on or from swing staging shall:

- have an effective means of summoning assistance,
- be protected from falling while getting on or off and while working on the Swing Staging equipment, and
- use a vertical lifeline that is
  - suspended independently from the Swing Staging equipment, and
  - securely attached to an approved anchor point so that the failure of one means of support will not cause the lifeline to fail.

## 6.9 Rolling scaffold

Is a free-standing tower scaffold equipped with casters directly attached to the standards. This scaffold configuration can be moved around easily on firm, level surfaces.

### 6.9.1 Moving of rolling scaffold

The following safe-use practices shall be followed when moving a rolling scaffold:

- Side brackets or other types of platform extensions shall not be used on rolling scaffolds. Outrigger stabilizers may be used to increase the base dimension and allow a greater maximum height. Where stabilizers have unequal extension, the lateral base dimension is twice the distance from the centreline of the scaffold to the centre of the least extended stabilizer
- Prior to use mobile rolling scaffold shall be inspected daily and tagged by a competent person and by the person is to use it.
- Materials and equipment shall be secured or removed from the work platform before a rolling scaffold is moved.
- A rolling scaffold shall not be moved while supporting a worker.

- Before moving a rolling scaffold, the path of travel shall be checked for hazards including the MAD (Minimum Approach Distance) from energized equipment will be maintained at all times; and there is adequate clearance from any obstructions. A rolling scaffold shall not be moved without sufficient help.
- Rolling scaffold shall be moved by pushing or pulling at the base frames only. The upper portion of the scaffold shall not be pushed or pulled.
- A rolling scaffold is not to be higher then three times the width of the smallest lateral base dimension of the scaffold
- Side brackets or other types of platform extensions shall not be used on rolling scaffolds.
- Outrigger stabilizers may be used to increase the base dimensions and allow a greater maximum height.
- All wheels are to be equipped with locking mechanism and equipped with guardrails.

#### 6.9.2 Documentation and Record Keeping

The following shall be readily available on site and/or with the contractor where the scaffold is located:

- records of all inspections, fall protection and rescue plans and
- design or erection drawings (as applicable), manufacturer's specifications, and supplier's literature.

### 6.10 Suspended Scaffold

- Any person that is required to work on a suspended scaffold shall have a rescue plan in place which includes an effective means of summoning assistance in case of an emergency.
- A hanging scaffold shall be erected according to the design drawings.
- Effective means of access and egress are to be integrated into the build of the suspended scaffold, if unable to build into the scaffold the use of vertical life line that are suspended independently from the suspended scaffold and attached to an anchor point so that the failure of one means of support will not cause the life line to fail.
- Suspended scaffolds are to be inspected at least once daily and before being used. If defects are found no one shall use the scaffolding until the defect has been eliminated.

### 6.11 Engineered Scaffold

#### 6.11.1 Engineered Design Drawings Criteria

A scaffold that meets any of the following criteria shall be described by design drawings and shall be erected in accordance with the engineered design drawings:

- a scaffold that incorporates a truss, joist, or bridge section.
- a scaffold that includes a cantilevered platform or a side bracket that projects more than 0.8 m (32 in)
- a scaffold that includes a cantilevered platform supported by end or side brackets that will support loads other than personnel

- a scaffold that incorporates a powered hoisting device
- a scaffold that includes a partial or full enclosure
- a scaffold bearing a platform live load more than 3.6 kN/m2 (75 psf)
- a scaffold of outrigger configuration
- a hanging scaffold
- a scaffold, other than a tube-and-clamp, that exceeds a height of 15 m (49 ft) from its base support to the uppermost platform
- a tube-and-clamp scaffold that exceeds a height of 10 m (33 ft) from its base support to the uppermost platform; and
- a scaffold subject to sudden impacts.
- The scaffold is **not** constructed of a tube and clamp system **and** exceeds 15m (49ft) in height above its base support

Engineered scaffolds or temporary lifting beams shall have the approved drawing scanned to the supervisor or a hard copy in hand by the inspector prior to tagging. A copy of the drawing will be maintained on file until it has been dismantled.

## 7.0 TRAINING

- Fall Protection Competency (if required)
  - Users – when indicated on the scaffold tag
  - Erectors – all at times

## 8.0 APPENDIX

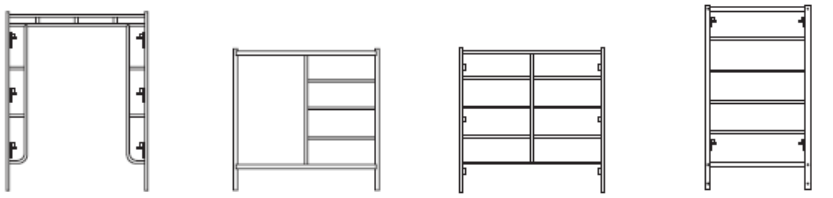
Appendix A – Diagram of Scaffold Build

Director of Total
Health & Safety

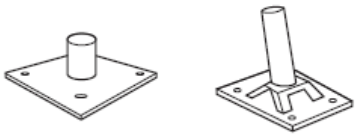
## REVISION and APPROVAL RECORD

| Revision # | Date | Revision Summary | Author | Reviewed By | Approved By |
|---|---|---|---|---|---|
| 01 | 2022-01-06 | Complete revision | Jo-Ann Targett | TH&S Group | Robin Condon |
| 02 | 2025-07-03 | Alignment with regulation changes | Jo-Ann Targett | TH&S Group | Roland Roy |

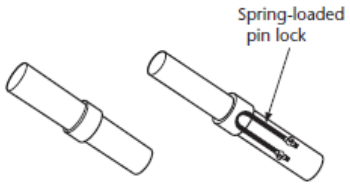
## Appendix A – Scaffold Components

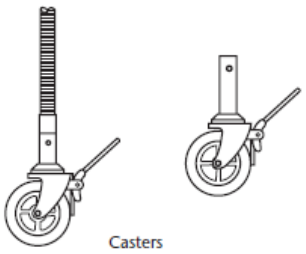

**Examples of frames**



Base plates



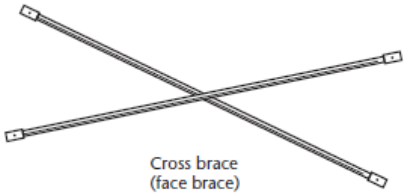

Pins



Casters

Pigtail

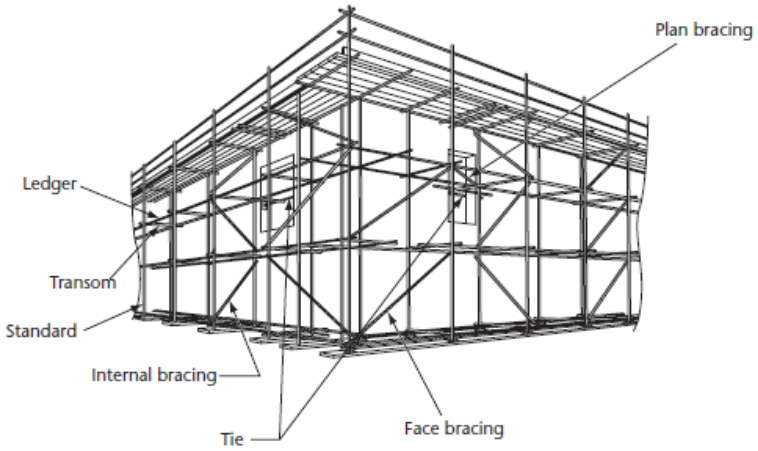
Gravity locking pin



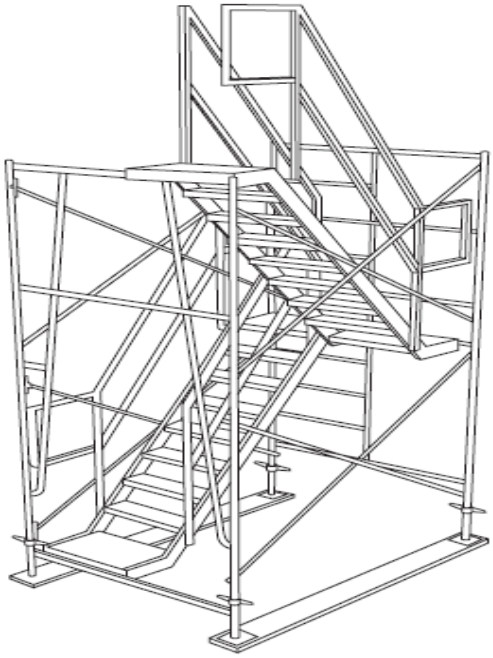
Cross brace
(face brace)

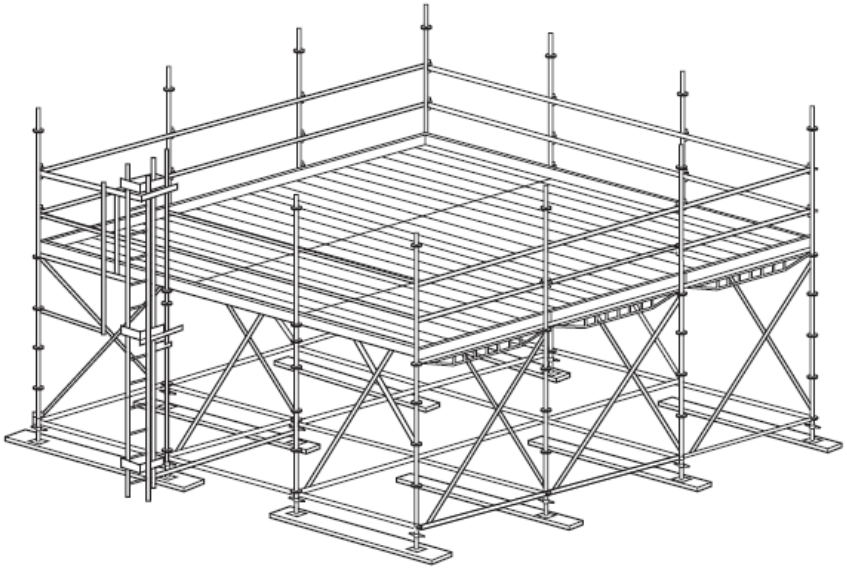
Gooser bar
(plan brace)

Example of tube and clamp scaffold



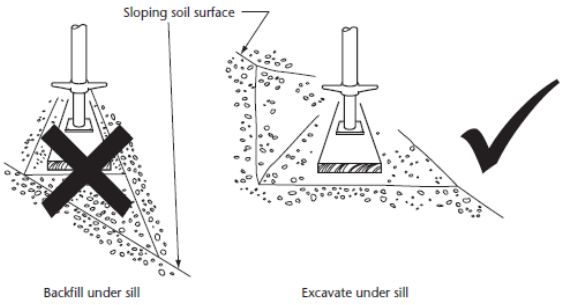

Example of a stair tower – Frame scaffold components

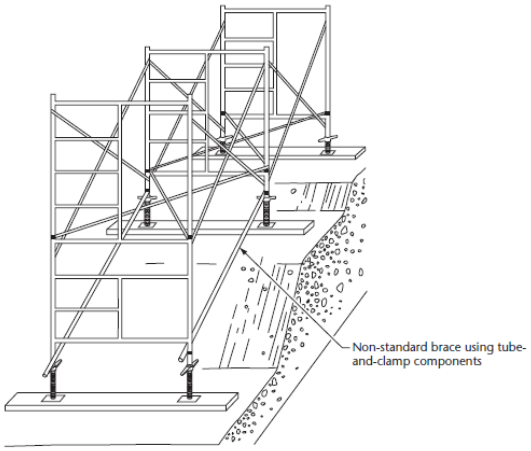


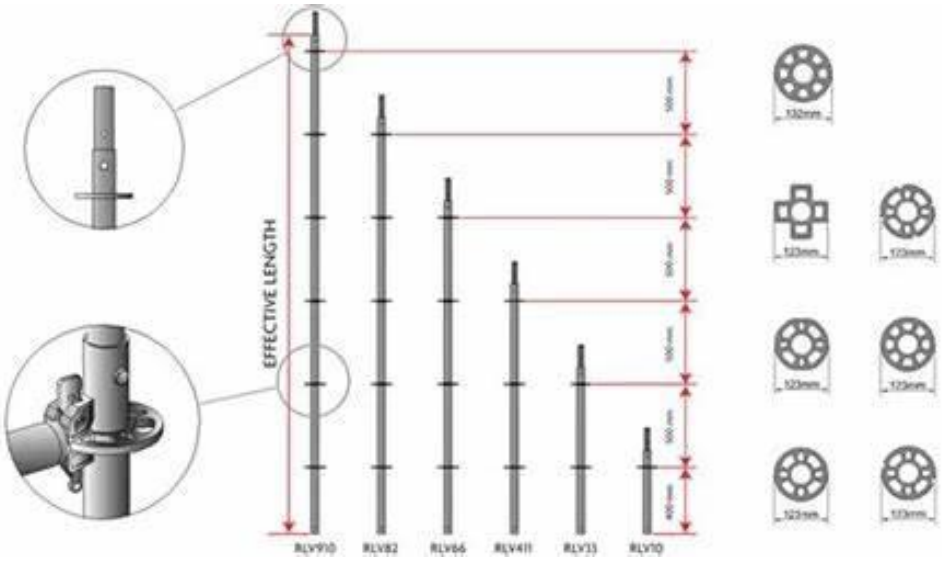


Example of a dance floor

Rolling scaffold with casters


Sloping soil surface
Backfill under sill
Excavate under sill


Non-standard brace using tube-and-clamp components


EFFECTIVE LENGTH
RLV910
RLV882
RLV66
RLV411
RLV33
RLV10


Hand Signal procedures for ordering scaffold material