UNIVERSAL DESIGN, ACCESSIBILITY & SOCIAL RESPONSIBILITY IN THE BUILT ENVIRONMENT

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Primula Beach Hotel, Kuala Trengganu

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1.0 Universal Design and Social Responsibility
   1.1 ISO 26000

2.0 The Application of Universal Design and Accessible Transportation in Malaysia, the development of Disability Act 2008, MS 1184:2014 and government policy for disabilities

3.0 Travelodge
1.0 Universal Design, Accessibility and Social Responsibility

Universal Design, accessibility and Social Responsibility are tightly related in term of its core subjects such as Human Rights against discrimination and specific vulnerable groups; economic, social and cultural rights; consumer issues such as access to essential services; education, awareness and community involvement as well as technology development and access; and social investment.

Accessibility is defined as the freedom or ability of people to achieve their basic needs in order to sustain their quality of life. Accessibility can be defined as the ability to reach a range of social, leisure and employment destinations from home and therefore access to pedestrian and transport systems with seamless journey, thus give benefits to all users.

Social Responsibility is an ethical ideology or theory than an entity, be it an organization or individual, has an obligation to act to benefit society at large and universal design is an active agent in this process.

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GLOBAL - PEOPLE WITH DISABILITIES (PWDS)

- Estimated **15%** of the world's population has a disability
- More than **ONE BILLION** people with special needs worldwide
- An estimated **80%** live in developing countries

(Source: WHO Report, 2011)

PEOPLE WITH DISABILITIES (PWDS) IN MALAYSIA

- There are 436,317 PWDs registered with the Department of Social Welfare by Dec 2012
- 37.3% - learning disabilities (autism is the highest %)
- 33.4% - physically disabled
- 9.0% - visually impaired
- 3.3% - hearing impaired
- 3.3% - mentally disabled
- 0.4% - speech disability
- 4.6% - other type of disabilities.

(Source: Jabatan Kebajikan Masyarakat [JKM] Malaysia, 2012)

ELDERLY IN MALAYSIA (60+)

- Population of 60+ in 2010 is 7.9%
- Population projection in 2040 will be 16.3%

(Social Welfare Department, 2013)
The Universal Design Pyramid
Source: Universal Design Pyramid (Goldsmith, 2000)
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(Figure Source: Jim Harrison, ICUDBE 2013)
INTENDED USERS
Figure: Schematics Diagram of Universal Design Application in the Built Environment. (Source: Asiah Abdul Rahim, 2010)
<table>
<thead>
<tr>
<th>Example Building typology</th>
<th>Example of Products Design</th>
<th>Services (human resources)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterfront / tourist attraction areas</td>
<td>Digitized information</td>
<td>Doorman Assistance</td>
</tr>
<tr>
<td>Residential</td>
<td>Guiding Blocks</td>
<td>Service Personnel</td>
</tr>
<tr>
<td>Public buildings / Religious Building</td>
<td>Warning blocks</td>
<td>Interpreter</td>
</tr>
<tr>
<td>Institutional</td>
<td>Ramps</td>
<td>Sign Language</td>
</tr>
<tr>
<td>Healthcare</td>
<td>Accessible toilets’ appliances</td>
<td></td>
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<tr>
<td></td>
<td>Grab bars / Hooks</td>
<td></td>
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<td>Railing</td>
<td></td>
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<tr>
<td></td>
<td>Legible / Embossed Graphics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commercial Wheelchairs</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Asiah Abdul Rahim, 2010)
Client’s Brief

- Design Process
  - Pre-Construction Process
  - Post-Construction

New Building

- Universal Design Consideration

Existing Building

- Post-Occupancy

Access Audit in Building

(Source: Asiah Abdul Rahim, 2010)
The access audits conducted are at public buildings and public spaces where the (PwDs) will use and visit those areas. The report identify existing circulation route and has developed an accessibility map to ease legibility and way finding for the disable.

(Source: Access Audit Report Putrajaya, Malaysia, Nov 2013)
Pictures of existing facilities provided and barriers were identified and the report provide relevant solution in terms of proper specification and referral sources of designing options, if further upgrading of existing facilities is to be commence in the near future for a better built environment to be socially sustainable.

(Source: Access Audit Report Putrajaya, Malaysia, Nov 2013)
2.0 The Application of Universal Design in Malaysia and abroad

1957 – 1980s

Malaysia has just regained its independency, and is still underdeveloped. The primary focus of the country at that time was on the development of education, agriculture, economy, infrastructure and basic facilities.

The buildings erected in this period are mostly not accessible for the disabled.
2.0 The Application of Universal Design in Malaysia and abroad

1980s

Malaysia has started to address the needs of People with Disabilities (PWD) in the built environment with the development of Malaysian Standards and code of practices.

3 Standards was initiated in 1980s and published in 1990s:

- MS 1184:1991 – Code of Practice on Access for Disabled Persons to Public Buildings
- MS 1331:1993 – Code of Practice for Access of Disabled Persons Outside Buildings
2.0 The Application of Universal Design in Malaysia and abroad

1990s and 2000s

- The UNESCAP Decade of the Disabled addressed the problems that many Asian people were facing - Lack of access to buildings which deprives them of their rights to education, employment and social or religious places (JD Harrison, ICUDBE 2011).

- Malaysia, as a member of the United Nation Economic and Social Commission of Asia pacific (UNESCAP), is liable to uphold the BIWAKO Millennium Framework for Action towards an Inclusive (BMF), Barrier-Free and Rights-Based Society for Persons with Disabilities in Asia and the Pacific, October 2002.
This started the global trend toward universal/inclusive design as it was formed to protect and enhance the rights and opportunities of the world's estimated 650 million (in 2006) disabled people.

Many countries sign up to the convention, including Malaysia, and have agreed to adopt and enact laws so that persons with disabilities would have equal rights to education, employment, and cultural life; the right to own and inherit property; not be discriminated against in marriage, children, etc; not be unwilling subjects in medical experiments.

- December 13 2006
As we launch the new Asian and Pacific Decade of Persons with Disabilities, 2013–2022, let us focus on addressing the remaining challenges. By adopting — and implementing — the Incheon Strategy, you can help to ensure a disability-inclusive post-2015 development agenda.

Ban Ki-moon
Secretary-General
United Nations

Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific

- Aims to accelerate disability-inclusive development and CRPD ratification and implementation
- Key feature: time-bound and measurable Incheon goals and targets
- Based on CRPD principles
- Time-frame for achieving goals: Asian and Pacific Decade of Persons with Disabilities, 2013 to 2022
- For a disability-inclusive Asia-Pacific, partnerships must be forged:
  - Multi-sectoral
  - Multi-stakeholder
  - Multi-level

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10 Goals to "Make the Right Real"

1. Reduce poverty and enhance work and employment prospects
2. Promote participation in political processes and in decision-making
3. Enhance access to the physical environment, public transportation, knowledge, information and communication
4. Strengthen social protection
5. Expand early intervention and education of children with disabilities
6. Ensure gender equality and women's empowerment
7. Ensure disability-inclusive disaster risk reduction and management
8. Improve the reliability and comparability of disability data
9. Accelerate the ratification and implementation of the Convention on the Rights of Persons with Disabilities and harmonization of national legislation with the Convention
10. Advance subregional, regional and interregional cooperation
ACT 685

Persons With Disabilities Act 2008

An Act to provide for the registration, protection, rehabilitation, development and wellbeing of persons with disabilities, the establishment of the National Council for Persons with Disabilities, and for matters connected therewith.
PART IV

PROMOTION AND DEVELOPMENT OF THE QUALITY OF LIFE AND WELLBEING OF PERSONS WITH DISABILITIES

CHAPTER 1
ACCESSIBILITY
Access to public facilities, amenities and services and buildings (26, 27, 28)

(1) Persons with disabilities shall have the right to access to and use of, public facilities, amenities, services and buildings open or provided to the public on equal basis with persons without disabilities, but subject to the existence or emergence of such situations that may endanger the safety of persons with disabilities.

(2) For the purposes of subsection (1), the Government and the providers of such public facilities, amenities, services and buildings shall give appropriate consideration and take necessary measures to ensure that such public facilities, amenities, services and buildings and the improvement of the equipment related thereto conform to universal design in order to facilitate their access and use by persons with disabilities.
Access to public facilities, amenities and services and buildings (26, 27, 28)

According to the Transportation Sector, Clause 27 of Part IV of the PWD Act 2008, the most pertinent is the Access to public transport facilities with details as follows:

(1) Persons with disabilities shall have the right to access to and use of public transport facilities, amenities and services open or provided to the public on equal basis with persons without disabilities.

(2) For the purposes of subsection (1), the Government and the providers of such public transport facilities, amenities and services shall give appropriate consideration and take necessary measures to ensure that such facilities, amenities and services conform to universal design in order to facilitate their access and use by persons with disabilities.

And highlighted here are three terms in the Clause, as follows:

1. Facilities are physical things created to serve particular functions.

2. Amenities are physical things that contribute to physical or material comfort.

3. Services are assistance given to someone in need.
Uniform Building By-Law (UBBL) 34 A

3. The principal By-laws is amended by inserting immediately after by-law 34, the following new by-law 34A:

1) Any building or part thereof to which this by-law applies shall –

(a) be approved with access to enable disabled persons to get into, out of and within the building for which access is provided wholly or mainly for the inspection, maintenance or repair of the building, its services or fixed plant or machinery; and

(b) be designed with facilities for used by disabled persons.
2) **The requirements of this by-law shall be deemed to be satisfied by compliance with Malaysian Standard MS 1183 and MS 1184.**

3) Buildings to which this by-law applies and which on the date of commencement of this by-law have been erected, are being erected or have not been erected but plans have been submitted and approved shall be modified or altered to comply with this by-laws within 3 years from the date of commencement of this by-law.
Universal design and accessibility in the built environment - Code of practice
(Second revision)

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DEPARTMENT OF STANDARDS MALAYSIA

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25 Toilet

25.1 General

- The requirements contained in this clause apply to buildings in use by the public, for example hotels, work places, public buildings and buildings used for sport and recreation activities.

- Toilet rooms and sanitary facilities shall be designed to accommodate a variety of users (See Figure 53). Public toilet facilities shall provide for the needs of people of all genders, for parents and children, for people with disabilities and their carers in all gender combinations. Refer to MS 2015: Part 1.
Figure 62. Positioning of grab rails, water supply and toilet paper in Type C corner toilet

<table>
<thead>
<tr>
<th>Key</th>
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Figure 57. Type A toilet room transfer options

Key
1 possible transfer positions
<table>
<thead>
<tr>
<th>Feet and inches</th>
<th>Nominal conversion based on 1 inch: 25 mm, 6 inch: 150 mm, 12 inch: 300 mm</th>
<th>More exact conversion based on 1 inch: 25.4 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mm)</td>
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<tr>
<td>7 ft 0 inch</td>
<td>2100</td>
<td>706</td>
</tr>
<tr>
<td>6 ft 6 inch</td>
<td>1981</td>
<td></td>
</tr>
<tr>
<td>6 ft 0 inch</td>
<td>1800</td>
<td>549</td>
</tr>
<tr>
<td>5 ft 6 inch</td>
<td>1650</td>
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<tr>
<td>5 ft 0 inch</td>
<td>1500</td>
<td>457</td>
</tr>
<tr>
<td>4 ft 6 inch</td>
<td>1350</td>
<td></td>
</tr>
<tr>
<td>4 ft 0 inch</td>
<td>1200</td>
<td>381</td>
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<tr>
<td>3 ft 6 inch</td>
<td>1125</td>
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<tr>
<td>3 ft 0 inch</td>
<td>1060</td>
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<tr>
<td>3 ft 3 inch</td>
<td>1000</td>
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<tr>
<td>2 ft 6 inch</td>
<td>900</td>
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<tr>
<td>2 ft 3 inch</td>
<td>875</td>
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<tr>
<td>2 ft 0 inch</td>
<td>825</td>
<td></td>
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<tr>
<td>1 ft 9 inch</td>
<td>750</td>
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<tr>
<td>1 ft 6 inch</td>
<td>690</td>
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<td>1 ft 0 inch</td>
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<td>9 inch</td>
<td>250</td>
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<tr>
<td>6 inch</td>
<td>150</td>
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<tr>
<td>3 inch</td>
<td>75</td>
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</tr>
</tbody>
</table>

Figure 55. The anthropometric height for wheelchair users

2040: Standard door heights.
1981:
1500: Nominal wheelchair turning circle - 180°/360°
1400: Max. controls height
1200: Nominal wheelchair turning circle - 90°
800: Clear opening widths of doorways
750:
Annex H
(informative)

Design guidelines for elderly

1. General
2. Ageing and Safety
3. Falls in Home
4. Advantages of considerate design
5. Mobility
6. Design Consideration
   a) Barrier free and level floors
   b) Floor surfaces
   c) Control and operating mechanisms
   d) Lighting and services
   e) Design to prevent accidents
   f) Space standards
7. Top ten design points
Design guidelines for family friendly facilities

1. Application
2. Recommended facilities
3. Design considerations
   a) Child-friendly sanitary facilities
   b) Water closet
   c) Urinal
   d) Wash basin
   e) Floor finish
   f) Child protection seat
   g) Family room
   h) Breastfeeding area
   i) Diaper-changing station
   j) Seating or resting area
   k) Children’s activity corner or playroom
   l) Locker provision
   m) Pram / wheelchair rental
   n) Flexible arrangement of table and chairs
   o) Baby chairs
Annex K
(informative)

Design guidelines for parks and open spaces

1. General
2. Graduated difficulty of access
3. Outdoor steps
4. Parks furniture
5. Kerb cuts
6. Parks vegetation
7. Accessible parking lots
8. Amenities
3.0 Travelodge
STOCKHOLM, SWEDEN
OSLO, NORWAY
HELSPINKI & TURKU, FINLAND
MELBOURNE, AUSTRALIA
TOKYO, JAPAN
みんなのトイレ
Multi-Purpose Restroom
다목적화장실
多用途洗手间 / 多用途洗手間
Floor 350
THANK YOU

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