ANNEX IV

MINIMUM SAFETY AND HEALTH REQUIREMENTS FOR CONSTRUCTION SITES Referred to in Article 9 (a) and Article 10 (1) (a) (i) of the Directive

PART B

SPECIFIC [^{X1}**MINIMUM REQUIREMENTS FOR] ON-SITE WORKSTATIONS** Preliminary remark

If special situations so dictate, the classification of these minimum requirements into two sections, as below, should not regarded as binding.

Section I

On-site indoor workstations

1. Stability and solidity

Premises must have a structure and stability appropriate to the nature of their use.

2. Emergency doors

Emergency doors must open outwards.

Emergency doors must not be so locked or fastened that they cannot be easily and immediately opened by any person who may require to use them in an emergency.

Sliding or revolving doors are not permitted if intended as emergency exits.

3. Ventilation

If air-conditioning or mechanical ventilation installations are used, they must operate in such a way that workers are not exposed to draughts which cause discomfort.

Any deposit or dirt likely to create an immediate danger to the health of workers by polluting the atmosphere must be removed without delay.

- 4. Temperature
- 4.1. The temperature in rest areas, rooms for duty staff, sanitary facilities, canteens and first-aid rooms must be appropriate to the particular purpose of such areas.
- 4.2. Windows, skylights and glass partitions should allow excessive effects of sunlight to be avoided, having regard to the nature of the work and the use of the room.
- 5. Natural and artificial lighting

Workplaces must as far as possible have sufficient natural light and be equipped with the means of providing artificial lighting which is adequate for the purposes of protecting workers' safety and health.

- 6. Floors, walls, ceilings and roofs of rooms
- 6.1. The floors of workplaces must have no dangerous bumps, holes or slopes and must be fixed, stable and not slippery.

- 6.2. The surfaces of floors, walls and ceilings in rooms must be such that they can be cleaned or refurbished to an appropriate standard of hygiene.
- 6.3. Transparent or translucent walls, in particular all-glass partitions, in rooms or in the vicinity of workplaces and traffic routes must be clearly indicated and made of safety material or be shielded from such places or traffic routes to prevent workers from coming into contact with walls or being injured should the walls shatter.
- 7. Windows and skylights
- 7.1. It must be possible for workers to open, close, adjust or secure windows, skylights and ventilators in a safe manner.

When open, they must not be positioned so as to constitute a hazard to workers.

- 7.2. Windows and skylights must be designed in conjunction with equipment or otherwise fitted with devices allowing them to be cleaned without risk to the workers carrying out this work or to workers present.
- 8. Doors and Gates
- 8.1. The position, [^{X1}number and dimensions] of doors and gates, and the materials used in their construction, are determined by the nature and use of the rooms or areas.
- 8.2. Transparent doors must be appropriately marked at a conspicious level.
- 8.3. Swing doors and gates must be transparent or have see-through panels.
- 8.4. If transparent or translucent surfaces in doors and gates are not made of safety material and if there is a danger that workers may be injured if a door or gate should shatter, the surfaces must be protected against breakage.
- 9. Traffic routes

Where the use and equipment of rooms so requires for the protection of workers, traffic routes must be clearly identified.

10. Specific measures for escalators and travelators

Escalators and travelators must function safely.

They must be equipped with any necessary safety devices.

They must be fitted with easily identifiable and accessible emergency shut-down devices.

11. Room dimensions and air space in rooms

Workrooms must have sufficient surface area and height to allow workers to perform their work without risk to their safety, health or well-being.

Section II

On-site outdoor workstations

- 1. Stability and solidity
- 1.1. High-level or low-level movable or fixed workstations must be solid and stable, taking account of:

- the number of workers occupying them,
- the maximum loads they may have to bear and the weight distribution,
- the outside influcences to which they may be subject.

If the support and the other components of these workstations are not intrinsically stable, their stability will have to be ensured by appropriate and safe methods of fixing to avoid any untimely or spontaneous movement of the whole or of parts of the workstations.

1.2. Checking

Stability and solidity must be checked appropriately and especially after any change $[^{X_1}$ in the height or depth] of the workstation.

- 2. Energy distribution installations
- 2.1. On-site energy distribution installations, especially those subject to outside influences, must be regularly checked and maintained.
- 2.2. Installations existing before the site began must be identified, checked and clearly signposted.
- 2.3. Whenever possible, where overhead electric power lines exist, either they must be redirected away from the area of the site or else the current must be cut off.

If this is not possible, there will be barriers or notices to ensure that vehicles and installations are kept away.

Suitable warnings and suspended protections must be provided where vehicles have to pass beneath the lines.

3. Atmospheric influences

Workers must be protected against atmospheric influences which could affect their health and safety.

4. Falling objects

Wherever technically feasible, workers must be protected by collective methods against falling objects.

Materials and equipment must be laid out or stracked in such a way as to prevent their collapsing or overturning.

Where necessary, there must be covered passageways $[^{X1}$ on the site or access] to danger areas must be made impossible.

- 5. Falls from a height
- 5.1. Falls from a height must be physically prevented in particular by means of solid cradles which are sufficiently high and have at least an end-board, a main handrail and an intermediate handrail or an equivalent alternative.
- 5.2. In principle, work at a height must be carried out only with appropriate equipment or using collective protection devices such as cradles, platforms or safety nets.

If the use of such equipment is not possible because of the nature of the work, suitable means of access must be provided and safety harnesses or other anchoring safety methods must be used.

6. Scaffolding and leaders⁽¹⁾

- 6.1. All scaffolding must be properly designed, constructed and maintained to ensure that it does not collapse or move accidentally.
- 6.2. Work platforms, gangways and scaffolding stairways must be constructed, dimensioned, protected and used in such a way as to prevent people from falling or being exposed to falling objects.
- 6.3. Scaffolding must be inspected by a competent person:
- (a) before being put into service;
- (b) subsequently, at periodic intervals;
- (c) after any [^{X1}modification, period] without use, exposure to bad weather or seismic tremors, or any other circumstance which may have affected its strength or stability.
- 6.4. Ladders must be sufficiently strong and correctly maintained.

They must be correctly used, in appropriate places and in accordance with their intended purpose.

- 6.5. Mobile scaffolding must be secured against spontaneous movements.
- 7. Lifting equpiment⁽¹⁾
- 7.1. All lifting devices and accessories, including their component parts, attachments, anchorings and supports, must be:
- (a) properly designed and constructed and sufficiently strong for the use to which they are put;
- (b) correctly installed and used;
- (c) maintained in good working order;
- (d) checked and subjected to periodic tests and inspections in accordance with current legislation;
- (e) operated by qualified workers who have received appropriate training.
- 7.2. All lifting devices [^{X1} and accessories must] clearly display their maximum load values.
- 7.3. Lifting equipment and accessories may not be used for other than their intended purposes.
- 8. Excavating and materials-handling vehicles and machinery⁽¹⁾
- 8.1. All excavating and materials-handling vehicles and machinery must be:
- (a) properly designed and constructed taking account, as far as possible, of the principles of ergonomics;
- (b) kept in good working order;
- (c) used correctly.
- 8.2. Drivers and operators of excavating and materials-handling vehicles and machinery must be specially trained.

- 8.3. Preventive measures must be taken to ensure that excavating and materials-handling vehicles and machinery do not fall into the excavations or into water.
- 8.4. Where appropriate, excavating machinery and materials-handling machinery must be fitted with structures to protect the driver against being crushed if the machine overturns, and against falling objects.
- 9. Installations, machinery, equipment⁽¹⁾
- 9.1. Installations, machinery and equipment, including hand tools whether power-driven or not, must be:
- (a) properly designed and constructed [^{X1}taking account, as far as] possible, of the principle of ergonomics;
- (b) kept in good working order;
- (c) used solely for the work for which they were designed;
- (d) operated by workers who have received appropriate training.
- 9.2. Installations and equipment under pressure must be checked and subjected to regular tests and inspections in accordance with existing legislation.
- 10. Excavations, wells, underground works, tunnels and earthworks
- 10.1. Suitable precautions must be taken in an excavation, well, underground, working or tunnel:
- (a) using an appropriate support or embankment;
- (b) to prevent hazards entailed in the fall of a person, materials or objects, or flooding;
- (c) to provide sufficient ventilation at all workstations so as to ensure a breathable atmosphere which is not dangerous or harmful to health;
- (d) to enable workers to reach safety in the event of fire or [^{X1}inrush of water] or materials.
- 10.2. Before excavation starts, measures must be taken to identify and reduce to a minimum any hazard due to underground cables and other distribution systems.
- 10.3. Safe routes into and out of the excavation must be provided.
- 10.4. Piles of earth, materials and moving vehicles must be kept away from the excavation; appropriate barriers must be built if necessary.
- 11. Demolition work

Where the demolition of a building or construction may present a danger:

- (a) appropriate precautions, methods and procedures must be adopted;
- (b) the work must be planned and undertaken only under the supervision of a competent person.
- 12. Metal or concrete frameworks, shutterings and heavy prefabricated components

- 12.1. Metal or concrete frameworks and their components, shutterings, prefabricated components or [^{x1}temporary supports, and] buttresses must be erected and dismantled only under the supervision of a competent person.
- 12.2. Adequate precautions must be taken to protect workers against risks arising from the temporary fragility or instability of a structure.
- 12.3. Shutterings, temporary supports and buttresses [^{X1}must be devised and designed], installed and maintained so as to safely withstand any strains and stresses which may be placed on them.
- 13. Cofferdams and caissons
- 13.1. All cofferdams and caissons must be:
- (a) well constructed, of appropriate, solid materials of adequate strength;
- (b) appropriately equipped so that workers can gain shelter in the event of an irruption of water and materials.
- 13.2. The construction, installation, transformation or dismantling of a cofferdam or caisson must take place only under the supervision of a competent person.
- 13.3. All cofferdams and caissons must be inspected by a competent person at regular intervals.
- 14. Work on roofs
- 14.1. Where necessary to avert a risk or where the height or the slope exceed values set by the Member States, collective preventive measures must be taken to prevent workers, and tools or other objects or materials, from falling.
- 14.2. Where workers have to work on or near a roof or any other surface made of fragile materials through which it is possible to fall, preventive measures must be taken to ensure that they do not inadvertently walk on the surface made of fragile materials, or fall to the ground.

(1) This point will be specified in the framework of the future Directive amending Directive 89/655/ EEC, particularly with a view to supplementing point 3 of the Annex thereto.