

Myanmar National Building Code

Safety in Construction of Elements of a Building

Presented by:
U Kyi Lwin, BE (Civil),
PE (Construction), A.C.P.E.,
ASEAN Eng, Hon.F.AFEO.
M Eng C, F.Fed.MES

Accident Percentage

1. Falling From Height	56 %
2. Being Pinched, Being Crushed , Overturning	21 %
3. Moving Vehicles	10%
4. Electrical Appliance	5%
5. Falling Materials while Lifting Crane	4%
6. Rotating Machine and Moving Heavy Machinery Hazards	3%
7. Heat or Dangerous Materials	1%
Total	100%



Technical Working Group – 7

MEMBER LISTS

No	Name	Designation	Department
1.	U Aung Myint	Group Leader	Fed.MES
2.	U Kyi Lwin	Dy Group Leader	M.Eng.C, Fed.MES
3.	U Myint Sein	Secretary	Fed.MES
4.	U Win Tint	Member	HPBC
5.	U kyi Soe	Member	Fed.MES
6.	U Aung Koe	Member	Marubeni Corporation
7.	U Saw Htun Hla Baw	Member	A1 Group of Companies
8.	Daw Aye Aye Khine	Member	Fed.MES
9.	Daw Po Po Min	Member	Fed.MES
10.	U Htay Oo	Member	M.Eng.C
11.	U Yin Htwe Thet	Member	External Expert
12.	U Myint Oo	Member	External Expert

No	Name	Designation	Department
13.	Daw Mya Win	Member	HPBC
14.	Daw Thandar Win	Member	MOC
15.	Daw Khine Nyein Soe	Member	MOC
16.	Daw Mya Myet Chel	Member	MOC
17.	U Min Min	Member	MOC
18.	Daw Wint Moh Aung	Member	MOC
19.	U Htein Linn Aung	Member	YCDC
20.	Daw Ei Win Khaing	Member	YTU
21.	Dr. Daw Khin Su Su Htwe	Member	YTU
22.	U Htin Aung	Member	External Expert
23.	U Khin Maung Win	Member	Mhone one Engineering & Consult & Construction Co.,ltd
24.	Daw Su Yatanar Tun	Member	Fed.MES
25.	Daw Pann Ei Swe	Member	Fed.MES

Chapter -7

CONSTRUCTION MANAGEMENT AND PLANNING, CONSTRUCTION PRACTICES, SAFETY AND BUILDING MAINTENANCE

1. CONSTRUCTION MANAGEMENT, PLANNING AND SITE MANAGEMENT
2. CONSTRUCTION CONTROL AND PRACTICES
3. SAFETY IN CONSTRUCTION OF ELEMENTS OF A BUILDING
4. SAFETY IN DEMOLITION OF BUILDINGS
5. MAINTENANCE MANAGEMENT, REPAIRS, RETROFITTING AND STRENGTHING OF BUILDINGS

Section (3)

SAFETY IN CONSTRUCTION OF ELEMENTS OF A BUILDING

1. GENERAL
2. TERMINOLOGY
3. TEMPORARY CONSTRUCTION, USE OF SIDE WALK AND TEMPORARY ENCROACHMENTS
4. TESTING
5. INSPECTION AND RECLIFICATION OF HAZARDOUS DEFECTS
6. FOUNDATIONS
7. GENERAL REQUIREMENTS AND COMMON HAZARDOUS DURING EXCAVATION
8. PILING AND OTHER DEEP FOUNDATION

Section (3)

SAFETY IN CONSTRUCTION OF ELEMENTS OF A BUILDING

- 9. WALLS
- 10. COMMON HAZARDS DURING WALLING
- 11. ROOFING
- 12. ADDITIONAL SAFETY REQUIREMENTS FOR ERECTION OF CONCRETE FRAMED STRUCTURE
HIGH-RISE BUILDING
- 13. ADDITION SAFETY REQUIREMENTS FOR ERECTION OF STRUCTURAL STEEL WORK
- 14. MISCELLANEOUS ITEM
- 15. FINISHES



Section (3)

SAFETY IN CONSTRUCTION OF ELEMENTS OF A BUILDING

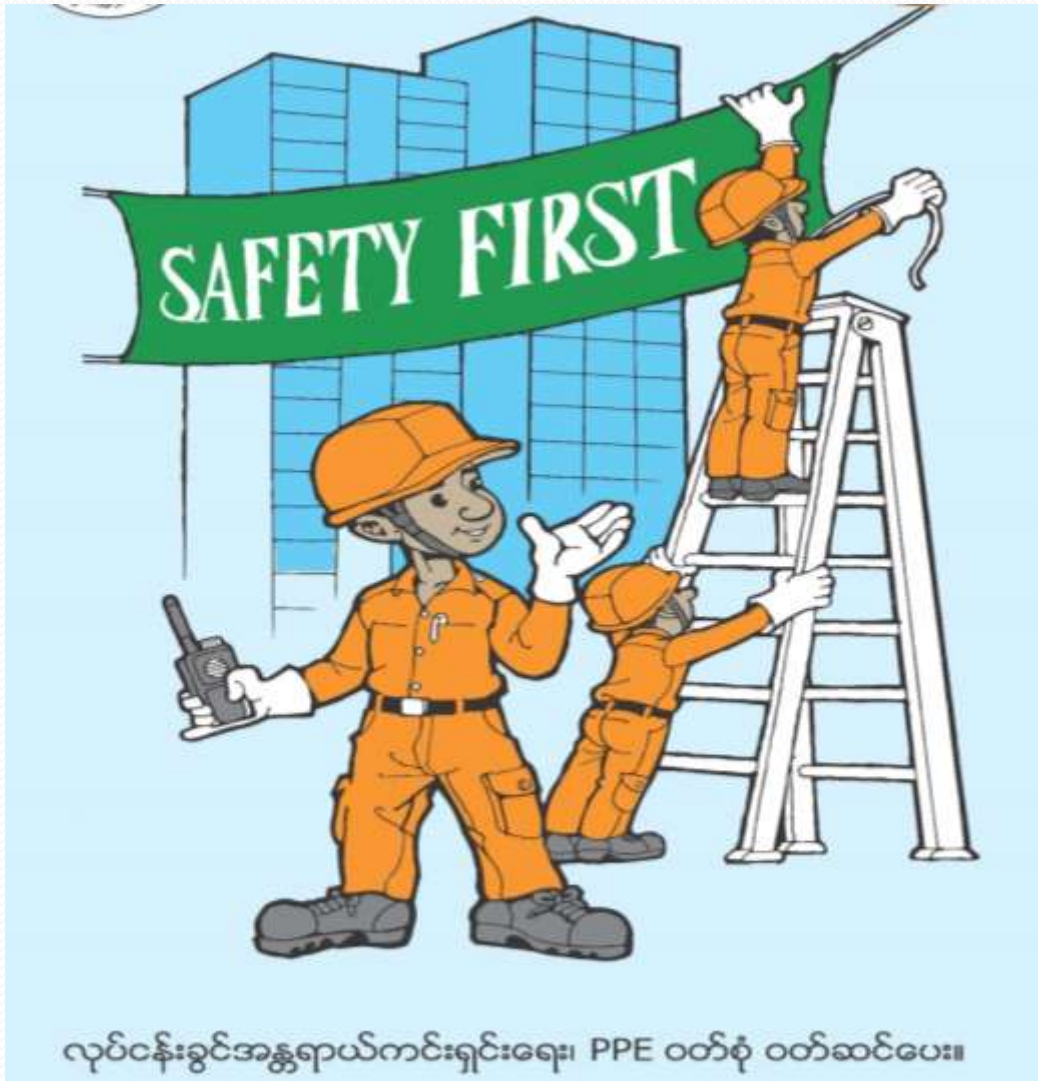
16. FRAGILE FIXTURES

17. ELECTRICAL INSTALLATION AND LIFTS

18. GENERAL REQUIREMENTS

19. CONSTRUCTION MACHINERY

Abstract



- This presentation summarizes Part 7.3 of the Myanmar National Building Code 2025.
- Focuses on safety requirements during construction of building elements.
- Covers management systems, excavation, foundations, scaffolding, roofing, and high-rise works.
- Aims to reduce accidents, protect workers, public, and adjoining properties.

Introduction



- Applies to erection, alteration, and demolition works.
- Emphasizes compliance with local laws and safety regulations.
- Safety provisions override in case of conflict.

Safety Management System



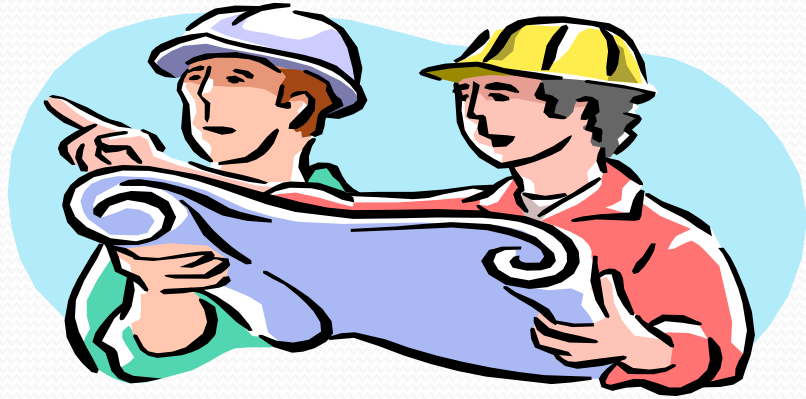
- Formation of Safety Committee based on project size.
- Regular safety meetings and emergency meetings.
- Continuous review of safety measures at site.

Health, Safety & Environment (HSE)



- Identify activities impacting health and environment.
- Implement preventive and corrective measures.
- Ensure statutory compliance throughout project lifecycle.

Policy & Project Management



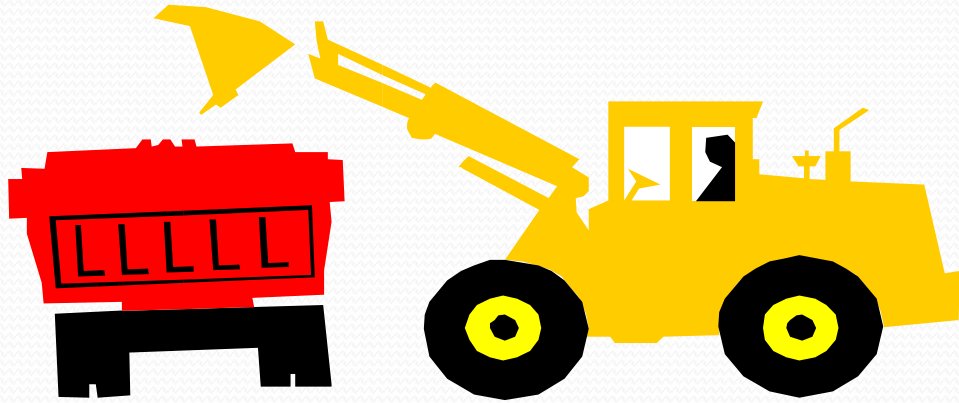
- Defined safety policy involving all stakeholders.
- Clear roles, responsibilities, and authority.
- Training and competency of workers are mandatory.

Permit to Work & Safety Meetings



- Toolbox meeting and safety briefings conducted regularly.
- Permit-To-Work system for high-risk activities.
- Ensures safety before, during, and after work.

Machinery Maintenance & Emergency Plans



- Regular maintenance of machinery and tools.
- Emergency response plans established and tested.
- Prompt identification and correction of unsafe conditions.

Key Terminology



- Scaffold, Platform, Guard Railing, Floor Opening.
- Pile Rig, Construction Equipment, Toe Board.
- Clear definitions improve safety compliance.

Temporary Construction



- Approval required for temporary structures.
- Fire safety compliance mandatory.
- No obstruction to traffic or public utilities.

Testing & Inspection



- Scaffolds and equipment must not exceed safe loads.
- Testing at 2.5 times working load when in doubt.
- Unsafe members to be rejected immediately.

Foundation Safety



- Prevent harmful settlement and protect adjoining properties.
- Advance notice to neighboring owners required.
- Special care during piling and excavation works.

Excavation: Common Hazards



- Machinery kept at safe distance from trench edges.
- Proper shoring and sloping of sides.
- Gas detection and ventilation in confined spaces.

Excavation Safety Measures



- Fencing, warning signs, and lighting.
- Control vibrations from nearby sources.
- No blasting without special permission.

Safety Color Code



Prohibition



Mandatory



Hazard Identification



Safe Condition



Fire Fighting

Safety Color Code

Prohibition



Mandatory



Hazard Identification



Safe Condition



Fire Fighting



Piling Operations Safety



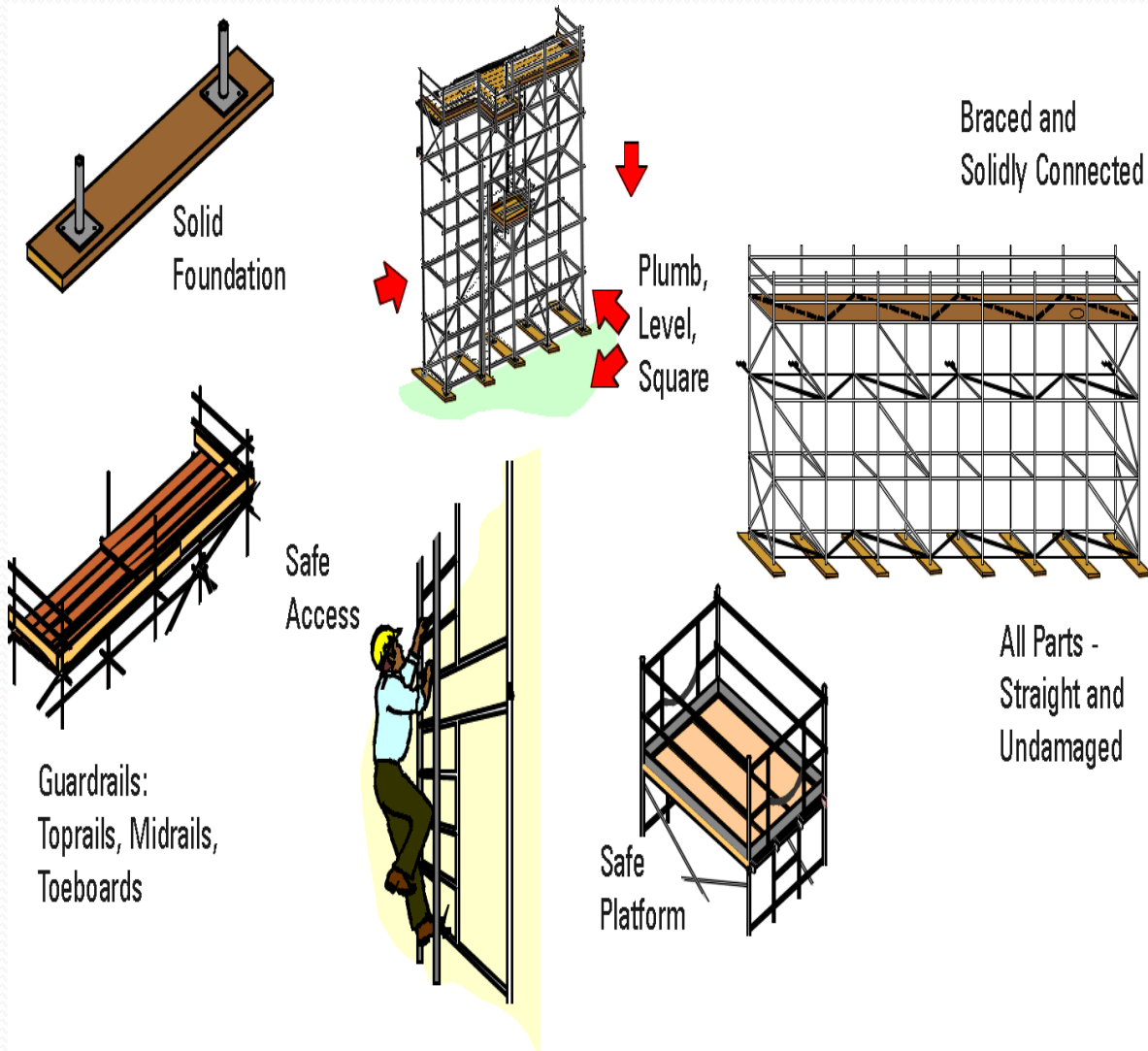
- Qualified supervision mandatory.
- Adequate lighting and barricading.
- Regular inspection of piling rigs.

Sheet Piling & Cofferdam Safety



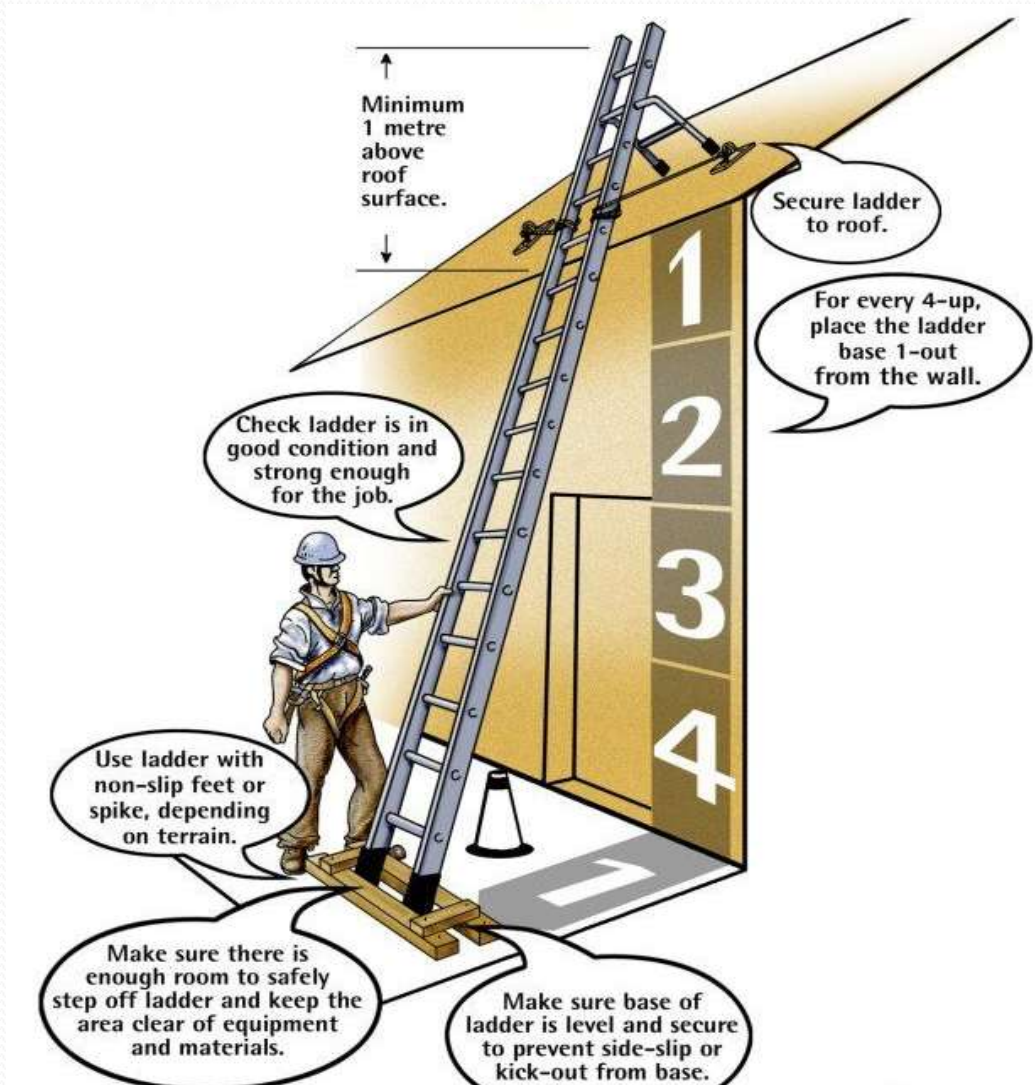
- Provide ladders and emergency escape arrangements.
- Use life-saving equipment near water areas.
- Ensure proper support and stability during operations.

Scaffolding Safety



- Designed and erected by competent persons.
- Regular inspections and non-combustible materials.
- Use of safety nets and guard rails.

Ladder Safety



- Use sound materials and proper angles.
- Secure ladders at top and bottom.
- No metal ladders near electrical work.

Wall Construction Hazards



- Controlled lifting and haulage of materials.
- Electrical and fire hazard prevention.
- Protection against falling materials.

Roofing Safety



- Use platforms and safety devices to prevent falls.
- Walking boards for fragile roofing materials.
- Guarding of floor openings mandatory.

Concrete Framed Structures



- Safe operation of mixers, cranes, and hoists.
- Formwork designed and inspected by engineers.
- Strict control of lifting operations.

Prestressed & Prefabricated Work



- Inspect jacks, anchors, and lifting devices.
- Use spreader beams during lifting.
- Temporary bracing required after erection.



Safety Circular
on Safe Use of
Mobile Elevating Work Platform



Structural Steel Work Safety

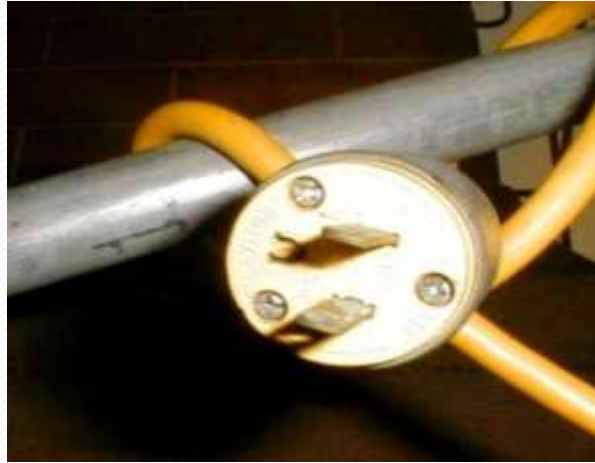


- Proper PPE and worker training.
- Safe lifting, slinging, and riveting practices.
- Fire prevention during welding and cutting.

Electrical Safety



Water is very conductive



Missing Grounding Prong



Damaged Casing!



- Proper grounding of electrical equipment.
- Switch off unused circuits after work.
- Provide extinguishers near switchboards.

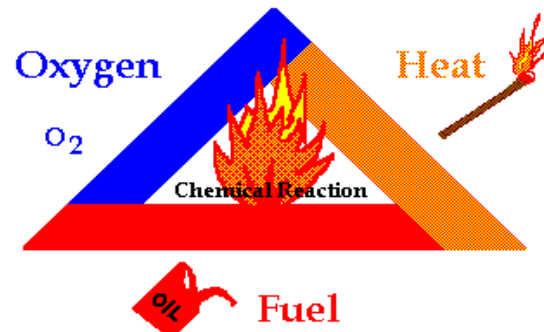
Fire Protection & Emergency Response



- Provide fire extinguishers and hydrants.
- Conduct emergency drills and mock exercises.
- Maintain emergency access routes.



Fire Triangle



PASS

Pull



Aim



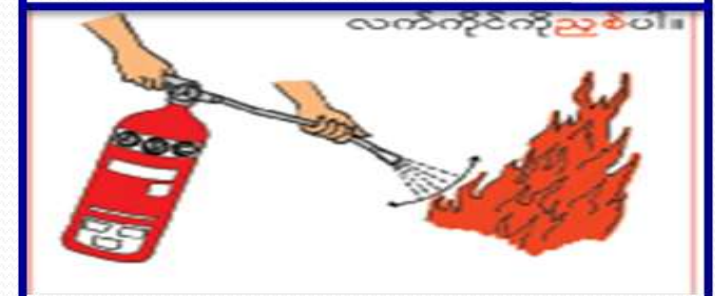
Squeeze



How To Operate The Potable Fire Extinguisher

The four steps for using a fire extinguisher.

- (a) Pull the pin.
- (b) Aim the nozzle.
- (c) Squeeze the handle.
- (d) Sweep the base of the fire.



မီးသတ်ဘူးများ ပေါ်တွင်တွေ့ရသော သင်္ကေတများနှင့် ဆိုလိုသည့် အဓိပ္ပါယ်များ						
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လျှပ်စစ်ကြောင့် လောင်သောမီး		✗	✗	✓	✓	✗
ဟင်းချက်ဆီ		✗	✗	✗	✗	✓

Worker Welfare & Sanitation



- Provide clean drinking water and washing facilities.
- Ensure adequate lighting and ventilation.
- Maintain hygienic working conditions.

Fall Prevention & PPE



- Use safety harnesses and guard rails.
- Barricade dangerous work areas.
- Mandatory use of personal protective equipment.



Incident Investigation & Audits



- All incidents to be recorded and investigated.
- Corrective actions to prevent recurrence.
- Periodic safety audits conducted.

Conclusion



သာယာချမ်းမြေ့သော မိသားစုဘဝတည်ဆောက်ဖို့၊
လုပ်ငန်းခွင်အန္တရာယ်ကင်းရှင်းရေး လိုက်နာဖို့။

- Safety is a shared responsibility.
- Compliance with MNBC 2025 reduces accidents.
- Systematic planning ensures safe construction sites.

Work Site Safety

ဘေးအန္တရာယ်ကင်းရှင်းမှု မရှိပဲ လုပ်ရန်လိုအပ်သည့် အရေးကြီးသော
လုပ်ငန်း မရှိပါ။



မည်သည့် အခြေအနေတွင်မဆို လုပ်ငန်းလုပ်ဆောင်သူများသည် မိမိကိုယ်ကို
ဘေးအန္တရာယ် မဖြစ်အောင် ဆောင်ရွက်ကြရမည် ဖြစ်ပါသည်။