

Myanmar National Building Code

Safety in Demolition of Buildings

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Section (4)

SAFETY IN DEMOLITION OF BUILDINGS

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Section (4)

SAFETY IN DEMOLITION OF BUILDINGS

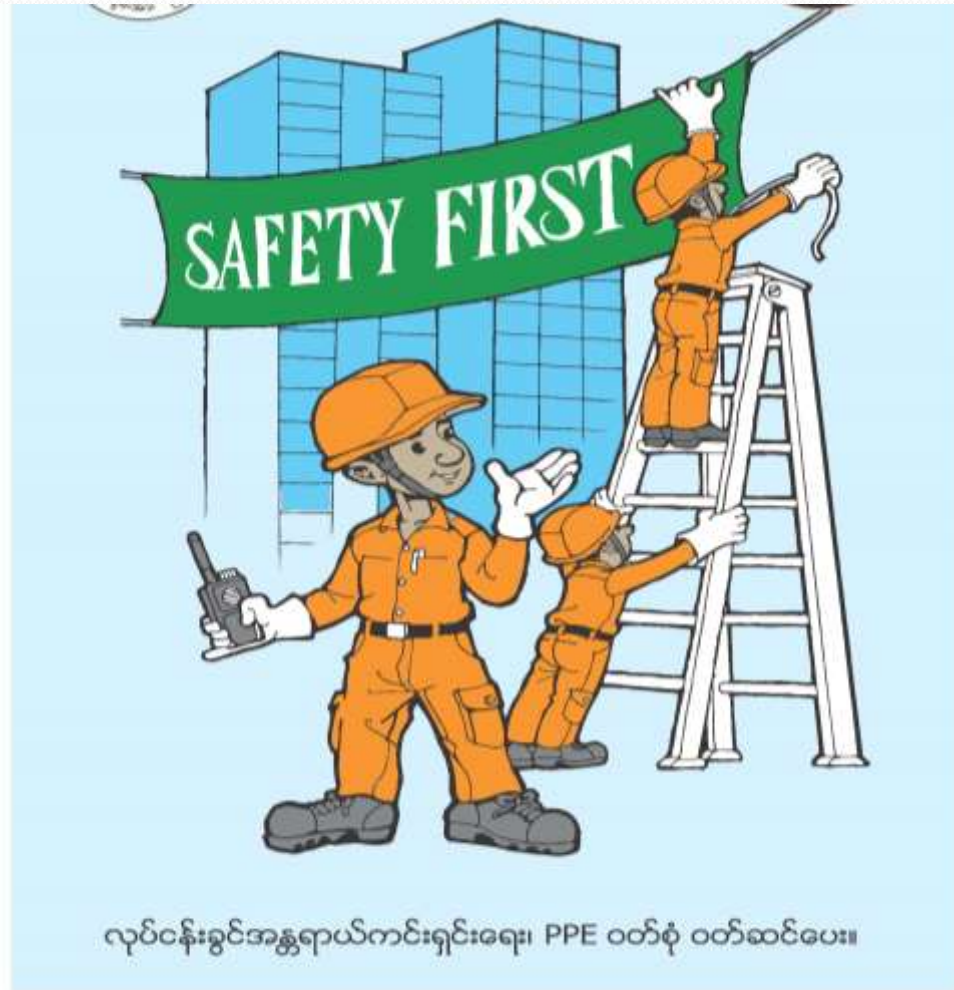
- 9. STAIRS,PASSAGEWAYS AND LADDERS
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Introduction



- In the aftermath of Mandalay Earthquake on 28th march' 2025, Significant damage and loss have been happened not only buildings but also infrastructures like bridge, pagodas, etc. So, we need to demolish the damaged buildings and reconstruct a huge amount of buildings.
- Post Disaster Rapid Assessment (PDRA)
- Post Disaster Structural Retrofitting (PDSR)

Introduction



- Purpose: Ensure safe demolition/dismantling of buildings
- Covers planning, precautions, execution, public safety, and emergencies
- Compliance with engineer-in-charge and safety regulations is mandatory

Planning & General Requirements



- Study structure and surroundings before demolition
- Prepare stage-by-stage demolition plan (approved by engineer)
- Workers briefed on safety before each stage
- Avoid overloading structures or scaffolds
- Ensure adjoining structures remain safe

Precautions Prior to Demolition



- Post danger signs & barricades; provide 2 emergency exits
- Red warning lights at night; watchmen if required
- Workers equipped with PPE (helmets, gloves, goggles, boots, harnesses)
- Disconnect power, gas, water, steam lines before work
- Protect/remove meters, mains, and fragile parts
- Shore/braced damaged structures before demolition

Public Safety



- Clearly mark safety distances; close/protect sidewalks & roads
- Sidewalk sheds required if building >2 storeys / 7.5 m
- Sheds must be strong, lit, covered to stop debris
- Provide barricades/fencing if clearance >4.5 m
- Ensure debris removal without endangering public

Precautions During Demolition



- Remove fragile materials (glass, plaster, fixtures) first
- Control dust, provide lighting & ventilation
- Avoid unsafe stacking of debris; add supports if required
- Secure openings, shafts, and wells with guardrails

Sequence of Demolition



- Proceed systematically, floor by floor (top to bottom)
- Engineer must approve each stage before moving lower
- Fixtures/glass/plaster removed first
- Protect or relocate essential services/fixtures

Specific Structures



- Walls: Remove part by part, avoid collapse as single mass
- Floors: Provide support, barricade lower areas, no workers below
- Steel structures: No free-fall, use tag lines, lower safely
- Catch platforms: Mandatory for >20 m height walls
- Stairs & ladders: Retain as long as possible, keep safe

Special Elements



- Roof trusses: Remove progressively with bracing/guying
- Heavy beams: Support and lower safely
- Arches: Demolish systematically or via controlled collapse
- RCC structures: Cut reinforcement systematically, controlled lowering
- Precast & prestressed concrete: Use supports, expert supervision

Debris Handling & Disposal



- Prefer controlled lowering (ropes, tackles, chutes)
- Chutes: enclosed, safe angles, guarded openings, load control
- Floor holes: max 25% area, barricaded, shored
- Separate serviceable/unserviceable materials
- Dust-producing materials covered & promptly removed

Miscellaneous Safety



- Avoid night/storm demolition; warning devices required
- PPE mandatory: helmets, gloves, goggles, harnesses
- Protect workers from falling debris with overhead covers
- Vacant plot after demolition: grade, fill, maintain safely

First Aid & Emergency



- Display accident/first-aid regulations at site
- Qualified first-aid personnel with kit, stretcher, contacts
- Accident reports submitted to authorities
- Telephone access with hospital contacts available

Conclusion



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- Safe demolition = planning + precautions + trained workers
- Protects workers, public, and structures
- Aim: Zero accidents & safe site clearance

Work Site Safety

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THANK YOU