Erection and Dismantling of Scaffolds

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1. Purpose, scope and target group [back to TOC]

1.1 Purpose

The purpose of this instruction is to describe the requirements and responsibilities for the erection and dismantling of all scaffolds on SAPREF sites.

1.2 Scope

This scope covers the following:
a) the legal requirements and responsible persons for the activities:

1) suspended scaffolds and all lifting tackle and lifting machines forming an integral part thereof:

- Occupational Health and Safety Act and DMR18 and OHS Act Construction Reg's (16)(2)
- Supplier Documentation
- Lifting Tackle
- Anchor Points
- Winch Braking Devices Precautionary Test
- Safety Precaution
- Fixed Suspended Scaffolds

2) erection and dismantling of scaffold framework and scaffold platforms:

- Occupational Health and Safety Act, the Construction Reg's (16) and SANS 10085.
- CONTRACTOR Requirements
- Transporting of material
- Pre-Erection Discussion
- Free Standing Scaffolds
- Independent Tied Scaffolds
- Erecting Scaffolds

- Safety Check List

- Handover Procedure
- Scaffold Registers
- Tagging System
- Safety Harnesses
- Material Racks
- Dismantling of Scaffolds
- Scaffold Inspection
- Modifications to Scaffolds
- High Risk Scaffolds
- Mobile Scaffolds

1.3 Target Group

All SAPREF employees and Contractors.

2. Description [back to TOC]

2.1 Suspended scaffolds and all lifting tackle and lifting machines forming an integral part thereof

2.1.1 The above shall as a minimum requirement comply with the OCCUPATIONAL HEALTH AND SAFETY ACT NUMBER 85 of 1993, Construction REGULATIONS 16 and HSSE.PM.0004 SAPREF HSSE Regulations Chapter 8.

In addition to these regulations SAPREF procedures are as follows:

2.1.2 CONTRACTOR Documentation

CONTRACTOR shall produce the following documents prior to use:
a) Up to date Inspection and load testing records.
b) Certification with regard to the competence of Persons using the scaffold.
c) Safe working procedure based on the appropriate RAP

2.1.3 Lifting tackle

a) Manufacturer's Safe Working and/or Mass load shall be clearly visible on all equipment.

b) In the event of a winch rope having to be shortened on site as a result of suspect damage special care must be taken to ascertain sufficient rope on the winch drum to safely lower the suspended swing scaffold to ground level.

c) Winch rope ends should be finished off with SUPERLOOP THIMBLE EYES preferably made up by a recognized Rope Company. **Under no circumstances shall CROSBY CLIPS be used for the same purpose**. (Refer Fig. 13 and Fig. 14 on 28-0080-12)

d) If necessary rope deflections shall be made through OVAL EYE snatch blocks and not the open hook type. Care should be taken to match rope with sheaf wheel to avoid rope flattening and / or crushing. (Refer Fig. 12 on 28-0080-12)

e) All connections shall be made with SAFETY PIN BOW SHACKLES and not the screw pin type. (Refer to Fig. 10 on 28-0080-12)

f) On site fabricated Lifting Tackle shall not be used.

g) Natural and/or man-made fibre ropes should be carefully inspected and replaced with new ones if in doubt. They shall under no circumstances be used to support any part of a

suspended scaffold or persons. Steel wire ropes conforming to Manufacturer's specifications shall be used.

2.1.4 Anchor points

CONTRACTOR shall give special attention to upper Anchor Points by applying a load test to same. The combined weight of the Scaffold, all equipment and Persons working on the scaffold must be considered.

2.1.5 Final check on winch braking devices

Once the winch ropes are attached to the upper anchor points the Operators can board the scaffold, raise same to one meter above ground level and stop. The scaffold may now be lowered and stopped at intervals checking the integrity of the braking devices in doing so.

2.1.6 Additional safety precautions

a) Safety lanyards shall be attached to upper Anchor points other than those supporting the scaffold. Lanyards should be inspected thoroughly by the user for any visible defects, prior to use to ensure that it is fit for purpose.
b) All Safety Harnesses and Automatic Safety Arrestors shall be SABS Approved.
c) The working area should be cordoned off with chevron tape at ground level.
d) Tools and material should be tied to the inside of the working platform handrail and not left on the platform.
e) Winch Rope and Lanyard Cross Overs at the upper anchor points shall be done only when the Scaffold is resting on ground level. Great care must be exercised during this operation and no Persons shall be stationed directly below.
f) The job shall be stopped in bad weather conditions e.g. (winds exceeding 35km/hr and excessive rains of 40mm per hour and or where visibility is hampered and surfaces are too slippery for work to be conducted.)
g) The winch braking devices shall be checked at the start of every day.
h) The responsible Contract person shall carry out the following checks at start of every day:

i) All swing scaffolds should have a sign board (TAG) stating S.W.L and number of persons allowed inside swing.
j) During erecting and dismantling of vertical scaffolds a minimum of one board is required for the erector to stand on, this will minimize the risk of the erector from slipping and falling.

2.2 Erection and dismantling of scaffold framework and scaffold platforms

2.2.1 The above shall as a minimum requirement comply with the OCCUPATIONAL HEALTH AND SAFETY ACT NUMBER 85 of 1993, Construction REGULATIONS 16 SANS10085 and HSSE.PM.0004 SAPREF HSSE Regulations chapter 8.

In addition to this the SAPREF Requirements are as follows:

2.2.2 **CONTRACTOR requirements** :

a) CONTRACTOR shall provide documented proof with regard to the competence of his Scaffolding crews. Ongoing training is imperative to maintain a high level of hands on experience.
b) CONTRACTOR has prime responsibility for the safe erection and dismantling of scaffolding. No scaffolds above 2m to be erected or dismantled in extreme weather conditions (winds exceeding 35km/hr and excessive rains of 40mm per hour and or where visibility is hampered and surfaces are too slippery for work to be conducted. (Heavy rain or high wind) unless it is an emergency and has been approved by a PUM or MM / EM.
c) CONTRACTOR shall provide his employees with the necessary safety gear and equipment.
d) CONTRACTOR shall conduct safety toolbox talks with his employees at least once a week. A register shall be kept. SAPREF reviews will be carried out.
e) All scaffold supervisors and foremen must be in possession of a valid scaffold certificate when employed.

f) SAPREF approved Scaffold Company to erect scaffolding only, unless given permission by MM / EM.

2.2.3 Transporting scaffold material for the "Maintenance Contract"
CONTRACTOR shall supply the following for the sole purpose of transporting scaffold material across the Refinery Sites:

a) Forklifts.
b) Sufficient scotch carts must be available to move material to areas inaccessible to the above.

2.2.4 Pre-erection discussion
The scaffold Supervisor, Foreman and Requester shall clearly understand one another with regard to the purpose of the scaffold. The following should be discussed and agreed upon :
a) Correct elevation, width and length of a working platform.
b) No Scaffold shall be allowed to touch or rest against any Insulated line or piece of equipment or cause damage to Cladding on any such Line or Equipment. If this is unavoidable then agreement with the end user to replace all damaged Cladding must be agreed.
c) To avoid unsafe modifications to a completed scaffold it must be understood that the base of the scaffold determines the elevation and working platform size as originally agreed by user and scaffold supervisor. Quick fix modifications and / or extensions to these scaffolds could lead to failure at base if not correctly designed and executed. To fill in gaps between standard sized metal boards on working or rest platforms, up front discussion with the SAPREF host or engineer shall be done. The same applies to working or rest platforms where the standard size metal boards cannot be used. Therefore no allowances are made for excessive extensions.
d) The contractor is to be notified if a heavy load bearing scaffold is required.(Max load for a light scaffold is 160 kg/m²
e) Whether or not hot work is required on the working platform.
f) Only metal decking boards will be permitted.
g) Access around Scaffolds to be discussed with relevant Personnel.

2.3 Free Standing Scaffold

Definition. A scaffold which is not attached to any other structure and stable against overturning on its own account. Preference would be to buttress at 2 or 3 points. It shall never exceed in height more than three times the least width at the base. Any scaffold above 10m in height is subjected to a structural calculation and an erection drawing by Contractor.

2.4 Independent Tied Scaffold

Definition. A scaffold which has two lines of standards, one line supporting the outside of the deck and one the inside. It is not free standing but is tied into the structure to prevent overturning. (Refer Fig 1 on 28-0080-10)

2.5 Procedure for Erecting Scaffolds

2.5.1 The scaffold Foreman shall inspect all the required material with utmost care. Suspect material shall be removed from site to prevent further accidental use.

2.5.2 Ground stability shall be checked, and if doubtful, a second opinion should be sought from either Electrical Department for underground cable trenches, the Civil Department for ground stability or Area Engineer.

2.5.3 Steel base jacks shall be installed at every scaffold standard on base level. Adjustable base plates to be installed where ground levels vary. They shall be no less than 150mm square and 6mm thick. (Refer Fig 1 on 28-0080-10)

2.5.4 Sole plates made of rigid steel, 300mm2, under base jacks where the ground is sand, stone or grass. (Refer Fig 1 on 28-0080-10)Under no circumstances may steel decking boards be used for this purpose.

2.5.5 Standards shall be no longer than four meters in length, and placed no further than meters apart, they shall be vertical with a sleeve cup.

a) Base of the scaffold should be leveled using a spirit level.
b) There shall be no welds repairs done to any scaffold tubes.
c) A Red tag shall be securely fixed to the scaffold after the first four standards and ledgers are in place this will indicate that the scaffold is incomplete and unsafe to work upon if for any reason the scaffold is found untagged it shall also be considered unsafe.

Note: Only scaffolders erecting or dismantling are allowed on red tagged and/or untagged scaffolds and double lanyard Safety Harnesses must be attached to a fixed point that can support their weight.

2.5.6 Ledgers shall be horizontally affixed to all standards starting at 500mm above base jacks and thereafter no more than two meters apart.

2.5.8 Scaffolding shall be adequately braced in a Zig Zag formation to form a rigid structure under all possible load conditions for the intended use of the scaffold. They shall be fixed as close as possible to the ledger / standard connections at each and every lift.

2.5.9 Plan bracing shall be:
a) fixed across the diagonal of a bay to the inner and outer rows of standards,
b) fixed below the level of the working platforms,
c) provided at a spacing not exceeding 10 bays or 20 m, whichever is less, in the horizontal direction and preferably at the tie levels in the vertical direction.

2.5.10 Ties shall be effectively connected to standards and structure at two meter levels to avoid movement in any direction.

2.5.11 Rest platforms shall be decked out at a maximum of Four-meter elevations using non slip steel boards. An allowance should be made for the protruding ladder at each resting platform. There shall be no gaps between the boards. The boards shall be securely fixed to the ledgers and perfectly flush to avoid tripping.

2.5.12 Working platforms Shall be decked out with non-slip steel boards securely affixed to ledgers. They shall be perfectly flush with no gaps between them to avoid tripping.

2.5.13 Steel toe boards shall be firmly affixed to the insides of the standards on all working platforms and rest on the decking boards. They shall encompass the entire working platform. The boards shall not be less than 150 mm wide.

2.5.14 All tubing and steel boards shall be SABS approved.

2.5.15 Guard rails shall be securely affixed to the standards above the working platform. They shall be no less than 900 mm and no more than 1000 mm in height.

2.5.16 Knee rails shall be securely affixed to the same standards directly below the guard rails. They shall be no less than 450 mm and no more than 500 mm in height.

2.5.17 Both guard and knee rails shall encompass the entire working platform with the exemption of the side against the structure.

2.5.18 Access ladders shall be equally and securely clamped to the scaffold structure to prevent swaying. They shall rise no less than 1 m above the stepping off point at rest and / or working platforms.

2.5.19 All ladders shall be close to the platforms as possible with a maximum gap of no more than 200 mm between the side of the ladder and the nearest decking board. If the scaffold has more than one lift the ladders shall be installed on the opposite side of every platform.

2.5.20 All erected scaffolds with a ground area of 20m^2 to 100m^2 shall have two access ladders to all working and rest platforms and an additional ladder for every 100m^2 of ground area. This will provide an orderly evacuation in an emergency. Exit signs shall be displayed at all ladder ways irrespective of the size of the scaffold. In the case of scaffolds with a ground area less than 20m^2 consideration should be given to whether two access ladders are required due to the potential hazards of the work.

2.5.21 The scaffold tool as shown in attachment 28-0080-10 shall be used for erection and dismantling of scaffolding.

2.5.22 **NOTE:** A **SAFETY CERTIFICATE** is to be obtained if the scaffold is to exceed 10 meters in height.

2.6 Safety Check List for Scaffolding prior to handover

2.6.1 Any indication of ground collapse at the base.

2.6.2 Sole plates and base plates positioned and secured.

2.6.3 Access ladders firmly secured.

2.6.4 All excess material removed from site and platforms.

2.6.5 All couplers securely tightened.

2.6.6 Decking boards positively secured to ledgers, flush and with no gaps.

2.6.7 Sufficient bracing on entire scaffold structure and positively secured.

2.6.8 Sufficient ties connecting scaffold to structure and positively secured.

2.6.9 Toe boards securely attached and encompassing entire working platform.

2.6.10 Guard and knee rails securely attached and encompassing entire Working platform.

2.6.11 Access roads and passages clear.

2.6.12 All material corrosion free.

2.7 Hand-Over Procedure

On completion of the scaffold and prior to its first use, the Scaffold Foreman shall complete a scaffold checklist as described in 2.6. The checklist is stored with the scaffolding inspector.

A "Safe to Use" sign with the completed handwritten details of the conditions of usage is to be positioned in a prominently visible position, preferably at eye level, at every entrance to the scaffold. He may now hand over to the user.

Subsequent to a satisfactory final inspection, the Inspector of Scaffolding shall submit a Scaffolding Handover Certificate to the person who requested the scaffold to be constructed and this person shall, in turn, sign the Scaffolding Handover Certificate to indicate acceptance of the scaffold.

The Scaffolding Handover Certificate shall contain details of the conditions of usage (including regular inspections to be undertaken by the Scaffolding Inspector) of the scaffold.

The end user is responsible to notify the scaffold Foreman and sign off handover stating task completion or otherwise.

2.8 Scaffold Registers

A scaffold Register shall be kept at the contractor site office. The Green tag number shall be entered into the register by the Scaffold Foreman with the date, area and equipment number where the scaffold is to be erected. On completion of scaffold erection the Scaffold Foreman will return to the Contractor Site Officer and complete the register as Scaffolding complete. When the scaffold has been dismantled the Scaffold Foreman shall complete the registered scaffold as Scaffolding dismantled.

2.9 Tagging System

During the erection stage of a scaffold, warning notices with the wording "Scaffold incomplete, Do Not Use "shall be attached to the scaffold at all access points. The tag has a red signal colour and comprises a weatherproof transparent envelope.

On completion of the scaffold erection the CONTRACTOR Scaffold Foreman shall go through the aforementioned Safety check list as described in Paragraph (2.6).

He shall inspect and where there are minor precautions write the associated risks identified on the scaffold (e.g. uneven surfaces, be aware of tripping hazards, gaps less than 200mm wide in the scaffold deck, missing toe boards or access ladder on the outside.) and on completion sign a Green status tag with the wording "Scaffold Complete, Safe For Use "with precautions / or cancel the comments section with an X indicating no precautions required" and insert it into the envelope, thereby concealing the Red warning notice.

2.10 Safety Harness

SABS approved double lanyard safety harnesses shall always be worn by scaffold erectors whilst working and shall always be hooked up at two meter elevations and above.

2.11 Material Racks

Material racks shall be erected at prescribed areas close to Production Units. They shall be erected on firm level ground and adequately braced to avoid movement in any direction. Base and Sole plates shall be affixed to all standards to avoid collapse. Provision shall be made to prevent material from falling off at the edges.
A high standard of housekeeping shall be maintained at all times. Stacking shall be done in a uniform manner to prevent material from protruding dangerously.

2.12 Dismantling of Scaffolding

Scaffold can only be dismantled once handover stating task completion or otherwise received from end user.
The dismantling of any scaffold is potentially the most hazardous activity and is largely dependent on the skill and experience of both the Contract Scaffolding Foreman and his Crew Members for safe execution. Careful planning is therefore necessary to ensure that dismantling is executed in a safe and orderly manner.

The scaffold tool as shown in attachment 28-0080-10 shall be used for the dismantling of all scaffolds.

2.13 Scaffold Inspection

CONTRACTOR Scaffolding Inspector and foreman or supervisor of workers who will be using the scaffold shall physically inspect the scaffold on completion. This joint inspection by scaffold inspector and supervisor or foremen aims to ensure that they jointly endorse the scaffolding as suitable for the purpose for which it is erected. The scaffold inspector will from then physically inspect all erected scaffolds one week thereafter and after inclement weather and continue doing so for each and every week that the scaffold remains erected. The green tag shall be removed whilst this exercise is taking place and returned signed and updated on completion. The Scaffold Register shall also be signed and updated. The weekly safety check shall always be carried out.

2.14 Modifications to Scaffolding

The SAPREF supervisor must be the requestor for modifications of the scaffold. This way control is maintained and he will inspect the scaffold once completed together with the scaffold contractor inspector and the scaffold contractor foreman. The supervisor (requestor) must conduct a LMRA with the team that will be using the scaffold if the conditions have changed from Green Status.

- Green Carded Scaffold with precautions (LMRA)
- Orange card scaffold (LMRA)

As mentioned earlier, modifications should be minimized through proper planning. Occasions may occur whereby scaffolds require unavoidable modifications especially during Shutdown periods. CONTRACTOR Scaffolding Foreman shall immediately be informed of the intention and only the scaffolding CONTRACTOR Foreman shall supervise the modification. The green status card shall be removed from the envelope during the exercise and re-inserted after completion with the date and nature of the modification. The same information shall also be entered into the Scaffold Register and CONTRACTOR Scaffolding Foreman shall sign both.

Safety is the responsibility of everyone on the SAPREF site and therefore anybody doubting the integrity of any erected scaffold may remove the Green status card after checking that the scaffold is not in use and immediately inform CONTRACTOR Scaffolding Foreman, and relevant Supervision.

However, where a scaffold is modified or built for a purpose that does not allow it to conform to all the requirements of the procedure, the associated risks to be assessed prior to the modification, an Orange tag shall be displayed on the scaffold indicating the area of caution and the requirement for safety harnesses may be prescribed. During this period access is restricted only to those working on that scaffold. Once this requirement is fulfilled the scaffold is to be reinstated and made safe with the Green Card.

Scaffolds erected for Tanks and Pipe Tracks: Due to the size of scaffold erected to carry out work on tanks and pipe racks, it is not practical to change the entire scaffold to a Orange card or Green card with Precaution status when ONLY a small section of the scaffold is been modified to perform the work so the following must be done.

Green Card

- Refer to 2.9 Tagging System.

Orange card scaffolds

- The modified section must have an Orange Card with Precautions attached.

- Must have its own access way: it must not be possible to access scaffolding from another access way.
- Must be barricaded with a solid barricade from the rest of the scaffold.
- Signs must be posted at platform levels informing people of the change.
- LMRA must be conducted by the Supervisor with his team prior to starting the work.

2.15 High Risk Scaffolding

The scaffolding service Provider must appoint a competent person who must ensure that all high risk scaffolding structures or platforms work operations are carried out under his or her supervision and that all high risk scaffolding structure or platform erectors, operators and inspectors are competent to carry out their work.

2.15.1 Load bearing scaffolding

The main function of this scaffolding is to support the weight of the object which is being lifted or the stationary unsupported load. It is critical for the specialist service provider to design this scaffolding based on load capacity. According to Construction Regulation of 2014, the design drawings should be signed by a Registered Professional Engineer, Certificated or Technologist Engineer. At SAPREF, this scaffolding is used to rig fin fan covers, valves, furnace covers, etc. In the Turnaround condition, there is a huge volume of these scaffolding. SAPREF safety regulations do not allow for this scaffolding to be used for access. There are number of near misses associated with this scaffolding across site (few examples can be picked up from CIS).

2.15.2 Cantilevered scaffolding.

Cantilevered scaffolding is used at SAPREF as an access and temporary storage for material like bolts, gasket, valves, welding machines, etc. This scaffolding has a mechanical advantage (load turning effect) which is not required in general platforms and therefore the task to be performed must be very clear to both specialist and end user. Due to the access use of this type of scaffold, there is a need to limit its use on SAPREF sites to reduce the risk of exposure to the turning effect nature. Another disadvantage for this scaffolding is a limited platform work area.

2.15.3 Suspended scaffolding (normally mounted or braced to existing beams or structure).

The function for this type of scaffolding is purely for access and temporary storage for small material, normally this scaffolding is mounted or braced on existing beams or structure. Existing beams should have design capacity to support the load. Proper design should be provided and signed by Registered Engineer. At SAPREF, this scaffolding is erected if there is no space on the ground level for normal supported scaffolding.

2.16 Basic requirements

2.16.1 End User (Sapref and Service providers)

- The End User should define the task to be executed (e.g. rigging of 8" control valve, 0.15 tones and 2m above ground). The method statement should be initiated to cover all tasks involved.
- The End User should roughly have estimated weight of the object to be supported or rigged and this information should be provided to the scaffolding specialist during scoping exercise.
- If the scaffolding will be braced or mounted to existing beams, the SAPREF Engineer should ensure that the structure is robust for intended scaffolding tasks.
- Scaffolding erected for rigging activities should be also checked by the SAPREF Rigger.
- No modification of any scaffolding is permitted unless by competent persons as prescribed in the Construction Regulation of 2014.

2.16.2. Scaffolding Specialist Service Provider

- The scaffolding specialist service provider should ensure that the scaffolding is erected to perform intended task as stipulated by the end user.
- The scaffolding specialist should perform design as per the Construction Regulation of 2014 if required and approval by Registered or Professional Engineer.
- Specialist to ensure that the work force is competent to perform the task.

2.16.3. Basic requirement for high risk scaffolding

Scaffolding Type	End User (Sapref staff or service provider)	Scaffolding specialist service providers	Basic requirement
Cantilever Scaffolding	Supply information (task to be performed) and safely use of scaffolding	Scope, drawing, design, approval, erect, modify and dismantle	Small working area
			Areas which are not accessible with normal scaffolding
			Cannot be used for flare jobs
Load bearing scaffolding			Only for Load to be lifted or supported
			Can be used with rigging gear
Suspended scaffolding			Integrity of the main structure
			work area can vary from small to big

2.16 Mobile Scaffolds

A mobile scaffold shall be erected in such a manner that it never exceeds in height more than three times the least width at its base. The working platform shall not exceed 6.5m in height. Temporary ties shall be affixed to a structure for mobile scaffolds with a width of less than 1.2m or a height in excess of 3 times the main base. Castors attached to the standards shall be of a heavy-duty type and fitted with locking devices. Metal/electric conductive castors are to be used to ensure safe discharge of static charge. If non metallic castors are used the user must ensure that the mobile scaffold is properly earthed by an authorized person.

Working platforms and access ladders shall be erected as described in paragraph 2.5.10 to 2.5.17. Scaffolds shall not be permitted to remain in access ways overnight, on grass, stone or sand. The green status card shall be removed to avoid unauthorized working on the scaffold.

3. References [back to TOC]

3.1 Records

ID No.	Title	Holder	Location	Working Duration	Archive Duration

3.2 External References

Document Reference	Title	Issued by	Revision / Date
	OSH Act Construction Regulations section 44 of the act.		

3.3 Internal References

Doc. ID	Title
ASSET.PM.0000	Asset Business Management System Policy
HSSE.PM.0004	SAPREF HSSE Regulations
HSSE.PR.0070	Shutdown Health, Safety and Environmental Plan

4. Keywords [back to TOC]

5. Definitions and abbreviations [back to TOC]

Refer to SITE.RG.0001

Additions to this list must be sent via e-mail to the BMS Administrator.

6. Revision list [back to TOC]

Revision	Date	Description	Checked by	Approved by
0	22/03/2001	First Issue	ES	EM
1	13/07/2004	Added Appendices, Orange card detail added in	F. Forno, ES	EM
2	30/05/2005	Document Revised for clarity, added Drawing and cards	M. Webbstock, ES1	N. Sukaih, Acting EM
3	23/12/2008	Deleted reference to GSR 13 (repealed) and updated in line with revision 5 of HSSE.PM.0004	F. Forno, MP	G. Tate, MM
4	17/05/2010	36 Months Review	F. Mansur MP3	G. Tate MM
5	31/12/2010	Updated	F. Mansur MP3	G. Tate MM
6	25/07/2014	Updated	M. Nduzi	A. Mabaso
7	08/04/2019	Added Revised distance between resting platforms, added section on damaging Insulation when erecting, added Final Inspection & Scaffold Handover Certificate, added Plan bracing section Added dismantling sign off by end user.	M.Webb EVA	F. Sithole MP2
8	12/11/2019	Added mobile scaffold protection against static electricity.	K. Piaray	B. Mbongwa

7. Appendices [back to TOC]

7.1 Flow Scheme for Scaffold Erection on All SAPREF Sites

7.2 Flow Scheme for Dismantling Scaffold on All SAPREF Sites

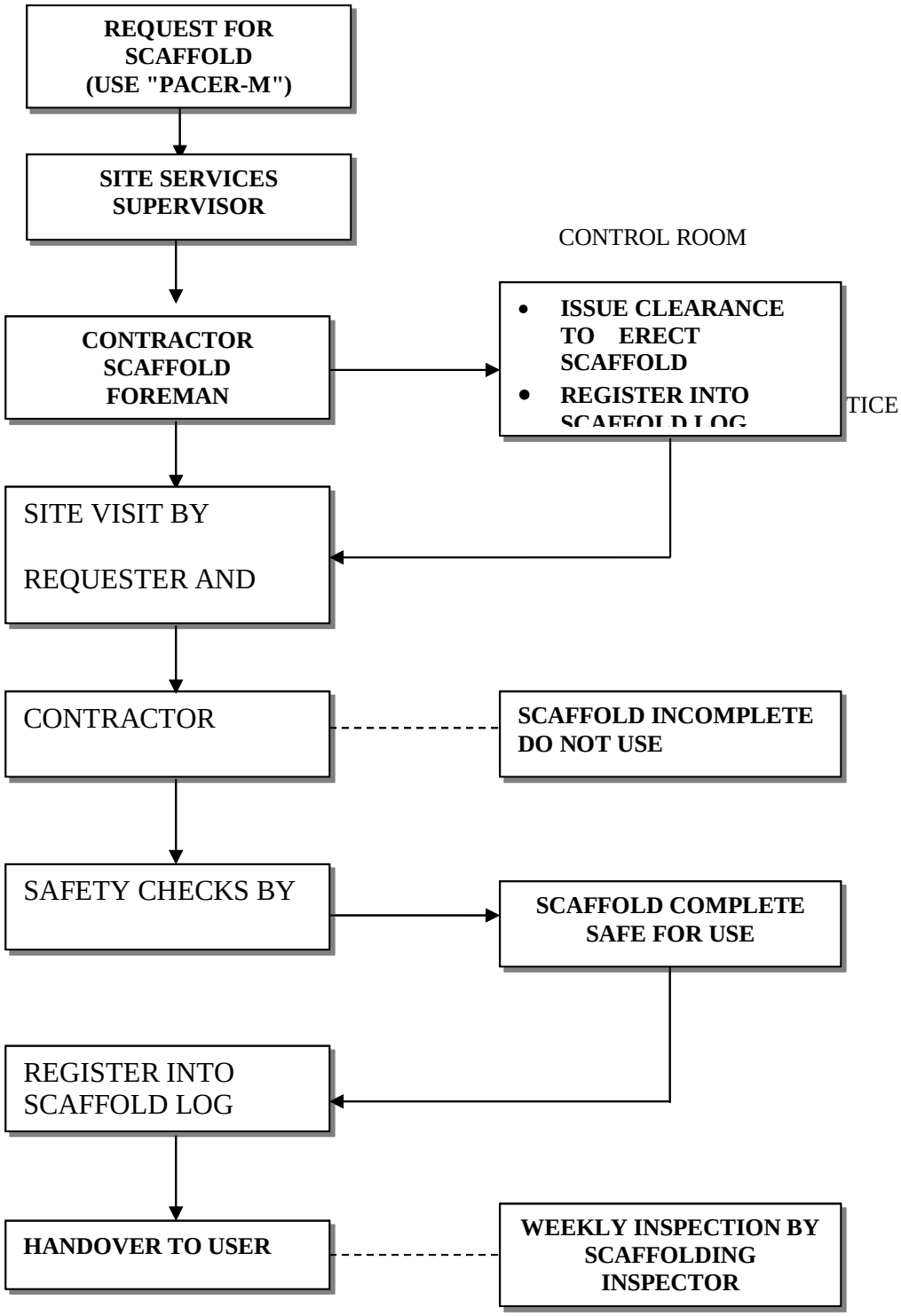
7.3 Orange Card

7.4 Green Card

7.5 Scaffolding Tool

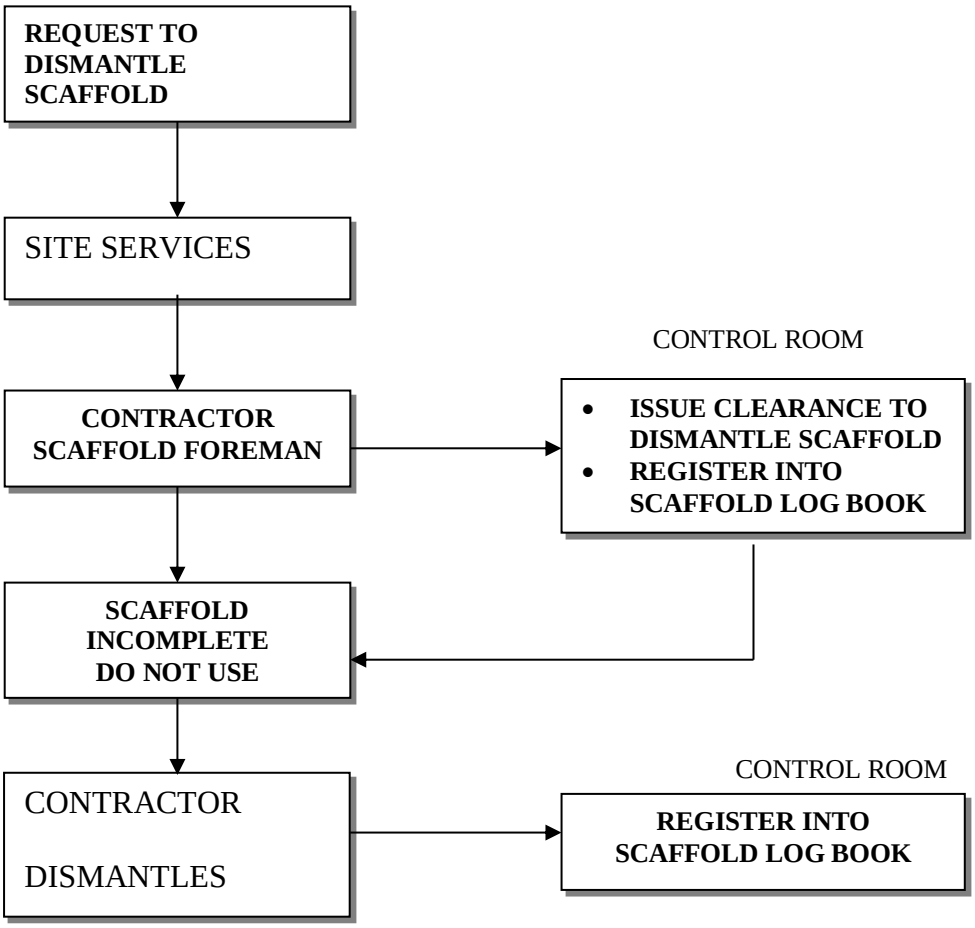
Appendix 7.1

Flow Scheme for Scaffold Erection on all SAPREF Sites

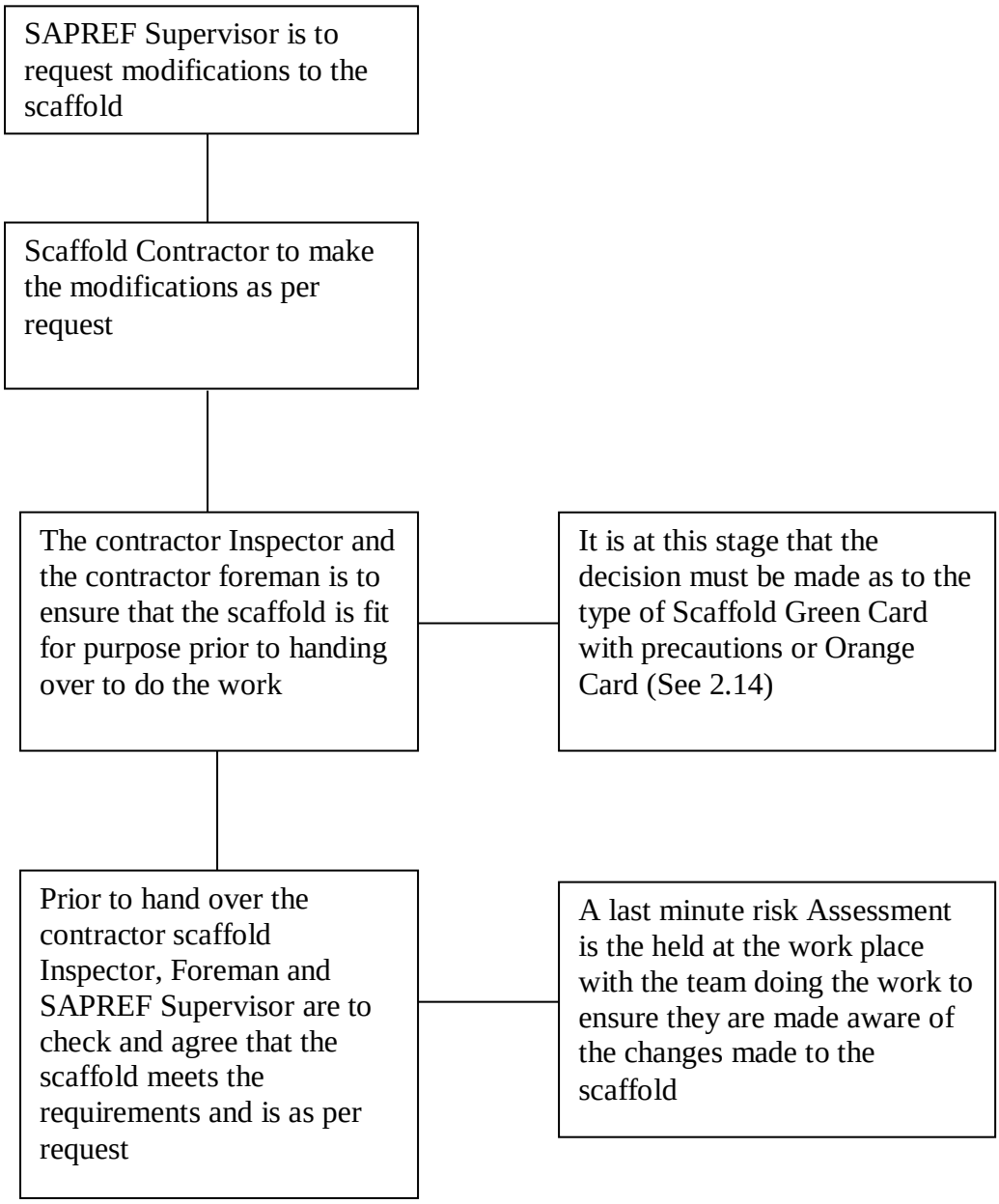


Appendix 7.2

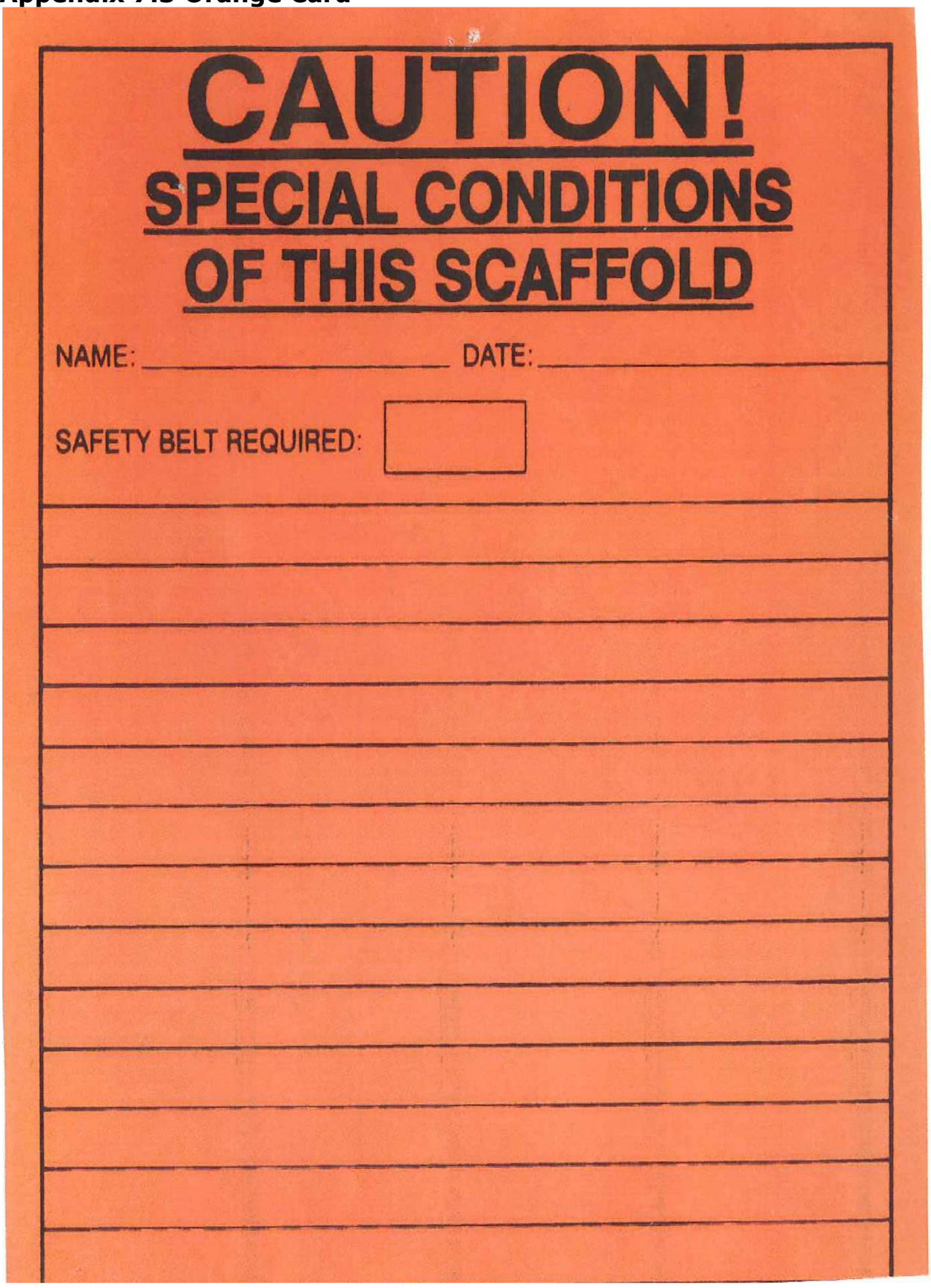
Low Scheme for Dismantling Scaffold on all SAPREF Sites



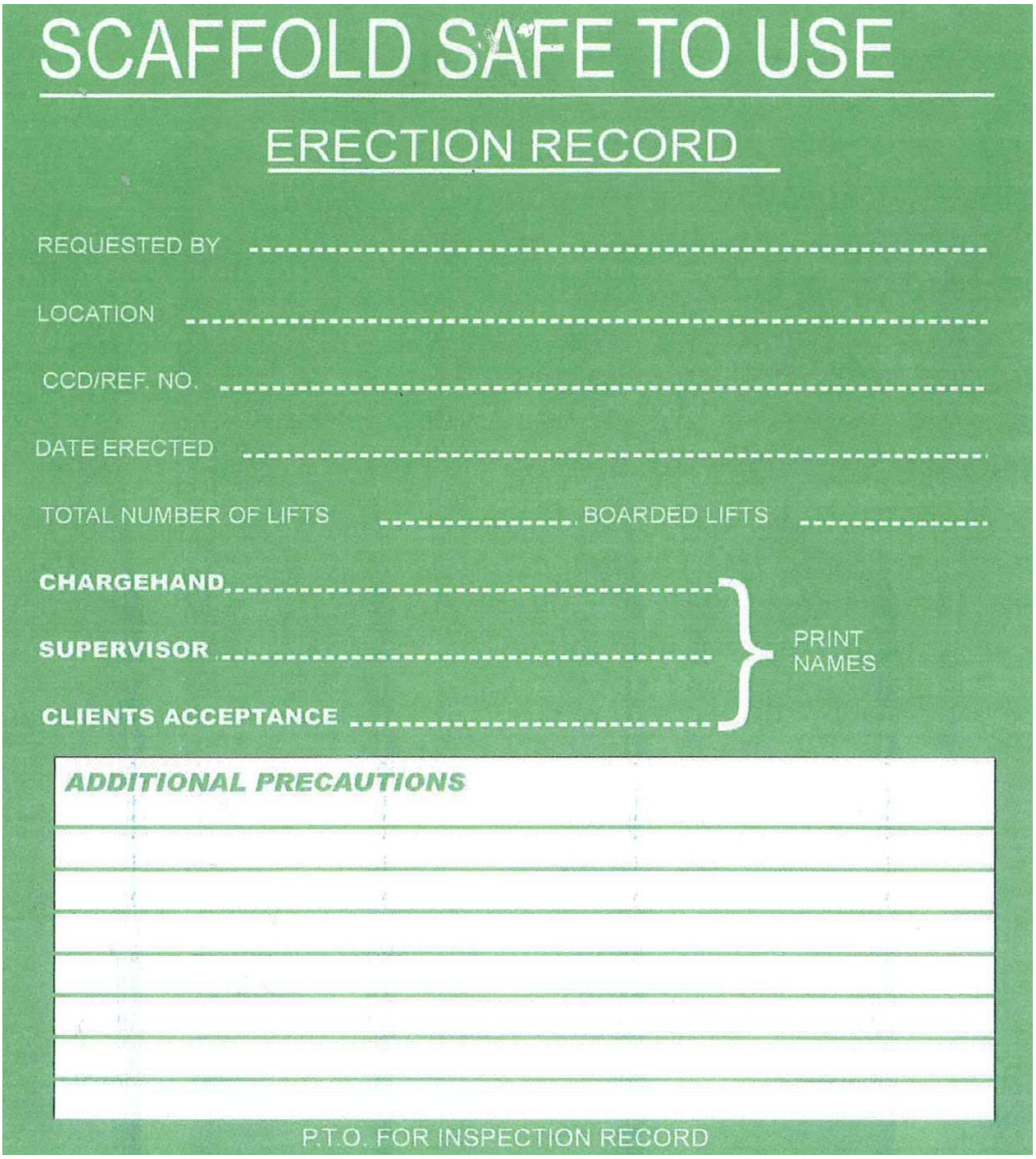
Modifications to Scaffolds



Appendix 7.3 Orange Card



APPENDIX 7.4 Green Card



SCAFFOLD SAFE TO USE

ERECTION RECORD

REQUESTED BY .....

LOCATION .....

CCD/REF. NO. .....

DATE ERECTED .....

TOTAL NUMBER OF LIFTS ..... BOARDED LIFTS .....

CHARGEHAND .....

SUPERVISOR ..... } PRINT NAMES

CLIENTS ACCEPTANCE .....

ADDITIONAL PRECAUTIONS

P.T.O. FOR INSPECTION RECORD

APPENDIX 7.5 Scaffolding Tool

28-0080-10