

Berlin - Design for all

'Barrier-Free Concept' Instructions

Accessible Public Buildings

'Barrier-Free Concept' Instructions

The 'Barrier-Free Concept' instructions and the manuals provide together assistance in the planning process and indicate WHO does WHAT and WHEN.

The 'Berlin-Design for all - Publicly Accessible Buildings' and 'Berlin-Design for all - Public Space' manuals represent comprehensive planning principles for barrier-free construction in Berlin building development. Design for all is the goal for the design of our constructed environment and demands a multidisciplinary pool of expertise.

The instructions are structured chronologically based on the planning stages of a public construction project in accordance with ABau (General Instructions for the Preparation and Execution of Construction Work in Berlin). This guides the basic tenet of Design for all through the entire planning process.

The planning stages build on each other. Approved content of the above document must be adopted into the following document.

Barrier-free construction is regulated in the legal principles (Construction Directive for Berlin - BauOBln, DIN 18040 Part

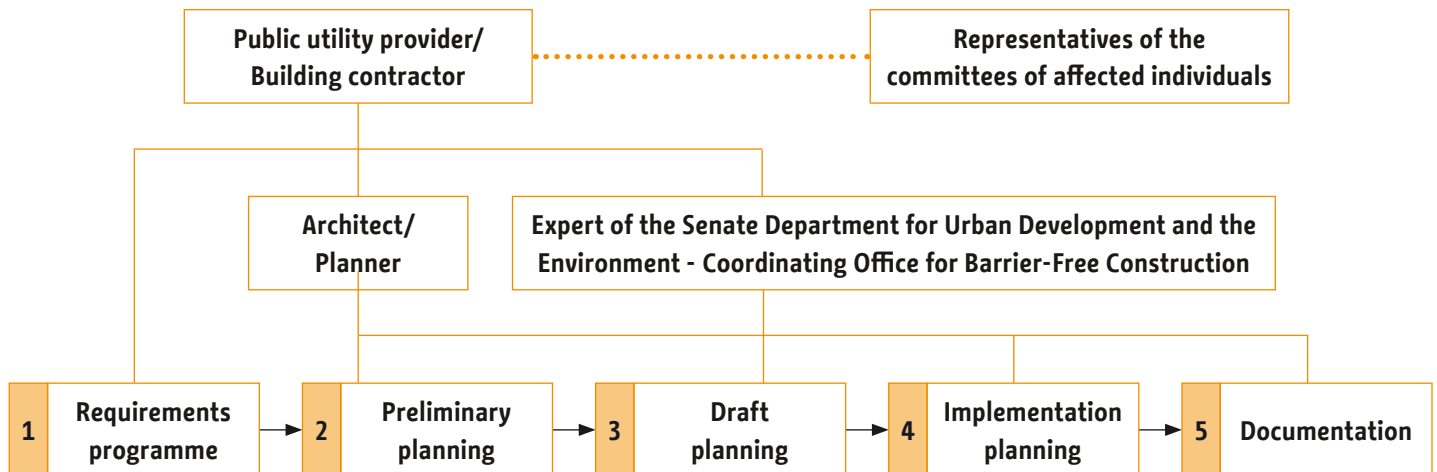
1, operational regulations - BetrVO and so on). In Berlin, the *Berlin-Design for all - Publicly Accessible Buildings* and *Berlin-Design for all - Public Space* manuals must be used in accordance with ABau, Directive II 120 et seq.

For new builds, conversions and extensions, as well as complete modernisations and major changes of use, a barrier-free concept must be drafted.

Areas of use that are subject to the Workplace Ordinance (ArbStättV) are not included in this. It is however recommended that the barrier-free concept also be taken into account for workplaces (e.g. offices).

DIN 18040 Part 1 (10-2010), which is being introduced as a technical building regulations in Berlin (AV LTB dated 23 May 2012) sets out minimum requirements. The formulations contained therein regarding protection goals can also be satisfied in ways that differ from those defined in the standard.

[All measurements quoted in cm]



Deviations from the requirements of barrier-free construction

Deviations as detailed in Section 68 of the BauOBln (Berlin building regulations) must be stated in factual and functional terms and suitable proposed solutions must be offered. They must be coordinated with the essential user and responsible authorities and documented. Compliance with listed building requirements must be ensured.

Specialists in Design for all, advisory organisations and/or representatives of the people affected must be included in the planning process.

The services to be provided are not classed as special services pursuant to the HOAI, provided these services relate to services that must be provided in the context of satisfying requirements from public law directives or generally recognised rules of technology.

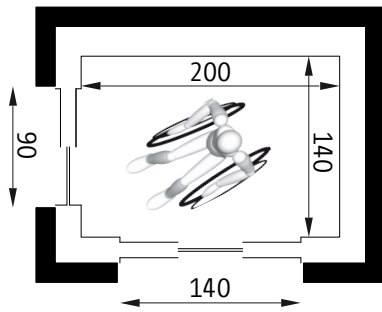
It must be determined in each individual case whether the text-based and/or planning-related proof of barrier-free planning goes beyond the basic services to be provided pursuant to the HOAI.

[Quote: Barrier-Free Construction Guidelines, published by the BMUB / TU Dresden 2014]

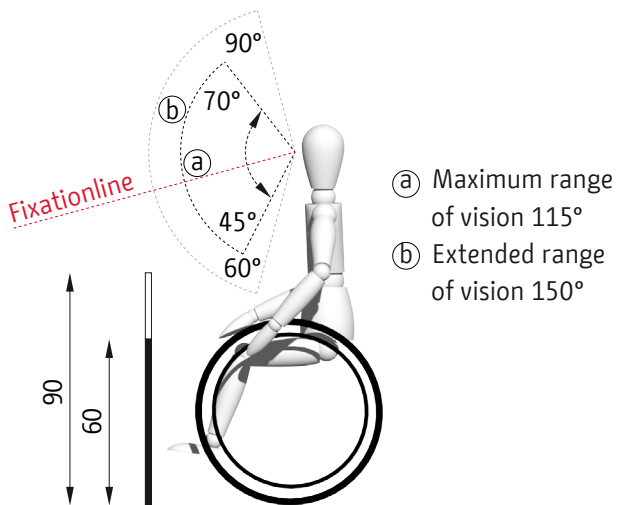
1 Requirements programme

The requirements programme must generally be set up by the essential user with collaboration of the building agency. The quality and quantity requirements relating to the barrier-free construction must be formulated in the spatial, functional and facilities programme as well as in the operating concept.

„3-sided“ lift

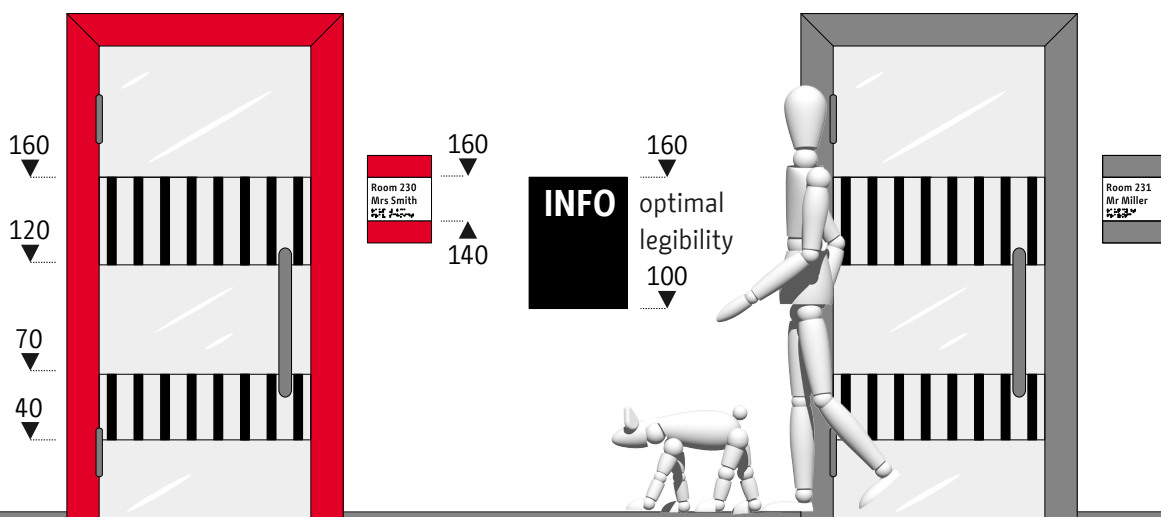
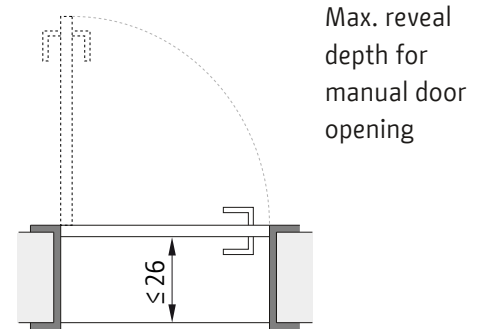


Fields of vision



External access: barrier-free public transport system connection and personal transport, number of special parking spaces based on the applicable draft of the Berlin building regulations
Definition of requirements for publicly accessible areas within the building and on the premises
Building plot: location of accesses, topography
Spatial programme (useful areas based on DIN 277): the required additional space requirements in the relevant areas must be checked
Internal vertical and horizontal access
Location and number of barrier-free sanitation rooms
Quality-related spatial requirements - definition of rooms / areas with special requirements on barrier-free design
Requirements on the barrier-free use of external rooms with an access and accommodation function
Equipment causing additional costs

Doors



2 Preliminary planning

The client will decide promptly on the nature and scope of the involvement as per the State Equal Rights Act (LGBG). In addition to state or district representatives for people with disabilities, the Barrier-Free Construction and Transport Working Group of the Senate Department for Urban Development and the Environment and other committees of affected parties can also be involved. The required professional and technical expertise can be optimised by including **experts**. The project managers decide regarding commissioning. The Coordinating Office of the Senate Department for Urban Development and the Environment will clarify fundamental matters for barrier-free construction. The barrier-free concept is to be developed in the **preliminary planning** as an **independent element**. It must be demonstrated how the requirements drafted in the requirements programme will be implemented in the planning stage; voting records must be included. The barrier-free concept must be set out in **text** and **diagrammatic form** as part of the initial planning.

Topography:

Representation of external spaces provided for barrier-free use as per the requirements programme

Accessibility:

Representation of the connection (interfaces to civil engineering) between the plot of land and the public transport system in the location map with adjacent building development on a scale of 1:1000 / 1:5000 with coloured highlighting of the route relationships, e.g. from the bus stop and / or parking spaces to the horizontal or vertical access to the building

Representation of the planned assignment of dedicated parking spaces and routes to entrances

Schematic representation for barrier freedom of the external facilities at entrance level

Horizontal access:

Accesses, entrances, communication elements, doors, vestibules

Access areas / guided pathways (foyers, corridors, escape routes, etc.)

Vertical access:

Stairs, ramps, lifts, escalators

Mobility areas:

In all relevant publicly accessible areas (corridors, lifts, sanitary rooms, etc.)

Spatial programme:

Representation of the areas defined in accordance with the requirements planning as publicly accessible

Labelling of rooms with special requirements on barrier-free design

Representation of route relationships and spatial arrangement of the individual functional areas

Labelling of barrier-free sanitary systems

Orientation:

The choice of materials, colours and shapes (visual and tactile contrasts) is intended to achieve a self-explanatory design

Concept for guidance, communication and information systems with explanation of materials, colours, shape, size and lighting

Multisensory principle

Amenities:

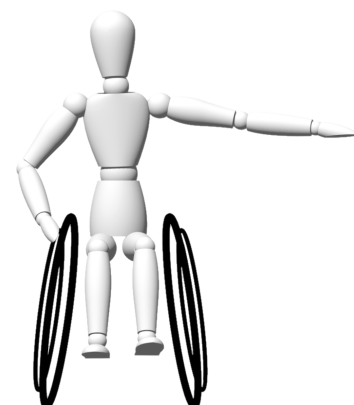
Furniture (e.g. machinery, counters, chairs)

Grip height

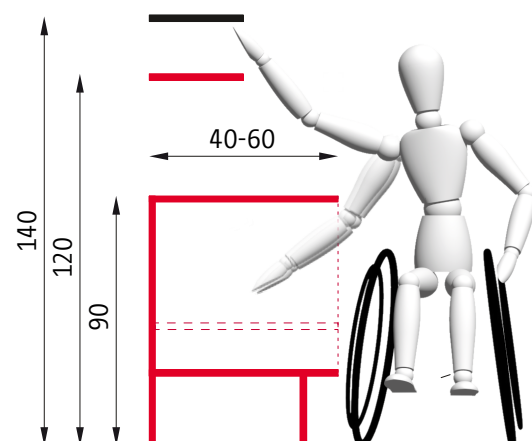
Eye level
approx. 125

Working
height 80

Knee level
approx. 65



Reach



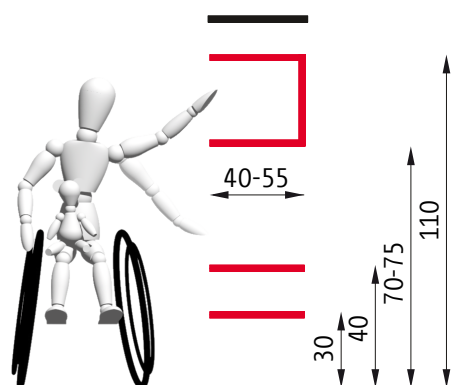
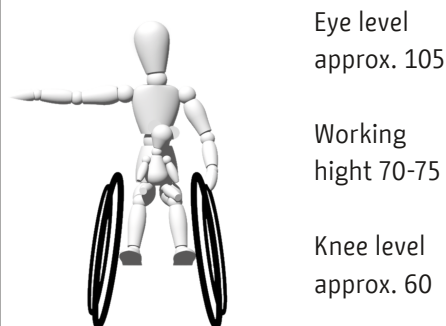
3 Draft planning

The barrier-free concept must be set out in text and diagrammatic form as part of the construction planning (CPD) on a scale of 1:100. The representation depth (scale) may need to be adapted to the specific construction task. Any deviations in the CPD from the approved IPD must be demonstrated. The concept must be integrated in a readable form into the CPD.

Complete draft drawings	
Relevant design, detail and construction drawings	
Text explanations required for execution	
Voting records	

Topography:	
Presentation of the measures required for the barrier-free use of external rooms	

Accessibility:	
Connection (interfaces to civil engineering) of the plot to the public transport network in the location map with adjacent building developments	
Route relationships, e.g. from the bus stop and/or parking spaces to the horizontal or vertical access of the building	
External installations on a suitable scale with a floor plan of the entrance level	



Assignment of barrier-free parking spaces to entrances and proof of the number based on the applicable draft of the Berlin building regulations	
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Horizontal access:	
Entrances, accesses, doors, vestibules, communication elements, etc.	
Access areas / guided pathways (foyers, corridors, escape routes)	

Vertical access:	
Detailed representation of stairs, ramps, lifts, escalators	

Mobility areas:	
In all relevant publicly accessible areas (corridors, lifts, sanitary rooms, etc.)	

Spatial programme:	
Representation of the areas defined in accordance with the requirements planning as publicly accessible	
Labelling of rooms with particular requirements in terms of barrier-free design and representation of measures required for this	
Representation of spatial sequences, route relationships between functional areas	
Representation of barrier-free sanitary systems	

Orientation:	
Communication, guidance and orientation systems (e.g. relevant details such as transitions, blind guidance system)	
Information on materials for internal and external spaces where relevant for facilitating an understanding of the barrier-free design	
Colour and material design of walls and floors (e.g. details of wall elements, photographic representations, examples of patterns)	
External facilities - representation of the materials of surfaces, planting areas	

Amenities:	
Statements on the lighting concept and acoustic installations where they are relevant to the barrier-free design	
Furniture (e.g. supplemented by detailed drawings)	
Control elements, technology	

4 Implementation planning

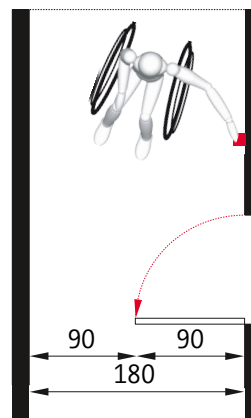
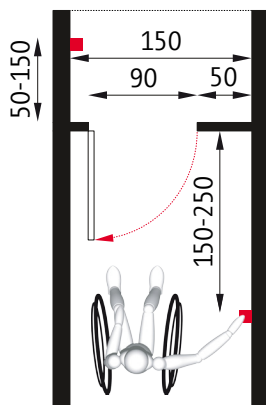
Details and/or special designs must be detailed in the appropriate scale.

5 Documentation, success monitoring

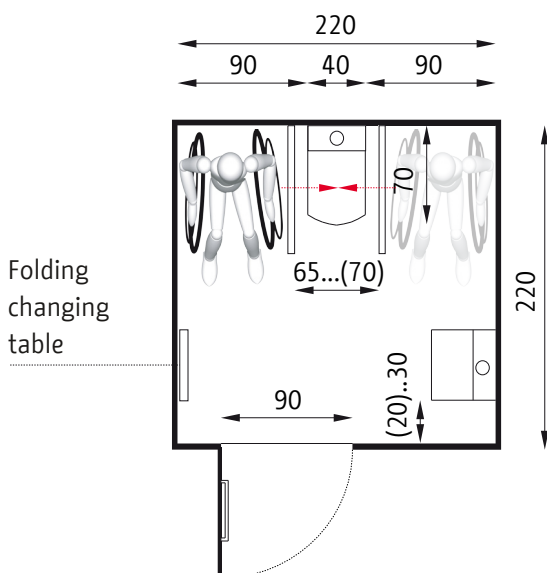
Summary of results

General information on operational measures (e.g. interfaces to service), possibly justification for devia

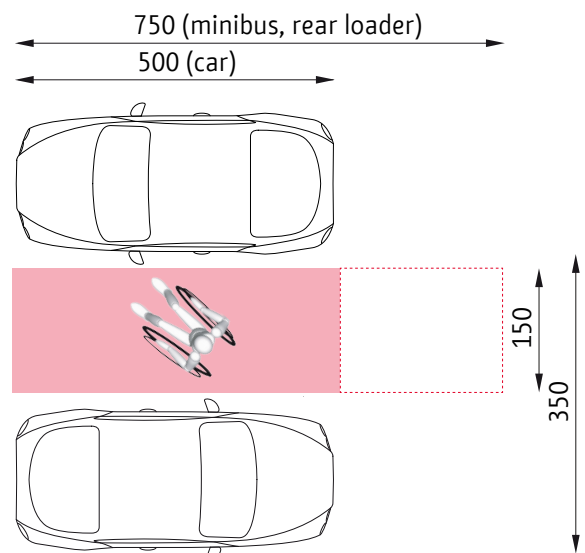
Door opener



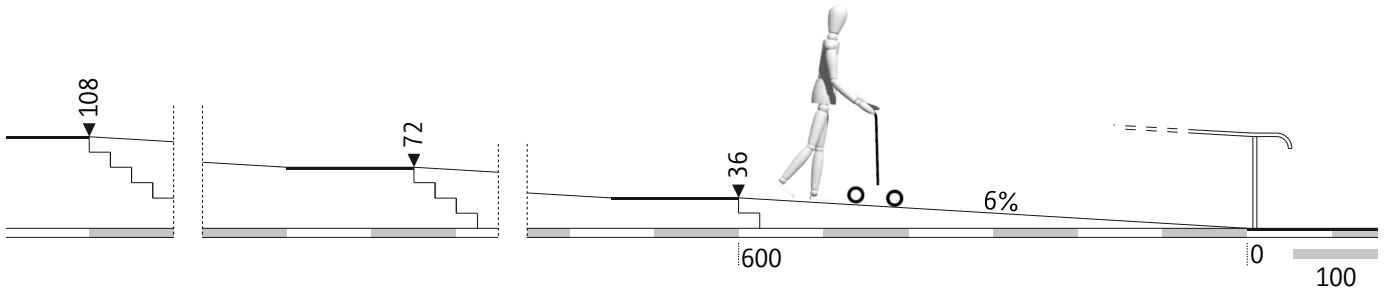
WC



Parking spaces



Ramps

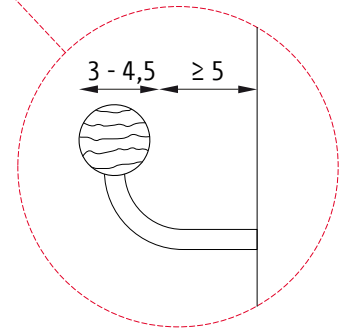
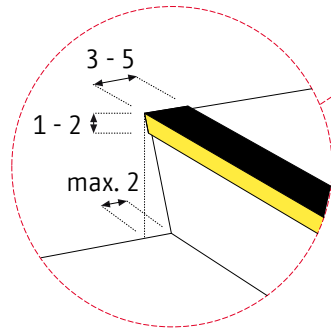
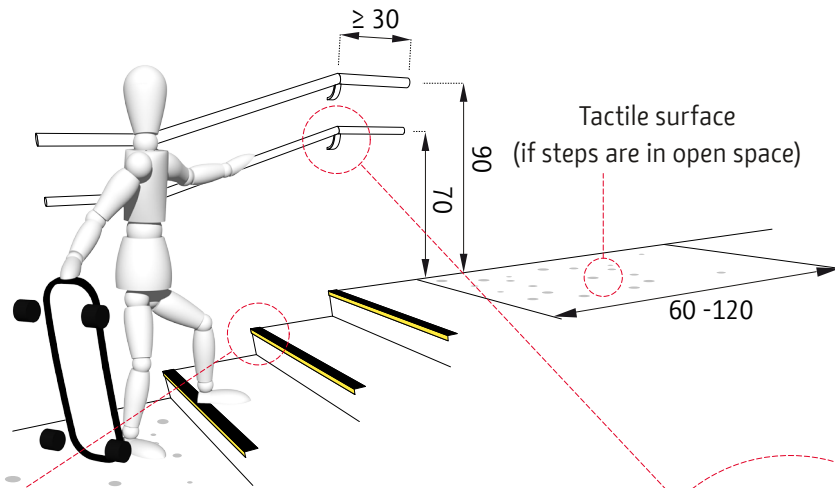


$$\text{Incline length (m)} = \frac{\text{Hight (cm)}}{\text{Incline (\%)}}$$

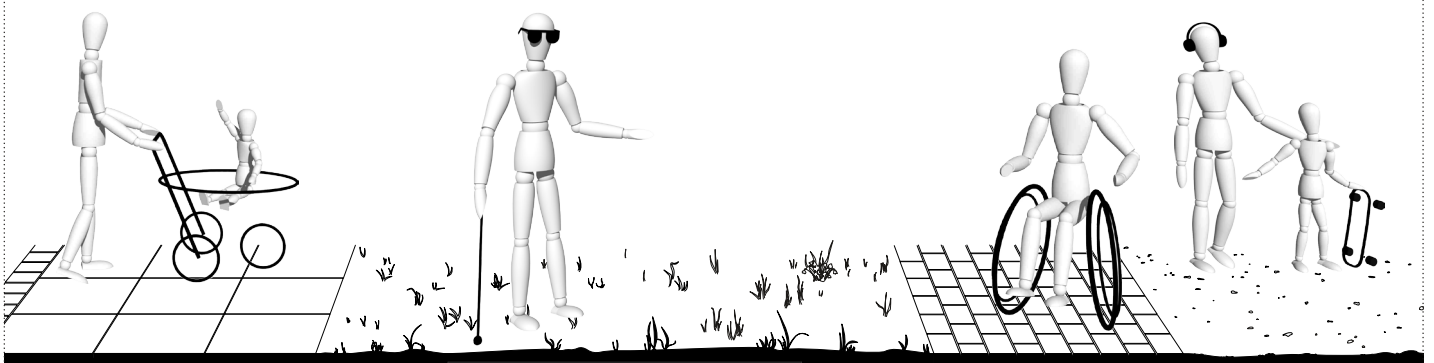
$$\text{Incline (\%)} = \frac{\text{Hight (cm)}}{\text{Lenght (m)}}$$

$$\text{Hight (cm)} = \text{Incline (\%)} \times \text{Lenght (m)}$$

Stairs



Flooring



More information about Design for all

Brochure Berlin - Design for all

Publicly Accessible Buildings

Brochure Berlin - Design for all

Public Space

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Internet version

http://stadtentwicklung.berlin.de/bauen/barrierefreies_bauen/de/handbuch.shtml

Exhibition and information center

Brochure point of the Senate Department

for Urban Development and the Environment

Am Köllnischen Park 3, 10179 Berlin

Subway lines U2, Märkisches Museum,

U8, Jannowitzbrücke or Heinrich-Heine-Straße

S-Bahn lines S5, S7, S75, Jannowitzbrücke

Bus line 147, 248, 265, U-Bhf. Märkisches Museum

broschuerenstelle@senstadtum.berlin.de

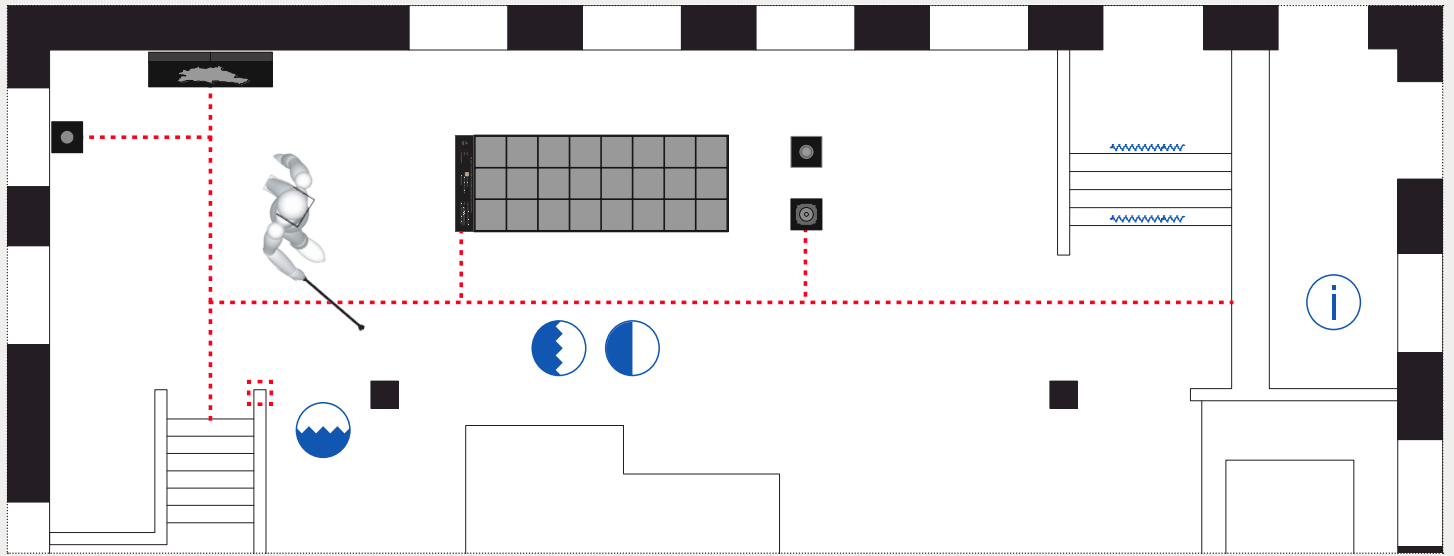
Print

medialis

Berlin, May 2015

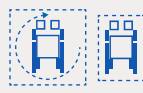
„Barrier-Free Concept“ Instructions

Accessible Public Buildings



Key

Space requirement 150 x 150 cm
& space requirement 130 x 90 cm
(scale representation)



Passage 90 cm
(scale representation)



Barrier-free lift type TYPE 2:
110 x 140 cm
(scale representation)



Stepless transition outdoors / indoors



Communication aids

Swing door with request
button (scale representation)

Guide strip
Attention fields

Contrast of floor materials -
tactile and visual

Light guidance system



Audible guidance system



Tactile floor guidance system



Visual floor guidance system



Step marking



Barrier-free information counter



Tactile wall or handrail
guidance system



Key from: Guidelines on Barrier-Free Construction, BMUB, / TU Dresden 2014

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Color contrast

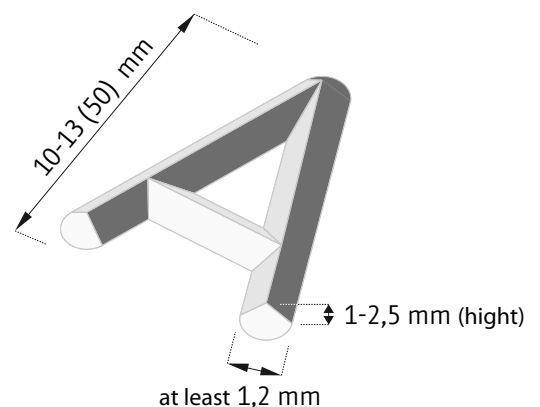


Contrast in luminance



(Berlin - Design for all - Accessible Public Buildings 2.1.2)

Tactile pyramid font



Space requirement: traffic, meeting and mobility areas, dimensions as per DIN 18040 Part 1

Space requirement	Surface W x D in cm	Description
Meeting areas	≥ 180 x 180	<ul style="list-style-type: none"> For meetings between wheelchair users On walkways / corridors after max. 15 m length
Movement areas	≥ 150 x 150	<ul style="list-style-type: none"> For changing direction, parking, meetings In front of swing doors (opening side) Waiting area in front of lift doors, additional thoroughfare width of 90 cm in the event of overlap with other traffic areas At the start and end of a ramp In front of service units (e.g. cash desks, machines, letterboxes, tel. & intercom systems) In front of control elements E.g. in front of WC bowls, sink stands, shower area
Car parking space	≥ 350 x 500	<ul style="list-style-type: none"> In the case of garages with automatic door opening
Wheelchair parking spot	≥ 180 x 150	<ul style="list-style-type: none"> Also equal surface in front of the wheelchair parking space
Standing surface where seats are fixed	≥ 150 x 90 ≥ 130 x 90	<ul style="list-style-type: none"> Where a side approach is possible Where a backward or front-facing approach is possible
	Depth in cm	
	≥ 300	<ul style="list-style-type: none"> Distance from downwards-leading stairs opposite lift doors
	≥ 250	<ul style="list-style-type: none"> Distance of button from wing door (opening side) based on a front-facing approach
	≥ 150	<ul style="list-style-type: none"> Doors with wall opposite In case of frontal approaches to door: sliding door button; wing door (closing side) Intermediate podium on ramps after 600 cm of ramp run In front of wheelchair parking spaces In front of couches 180 cm wide (e.g. in changing rooms)
	≥ 120	<ul style="list-style-type: none"> If the floor clearance is > 150 cm, otherwise T = 150 cm
	≥ 70	<ul style="list-style-type: none"> From the front edge of the WC bowl to the back wall
	≥ 55	<ul style="list-style-type: none"> Floor clearance
	≥ 50	<ul style="list-style-type: none"> Distance to the main closing edge in the case of lateral approaches to doors Distance between control elements and room corners
	≥ 45	<ul style="list-style-type: none"> Washbasin, shower folding seat
	≤ 26	<ul style="list-style-type: none"> Reveal depth (reach depth for door handles, see graphic for doors)
	Width in cm	
	≥ 150	<ul style="list-style-type: none"> Walkways, corridors and other traffic areas with meeting up to 15 m in length
	≥ 120	<ul style="list-style-type: none"> Walkways, corridors, ramps and other traffic areas up to max. 6 m without change of direction, turning option before and after Lateral approach with 150 cm surface length in the direction of travel
	≥ 90	<ul style="list-style-type: none"> Passages, doors Floor clearance On either side of the WC bowl