ArchSD Knowledge Management

ARCHSD KNOWLEDGE PAPER

ARCHSD STANDARD ON UNIVERSAL ACCESSIBILITY (UA) PROVISIONS

EXECUTIVE SUMMARY

It is the established practice for ArchSD to comply with the prevailing Building Laws and Codes, including the Design Manual: Barrier Free Access 2008 (DM2008) promulgated by the Buildings Department and wherever practicable, to achieve standards beyond those that are legally required in projects delivered by the department. The ArchSD Standard on UA Provisions has been drawn up to set a higher standard in achieving a barrier free environment beyond the minimum statutory requirement. This Standard is the minimum requirement for UA provisions in ArchSD projects and should be followed for all projects unless with genuine difficulties.

Authors : Mrs. Susanna CHEUNG (CA/ASC) & Mr. Henry LOK (A/ASC/3)
Date : 4 October 2012
KM Manager : Mrs. Alice YU (AD(A))
Key Words : Knowledge Expertise, Architectural, Universal Accessibility, Design Standard
Deposition in KM Portal : AB Hub, Universal Accessibility

Revision History				
Revision No.	Date Revised	Descriptions of Major Amendments	Author	KM manager
Rev. 1	23 Mar 2018	1. Revision history was added. 2. Numberings and bullets of remarks were added to sub-section. 3. New items: 2.6b), 2.13c), 2.14c), 2.15a), 5.2b) 4. Amended items: 2.3a), 2.9a), 2.11a), 2.11b), 2.13a), 5.1d), 6.2a), 7.1a), 7.1b), 7.2a), 7.3a), 7.4b), 8.1b) 5. Deleted items: Remark of 2.10	Mr. LEE Wing-hong (CA/ASC), Mr. Albert YUE (SA/ASC/1), Ms. Yuki NG (A/ASC/2)	Ms. Alice YEUNG (AD(A))

It is the established practice for ArchSD to comply with the prevailing Building Laws and Codes, including the Design Manual: Barrier Free Access 2008 (DM2008) (http://www.bd.gov.hk/english/documents/code/BFA2008_e.pdf) promulgated by the Buildings Department in projects delivered by the department. The ArchSD Standard on UA Provisions has been drawn up to set a higher standard in achieving a barrier free environment beyond the minimum statutory requirement. Unless otherwise specified, the Standard shall only apply to areas within the site.

This Standard is the minimum requirement for UA provisions in ArchSD projects and should be followed for all projects unless with genuine difficulties. Where the situations permit, project teams are encouraged to achieve an even higher standard such as incorporating other recommended items in DM2008.

Design Aspects	ArchSD Standard on UA Provisions
1. Client's Requirements	
a) UA requirements in the design brief	***Advise client department:*** ***1) To address the requirements of UA in the context of United Nations Convention on the Rights of Persons with Disabilities in formulation of the design brief and the Project Definition Statement to achieve a standard above the statutory requirements wherever applicable and practicable.***
b) Accessibility to and within the sites	***Advise client department:*** ***1) To consider accessibility to and within the sites with respect to topography, travel distance from public transport and major road, etc.*** ***2) To adopt a "facility-based approach" in coordination with relevant departments (including TD and HyD) and parties to ensure accessible routes leading to the venues are available from public transport and roads in the vicinity.***
c) Specific accessibility requirements	***Advise client department:*** ***1) To engage Access Coordinator to provide input on accessibility based on future operation of the venue in accordance with the LWB's memorandum (Ref.: LWB R 9/3939/10 Pt 2) dated 13/12/2010.*** ***2) To consult Rehabilitation Advisory Committee via LWB for major projects on providing a barrier-free environment in government premises and facilities for persons with disabilities in accordance with LWB Circular No. 1/2011 dated 9/2/2011.***
d) Management and maintenance requirements	***Advise client department:*** ***1) To appoint Access Coordinator and Access Officers to conduct regular review and maintenance, where appropriate, to carry out improvement works, on access and facilities for use by persons with disabilities after occupation.***

2. Access Strategy	
2.1 Travel chain analysis	
a) Travel chain analysis, within each building and across the compound, from drop off point to approach/landscape areas, car park, main entrance, lift to upper floor lobbies, function rooms, toilets, return routes and exits	***Prepare UA Drawings for vetting by PQDVC/ADAP at Workstage 2 and Workstage 3 including:*** ***1) Identification of continuous accessible routes throughout the development.*** ***2) Locations of UA facilities such as accessible car parking spaces, etc.*** ***3) Information of way finding such as tactile guide paths and signs, etc. from main entrance to major facilities including outdoors intended function.*** ***4) Areas accessible by different users of the venue.***
2.2 Drop-off	
a) Drop-off outside the sites	***Provide advice and technical support to client department:*** ***1) To coordinate with relevant departments (including HyD and TD) for the provision of drop-off on the street near the main entrance of venues.***
b) Drop-off inside the sites	***1) Provide at least one drop-off in the form of either a lay-by or line markings on the vehicular access road in the vicinity of the main entrance or the lift lobby of the building.*** ***2) Provide appropriate signs along the vehicular access to locate the drop-off point and to give warning against its misuse for parking.*** ***3) Provide drop kerb* to the pavement adjacent to the drop-off where there is a level difference.*** *Remark: * Refer to Division 6 of Chapter 4 of the DM2008 for standards of drop kerb.*
2.3 Accessible car parking spaces	
a) Number of accessible car parking spaces	***1) Total no. of car parking space: 1-25, no. of accessible car parking space: 1*** ***2) Total no. of car parking space: 26-50, no. of accessible car parking space: 2*** ***3) Total no. of car parking space: 51-100, no. of accessible car parking space: 3*** ***4) 1 additional accessible car parking space for each additional increment of 100 or part thereof)***
b) Location of outdoor and indoor accessible car parking spaces	***Locate outdoor and indoor accessible car parking spaces at not more than 50m and 20m respectively on an accessible route from the major entrance or lift lobby of buildings.***
c) Dimensions of accessible car parking spaces	***Provide minimum width of 3.9m for accessible car parking spaces.***
d) Signage showing numbers and direction to accessible car parking spaces	***1) Provide signage at the entrance of parking facilities in prominent locations to display the designated numbers of accessible car parking spaces reserved for persons with a disability;*** ***2) Provide indication/directional signage along driveway showing the way leading to the accessible car parking spaces.***

2.4 Drop kerb	
a) Gradient of drop kerb inside parks and open spaces	***Provide gradient of not steeper than 1:12 for drop kerbs inside parks and open spaces.***
2.5 Internal staircases and steps	
a) Risers and treads of main circulation staircases and steps in or connected to the main entrance lobby of buildings	***Provide maximum and minimum dimension for risers and treads at 0.15m and 0.3m respectively for the main circulation staircases and steps in or connected to the main entrance lobby of buildings.*** *(Remark: For the avoidance of doubt, this requirement is not applicable to the staircases required for MoE.)*
2.6 Corridors	
a) Width of corridors connecting the main entrance to facilities for the public on the major entrance floor of buildings	***Provide minimum width of 1.8m for corridors connecting the main entrance to the following facilities for the public on the major entrance floor of buildings:*** ***1) Information/service counter*** ***2) Lift lobby*** ***3) Major circulation staircases*** ***4) Accessible toilets*** ***5) Baby care facilities*** *(Remark: For the avoidance of doubt, this requirement is not applicable to corridors on other floors.)*
b) Protruding objects	***The counters or devices installed at controlled passages and the warning guardrails provided for low headroom should be designed with round edges.***
2.7 Doors	
a) Door handles	***Provide lever-type handles or pull handles to swing doors along accessible routes.***
b) Opening time of automatic doors	***Doors to stay open for a minimum of 5 seconds each opening.***
2.8 Entrances	
a) Separate main entrance for the visually impaired to healthcare facilities	***Provide separate designated main entrance for the visually impaired to healthcare facilities.*** *(Remark: Attempt should be made to set aside an accessible route for the visually impaired.)*
2.9 Handrails	
a) Provisions of double handrails for steps and staircases in schools *and Places of Public Entertainment.*	***Provide double handrails at a height between 850-950mm and 700-800mm for upper and lower handrails respectively for steps and staircases in schools and Places of Public Entertainment.***

2.10 Accessible lifts	
a) Numbers and graphic on lift control buttons	***1) Provide call button panels on both sides of door openings in an accessible lift.*** ***2) Provide tactile graphics for open-door and close-door push buttons, emergency alarm button and main entrance level for the call button panels as per Figure 41 of the DM2008.***
b) Opening time for lift doors	***Accessible lift doors to stay open for a minimum of 3 seconds each opening.***
c) Turning space in front of lift car door for wheelchair users	***Provide an unobstructed turning space of 1.5m x 1.5m in front of accessible lift car door.***
2.11 Vertical lifting platform (if provided)	
a) Dimensions of vertical lifting platform	***Provide minimum internal size of 1.1m (wide) x 1.5m (deep) for a vertical lifting platform.***
b) Entrance of vertical lifting platform	***Provide Automatic door with*** ***1) minimum clear entrance width of 900 mm;*** ***2) single door or 2-door design and the kinetic energy of the door should not exceed 10J.***
2.12 Escalators and Passenger Conveyors (if provided)	
a) Provisions of audio indicator for escalators and passenger conveyors	***Provide clear and consistent audio signal or devices to indicate going up, down or moving forward on both ends of escalators and passenger conveyors.***
b) Signage showing alternative access route at entry of escalators	***Provide signs near to or at the entry to the escalator to guide the persons with a disability or parents with baby prams to use alternative access routes such as ramps or accessible lifts, if available.***
2.13 Auditorium and related facilities	
a) Numbers of wheelchair spaces in auditorium and related facilities	***Provide minimum number of wheelchair spaces in auditorium and related facilities as follows:*** ***1) 8 wheelchair spaces for a venue with maximum 800 fixed seats*** ***2) 8 wheelchair spaces plus 4 for each additional 400 fixed seat for a venue with more than 800 fixed seats***
b) Locations and access for wheelchair spaces in auditorium and related facilities	***In auditorium and related facilities with more than 150 fixed seats,*** ***1) Provide a conventional companion seat next to each wheelchair space;*** ***2) Locate wheelchair spaces at different levels;*** ***3) Provide access to at least the low and high levels of seating area.*** *(Remark: For the avoidance of doubt, there is no need to provide wheelchair spaces and access at every row of seating.)*
c) Accessible route to the stage and performing area	***Provide an accessible route from the wheelchair seating locations to the stage and performing area where access is provided to the stage from within the fixed seating venue. Access to the stage should be by means of a ramp or a platform lift.***

2.14 Hotels, hostels and guesthouses	
a) Dimensions of a bathroom and shower compartment in accessible guest rooms	***In accessible guest rooms in hotels, hostels and guesthouses,*** ***1) Provide minimum internal dimensions 2.5m x 2.7m for accessible bathrooms; or*** ***2) Provide minimum internal dimensions 2.5m x 2.5m for shower compartment.*** ***3) Provide a clear space of not less than 1.5m x 1.5m immediately in front of bathtub or shower compartment to allow manoeuvrability.***
b) Positions of switches and controls in accessible guest rooms	***Locate switches and controls in accessible guest rooms as follows:*** ***1) Electric sockets between 0.45m and 1m high from finished floor level.*** ***2) Light switches, door bells, entry phones and other controls between 0.75 m and 1.2m from finished floor level.***
c) Emergency call bells in accessible bathrooms and shower compartments	***1) The emergency alarm should be installed outside the accessible bathroom/shower compartment and connected to a caretaker's office or a public information/ service counter;*** ***2) Emergency call bells should be equipped with a back-up power supply.***
2.15 Water Sports Facilities	
a) Accessibility to water facilities	***Accessibility to water facilities should be by means as follow:*** ***1) Ramp with 1.2m wide and provide with a slip resistant surface extending into the shallow end of the pool.*** ***2) A lifting device such as a disable chair lift.***
3.0 External Circulation & Landscaped Areas	
3.1 Access route	
a) Width of accessible routes from the site boundary to the main entrance of buildings	***Provide minimum width of 1.8m for accessible pedestrian paths from the site boundary to the main entrance of buildings.***
b) Access options to facilitate unimpeded paths and flexibility in use	***Explore and maximize options in route of travel to facilitate independent access including consultation with users/operators and relevant authorities.***
3.2 Ramps	
a) Width of ramps leading to main entrance of buildings and parks and open spaces, and to major public facilities inside parks and open spaces	***Provide minimum width of 1.5m for ramps leading to:*** ***1) The main entrances of buildings, parks and open spaces.*** ***2) Major public facilities inside parks and open spaces (major public facilities such as accessible toilets, pavilions, amphitheatre, children play areas, elderly fitness stations and other main activity centres).***
b) Gradient of ramps leading to main entrance of buildings and parks and open spaces, and to major public facilities inside parks and open spaces	***Provide gradient of not steeper than 1:15 for ramps leading to:*** ***1) The main entrances of buildings, parks and open spaces.*** ***2) Major public facilities inside parks and open spaces (major public facilities such as accessible toilets, pavilions, amphitheatre, children play areas, elderly fitness stations and other main activity centres).***

3.3 Staircases and steps	
a) Risers and treads of staircase and steps leading to main entrance of buildings and parks and open spaces, and to major public facilities inside parks and open spaces	***Provide risers of maximum 0.15m and treads of minimum 0.3 m for staircases and steps leading to:*** ***1) The main entrances of buildings, parks and open spaces.*** ***2) Major public facilities inside parks and open spaces (major public facilities such as accessible toilets, pavilions, amphitheatre, children play areas, elderly fitness stations and other main activity centres).***
b) Handrails for staircases and steps leading to main entrance of buildings and parks and open spaces, and to major public facilities inside parks and open spaces0.3	***Provide handrails, in accordance with Division 8 of Chapter 4 of the DM2008 for staircases and steps leading to:*** ***1) The main entrances of buildings, parks and open spaces.*** ***2) Major public facilities inside parks and open spaces (major public facilities such as accessible toilets, pavilions, amphitheatre, children play areas, elderly fitness stations and other main activity centres).***
4.0 Way finding and Signage	
4.1 Accessible signage	
a) Braille and tactile floor plans	***Provide Braille and tactile floor plan for the following building types :*** ***1) Crematoriums*** ***2) Columbariums*** ***3) Government offices*** ***4) Law courts*** ***5) Community halls*** ***6) Exhibition areas*** ***7) Buildings for the public in parks and open spaces.***
b) Luminous contrast for the international symbol of accessibility	***Provide luminous contrast of not less than 70% to differentiate the international symbol of accessibility from the background.***
5.0 Sanitary Facilities	
5.1 Accessible toilets	
a) Internal dimensions of accessible toilet in healthcare facilities	***Provide minimum internal dimensions of 2m x 2m for accessible toilets in healthcare facilities.***
b) Layout of accessible toilets	***Provide accessible toilets with layout in line with the side approach requirements in DM2008.***
c) Width of door openings for accessible toilets	***Provide minimum clear width of 0.9m door openings for accessible toilets.***
d) Emergency call bells in accessible toilets	***1) The emergency alarm should be installed outside the accessible toilet and connected to a caretaker's office or a public information/service counter;*** ***2) Emergency call bells should be equipped with a back-up power supply.***

5.2 Accessible Urinal	
a) Provision of horizontal breast bars	***Provide a horizontal breast bar, other than vertical grab rails on both sides, at a level between 1.2m-1.5m from the finished floor level, on an accessible urinal.***
b) Indicating Tiles/Blocks	***1) Two indicating tiles/blocks* on the floor to facilitate the use by persons with visual impairment should be provided in front of the urinal for use by persons with ambulant disabilities.*** *Remark: *Refer to Figures 26A and 26B, item 18, App. E in PNAP APP-41 (April 2017) for illustration.* ***2) The indicating tiles/blocks should have a minimum luminous contrast of 30% with the floor finishes.***
6.0 Furniture Facilities	
6.1 Seating facilities	
a) Seating with shade in parks and open spaces	***1) Provide seating with shade at maximum 50m intervals along main footpaths inside parks and open spaces.*** ***2) Provide shelter with seating at maximum 200m intervals along main footpaths inside parks and open spaces.*** ***3) Locate the seating in a recessed alcove adjacent to walkway and circulation paths on the same floor level without a plinth.*** ***4) Explore resting provisions other than seating bench and at suitable intervals along routes where great effort is required such as a long flight of stair or a sloping ground, etc.***
b) Clearance space adjoining external seating for wheelchair	***Provide 1.5m x 1.5m clear space on at least one side of the external seating along accessible routes in parks and open spaces for parking of wheelchair and pram chair.***
6.2 Accessible public information/service counters	
a) Provision of public information / service counters	***Provide public information/ service counter to the following building types:*** ***1) Government offices*** ***2) Law courts*** ***3) Community halls*** ***4) Exhibition areas*** ***5) Manned Public facilities (except manned toilet and changing facilities) in parks and open space.***
6.3 Drinking fountains (if provided)	
a) Height of drinking fountains	***Provide two spouts at different heights between 0.75m and 0.9m for drinking fountains.***
b) Controls of drinking fountains	***1) Provide automatic controls or controls with handles of the lever type operable with a closed fist for drinking fountains.*** ***2) Provide Braille, tactile sign or raised dot indication for detection of such control by the visually impaired users.***

c) Space in front of and below drinking fountains	***Provide proper floor drain and minimum space for drinking fountains as follows:*** ***1) Clear floor space of min. 0.75m wide x 1.2m deep in front.*** ***2) Knee space of min. 0.75m wide x 0.2m deep x 0.68m high below.*** ***3) Toe space of min. 0.75m wide x 0.23m deep x 0.23m high below.***
6.4 Public telephones (if provided)	
a) Locations and cord length of accessible public telephones for wheelchair users	***Provide at least one telephone in a group of two or more public telephones for wheelchair users as follows:*** ***1) To position all operable parts including the coin or credit card slot at a height not higher than 1.2m above finished floor level.*** ***2) To provide a cord length of not less than 0.75m long.***
7.0 Safety Aspects	
7.1 Luminous contrast	
a) Luminous contrast between different surfaces:	***Luminous contrast should be greater than or equal to 30% between:*** ***1) Staircase nosing and adjoining surfaces.*** ***2) Staircase tread and adjoining wall.*** ***3) Floor and wall along ramp.*** ***4) Handrails and surrounding wall surfaces.*** ***5) Wall, floor and door surfaces along corridor and lobby.*** ***6) Door handle of manually operated doors/ control switch or button of door with powered open devices and the background finishes.***
b) Luminous contrast between tactile warning strips and adjoining surfaces	***Luminous contrast between tactile warning strips and adjoining surfaces should be greater than or equal to 70% at ramps and drop kerbs; and 50% at steps and staircases.***
7.2 Slip resistance	
a) Slip resistance of flooring materials for floor surfaces of both internal and external accessible routes	***Provide flooring materials with static coefficient of friction between 0.8 and 0.5 for floor surfaces of both internal and external accessible routes.***
7.3 Illumination	
a) Illumination level of accessible facilities	***Provide illumination level of not less than 120 lux measured at the finished floor level for the following areas, if provided:*** ***1) Lift lobby of typical floors*** ***2) Information/service counter*** ***3) Accessible toilets*** ***4) Baby care rooms*** ***5) Common areas***
7.4 Switches and controls	
a) Positioning of electric sockets for wheelchair users	***Locate electric sockets, which are intended to be accessible to the wheelchair users, between 0.45m and 1m high from finished floor level.***

b) Positioning of controls of safety devices for wheelchair users	***Locate controls of safety devices including electrical switches, light switches, thermostats, intercom switches and card reading machines, which are intended to be accessible to wheelchair users, between 0.75m and 1.2m above the finished floor level.***
8.0 Use of Sensory Elements – tactile, auditory, olfactory and visual	
8.1 Tactile and visual elements	
a) Tactile guide path	***Provide tactile guide path* to the following building types:*** ***1) Government offices*** ***2) Law courts*** ***3) Community halls*** ***4) Exhibition areas*** ***5) Indoor recreation centres***
Remark: *Adopt flexible and sensitive approach in providing tactile guide path for the purpose of way finding and orientation within those large public venues on hilly sites or in extensive open area such as crematoriums, cemetery ground, columbariums, parks and open spaces.	
b) Clearance from tactile guide path along accessible routes	***Provide minimum clearance of 0.6m between the tactile guide path and any obstructions such as walls, planter boxes, kerbs and seating, overhanging features including tree branches, etc.*** *(Remark: For accessible routes provided with tactile guide path, the minimum width should be 1.5m taking into account the clearance space of 0.6m on both sides of the tactile guide path which is 0.3m wide. For width of accessible routes less than 1.5m, refer to the following for the minimum clearance.* *1) Clear width of access route: 1.05-1.2m, min. clearance: 0.35m* *2) Clear width of access route: 1.2-1.35m, min. clearance: 0.45m* *3) Clear width of access route: 1.35-1.5m, min. clearance: 0.5m)*
c) LED visual display boards	***Provide LED display boards to the following building types:*** ***1) Sports complex*** ***2) Swimming pool*** ***3) Exhibition area*** ***4) Market*** ***5) Library***
8.2 Auditory elements	
a) Provisions of assistive listening system	***Provide assistive listening system in the seating areas of the following building types:*** ***1) Sports complex*** ***2) Swimming pool*** ***3) Community hall*** ***4) Law courts***
b) Provisions of receivers for assistive listening system	***1) Provide minimum 2 receivers or similar equipment for use by the public for an assistive listening system if the system requires the use of such receivers is adopted.*** ***2) The number of receivers provided shall be not less than 1 for every 50 persons.***