# BUILDING GUIDELINES FOR TECHNOLOGY

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| Construction project: | **Rozbudowa hali magazynowej wysokiego składowania z częścią socjalno-biurową w** Centrum Dystrybucyjnego Rossmann w Pyskowicach przy ul. Lokalnej 9”. |
| Address of the Investment: | ***ul. Lokalna 9, 44-120 Pyskowice*** |

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This document describes selected issues from the scope of the standard described below which is applicable to the Bidder in the design of technology. The technology designer is bound by all provisions of the assigned standards and regulations. The document defines the required standard of the Investor for selected elements.

## 1. SANDARDS AND GUIDELINES

1.1 Ordinance of the Infrastructure Minister of April 12, 2002 on the Technical Conditions to Which Buildings and Their Location Should Conform (consolidated text. Dz.U. z 2002 r. poz. 1225; amendment.: Dz. U. z 2023 r. poz.2442) – (abr. WT)
1.2 Ordinance of the Family and Social Policy Minister of November 4, 2021, amending the Ordinance on General Regulations of Occupational Safety and Health. (Dz. U. z 2023r. poz.2405)
1.3 PN-EN ISO 14122-1 Safety of machinery - Permanent means of access to machinery - Part 1: Choice of fixed means and general requirements of access
1.4 PN-EN ISO 14122-2 Safety of machinery - Permanent means of access to machinery - Part 2: Working platforms and walkways
1.5 PN-EN ISO 14122-3 Safety of machinery - Permanent means of access to machinery - Part 3: Stairs, stepladders and guard-rails
1.6 PN-EN ISO 14122-4 Safety of machinery - Permanent means of access to machinery - Part 4: Fixed ladders

### STAIRS AND GUARD-RAILS ON PUBLICLY ACCESSIBLE PEDESTRIAN ROUTES

The structure of stairs, ramps, platforms and galleries for general circulation must not be susceptible to vibrations caused by users or technology.

In order to ensure communication between different utility levels, fixed stairs shall be used. On the publicly accessible pedestrian routes, the conditions described in the Ordinance of the Infrastructure Minister of April 12, 2002 on the Technical Conditions to Which Buildings and Their Location Should Conform [item 1.1] must be met.
The limiting dimensions of the stairs are to be taken in accordance with §68.1 of the WT [item1.1]. The usable width of a fixed stairway is the width measured between the inner edges of the handrails.

*§ 68*

*(1) The limiting dimensions of fixed stairs in buildings with different uses are set out in the table:*

| *Purpose of buildings* | *Minimum clear width (m)* | | *Maximum rise height (m)* |
|---|---|---|---|
| | *flight* | *landing* | |
| *1* | *2* | *3* | *4* |
| *Single-family and semi-detached houses and two storey flats* | *0.8* | *0.8* | *0.19* |
| *Multi-family dwellings, collective dwellings[*)] and public buildings[*)], excluding buildings for healthcare facilities [(4)] , as well as production[*)], storage and service buildings employing more than 10 persons* | *1.2* | *1.5* | *0.175* |
| *Nursery schools and crèches* | *1.2* | *1.3* | *0.15* |
| *Healthcare buildings[*)]* | *1.4* | *1.5* | *0.15* |
| *Built-in and detached garages (multi-bay) and service buildings employing up to 10 persons* | *0.9* | *0.9* | *0.19* |
| *In all buildings, irrespective of their use, stairs to underground storeys, technical rooms and non-use lofts* | *0.8* | *0.8* | *0.2* |

*The dimensions and number of steps in a stair flight must comply with the conditions described in the Ordinance [item.1.1] i.e. §69.1 pt. 2 and §69.4.*

*§ 68*

*(1) Number of risers in single flight of fixed stairs shall not be greater than*

1) *14 risers – in healthcare buildings*
2) *17 risers – in other buildings*

*(4) Going size of treads of fixed internal stairway shall result from the condition defined by the formula 2h + s = 0.60 to 0.65m, where "h" is rise of the tread and "s" is going of the tread.*

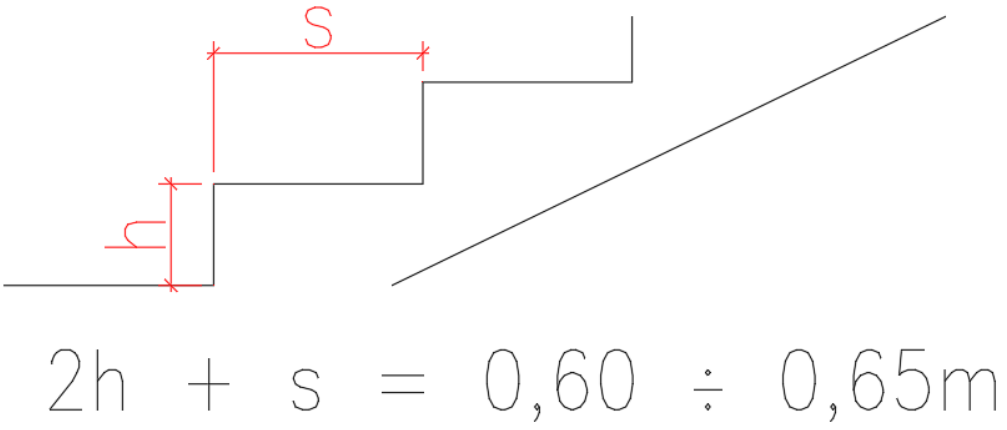



Diagram 1 - Measuring rise and going.

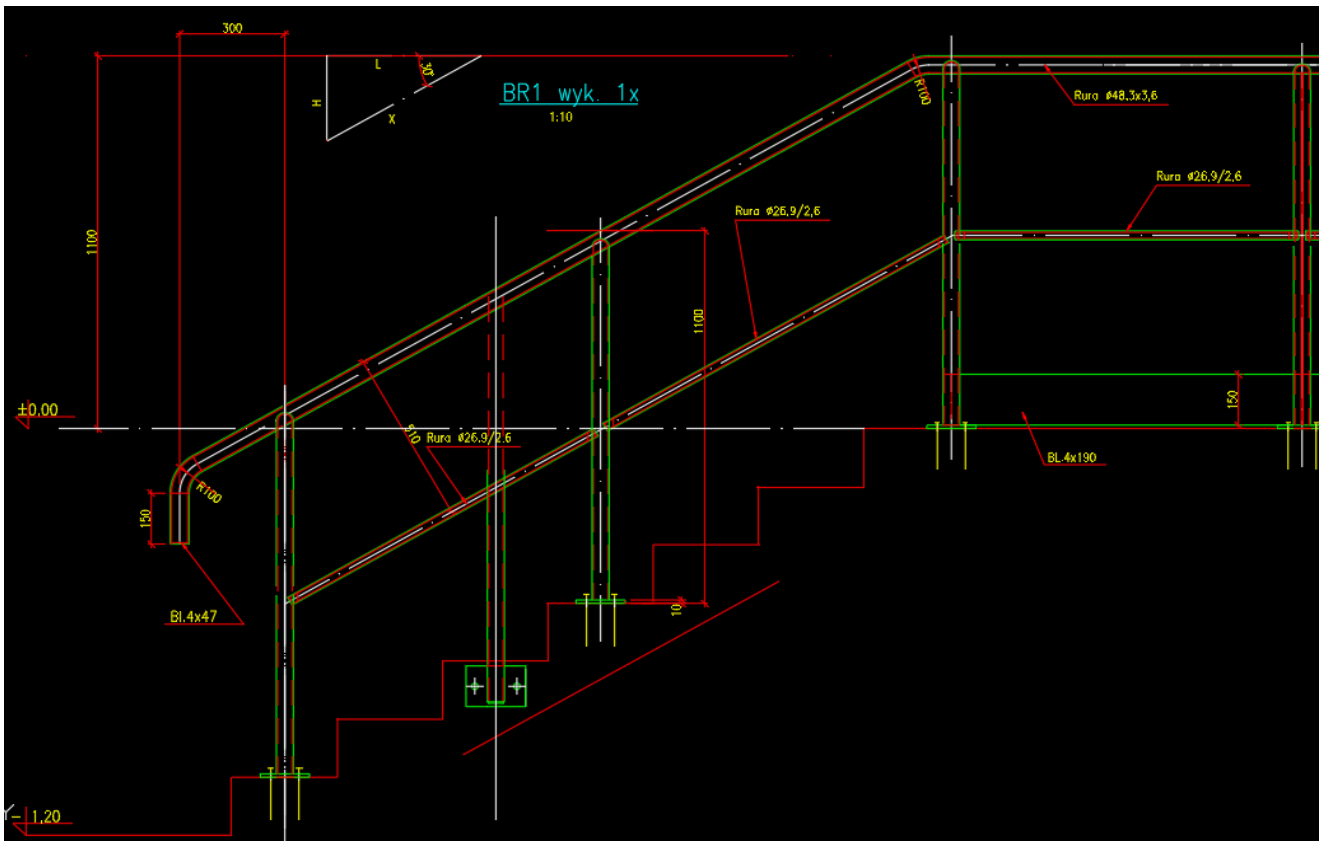



Diagram 2 - Example of a standard handrail on a staircase connected to a landing's handrail. Two different ways of fixing the handrail to the flight are shown.

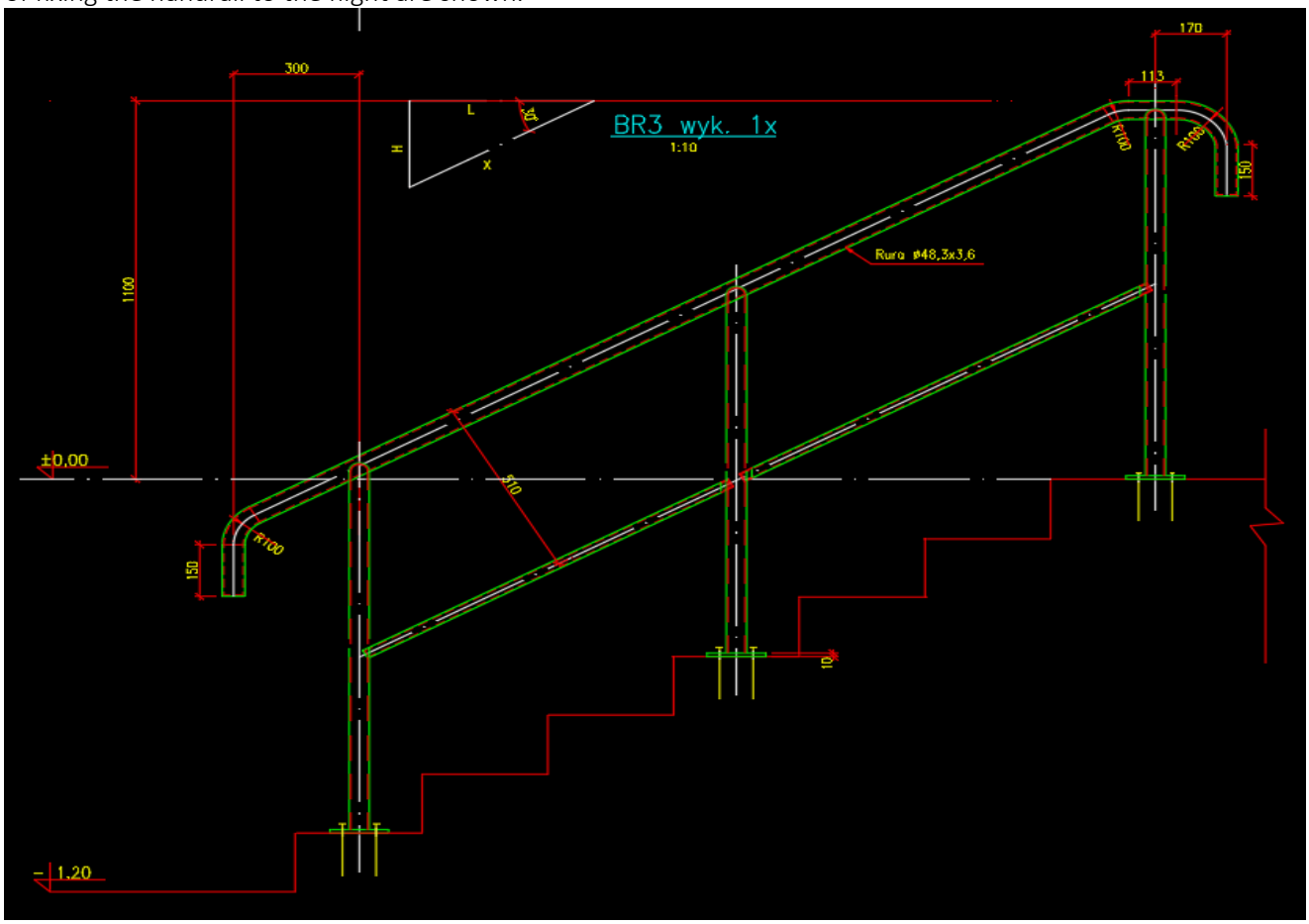



Diagram 3 - Example of a standard for a handrail on a staircase without connection to a landing's handrail.

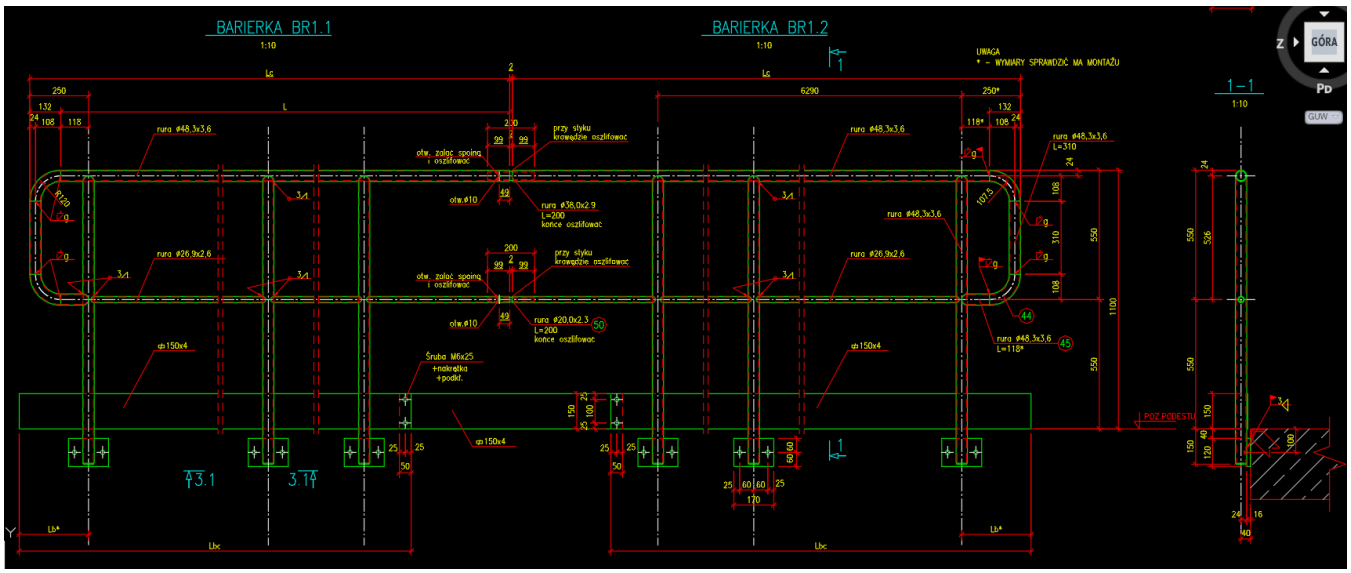
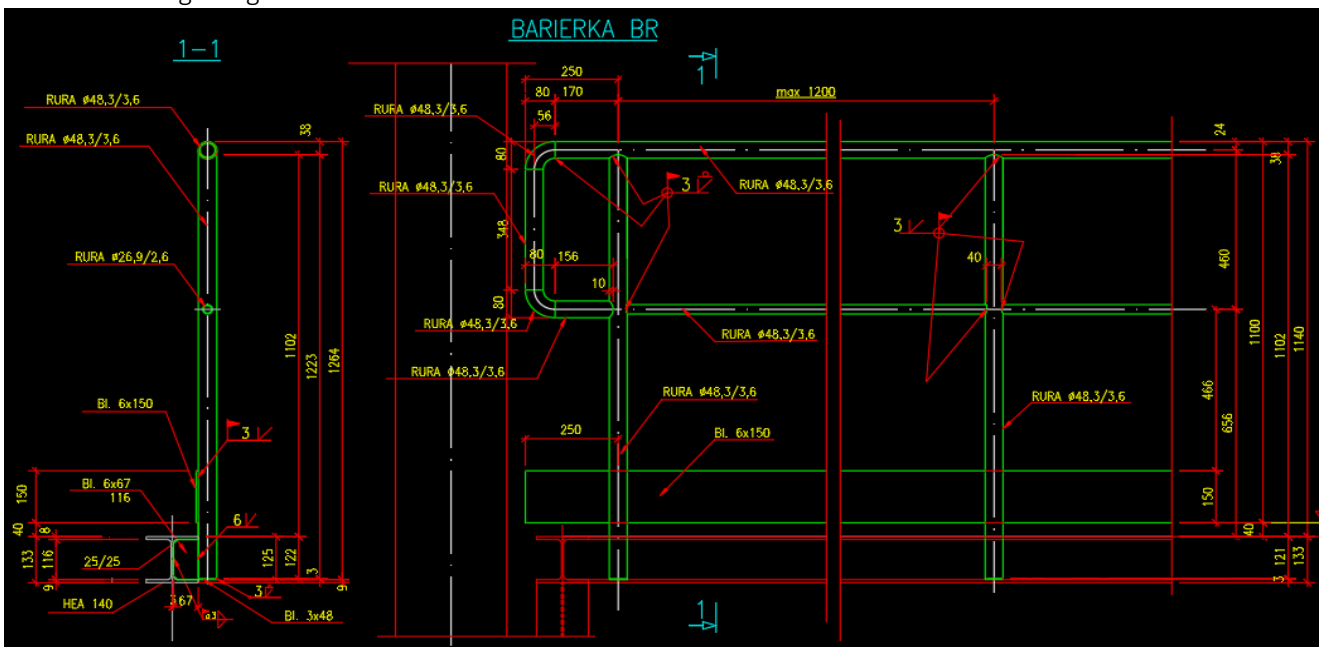
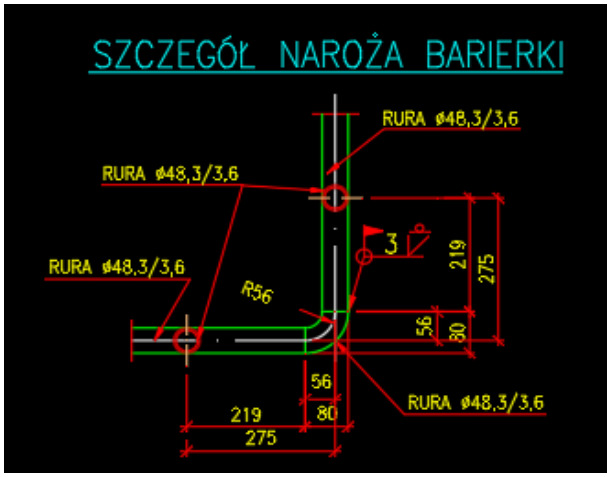



Diagram 4 - Example of railing standard on platforms and landings. Fixing detail to be determined with the architect during design.



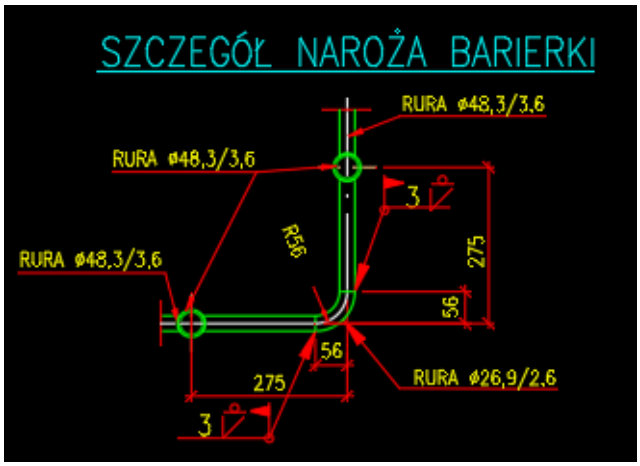




Diagram 5 - Example of railing standard on platforms and landings. Detail of corner to be determined with the architect during design.

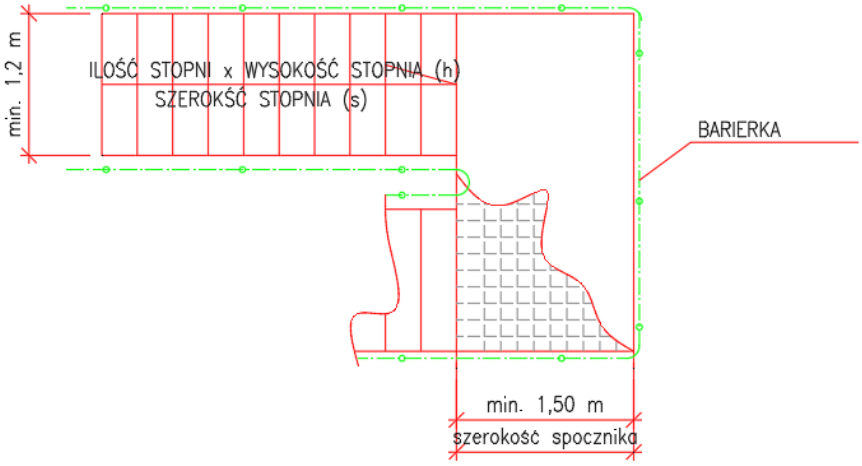



Diagram 6 – Minimum width of stair flight and landing

All voids higher than 0.5 m must be equipped with railings. The minimum requirements to be met by railings are described in the ordinance in §298 sections 1 to 7 [item 1.1].

The surface of stairs and walkways must be made of non-slip materials in accordance with §305. Any changes in the level of the floor must be marked in such a way that the conditions in the ordinance §306 are met. A sign indicating the permissible loads shall be placed on stairs, platforms and floors according to §307 [the ordinance item 1.1].

*§ 305*
*(1) The surface of access to buildings, external and internal stairs and ramps, circulation paths in the building and floors in rooms intended for human occupancy, as well as the floor in the garage, should be made of materials that do not cause a slipping hazard.*
*(2) Floors and coverings in rooms intended for human occupation should be made of anti-electrostatic materials meeting the conditions specified in the Polish Standards for protection against static electricity.*

*§ 306*
*(1). In a public, production and storage building, in places where there is a change in floor level, technical, visual or other solutions should be used to signalize this difference.*
*(2) In the buildings referred to in paragraph (1), the surfaces of landings and ramps shall have a finish that distinguishes them by shade, colour or texture, at least in a strip of 30 cm from the edge beginning and ending of the flight of stairs or ramps.*

*§ 307.*
*In a production and storage building, where variable live loads on floors, stairs or working platforms may occur, a notice board shall be prominently displayed, specifying the permissible load on these elements.*

## 2. ACCESSES AND PASSAGEWAYS TO TECHNICAL FACILITIES

Designed accesses and passageways to technical facilities should meet the conditions described in Chapter 9 of the Ordinance [Item 1] §99 to §101

*§99.*
*(1). Accesses and passageways to cranes and other technical equipment may be corridors, platforms, landings, galleries, stairs, subject to §68.1, ladders and access step-irons, made of non-combustible materials.*

*(2) The general requirements for accesses and passageways to cranes should also be applied if working accesses are made to rooms and parts of the building not intended for human habitation, related to periodic operation of machinery and equipment and inspection and maintenance of the technical condition of the building.*

*§ 100.*
*(1) Accesses and passageways should have a clear height of at least 1.9 m and may be located above the workplace at a height of at least 2.5 m, counting from the floor level of that workplace.*
*(2) Floor surfaces in accesses and passageways shall be non-slip.*
*(3) Open-work floors shall not have openings with area greater than 1700 $mm^2$ and of such dimensions as to allow a sphere with a diameter greater than 36 mm to pass through.*
*(4) Horizontal accesses and passageways on the side of open spaces shall be protected by a railing 1.1 m high with a crossbar halfway up and a kerb at least 0.15 m high.*

*§ 101.*
*(1) In exceptional cases, justified by utility reasons, ladders or step-irons, permanently attached to the structure, may be used as access or passageway between different levels.*
*(2) The width of the ladders or step-irons referred to in paragraph 1 shall be at least 0.5 m and the spacing between rungs shall be no more than 0.3 m. Starting from a height of 3 m above floor level, ladders or step-irons shall be provided with fall protection devices, such as guard cage made of rings, spaced not more than 0.8 m apart, and vertical bars spaced not more than 0.3 m apart.*
*(3) The distance of the ladder or step-iron from the wall or other structure to which it is attached shall not be less than 0.15 m and the distance of the guard cage from the ladder, at its furthest point, shall not be less than 0.7 m and more than 0.8 m.*
*(4) Balustraded landings should be placed every 8-10 m of ladder or row of step-irons. The upper ends of ladder stringers should extend at least 0.75 m above the level of the entrance (platform) if no other fall protection is provided.*