



Abu Dhabi Guideline

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Abu Dhabi Guideline for "Sahel"  
System - Building Rating

دليل أبوظبي الإرشادي لنظام "سهل" -  
تقييم المباني



This standard contributes to the following  
Sustainable Development Goals





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## 1. Amendment Page

To ensure that each copy of this technical document (Abu Dhabi Guideline) contains a complete record of amendments, the Amendment Page is updated and issued with each set of revised/new pages of the document. This ADS is a live document which can be amended when necessary. QCC operates (Sahel Building Rating System) Group which prepared this document and can review stakeholder comments to review and amend this document and issue an updated version when necessary.



## 2. About the Abu Dhabi Quality and Conformity Council

Abu Dhabi Quality and Conformity Council (QCC) is an Abu Dhabi government entity established in accordance with Local Law No. (3) of 2009 to raise the quality of Abu Dhabi's exports and products traded locally. QCC consists of a council of regulators and industry with a mandate to ensure provision of quality infrastructure in line with global standards.

o QCC's functions are divided into six key areas:

- Developing standards and specifications
- Capacity building of metrology systems
- Strengthening testing infrastructure
- Launching conformity schemes
- Protecting consumer interests
- Ensuring fair trade

o QCC's key stakeholders include regulatory authorities, consumers, retailers and wholesalers, industry, conformity assessment bodies (CABs) and importers.

QCC supports regulators and government organizations through offering quality and conformity facilities, expertise and resources that allow them to implement products safety and compliance requirements and regulations. Additionally, QCC works towards promoting a culture of quality and protecting the interests of consumers. In doing this, QCC seeks to promote the Emirate's competitiveness to become one of the world's most attractive regions for investments and human capital, and to support the competitiveness of national industries in world markets.



### 3. Acknowledgement

QCC would like to thank the members of the Working Group listed below.

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## 4. Foreword

The AD QCC “Sahel Building Rating System” has been developed to guide the design, development, and renovation of new and existing buildings. Prioritizing accessibility and inclusion in both new and renovated buildings unlocks a multitude of benefits that enhance the well-being of users and residents while driving economic growth. Accessible and inclusive buildings and their surrounding areas on the plot not only attract businesses, stimulate economic growth, and boost tourism, but also improve user experiences, thereby increasing demand for living in or visiting these locations and drawing in eager investors.

Accessible and inclusive buildings significantly enhance the quality of life for residents and visitors alike. Easy access to essential services, workplaces, and residential areas fosters more fulfilling lives, improving mental health and overall well-being for individuals and families. Investments in features such as well-maintained paths, staircases, and lighting not only reduce accident risks but also lower healthcare costs, as increased accessibility is linked to improved safety measures.

## 5. Working Group

The Professional Working Group was organized by the Abu Dhabi Quality and Conformity Council and established in January 2024. It was requested by the Department of Municipalities and Transport to prepare the “Sahel Building Rating System” in cooperation with the related stakeholders, including representatives from the government and private sectors, to establish operating procedures and technical guidelines for the relevant Authorities, Project Developers, Planners, Landscape Architects, Engineers, etc. focusing on developing and ensuring adequate and appropriate guidance in developing a world-class public realm.

## 6. Purpose

The Sahel Rating System shall encourage all developers, asset owners, and designers to design, create and maintain a built environment that can be used easily, effortlessly, safely and without facing barriers by all residents and visitors regardless of their needs.

- Equitable use
- Flexibility in use
- Simple and intuitive use
- Perceptible information
- Tolerance for error
- Low physical effort
- Size and space for approach and use



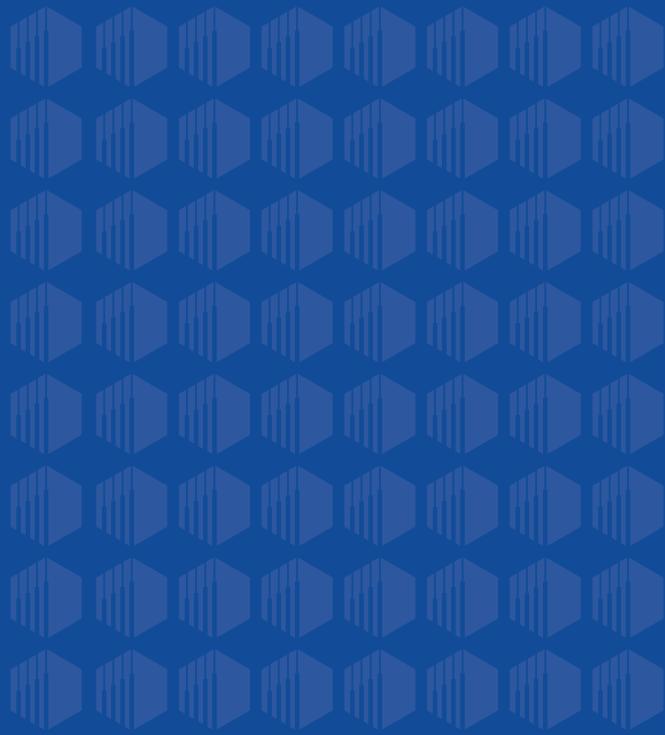
The objectives of the rating system include:

- System that drives change towards building accessible built environment
- Promote compliance with accessibility regulations
- Awarding buildings and spaces based on accessibility levels
- Create value for accessible assets
- Raise awareness for accessibility among all users.

For achieving the above objectives, the rating system assists with designing principles and policies, setting minimum and aspirational quality standards, and establishing clear and consistent planning, design, review, and approval process.

## 7. Scope

The manual is intended for use by all related professionals involved in the community and neighbourhood design, development, and operation process. It guides in preparing and assessing all new development proposals and retrofitting the existing buildings within the Emirate, encompassing Abu Dhabi City Municipality (ADM), Al Ain City Municipality (AAM), and Al Dhafra Region Municipality (DRM).



# Sahel Building Rating System Handbook

Design, Construction and Operation





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# 1 Executive summary

Prioritizing accessibility and inclusion in both new and renovated buildings unlocks a multitude of benefits that enhance the well-being of users and residents while driving economic growth. Accessible and inclusive buildings and their surrounding areas on the plot not only attract businesses, stimulate economic growth, and boost tourism, but also improve user experiences, thereby increasing demand for living in or visiting these locations and drawing in eager investors.

When buildings and their sites are designed to be accessible, inclusive, and easy to navigate, they foster job creation and promote overall economic vitality. Improved accessibility cultivates an inclusive environment where individuals of all abilities can fully participate in community life. Furthermore, accessible educational facilities, such as schools and universities, lead to better academic outcomes for students with disabilities, paving the way for future success.

Accessible and inclusive buildings significantly enhance the quality of life for residents and visitors alike. Easy access to essential services, workplaces, and residential areas fosters more fulfilling lives, improving mental health and overall well-being for individuals and families. Investments in features such as well-maintained paths, staircases, and lighting not only reduce accident risks but also lower healthcare costs, as increased accessibility is linked to improved safety measures.

Buildings designed with accessibility and inclusion in mind are better equipped to adapt to changing demographics and evolving needs over time. As populations age and the demand for accessible spaces increases, these structures will remain relevant and functional. Additionally, they play a vital role in addressing climate change and promoting a more sustainable environment.

For developers, enhancing accessibility and inclusion in buildings and their surrounding areas presents a valuable opportunity to earn substantial points in rating systems, showcasing their commitment to creating inclusive environments. This can be achieved through various strategies, including smooth paths and ramps, accessible parking on the plot, clear signage, inclusive amenities, universal design principles in landscaping, well-maintained corridors, adequate lighting, community engagement, and inclusive policies. Collaborating with accessibility experts and user groups throughout the process ensures that best practices are effectively integrated.

In conclusion, accessible and inclusive buildings are not only more vibrant but also contribute to a sustainable future, making them essential for the well-being of all users.

## Content

In the Sahel Building Rating System: Design, Construction and Operation can be found all the required information to understand and implement the Sahel Building Rating System in buildings and external areas on the plot with the help of the following content:

- a) The description of the Sahel Building Rating System, the objectives and its relationship with the Rating Systems for Public Realm and for Communities.
- b) The methodology used in the system, including the rating system used and the assessment criteria in each of the contained category.
- c) The applicability of the rating system in the buildings' initial development or redevelopment, and its renovation projects.
- d) The rating system and the levels that can be achieved.
- e) The rating process including the registration procedures, pre-certification rating, certification rating and renewal.
- f) The key members involved in the rating process.
- g) Finally, after an explanation of the scorecards to be used to guide the design, the implementation of accessibility and universal design, the assessment and the rating, the detailed content of each scorecard is presented being grouped into eleven categories: Inclusive Integrated Design (IID), Transportation Access (TA), Interconnectivity and Circulation (IC), Ergonomic Furniture and Equipment (EFE), Environment Quality and Comfort (EQC), Hygiene and Care (HC), Digital Accessibility (DA), Orientation and Communication (OC), Emergency Systems and Procedures (ESP), Considerate Maintenance (CM) and Use Specific Special Provisions (USSP).

## 2 Introduction

### 2.1 Inclusion: Key to sustainable built environment

More than a billion individuals, accounting for about 15% of the global population<sup>1</sup> live with some disability. As the population continues to age, this number is expected to rise, leading to more people facing various challenges in the future. This substantial demographic underscores the necessity of developing inclusive environments that cater to a variety of needs. Disabilities encompass a wide spectrum, such as:

- Individuals with mobility impairment
- Individuals with a vision impairment
- Individuals with a hearing impairment
- Individuals with a cognitive impairment or neurodivergent individuals

A disability can profoundly affect an individual's daily activities and opportunities. Moreover, creating an inclusive and accessible public realm benefits a wide range of user groups, including:

- Elderly
- Women (pregnant women and nursing mothers) and families with children
- Individuals with allergies
- Obese and bariatric people
- Individuals of foreign cultural background

Creating accessible and inclusive buildings is essential to ensure that everyone can participate fully and safely in society, regardless of their abilities, ages, or backgrounds. Failing to accommodate the diverse needs of the population perpetuates exclusion (Federal Law No. 29 of 2006 Concerning the Rights of People with Special Needs) and impedes social progress.

An accessible and inclusive building plays a vital role in promoting environmental sustainability by incorporating universal design principles, such as ramps, wide doorways, and adaptable spaces. These features reduce the need for future retrofitting and minimize waste. This shift has a profound impact on the environment, leading to a significant decrease in air pollution and greenhouse gas emissions.

Moreover, accessible and inclusive buildings have a positive effect on individuals and families, improving mental health and overall well-being. Additionally, well-designed features like well-maintained corridors, stairways and adequate lighting enhance safety, minimizing the risk of accidents and creating a more secure environment for everyone.

By placing accessibility and inclusivity at the forefront of building design, cities can foster more sustainable, equitable, and resilient environments that benefit everyone. This approach aligns with the United Nations' Sustainable Development Goals (SDGs), which promote inclusive and sustainable development worldwide. Designing buildings and their surrounding areas that are accessible and inclusive, cities can make significant strides towards achieving the SDGs, ultimately creating a better quality of life for present and future generations. "Sustainable development is how we must live today if we want a better tomorrow, by meeting present needs without compromising the chances of future generations to meet their needs."<sup>2</sup>

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1 World Health Organization. World report on disability. World Health Organization. Retrieved from September 19, 2023, from <http://www.who.int/publications/i/item/world-report-on-disability>

2 United Nations. (2024, August). What is sustainable development? Retrieved from <https://www.un.org/sustainabledevelopment/blog/2023/08/what-is-sustainable-development/>

## 2.2 The Sahel Building Rating System and its objectives

### 2.2.1 The Sahel Rating System

Sahel, which means ‘ease’ or ‘facileness’ in Arabic, is an initiative launched by the Department of Municipalities and Transport (DMT) to develop and redevelop the built environment in the Emirate of Abu Dhabi, making it more socially sustainable for its residents and visitors.

The Sahel Rating System shall encourage all developers, asset owners and designers to design, create and maintain a built environment that can be used easily, effortless, safely and without facing barriers by all residents and visitors regardless of their needs and according to the 7 Principles of Universal Design developed by Ronald L. Mace.<sup>3</sup>

- Equitable use
- Flexibility in use
- Simple and Intuitive Use
- Perceptible information
- Tolerance for error
- Low physical effort
- Size and space for approach and use

This ‘People First Paradigm’ is an approach that prioritizes the needs and preferences of individuals, placing them at the heart of design and decision-making processes. This paradigm ensures that the unique abilities, challenges, and perspectives of all people are acknowledged and respected across various aspects of life, including technology, infrastructure, policies, and services. It embodies a steadfast commitment to human-centered design.

In alignment with this philosophy, the Sahel Rating System emphasizes the ‘Human Scale’ in new developments and redevelopments. This focus tailors urban environments to align with human senses and mobility, considering how individuals perceive their surroundings and their comfort within both natural and built environments, relative to their size, proportion, and line of sight. In buildings, this translates to inviting entrances, appropriately sized doors and rooms to promote usability, and the use of transparent materials and open designs to enhance visibility and connection, along with accessible amenities.

The Sahel Rating System compromises the following documents:

- a) Sahel Community Rating System: Design, Construction and Operation
- b) Sahel Public Realm Rating System: Design, Construction and Operation
- c) Sahel Building Rating System: Design, Construction and Operation

The Sahel Building Rating System aims to guarantee that the design requirements for a building meet the needs and expectations of all users by comprehensively planning all the services and amenities that they require.

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<sup>3</sup> Universal Design Institute. (n.d.). The 7 principles of universal design. Retrieved from September 19, 2023, from <http://www.udinstitute.org/principles>

## **2.2.2 Objectives**

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### **2.2.2.1 Promoting compliance with accessibility regulations**

The Sahel Building Rating System has a bold ambition: to not only ensure compliance with accessibility regulations across the entire buildings and external areas on the plot, but to exceed them. By championing recommended and best practices, the system strives to create buildings that are truly inclusive and accessible to all users.

### **2.2.2.2 Encourage the renovation of buildings**

Promote the deliberate and progressive transformation of buildings to meet the diverse needs of all occupants and visitors. Ensure that all renovations focus on making spaces accessible, that currently accessible features are maintained or upgraded, and that any areas lacking accessibility are systematically renovated to foster inclusivity.

### **2.2.2.3 Recognition of services and places based on accessibility levels**

The Sahel Building Rating System aims to categorize the built environment based on its accessibility and inclusivity features. This comprehensive framework provides a clear understanding of the level of accessibility offered, empowering users to make informed decisions about their visits and participation in society. Whether a location is wheelchair-accessible, sensory-friendly, or accommodates diverse needs, this recognition enables individuals to choose spaces that cater to their unique requirements, fostering greater inclusion and social participation.

### **2.2.2.4 Creating value for accessible assets**

By rating the buildings and its external areas on the plot as Accessible, Adaptable, Inclusive or Exemplar, the Sahel Building Rating System seeks to drive demand for these assets, from a minimum standard to a maximum aspiration. By recognizing the value of Exemplar buildings, it incentivizes investment in their development and redevelopment, ultimately creating a more equitable and diverse built environment that benefits not only individuals with disabilities, but everyone.

### **2.2.2.5 Raising awareness among stakeholders**

The Sahel Building Rating System plays a crucial role in educating owners, occupants, designers, and operators about the advantages of Accessible, Adaptable, Inclusive or Exemplar buildings. It emphasizes positive impact on quality of life, social inclusion, and overall well-being of the Emirate. By spreading awareness, it fosters a collective commitment to creating spaces that cater to everyone.

## 2.3 The methodology - A robust and consistent cross-tier approach

The system relies on one set of rules covering different aspects of accessible and universal design. It's divided into three tiers: one for buildings, another for public realm, and a third for communities. This setup ensures assessment integrity while accounting for the differences between these types of assets.

### 2.3.1 Rating tiers

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The Sahel Rating System recognizes three tiers of assets which are subject to different administrative processes and stakeholders:

#### 2.3.1.1 Buildings

The Sahel Building Rating System provides a tool to determine the level of accessibility in all building types, particularly those meant for public access. The system can also be used to certify various types of dwellings and heritage buildings.

#### 2.3.1.2 Public Realm

The Sahel Public Realm Rating System provides a tool to assess the accessibility of designated outdoor spaces and associated facilities, such as playgrounds, public toilets, and kiosks, which are used independently from buildings. The system evaluates urban spaces connecting these areas, including plazas, squares, parks, playgrounds, heritage sites, beaches, gardens, waterfronts, streetscapes, transit hubs, and gateways, while excluding transportation buildings. It may also apply to natural landmarks, environmental preservation areas, or networks of streetscapes. These spaces should function as a cohesive environment, offering a unified user experience.

#### 2.3.1.3 Community

The Sahel Community Accessibility Rating System provides a tool to assess the accessibility of community spaces and infrastructure. Its purpose is to integrate accessibility principles into master planning, ensuring a systematic approach to accessibility challenges on a large scale. The system aims to create inclusive environments that support equitable access for all community members.

## 2.3.2 Sahel Building Rating System for development and renovation

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### 2.3.2.1 Focus:

The Sahel Building Rating System for development and renovation is designed to foster accessible and inclusive buildings that cater to the needs of all occupants. This entails creating spaces that not only support physical and mental well-being but also encourage social interaction, thereby enhancing the overall quality of life.

To achieve this goal, integrating accessibility and inclusivity is crucial at every stage, from initial planning to development and ongoing operations. This approach ensures that all occupants can actively participate and benefit from building enhancements.

For whom it is intended:

- a) Planning stage:** The Sahel Building Rating System is available for building projects at any stage of planning and design, but no later than the concept design stage.
- b) Built environment:** The Sahel Building Rating System is designed for building projects that were completed in the past or prior to handover after construction.

The Sahel Building Rating System is designed to be used both for new developments/redevelopments and for renovation projects. There is no maximum size of project which may apply for a Sahel Building Rating System.

## 2.3.3 Submission requirements

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Submission requirements for each of the stages of the Sahel Building Rating System are outlined under each credit area.

## 2.3.4 Assessment criteria – Categories

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People with diverse access needs, whether due to physical or mental conditions, may encounter challenges in various aspects of public city life like transportation, communication, education, employment, or social activities. Hence, the rating system is structured into different thematic categories as mentioned in the table below, to address these issues comprehensively. These categories are interconnected, so applicants should aim to address multiple aspects rather than focusing on just one. This approach demonstrates a holistic and inclusive strategy to enhance the quality of life for everyone.

Within each category listed below, there are sub-categories devoted to different aspects. Within subcategories, the rating system distinguishes between two types of requirements:

- Mandatory – being the obligatory minimum for new assets but providing the opportunity to gain credits in existing buildings by improving their accessibility.
- Enhanced – providing an opportunity to gain credits for “enhanced” provisions – hence the differentiation in the title.

**Table 1: Rating Categories**

Number	Credit Reference	Credit Title
1	IID	Inclusive Integrated Design
2	TA	Transportation Access
3	IC	Interconnectivity and Circulation
4	FFE	Ergonomic Furniture and Equipment
5	EQC	Environment Quality and Comfort
6	HC	Hygiene and Care
7	DA	Digital Accessibility
8	OC	Orientation and Communication
9	ESP	Emergency Systems and Procedures
10	CM	Considerate Maintenance
11	USSP	Use Specific Special Provisions

### 2.3.5 Applicability of assessment criteria

The rating system checks a broad variety of accessibility aspects as shown above in the criteria. It is however acknowledged that there may be instances where some criteria may not be applicable due to:

- lack of assessed items within the building, whether new or in the areas of the existing building to be renovated. The areas of the building to be renovated should include all services and spaces related to accessibility (e.g., elevators should be submitted along with the accessible path to reach them, the absence of obstacles, accessible signage, etc.)

or

- the nature of certified assets

Both mandatory and voluntary requirements have a defined applicability. Based on the description of applicability one can confirm if the asset needs to comply with the given criteria or is entitled to gain extra credits.

a) The applicability of some requirements (subcategories) depends on the type or size of the asset.

It also depends on the Use Specific Special Provisions (USSP category) that one asset may contain (e.g.: one school may contain gymnasiums, changing rooms, assembly areas, swimming pools or other facilities).

Additionally, there are certain types of assets that contain all the applicable requirements in the own subcategory:

- Accessible public transportation terminals.
- Accessible amusement and thematic parks.
- Accessible dwellings, which shall meet the requirements for accessible dwellings plus those required for each type of dwelling.

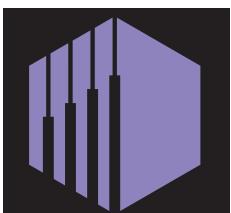
The subcategories listed above shall also meet the requirements of DA (Digital Accessibility) and CM (Considerate Maintenance) where applicable.

- b) The system proposes different criteria depending on prevailing type of occupants resulting from occupancy type (following **Abu Dhabi International Building Code, 2013 (ADIBC)** occupancy classification):
  - Buildings whose occupants are mostly visitors (A-1; A-2; A\_3; I-1, I-2, M)
  - Buildings whose occupants are regular users (B, E)
  - Buildings whose occupants are dwelling inhabitants (R-1, R-2, R-3, R-4)
- c) Additionally, the system applies a size threshold of 2000 square meters distinguishing between smaller and large assets.
- d) Within the description of each criteria the applicable building types or features justifying the applicability are described. It is strongly advised that the certification process is started with an applicability check- determining the list of applicable certification criteria.

## 2.3.6 Rating scores

The Sahel Rating System recognizes the quality of the asset in terms of overall accessibility at the following levels:

**Table 2: Sahel Building Rating System levels**

Awarded Rating	Minimum Requirements
<b>Accessible (R)</b> 	In new buildings: All mandatory credits In renovated buildings: At least all available credit points in mandatory credits.
<b>Adaptable</b> 	In all buildings: All mandatory credits + at least 30% of recommendations or best practices.
<b>Inclusive</b> 	In all buildings: All mandatory credits + at least 60% of recommendations or best practices.
<b>Exemplar</b> 	In all buildings: All mandatory credits + at least 90% of recommendations or best practices.

The scores depend on the number of credits achieved by meeting the applicable criteria defined as percentage.

Meeting mandatory criteria is not awarded with credits in new assets; however, they contribute to the number of applicable requirements.

In existing buildings, credits obtained by meeting mandatory requirements will confirm that all mandatory criteria are met or will identify the gap between the current situation and the requirements that shall be met to achieve all mandatory criteria, identifying aspects that need improvements.

An example of credits given for the Sahel Rating System is given in the table below:

**Table 3: Credit Scores Summary**

Code	Credit section	Credits available	Pre-certificate rating credits	Certificate rating credits
IID	Inclusive Integrated Design	75	13	13
TA	Transportation Access	13	13	13
IC	Interconnectivity and Circulation	22	8	10
FFE	Ergonomic Furniture and Equipment	10	5	5
EQC	Environment Quality and Comfort	13	10	9
HC	Hygiene and Care	16	12	12
DA	Digital Accessibility	12	6	6
OC	Orientation and Communication	14	9	9
ESP	Emergency Systems and Procedures	8	2	6
CM	Considerate Maintenance	16	12	12
USSP	Use Specific Special Provisions	8	8	8

<b>Total:</b>	<b>145</b>	<b>98</b>	<b>103</b>
<b>Percent:</b>	<b>100%</b>	<b>68%</b>	<b>71%</b>

<b>Pre-certificate rating</b>	Inclusive
<b>Certificate rating</b>	Inclusive

The table below summarizes the conditions to be met for each of the Sahel Building Rating System levels:

**Table 4: Rating scores per level**

	Accessible	Adaptable	Inclusive	Exemplary
<b>Mandatory requirements met</b>	100%	100% +	100% +	100% +
Recommended & Best Practice requirements met	Minimum	30%	60%	90%

Example: The project has met 71% of the applied requirements. This is above the 60% threshold, so the proposed score is Inclusive.

## **2.3.7 Rating level to achieve**

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Both new and renovation projects shall aim to reach Sahel Accessible level at pre-certification rating stage to obtain the municipal permit to build.

In the case of new government and semi government projects, the level to be achieved is Sahel Adaptable.

## **2.3.8 Rating process**

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### **2.3.8.1 Rating steps**

The Sahel Building Rating System covers the design, implementation, operation, alteration and expansion of certified buildings and enables confirmation of their accessible character in four steps:

#### **2.3.8.2 Registration, enquiry, and applicability check**

In the initial certification stage, the project is registered by submitting a digital form to the portal on TAMM.

Once the form is analyzed by the Sahel Rating Team, a meeting is organized between the owner/developer, his Sahel Qualified Professional and the representative of the certifying institution.

Based on the general project information containing data such as location, estimated size and initial design brief, in new developments, or area or services to be renovated, in existing assets, characterizing its primary functions, the owner/developer can confirm with the certifying institution, which rating variant is suitable and what are the applicable credits.

#### **2.3.8.3 Pre-certificate Rating**

The pre-certificate rating is associated with the design stage and recognizes the intended level of accessibility. The basis for the pre-certificate rating is an Accessibility Statement – a document confirming designed accessibility and universal design features and intentions. The pre-certificate rating should support owners/developers in obtaining the necessary permits and funding for creating accessible buildings.

#### **2.3.8.4 Certificate Rating**

Only the assets for which the construction or renovation has been completed, and successfully handed over for operation, are entitled to apply for a certificate, including those of existing buildings being renovated. Accessibility is assessed based on as-built documentation, situation, and operational procedures.

For assets of significant accessibility importance, such as public buildings projects, the certificate rating depends on a successful on-site audit.

#### **2.3.8.5 Certificate renewal**

The first certificate is valid for 5 years. After that period, to maintain the status of a certified asset the level of accessibility needs to be confirmed. This is done by submitting an updated Accessibility Statement, scorecards, maintenance records and user feedback. The assessor will then decide the type of assessment required before issuing the renewed certificate.

## 2.3.9 The Sahel Rating System process chart

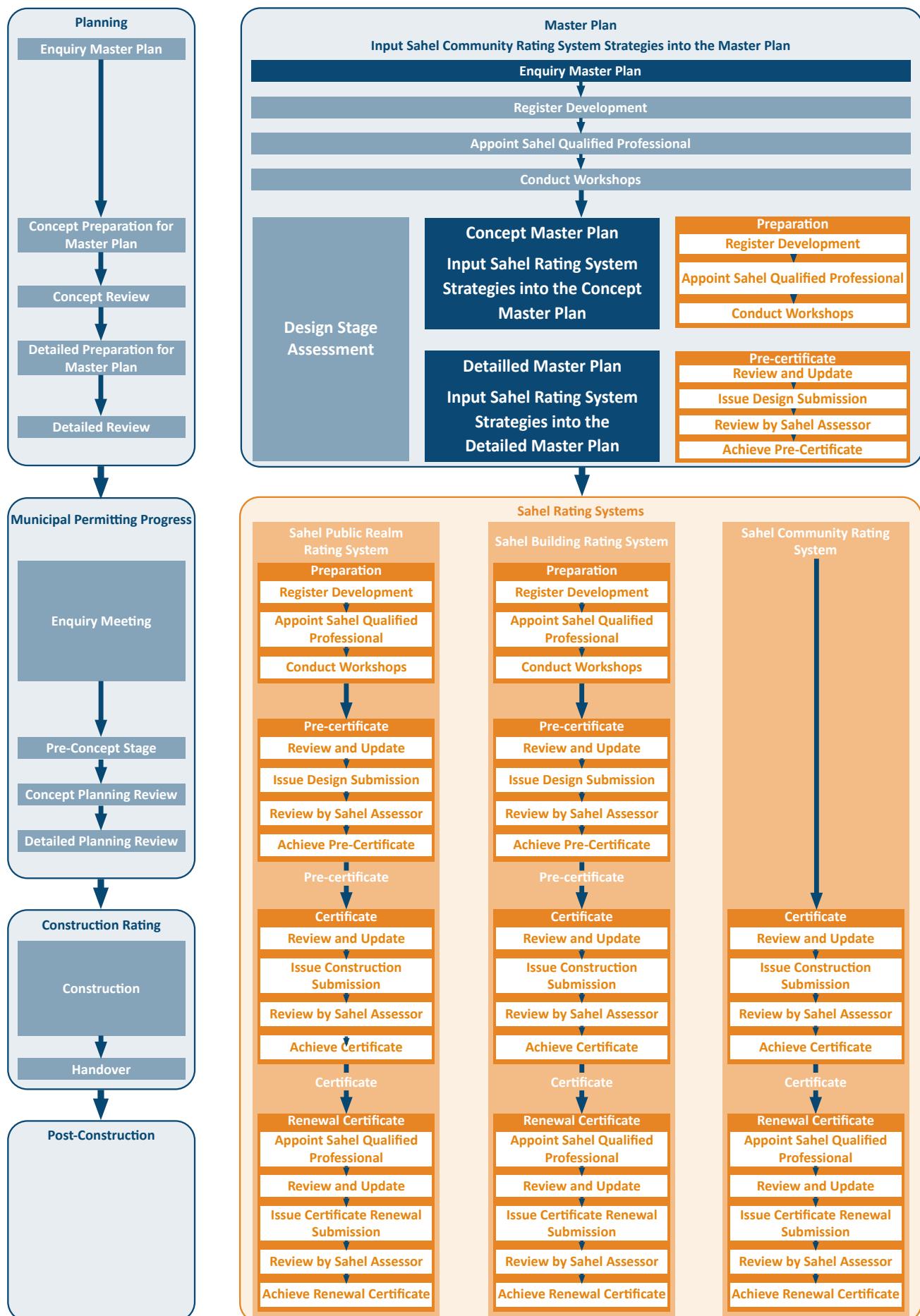


Figure 1: The Sahel Rating System process chart

## 2.4 Key team members

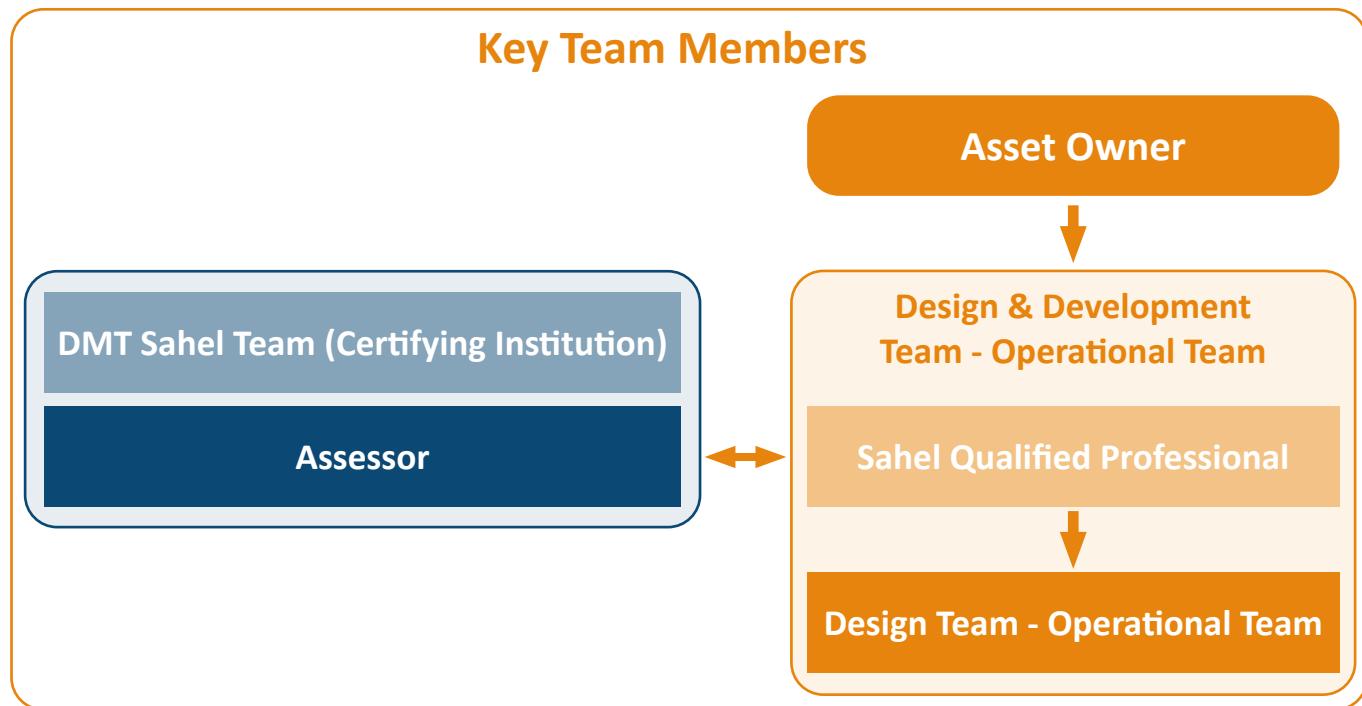


Figure 2: Sahel team members

### 2.4.1 Asset Owner

It is an entity that owns the asset or project and finally applies for the pre-certificate and certificate – typically a developer or owner.

The asset owner assumes responsibility for applying for the certificate and signing the Accessibility Statement. This responsibility, including compliance with Sahel Rating System criteria, only transfers during a change in asset ownership, regardless of whether the asset is managed by or leased to another party.

### 2.4.2 Asset Developer

An asset developer, which may also be an asset owner, is involved in the process of planning, financing, management and overseeing the construction of a diversity of assets. Overall, developers play a critical role in shaping the asset's function at an early design stage.

### 2.4.3 Sahel Qualified Professional

A Sahel Qualified Professional (SQP) is an individual, who has undertaken a training conducted by the DMT and has passed the assessment. Every project shall have an SQP as a team member to follow up on all Sahel Rating System processes during the project's design, construction and operational stage. Their responsibility is to ensure that the asset fulfils all requirements agreed in the applicability check stage along the pre-certificate rating, certificate rating and certificate renewal rating process.

## **2.4.4 Assessor**

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The Sahel Rating System Assessor, a representative body appointed by the DMT, conducts on-site audits, reviews design documents and Accessibility Statements. This process shall be agreed upon at the project's inception stage.

The Assessors can challenge Accessibility Statements by conducting on-site audits or design reviews.

The DMT shall certify the asset upon confirmation from the Assessor who conducted the Accessibility Statement review or on-site audit of the certified asset.

## **2.4.5 Accessibility Consultant**

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An individual with expertise in accessibility and inclusive design holds a degree, diploma, or certificate recognized by the relevant certifying institution. Additionally, this individual may be accredited by a national or international accreditation or regulatory body, demonstrating a certain level of competence and expertise.

The Sahel Rating System rewards their contribution to the design or construction process. The main responsibility of the Accessibility Consultant is to provide guidance for the design and asset management team to timely and accurately implement adequate accessibility solutions and this person engages with the SQP.

The same person can also perform the role of an SQP.

## **2.4.6 Accessibility Body**

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This may consist of various professional experts in different fields, representatives of the administration and/or companies, users with specific needs or neighbors of a community who express their needs and expectations for a future renovation of their neighborhood. The Accessibility Bodies are consulted when the Accessibility Consultant, SQP, Sahel Rating System Assessor or DMT consider it necessary.

## **2.4.7 Certifying Institution**

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An organization responsible for maintaining, managing and operating the Sahel Rating System, providing training and issuing certificates and credentials to professionals. DMT performs the role of Certifying Institution.

**Table 5: Qualifications, Roles and Responsibilities**

	<b>Sahel Qualified Professional</b>	<b>Accessibility consultant</b>	<b>Accessibility body</b>
<b>Pre-qualification</b>	<ul style="list-style-type: none"> <li>Trained in the Sahel Rating System process in the three tiers (Communities, Public Realm and Buildings), certified by DMT</li> <li>Understanding fundamental principles of universal design.</li> <li>Understanding the Sahel Rating System requirements and the professionals involved to meet them.</li> <li>Desirable: Experienced in multiple building types and urban planning developments, able to propose solutions that cater to diverse abilities and population groups.</li> <li>Field of expertise: (from DMT Specialties and Subspecialties on EPLS) <ul style="list-style-type: none"> <li>Architecture Engineering</li> <li>Interior Design Engineering</li> <li>Landscaping Engineering</li> <li>Urban Planning</li> <li>Sustainable Architecture</li> <li>Environmental Architecture</li> <li>Building Restoration Engineering</li> <li>Access Engineering, Safety and Evacuation</li> <li>Landscaping Engineering</li> <li>Sustainable Architecture</li> <li>Environmental Architecture</li> <li>Sustainability and Green Building Engineering</li> <li>Management and Building Materials</li> <li>Fire Protection Engineering and Firefighting Systems</li> <li>Engineering of Sanitary Installations</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Knowledgeable in local legislation, regulations, codes and standards in accessibility and universal design.</li> <li>Experienced in diverse building types and urban planning, capable of assessing the needs of various abilities and disabilities across the spectrum of human functioning.</li> <li>Expert knowledge of industry standards.</li> <li>Field of expertise: (from DMT Specialties and Subspecialties on EPLS) <ul style="list-style-type: none"> <li>Architecture Engineering</li> <li>Interior Design Engineering</li> <li>Urban Planning</li> <li>Civil, Construction and Infrastructure Engineering</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Individuals or different users groups in the community</li> <li>Accessibility experts</li> <li>Advocacy organizations</li> <li>Government agencies</li> <li>Industry representatives and relevant professionals</li> </ul>

	<b>Sahel Qualified Professional</b>	<b>Accessibility consultant</b>	<b>Accessibility body</b>
<b>Educational background</b>	<ul style="list-style-type: none"> <li>Locally recognized bachelor's degree academic qualification in architecture/landscape/urban planning/civil engineering.</li> <li>UAE attested educational certificates and international degrees</li> </ul>	<ul style="list-style-type: none"> <li>Locally recognized master's degree academic qualification in architecture/landscape/Urban planning.</li> <li>UAE attested educational certificates and international degrees</li> </ul>	
<b>Experience required</b>	<ul style="list-style-type: none"> <li>5 years professional experience within their respective field.</li> <li>In addition to DMT Training Course, basic and general knowledge in accessibility and universal design is a plus.</li> <li>Perform assessments, create reports, and offer advice on respective field.</li> </ul>	<ul style="list-style-type: none"> <li>5-10+ years professional specializing in accessibility and universal design in their respective field such as architecture, engineering, urban planning, etc.)</li> <li>Engage in design, assessment, policy development, and training across all domains.</li> <li>Senior level in the field of accessibility either through policy development and/or standards or as a lead consultant to the professional development of other accessibility professionals.</li> <li>Membership in international organizations with certifications/supporting documents showing Professional Associations (if any)</li> </ul>	
<b>Responsibilities in Sahel Rating System</b>	<ul style="list-style-type: none"> <li>For all-sized projects.</li> <li>Organizes and plans community engagement.</li> <li>Client side or nominated within the design or construction team.</li> </ul>	<ul style="list-style-type: none"> <li>Extensive technical knowledge and experience.</li> <li>Qualified accessibility expert/consultant.</li> <li>Client side/Nominated within the design or construction team.</li> </ul>	<ul style="list-style-type: none"> <li>To champion accessibility initiatives by advocating for the needs of different user groups or other access challenges.</li> </ul>

	<b>Sahel Qualified Professional</b>	<b>Accessibility consultant</b>	<b>Accessibility body</b>
	<ul style="list-style-type: none"> <li>Conducts detailed design reviews of projects including specification and product assessments, site visits and report writing.</li> <li>For existing buildings, conducts audits to identify potential challenges and improvements to pass the rating system</li> <li>Conducts commissioning exercises and provides verification reports.</li> <li>Engaged throughout the project life cycle.</li> <li>Prepares/reviews Accessibility Strategy and Statement and submits to the Assessor</li> <li>Prepares/review project brief.</li> </ul>	<ul style="list-style-type: none"> <li>Conducts detailed design reviews of projects including specification and product assessments, site visits and report writing.</li> <li>For existing buildings, conducts audits to identify potential challenges and improvements beyond the minimum standards to score higher points in the rating system.</li> <li>Conducts commissioning exercises with fully equipped tools and provides verification reports.</li> <li>Provides alternative solutions and specialist advice at each project stage.</li> <li>Reviews accessibility strategy and agree with the client.</li> <li>Reviews project brief.</li> <li>Attend meetings with clients, collaborators, stakeholders, and partners.</li> <li>Insured (for liability).</li> </ul>	<ul style="list-style-type: none"> <li>Provide firsthand insights and feedback on accessibility features and usability.</li> <li>Attend meetings (use feedback, decisions to be made on local level e.g. surveys)</li> <li>Advise on the use of technologies and test products</li> <li>Consulted for additional advice for local contacts</li> </ul>
<b>Training background</b>	<ul style="list-style-type: none"> <li>DMT Training on the Sahel Rating System and on accessibility.</li> </ul>	<ul style="list-style-type: none"> <li>Local and international training certifications with supporting documents (if any).</li> <li>Regular attendance of industry CPDs.</li> </ul>	

## 2.5 Handbooks explained – Mandatory requirements

### Handbook explained – Obligatory credits



Figure 3: Criterion from the Sahel Community Rating System

### 3 Buildings

#### 3.1 IID.1 Inclusive Integrated Design

This category evaluates the incorporation of inclusive design principles, which means designing for the diversity of all users. It focuses on incorporating inclusive design practices at early project stages, such as developing an Accessibility Statement, including accessibility bodies and consultants in the design process, and quality checks of accessibility-sensitive and universally designed asset elements throughout the construction process of new buildings and renovation/retrofitting of existing buildings.

**Table 6: Inclusive Integrated Design**

IID	Inclusive integrated design	Requirement type	Credit points applicability	
			New community developments/redevelopment	Existing community renovation
IID.1.01	An access strategy at the early design stage of the development/redevelopment	Mandatory	R	75
IID.1.02	Consulted accessibility pre-design statement for development/renovation	Recommended	25	25
IID.1.03	Accessibility Consultant from the early design stage of development/renovation	Recommended	10	10
IID.1.04	Accessibility Consultant at the construction stage of development/renovation	Recommended	30	30
	<b>Total</b>		<b>65</b>	<b>140</b>

## **3.1.1 IID.1.01 Accessibility strategy at the early design stage of development/renovation**

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### **3.1.1.1 Applicability:**

Applicable to:

- a) All new buildings.**
- b) All buildings undergoing renovation**

### **3.1.1.2 Intent:**

To promote accessibility and universal design considerations and goals from the early stage of development/redevelopment.

### **3.1.1.3 Requirements:**

#### **Mandatory:**

Ideally at pre-design but no later than the concept design stage of development/renovation of the Sahel Rating System process, the SQP shall prepare an Accessibility Statement to include the following:

##### **a) 10 credits in renovation:**

- i.** Appointment of a Sahel Qualified Professional (SQP, the designated team member responsible for the follow up of the Sahel Building Rating System process).  
The SQP shall follow up and give guidance to design, construction and management teams at the following appropriate stages:
- ii. Design stage:**
  - a.** Set up a team structure and roles (Check if an Accessibility Consultant or Accessibility Body is involved if required) which demonstrate the transition between development stages and manage the contribution from all disciplines when implementing accessibility into the design.
  - b.** Set up workshops.
  - c.** Check drawings and design.
  - d.** Check all specifications.
  - e.** Utilize scorecards and write an Accessibility Statement.
  - f.** Review and update credit submissions and Accessibility Statement on a regular basis throughout the design process.
  - g.** Issue the final pre-certificate credit submission and Accessibility Statement to the Assessor.

**iii. Construction stage:**

- a. Set up a team structure and roles (Check if an Accessibility Consultant or Accessibility Body is involved if required) which demonstrate the transition between development stages and manage the contribution from all disciplines when implementing accessibility into the construction.
- b. Set up workshops.
- c. Address changes or comments received from the Assessor at the design stage.
- d. Check modified drawings and designs (if applicable).
- e. Check all specification and samples provided by the contractor.
- f. Utilize scorecards and write an Accessibility Statement.
- g. Site visits/assessment and what needs to be modified. To undertake this task, it will be necessary to visit the site at least three times:
  - When space dimensions and levels (including levels between building entrances and building plot exteriors) are defined.
  - When doors, openings and circulation corridors are defined and, at the same time, all fittings' characteristics (sanitaryware, ironmongery, flooring materials, etc.) shall be checked.
  - Before the handover.
- h. Review and update credit submissions and Accessibility Statement on a regular basis throughout the construction process.
- i. Issue the final certification credit submission and Accessibility Statement to the Assessor.

**iv. Certificate renewal stage:**

- a. Verify that all elements of the sections from CM.1.01 to CM.1.08 are implemented and reviewed annually to ensure ongoing compliance and performance. This review should also be conducted following tenant relocation or partial building vacancy.
- b. Check if, in the event of any changes in occupancy, structure and or extensions and the applied chapters TA.1, IC.1, EFE.1, EQC.1, HC.1, DA.1, OC.1, ESP.3 and USSP.1 achieve the minimum credits required.
- c. Utilize scorecards and update the Accessibility Statement.
- d. Review and update credit submissions.
- e. Issue the final renewal certification credit submission to the Assessor.

**b) 15 credits in renovation:**

- i. Produce reports about:
  - a. Types of access needs expected amongst all asset users.
  - b. Evidence of compliance with Master Plan specifications (if relevant).
  - c. Information on meetings and/or workshops with design team members and relevant stakeholders in relation to the universal design challenges and opportunities.
  - d. Narrative describing accessible and universal design solutions addressing various user groups which shall cover location and site-specific requirements (e.g., site slope gradients, sun exposure, existing and/or native planting, and heritage status).
  - e. Refer to required standards (e.g., DMT manuals, international best practices and other documents to be used which impacts accessibility and universal design).

**c) 50 credits in renovation.**

- i. A breakdown of the timeframe for implementing developments/ redevelopments.

### **3.1.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **75**.

### **3.1.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **75**.

### **3.1.1.6 Pre-certificate rating submission:**

- a)** A report outlining the proposed Accessibility Statement at the design stage providing information of the development/redevelopment providing information according to the mandatory requirements, to meet at least the minimal level of Sahel Building Rating System or the minimum requirements to meet at least the rating level that is envisioned.
- b)** Process chart for the IID developed at project inception, detailing:
  - i.** Team structure listing team members and their roles.
  - ii.** Design milestones and workshops listing participants, goals, expected outcomes, required actions with tasks assignments;Methodology for ensuring appropriate stakeholders are involved, including relevant regulatory authorities and permit agencies.
- c)** Narrative summarizing initial vision, objectives and targets set jointly by the project team for the project.
- d)** Implementation strategy for achieving transition between project stages and project packages.
- e)** Meeting minutes, action items and team member responsibilities from key
- f)** workshops held as part of the IID.
- g)** Narrative highlighting the reasons for any changes from the initial IID process chart.
- h)** Scorecards and Accessibility Statement to provide proof of achievement.

### **3.1.1.7 Certificate rating submission:**

- a)** A comprehensive report confirming that the Accessibility Statement derived at the design stage of the development/redevelopment has complied and with mandatory and aimed enhanced requirements in the construction and completion stage, meeting at least the minimal level of Sahel Building Rating System or the minimum rating level that is envisioned.
- b)** Process chart for the IID developed at construction stage, detailing:
  - i.** Team structure listing team members and their roles.
  - ii.** Construction milestones and workshops listing participants, goals, expected outcomes, required actions with tasks assignments; and
  - iii.** Methodology for ensuring appropriate stakeholders are involved.
- c)** Implementation strategy for achieving transition between project stages and project packages.
- d)** Meeting minutes, action items and team member responsibilities from key workshops held as part of the IID.
- e)** Narrative highlighting the reasons for any changes from the initial IID process chart and listing successes and challenges during construction stage.
- f)** Scorecards and Accessibility Statement to provide proof of achievement.

### **3.1.1.8 References:**

- a) ADG-009 Abu Dhabi Guideline for Engineering Value**
- b) RIBA Plan of Work: Inclusive Design Overlay**
- c) Barrier-free Concept, Germany**

## **3.1.2 IID.1.02 Consulted accessibility pre-design and statement for development/renovation**

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### **3.1.2.1 Applicability:**

Applicable to:

- a)** All new buildings.
- b)** All buildings undergoing renovation.

### **3.1.2.2 Intent:**

To ensure that accessibility, universal design considerations and goals are integrated from the pre-design stage of development /redevelopment by engaging Accessibility Bodies, representing diverse user groups, including families, seniors, and individuals with varying abilities and disabilities, and an Access Consultant to ensure that all actions are implemented in a timely manner.

### **3.1.2.3 Requirements:**

#### **Recommended:**

At pre-design stage, the SQP prepares an Accessibility Statement providing information which should:

#### **For new assets developments/redevelopments:**

- a)** Be consulted with an Accessibility Body at the pre-design stage. The consultation may be a report on an Accessibility Statement proposal with comments and suggestions from the consulting party or minutes from a meeting with the Accessibility Consultant. In either case, the SQP and/or design team needs to confirm in writing having consulted an Accessibility Consultant at the pre-design stage.

#### **For renovation projects:**

- b)** Be consulted with an Accessibility Body at the pre-design stage. The consultation may be a report on an Accessibility Statement proposal with comments and suggestions from the consulting party or minutes from a meeting with the Accessibility Body. In either case, the SQP and/or design team needs to confirm in writing having consulted an Accessibility Body at the pre-design stage.
- c)** Demonstrate that all actions are planned and can be implemented in a timely manner in redevelopments, including a detailed breakdown of the timeframe for implementing new accessibility and universal design developments or modifications to existing ones, including specific stages and milestones, as in the example that follows:

**Table 7: Milestones timeframe for redevelopments**

Objects	Quantities	Deadlines
Guest rooms	63 (50%)	2 years
Guest rooms	63 (100%)	4 years
Elevators	4 (50%)	2 years
Elevators	4 (100%)	5 years
Toilets rooms	4 (100%)	3 years
Common spaces and restaurants	(100%)	5 years
Private and employees' areas	(100%)	8 years

Once planned, submit each stage of the action plan to Sahel Building Rating System to obtain the pre-certificate and certificate rating credits for each stage.

### 3.1.2.4 Pre-certificate rating credits:

**Table 8: IID.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	Recommended
25	0	Consult the Accessibility Statement with an Accessibility Consultant at the pre-design stage.
0	5	Consult the Accessibility Statement with an Accessibility Body representing persons with access needs at the pre-design stage.
0	20	Prepare a timeframe from the commencement of project outlining when the accessible and universal design provisions will be implemented in the redevelopment.

### 3.1.2.5 Certificate rating credits:

**Table 9: IID.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
25	0	Demonstrate that any changes made during the pre-design stage will be communicated to the Accessibility Consultant.
0	5	Demonstrate that any changes made during the pre-design stage will be communicated to the Accessibility Body.
0	20	Provide evidence that the project timeline for implementing accessible and universal design provisions in the redevelopment has been met or explain any changes to the original timeframe and provide an updated implementation schedule.

### 3.1.2.6 Pre-certificate rating submission:

#### Recommended:

- a) Report detailing the consultation with an Accessibility Consultant or Accessibility Body representing persons of special needs, families, and the elderly during the pre-design stage, including their expertise (name, portfolio and company's registration or profile) and details of the survey if conducted such as time, date, subject matter, and survey questions, summary of discussions, feedback, and recommendations provided during the consultation.
- b) A written record of any adjustments or modifications made to the pre-design based on the consultation.
- c) A policy report detailing the timeframes, action plans and specific milestones to be achieved at each stage.

### 3.1.2.7 Certificate rating submission:

#### Recommended:

- a) A comprehensive report confirming that the Accessibility Consultant and Accessibility Body have been informed about any changes made in the pre-design stage.
- b) Report and handover certificates with start and finish dates of conducted implementation in redevelopments, details confirming the timeframes and milestones achieved at each stage during the construction and completion.

### 3.1.2.8 References:

- a) ADG-009 Abu Dhabi Guideline for Engineering Value
- b) RIBA Plan of Work: Inclusive Design Overlay
- c) Barrier-free Concept, Germany

### **3.1.3 IID.1.03 Accessibility Consultant from the early design stage of the development/renovation**

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#### **3.1.3.1 Applicability:**

Applicable to:

- a) All new buildings.
- b) All buildings undergoing renovation

#### **3.1.3.2 Intent:**

To ensure that SQPs and design teams incorporate accessibility expertise throughout the design process, particularly for complex projects, an Accessibility Consultant will be engaged to provide guidance on innovative solutions that exceed the requirements of the Sahel Rating System and align with international best practices. The Accessibility Consultant with recognized training and practice in accessibility and universal design can also be the SQP if accredited by DMT.

#### **3.1.3.3 Requirements:**

##### **Recommended:**

An Accessibility Consultant shall be appointed for the project's design stage and will be responsible for ensuring that the project is accessible and universally designed following international best practice and considering the latest assistive technology. The Accessibility Consultant with recognized training and practice in accessibility and universal design can also be the Sahel Qualified Professional, if accredited by DMT.

#### **3.1.3.4 Pre-certificate rating credits:**

**Table 10: IID.1.03 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
10	10	Appointment of Accessibility Consultant

#### **3.1.3.5 Certificate rating credits:**

**Table 11: IID.1.03 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
10	10	Appointment of Accessibility Consultant

### **3.1.3.6 Pre-certificate rating submission:**

#### **Recommended:**

- a) Contract with an Accessibility Consultant for the subject project with a defined engagement date matching design period.
- b) Details of the Accessibility Consultant's qualifications, certifications, and relevant experience.
- c) Brief overview of the Accessibility Consultant's role within the design team and their responsibilities in ensuring accessibility compliance.

### **3.1.3.7 Certificate rating submission:**

No submission required.

### **3.1.3.8 References:**

- a) ADG-009 Abu Dhabi Guideline for Engineering Value
- b) RIBA Plan of Work: Inclusive Design Overlay
- c) Barrier-free Concept, Germany

## **3.1.4 IID.1.04 Accessibility Consultant at the construction stage of the development/renovation**

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### **3.1.4.1 Applicability:**

Applicable to:

- a) All new buildings.
- b) All buildings undergoing renovation

### **3.1.4.2 Intent:**

To ensure that SQP and construction teams incorporate accessibility expertise throughout the design process, particularly for complex projects, an Accessibility Consultant will be engaged to provide guidance on innovative solutions that exceed the requirements of the Sahel Rating System and align with international best practice. The Accessibility Consultant may also collaborate with an Accessibility Body during the construction stage and pre-completion checks to ensure that diverse perspectives are considered.

### **3.1.4.3 Requirements:**

#### **Recommended:**

An Accessibility Consultant is appointed to perform construction, and pre-completion checks of implemented accessibility and universal design in the buildings. Their responsibility is to ensure that the construction site is accessible, safe and usable for all. If required, the Accessibility Consultant will contact an Accessibility Body. The requirements for the Accessibility Consultant position are outlined below:

- a) Check shop drawings.
- b) Check material submitted by contractors.
- c) Check mock-up areas and involve an Accessibility Body if required.
- d) Advise on accessibility and universal design solutions requested during the construction stage, if required.
- e) Support with pre-completion checks.

### **3.1.4.4 Pre-certificate rating credits:**

**Table 12: IID.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
30	30	Confirm that an Accessibility Consultant will be appointed at the construction stage.

### 3.1.4.5 Certificate rating credits:

**Table 13: IID.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
30	30	Confirm the appointment of Accessibility Consultant at the construction stage.

### 3.1.4.6 Pre-certificate rating submission:

#### **Recommended:**

Submit an intent to involve an Accessibility Consultant at the construction stage as part of the report created by the SQP to the Assessor.

### 3.1.4.7 Certificate rating submission:

#### **Recommended:**

- a) Contract with an Accessibility Consultant for the subject project with a defined engagement date matching design period.
- b) Details of the Accessibility Consultant's qualifications, certifications, and relevant experience.
- c) Brief overview of the Accessibility Consultant's role within the construction team and their responsibilities in ensuring accessibility compliance.
- d) Reports of visits and advice provided throughout the construction stage along with date, time and concerns raised, or agreements made.
- e) Construction report concerning compliance accessibility and universal design.

### 3.1.4.8 References

- a) ADG-009 Abu Dhabi Guideline for Engineering Value
- b) RIBA Plan of Work: Inclusive Design Overlay
- c) Barrier-free Concept, Germany

## 3.2 TA.1 Transportation Access

This category assesses the provisions for access and mobility of all users to reach the building in public and private transportation stops and modes, such as buses, trams, ferries, taxis, and cycles. Transportation Access addresses aspects such as the availability, safety, convenience, and comfort of transportation and parking options and their connection.

**Table 14: Transportation Access**

IID	Inclusive integrated design	Requirement type	Credit points applicability	
			New community developments/redevelopment	Existing community renovation
TA.1.01	Accessible parking	Mandatory	R	25
TA.1.02	Enhanced accessible parking	Recommended	15	20
		Best Practice	30	40
TA.1.03	Accessible non-standard cycle parking	Mandatory	R	8
TA.1.04	Enhanced accessible non-standard cycle parking	Recommended	5	5
TA.1.05	Accessible passenger loading zone and accessible taxi stands	Mandatory	R	15
TA.1.06	Enhanced accessible passenger loading zone and accessible taxi stands	Recommended	8	8
		Best Practice	4	4
TA.1.07	Accessible e-vehicle charging stations	Mandatory	R	10
TA.1.08	Accessible public transportation terminals: airports, railways, bus and ferries	Mandatory	R	150
TA.1.09	Enhanced accessible public transportation terminals: airports, railways, bus and ferries	Recommended	20	30
		Best Practice	8	10
	<b>Total</b>		<b>90</b>	<b>325</b>

## 3.2.1 TA.1.01 Accessible parking

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### 3.2.1.1 Applicability:

Applicable to all buildings that require parking spaces.

### 3.2.1.2 Intent:

To ensure enough designated parking spaces for private vehicles are provided in buildings allowing equitable and independent access for all users at convenient and accessible locations.

### 3.2.1.3 Requirements:

#### Mandatory:

All accessible parking including standard accessible parking space, ambulant parking space, family parking space, and accessible van parking space within the certification boundary shall ensure:

a) The strategic locations of all types of accessible parking spaces within different building typologies shall be in accordance with “**Sahel Community Rating System – TA.3.01 Accessible parking**”

b) **3 Credits in renovation:**

i. Each parking facility (lots and/or garages) within the certification boundary shall include accessible parking spaces of four types, wherever applicable: standard accessible parking space, ambulant parking space, family parking space, and accessible van parking space provided at quantity in accordance with **Abu Dhabi International Building Code, 2013** and as seen in the table below:

**Table 15: Accessible parking provision**

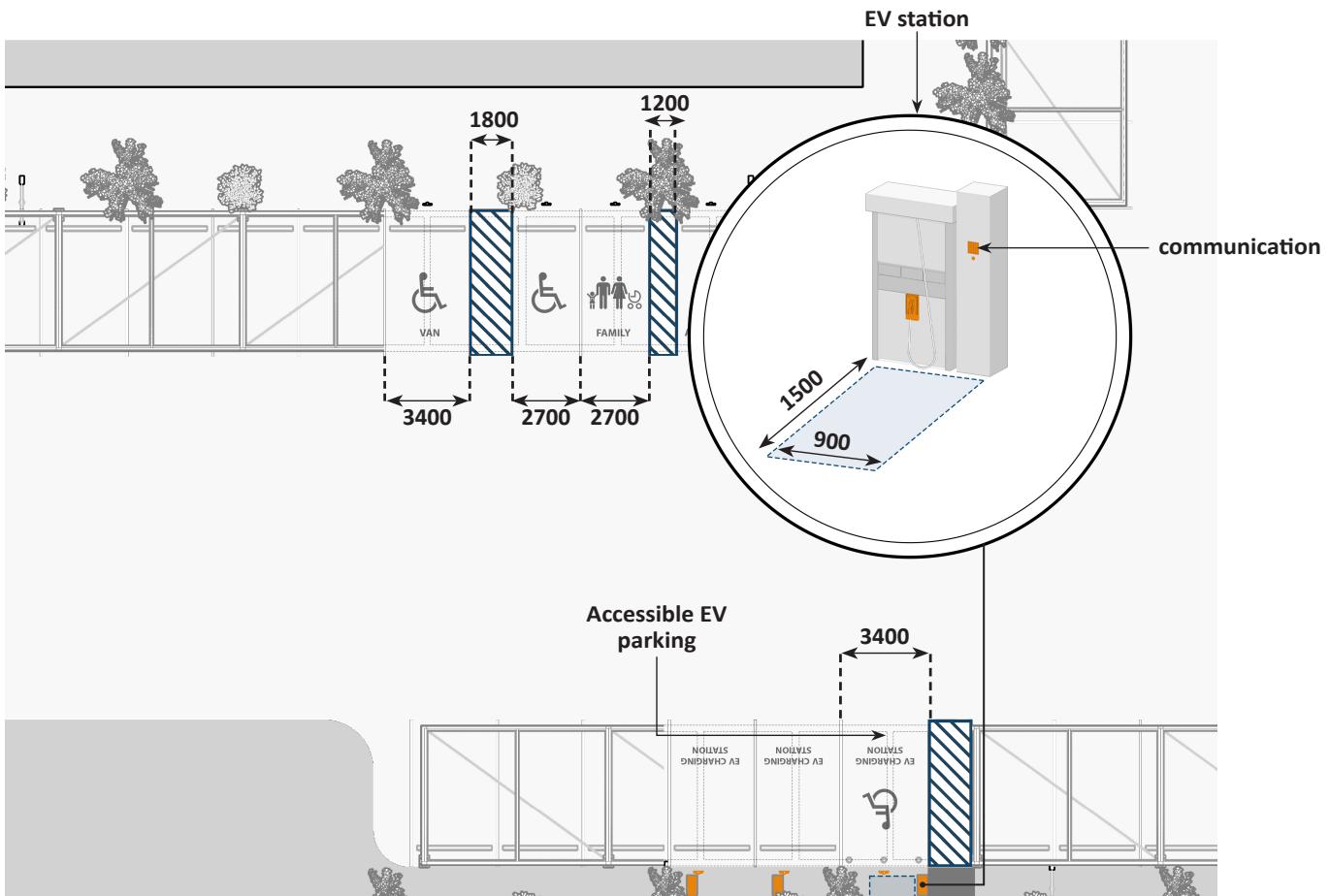
Total parking spaces provided	Minimum number of standard accessible parking	Minimum number of accessible van parking	Minimum number of ambulant parking	Minimum number of family parking
1-25	1	-	-	-
26-50	2	-	2-3	2-3
51-75	3	-	3-4	3-4
76-100	4	-	4-5	4-5
101-150	5	-	6-8	6-8
151-200	6	1	8-10	8-10
201-300	7	2	11-15	11-15
301-400	8	2	16-20	16-20
401-500	9	2	21-25	21-25
501-1000	2% of total	0.3% of total	5% of total	5% of total
1001-	20 + 1 for each 100	0.3% of total	5% of total	5% of total

- ii. Where more than 25 parking spaces are provided:
  - a. A minimum of 5% of parking spaces shall be designated as family parking spaces (For example: if 5% results 1.25 places, rounded up 2 shall be included).
  - b. A minimum of 5% of parking spaces shall be designated as ambulant parking spaces (For example: if 5% results 1.25 places, rounded up 2 shall be included).
  - c. For every 6 accessible parking spaces, there shall be a minimum of one designated as accessible van parking (For example: if there are 7 accessible parking places, 2 shall be for accessible van parking).
- iii. Additionally, the standard accessible parking spaces and accessible van parking spaces provided in following buildings, shall follow the table below:

**Table 16: Accessible parking provisions per type of facility**

Type of facilities	Minimum % of standard accessible parking	Minimum % of accessible van parking
Residential parking (Residents)	A minimum of 2% (not less than one) of the occupancy parking	
Residential parking (Visitors)	A minimum of 2% (not less than one) of the visitor parking	
Multi-use buildings with office spaces	A minimum of 5% (not less than one) of the occupancy parking	1 for every 6 accessible parking spaces in accordance with <b>“Abu Dhabi International Building Code, 2013”</b>
Hospital outpatient facilities,		
Rehabilitation and outpatient physical therapy facilities	In accordance with <b>“Abu Dhabi International Building Code, 2013”</b>	

The parking provision requirements outlined above shall be in accordance with the **Abu Dhabi International Building Code, 2013**.



**Figure 4: Off street accessible parking spaces (plan view)**

All buildings and assets with parking facilities (Figure 4) shall:

**c) 5 credits in renovation:**

- i. Have accessible standard parking spaces and accessible van parking spaces, be located as close as possible to at least one accessible entrance, path, elevator or ramps within a maximum distance of 50 m, in all buildings or facility of public use, calculated via the Direct Route Indices Method.
- ii. Have family and ambulant parking spaces be located as close as possible to at least one accessible entrance, path, elevator, ramps within a maximum distance of 50 m, in the occupancies as applicable in accordance with **“Sahel Community Rating System – TA.1.01 Accessible parking”**.
- iii. For residential developments, standard accessible parking spaces and accessible van parking spaces shall be provided within 50m radius from the accessible entrances of the residential building (including both villas and apartments), calculated via the Direct Route Indices Method.
- iv. In existing residential buildings, where there is no provision for accessible parking or where the distance between the accessible parking and accessible entrance is higher, accessible passenger loading zones shall be provided within 100m radius from the accessible entrance, calculated via the Direct Route Indices Method.

- v. All accessible parking spaces shall:
  - a. Ensure users are not required to pass behind vehicles that may be backing out, through well-connected, continuous, safe and accessible paths of minimum 2000 mm width.
  - b. In a multi-level parking facility, accessible parking spaces shall be accessible via at least one designated continuous accessible path leading to an entrance, exit, or elevator lobby.
  - c. Be shaded if outdoors, with a shading provision in accordance with "**Sahel Building Rating System – EQC.2.01 Thermal comfort (outdoor)**". The shading structure shall not obstruct the access aisle or the accessible path to the parking space.
  - d. Have a minimum clear height of 2500 mm above floor level for uninterrupted movement of vehicles and users (in R-2 and R-3 occupancies 2200 mm are permitted).
  - e. Have floor surfaces which shall:
    - Be obstacle-free, firm, stable and glare resistant floor surface.
    - Have slip-resistant in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
    - Have a running slope and a cross-fall slope of no more than 1:50 (2%) at parking spaces and access aisles.

**d) 2 Credits in renovation:**

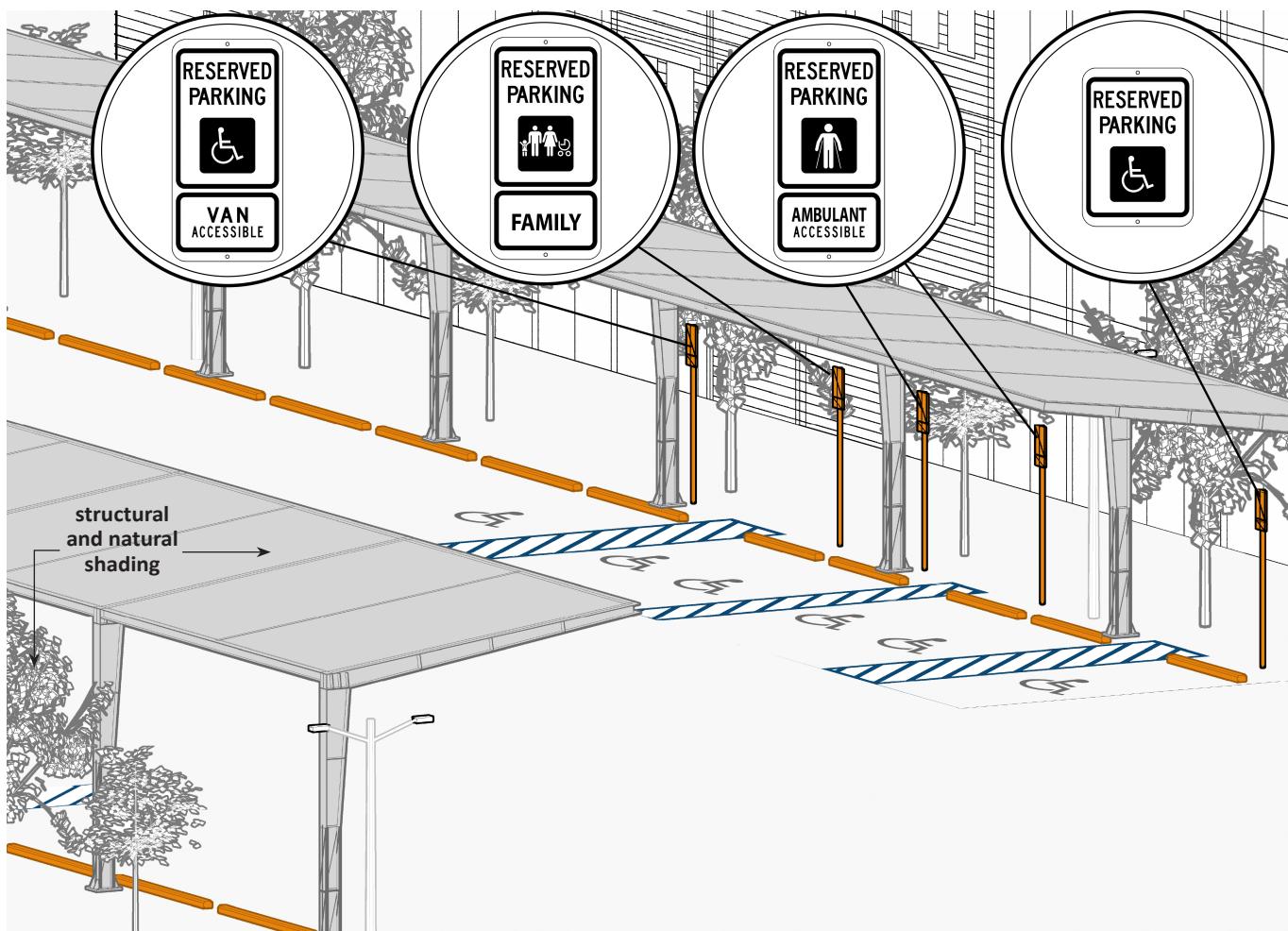
- i. Be adequately marked:
  - a. With vertical signage (Figure 5) containing the International Symbol of Accessibility, the Family Parking Symbol, the Ambulant Parking Symbol, or Accessible Van Parking Symbol, depending on the type of parking space they represent. Vertical signage shall be mounted with their bottom edge positioned at a height of 2200 mm above floor level and shall have a minimum width of 300 mm and a minimum height of 450 mm.
  - b. With horizontal (paving) markings containing the International Symbol of Accessibility, the Family Parking Symbol, the Ambulant Parking Symbol, or Accessible Van Parking Symbol, depending on the type of parking space they represent. Sidewalk markings shall consist of a white symbol painted on a blue background, with minimum dimensions of 1800 mm by 1800 mm. Marking shall have a visual contrast from their background in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".

**e) 2 Credits in renovation:**

- i. Have clear signage system within the certification boundary:
  - a. at every entrance to the parking facility.
  - b. Directional signage, featuring the International Symbol of Accessibility, indicating the location of accessible parking spaces and the nearest accessible entrance.
  - c. Be accompanied by accessible directional signs indicating the accessible path to the ticket machine, elevators, ramps, exit, or facilities being visited.
  - d. Be accompanied by accessible exit control devices at the entrance to the parking, with operable parts in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**" and minimum luminance contrast from their background in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".

**f) 3 credits in renovation:**

- i. Be accompanied by an access aisle, which shall:
  - a. Be at the same level as the parking space it serves.
  - b. Extend to the full length of the parking space it serves. Access aisles situated at the rear of the car shall extend to the full width of the parking spaces they serve.
  - c. Adjoin with an accessible path. Access aisles shall not overlap with the vehicular way.
  - d. Have a minimum slip resistance value in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - e. Be placed on either side of the accessible standard or van parking space.
  - f. Access aisles shall be marked with diagonal blue lines to discourage parking in them with a visual contrast from their background in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- ii. Parking spaces and access aisles shall be designed and located in such a way that cars and/or vans, when parked, do not obstruct the required clear width of adjacent accessible paths, as in "**Sahel Building Rating System – IC.1 Interconnectivity and Circulation**".



**Figure 5: Accessible parking types**

**g) 2 credits in renovation:**

- i. Private garages shall:
  - a. Be large enough to accommodate a standard unmarked accessible parking space and space for an access aisle in accordance with the requirements of standard accessible parking space.
  - b. Have the main garage door remote operated, automated roll-up door with anti-collision sensors.
  - c. Have operable parts in accordance with “**Sahel Building Rating System – EFE.1.13 Operable parts**”.

**h) 1 credit in renovation:**

- i. Have wheel stoppers at a distance of 900 mm from accessible route, to prevent parked vehicles from protruding into the pedestrian route, which is perpendicular to the front of parking space. Curb height shall be equal to or lower than 150 mm.

**i) 2 Credits in renovation:**

- i. Allow off-street private parking within a compound to be shared with other users, if accessible parking and/or accessible van parking space with an access aisle is provided.
- ii. Additionally, all standard accessible off-street parking spaces shall:
  - a. Have a minimum width of 2700 mm and a minimum length of 5500 mm, and an adjoining access aisle with a minimum width of 1800 mm. Access aisles in existing facilities shall have a minimum width of 1500 mm. Two parking spaces are permitted to share a common access aisle. Measurements of both access aisles and adjacent parking spaces shall be taken from the centerline of the markings.
- iii. Additionally, all accessible off-street van parking spaces shall:
  - a. Have a minimum width of 3400 mm and a minimum length of 5500 mm with an adjoining access aisle with a minimum width of 1800 mm. Access aisles in existing facilities shall have a minimum width of 1500 mm. Two parking spaces shall be permitted to share a common access aisle. Accessible van parking spaces are permitted to be of minimum 2700 mm width, where an access aisle of minimum 2500 mm (2200 mm for existing facilities) width is provided.
  - b. Have an additional area at the rear of the van measuring at least 2500 mm, resulting in a total length of 8000 mm for the parking space. The additional area at the rear of a van in existing facilities shall have a minimum width of 2200 mm.
- iv. Additionally, all off-street ambulant parking spaces and family parking spaces shall:
  - a. Have a minimum width of 2700 mm and a minimum length of 5500 mm, and an adjoining access aisle with a minimum width of 1200 mm. Two parking spaces are permitted to share a common access aisle. Measurements of both access aisles and adjacent parking spaces shall be taken from the centerline of the markings.

**j) 5 Credits in renovation:**

- i. Where on-street accessible parking spaces are provided within the plot, they shall be under “**Sahel Public Realm Rating System – TA.2.01 Accessible parking**”.

### **3.2.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **25**.

### **3.2.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **25**.

### **3.2.1.6 Pre-certificate rating submission:**

- a)** Design drawings showing the proposed locations, measurements, and accessibility of all types of parking spaces (standard accessible, ambulant, family, and accessible van parking spaces).
- b)** Detailed specifications of the floor surface, lighting illuminance, slope, location relative to the principal accessible entrance(s), connection to the accessible path, marking, and shading structure for all accessible parking spaces.
- c)** Design details of the access aisle for each type of parking space, including its level, location, slip resistance value, length, marking, and design to prevent obstruction of the accessible paths.
- d)** Design drawings for the signage and marking for each type of parking space, including the symbols, location, dimensions, luminance contrast, and Light Reflectance Value (LRV).
- e)** Design drawings and specifications for the exit control devices and parking pay stations, including their location, height, luminance contrast, and LRV.
- f)** If on-street parking is envisioned, provide design drawings showing the width of the adjacent sidewalk, the access aisle, and the parking space in accordance with **“Sahel Public Realm Rating System – TA.2.01 Accessible parking”**.

### **3.2.1.7 Certificate rating submission:**

- a)** As-built drawings showing the actual implementation of all types of parking spaces, their measurements, components, and accessibility from the accessible path.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the parking spaces, focusing on the accessibility of use, connectivity with the accessible path, marking, signage, exit control devices, and parking pay stations.

### **3.2.1.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013
- c)** ROW-603 Abu Dhabi Urban Street Design Manual
- d)** Standards Guideline For Standard Drawings TR- 541 (Part 1)
- e)** TR-520 Technical Circular – Bus Stop Design Standards
- f)** TR-521 Guide Drawings on Locating Bus Stops on Urban Roads
- g)** DP-306\_Estdama Pearl Building Rating System
- h)** DP-307-Estdama Pearl Community Rating System

## 3.2.2. TA.1.02 Enhanced accessible parking

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### 3.2.2.1 Applicability:

Applicable to all buildings that require parking spaces.

### 3.2.2.2 Intent:

To ensure substantial designated parking spaces for private vehicles are provided in buildings, to allow equitable and independent access for all users at convenient and accessible locations.

### 3.2.2.3 Requirements:

All designs, drawings, and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

- a) Standard accessible parking spaces, accessible van parking spaces, family and ambulant parking spaces should be provided in accordance with "**Sahel Community Rating System – TA.3.02 Enhanced accessible parking**".
- b) Each parking facility, if indoors or multi-level, should have additional electronic signage indicating the availability and floor location of available accessible parking spots provided.

#### Best Practice:

All accessible parking including standard accessible parking space, ambulant parking space, family parking space, and accessible van parking space within the certification boundary should ensure:

- a) Each parking facility (lots and/or garages) within the certification boundary should include accessible parking spaces of four types, wherever applicable: standard accessible parking space, ambulant parking space, family parking space, and accessible van parking space provided at an enhanced quantity as seen in the table below:

**Table 17: Accessible parking provision (Best Practice)**

Total parking spaces provided	Minimum number of standard accessible parking	Minimum number of accessible van parking	Minimum number of ambulant parking	Minimum number of family parking
1-25	2	-	-	-
26-50	3	-	2-4	2-4
51-75	4	-	4-6	4-6
76-100	5	-	6-7	6-7
101-150	6	-	7-11	7-11
151-200	7	1	11-14	11-14
201-300	8	2	15-21	15-21
301-400	9	2	22-28	22-28
401-500	10	2	29-35	29-35
501-1000	3% of total	0.30%	7% of total	7% of total
1001-	30 + 1 for each 100	0.30%	7% of total	7% of total

- b) Where more than 25 parking spaces are provided:
  - i. A minimum of 7% of parking spaces should be designated as family parking spaces (For example: if 5% results 1.75 places, rounded up 2 should be included).
  - ii. A minimum of 7% of parking spaces should be designated as ambulant parking spaces (For example: if 5% results 1.75 places, rounded up 2 should be included).
  - iii. For every six accessible parking spaces, there should be a minimum of one designated as accessible van parking (For example: if there are 7 accessible parking places, 2 should be for accessible van parking).
- c) The enhanced accessible standard parking spaces and accessible van parking spaces when provided in following buildings, should be as follows:

**Table 18: Accessible parking provisions per type of facility (Best Practice)**

Type of facilities	Minimum % of standard accessible parking	Minimum % of accessible van parking spaces
Residential parking (Residents)	A minimum of 3% (not less than one) of the occupancy parking	1 for every 6 accessible parking spaces in accordance with <b>Abu Dhabi International Building Code, 2013</b>
Residential parking (Visitors)	A minimum of 3% (not less than one) of the visitor parking	

- d) Additionally, enhanced dimensions for all types of accessible parking spaces should be achieved as following:
  - i. All standard accessible parking spaces should:
    - a. Have a width more than 2700 mm and length more than 5500 mm, and an adjoining access aisle with a width more than 1800 mm. Access aisles in existing facilities should have a width more than 1500 mm. All parking spaces should have an individual access aisle. Measurements of both access aisles and adjacent parking spaces should be taken from the centerline of the markings.
  - ii. All accessible van parking spaces should:
    - a. Have a width more than 3400 mm and a length more than 5500 mm with an adjoining access aisle with a width more than 1800 mm. Access aisles in existing facilities should have a width more than 1500 mm. All parking spaces should have an individual access aisle.
    - b. Have an additional area at the rear of the accessible van parking space measuring at least 2500 mm, resulting in a total length of at least 8000 mm for the parking space. The additional area at the rear of the accessible van parking space in existing facilities should have a minimum width of 2200 mm.
  - iii. All ambulant parking spaces and family parking spaces should:
    - a. Have a width more than 2700 mm and a minimum length of 5500 mm, and an adjoining access aisle with a width more than 1200 mm. All parking spaces should have an individual access aisle. Measurements of both access aisles and adjacent parking spaces should be taken from the centerline of the markings.

### 3.2.2.4 Pre-certificate rating credits:

**Table 19: TA.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Ensure that design includes the four parking types in line with “Sahel Community Rating System – TA.3.02 Enhanced Accessible parking”.
5	5	Incorporate an electronic signage system in the design that indicates the number and floor location of available parking lots.
		<b>Best Practice:</b>
15	20	Design all types of accessible parking to be in quantity 30% beyond the minimum and as defined per buildings type.
12	15	Ensure the width of an accessible access aisle (one per space) is greater than 1800mm, the width of a standard accessible parking space/family parking space/ambulant parking space is greater than 2700mm, and the width of an accessible van parking space is greater than 3400mm.

### 3.2.2.5 Certificate rating credits:

**Table 20: TA.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Confirm that design includes the four parking types in line with <b>“Sahel Community Rating System – TA.3.02 Enhanced Accessible parking”</b>
5	5	Confirm the incorporation of an electronic signage system in the design that indicates the number and floor location of available parking lots.
		<b>Best Practice:</b>
15	20	Confirm the provision of all types of accessible parking to be in quantity 30% beyond the minimum and as defined per buildings type.
12	15	Confirm the width of an accessible access aisle (one per space) is greater than 1800mm, the width of a standard accessible parking space/family parking space/ambulant parking space is greater than 2700mm, and the width of an accessible van parking space is greater than 3400mm.

### **3.2.2.6 Pre-certificate rating submission:**

#### **Recommended and Best Practice:**

- a)** Design drawings showing the proposed locations, measurements, and accessibility of all parking spaces (standard accessible, ambulant, family, and accessible van parking spaces).
- b)** Detailed specifications of the floor surface, lighting illuminance, slope, location relative to the principal accessible entrance(s), connection to the accessible path, marking, and shading structure for all accessible parking spaces.
- c)** Design details of the access aisle for each type of parking space, including its level, location, slip resistance value, length, marking, and design to prevent obstruction of the accessible paths.
- d)** Design drawings for the electronic signage system indicating the number and floor location of available parking lots.

### **3.2.2.6 Certificate rating submission:**

#### **Recommended and Best Practice:**

- a)** As-built drawings showing the actual implementation of all types of parking spaces, their measurements, components, and accessibility from the accessible path.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the parking spaces.

## **3.2.3 TA.1.03 Accessible non-standard cycle parking**

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### **3.2.3.1 Applicability:**

Applicable to all buildings that require cycle parking spaces.

### **3.2.3.2 Intent:**

To ensure an equitable access, design and capacity of cycle parking spaces for all building users, providing safety and convenience, fostering independence, facilitating mobility, and ultimately creating inclusive environments that accommodate the diverse needs of all, while promoting active and healthy lifestyles.

### **3.2.3.3 Requirements:**

#### **Mandatory:**

##### **a) 2 Credits in renovation:**

All buildings and facilities with a cycle parking facility within the certification boundary, shall include accessible non-standard cycle parking spaces (Figure 6), which shall:

- i. Be a minimum of 5% (not less than one) of all public cycle parking spaces.
- ii. Be a minimum of 2% (not less than one) of all residential cycle parking spaces.
- iii. Be strategically located within an asset in accordance with **“Sahel Community Rating system – TA.3.03 Accessible non-standard cycle parking”**.

##### **b) 2 Credits in renovation.**

Each cycle parking facility within the certification boundary shall:

- i. Be separated from the accessible pedestrian path and be shaded if provided outdoors.

##### **c) 2 Credits in renovation.**

- i. Have a minimum width of 1200 mm and a minimum length of 2800 mm, accompanied by a transfer space with a minimum width of 1800 mm, along the entire length of the accessible cycle parking space.
- ii. Be accompanied by accessible charging stations and air pumps, if any are envisioned, near the accessible non-standard cycle parking space, with at least one of each type located adjacent to an accessible path.
- iii. Be marked with signage featuring the International Symbol of Accessibility in accordance with **“Sahel Building Rating System - OC.1.01 Signage and other communication elements”**.
- iv. If provided, end of ride facilities such as shower rooms, changing facilities or locker spaces shall be provided in accordance with **DMT Walking and Cycling Masterplan Manual (TR 530)** and shall be accessible in accordance with **“Sahel Building Rating System – HC.1.07 Accessible shower rooms and bathrooms”**.

##### **d) 2 Credits in renovation.**

- i. Have operable parts at a height in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**, for accessible facilities such as lock-up facilities or rental vending machines.

##### **e) Credits available in the mentioned section.**

- i. Have a minimum luminance contrast and Light Reflectance Value (LRV) between floor, wall (if applicable), furniture and service provisions (e.g. cycle stands) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**f) Credits available in the mentioned section.**

- i. Have a firm, stable, slip-resistant, and glare-free floor surface with slip resistance in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.

**g) Credits available in the mentioned section.**

- i. Be well lit in accordance with the section “**Sahel Building Rating System – EQC.1.11 Lighting and display**”.



**Figure 6:** Accessible cycle racks in front of a building

#### **3.2.3.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.2.3.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.2.3.6 Pre-certificate rating submission:**

- a)** Design drawings showing the proposed locations, measurements, and accessibility of all types of cycle parking spaces.
- b)** Detailed specifications of the floor surface, lighting illuminance, slope, location relative to the principal accessible entrance(s), connection to the accessible path, and shading structure for all cycle parking spaces.
- c)** Design details of the transfer space for each type of cycle parking space, including its level, location, slip resistance value, length, and design to prevent obstruction of the accessible paths.
- d)** Design drawings for the signage including the symbols, location, dimensions, luminance contrast, and Light Reflectance Value (LRV).
- e)** Design drawings for the installation showers and changing facilities (if applicable).
- f)** Design drawings for the installation of rental vending machines for cycles and equipment, accessible charging stations and air pumps, their location, height, and operable parts.
- g)** Design drawings for the installation of cycle stands, their location, dimensions, luminance contrast, and LRV.

### **3.2.3.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including implementing all types of cycle parking spaces.
- b)** As-built drawings showing the actual implementation of all types of cycle parking spaces, their measurements, components, and accessibility from the accessible path.
- c)** Updated specifications if any changes were made during the construction stage.
- d)** Photographs of the cycle parking spaces, focusing on the accessibility of use, connectivity with the accessible path, signage, rental vending machines for cycles and equipment, cycle stands, accessible charging stations and air pumps, showers and other amenities.

### **3.2.3.8 References:**

- a)** ROW-603 Abu Dhabi Urban Street Design Manual
- b)** Abu Dhabi International Accessibility Standards, 2013
- c)** Abu Dhabi International Building Code, 2013
- d)** DMT Walking and Cycling Masterplan Manual (TR 530)

## 3.2.4 TA.1.04 Enhanced accessible non-standard cycle parking

---

### 3.2.4.1 Applicability:

Applicable to all buildings that require cycle parking spaces.

### 3.2.4.2 Intent:

To ensure an equitable access, design and capacity of cycle parking spaces for all building users, providing safety and convenience, fostering independence, facilitating mobility, and ultimately creating inclusive environments with advanced commitments that accommodate the diverse needs of all, while promoting active and healthy lifestyles.

### 3.2.4.3 Requirements:

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All buildings and facilities with a cycle parking facility within the certification boundary, should include accessible non-standard cycle parking spaces, as per the following provisions:

- a) Have a minimum of 10% (not less than one) of all public on-street/off-street cycle parking spaces.
- b) Have a minimum of 10% (not less than one) of all rental cycle parking spaces.
- c) Be a minimum of 5% (not less than one) of all residential cycle parking spaces.

### 3.2.4.4 Pre-certificate rating credits:

**Table 21: TA.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
1	1	Design accessible non-standard cycle parking area with 10% of all cycles
3	3	Design accessible non-standard cycle parking area with 10% of all rental parking spaces
1	1	Design accessible non-standard cycle parking area with 5% in residential areas.

### 3.2.4.5 Certificate rating credits:

**Table 22: TA.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
1	1	Provide accessible non-standard cycle parking area with 10% of all cycles
3	3	Provide accessible non-standard cycle parking area with 10% of all rental parking spaces
1	1	Provide accessible non-standard cycle parking area with 5% in residential areas.

### 3.2.4.6 Pre-certificate rating submission:

**Recommended:**

- a) Design drawings for enhanced number of the cycle parking spots.

### 3.2.4.7 Certificate rating submission:

**Recommended:**

- a) Updated specifications if any changes were made during the construction stage.
- b) Photographs of cycle parking spots.

## **3.2.5 TA.1.05 Accessible passenger loading zone and accessible taxi stands**

---

### **3.2.5.1 Applicability:**

Wherever a passenger loading zone and taxi stands are present in the buildings or the campuses within the certification boundary, they shall be accessible.

### **3.2.5.2 Intent:**

To facilitate safe, efficient, inclusive, and convenient points of access to buildings, by offering momentary loading zones as close as possible to the accessible entrances of the facilities for all users.

### **3.2.5.3 Requirements:**

#### **Mandatory:**

The accessible passenger loading zone and accessible taxi stands shall be designed and planned in accordance with the **“Sahel Public Realm Rating System – TA.2.05 Accessible passenger loading zone and accessible taxi stands”**.

### **3.2.5.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **15**.

For credits breakdown refer to **“Sahel Public Realm Rating System – TA.2.05 Accessible passenger loading zone and accessible taxi stands”**.

### **3.2.5.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **15**.

For credits breakdown refer to **“Sahel Public Realm Rating System – TA.2.05 Accessible passenger loading zone and accessible taxi stands”**.

### **3.2.5.6 Pre-certificate rating submission:**

- a)** Design drawings showing the proposed locations, measurements, and accessible passenger loading zones and/or accessible taxi stands.
- b)** Detailed specifications of the floor surface, lighting illuminance, slope, location relative to the nearest accessible entrance(s), connection to the accessible path, marking, and shading structure for all accessible passenger loading zones and/or accessible taxi stands.
- c)** Design details of the access aisle of the accessible passenger loading zone and/or accessible taxi stand, including its level, location, slip resistance value, length, marking, and design to prevent obstruction of the vehicular travel lanes.
- d)** Design drawings for the signage and marking for each type of accessible passenger loading zone and/or accessible taxi stand, including the symbols, location, dimensions, luminance contrast, and Light Reflectance Value (LRV).
- e)** Design drawings to install various seating options, their location, height, and operable parts.
- f)** Design drawings for queuing lines, if provided.
- g)** Refer to “**Sahel Public Realm Rating System – TA.2.05 Accessible passenger loading zone and accessible taxi stands**”.

### **3.2.5.7 Certificate rating submission:**

- a)** As-built drawings showing the actual implementation of the accessible passenger loading zones and/or accessible taxi stands, their measurements, components, and accessibility from the accessible path.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the accessible passenger loading zones and/or accessible taxi stands, focusing on the accessibility of use, connectivity with the accessible path, marking, signage, seating options and queuing lines.
- d)** Refer to “**Sahel Public Realm Rating System – TA.2.05 Accessible passenger loading zone and accessible taxi stands**”.

### **3.2.5.8 References:**

- a)** ROW-603 Abu Dhabi Urban Street Design Manual
- b)** Abu Dhabi International Accessibility Standards, 2013

## **3.2.6 TA.1.06 Enhanced accessible passenger loading zone and taxi stands**

---

### **3.2.6.1 Applicability:**

Wherever passenger loading zones and taxi stands are present in the buildings or the campuses within the certification boundary, they shall be accessible.

### **3.2.6.2 Intent:**

To facilitate safe, efficient, inclusive, and convenient points of access to buildings, by offering momentary loading zones as close as possible to the accessible entrances of the facilities for all users.

### **3.2.6.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment or renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All enhanced requirements (Recommended) should demonstrate that all accessible passenger loading zones and/or accessible taxi stands parking spaces within the certification boundary of the building should be in accordance with **“Sahel Public Realm Rating System – TA.2.06 Enhanced accessible passenger loading zone and accessible taxi stands”**, wherever applicable.

#### **Best Practice:**

All enhanced requirements (Best Practice) should demonstrate that all accessible passenger loading zones and/or accessible taxi stands parking spaces within the certification boundary of the building should be in accordance with **“Sahel Public Realm Rating System – TA.2.06 Enhanced accessible passenger loading zone and accessible taxi stands”**.

### **3.2.6.4 Pre-certificate rating credits:**

Refer to **“Sahel Public Realm Rating System – TA.2.06 Enhanced accessible passenger loading zone and accessible taxi stands”**.

### **3.2.6.5 Certificate rating credits:**

Refer to **“Sahel Public Realm Rating System – TA.2.06 Enhanced accessible passenger loading zone and accessible taxi stands”**.

### **3.2.6.6 Pre-certificate rating submission:**

Refer to **“Sahel Public Realm Rating System – TA.2.06 Enhanced accessible passenger loading zone and accessible taxi stands”**.

### **3.2.6.7 Certificate rating submission:**

Refer to **“Sahel Public Realm Rating System – TA.2.06 Enhanced accessible passenger loading zone and accessible taxi stands”**.

## **3.2.7 TA.1.07 Accessible e-vehicle charging stations**

---

### **3.2.7.1 Applicability:**

Applicable to all buildings required to have charging stations for e-vehicles such as public service buildings, hospitals, shopping centers or commercial districts, major public transportation hubs, residential occupancy groups, and other places with long stay.

### **3.2.7.2 Intent:**

To ensure the promotion of sustainable transportation, the accessible parking facilities shall be complemented by a fraction of accessible charging stations for accessible e-vehicles with convenient, equitable and adequate capacity within the parking spaces.

### **3.2.7.3 Requirements:**

#### **Mandatory:**

If electric vehicle charging stations are envisioned within the certification boundary, they shall be provided and located in accordance with **“Sahel Community Rating System – TA.3.07 Accessible e-vehicles charging stations”**, wherever applicable.

Accessible EV charging stations shall:

#### **a) 1 Credit in renovation.**

The accessible electric vehicle charging stations and the accessible parking spaces shall be co-located (Figure 7), sharing the access aisle. In locations where only one space for EV charging space is provided, the charger will be shared with the accessible parking space.

Where standard EV parking spaces are available, both on-street and off-street (with a minimum of 1% of the total parking spaces), at least 5% (but no fewer than one) of each type of accessible parking space standard accessible parking spaces, ambulant parking spaces, family parking spaces, and accessible van parking spaces, if provided—shall have access to an accessible EV charging station.

#### **b) 2 Credits in renovation.**

- i. Shall have of a minimum width of 3400 mm wide and minimum length of 5500 mm long.
- ii. Be accompanied by an accessible path provided from the access aisle adjacent to the parking space to the clear floor space of minimum 900 mm in width and 1500 mm in depth space positioned adjacent to and centered on the operable part of the electric vehicle charging station.
- iii. Not obstruct the associated parking spaces, or access aisles with e.g., slack from charging cables.
- iv. Include accessible communication features to provide customer service, help support, mechanisms for reporting outages, malfunctions, and other issues. Information shall be provided in Arabic and English.

- v. When provided outdoors:
  - a. Operable parts that require touch activation shall have low-heat-conductivity material when located outdoors.
  - b. In fast charging locations, such as gas stations or on-street parking with limited spaces, standard accessible parking spots may be utilized as EV charging stations, provided there is access to the charging equipment.
  - c. Where EV charging ports are provided in on-street and off-street parking, they shall be positioned as close as possible to the nearest curb ramp, no more than 250 mm from the face of the curb, if installed on the sidewalk for accessible parking.

**c) 5 Credits in renovation:**

Be shaded or sheltered, using either structural (e.g., set back facade, umbrellas) or natural (e.g., trees, bushes) shading elements in accordance with **“Sahel Building Rating System – EQC 1.01 Thermal comfort (outdoors)”**.

**d) 2 Credits in renovation:**

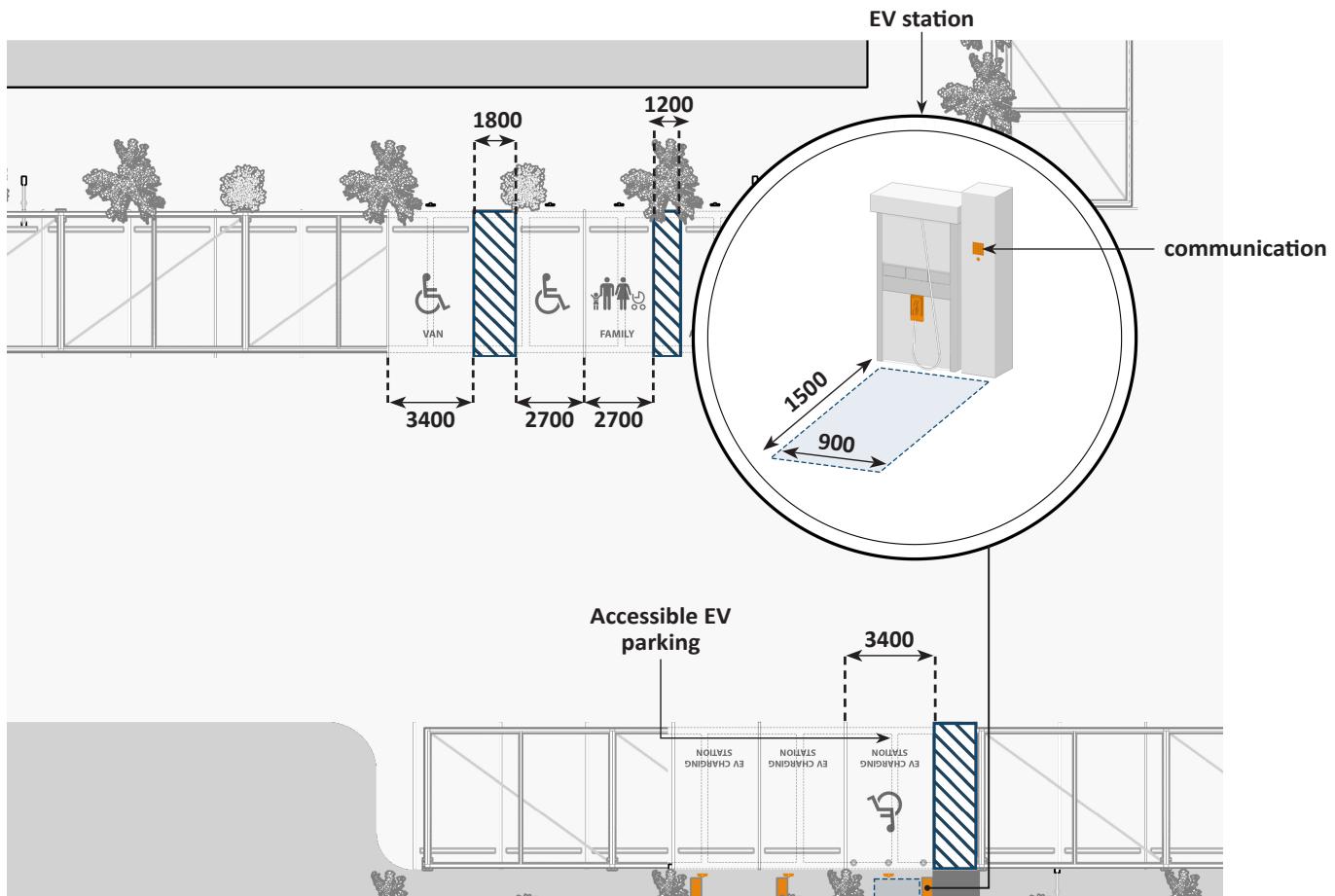
Have chargers and connectors with operable parts in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.

**e) Credits available in the mentioned section:**

Have a minimum luminance contrast from the background in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**f) Credits available in the mentioned section:**

Have operable parts, controls, switches with a minimum luminance contrast from their background in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.



**Figure 7: EV accessible charging station and parking**

### **3.2.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

### **3.2.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

### **3.2.7.6 Pre-certificate rating submission:**

- a)** Design drawings showing the proposed locations of accessible electric vehicle charging stations, including their proximity to the principal accessible entrance(s) and accessible path.
- b)** Detailed specifications of the charging stations, including measurements, components, operable parts, luminance contrast, and Light Reflectance Value (LRV), and materials used, especially for outdoor stations.
- c)** Lighting drawings showing the proposed lighting illuminance around the charging stations.

### **3.2.7.7 Certificate rating submission:**

- a)** As-built documentation confirming the implementation of accessible electric vehicle charging stations in the designated areas.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** As-built lighting drawings showing the actual lighting illuminance around the charging stations.
- d)** Photographs of the charging stations, focusing on features like operable parts, accessibility of use, connectivity with the accessible path, luminance contrast and lighting conditions.
- e)** Evidence of accessible communication features, such as customer service and help support mechanisms. This could include screenshots or photographs of the user interface, if applicable.

### **3.2.7.8 References:**

- a)** ROW-603 Abu Dhabi Urban Street Design Manual
- b)** Abu Dhabi International Building Code, 2013
- c)** Abu Dhabi International Accessibility Standards, 2013
- d)** TR-534 Bus Services Planning standards
- e)** TR-536 - Railway Planning Standards
- f)** TR-537 Tramways Planning Standards

## **3.2.8 TA.1.08 Accessible public transportation terminals: airports, railways, bus, and ferries**

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### **3.2.8.1 Applicability:**

Applicable to all public terminal buildings and main transportation hubs such as airports, railway stations, bus stations, and ferry terminals (Figure 8).

### **3.2.8.2 Intent:**

To ensure that all users are provided access to public means of transportation allowing for equitable, independent and convenient use for all passengers.

### **3.2.8.3 Requirements:**

#### **Mandatory:**

The following facilities and services shall be provided:

##### **a) 10 Credits in renovation.**

Accessible parking provisions, accessible non-standard cycle parking and EV parking provisions within the certification boundary shall be in accordance with “**Sahel Building Rating System - TA.1.01 Accessible parking**”, “**Sahel Building Rating System - TA.1.03 Accessible non-standard cycle parking**” and “**Sahel Building Rating System - TA.1.07 Accessible e-vehicles charging stations**”, wherever applicable.

##### **b) 15 Credits in renovation.**

Accessible passenger loading zones and accessible taxi stands provisions within the certification boundary shall be in accordance with “**Sahel Building Rating System - TA.1.05 Accessible passenger loading zone and accessible taxi stands**”, wherever applicable and shall be located near the accessible departure and arrivals entrances.

##### **c) 20 Credits in renovation.**

Accessible pedestrian paths both indoors and outdoors between all accessible services and facilities along with accessible elevators, escalators and travellators at all floors of the terminal shall be in accordance with “**Sahel Building Rating System - IC.1 Interconnectivity and Circulation**”, while the tactile surfaces for navigation shall be in accordance with “**Sahel Building Rating System - OC.1.03 Tactile Walking Surface Indicators (TWSI)**”, wherever applicable.

##### **d) 5 Credits in renovation.**

All areas of the terminal building to fulfill the lighting, glare, sound, air quality requirements in accordance with “**Sahel Building Rating System - EQC.1 Environment Quality and Comfort**”, wherever applicable.

##### **e) 6 Credits in renovation.**

- i. Accessible passenger information displays signs for real-time updates on scheduled arrivals, delays, outages, and any shuttle arrangements and accessible public clocks, shall be provided in accordance with “**Sahel Building Rating System - OC.1.10 Information points**”, wherever applicable.
- ii. Accessible PA system if an occupant load of more than 500 persons is expected in accordance with “**Sahel Building Rating System – ESP.1.05 Accessible public address system**” and required hearing enhancement system in accordance with “**Sahel Building Rating System – OC.1.07 Hearing enhancement systems**”

**f) 3 Credits in renovation.**

At least one of each self-service fare vending, collection, adjustment, and check-in machines be accessible in accordance with **“Sahel Building Rating System - EFE.1.08 ATMs and vending machines”**.

**g) 8 Credits in renovation.**

Tactile maps shall be provided, located near the accessible entrances or ticket counters in accordance with **“Sahel Building Rating System - OC.1.05 Tactile maps and raised floor plans”**.

**h) 20 Credits in renovation.**

All identity and directional signage shall be in accordance with **“Sahel Building Rating System - OC.1.01 Signage and other communication elements”**.

**i) 6 Credits in renovation.**

Emergency intercom/SOS points in the platforms (where applicable), in accordance with **“Sahel Building Rating System - ESP.1 Emergency Systems and Procedures”**

**j) 4 Credits in renovation.**

Accessible drinking fountains, located before and after check points, electric charging stations for assistive devices, screening cabins with a clear turning circle with a minimum diameter of 1800 mm next to walk-through scanner in accordance with the requirements of **“Sahel Building Rating System - EFE.1 Ergonomic Furniture and Equipment”**.

**k) 20 Credits in renovation.**

Accessible toilets for men and women located on all floors of the terminal in accordance with the requirements of **“Sahel Building Rating System - HC.1 Hygiene and Care”**.

**l) 6 Credits in renovation.**

Accessible check-in and information counters, self-information points in accordance with the requirements of **“Sahel Building Rating System - EFE.1 Ergonomic Furniture and Equipment”** and **“Sahel Building Rating System - OC.1 Orientation and Communication”**.

If the terminal is designed for more than 2000 square meters, the following facilities shall be provided:

**m) 8 Credits in renovation.**

Family toilets and Baby feeding rooms located on all floors of the terminal, in the departure gates area and in the arrivals area before or after immigration or baggage pick-up areas, in accordance with the requirements of **“Sahel Building Rating System - HC.1 Hygiene and Care”**.

**n) 9 Credits in renovation.**

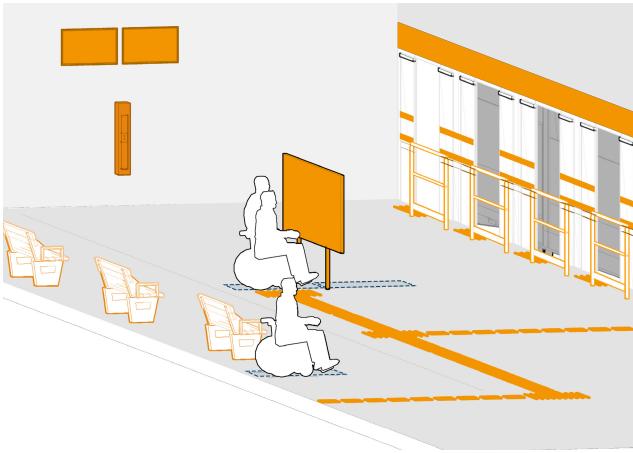
Prayer rooms are located on all floors of the terminal, in accordance with the requirements of **“Sahel Building Rating System - USSP.1.34 – Accessible praying areas”**.

**o) 5 Credits in renovation.**

Quiet rooms, in accordance with the requirements of **“Sahel Building Rating System - EQC.1.13 Quiet room”**.

**p) 5 Credits in renovation.**

Gangways when provided shall be in accordance with **“Sahel Public Realm Rating System – USSP.2.20 Accessible gangways”**.



**Figure 8:** Transportation terminal

#### **3.2.8.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **150**.

#### **3.2.8.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **150**.

#### **3.2.8.6 Pre-certificate rating submission:**

- a) Design drawings showing the proposed locations, measurements, and accessibility of all circulation paths, parking, toilets and all services and spaces described as required.
- b) Specifications detailing the design of each component, including their measurements, floor surface, lighting illuminance, luminance contrast, Light Reflectance Value (LRV), slope, and shading structures and accessibility features.
- c) Design details ensuring the accessibility of each component, including their height, and connection to an accessible path.

#### **3.2.8.7 Certificate rating submission:**

- a) As-built drawings showing locations, measurements, and accessibility of all circulation paths, parking, toilets and all services and spaces described as required.
- b) Updated specifications if any changes were made during the construction stage.
- c) Photographs of all accessible spaces and facilities.

#### **3.2.8.8 References:**

- a) Design Code for Maritime Infrastructure
- b) Abu Dhabi International Building Code, 2013
- c) Abu Dhabi International Accessibility Standards, 2013
- d) UAE Universal Design Code.

## **3.2.9 TA.1.09 Enhanced accessible public transportation terminals: airports, railways, bus, and ferries**

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### **3.2.9.1 Applicability:**

Applicable to all public terminal buildings and main transportation hubs such as airports, railway stations, bus stations, and ferry terminals.

### **3.2.9.2 Intent:**

To ensure that all users are provided access to public means of transportation allowing for equitable, independent and convenient use for all passengers.

### **3.2.9.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

- a)** Free Wi-Fi should be available.
- b)** Information points include captions and sign language interpretation, should be in accordance with **“Sahel Building Rating System - OC.1.10 Information points”**, wherever applicable.
- c)** Storage space for mobility aids as well as electrical charging stations should be provided (enough to accommodate the expected number of passengers who might need them simultaneously), in accordance with the requirements of **“Sahel Building Rating System - EFE.1.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”**.
- d)** Accessible PA system with a hearing enhancement system if an occupant load of less than 500 persons is expected in accordance with **“Sahel Building Rating System - OC.1.07 Hearing enhancement systems”** and **“Sahel Building Rating System - ESP.1.05 Accessible public address systems”**.

#### **Best Practice:**

Emergency intercom/SOS points button for two-way communication, enabling users to request route information or assistance during emergencies, with the possibility of video calls is in place, in accordance with **“Sahel Building Rating System - ESP.1 Emergency Systems and Procedures”**.

### 3.2.9.4 Pre-certificate rating credits:

**Table 23: TA.1.09 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Foreseen Free Wi-Fi is available.
2	5	Design information points include captions and sign language
3	10	Design storage space for mobility aids and electrical charging stations
10	10	Foreseen hearing enhancement system along with a PA system
		<b>Best Practice:</b>
8	10	Foreseen emergency intercom/SOS points

### 3.2.9.5 Certificate rating credits:

**Table 24: TA.1.09 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Provide Free Wi-Fi is available
2	5	Provide information points include captions and sign language
3	10	Provide storage space for mobility aids and electrical charging stations
10	10	Foreseen hearing enhancement system along with a PA system
		<b>Best Practice:</b>
8	10	Provide emergency intercom/SOS points

### 3.2.9.6 Pre-certificate rating submission:

#### Recommended and Best Practice:

- a) Technical specifications and drawings, when required, for information points, Wi-Fi, hearing enhancement system along with the PA system, and SOS points.

### 3.2.9.7 Certificate rating submission:

#### Recommended and Best Practice:

- a) Updated specifications if any changes were made during the construction stage.
- b) Photographs of information points, Wi-Fi, hearing enhancement system along with the PA system, and SOS points.

### 3.3 IC.1 Interconnectivity and Circulation

This category assesses how well spaces like pedestrian paths and Sikkak (sidewalks) facilitate connectivity and movement for all users. It looks at factors like accessibility, ease of navigation, and suitability for indoor and outdoor walking.

**Table 25: Interconnectivity and Circulation**

IC	Interconnectivity and Circulation	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/
IC.1.01	Circulation based on accessible paths (outdoor)	Mandatory	R	16
IC.1.02	Enhanced circulation based on accessible paths (outdoor)	Recommended	6	12
IC.1.03	Circulation based on accessible paths (indoor)	Mandatory	R	22
IC.1.04	Enhanced circulation based on accessible paths (indoor)	Recommended	6	12
IC.1.05	Accessible doors, doorways and gates (outdoor and indoor)	Mandatory	R	12
IC.1.06	Enhanced accessible doors, doorways and gates (outdoor and indoor)	Recommended	6	12
		Best Practice	4	6
IC.1.07	Accessible ramps	Mandatory	R	6
IC.1.08	Enhanced accessible ramps	Recommended	6	6
IC.1.09	Accessible cycling infrastructure	Mandatory	R	8
IC.1.10	Enhanced accessible cycling infrastructure	Recommended	4	6
IC.1.11	Rest points	Mandatory	R	13
IC.1.12	Enhanced rest points	Recommended	4	4
		Best Practice	6	6
IC.1.13	Staircases	Mandatory	R	8
IC.1.14	Enhanced staircases	Recommended	2	4
		Best Practice	6	10
IC.1.15	Escalators and travellators	Mandatory	R	10

IC	Interconnectivity and Circulation	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/
IC.1.16	Enhanced escalators and travellators	Recommended	4	4
IC.1.17	Elevators and platform lifts (outdoor and indoor)	Mandatory	R	50
IC.1.18	Enhanced elevators and platform lifts (indoor and outdoor)	Recommended	5	5
		Best Practice	3	3
IC.1.19	Traffic segregation and crossings	Mandatory	R	15
IC.1.20	Enhanced traffic segregation and crossings	Recommended	5	8
		Best Practice	5	5
	<b>Total</b>		<b>72</b>	<b>263</b>

### 3.3.1 IC.1.01 Circulation based on accessible paths (outdoor)

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#### 3.3.1.1 Applicability:

Applicable to all buildings with outdoor circulation paths on the plot.

#### 3.3.1.2 Intent:

To promote public health, decrease dependence on cars, and foster active, independent lifestyles by providing accessible within the building's outdoor premises, ensuring that all outdoor circulation corridors create a cohesive accessible network seamlessly connected with the surroundings.

#### 3.3.1.3 Requirements:

##### Mandatory:

All primary pedestrian connections within the certification boundary, such as:

- a) From the main entrance to the nearest transportation infrastructure (e.g., bus stop, taxi stands, car parking, passenger loading zone).
- b) From the main entrance to the nearest street infrastructure (e.g., pedestrian crossing, cycle track/lane, street junction).
- c) From the main entrance to adjacent development's accessible entrances within the certification boundary.
- d) From the main entrance to all public open spaces, accessible services and facilities within the certification boundary.

Are to be provided as accessible paths. The components of accessible paths, if present, shall meet the **Abu Dhabi International Accessibility Standards, 2013 and Urban Street Design Manual (ROW-603)** and shall:

- a) Maintain an adequate, unobstructed width for outdoors as required below:

**Table 26: Minimum width of outdoor accessible paths**

Accessible path – Double paths	Minimum width
Newly constructed assets	2000 mm
Existing assets	1800 mm
Private use assets (residential assets)	1200 mm
Accessible path – Single paths and playground area paths	
Newly constructed assets	1200 mm
Existing assets	900 mm
Private use assets (residential assets)	900 mm

- b) All applicable mandatory requirements for outdoor accessible paths within the certification boundary shall be in accordance with "**Sahel Public Realm Rating System - IC.2.01 Circulation based on accessible paths (outdoor)**".

### **3.3.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **16**.

For credits breakdown refer to **“Sahel Public Realm Rating System - IC.2.01 Circulation based on accessible paths(outdoor)”**.

### **3.3.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **16**.

For credits breakdown refer to **“Sahel Public Realm Rating System - IC.2.01 Circulation based on accessible paths(outdoor)”**.

### **3.3.1.6 Pre-certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.01 Circulation based on accessible paths (outdoor)”**.

### **3.3.1.7 Certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.01 Circulation based on accessible paths (outdoor)”**.

### **3.3.1.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** Abu Dhabi International Building Code, 2013
- c)** PR-401\_Public Realm Design Manual
- d)** ROW-603 Abu Dhabi Urban Street Design Manual

### **3.3.2 IC.1.02 Enhanced circulation based on accessible paths (outdoor)**

---

#### **3.3.2.1 Applicability:**

Applicable to all buildings with outdoor circulation paths on the plot.

#### **3.3.2.2 Intent:**

To promote public health, decrease dependence on cars, and foster active, independent lifestyles by providing accessibility within the building's outdoor premises, ensuring that all outdoor circulation corridors create an improved and cohesive accessible network between the plots seamlessly connected with the surroundings.

#### **3.3.2.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

##### **Recommended:**

All applicable recommended requirements for outdoor accessible paths within the certification boundary shall be in accordance with **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.2.4 Pre-certificate rating credits:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.2.5 Certificate rating credits:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.2.6 Pre-certificate rating submission:**

##### **Recommended:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.2.7 Certificate rating submission:**

##### **Recommended:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

### 3.3.3 IC.1.03 Circulation based on accessible paths (indoor)

---

#### 3.3.3.1 Applicability:

Applicable to all buildings with indoor circulation paths.

#### 3.3.3.2 Intent:

To ensure that general areas of the asset (e.g., entrance/lobby, (indoor/underground) parking, workplaces, elevators, information points) are connected to circulation spaces via accessible paths that allow all users to an equitable access to the services offered.

#### 3.3.3 Requirements:

##### Mandatory:

All critical connections within the building are to be provided as accessible paths in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall:

##### a) 2 credits in renovation.

- i. Except for the unobstructed width, all applicable mandatory requirements for indoor accessible paths within the certification boundary shall be in accordance with the **“Sahel Public Realm Rating System - IC.2.01 Circulation based on accessible paths (outdoor)”**.
- ii. Have carpets or carpet tiles securely fixed with a maximum pile height of 13 mm in accordance with **Abu Dhabi International Accessibility Standards, 2013**.

##### b) 2 credits in renovation.

Maintain an adequate, unobstructed width for indoors as required below:

**Table 27: Minimum width of indoor accessible paths**

Accessible path – Double paths	Minimum width
Newly constructed assets	1800 mm
Existing assets	1500 mm
Private use assets	1200 mm
Accessible path – Single paths	
Newly constructed assets	1200 mm
Existing assets	900 mm
Private use assets	900 mm

##### c) 2 credits in renovation.

The turning radius in front of services like elevators shall not interfere with the required minimum clear width of the pedestrian path (Figure 9).

**d) 1 credit in renovation.**

Alternatively, provide adequate passing spaces, wherever the double path has to be narrower than 1800 mm and the single path narrower than 1200 mm:

- The passing space (Figure 10) shall measure 1800 mm by 1800 mm for newly constructed assets and 1500 mm by 1500 mm for existing assets.
- The maximum distance between passing spaces shall be 60 m, or 30 m if there is no clear line of sight for 60 m.
- The passing space shall not intersect with any minimum required space for resting and seating areas from any resting or waiting areas.

**e) 1 credit in renovation.**

For L-shape or U-shape turns, provide a clear width of the turn of at least 1800 mm in newly constructed assets and at least 1500 mm in existing assets.

**f) 1 credit in renovation.**

Have a clear headroom height of 2200 mm.

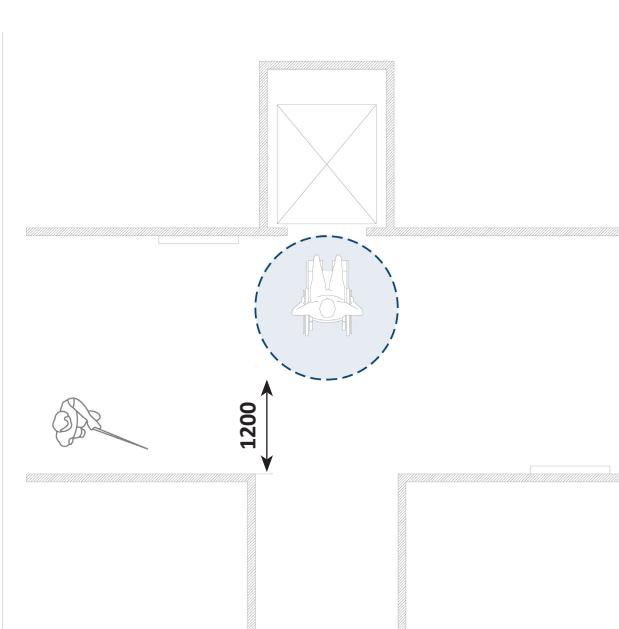
**g) 1 credit in renovation.**

Utilize glass panels (if present) that adhere to the criteria for glass manifestations:

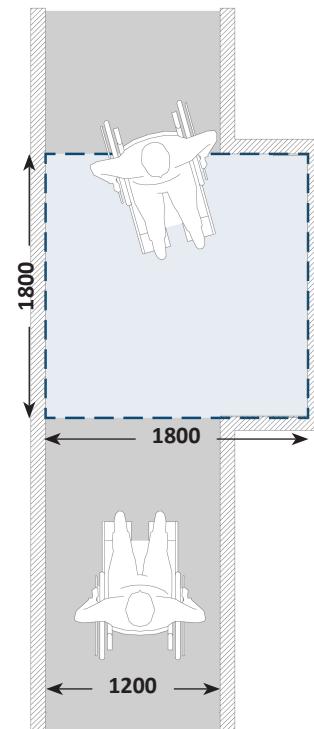
Glass panels shall be clearly defined with 2 continuous visual contrast indicator strips and shall have a luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**h) 12 Credits in renovation**

Feature adequate doors, doorways and gates (if present) in accordance with **“Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)”**.



**Figure 9:** Corridor with clear turning circle outside the minimum required clear width of the accessible path



**Figure 10:** Corridor with a passing space

### **3.3.3.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **22**.

### **3.3.3.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **22**.

### **3.3.3.6 Pre-certificate rating submission:**

- a)** Narrative describing how the project meets the credit requirements, including the location and number of accessible paths planned and the components that they will consist of.
- b)** Drawings showing the location of accessible paths, their measurements, and components (curb ramps and paths).

### **3.3.3.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including the location and number of accessible paths planned and the components that they will consist of.
- b)** As-built drawings showing the location of accessible paths, their measurements, and components (curb ramps and paths).
- c)** Photographs of the accessible paths and curb ramps, if any.

### **3.3.3.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code

### **3.3.4 IC.1.04 Enhanced circulation based on accessible paths (indoor)**

---

#### **3.3.4.1 Applicability:**

Applicable to all buildings with indoor circulation paths.

#### **3.3.4.2 Intent:**

Ensure that the general areas of the asset (e.g. entrance/lobby, parking, workplaces, lifts, information points) are connected to circulation spaces by accessible paths that allow all users equal and very comfortable access to the services offered.

#### **3.3.4.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

##### **Recommended:**

All applicable recommended requirements for indoor accessible paths within the certification boundary shall be in accordance with the **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.4.4 Pre-certificate rating credits:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.4.5 Certificate rating credits:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.4.6 Pre-certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

#### **3.3.4.7 Certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.02 Enhanced circulation based on accessible paths (outdoor)”**.

### **3.3.5 IC.1.05 Accessible doors, doorways and gates (outdoor and indoor)**

---

#### **3.3.5.1 Applicability:**

Applicable to all buildings with outdoor and indoor circulation paths.

#### **3.3.5.2 Intent:**

To ensure that general areas of the asset (e.g., entrance/lobby, parking, workplaces, elevators, information points) are connected to circulation spaces via accessible doors, doorways and/or gates that allow all users to an equitable access to the services offered.

#### **3.3.5.3 Requirements:**

##### **Mandatory:**

Doors, doorways and gates used as part of the outdoor and indoor accessible paths shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013 and Abu Dhabi International Building Code, 2013 (ADIBC)** and shall:

**a) 1 credit in renovation.**

Thresholds shall not exceed 13 mm in height. If it is higher than 5 mm, then a beveled threshold shall be installed.

**b) 1 credit in renovation.**

- i. Have signage (if present) positioned on the latch side of doors and in accordance with **“Sahel Building Rating System – OC.1.01 Signage and other communication elements”**.
- ii. When peepholes are required, they shall be positioned at two different heights: 1000 mm and 1500 mm above the floor level. Both shall have an angled view of a minimum of 180 degrees.

**c) Credits available in the mentioned section.**

- i. Have a door leaf, frame, and architrave with sufficient luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- ii. Have door hardware with sufficient luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**d) 1 credit in renovation.**

- i. The opening force shall not exceed a maximum of 20 N. An automatic door opener shall be provided if this requirement cannot be met.
- ii. Not use spring closer and non-adjustable closer.

**e) 2 credits in renovation.**

Have clear, unobstructed opening widths as follows:

**Table 28: Minimum width of doors, doorways and gates**

Location	Clear width
All locations except those specified below	Single leaf: 900mm (new), 800mm (existing) Double leaf: 900mm (at least one of the active leaves)
<ul style="list-style-type: none"> <li>• Healthcare facilities where bed transfers are required</li> <li>• Auditoriums</li> <li>• Convention centers</li> <li>• Four/six/nine/or more court</li> <li>• sports halls where sports wheelchairs are utilized such as indoor cricket facilities and tennis</li> <li>• Swimming pool areas where ceiling or movable lifts are utilized</li> </ul>	1200 mm
<ul style="list-style-type: none"> <li>• Clubhouses &amp; pavilions</li> <li>• Full-size synthetic pitch</li> <li>• Multi-use games area</li> <li>• Fitness equipment room</li> <li>• Gymnastics hall</li> <li>• Basketball outdoor</li> <li>• Bowls</li> <li>• Table tennis center</li> <li>• Athletics</li> </ul>	1000 mm

**f) 1 credit in renovation.**

- i. Be clearly distinguishable if used as a primary accessible entrance to a building and in case of alternative accessible entrance, a directional sign shall be installed.
- ii. Not include revolving doors, revolving gates, and turnstiles as part of an accessible path.

**g) 2 credits in renovation.**

- i. When automated, the doors shall:
- ii. Be equipped with an anti-collision sensor that triggers the door to return to the open position upon contact, after which the time delay is reset.
- iii. In new designs, provide a clear unobstructed space of 900 mm by 1500 mm in front of a door control device (e.g., a push button, keypad, key card reader, or biometrics system).
- iv. Have a closing time of at least 5 seconds for entrance doors, toilet doors, fire doors, auditorium doors (such as those in theaters, cinemas, and lecture rooms), or doors in public spaces equipped with a closing mechanism.
- v. Provide a door control device within reach of the clear turning circle, positioned at a height not exceeding 1200 mm for new facilities and 1350 mm for existing facilities in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
  - The door control device shall have luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
  - Provide a manual operation alternative.

**h) 1 credit in renovation.**

Be equipped with adequate accessories:

- i. The door handle shall be of the “D-lever Type” and positioned between 900 mm and 1200 mm above floor/ground level, and mounted on both sides of the door.
- ii. The door handle shall require a maximum pulling force of 20 N.
- iii. Lever handles shall have a diameter ranging between 20 mm and 25 mm.
- iv. A vertical handlebar for sliding doors shall have a diameter between 30 mm and 45 mm and a minimum length of 300 mm.
- v. The clearance between the handlebar and the door leaf shall be a minimum of 50 mm.
- vi. Recessed door handles are not allowed.
- vii. Door handles shall be operable with closed fist.
- viii. If doors are recessed, the distance between the door handle and the face of the wall shall be a maximum of 200 mm, measured perpendicular to the face of the door or gate.
- ix. The locking mechanism shall be designed to be operable with one hand and shall not necessitate tight grasping, pinching, or twisting of the wrist.

**i) 2 credits in renovation.**

- i. When two doors are in a series, the space between the doors shall have a minimum area of 1500 mm by 1500 mm, excluding the width of the doors swinging into that space.
- ii. When doors are swinging one-way, they shall offer adequate maneuvering space for access in accordance with **Abu Dhabi International Accessibility Standards, 2013** and:
  - a. The space on the door’s latch (pulling) side shall be a minimum of 600 mm.
  - b. The space on the door’s latch (pushing) side shall be a minimum of 300 mm.
  - c. In existing facilities, power-operated doors may be used if the minimum required maneuvering space cannot be provided.
- iii. When swing doors open into the main walking/circulation path and do not lead to areas requiring privacy or confidentiality (e.g., toilets, examination rooms) they shall have a viewing panel/vision lite.
- iv. Vision lights on doors shall be positioned at a minimum height of 600 mm above floor level in areas such as stairs/high circulation paths, schools, and offices. The upper part of the vision lite shall be positioned lower than 1700 mm above floor level.

**j) 1 credit in renovation.**

Adhere to the criteria for glass manifestations when utilizing glass panels:

- i. Glass panels shall be clearly defined with 2 continuous visual contrast indicator strips and shall have a luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- ii. The edges of glass panels shall feature a colored strip or stainless frame to highlight the outline of the door. These edges shall have a luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

### **3.3.5.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **12**.

### **3.3.5.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **12**.

### **3.3.5.6 Pre-certificate rating submission:**

- a)** Narrative describing how doors, doorways and gates design follows all dimensional and technical requirements.
- b)** Technical data of doors parts (handles, peepholes, if any, accessories, mechanisms, etc.)
- c)** Drawings showing the measurements and location of all doors, doorways and gates.

### **3.3.5.7 Certificate rating submission:**

- a)** Updated narrative describing how doors, doorways and gates design follows all dimensional and technical requirements.
- b)** Technical data of doors parts (handles, peepholes, if any, accessories, mechanisms, etc.)
- c)** As-built drawings showing the measurements and location of all doors, doorways and gates.
- d)** Photographs of doors, doorways and gates.

### **3.3.5.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** DP-305\_Safety and Security Planning Manual

### **3.3.6 IC.1.06 Enhanced accessible doors, doorways and gates (outdoor and indoor)**

---

#### **3.3.6.1 Applicability:**

Applicable to all buildings with outdoor and indoor circulation paths.

#### **3.3.6.2 Intent:**

To ensure that general areas of the asset (e.g., entrance/lobby, parking, workplaces, elevators, information points) are connected to circulation spaces via accessible doors, doorways and/or gates that allow all users to an equitable access to the services offered.

#### **3.3.6.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

##### **Recommended:**

Doors, doorways and gates used as part of the outdoor and indoor accessible paths should:

- a) Have no threshold and offer a step-free entry.
- b) Have door opening force and the door handle should require a maximum force of 15 N.
- c) Have a clear, unobstructed opening width of at least 1000 mm when used as main doors and entrance.
- d) When automated, the doors should:
  - i. Have a closing time of at least 8 seconds for entrance doors, toilet doors, fire doors, auditorium doors (such as those in theaters, cinemas, and lecture rooms), or doors in public spaces equipped with a closing mechanism.

##### **Best Practice:**

Doors, doorways and gates used as part of the outdoor and indoor accessible paths should:

- a) Have a clear, unobstructed opening width of at least 1100 mm when used as main doors and entrance.
- b) Main doors are automated.
- c) Be shaded within a 2 m radius from the door itself.

### 3.3.6.4 Pre-certificate rating credits:

**Table 29: IC.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	3	Design doors without threshold
1	2	Opening force less than 15 N
2	5	Design a clear opening width > 1000 mm in main entrances
2	2	Closing time > 8 seconds in automated doors
		<b>Best Practice:</b>
2	3	Design a clear opening width > 1100 mm in main entrances
1	2	Design automated main doors
1	1	Design shading for entrance and outdoor doors

### 3.3.6.5 Certificate rating credits:

**Table 30: IC.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	3	Confirm that doors are without threshold
1	2	Confirm opening force less than 15 N
2	5	Confirm a clear opening width > 1000 mm in main entrances
2	2	Confirm that closing time > 8 seconds in automated doors
		<b>Best Practice:</b>
2	3	Confirm a clear opening width > 1100 mm in main entrances
1	2	Confirm that main doors are automated
1	1	Confirm shaded entrance and outdoor doors

### 3.3.6.6 Pre-certificate rating submission:

**Recommended:**

- a) Narrative describing how doors, doorways and gates design follows all recommended requirements.
- b) Drawings showing the measurements and location of all doors, doorways and gates.

**Best Practice:**

- a) Narrative describing how doors, doorways and gates design follows all best practice requirements.
- b) Technical data of doors parts (accessories, mechanisms, etc.)
- c) Drawings showing the measurements and location of all doors, doorways and gates.

### **3.3.6.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing how doors, doorways and gates design follows all recommended requirements.
- b)** As-built drawings showing the measurements and location of all doors, doorways and gates.

#### **Best Practice:**

- a)** Updated narrative describing how doors, doorways and gates design follows all best practice requirements.
- b)** As-built drawings showing the measurements and location of all doors, doorways and gates.

## 3.3.7 IC.1.07 Accessible ramps

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### 3.3.7.1 Applicability:

Applicable to all buildings with outdoor and indoor circulation paths.

### 3.3.7.2 Intent:

To ensure that, in case of level changes that cannot be solved with slopes or elevators, all major areas within the asset, such as entrances, parking areas, workspaces, elevators, and information points, are linked to circulation spaces through accessible ramps, both indoors and outdoors, enabling equitable access for all users to the available services (Figure 11).

### 3.3.7.3 Requirements:

#### Mandatory:

Ramps used as part of the outdoor and indoor accessible paths shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall:

##### a) 2 credits in renovation.

- i. Have clear width between edge protections, a minimum of 1200 mm in existing constructions, and 1100mm in existing constructions.
- ii. Have clear width between handrails a minimum of 1000 mm in existing constructions, and 900mm in existing constructions.
- iii. Be provided wherever is not possible to overcome level change with a slope up to 1:20 (5%) where level changes exceed 13 mm.
- iv. Existing ramps are permitted to accommodate a height greater than 720 mm.
- v. Not be curved.
- vi. Have adequate slip-resistance value including landings in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- vii. In new constructions, the ramp’s slope shall not exceed 1:16 (rounded to 6%). In existing constructions, the ramp’s slope shall not exceed 1:12 (rounded to 8%).
- viii. Avoid designing foot rails on accessible ramps.

##### b) 1 credit in renovation.

Ramps with a rise exceeding 150 mm shall feature adequate handrails, which shall:

- i. Be continuous and have a horizontal extension of at least 300 mm beyond the top and bottom of the ramp. The edges or ends of each handrail shall either return to a wall (if present), point downward, or turn on itself.
- ii. Be positioned at two different heights. The higher handrail’s height shall range between 850 mm and 950 mm and the lower handrail’s height - 600 mm and 750 mm, measured from the top of the gripping surface to floor/ground level.
- iii. Provide clearance between the handrail and the wall of at least 50 mm.
- iv. Have a gripping surface with a diameter ranging from 30 mm to 45 mm.
- v. For matte materials, have a luminance contrast in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- vi. For glossy materials, have a luminance contrast in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- vii. Made from low-heat-conductivity material to reduce heat absorption when exposed to the sun (if applicable).

**c) 1 credit in renovation.**

Wherever the clear height below the ramp is lower than 2200 mm, a protective, cane-detectable railing shall be provided.

**d) 1 credit in renovation.**

Be accompanied by adequate landings:

- i. Landings shall provide a clear turning circle with a minimum diameter of 1800 mm, which shall not overlap with the main circulation space. The clear turning circle shall be positioned at the bottom, top, and between each maximum run of the ramp 9000 mm.
- ii. For new constructions, landings shall be set back from perpendicular circulation route.
- iii. Landings shall be adequately marked with Warning TWSI.
- iv. Corridors connected to landings shall have a minimum width of 1200 mm.
- v. Doors shall not open directly onto a landing. Doors shall be situated at least 1800 mm away from the start or end of each ramp run in new constructions and 1500 mm in existing constructions.

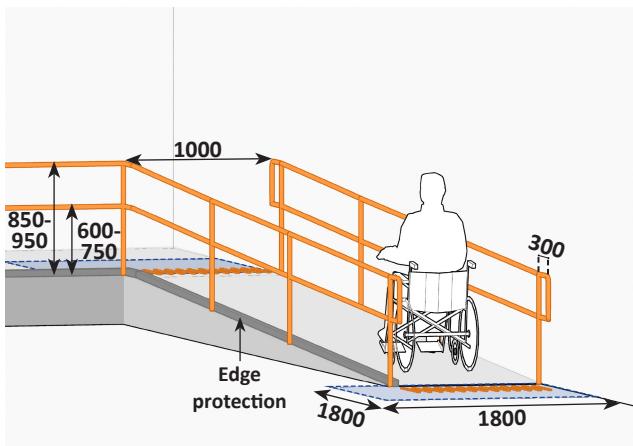
**e) 1 credit in renovation.**

Ramps shall feature edge protection of 100 mm in height installed along the ramp run, intermediate and top landing (regardless of the presence of the handrails) in accordance with **Abu Dhabi International Accessibility Standards, 2013**. The edge protection shall:

Have a luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".

**f) Credits available in the mentioned section.**

Indoor ramps shall be illuminated with lighting in accordance with "**Sahel Building Rating System – EQC.1.11 Lighting and display**".



**Figure 11: Indoor ramp**

### **3.3.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

### **3.3.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

**3.3.7.6 Pre-certificate rating submission:**

- a) Narrative describing how ramps design follows all dimensional and technical requirements.
- b) Drawings showing the measurements and location of all ramps.

**3.3.7.7 Certificate rating submission:**

- a) Updated narrative describing how ramps design follows all dimensional and technical requirements.
- b) Technical data of ramps parts.
- c) As-built drawings showing the measurements and location of all ramps.
- d) Photographs of ramps.

**3.3.7.8 References:**

- a) Abu Dhabi International Building Code, 2013
- b) Abu Dhabi International Accessibility Code
- c) DP-305\_Safety and Security Planning Manual

## 3.3.8 IC.1.08 Enhanced accessible ramps

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### 3.3.8.1 Applicability:

Applicable to all buildings with outdoor and indoor circulation paths.

### 3.3.8.2 Intent:

To ensure that, in case of level changes that cannot be solved with slopes or elevators, all major areas within the asset, such as entrances, parking areas, workspaces, elevators, and information points, are linked to circulation spaces through accessible ramps, both indoors and outdoors, enabling equitable access for all users to the available services.

### 3.3.8.3 Requirements:

All designs, drawings and specifications of the development/redevelopment and renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

- a) Feature adequate ramps: A compliant staircase should be provided next to ramps at level changes more than 300 mm in accordance with "**Sahel Building Rating System – IC.1.13 Staircases**".
- b) Ramps should be accompanied by adequate landings:
  - i. Landings should provide a clear turning circle with a minimum diameter of 2000 mm, not overlapping with the main circulation space. The clear turning circle should be positioned at the bottom, top, and between each maximum run of the ramp.
- c) Outdoor ramps shall be illuminated with lighting in accordance with "**Sahel Building Rating System – EQC.1.12 Enhanced lighting and display**".

### 3.3.8.4 Pre-certificate rating credits:

**Table 31: IC.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
3	3	Design staircases next to ramps
2	2	Design ramps with appropriate landings
1	1	Design enhanced lighting for outdoor ramps.

### 3.3.8.5 Certificate rating credits:

**Table 32: IC.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
3	3	Confirm that staircases are next to ramps
2	2	Confirm that ramps count with appropriate landings
1	1	Confirm the presence of enhanced lighting for outdoor ramps.

### 3.3.8.6 Pre-certificate rating submission:

**Recommended:**

- a) Narrative describing how ramps design follows all recommended requirements.
- b) Drawings showing the measurements and location of all ramps.
- c) Drawings and technical data showing the enhanced lighting system in outdoor ramps.

### 3.3.8.7 Certificate rating submission:

**Recommended:**

- a) Updated narrative describing how ramps design follows all recommended requirements.
- b) As-built drawings showing the measurements and location of all ramps.
- c) As-built drawings and technical data showing the enhanced lighting system in outdoor ramps.

## **3.3.9 IC.1.09 Accessible cycling infrastructure**

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### **3.3.9.1 Applicability:**

Applicable to all buildings with cycling infrastructure within its campus/premises.

### **3.3.9.2 Intent:**

If provided, ensure that cycle tracks/lanes within the certification boundary are continuous, safe and inclusive for all.

### **3.3.9.3 Requirements:**

#### **Mandatory:**

All applicable mandatory requirements for accessible cycling infrastructure within the certification boundary shall be in accordance with **“Sahel Public Realm Rating System - IC.2.05 Accessible cycling infrastructure”**.

### **3.3.9.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

For credits breakdown refer to **“Sahel Public Realm Rating System - IC.2.05 Accessible cycling infrastructure”**.

### **3.3.9.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

For credits breakdown refer to **“Sahel Public Realm Rating System - IC.2.05 Accessible cycling infrastructure”**.

### **3.3.9.6 Pre-certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.05 Accessible cycling infrastructure”**.

### **3.3.9.7 Certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.05 Accessible cycling infrastructure”**.

### **3.3.9.8 References:**

- a)** PR-401: Abu Dhabi Public Realm Design Manual
- b)** ROW-603: Abu Dhabi Urban Street Design Manual
- c)** TR-530: Walking and Cycling Master Plan-Network Design

## **3.3.10 IC.1.10 Enhanced accessible cycling infrastructure**

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### **3.3.10.1 Applicability:**

Applicable to all buildings with cycling infrastructure within its campus/premises.

### **3.3.10.2 Intent:**

If provided, ensure that cycle tracks/lanes within the certification boundary are continuous, safe and inclusive for all.

### **3.3.10.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All applicable recommended requirements for accessible cycling infrastructure within the certification boundary shall be in accordance with **“Sahel Public Realm Rating System - IC.2.06 Enhanced accessible cycling infrastructure”**.

### **3.3.10.4 Pre-certificate rating credits:**

Refer to **“Sahel Public Realm Rating System - IC.2.06 Enhanced accessible cycling infrastructure”**.

### **3.3.10.5 Certificate rating credits:**

Refer to **“Sahel Public Realm Rating System - IC.2.06 Enhanced accessible cycling infrastructure”**.

### **3.3.10.6 Pre-certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.06 Enhanced accessible cycling infrastructure”**.

### **3.3.10.7 Certificate rating submission:**

Refer to **“Sahel Public Realm Rating System - IC.2.06 Enhanced accessible cycling infrastructure”**.

## 3.3.11 IC.1.11 Rest points

### 3.3.11.1 Applicability:

Applicable to all buildings for public use with indoor and/or outdoor circulation spaces.

### 3.3.11.2 Intent:

To enable all users to relax and rest, creating more enjoyable, inviting, and inclusive buildings and surroundings, with the support of an efficient accessible path.

### 3.3.11.3 Requirements:

#### Mandatory:

##### a) 2 credits in renovation.

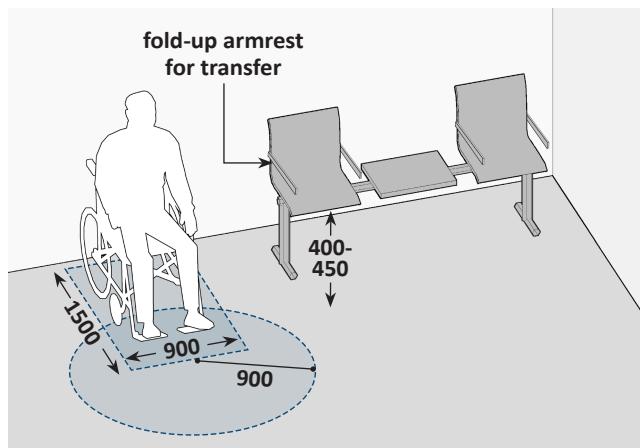
For indoor areas (Figure 12) and outdoor residential areas (Figure 13), a minimum of one rest point shall be provided every 30 m. Rest points and waiting areas shall be set back from the main path to allow free passage.

##### b) 2 credits in renovation.

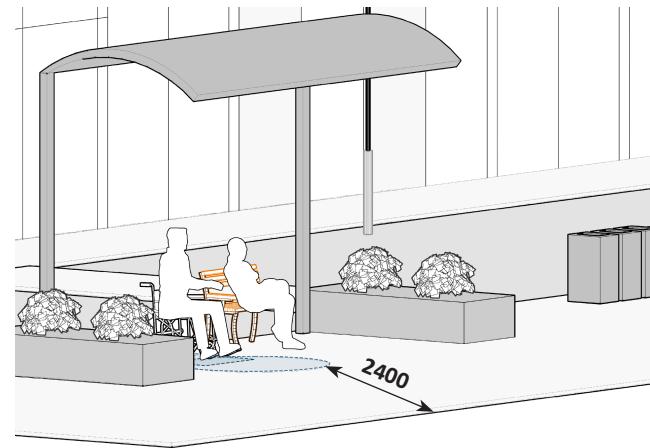
Additionally, at least 30% of rest points in malls shall:

Feature additional equipment such as: a litter basket, and a drinking fountain.

Further requirements for the rest points indoors and outdoors shall be in accordance with “**Sahel Public Realm Rating System – IC.2.07 Rest points**”.



**Figure 12:** Indoor rest point



**Figure 13:** Outdoor residential rest point

### 3.3.11.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **13**.

For credits breakdown refer to “**Sahel Public Realm Rating System – IC.2.07 Rest points**”.

### 3.3.11.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **13**.

For credits breakdown refer to “**Sahel Public Realm Rating System – IC.2.07 Rest points**”.

### **3.3.11.6 Pre-certificate rating submission:**

Refer to “Sahel Public Realm Rating System – IC.2.07 Rest points”.

### **3.3.11.7 Certificate rating submission:**

Refer to “Sahel Public Realm Rating System – IC.2.07 Rest points”.

### **3.3.11.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** PR-401: Abu Dhabi Public Realm Design Manual
- d)** ROW-603: Abu Dhabi Urban Street Design Manual
- e)** TR-530: Walking and Cycling Master Plan-Network Design

## 3.3.12 IC.1.12 Enhanced rest points

### 3.3.12.1 Applicability:

Applicable to all buildings with indoor and/or outdoor circulation spaces (Figure 14, 15).

### 3.3.12.2 Intent:

To enable all users to relax and rest, creating more enjoyable, inviting, and inclusive buildings and surroundings, with the support of an efficient accessible path.

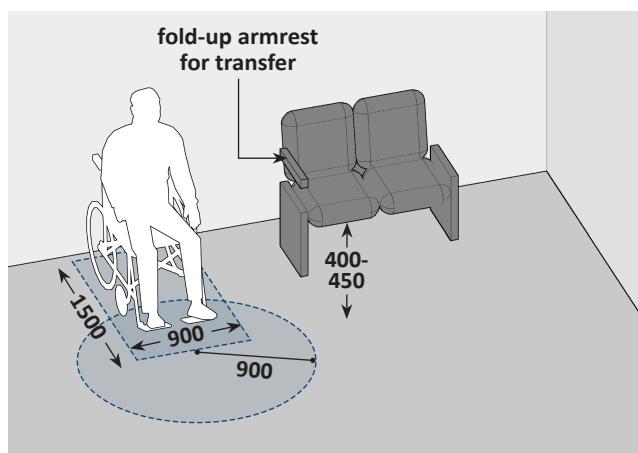
### 3.3.12.3 Requirements:

All designs, drawings and specifications of the development/redevelopment and renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

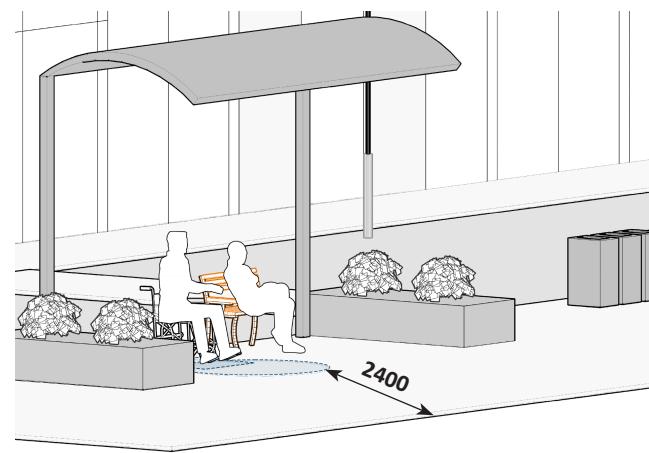
#### Recommended:

- a) For Indoor areas, in corridors longer than 20 m and waiting areas a minimum of one rest point should be provided, and shall have adequate lighting in accordance with “**Sahel Building Rating System – EQC. 1.12 Enhanced Lighting and display**”.
- b) Additionally, at least 30% of rest points shall feature additional equipment such as an electrical charging station, an air pump (if outdoors), detectable QR codes for wayfinding, and additional information.

Additionally, all recommended requirements for indoor and/or rest points within the certification boundary should be in accordance with “**Sahel Public Realm Rating System - IC.2.08 Enhanced rest points**”.



**Figure 14:** Indoor rest point



**Figure 15:** Outdoor rest point

#### Best Practice:

All best practice requirements for indoor and/or outdoor rest points within the certification boundary should have different seat types in accordance with “**Sahel Public Realm Rating System - IC.2.08 Enhanced rest points**”.

### 3.3.12.4 Pre-certificate rating credits:

**Table 33: IC.1.12 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design all indoor rest points at recommended intervals with enhanced lighting.
1	1	Design 30% with additional equipment.
		<b>Best Practice:</b>
2	2	Design additional rest points to provide rest from challenges. The credit is awarded automatically if the asset does not feature any challenges.
4	4	Design at least 50% of the rest points with additional seat types.

### 3.3.12.5 Certificate rating credits:

**Table 34: IC.1.12 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Narrative describing how the project meets the credit requirements, including location and quantity of rest points and their design in the planned development.
1	1	Drawings showing the location of rest points, their measurements, components, and the distances between them.
		<b>Best Practice:</b>
2	2	Detail drawings of the rest points proving the presence of ischiatic support, seating for children, and seating for bariatric persons on selected rest points.
4	4	Location drawings and/or documentation proving adequate rest points equipped with ischiatic support, and/or children/bariatric seating.

### **3.3.12.6 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing how the project meets the credit requirements, including location and number of rest points and their design in the planned development.
- b)** As-built drawings showing the location of rest points, their measurements, components, and the distances between them.

#### **Best Practice:**

- a)** Detail drawings of the rest points proving the presence of ischiatic support, seating for children, and seating for bariatric persons on selected rest points.
- b)** Location drawings and/or documentation proving adequate rest points equipped with ischiatic support, and/or children/bariatric seating.

### **3.3.12.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing how the project meets the credit requirements, including location and number of rest points and their design in the planned development.
- b)** As-built drawings showing the location of rest points, their measurements, components, and the distances between them.
- c)** cPhotographs of the rest points.

#### **Best Practice:**

- a)** As-built detail drawings of the rest points proving the presence of ischiatic support, seating for children, and seating for bariatric persons on selected rest points.
- b)** As-built location drawings and/or documentation proving an adequate number of rest points equipped with ischiatic support, and/or children/bariatric seating.

## 3.3.13 IC.1.13 Staircases

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### 3.3.13.1 Applicability:

Applicable to all buildings with access to stairs.

### 3.3.13.2 Intent:

To ensure that building staircases prioritize safety, inclusivity, and seamless navigation, allowing individuals to move effortlessly and securely within the building and its surrounding external areas.

### 3.3.13.3 Requirements:

#### Mandatory:

All staircases accessible to the public shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall:

#### a) 2 credits in renovation.

Have compliant size and design, as per the requirements outlined below:

- i. Have a minimum clear width of 1200 mm between the handrails for new construction and 900 mm for existing construction (Figure 16, 17).
- ii. The maximum number of steps in a flight is 12 (Figure 16).
- iii. Have a minimum clear width of 1500 mm between the handrails, if designed as an emergency staircase in hospitals and care facilities.
- iv. Be in a straight/orthogonal shape (curved/spiral stairs, angled treads that change directions, and corner-to-corner stairs are not allowed).
- v. Provide a clear height of a minimum of 2200 mm for circulation under the stairs. (Figure 18). Wherever the clear height is lower than 2200 mm, a protective, detectable railing shall be provided.
- vi. Staircases shall have signage in accordance with **“Sahel Building Rating System – OC.1.01 Signage and other communication elements”**. Signage at stairs shall indicate the location of the accessible alternative such as ramp and elevator.

#### b) 1 credit in renovation.

Have compliant risers, as per the requirements outlined below:

- i. Risers shall not be tapered and splay backward of more than 25 mm for new constructions, and 30 mm for existing.
- ii. The permitted projection of the nosing shall be 25 mm maximum over the tread or floor below.
- iii. Risers shall have a height of at least 100 mm and a maximum of 180 mm.
- iv. There shall always be a relationship between the height of the risers and the length of the treads according to the formula  $650 \text{ mm} < 2 \text{ risers} + \text{tread} < 700 \text{ mm}$ .
- v. All steps on a flight of stairs shall have uniform riser height.
- vi. Open risers shall not be permitted.
- vii. Risers shall have the underside of the leading edge curved or beveled.

**c) 1 credit in renovation.**

Have compliant treads, as per the requirements outlined below:

- i. Treads shall have a minimum depth of 280 mm.
- ii. Treads shall have a firm, stable, slip-resistant, and glare free floor surface, with a maximum cross slope of 1:50 (2%). in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- iii. All steps within a flight of stairs shall maintain uniform tread depth.
- iv. The radius of curvature at the leading edge of the tread shall not exceed 12 mm.

**d) 1 credit in renovation.**

Have compliant handrails, as per the requirements outlined below:

- i. Be provided on both sides, along the full length of the stairs
- ii. Be continuous with a horizontal extension of at least 300 mm beyond the top and bottom of the stairs. The edges or ends of each handrail shall either return to a wall, point downward, or turn on itself.
- iii. Be positioned at two different heights. The higher handrail’s height shall range between 850 mm and 950 mm and the lower handrail height, 600 mm and 750 mm is measured from the top of the gripping surface to floor/ground level.
- iv. If the width is greater than 2400 mm, an extra intermediate handrail shall be provided in the middle of the stairs.
- v. Provide clearance between the handrail and the wall of a minimum of 50 mm.
- vi. Have a gripping surface with a diameter ranging from 30 mm to 45 mm.
- vii. Have a luminance contrast in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- viii. Made from low-heat-conductivity material to reduce heat absorption when exposed to the sun (if applicable).

**e) Credits available in the mentioned section.**

Have compliant luminance contrast and LRV on stair elements in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**f) 1 credit in renovation.**

Have compliant edge protection and nosing (markings), as per the requirements outlined below:

- i. A color-contrasted riser nosing strip, 30mm - 55 mm in width, shall be incorporated, featuring a luminance contrast and Light Reflectance Value (LRV) with the tread in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- ii. A color-contrasted tread nosing strip, 50 mm – 65 mm in width, shall be installed horizontally at the edge of the nosing, with a luminance contrast with the riser and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- iii. Nosing (leading edge) shall be flush with the riser and tread.

### g) 2 credits in renovation.

Have compliant landings, as per the requirements outlined below:

- i. Landings located between stair flights in the same direction shall maintain at least the same stair width and have a minimum length of 1200 mm between handrails. This length shall be free of obstacles and free from any door opening.
- ii. Landings shall have a firm, stable, slip-resistant, and glare free floor surface, with a maximum cross slope of 1:50 (2%) in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- iii. Corridors connected to landings shall have a minimum width of 1200 mm.
- iv. Landings shall be setback from perpendicular circulation routes.
- v. Landings shall be adequately marked with Warning TWSI in accordance with “**Sahel Building Rating System OC.1.03 Tactile Walking Surface Indicators (TWSI)**”.
- vi. Landings and stairs shall be adequately illuminated in accordance with “**Sahel Building Rating System – EQC 1.11 Lighting and display**”.

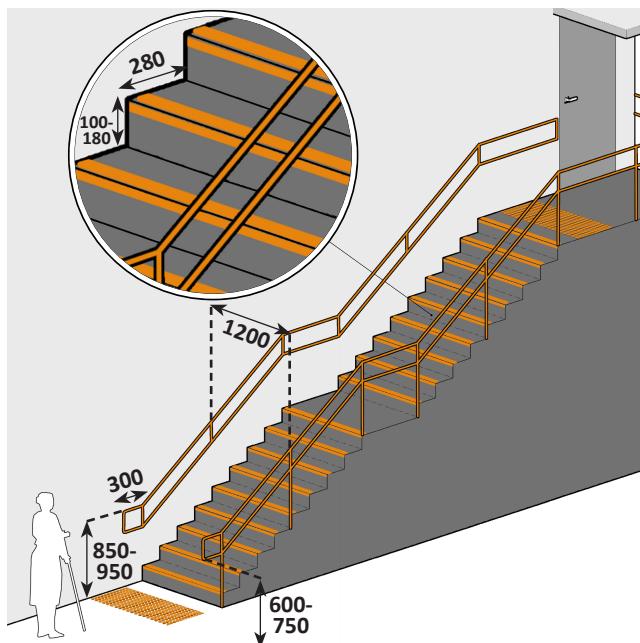


Figure 16: Exterior stairs

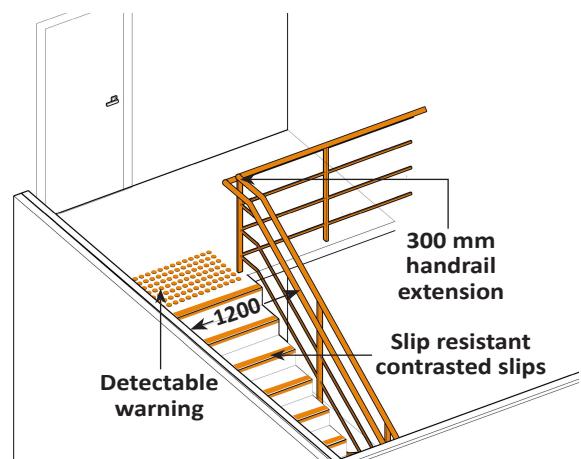


Figure 17: Interior stairs

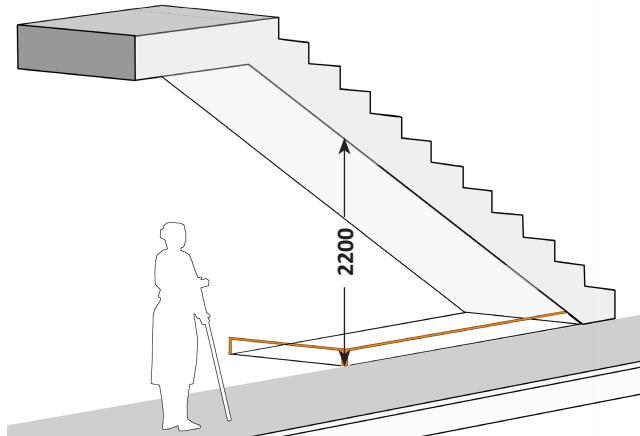


Figure 18: Head clearance

### **3.3.13.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.3.13.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.3.13.6 Pre-certificate rating submission:**

- a)** Detailed drawings for staircases, including handrail specifications, clear width, emergency staircase provisions, shape, clearance height, riser and tread specifications, and landing details.
- b)** Design documentation including material specifications for handrails and luminance contrast details.

### **3.3.13.7 Certificate rating submission:**

- a)** As-built detailed drawings for staircases, including handrail specifications, clear width, emergency staircase provisions, shape, clearance height, riser and tread specifications, and landing details.
- b)** Updated design documentation including material specifications for handrails and luminance contrast details.
- c)** Photographs of the completed staircase, emphasizing handrails, clear width, clear height, risers, treads, and landings.

### **3.3.13.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code

## 3.3.14 IC.1.14 Enhanced staircases

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### 3.3.14.1 Applicability:

Applicable to all buildings with access to stairs.

### 3.3.14.2 Intent:

To ensure that building staircases prioritize safety, inclusivity, and seamless navigation, allowing individuals to move effortlessly and securely within the building and its surrounding external areas.

### 3.3.14.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All staircases accessible to the public should:

- a) Have compliant risers, as per the requirements outlined below:
  - i. Risers should have a height of at least 150 mm and a maximum of 180 mm.
- b) Have compliant treads, as per the requirements outlined below:
  - i. Treads should have a firm, stable, slip-resistant, and glare free floor surface, with a maximum cross slope of 1:100 (1%).
  - ii. Have a maximum of 10 steps in one flight. Stairs with more steps should be divided with intermediate landings.
- c) Have compliant landings, as per the requirements outlined below:
  - iii. Landings should have a maximum cross slope of 1:100 (1%).

#### Best Practice:

No stairs in the asset, or if present:

All staircases accessible to the public should:

- a) Have braille and tactile indicators on handrails indicating the current floor and exit level.
- b) Design seating and shade as per the requirements outlined below:
  - i. Feature seating (foldable or fixed) on every intermediate landing, ensuring that it does not obstruct the minimum required width.
  - ii. If outdoors, ensure that all stairs with more than 10 steps are shaded.
- c) Have compliant lighting, as per the requirements outlined below:
  - i. Lighting should be provided under handrails.
  - ii. Lighting at riser level should be provided without causing glare.

### 3.3.14.4 Pre-certificate rating credits:

**Table 35: IC.1.14 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design recommended risers
1	1	Design recommended treads
1	1	Design landings cross-slope < 1:100 (1%)
		<b>Best Practice:</b>
1	1	Braille and tactile indicators
2	3	Design seating and shade
2	3	Lighting under handrails and at riser level

### 3.3.14.5 Certificate rating credits:

**Table 36: IC.1.14 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Provide recommended risers
1	1	Provide recommended treads
1	1	Provide landings cross-slope < 1:100 (1%)
		<b>Best Practice:</b>
1	1	Provide braille and tactile indicators
2	3	Provide seating and shade
2	3	Provide lighting under handrails and at riser level

### 3.3.14.6 Pre-certificate rating submission:

#### Recommended:

- a) Detailed drawings for staircases, including handrail specifications, clear width, emergency staircase provisions, shape, clearance height, riser and tread specifications, and landing details.
- b) Design documentation including material specifications for handrails and luminance contrast details.
- c) Design drawings illustrating the arrangement of stairs, and landing dimensions.

#### Best Practice:

- a) Design drawings showcasing the integration of braille and tactile indicators on handrails.
- b) Plans illustrating the provision of seating on every intermediate landing.
- c) Details on shading solutions for outdoor stairs with more than 10 steps.

### **3.3.14.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built detailed drawings for staircases, including handrail specifications, clear width, emergency staircase provisions, shape, clearance height, riser and tread specifications, and landing details.
- b)** Updated design documentation including material specifications for handrails and luminance contrast details.
- c)** As-built drawings confirming the step arrangement and landing dimensions.
- d)** Photographs highlighting completed staircases, focusing on step arrangement, and landings.

#### **Best Practice:**

- a)** As-built drawings confirming the implementation of braille and tactile indicators, seating on intermediate landings, and outdoor shading solutions.
- b)** High-quality photographs emphasizing the presence of braille and tactile indicators, seating arrangements, and shading for outdoor stairs.

## 3.3.15 IC.1.15 Escalators and travellators

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### 3.3.15.1 Applicability:

Applicable to all buildings with additional options for circulation such escalators and travellators if provided.

### 3.3.15.2 Intent:

To promote independent lifestyles by providing circulation paths, ensuring a cohesive accessible network within building's outdoor and indoor premises and seamlessly connect with the surroundings.

### 3.3.15.3 Requirements:

#### Mandatory:

Escalators and travellators within the certification boundary shall not serve as part of an accessible path. Instead, alternative accessible vertical circulation elements, such as ramps or elevators, shall be provided.

#### a) 3 credits in renovation.

Have a minimum clear opening entrance width shall be 800 mm.

#### b) 2 credits in renovation.

Be provided with an emergency stop button.

#### c) 3 credits in renovation.

Be installed with Warning TWSI at both the top and bottom of escalators in accordance with **"Sahel Building Rating System – OC.1.03 Tactile Walking Surface Indicators (TWSI)"**.

- i. These surfaces shall have the same width as the escalator and travellator and a minimum depth of 600 mm.
- ii. Be positioned minimum 300 mm  $\pm$  10 mm from the landing plate, spanning the entire width of the escalator.

#### d) Credits available in the mentioned section.

Have a minimum luminance contrast and Light Reflectance Value (LRV) in accordance with **"Sahel Building Rating System – EQC.1.09 Wall and floor finishes"**.

#### e) 2 credits in renovation.

Escalators shall provide a headroom height of at least 2200 mm.

### 3.3.15.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

### 3.3.15.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

### 3.3.15.6 Pre-certificate rating submission:

- a) Detailed drawings showing the location of escalators and travellators, their measurements, and components.
- b) Design documentation of the escalators and travellators.

### **3.3.15.7 Certificate rating submission:**

- a)** As-built detailed drawings showing the location of escalators and travellators, their measurements, and components.
- b)** Updated design documentation of the escalators and travellators.
- c)** Photographs of the installed escalators and travellators.

### **3.3.15.8 References:**

- a)** Abu Dhabi International Building Code, 2013

## 3.3.16 IC.1.16 Enhanced escalators and travellators

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### 3.3.16.1 Applicability:

Applicable to all buildings with additional options for circulation such escalators and travellators if provided.

### 3.3.16.2 Intent:

To promote independent lifestyles by providing circulation paths, ensuring a cohesive accessible network within building's outdoor and indoor premises and seamlessly connect with the surroundings.

### 3.3.16.3 Requirements:

#### Recommended:

Escalators and travellators within the certification boundary shall:

- a) Be provided with audible signals or pre-recorded messages to indicate both the start and finish of escalator and travelator operations.
- b) Have three flat steps at both the upper and lower ends of escalator.

### 3.3.16.4 Pre-certificate rating credits:

**Table 37: IC.1.16 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
2	2	Procure travellators and escalators with audible information
2	2	Procure escalators with three flat steps at both ends

### 3.3.16.5 Certificate rating credits:

**Table 38: IC.1.16 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
2	2	Install and confirm travellators and escalators with audible information
2	2	Install and confirm escalators with three flat steps at both ends

### 3.3.16.6 Pre-certificate rating submission:

#### Recommended:

- a) Narrative describing the audible information system to be installed.
- b) Drawings showing the escalators and travellators location, as well as the loudspeakers.
- c) Technical documentation of escalators and travellators.

### **3.3.16.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing the audible information system installed.
- b)** As-built drawings showing the escalators and travellators location, as well as the loudspeakers.
- c)** Photographs of the escalators and travellators installed.

## 3.3.17 IC.1.17 Elevators and platform lifts (outdoor and indoor)

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### 3.3.17.1 Applicability:

Applicable to all buildings with accessible vertical circulation such as elevators and platform lifts, both indoors and outdoors.

### 3.3.17.2 Intent:

To promote independent lifestyles by providing accessible vertical circulation routes, ensuring a cohesive accessible network within a building's outdoor and indoor premises and seamlessly connect it with its surroundings.

### 3.3.17.3 Requirements:

#### Mandatory:

Elevators used for vertical circulation as part of the outdoor and indoor accessible paths shall be designed in accordance with **Abu Dhabi International Accessibility Standards, 2013**, and shall:

**a) 2 credits in renovation.**

Be provided in new construction of public or commercial assets with multiple levels. In existing assets with multiple levels, all critical services of the asset located on inaccessible levels shall be relocated to the accessible levels.

**b) 1 credit in renovation.**

Be provided with a sign in accordance with "**Sahel Building Rating System – OC.1.01 Signage and other communication elements**" indicating the direction to the accessible elevator whenever there are various options of vertical circulation.

**c) 3 credits in renovation.**

- i. Have a minimum clear, unobstructed elevator door opening width of 900 mm.
- ii. Have doors equipped with a reopening device that halts and reopens if an object or person obstructs the door. Sensors shall be positioned at 100 mm and 750 mm from the floor. The reopening device shall remain operational for a minimum of 20 seconds.
- iii. Have doors that remain open for a minimum of 5 seconds.

**d) 2 credits in renovation.**

Have each elevator car that automatically stops and maintains its position at floor landings, ensuring a maximum gap of 13 mm between the floor surfaces.

**e) 1 credit in renovation.**

- i. Have a mirror or mirrored wall installed inside the elevator to enable individuals to observe obstacles behind them when moving backwards out of the car. If a glass mirror is used, it shall be made of safety glass.
- ii. Shall have floor and wall surfaces in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".

**f) 5 credits in renovation.**

Feature multisensory two-way communication systems. These systems shall be placed between 900 mm and 1200 mm and include raised characters and braille. The communication method shall be suitable for all individuals including people with hearing and speech impairments.

- i. Be provided with two-way message display in the elevator cars with a system that allows for a text-based chat function between the trapped passenger and authorized personnel.
- ii. Be provided with communication with the emergency call center through a voice connection.

**g) 2 credits in renovation**

- i. Be provided with a means for authorized personnel to view video of passengers anywhere in the elevator cars.
- ii. Be provided with a means activated by emergency personnel to change elevator car message to indicate help is on-site if the elevator rise is 18 m or more.

**h) 3 credits in renovation.**

- i. Be designed with signs and signals, including those confirming the operation of controls, indicating the arrival or position of the elevator car, and providing information about floor levels, to cater to multiple senses.
- ii. Be provided with call buttons with an audible signal or mechanical motion of the button when the call is registered.

**i) 2 credits in renovation.**

Be provided with a destination-oriented elevator signals that include an audible tone and verbal announcement when pressing the function button below the keypad arrangement or floor buttons. The function button shall be identified by a raised International Symbol for Accessibility, at least 16 mm in height, and featuring three raised dots forming an equilateral triangle. Each destination-oriented elevator in a bank of elevators shall have audible and visible means for differentiation.

**j) 3 credits in renovation.**

At each hoistway entrance, a visible and audible hall signal shall be installed to indicate which elevator is responding to the call. The visible hall signal shall be positioned with its center at least 1800 mm above the floor surface. The audible signal or verbal annunciator shall be at least 10 dBA louder than the ambient noise measured at the hall call button. If audible signals are used, they shall sound once for the up direction and twice for the down direction. If a verbal annunciator is employed, it shall indicate the direction of travel.

**k) 1 credit in renovation.**

Have signs placed at the elevator hoistway, providing information about the floor level, exit floor, and elevator number. These signs shall feature raised characters, at least 50 mm high, along with braille. The signage shall be in accordance with **“Sahel Building Rating System – OC.1.01 Signage and other communication elements”** positioned at a height between 1200 mm and 1500 mm above the finished floor level, measured to the baseline of the raised characters and/or braille.

**l) 2 credits in renovation.**

Be provided with an audible and visible car position indicators inside the elevator car. The visible indicator shall be at least 16 mm high and placed either above the door or car control buttons. Additionally, an announcer shall indicate the floor level at which the car is about to stop, and its sound level shall be at least 10 dBA above the ambient noise level.

**m) 8 credits in renovation.**

In new buildings, elevators shall have a minimum clear internal dimension of 1500 mm by 1500 mm or 1400 mm by 2000 mm (figure 20). In existing buildings, elevators shall have a minimum clear internal dimension of 1400 mm by 1100 mm.

**n) 1 credit in renovation.**

The internal lighting of the elevator car shall be in accordance with "**Sahel Building Rating System – EQC 1.11 Lighting and display**".

**o) 2 credits in renovation.**

Have adequate handrails, which shall:

- i. In new constructions the handrails shall be installed with no exceptions. In existing constructions, the handrails shall be installed only if the clear, unobstructed internal width of 1100 mm is not compromised.
- ii. Be positioned at two different heights. The higher handrail's height shall range between 850 mm and 950 mm and the lower handrail's height - between 600 mm and 750 mm, measured from the top of the gripping surface to floor/ground level.
- iii. Provide clearance between the handrail and the wall of a minimum of 50 mm.
- iv. Have a gripping surface with a diameter ranging from 30 mm to 45 mm.
- v. Have a luminance contrast and Light Reflectance Value (LRV) in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".

**p) 2 credits in renovation.**

Have adequate call and control buttons:

- i. A clear floor space of minimum 900 mm in width and 1500 mm in depth shall be provided in front of all buttons in new constructions (Figure 19). In existing, a clear floor space of 900 mm in width by 1200 mm in depth shall be provided.
- ii. In new constructions, all buttons shall be positioned between 900 mm and 1200 mm above floor level. In existing constructions, all buttons shall be positioned between 800 mm and 1350 mm above floor level
- iii. All buttons shall have adequate contrast and Light Reflectance Value with the surrounding surfaces in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- iv. In new constructions, the buttons shall be either raised or flush. In existing constructions, the buttons are allowed to be recessed.
- v. Braille on buttons shall be located either under the push button or on the left side.
- vi. Buttons shall be operable with the least amount of force in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**".
- vii. Buttons shall be positioned at a minimum distance of 700 mm from any adjacent corner or wall; alternatively, a second panel with push buttons shall be provided.
- viii. The depth of any recess where the button(s) can be located, whether in the wall or door frame, shall be limited to  $\leq 200$  mm.
- ix. Buttons for each function, such as floor selection, alarm, and door opening, shall be detectable and identifiable both visually and by touch.
- x. Emergency control buttons shall be positioned with their center line at least 900 mm above the floor surface and at the bottom of the panel.
- xi. The exit floor button/level shall be highlighted in green and indicated with a higher rise.

Additionally, platform lifts and stair lifts within accessible paths:

**q) 2 credits in renovation.**

Stairlifts (chair) are allowed only for private use. In new construction, platform lifts can be used only as an addition to alternative, accessible vertical circulation (e.g., an elevator). In existing construction, platform lifts shall be used as an alternative to stairs only in cases where there isn't enough space for alternative accessible vertical circulation.

**r) 2 credits in renovation.**

Any ramp providing access to the platform lift shall have a width equal to that of the platform lift and a maximum slope of 1:16 (rounded to 6%).

**s) 1 credit in renovation.**

Controls and operating devices shall be accessible between 900 mm and 1200 mm above the finished floor level.

**t) Credits available in the mentioned section.**

Controls and operating devices shall have luminance contrast and Light Reflectance Value (LRV) in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.

**u) 2 credits in renovation.**

A securing guardrail and protective edge shall be available during transit.

**v) 2 credits in renovation.**

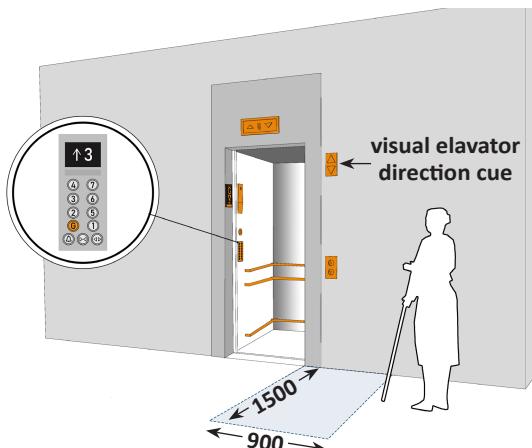
- i. Incline platform lifts shall have a clear unobstructed space of at least 900 mm by 1200 mm.
- ii. Vertical platform lifts shall have a clear unobstructed space of at least 900 mm by 1500 mm.
- iii. Vertical platform lifts shall have a clear unobstructed door opening width of 900 mm.

**w) 1 credit in renovation.**

An accessible emergency call button shall be provided within reach at a height of 1200mm maximum. Buttons shall be operable with the least amount of force, requiring a maximum of 5N for new construction and 20 N for retrofit.

**x) Credits available in the mentioned section.**

Shall have adequate slip-resistance value in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.



**Figure 19: Clear floor space at elevator call buttons**

#### **3.3.17.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **50**.

#### **3.3.17.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **50**.

#### **3.3.17.6 Pre-certificate rating submission:**

- a)** Narrative describing the elevators and/or platform/stair lifts characteristics.
- b)** Drawings showing the location of elevators and/or platform/stair lifts, their measurements, and components.
- c)** Technical documentation of the elevators and/or platform/stair lifts.

#### **3.3.17.7 Certificate rating submission:**

- a)** Updated narrative describing the elevators and/or platform/stair lifts characteristics.
- b)** As-built drawings showing the location of elevators and/or platform/stair lifts their measurements, and components.
- c)** Technical documentation of the elevators and/or platform/stair lifts
- d)** Photographs of elevators and/or platform/stair lifts.

#### **3.3.17.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code

### **3.3.18 IC.1.18 Enhanced elevators and platform lifts (outdoor and indoor)**

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#### **3.3.18.1 Applicability:**

Applicable to all buildings with accessible vertical circulation such as elevators and platform lifts, both indoors and outdoors.

#### **3.3.18.2 Intent:**

To promote independent lifestyles by providing accessible vertical circulation routes, ensuring a cohesive accessible network within a building's outdoor and indoor premises and seamlessly connect with the surroundings.

#### **3.3.18.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

##### **Recommended:**

When level changes are greater than 1500 mm, it is preferable to use elevators or platform lifts rather than long ramps.

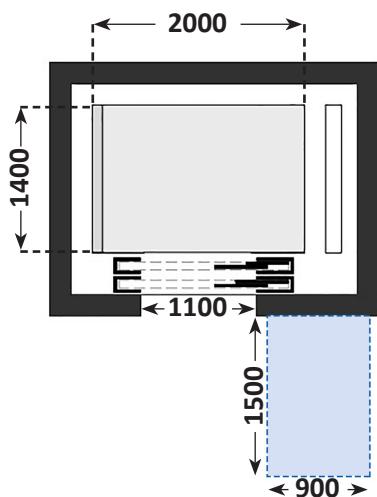
Elevators used for vertical circulation as part of the outdoor and indoor accessible paths should:

- a)** Follow the design width and opening time requirements below:
  - i. Have a minimum clear, unobstructed elevator door opening width of 1000 mm.
  - ii. Have doors that remain open for a minimum of 8 seconds.
- b)** Provide a seat inside and not have carpets.
- c)** Platform lifts should have:
  - i. Vertical platform lifts shall have a clear unobstructed space of at least 1600 mm by 2000 mm.

##### **Best Practice:**

Elevators used for vertical circulation (Figure 20) as part of the outdoor and indoor accessible paths should have:

- a)** A minimum clear, unobstructed elevator door opening width of 1100 mm and an opaque section when the elevator is panoramic.
- b)** Multisensory two-way emergency communication systems, A hearing enhancement system should be provided.
- c)** Platform lifts should have:
  - i. Vertical platform lifts shall have a clear unobstructed space of at least 1600 mm by 2400 mm.
- d)** A fully closed platform shaft.



**Figure 20: Elevator plan view**

### 3.3.18.4 Pre-certificate rating credits:

**Table 39: IC.1.18 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design doors with opening with > 1000 mm and opening time over 8 seconds
1	1	Design a seat and avoid carpets
1	1	Design platform lifts in accordance to recommendations.
		<b>Best Practice:</b>
1	1	Design doors with opening with > 1100 mm and design an opaque section in the car
2	3	Hearing enhancement system linked to two-way communication system
2	3	Design platform lifts in accordance with best practice.

### 3.3.18.5 Certificate rating credits:

**Table 40: IC.1.18 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm the provision of doors with opening width > 1000 mm and opening time over 8 seconds
1	1	Confirm the provision of a seat and avoid carpets
1	1	Confirm the provision of platform lifts in accordance with recommendations.
		<b>Best Practice:</b>
1	1	Confirm the provision of with opening with > 1100 mm and an opaque section in the car
2	3	Confirm the provision of hearing enhancement system linked to two-way communication system
2	3	Confirm the provision of elevators or platform lifts in accordance with best practice.

### 3.3.18.6 Pre-certificate rating submission:

#### Recommended:

- a) Narrative describing how the elevators and/or platform lifts will meet the recommended requirements.
- b) Drawings showing the location of elevators and/or platform lifts, their measurements, and components.
- c) Technical documentation specifying elevators and/or platform lifts characteristics.

#### Best Practice:

- a) Design documentation specifying additional, best practice parameters in elevators and/or platform lifts.

### 3.3.18.7 Certificate rating submission:

#### **Recommended and Best Practice:**

- a) Updated narrative describing how the elevators and/or platform lifts will meet the recommended requirements.
- b) As-built drawings showing the location of elevators and/or platform lifts, their measurements, and components.
- c) Technical documentation of elevators installed.
- d) Photographs of elevators and/or platform/stair lifts.

## **3.3.19 IC.1.19 Traffic segregation and crossings**

---

### **3.3.19.1 Applicability:**

Applicable to all crossings within certification boundaries.

### **3.3.19.2 Intent:**

To ensure protection and convenience for pedestrians, by reducing pedestrian-vehicular conflicts and by designing safe sidewalks and car lanes segregations within the certification boundaries.

### **3.3.19.3 Requirements:**

#### **Mandatory:**

All mandatory requirements for traffic segregation and crossings shall be in accordance with “**Sahel Public Realm Rating System – IC.2.15 Traffic segregation and crossings**”.

### **3.3.19.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 15.

For credits breakdown refer to “**Sahel Public Realm Rating System – IC.2.15 Traffic segregation and crossings**”.

### **3.3.19.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 15.

For credits breakdown refer to “**Sahel Public Realm Rating System – IC.2.15 Traffic segregation and crossings**”.

### **3.3.19.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – IC.2.15 Traffic segregation and crossings**”.

### **3.3.19.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – IC.2.15 Traffic segregation and crossings**”.

### **3.3.19.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** PR-401: Abu Dhabi Public Realm Design Manual
- d)** ROW-603: Abu Dhabi Urban Street Design Manual
- e)** TR-530: Walking and Cycling Master Plan-Network Design
- f)** TR-511: Manual on Uniform Traffic Control Devices

## **3.3.20 IC.1.20 Enhanced traffic segregation and crossings**

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### **3.3.20.1 Applicability:**

Applicable to all crossings of different traffic types within certification boundaries of the buildings.

### **3.3.20.2 Intent:**

To ensure the risk mitigation of hazards related to crossings of different traffic types or changes in circulation spaces, follow either recommended or best practice.

### **3.3.20.3 Requirements:**

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All recommended requirements for traffic segregations and crossings within the certification boundary should be in accordance with "**Sahel Public Realm Rating System - IC.2.16 Enhanced traffic segregation and crossings**".

#### **Best Practice:**

All best practice requirements for traffic segregations and crossings within the certification boundary should be in accordance with "**Sahel Public Realm Rating System - IC.2.16 Enhanced traffic segregation and crossings**".

### **3.3.20.4 Pre-certificate rating credits:**

Refer to "**Sahel Public Realm Rating System - IC.2.16 Enhanced traffic segregation and crossings**".

### **3.3.20.5 Certificate rating credits:**

Refer to "**Sahel Public Realm Rating System - IC.2.16 Enhanced traffic segregation and crossings**".

### **3.3.20.6 Pre-certificate rating submission:**

Refer to "**Sahel Public Realm Rating System - IC.2.16 Enhanced traffic segregation and crossings**".

### **3.3.20.7 Certificate rating submission:**

Refer to "**Sahel Public Realm Rating System - IC.2.16 Enhanced traffic segregation and crossings**".

## 3.4 EFE.1 Ergonomic Furniture and Equipment

This category evaluates the provision of Ergonomic Furniture and Equipment for all users on the plot. It includes aspects such as functionality, adaptability, comfort, and support of furniture and equipment.

**Table 41: Ergonomic and furniture equipment**

EFE	Ergonomic Furniture and Equipment	Requirement type	Credit points applicability	
			New community developments/redevelopment	Existing community renovation
EFE.1.01	Enhanced, accessible charging stations for wheelchairs and personal vehicles	Recommended	6	8
		Best Practice	2	2
EFE.1.02	Street furniture	Mandatory	R	10
EFE.1.03	Enhanced street furniture	Recommended	3	6
		Best Practice	3	5
EFE.1.04	Seating areas	Mandatory	R	3
EFE.1.05	Enhanced seating areas	Recommended	3	3
EFE.1.06	Drinking fountains	Mandatory	R	4
EFE.1.07	Enhanced drinking fountains	Recommended	4	4
EFE.1.08	ATMs and vending machines	Mandatory	R	3
EFE.1.09	Telephones	Mandatory	R	2
EFE.1.10	Barriers in queuing areas	Mandatory	R	2
EFE.1.11	Reception counters and desks	Mandatory	R	3
EFE.1.12	Enhanced reception counters and desks	Recommended	2	2
EFE.1.13	Operable parts	Mandatory	R	2
EFE.1.14	Enhanced operable parts	Recommended	1	1
	<b>Total</b>		<b>24</b>	<b>60</b>

## 3.4.1 EFE.1.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles

### 3.4.1.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- c) A-4 (e.g., Pools, arenas, indoor sports facilities for spectator viewing)
- d) A-5 (e.g., amusement parks, other outdoor assembly uses)
- e) E (e.g., Colleges, Schools, day care)
- f) I-1 (e.g., Assisted living facilities, social care homes, for persons who are capable to function independently)
- g) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- h) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- i) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- j) Special Occupancy: Transportation hubs, covered/open malls, underground structures, high rise buildings, gas stations.

### 3.4.1.2 Intent:

To ensure that publicly accessible charging stations for electric wheelchairs and scooters in buildings and external areas are prioritizing safety, inclusivity, and usability, providing essential and advanced features accessible for all users. (Figure 21).

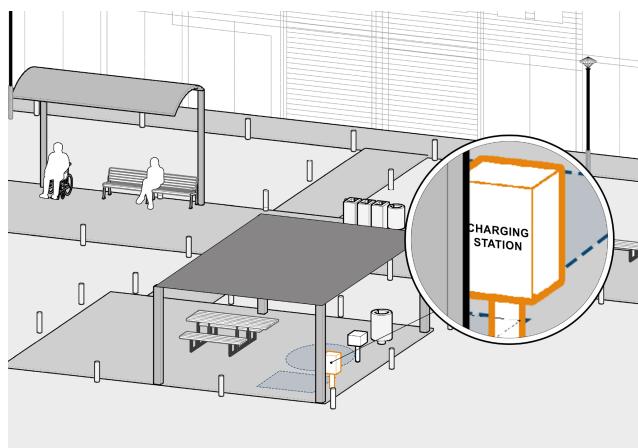
### 3.4.1.3 Requirements:

#### Recommended:

The asset provides a minimum of one publicly accessible charging station for electric wheelchairs and scooters which should be in accordance with **“Sahel Public Realm Rating System – EFE.2.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”**.

#### Best Practice:

All best practice requirements for publicly accessible charging station for electric wheelchairs and scooters should be in accordance with **“Sahel Public Realm Rating System – EFE.2.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”**.



**Figure 21:** Electric wheelchair charging

#### **3.4.1.4 Pre-certificate rating credits:**

Refer to “Sahel Public Realm Rating System – EFE.2.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”.

#### **3.4.1.5 Certificate rating credits:**

Refer to “Sahel Public Realm Rating System – EFE.2.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”.

#### **3.4.1.6 Pre-certificate rating submission:**

Refer to “Sahel Public Realm Rating System – EFE.2.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”.

#### **3.4.1.7 Certificate rating submission:**

Refer to “Sahel Public Realm Rating System – EFE.2.01 Enhanced, accessible charging stations for wheelchairs and personal vehicles”.

## **3.4.2 EFE.1.02 Street furniture**

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### **3.4.2.1 Applicability:**

Applicable to all buildings with indoor and/or outdoor circulation spaces, that have street furniture, within the certification boundary.

### **3.4.2.2 Intent:**

To develop a strategy for street furniture (e.g., litter baskets, picnic tables, outdoor seating tables, barriers, and bollards) that would play a crucial role in shaping the outdoor premises of the building through its functionality and inclusivity for all users, and seamlessly connect with the accessible surroundings.

### **3.4.2.3 Requirements:**

#### **Mandatory:**

All street furniture within the certification boundary shall be in accordance with “**Sahel Public Realm Rating System – EFE 2.02 Street furniture**”.

### **3.4.2.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EFE 2.02 Street furniture**”.

### **3.4.2.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EFE 2.02 Street furniture**”.

### **3.4.2.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE 2.02 Street furniture**”.

### **3.4.2.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE 2.02 Street furniture**”.

### **3.4.2.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** PR-401: Abu Dhabi Public Realm Design Manual
- d)** ROW-603: Abu Dhabi Urban Street Design Manual
- e)** TR-530: Walking and Cycling Master Plan-Network Design

## **3.4.3 EFE.1.03 Enhanced street furniture**

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### **3.4.3.1 Applicability:**

Applicable to all buildings with indoor and/or outdoor circulation spaces, that have street furniture, within the certification boundary.

### **3.4.3.2 Intent:**

To develop a strategy for street furniture (e.g., litter baskets, picnic tables, outdoor seating tables, barriers, and bollards) that would play a crucial role in shaping the outdoor premises of the building through its enhanced functionality and inclusivity for all users, and seamlessly connect with the accessible surroundings.

### **3.4.3.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All recommended requirements for street furniture within the certification boundary should be in accordance with “**Sahel Public Realm Rating System – EFE.2.03 Enhanced street furniture**”.

#### **Best Practice:**

All best practice requirements for publicly accessible charging station for electric wheelchairs and scooters should be in accordance with “**Sahel Public Realm Rating System – EFE.2.03 Enhanced street furniture**”.

### **3.4.3.4 Pre-certificate rating credits:**

Refer to “**Sahel Public Realm Rating System – EFE.2.03 Enhanced street furniture**”.

### **3.4.3.5 Certificate rating credits:**

Refer to “**Sahel Public Realm Rating System – EFE.2.03 Enhanced street furniture**”.

### **3.4.3.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.03 Enhanced street furniture**”.

### **3.4.3.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.03 Enhanced street furniture**”.

## **3.4.4 EFE.1.04 Seating areas**

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### **3.4.4.1 Applicability:**

Applicable to all buildings that have seating areas within their certification boundary.

### **3.4.4.2 Intent:**

To develop a strategy for seating areas that would enable all users to relax and rest ensuring accessibility and inclusivity for all users, and seamlessly connect with the accessible surroundings.

### **3.4.4.3 Requirements:**

#### **Mandatory:**

All seating areas within the building shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and “**Sahel Public Realm Rating System – EFE.2.04 Seating areas**”.

### **3.4.4.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EFE.2.04 Seating areas**”.

### **3.4.4.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EFE.2.04 Seating areas**”.

### **3.4.4.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.04 Seating areas**”.

### **3.4.4.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.04 Seating areas**”.

### **3.4.4.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** PR-401 - Abu Dhabi Public Realm Design Manual
- d)** ROW-603 - Abu Dhabi Urban Street Design Manual
- e)** TR-530 - Walking and Cycling Master Plan-Network Design

## **3.4.5 EFE.1.05 Enhanced seating areas**

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### **3.4.5.1 Applicability:**

Applicable to all buildings that have seating areas within their certification boundary.

### **3.4.5.2 Intent:**

To develop a strategy for seating areas that would enable all users to relax and rest ensuring accessibility and inclusivity for all users, and seamlessly connect with the accessible surroundings.

### **3.4.5.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All seating areas within the public realm shall be in accordance with “**Sahel Public Realm Rating System – EFE.2.05 Enhanced seating areas**”.

### **3.4.5.4 Pre-certificate rating credits:**

Refer to “**Sahel Public Realm Rating System – EFE.2.05 Enhanced seating areas**”.

### **3.4.5.5 Certificate rating credits:**

Refer to “**Sahel Public Realm Rating System – EFE.2.05 Enhanced seating areas**”.

### **3.4.5.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.05 Enhanced seating areas**”.

### **3.4.5.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.05 Enhanced seating areas**”.

## 3.4.6 EFE.1.06 Drinking fountains

### 3.4.6.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., Pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) E (e.g., Colleges, Schools, day care).
- g) I-1 (e.g., Assisted living facilities, social care homes, for persons who are capable to function independently)
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) Special Occupancy: Transportation hubs, covered/open malls, underground structures, high rise buildings, gas stations.

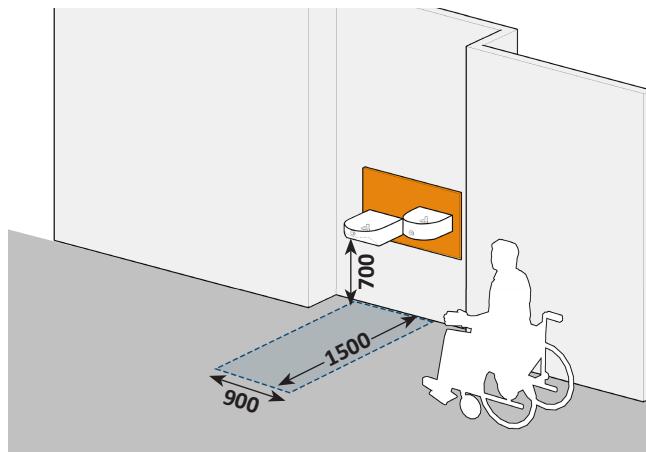
### 3.4.6.2 Intent:

To ensure consistent and equal access to drinking water, such as drinking water fountains, and to provide seamless connections between other amenities for all occupants within the building's boundaries. (Figure 22).

### 3.4.6.3 Requirements:

#### Mandatory:

At least 50% of drinking fountains within the certification boundary shall be designed to be accessible in accordance with **“Sahel Public Realm Rating System – EFE.2.06 Drinking fountains”**.



**Figure 22:** Indoor drinking fountain

### 3.4.6.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

For credits breakdown refer to **“Sahel Public Realm Rating System – EFE.2.06 Drinking fountains”**.

### **3.4.6.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EFE.2.06 Drinking fountains**”.

### **3.4.6.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.06 Drinking fountains**”.

### **3.4.6.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EFE.2.06 Drinking fountains**”.

### **3.4.6.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** PR-401: Abu Dhabi Public Realm Design Manual
- d)** ROW-603: Abu Dhabi Urban Street Design Manual

## **3.4.7 EFE.1.07 Enhanced drinking fountains**

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### **3.4.7.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., Pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) E (e.g., Colleges, Schools, day care).
- g) I-1 (e.g., Assisted living facilities, social care homes, for persons who are capable to function independently)
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) Special Occupancy: Transportation hubs, covered/open malls, underground structures, high rise buildings, gas stations.

### **3.4.7.2 Intent:**

To ensure consistent and equal access to drinking water, such as drinking water fountains, and to provide seamless connections between other amenities for all occupants within the building's boundaries.

### **3.4.7.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment or renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All recommended requirements for drinking fountains within the certification boundary should be in accordance with **“Sahel Public Realm Rating System – EFE.2.07 Enhanced drinking fountains”**.

### **3.4.7.4 Pre-certificate rating credits:**

Refer to **“Sahel Public Realm Rating System – EFE.2.07 Enhanced drinking fountains”**.

### **3.4.7.5 Certificate rating credits:**

Refer to **“Sahel Public Realm Rating System – EFE.2.07 Enhanced drinking fountains”**.

### **3.4.7.6 Pre-certificate rating submission:**

Refer to **“Sahel Public Realm Rating System – EFE.2.07 Enhanced drinking fountains”**.

### **3.4.7.7 Certificate rating submission:**

Refer to **“Sahel Public Realm Rating System – EFE.2.07 Enhanced drinking fountains”**.

## 3.4.8 EFE.1.08 ATMs and vending machines

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### 3.4.8.1 Applicability:

Applicable to all buildings with Automatic Teller Machines (ATM) and vending machines.

### 3.4.8.2 Intent:

To ensure that ATMs and vending machines located in buildings are equitable and inclusive for users of all dimensions and mobility levels.

### 3.4.8.3 Requirements:

#### Mandatory:

##### a) 1 Credit in renovation.

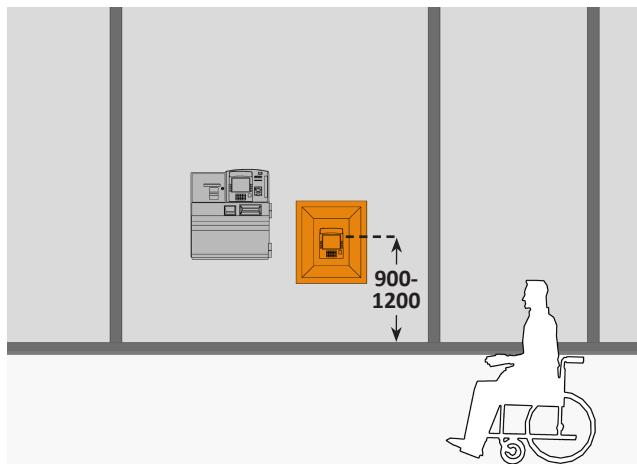
All ATMs and vending machines within the building shall:

- i. Be connected to an accessible path. Additionally, at least one of each type shall be designed to be accessible.
- ii. Prevent glare on the screen and shielding it from direct sunlight and be covered or shaded if installed outside in accordance with **“Sahel Public Realm Rating System – EQC.2.01 Thermal comfort (outdoor)”**.
- iii. A clear floor space of minimum 900 mm in width and 1500 mm in depth shall be provided, accessible via either a front approach or a parallel approach.

##### b) 2 Credits in renovation.

- i. All operable parts (Figure 23), including items such as keypads, deposit slots, money or ticket dispensers, and coin slots, shall be in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
- ii. When front approach is provided, have knee and toe clearance of a minimum height of 700 mm above floor level and a depth of at least 450 mm.
- iii. Have function keys that visually contrast with background surfaces. Each operable part shall be distinguishable by sound or touch without activation, unless a specific “clear key” or “correction key” is provided.
- iv. The characters and keys on the function and numeric keys shall have a minimum luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- v. Have numeric keys arranged in a 12-key ascending telephone keypad layout. The number five key shall have a single raised dot for tactile identification.
- vi. Have display screen visible from a point located between 900 mm and 1200 mm above the center of the clear floor space of minimum 900 mm in width and 1500 mm in depth in front of the machine.
- vii. Have characters displayed on the screen in a sans serif font. The height of all characters in the font shall be determined by the uppercase letter “I”, which shall be a minimum of 50 mm in height.
- viii. Shall be adequately lit in accordance with **“Sahel Building Rating System – EQC.1.11 Lighting and display”**.
- ix. Have a minimum luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

- x. Provide audio instructions for operating procedures and orientation, including visible transaction prompts, user input verification, error messages, and all displayed information. Options for at least Arabic and English languages should be accessible through an audio jack in accordance with **Abu Dhabi International Accessibility Standards, 2013**.
- xi. Additionally, text, symbols, and pictograms shall be displayed, accompanied by tactile information for locating and identifying controls.
- xii. Have receipt audible information including balance inquiry information, error messages, all other information on the printed receipt necessary to complete or verify the transaction.
- xiii. Have volume controls provided for speech output.
- xiv. Be speech-enabled, and/or speech output in Arabic and English.



**Figure 23: ATM Machines**

#### **3.4.8.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.4.8.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.4.8.6 Pre-certificate rating submission:**

- a) Brief narrative describing how the project meets the credit requirements, including the location and design of ATMs and vending machines.
- b) Design drawings showing the location of ATMs and vending machines, their measurements, components, and accessibility from the accessible path.
- c) Specifications detailing the materials used for ATMs and vending machines, their heat conductivity, and their resistance to weather conditions if placed outdoors.
- d) Lighting drawings showing the location and type of lighting for operable parts of ATMs and vending machines, with details on their illuminance levels.

### **3.4.8.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including the location and design of ATMs and vending machines.
- b)** As-built drawings showing the location of ATMs and vending machines, their measurements, components, and accessibility from the accessible path. Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the ATMs and vending machines, focusing on the accessibility of use and connectivity with the accessible path.

### **3.4.8.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013

## 3.4.9 EFE.1.09 Telephones

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### 3.4.9.1 Applicability:

Applicable to all buildings with telephones booths/stands.

### 3.4.9.2 Intent:

To ensure that telephones located in buildings are equitable and inclusive for users of all dimensions and mobility levels.

### 3.4.9.3 Requirements:

#### Mandatory:

##### a) 2 Credits in renovation.

All telephones within the building shall:

- i. Be situated on an accessible path and identified by a sign featuring the International Symbol of Accessibility in accordance with **“Sahel Building Rating” System – OC.1.01 Signage and other communication elements”**.
- ii. Have a clear floor space of minimum 900 mm in width and 1500 mm in depth, accessible via either a front approach or a parallel approach.
- iii. Have operable parts positioned within necessary reach ranges in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
- iv. Where a forward approach is available, the distance from the front edge of a counter within the enclosure to the face of the telephone shall not exceed 500 mm.
- v. Have a telephone handset cord with a minimum length of 750 mm.
- vi. Be provided with an automatic reset.
- vii. Be equipped with Text Telephone Devices or teletypewriter (TTY) and installed either permanently within or adjacent to the telephone enclosure. Alternatively, if movable TTYS are used, a shelf and electrical socket shall be provided nearby.
  - a. The cord connecting the TTY and telephone receiver shall be long enough to ensure proper connection.
  - b. When in use, the touch surface of TTY keypads shall be positioned a minimum of 850 mm above the floor level.
  - c. The shelf designated for accommodating a TTY shall have a vertical clearance of at least 150 mm above the area where the TTY is placed.

### 3.4.9.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

### 3.4.9.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

### **3.4.9.6 Pre-certificate rating submission:**

- a)** Brief narrative describing how the project meets the credit requirements, including the location and design of telephones.
- b)** Design drawings showing the location of telephones, their measurements, components, and accessibility from the accessible path.
- c)** Specifications.

### **3.4.9.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including the location and design of telephones.
- b)** As-built drawings showing the location of telephones, their measurements, components, and accessibility from the accessible path.
- c)** Updated specifications if any changes were made during the construction stage.
- d)** Photographs of the telephones, focusing on the accessibility of use and connectivity with the accessible path.

### **3.4.9.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013

## 3.4.10 EFE.1.10 Barriers in queuing areas

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### 3.4.10.1 Applicability:

Applicable to all buildings with queuing areas such as information points, reception areas, ticket sales and check points, that have barriers.

### 3.4.10.2 Intent:

To ensure that barriers in queuing areas available within the building are equitable and inclusive for users of all dimensions and mobility levels.

### 3.4.10.3 Requirements:

#### Mandatory:

##### **a) 1 Credit in renovation.**

All barriers used in queuing areas in service desk counters (e.g., information points, ticket sales, receptions shall:

- i. Have a clear width between the barriers of a minimum of 1200 mm to ensure unobstructed passage.
- ii. Shall be configured in an L-shape or U-shape, with a clear width of 1800 mm at the turn, in corner queuing barriers at airports and border control queuing areas.
- iii. Have luminance contrast and Light Reflectance Value (LRV) in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- iv. Avoid chains between bollards or queuing barriers. Alternatively, color-contrasting elements shall be attached to the dividing chains to enhance visibility and aid navigation.

##### **b) 1 Credit in renovation.**

Provide shaded areas and seating for outdoor spaces, or separate access for individuals who cannot stand for extended periods if the queuing time exceeds 10 minutes.

### 3.4.10.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

### 3.4.10.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

### 3.4.10.6 Pre-certificate rating submission:

- a) Brief narrative describing how the project meets the credit requirements, including the location and design of barriers in queuing areas.
- b) Design drawings showing the location of barriers in queuing areas, their measurements, components, and accessibility from the accessible path.

### **3.4.10.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including the location and design of barriers in queuing areas.
- b)** As-built drawings showing the location of barriers in queuing areas, their measurements, components, and accessibility from the accessible path.
- c)** Updated specifications if any changes were made during the construction stage.
- d)** Photographs of the barriers in queuing areas, focusing on the accessibility of use and connectivity with the accessible path.

### **3.4.10.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** PR-401 - Abu Dhabi Public Realm Design Manual
- c)** ROW-603 - Abu Dhabi Urban Street Design Manual
- d)** Abu Dhabi International Building Code, 2013

## 3.4.11 EFE.1.11 Reception counters and desks

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### 3.4.11.1 Applicability:

Applicable to all buildings with service desk counters such as information points, ticket sales, receptions, check-out counters, etc.

### 3.4.11.2 Intent:

To ensure that service counters are equitable and inclusive for users of all dimensions and mobility levels. (Figures 24, 25).

### 3.4.11.3 Requirements:

#### **Mandatory:**

At least 50% of counters and desks within the certification boundary, including food service lines and self-service lines, shall be designed to be accessible and distributed throughout the building or facility where multiple counters and desks are provided.

#### **a) 1 Credit in renovation.**

All accessible counters and desks provided within the certification boundary shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and shall:

- i. Have a clear floor space of minimum 900 mm in width and 1500 mm in depth, accessible via either a front approach or a parallel approach.
- ii. Provide both parallel and frontal approaches.

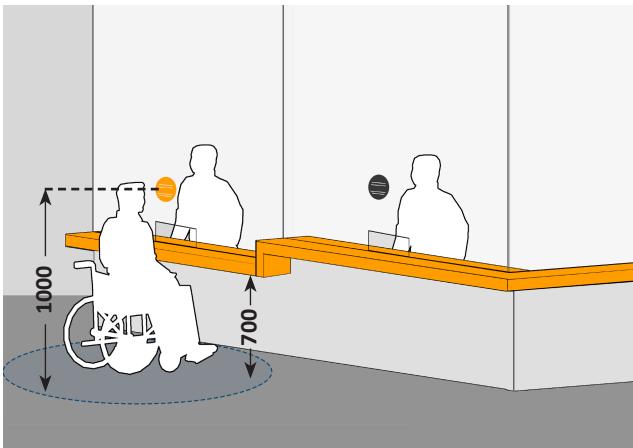
#### **b) 1 Credit in renovation.**

- i. If either a parallel or frontal approach is provided, the counter or desk shall provide both lowered and higher counterparts to accommodate all asset user needs.
- ii. Have a surface height measured between 750 mm and 800 mm above floor level (Figure 25), if designed for sitting.
- iii. Have a surface height measured between 950 mm and 1100 mm above floor level (Figure 25), if designed for standing.
- iv. Be a minimum of 900 mm long.
- v. For the aisle side of checkout counters, shall provide counter edge protection a maximum of 50 mm above the top of the surface.
- vi. Provide sufficient knee and toe clearance underneath the reception desk of a minimum height of 700 mm above floor level and a depth of at least 450 mm, for a forward approach.
- vii. Have a minimum luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

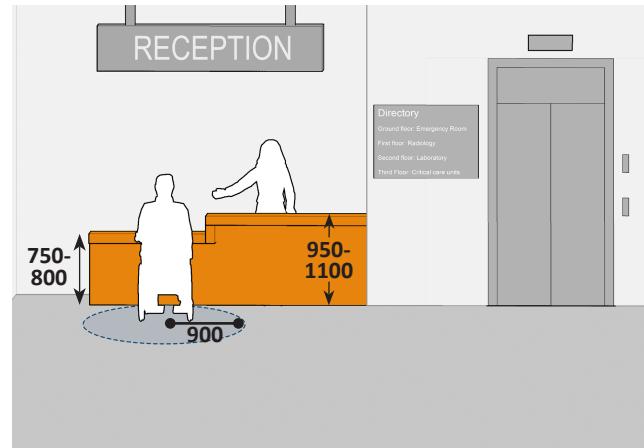
#### **c) 1 Credit in renovation.**

- i. Display all services offered at the counter using a pictographic map.
- ii. Provide a hearing enhancement system at all accessible counters in accordance with **“Sahel Building Rating System – OC.1.07 Hearing enhancement systems”**.

Additionally, all accessible counters and desks designed for writing shall not have any sharp or abrasive surfaces.



**Figure 24:** Accessible counter and speaker



**Figure 25:** Accessible counter

#### **3.4.11.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.4.11.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.4.11.6 Pre-certificate rating submission:**

- a) Design documentation detailing the proposed features for accessible counters and desks, including the clear floor space of 900 mm in width and 1500 mm in depth, knee and toe and approach clearances, and specific height specifications for counters and desks based on their purpose.
- b) Drawings illustrating the layout and dimensions of the accessible counters and desks, showcasing compliance with the specified features.
- c) Specifications for luminance contrast and hearing enhancement system of the accessible counters and desks and providing a pictographic map.

#### **3.4.11.7 Certificate rating submission:**

- a) As-built documentation confirming the implementation of accessible counters and desks within the certification boundary.
- b) Updated specifications if any changes were made during the construction stage.
- c) As-built drawings showing the knee and toe clearance underneath the reception desk for a forward approach.
- d) Photographs of the counters and desks, showcasing their accessibility features such as clear floor space of minimum 900 mm in width and 1500 mm in depth for parallel and frontal approaches, surface heights, lengths, luminance contrast, hearing enhancement system and the provision for services offered through a pictographic map.

#### **3.4.11.8 References:**

- a) Abu Dhabi International Building Code, 2013
- b) Abu Dhabi International Accessibility Code

## 3.4.12 EFE.1.12 Enhanced reception counters and desks

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### 3.4.12.1 Applicability:

Applicable to all buildings with service desk counters such as information points, ticket sales, receptions, check-out counters, etc.

### 3.4.12.2 Intent:

To ensure that service counters are equitable and inclusive for users of all dimensions and mobility levels.

### 3.4.12.3 Requirements:

All designs, drawings and specifications of the development/redevelopment or renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All (100%) counters and desks provided within the certification boundary should be designed to be accessible and should:

- a) Provide two adjacent surfaces measured between 750 mm to 800 mm above floor level and 950 mm to 1100 mm above floor level, both with a minimum width of 1000 mm (or)
- b) Provide two separate desks at heights measured between 750 mm to 800 mm above floor level and 950 mm to 1100 mm above floor level, both with a minimum width of 1000 mm, and both permanently staffed.

### 3.4.12.4 Pre-certificate rating credits:

**Table 42: EFE.1.12 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
1	1	Design to offer one of the dimensions alternatives

### 3.4.12.5 Certificate rating credits:

**Table 43: EFE.1.12 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
1	1	Provide one of the dimensions alternatives

#### **3.4.12.6 Pre-certificate rating submission:**

- a)** Design documentation detailing the proposed features for accessible counters and desks, including the clear floor space of 900 mm in width and 1500 mm in depth, knee and toe and approach clearances, and specific height specifications for counters and desks based on their purpose.
- b)** Specifications for luminance contrast and hearing enhancement system of the accessible counters and desks and providing a pictographic map.

#### **3.4.12.7 Certificate rating submission:**

- a)** As-built documentation confirming the implementation of accessible counters and desks within the certification boundary.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** As-built drawings showing the knee and toe clearance underneath the reception desk for a forward approach.
- d)** Photographs of the counters and desks showcasing their accessibility features such as the clear floor space of 900 mm in width and 1500 mm in depth, parallel and frontal approaches, surface heights, lengths, luminance contrast, hearing enhancement system and the provision for services offered through a pictographic map.

## 3.4.13 EFE.1.13 Operable parts

### 3.4.13.1 Applicability:

Applicable to all parts of furniture, equipment and devices that imply a physical interaction between the person and the object.

### 3.4.13.2 Intent:

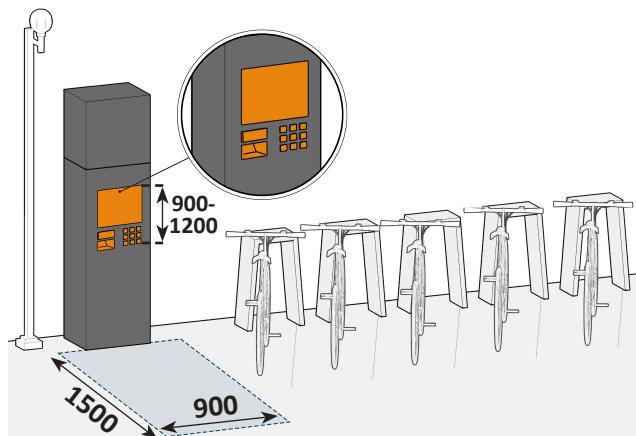
To ensure that all operable parts being part of spaces used by people are comfortably accessible to all users.

### 3.4.13.3 Requirements:

#### Mandatory:

##### a) 1 Credit in renovation.

- i. Ensure that the operable elements (Figure 26) have a clear floor space of minimum 900 mm in width and 1500 mm in depth in front of the element.
- ii. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
- iii. Touchable surfaces are made of materials that are weather-resistant and have low-heat-conductivity material to minimize heat absorption when exposed to the sun.
- iv. Have a minimum luminance contrast from the background in accordance with “**Sahel Building Rating System – EQC1.09 Wall and floor finishes**”.



**Figure 26: Operable elements at cycle parking**

**b) 1 Credit in renovation.**

The following table shows the required height and force to use elements with which users may have to interact:

**Table 44: Operable parts requirements**

Operable part location	Force (N)	Height (mm)
Call points	2.5-5N	900 mm - 1200 mm above the floor surface for forward and side reach if there are no obstructions in front of the element
Manual fire alarm box	2.5-5N	Up to 1200 mm above the floor surface for forward approach if knee and toe clearance under the obstruction is provided and the obstruction is no more than 500 mm deep.
First aid kits and defibrillators	2.5-5N	Up to 1200 mm above the floor surface for side reach if the obstruction in front of the element is no more than 250 mm deep.
Lighting controls	2.5-5N	Up to 1150 mm above the floor surface for side reach if the obstruction in front of the element is no more than 600 mm deep.
AC controls	2.5-5N	Up to 1100 mm above the floor surface for forward approach if knee and toe clearance under the obstruction is provided and the obstruction is more than 500 mm deep.
Door control device	20N	
Charging station	2.5-5N	
Electrical outlets	2.5-5N	
Microwave	2.5-5N	
Accessible (cycle) parking	20N	
Locker handles	20N	
Hooks/shelves	2.5-5N	
Keypads, deposit slots, money or Ticket dispensers, and coin slots in ATMs and vending machines	2.5-5N	
Soap dispenser	2.5-5N	
Elevator call buttons (new)	2.5-5N	900 mm – 1200 mm above the floor surface
Elevator call buttons (existing)	2.5-5N	800 mm - 1350 mm above the floor surface
ICT stand/counter	2.5-5N	800 mm – 1000 mm above the floor surface
TTY (Text Telephone Devices)	2.5-5N	Up to 850 mm above the floor surface
Emergency call button (elevator, platform lift, stair lift)	2.5-5N	centerline up to 900 mm above the floor surface
Door/window hardware	20N	
Public telephone hardware	2.5-5N	
Fire extinguisher	20N	
SOS point	2.5-5N	
Platform lift and stair lift controls	2.5-5N	
Elevator 2-way communication system	2.5-5N	
Pedestrian signal push button	2.5-5N	900 mm - 1200 mm above the floor surface
Temperature controls	2.5-5N	
Kitchen appliances (oven, refrigerator. etc.)	2.5-5N	
Street furniture (including drinking fountain)	20N	
Garage doors	20N	
Control buttons and input features in ATM	2.5-5N	
Garden bed water faucet	20N	up to 1200 mm above the floor surface
Portable fire extinguisher	20N	300 mm – 1500 mm above the floor surface

Operable part location	Force (N)	Height (mm)
Switched socket	2.5-5N	150 mm above the work surface and 300 mm from internal corners
Dwelling wall-mounted switches	2.5-5N	900 mm - 1200 mm above the floor surface
Shattaf at sanitary rooms	20N	Minimum of 200 mm above toilet seat. Maximum of 600 mm above the floor surface
Toilet paper dispenser placed inside toilet compartments.	2.5-5N	Minimum clearance of 60 mm is required above the dispenser for any grab bar, and a minimum clearance of 300 mm is required if the grab bar is placed underneath the dispenser. 500 mm – 1200 mm above the floor surface
Paper towel dispenser and hand dryer	2.5-5N	850 mm – 1200 mm above the floor surface and installed adjacent to washbasin
Accessible toilets call for assistance device(s) (e.g., an emergency pull cords and/or push button)	2.5-5N	Lowest cord/push button: up to 100 mm above the floor surface Highest cord/push button: 900 mm - 1100 mm above the floor surface Accessible from the floor surface while using the toilet bowl and shower.
Shower controls	20N	900 mm - 1200 mm above the floor surface 400 mm - 650 mm measured from the rear wall of the shower seat
Clothing hooks in shower compartments	20N	850 mm - 1200 mm placed outside the shower next to the seat

#### **3.4.13.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**

#### **3.4.13.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**

#### **3.4.13.6 Pre-certificate rating submission:**

- a)** Technical specifications of all devices and operable parts within the certification boundary.
- b)** Drawings showing the location of different operable parts.

### **3.4.13.7 Certificate rating submission:**

- a)** Updated narrative describing the implementation of all devices and operable parts, including any changes or modifications made during the construction stage.
- b)** As-built drawings showing the location of different operable parts.
- c)** Photographs of the different operable parts.

### **3.4.13.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** UAE Universal Design Code

## 3.4.14 EFE.1.14 Enhanced operable parts

### 3.4.14.1 Applicability:

Applicable to all parts of furniture, equipment and devices that imply a physical interaction between the person and the object.

### 3.4.14.2 Intent:

To ensure that all operable parts being part of spaces used by people are comfortably accessible to all users.

### 3.4.14.3 Requirements:

#### Recommended:

The force required to activate or move any device, switch or element is less than 15N.

### 3.4.14.4 Pre-certificate rating credits:

Table 45: EFE.1.14 pre-certificate credits

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
1	1	Elements and devices with an operating force of a maximum of 15 N

### 3.4.14.5 Certificate rating credits:

Table 46: EFE.1.14 certificate credits

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
1	1	Confirm elements and devices have an operating force of a maximum of 15 N

### 3.4.14.6 Pre-certificate rating submission:

#### Recommended:

- Technical specifications of all devices and operable parts within the certification boundaries where force required to operate them is described.
- Drawings showing the location of different operable parts.

### 3.4.14.7 Certificate rating submission:

#### Recommended:

- Updated narrative describing the implementation of all devices and operable parts, including any changes or modifications made during the construction stage.
- As-built drawings showing the location of different operable parts.
- Photographs of the different operable parts.

### 3.5 EQC.1 Environment Quality and Comfort

This category evaluates how comfortable and welcoming the environment is for individuals with diverse access needs. It considers factors like lighting, temperature, noise levels, air quality, and visual aesthetics.

**Table 47: Environment Quality and Comfort**

EQC	Environmental quality and comfort	Requirement type	Credit points applicability	
			New community developments/redevelopment	Existing community renovation
EQC.1.01	Thermal comfort (outdoor)	Mandatory	R	5
EQC.1.02	Enhanced thermal comfort (outdoor)	Recommended	5	5
EQC.1.03	Thermal comfort (indoor)	Mandatory	R	4
EQC.1.04	Enhanced thermal comfort (indoor)	Recommended	1	1
		Best Practice	2	2
EQC.1.05	Air quality	Mandatory	R	3
EQC.1.06	Enhanced air quality	Recommended	1	1
		Best Practice	2	2
EQC.1.07	Acoustics	Mandatory	R	8
EQC.1.08	Enhanced acoustics	Recommended	4	8
		Best Practice	2	2
EQC.1.09	Wall and floor finishes	Mandatory	R	5
EQC.1.10	Enhanced wall and floor finishes	Recommended	4	6
EQC.1.11	Lighting and display	Mandatory	R	3
EQC.1.12	Enhanced lighting and display	Recommended	5	5
		Best Practice	1	1
EQC.1.13	Quiet room	Mandatory	R	10
EQC.1.14	Enhanced quiet room	Recommended	3	3
		Best Practice	1	1
EQC.1.15	Enhanced view out	Recommended	3	6
	<b>Total</b>		<b>34</b>	<b>81</b>

## **3.5.1 EQC.1.01 Thermal comfort (outdoor)**

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### **3.5.1.1 Applicability:**

Applicable to all buildings with outdoor spaces within the certification boundary.

### **3.5.1.2 Intent:**

To ensure outdoor thermal comfort and reduce discomfort caused by temperature or humidity during transitional and extreme months, implement shading in outdoor spaces to enhance functionality within the certification boundaries.

### **3.5.1.3 Requirements:**

#### **Mandatory:**

Within the certification boundary, shading shall be provided which require at least the provision as stated in Estidama Pearl Rating System: LBo-R3 and in accordance with “**Sahel Public Realm Rating System – EQC.2.01 Thermal comfort (outdoor)**” at 1 PM.

### **3.5.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **5**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EQC.2.01 Thermal comfort (outdoor)**”.

### **3.5.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **5**.

For credits breakdown refer to “**Sahel Public Realm Rating System – EQC.2.01 Thermal comfort (outdoor)**”.

### **3.5.1.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EQC.2.01 Thermal comfort (outdoor)**”.

### **3.5.1.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – EQC.2.01 Thermal comfort (outdoor)**”.

### **3.5.1.8 References:**

- a)** PR-405: Mosque Design Regulations
- b)** PR-401: Public Realm Design Manual
- c)** ROW-603: Abu Dhabi Urban Street Design Manual
- d)** Estidama Pearl Rating System
- e)** TR-534: Bus Services Planning standards
- f)** TR-535: Metro Planning Standards
- g)** TR-536: Railway Planning Standards
- h)** TR-537: Tramways Planning Standards
- i)** Abu Dhabi International Accessibility Standards, 2013

## 3.5.2 EQC.1.02 Enhanced thermal comfort (outdoor)

### 3.5.2.1 Applicability:

Applicable to all buildings with outdoor spaces within the certification boundary.

### 3.5.2.2 Intent:

To ensure outdoor thermal comfort and reduce discomfort caused by temperature or humidity during transitional and extreme months, implement shading in outdoor spaces to enhance functionality within the certification boundaries.

### 3.5.2.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

Within the certification boundary shading should be provided as required in Estidama Pearl Rating System: LBo-1 and in “Sahel Public Realm Rating System – EQC.2.02 Enhanced thermal comfort (outdoor)” at 1 PM.

### 3.5.2.4 Pre-certificate rating credits:

**Table 48: EQC.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
3	3	Design shading for parking areas all outdoor accessible paths within the certification boundary at intervals no longer than 50 m apart.
2	2	Design misting/humidifying systems for all exterior accessible outdoor routes within the certification boundary.

### 3.5.2.5 Certificate rating credits:

**Table 49: EQC.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended</b>
3	3	Confirm that the constructed project provides shading for parking areas and all outdoor accessible paths within the certification boundary, at intervals no longer than 50 m apart
2	2	Confirm that the constructed project provides misting/humidifying systems for all outdoor accessible paths within the certification boundary.

### **3.5.2.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Narrative describing the design approach, shading sources and types, for the comfort and safety of users.
- b)** Drawings showing the proposed locations and dimensions of the shading and misting/ humidifying elements along the exterior accessible paths.
- c)** Specifications and details of the shading and misting/humidifying elements, including their materials, features, maintenance, and energy requirements.

### **3.5.2.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing the implementation, shading sources and types, and the achieved benefits for users' comfort and safety.
- b)** As-built drawings showing the accurate proposed locations and dimensions of the shading and misting/humidifying elements along the exterior accessible paths.
- c)** Photographs of the shading and misting/humidifying elements, showcasing their effectiveness, durability, and aesthetics.
- d)** Verification report confirming that the shading and misting/humidifying elements meet the requirements and provide adequate shade and cooling for users.

### 3.5.3 EQC.1.03 Thermal comfort (indoor)

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#### 3.5.3.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, nightclubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m) Special Occupancy: transportation hubs, covered/open malls, underground structures, high rise buildings.

#### 3.5.3.2 Intent:

To ensure thermal comfort in regularly occupied spaces meeting the requirements of all users.

#### 3.5.3.3 Requirements:

##### Mandatory:

All regularly occupied spaces within the certification boundary (e.g., dwellings and workstations) shall be designed to have separately controllable thermal zones as required in **Estidama Pearl Rating System: LBi-5.1, LBi-5.2** and shall:

- a) **1 Credit in renovation.**
  - i. Be provided with one thermostatic controller that allows control over air speed or temperature as a minimum for private enclosed spaces intended for individual use.
- b) **1 Credit in renovation.**
  - i. Separate controls for each living area and each bedroom (including maids' rooms).
- c) **1 Credit in renovation.**
  - i. Be provided with at least one thermostatic controller for multi-occupant spaces intended for group activities (meeting rooms, classrooms, lecture theatres, conference halls etc.).
- d) **1 Credit in renovation.**
  - i. Controls shall be installed at a height of 900 mm - 1200 mm above floor level.

Additionally, adequate ventilation shall be provided.

#### **3.5.3.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.5.3.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.5.3.6 Pre-certificate rating submission:**

- a)** HVAC or AC systems drawings and details showing the location and type of the temperature control devices in regularly occupied spaces, and the connection to central systems.
- b)** HVAC or AC systems specifications and calculations from the mechanical engineer demonstrating compliance with the category requirements and relevant standards and codes.

#### **3.5.3.7 Certificate rating submission:**

- a)** As-built HVAC or AC systems drawings and details showing the location and type of the temperature control devices in the regularly occupied spaces, and the connection to central systems.
- b)** Temperature testing reports verifying the temperature performance (dry and wet bulb and dew point temperatures) in regularly occupied spaces and including feedback from the mechanical engineer/facility maintenance and user.

#### **3.5.3.8 References:**

- a)** Estidama Pearl Rating System
- b)** PR-403: Design Manual-Minimum Requirements for Private School Facilities
- c)** PR-404: Design Manual-Standards and Criteria for School Facilities
- d)** Abu Dhabi International Accessibility Standards, 2013
- e)** Abu Dhabi International Building Code, 2013

## 3.5.4 EQC.1.04 Enhanced thermal comfort (indoor)

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### 3.5.4.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m) Special Occupancy: transportation hubs, covered/open malls, underground structures, high rise buildings.

### 3.5.4.2 Intent:

To ensure thermal comfort in regularly occupied spaces meets the requirements of all users.

### 3.5.4.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All regularly occupied spaces within the certification boundary (e.g., dwellings, workstations) should:

- a) Be accompanied by an HVAC or AC system that allows for configuration in which the airflow is not directed towards users (i.e., not directed towards workstations, seating, and beds).
- b) Have the ability to individually adjust the temperature between 22-26 °C.

#### Best Practice:

All regularly occupied spaces within the certification boundary (e.g., dwellings and workstations) should minimize temperature and humidity differences between adjacent and connected areas (e.g., outdoor/lobby and adjacent rooms) to a maximum of 5-6 °C and 10% relative humidity.

### 3.5.4.4 Pre-certificate rating credits:

**Table 50: Table 50: EQC.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design an HVAC or AC system that avoids direct airflow towards regularly occupied spaces and individually adjustable temperatures.
		<b>Best Practice:</b>
2	2	Design the building with a suitable HVAC or AC system that can maintain the temperature and humidity differences between adjacent and connected areas within the specified range.

### 3.5.4.5 Certificate rating credits:

**Table 51: EQC.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Confirm that the HVAC or AC system operates as designed and does not produce direct airflow towards regularly occupied spaces and individually adjustable temperatures.
		<b>Best Practice:</b>
2	2	Confirm the implementation of the HVAC or AC system as designed and verify its performance through measurements and testing.

### 3.5.4.6 Pre-certificate rating submission:

#### Recommended:

- a) HVAC or AC system drawings and details showing the location and type of the temperature control devices in the regularly occupied spaces, and the connection to central systems to regulate temperatures.
- b) HVAC or AC system specifications and calculations demonstrating compliance with categorical requirements and relevant standards and codes.
- c) HVAC or AC system design drawings and calculations showing the airflow direction and velocity in the regularly occupied spaces.

**Best Practice:**

- a) Narrative explaining how the project meets the category requirements, including the design strategies and technologies used to achieve the desired temperature and humidity levels in different areas.
- b) A table showing the expected temperature and humidity ranges for each area, and the maximum differences between adjacent areas based on the design calculations and simulations.
- c) A diagram showing the location and type of sensors and controls that will monitor and adjust each area's temperature and humidity levels.
- d) A list of the permanent workplaces in the lobby area that will have local temperature zones, and the justification for their exemption from the category requirements.

**3.5.4.7 Certificate rating submission:**

**Recommended:**

- a) As-built HVAC system drawings and details showing the location and type of the temperature control devices in regularly occupied spaces, and the connection to the central systems.
- b) Temperature testing reports verifying the temperature performance (Dry and wet bulb and dew point temperatures) in regularly occupied spaces and the feedback of the users.
- c) As-built HVAC system drawings and calculations confirming the implementation of indirect airflow in regularly occupied spaces.
- d) Updated narrative confirming how the project meets the category requirements, including any changes or deviations from the original design.

**Best Practice:**

- a) Updated narrative confirming how the project meets the category requirements, including any changes or deviations from the original design.
- b) A table showing the dry and wet bulb and dew point temperatures and humidity ranges for each area, and the maximum differences between adjacent areas, based on post-occupancy measurements and testing.
- c) A diagram showing the location and type of sensors and controls that monitor and adjust the dry and wet bulb and dew point temperatures and humidity levels in each area, and their performance and calibration data.
- d) A list of the permanent workplaces in the lobby area that have local temperature zones, and evidence of their exemption from the category requirements.
- e) Provide evidence and reports to demonstrate compliance.

## 3.5.5 EQC.1.05 Air quality

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### 3.5.5.1 Applicability:

Applicable to all buildings and their external areas within the certification boundary.

### 3.5.5.2 Intent:

To ensure the delivery of fresh and clean air in and around the building, it is essential to mitigate health risks for individuals prone to respiratory issues, such as those with allergies or other health concerns related to air pollution and odors.

### 3.5.5.3 Requirements:

#### Mandatory:

##### a) 3 Credits in renovation

- i. The asset shall provide safe air quality for all its users in accordance with Estidama Pearl Rating System: LBi: Livable indoors by:
  - a. Ensuring a VOCs mitigation strategy is within the asset (e.g., selection of low-VOC and SVOC building materials and provision of plants in regularly occupied areas).
  - b. Performing a building flush out after construction and prior to occupancy to improve the indoor air quality in accordance with **Estidama Pearl Rating System: LBi-3: Construction Indoor Air Quality Management**.

### 3.5.5.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 3.

### 3.5.5.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 3.

### 3.5.5.6 Pre-certificate rating submission:

- a) Drawings showing the location and boundaries of the prohibited smoking zones, as well as the signage and enforcement measures to be implemented.
- b) Narrative with strategies to mitigate odor transfers from spaces which are likely to produce intense smells and provide a VOCs mitigation strategy.
- c) List of the accessible paths, publicly accessible amenities, public toilets and sanitary rooms, and public service areas that are included in the prohibited smoking zones.
- d) List of materials used to demonstrate the selection of low-VOC and low-SVOC building materials.

### **3.5.5.7 Certificate rating submission:**

- a)** As-built drawings showing the location and boundaries of the prohibited smoking zones, as well as the signage and enforcement measures that are in place.
- b)** Updated narrative with strategies to mitigate odor transfers from spaces which are likely to produce intense smells and provide a VOCs mitigation strategy.
- c)** Updated list of materials used to demonstrate the selection of low-VOC and low-SVOC building materials.
- d)** Confirmation of the performance of a building flush out after construction.
- e)** Photographs of the prohibited smoking prohibition zones, showcasing compliance with the category requirements and accessibility requirements for all users.

### **3.5.5.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** ADG-027: Abu Dhabi Guideline Practice to increase opportunities for physical activity in the Emirate of Abu Dhabi
- c)** PR-403: Design Manual Minimum Requirements for Private School Facilities
- d)** PR-404: Design Manual Standards and Criteria for School Facilities
- e)** TR-534: Bus Services Planning standards
- f)** TR-535: Metro Planning Standards
- g)** TR-536: Railway Planning Standards
- h)** TR-537: Tramways Planning Standards
- i)** Estidama Pearl Rating System

## **3.5.6 EQC.1.06 Enhanced air quality**

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### **3.5.6.1 Applicability:**

Applicable to all buildings and their external areas within the certification boundary.

### **3.5.6.2 Intent:**

To ensure the delivery of fresh and clean air in and around the building, it is essential to mitigate health risks for individuals prone to respiratory issues, such as those with allergies or other health concerns related to air pollution and odors.

### **3.5.6.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

The asset should provide safe air quality for all its users by:

- a) Using cleaning products that are scent-free.
- b) Ensuring no odor transfer to adjacent areas from spaces which are likely to produce intense smells such as kitchens or perfume stands (e.g., via ventilation, enclosed dividing walls, and layout separating these areas from others).
- c) Providing windows that are easily accessible or operable in a room designed for occupant use.
  - i. Accessible windows shall have a clear floor space of minimum 900 mm in width and 1500 mm in depth placed in front of the operable part.
  - ii. Shall have operable parts in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**

#### **Best Practice:**

The asset should provide safe air quality for all its users by:

Applying filters of quality equivalent to MERV 13 in HVAC systems and AC or proving that the air quality is sufficient for no filters in all aforementioned areas (No significant sources of pollution).

### 3.5.6.4 Pre-certificate rating credits:

**Table 52: EQC.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Provide a detailed design strategy for the building's ventilation systems, that demonstrates how all regularly occupied spaces in the building can be naturally ventilated or air flushed preventing the use of scent products and odors transmission.
		<b>Best Practice:</b>
2	2	Provide a detailed design strategy for the building's air conditioning and filtering systems, that demonstrates how HVAC or AC systems are accompanied by the equivalent quality of MERV 13 filters in all specified areas or prove that the air quality is sufficient for no filters in all specified areas.

### 3.5.6.5 Certificate rating credits:

**Table 53: EQC.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Confirm that the constructed building follows the design strategy for ventilation systems and verify that the building can be naturally ventilated, or air flushed preventing the use of scent products and odors transmission.
		<b>Best Practice:</b>
2	2	Confirm that the constructed building follows the design strategy for air conditioning and filtering systems and verify that the HVAC or AC systems are accompanied by the equivalent quality of MERV 13 filters or higher in all specified areas or prove that the air quality is sufficient for no filters in all specified areas.

### **3.5.6.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Drawings showing the location and boundaries of the prohibited smoking zones, as well as the signage and enforcement measures to be implemented.
- b)** Narrative with strategies to mitigate odor transfers from spaces likely to have intense smells, including a VOCs strategy.
- c)** List of the accessible paths, publicly accessible amenities, public toilets and sanitary rooms, and public service areas that are included in the prohibited smoking zones.
- d)** Drawings and/or strategy indicating the possibility for natural ventilation/air flushing with potential air flow within the certification boundary.

#### **Best Practice:**

- a)** HVAC or AC systems drawings and details showing the location and type of the filtering (MERV 13 or higher) in the building.
- b)** HVAC or AC systems specifications and calculations demonstrating compliance with the category requirements and the relevant standards and codes. The specifications should also include the filtering efficiency and method for each system.
- c)** Alternatively, if the air quality is sufficient for no filters, a detailed air quality assessment report showing the sources and levels of pollutants in the building and the surrounding area, as well as the mitigation measures and monitoring plan to ensure that the air quality remains acceptable.

### **3.5.6.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built drawings showing the location and boundaries of the prohibited smoking zones, as well as the signage and enforcement measures that are in place.
- b)** Updated narrative with strategies to mitigate odor transfers from spaces that are likely to produce intense smells and include a VOCs mitigation strategy.
- c)** Photographs of the prohibited smoking zones, showcasing compliance with the category requirements and the accessibility requirements for all users.
- d)** As-built HVAC or AC systems drawings and calculations confirming the implementation of indirect airflow in regularly occupied spaces.

#### **Best Practice:**

- a)** As-built HVAC or AC systems drawings and details showing the location and type of the filtering (MERV 13 or higher) in the building.
- b)** HVAC or AC systems testing reports verifying indoor air quality performance of the building. The reports should also include the measured filtering efficiency and method for system.
- c)** Alternatively, if the air quality is sufficient and therefore does not require filters, Updated air quality assessment report showing the sources and levels of pollutants in the building and the surrounding area, as well as the mitigation measures and monitoring plan to ensure the air quality remains acceptable.

## 3.5.7 EQC.1.07 Acoustics

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### 3.5.7.1 Applicability:

Applicable to all buildings and areas of the buildings within the certification boundary.

### 3.5.7.2 Intent:

To ensure noise reduction stays within mandatory levels to prevent nuisance and communication issues, and to provide acoustic conditions that enhance privacy and sound quality for all users.

### 3.5.7.3 Requirements:

#### Mandatory:

##### a) 8 Credits in renovation

- i. The asset should establish an acoustic environment suitable for all users increasing acoustic comfort and communication enhancement in accordance with Pearl Rating System for Estidama: LBi-9 and by:
  - a. Keeping less noise in rooms by providing sound insulation.
  - b. Keeping the background noise at an adequate level as follows:

**Table 54: Required decibel levels (dBA) per room type**

Room type/ space	Required Decibel Levels (dBA)
General circulation space including corridors	≤ 40
Residential	≤ 30
Bedrooms	≤ 45
Dining/restaurant	≤ 45
General	≤ 40 - 50
Retail	≤ 50

### 3.5.7.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### 3.5.7.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.5.7.6 Pre-certificate rating submission:**

- a)** A brief summary describing the design strategies and techniques to achieve a comfortable acoustic environment in the building, including considerations for persons hypersensitive to noise and persons with a neurodivergent or neurodegenerative condition is required. This will include an acoustic study of the surroundings and proving such study influences the asset's design (e.g., building's positioning and placement of windows towards quieter areas of the plot).
- b)** Acoustic drawings and details showing the soundproofing measures for high noise-generating rooms, background noise levels in regularly occupied spaces, and the sound frequency range for the public announcements.
- c)** Acoustic study report including relevant acoustic tests and explaining in what way the study results influenced the asset's design.
- d)** Acoustic specifications and calculations demonstrating compliance with the category requirements and relevant standards and codes.

### **3.5.7.7 Certificate rating submission:**

- a)** Updated narrative confirming the implementation of the acoustic design in the building and reporting any challenges or feedback encountered during the construction or operation stage.
- b)** As-built acoustic drawings and details showing the soundproofing measures for the high noise-generating rooms, the background noise levels in the Regularly occupied spaces, and the sound frequency range for the public announcements.
- c)** Updated acoustic study report including relevant acoustic tests and explaining in what way the study results influenced the asset's design.
- d)** Acoustic testing reports and certificates verifying the acoustic performance of the building and recording of user feedback.

### **3.5.7.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** UAE Universal Design Code
- c)** Estidama Pearl Rating System

## 3.5.8 EQC.1.08 Enhanced acoustics

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### 3.5.8.1 Applicability:

Applicable to all buildings and areas of the buildings within the certification boundary.

### 3.5.8.2 Intent:

To ensure noise reduction stays within mandatory levels to prevent nuisance and communication issues, and to provide acoustic conditions that enhance privacy and sound quality for all users.

### 3.5.8.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

The asset should establish an acoustic environment suitable for all users increasing acoustic comfort and communication enhancement by:

- a) Acoustic zoning i.e., ensuring that areas with unwanted noise are placed further away from workplaces, classrooms, public services, receptions, waiting areas, and dwellings.
- b) Fully soundproofing all high noise-generating rooms (e.g., music rooms/studios).
- c) Designing suitable acoustic environments with an adequate reverberation time based on the purpose, shape, and volume of a room.
- d) Providing surface materials and finishes with low acoustic resonance properties, if feasible.
- e) Ensuring at least one window, if feasible, is readily accessible to close and controls to switch off the AC or fan are placed at a maximum height of and 1200 mm above floor level in all accessible rooms designed for occupant use in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
- f) Ensuring sound frequencies in PA systems are between 500-3000Hz.
- g) Keeping the background noise at an adequate level as follows:

**Table 55: Required decibel levels (dBA) per room type (Recommended)**

Room type/ space	Required Decibel Levels (dBA)	
	New	Existing
Quiet/sensory calming/Muslim and multi-faith prayer rooms	≤ 30	≤ 30
Classroom, general teaching area, and small group/meeting room	≤ 30	≤ 35
Special teaching rooms (for special hearing communication needs)	≤ 30	≤ 35
Open plan: Teaching area/resource area/breakout area	≤ 40	≤ 45
Control room (recording)	≤ 35	≤ 40
Audio/video conferencing	≤ 35	≤ 40

Room type/ space	Required Decibel Levels (dBA)	
Assembly hall	≤ 30	≤ 35
Sports hall/gym	≤ 35	≤ 40
Swimming pool	≤ 50	≤ 55
Kitchen/office/medic/staff room	≤ 30	≤ 40
Corridor/stairwell/coats and locker area/changing area/toilet	≤ 30	≤ 40

**Best Practice:**

- a) Minimizing background noise from ventilation and HVAC or AC systems (e.g., selection of low-noise fans, utilize in-duct attenuators, and employ acoustically insulated ductwork).
- b) Providing low-noise hand dryers or paper towels as an alternative to hand dryers in all public spaces where handwashing occurs (e.g., kitchenettes and toilets).

**3.5.8.4 Pre-certificate rating credits:**

**Table 56: EQC.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	2	Design acoustics zoning and low resonance materials
1	2	Envisage control over noise sources
1	1	Design PA announcements in the right frequency.
1	3	Design rooms and areas to achieve adequate background noise levels
		<b>Best Practice:</b>
1	1	Procure low-noise fans and HVAC or AC systems
1	1	Procure low-noise hand-dryers or paper towels.

### 3.5.8.5 Certificate rating credits:

**Table 57: EQC.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	2	Demonstrate acoustics zoning and low resonance materials.
1	2	Provide control over noise sources
1	1	Provide PA announcements in the right frequency.
1	3	Provide rooms and areas to achieve adequate background noise levels
		<b>Best Practice:</b>
1	1	Provide low-noise fans and HVAC or AC systems
1	1	Provide low-noise hand-dryers or paper towels.

### 3.5.8.6 Pre-certificate rating submission:

#### Recommended and Best Practice:

- a) Narrative describing the design strategies and techniques used to achieve a comfortable acoustic environment in the building, including considerations for users who are hypersensitive to noise or who have a neurodivergent or neurodegenerative condition.
- b) Acoustic drawings and details showing the soundproofing measures for high noise-generating rooms, background noise levels in regularly occupied spaces, and the sound frequency range for the public announcements.
- c) Acoustic specifications and calculations demonstrating compliance with the category requirements and relevant standards and codes.
- d) Provide technical information about the noise generation of the HVAC or AC systems and hand-dryers.

### 3.5.8.7 Certificate rating submission:

#### Recommended and Best Practice:

- a) Updated narrative confirming the implementation of the acoustic design in the building, and report of any challenges or feedback encountered during the construction or operation stage.
- b) As-built acoustic drawings and details showing the soundproofing measures for high noise generating rooms, background noise levels in regularly occupied spaces, and sound frequency range for the public announcements.
- c) Acoustic testing reports and certificates verifying the acoustic performance of the building and report containing user satisfaction feedback.
- d) Confirm the installation of low-noise-generation HVAC or AC systems and hand-dryers.

## 3.5.9 EQC.1.09 Wall and floor finishes

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### 3.5.9.1 Applicability:

Applicable to all buildings with outdoor circulation paths on the plot.

### 3.5.9.2 Intent:

To support self-guided orientation and reduce stress, by providing necessary contrasts and limiting patterns or color combinations, ensuring a calm and easily navigable environment.

### 3.5.9.3 Requirements:

#### Mandatory:

##### a) 2 Credits in renovation

- i. Wall finishes within the certification boundary shall:
  - a. Have visual contrast indicator strips on glass surfaces, with one strip positioned between 900 mm and 1000 mm above floor level and the second positioned between 1500 mm and 1600 mm. Each strip shall have a minimum height of 100 mm. The manifestations should be placed on both sides of the glass surface and shall have a luminance contrast and a Light Reflectance Value (LRV) as shown in the table below.
  - ii. Additionally, the asset shall establish a visual environment suitable for users who are sensitive to light or have visual impairments or neurodivergent conditions by:
    - a. Providing a floor-frieze (decorative stripe in the floor material) along the walls or skirting boards with appropriate luminance contrast as an alternative to luminance contrast between walls and floor to provide an accurate impression of the size of a space.
    - b. Providing luminance contrast and Light Reflectance Value (LRV) of the lighter surface as required in the table below (calculated with Michelson formula):

**Table 58: Minimum luminance contrast to background and LRV**

Location	Required contrast levels	
	Minimum luminance contrast to background/adjacent surface	Minimum LRV of the lighter surface
Door leaf/ frame/architrave/door hardware	30% (matte), 40% (glossy)	40LRV
Frameless door outline (edge of glass panels featuring a colored strip/stainless frame	60%	-
Push/call buttons (elevator), controls	60% (matte), 70% (glossy)	50LRV (matte), 70LRV (glossy)
Glass manifestation and strip on bollards	60%	50LRV
Escalators, staircase nosing strip	60%	50LRV
Tactile Walking Surface Indicators (TWSI)	60%	50LRV
Floor/wall, handrail (elevators, shower room, baby feeding room)	30%	70LRV
Adjacent floor surfaces that do not serve as guidance or warning	Up to 10%	-
Utility covers, handrails, guardrails	30% (matte), 40% (glossy)	40LRV
Glass panel guardrails	60%	-
Edge protection	60% (matte), 70% (glossy)	50LRV (matte), 70LRV (glossy)
Signage/digital screen letter-background, QR labels	60%	70LRV
Sanitary ware (bathrooms, ablutions), grab bars, washbasin, changing room bench	30%	40LRV
Furniture	30%	40LRV
Sidewalk markings	60%	70LRV
Pool amenities	-	30-50LRV
Operable parts	60% (matte finish), 70% (glossy finish)	50LRV (matte), 70LRV (glossy)
Information kiosk	30%	40LRV

Location	Required contrast levels	
Street furniture, bollards, drinking water fountains, litter baskets barbecue pits, seating options, tables, and unexpected column	30%	40LRV
ATM/Vending machine surface	40%	40LRV
ATM/Vending machine keys/Locker identification, function keys and numeric keypads	60%	70LRV
Controls/operating devices	60%	50LRV
Pull cord	60%	50LRV
Kitchen hooks/shelves	30%	40LRV
Charging station (mobility aid)	30%	40LRV
Religious building (prayer area perimeter zone, ablution floor, shoe rack, seating)	30%	40LRV
ICT: text-background and money insertion-background	60%	70LRV
Reception/counter	30%	40LRV
Barriers at queuing areas	60%	50LRV
Barbeque pits	30%	40LRV
Garden beds	30%	40LRV
Potential hazards	60%	50LRV
Public use clocks (hands, numerals)	60%	70LRV
Playground surfaces differentiating areas (loud and quiet zones)	30%	-

**b) 3 Credits in renovation**

Floor finishes within the certification boundary shall:

- i. Openings in floor surfaces shall be maximum 13 mm in diameter.
- ii. Have floor surface which shall:
  - a. Be firm, stable, slip-resistant, and glare free.
  - b. Have a maximum cross fall of 1:50 (2%).

- iii. If carpets are used, they shall have a pile height of maximum 13 mm and shall be securely fastened. Additionally, carpets shall not feature strong, bold patterns.
  - a. Made of low-heat conductivity material in settings of outdoor barefoot walking (beaches, hotel gardens, waterparks, or near swimming pools).
  - b. Additionally, minimum slip-resistance values for flooring in different environments using shoes, based on the Australian Standard AS 4586-2013 R rating system (from R 9 to R 13) measured in oil-wet ramp test for standard toilets and the minimum slip-resistance required for barefoot use, measured in barefoot ramp test (ABC-rating) shall be provided as required in the table below:

**Table 59: Minimum slip resistance value for floor surfaces in and around specific locations**

Location	R values
Outdoor stair treads, landings	R10 (dry) or R11 (wet)
Indoor stairs, entrances, lobbies, corridors	R9
Indoor ramps with 1:16 (rounded to 6%) maximum slope	R10 (dry), R11 (wet)
Outdoor ramp with 1:16 (rounded to 6%) maximum slope	R11
Indoor ramp with slopes > 1:16 (rounded to 6%)	R11 (dry)
Outdoor ramps with slopes > 1:12 (rounded to 8%)	R12
Sales areas, markets Parking areas & access aisle Sidewalks Pedestrian crossings Balconies Verandas Driveways Courtyards Roof decks External entrances/lobbies	R11
Utility grid	R11
Outdoor rest point	R10 (dry), R11 (wet)
Indoor rest point	R9 (standard), category A (barefoot use)
Playground	R11
Toilets, washrooms, covered parking	R10
Communal changing rooms (retail), baby feeding rooms	Category A

Location	R values
Toilet rooms (barefoot) Swimming pool surroundings Shower rooms (private and communal) Bathtubs Holy washing areas Interactive water features	Category B
Gym changing rooms	Category B (wet), R9 (dry)
Swimming pool ramps and stairs leading to water	Category C
Pedestrian path with cycling	R11
Cycle parking	R11
Ramp landing	R10 (dry) or R11 (wet)
Curb ramp landing	R10 (dry) or R11 (wet)
Platform Lifts and Stair lifts	R10 (dry) or R11 (wet)
Garage	R10
Sport facility (pour-in-place, rubber mats/tiles, artificial grass)	R11
Gangway	R9
Garden beds	R11

#### 3.5.9.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 5

#### 3.5.9.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 5

#### 3.5.9.6 Pre-certificate rating submission:

- a) Design drawings showing the location and dimensions of elements within the certification boundary, as well as their background/neighboring elements.
- b) Manufacturer's specifications of the LRVs of the material and luminance contrast calculations
- c) Drawings showing the location of different elements.
- d) Technical specifications of all materials to be used for floors.
- e) Drawings showing the location of different types of material, the slopes in floors and if the use is intended dry, wet, shod or barefoot use.

### **3.5.9.7 Certificate rating submission:**

- a)** Updated narrative describing the implementation of contrast between elements, including any changes or modifications made during the construction stage.
- b)** As-built documentation confirming the implementation of the elements as per the design drawings and specifications.
- c)** Updated specifications and calculations if any changes were made during the construction stage.
- d)** Photographs of the elements tested through LRV meter (see glossary) showcasing their luminance contrast values against their background/neighboring elements.
- e)** Updated narrative describing the implementation of flooring elements, including any changes or modifications made during the construction stage.
- f)** As-built drawings showing the location of different types of material, the slopes in floors and if the use is intended dry, wet, shod or barefoot use.
- g)** Photographs of the flooring materials used.

### **3.5.9.8 References:**

- a)** Abu Dhabi International Building Code, 2013

## 3.5.10 EQC.1.10 Enhanced wall and floor finishes

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### 3.5.10.1 Applicability:

Applicable to all buildings and areas of the buildings within the certification boundary.

### 3.5.10.2 Intent:

To support self-guided orientation and reduce stress, by providing necessary contrasts and limiting patterns or color combinations, ensuring a calm and easily navigable environment.

### 3.5.10.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

In all publicly accessible areas within the certification boundary, there should be:

- a) If present, patterns combining preferably darker colors at the edge of the color spectrum, e.g., violet, blue, red, and brighter colors in the middle of the spectrum e.g., yellow, green. (see figure Glossary 1 in Glossary Section)
- b) No patterns combining red and green or blue and yellow, if the colors have similar value and saturation.
- c) Extensive areas, like long corridors or spacious rooms, shall avoid using repetitive floor patterns, particularly strong linear or striped designs.
- d) No blinds or shading devices that produce prominent patterns such as those made from perforated sheet materials.
- e) No highly reflecting and shiny materials on large surfaces such as walls, floors, doors, or large furniture/equipment (e.g., polished metal, high-gloss tiling, or glazing causing the resemblance of a large mirror).
- f) No mirrors positioned in parallel to at a 0-degree angle, causing an effect of an infinite reflection.
- g) Additionally, in all publicly accessible areas within the certification boundary, luminance contrast and Light Reflectance Value (LRV) of the lighter surface as required in the table below (calculated with Michelson formula):

**Table 60: Recommended minimum luminance contrast**

Location	Required contrast levels	
	Minimum luminance contrast to background/adjacent surface	Minimum LRV of the lighter surface
Sanitary ware (bathrooms, ablutions), grab bars, washbasin, changing room bench	60%	50LRV
Charging station (mobility aid)	40%	40LRV
Tactile guiding edge along the walking path on sidewalks	30%	40LRV

Additionally, minimum slip-resistance values for flooring in different environments shall be provided as required in the table below:

**Table 61: Minimum slip resistance value**

Location	R values
Standard toilets	R11 and/or Category B for toilets intended for barefoot use.

### 3.5.10.4 Pre-certificate rating credits:

**Table 62: EQC.1.10 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design without high-contrast patterns on large surfaces such as walls, floors, doors, or large furniture/equipment within the certification boundary.
1	2	Design avoiding repetitive floor patterns
1	2	Prevent prominent patterns from shading structures and the use of highly reflecting and shiny materials and parallel mirrors
1	1	Design following the recommended minimum luminance contrast

### 3.5.10.5 Certificate rating credits:

**Table 63: EQC.1.10 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Demonstrate lack of high-contrast patterns on large surfaces such as walls, floors, doors, or large furniture/equipment within the certification boundary.
1	2	Demonstrate that repetitive floor patterns are not provided.
1	2	Demonstrate the absence of prominent patterns from shading structures and highly reflecting and shiny materials and parallel mirrors.
1	1	Demonstrate the use of the recommended minimum luminance contrast.

### **3.5.10.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Design drawings showing the location and dimensions of elements within the certification boundary, as well as their background/neighboring elements.
- b)** Manufacturer's specifications of the LRVs of the material and luminance contrast calculations
- c)** Drawings showing the location of different elements.
- d)** Technical specifications of all materials to be used for floors.
- e)** Drawings showing the location of different types of material, the slopes in floors and if the use is intended dry, wet, shod or barefoot use.
- f)** Drawings showing the placement and tilt angle for wall mirrors proving no parallel, 0-degree angled positioning.

### **3.5.10.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing the implementation of contrast between elements, including any changes or modifications made during the construction stage.
- b)** As-built documentation confirming the implementation of the elements as per the design drawings and specifications.
- c)** Updated specifications and calculations if any changes were made during the construction stage.
- d)** Photographs of the elements tested through LRV meter (see glossary) showcasing their luminance contrast values against their background/neighboring elements.
- e)** Updated narrative describing the implementation of flooring elements, including any changes or modifications made during the construction stage.
- f)** As-built drawings showing the location of different types of material, the slopes in floors and if the use is intended dry, wet, shod or barefoot use.
- g)** Photographs of the flooring materials used.
- h)** As-built drawings showing the placement and tilt angle for wall mirrors proving no parallel, 0-degree angled positioning.
- i)** Photographs of the large surfaces, mirrors, showcasing their compliance with the best practice requirements.

## 3.5.11 EQC.1.11 Lighting and display

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### 3.5.11.1 Applicability:

Applicable to all buildings and areas of the buildings within the certification boundary.

### 3.5.11.2 Intent:

To ensure adequate illuminance levels and placement of advertising and decorative lighting design solutions for visibility, overall accessibility, and its effects on the overall ambiance, safety and functionality of buildings and external areas on the plot.

### 3.5.11.3 Requirements:

#### Mandatory:

All lighting and displays present within the certification boundary shall:

- a) Comply with the curfew hours for decorative lighting/advertising (if relevant) as required in **Estidama Pearl Rating System: LBo-10**.
  - i. All non-safety and non-security lighting, including display shall be automatically switched off between 23:00 till 07:00 GST and outside these hours if daylight levels are sufficient.
- b) Have lighting controls accessible and placed in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**".
- c) **1 Credit in renovation.**  
Feature glare protection strategy considering users of various statures (e.g., tall, children, wheelchair users) and in accordance with **Estidama Pearl Rating System: LBi-7 Daylight and glare**. The Unified Glare Rating (UGR) shall assess the uncomfortable glare levels originating from light sources. The strategy could include, but is not limited to:
  - i. Avoiding placing windows at the end of corridors and behind service desks and reception counters to enhance lip-reading.
  - ii. Application of blinds, curtains, solar control film, or strategic placement of trees and shrubs.
  - iii. Avoiding highly reflective wall and floor surfaces.
  - iv. Shielded lights positioned below 1500 mm or light directed downward toward the ground effectively illuminates the floor surface while minimizing glare.
  - v. Avoiding uplighters with light sources at the floor or low level that conflict with the visual field of users, in the circulation areas.
  - vi. Avoiding floor lights in areas where direct customer engagement occurs.
- d) **2 Credit in renovation.**

Have adequate lighting that shall not cause any glare at accessible areas with illuminance levels in accordance with **Abu Dhabi International Building Code, 2013 - Section 1205** for interior spaces and stairways and **PR-402\_Lighting Manual** for external areas on the plot such as campuses:

**Table 64: Schedule of lighting levels**

Area	Minimum illuminance level (lux)	Lighting approach and notes
Staircase (steps/landing)	110 lux (internal)	Measured on the floor surface
Maps and relevant signage (outdoor)	50 lux	Measured on the sign surface
Maps and relevant signage (indoor)	300 lux	Measured on the sign surface

#### **3.5.11.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.5.11.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.5.11.6 Pre-certificate rating submission:**

- a) Lighting/screen specifications and calculations showing at least the glare rating and flicker frequency of each fixture/device.
- b) Design drawings and details showing the placement and orientation of lighting/screens.
- c) Specifications of lighting and calculation of illuminance level on the surface.
- d) Narrative describing how the project meets the credit requirements, including the type and location of decorative lighting/screens and the curfew hours

#### **3.5.11.7 Certificate rating submission:**

- a) As-built lighting/screen specifications and calculations showing at least the glare rating and flicker frequency of each fixture/device.
- b) As-built drawings and details showing the placement and orientation of lighting/screens.
- c) Photographs of lighting/screens, demonstrating their compliance with the credit requirements.
- d) Measurement of illuminance level on the surface.

#### **3.5.11.8 References:**

- a) Abu Dhabi International Building Code, 2013
- b) Abu Dhabi International Accessibility Code
- c) Abu Dhabi Storefront Design Manual
- d) Commercial Signage Regulations
- e) PR-402: Lighting Manual
- f) Estidama Pearl Rating System

## 3.5.12 EQC.1.12 Enhanced lighting and display

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### 3.5.12.1 Applicability:

Applicable to all buildings and areas of the buildings within the certification boundary.

### 3.5.12.2 Intent:

To ensure adequate illuminance levels and placement of advertising and decorative lighting design solutions for visibility, overall accessibility, and its effects on the overall ambiance, safety and functionality of buildings and external areas on the plot.

### 3.5.12.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All decorative lighting/screens present within the certification boundary should:

- a) Employ a balanced lighting scheme throughout spaces, incorporating illuminance from diverse sources, including the ceiling, walls, and floors, for visual comfort.
- b) Maximum UGR glare values are 22 for circulation areas and 19 for habitable rooms.
- c) Be positioned in areas where individuals have an option to avoid them.
- d) Not cause abrupt transitions from light to dark spaces such as when entering a well lit building at night (e.g., by providing a transition zone).
- e) Not produce flicker (not more than once per two seconds).
- f) Provide clear visibility of potential hazards by efficiently positioning light source.
- g) Be uniform to prevent the formation of patterns, shadows, and pools of light.
- h) Have indoor space that has access to outdoor daylight.
- i) Have adequate lighting that shall not cause any glare at accessible areas with illuminance levels as follows:

**Table 65: Schedule of lighting levels (Recommended)**

Area	Minimum illuminance level (lux)	Lighting approach and notes
Accessible parking spaces	30 lux	Including adjacent access aisles Measured on the floor surface
Cycle parking	30 lux	Measured on the floor surface
Passenger loading zone and taxi stands	30 lux	Measured on the floor surface
Public transportation platform	30 lux (outdoors) 110 lux (indoors)	Measured on the floor surface
Charging stations of e-vehicles	110 lux	Measured on the floor surface and operable parts

Area	Minimum illuminance level (lux)	Lighting approach and notes
Outdoor circulation paths	30 lux	<ul style="list-style-type: none"> <li>• Including street crossings, sikkak</li> <li>• Including assembly areas and audiences</li> </ul> Measured on the floor surface
Entrances	110 lux	From outdoors
Ramps (ramp run/landing)	110 lux (outdoors) 150 lux (indoors)	Including ramps used for emergency routes Measured on the floor surface
Staircase (steps/landing)	110 lux (outdoors) 150 lux (indoors)	Measured on the floor surface
Rest points	110 lux	Measured on the floor surface
Cycle tracks	30 lux	Measured on the floor surface
Pedestrian crossing	30 lux	Uniformly and adequately illuminated Measured on the floor surface
Refuge island	30 lux	Measured on the floor surface
Street furniture (if operable)	110 lux	Measured on operable parts
Accessible toilet (and all other compartments)	200 lux	Color temperature: 3000 K – 5000 K Measured on the floor surface
Family toilet	200 lux	Color temperature: 3000 K – 5000 K Measured on the floor surface
Inclusive family toilet	200 lux	Color temperature: 3000 K – 5000 K Measured on the floor surface
Baby feeding room	200 lux	Color temperature: 3000 K – 5000 K Measured on the floor surface
Bathrooms	200 lux	Measured on the floor surface
Shower room	200 lux	Measured on the floor surface
Changing room	200 lux	Measured on the floor surface
Holy Washing spaces	200 lux	Measured on the floor surface
Quiet areas	200 lux	Adjustable color, mood enhancing and dimmable lighting Measured on the floor surface

Area	Minimum illuminance level (lux)	Lighting approach and notes
Service animal relief area	30 lux (outdoor) 100 lux (indoor)	Measured on the floor surface
Playgrounds and play areas	30 lux * 100 lux **	<ul style="list-style-type: none"> <li>*Hazardous areas</li> <li>** Potential hazards (around swings, steps and ramps)</li> </ul> Measured on the floor surface
Swimming pools – Promenades and paths	300 lux	
Garden beds	300 lux	If artificial lights are provided and used at night Measured on the work surface
Self-service fare vending, collection, and adjustment machines	200 lux	Provided at controls and instructions to all coin- and card-operated devices (overhead/circulation space). Measured on the operable part
Elevator	110 lux	<ul style="list-style-type: none"> <li>Shall be uniformly distributed.</li> <li>Use of spotlights shall be avoided</li> </ul> Measured on the floor surface
Platform lift	110 lux	Measured on the floor surface
Tactile maps and plans	110 lux	Measured on the floor surface
Exit signs	50* lux	<ul style="list-style-type: none"> <li>Illuminated either internally or externally</li> <li>*if an external lighting source is used</li> </ul>
Indoor assembly areas and audiences	-	Controlled natural lighting
Assembly areas and audiences (Sign language interpreter station)	300 lux	Measured at the center of the floor of the station and a height of 1200 mm above floor level.
Lecterns	300 lux	Independent, local illuminance to ensure frontal face illuminance at the working surface of the lectern
Work and dining surfaces	300 lux	Measured on the work surface
Gymnasiums	200 lux	Measured on the floor surface

Area	Minimum illuminance level (lux)	Lighting approach and notes
Courts and sports fields	200 lux	Measured on the floor surface
Dwellings: Task-oriented spaces (kitchen, workshops)	300 lux	For Accessible Units, Type A, B and C units Measured on the work surface
Dwellings: Private garage	110 lux	For operating the garage door controls, overhead wheelchair hoist, and accessing/exiting the vehicle.
Dwelling: accessible path	30 lux (outdoor) 100 lux (indoors)	Measured on the floor surface
Dwelling: Outdoor space – furniture	100 lux	Trash and recycling cans, waste chutes, clotheslines, and garden tool storage
Dwelling: Lounge	200 lux	Measured on the floor surface
Dwelling: Bedroom	200 lux	Measured on the floor surface

j) For sanitary rooms such as accessible toilet, family toilet, inclusive family toilet and baby feeding room, shall have:

- i. High-frequency ballasts: >60Hz, if fluorescent or compact fluorescent
- ii. Dimmable illuminance

**Best Practice:**

All decorative lighting/screens present within the certification boundary should:

a) Have a color rendering index in areas as follows:

**Table 66: Schedule of color rendering index (Best Practice)**

Area	Color rendering index	Lighting approach and notes
Passenger loading zone and taxi stands	> 50	
Quiet areas	-	Adjustable color temperature of light; 3000 K
Accessible toilet (and all other compartments)	>80	-
Inclusive family toilet	>80	-

**3.5.12.4 Pre-certificate rating credits:****Table 67: EQC.1.12 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Include how the lighting design is well-balanced, prevents glare, and ensures that areas are well-lit based on their location according to recommended requirements.
<b>Best Practice:</b>		
1	1	Include color rendering index as per best practice requirements.

**3.5.12.5 Certificate rating credits:****Table 68: EQC.1.12 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Demonstrate the inclusion within the masterplan how lighting design is well balanced and prevent glare as per recommended requirements.
<b>Best Practice:</b>		
1	1	Demonstrate color rendering index as per best practice requirements.

### **3.5.12.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Lighting/screen specifications and calculations showing at least the glare rating and flicker frequency of each fixture/device.
- b)** Design drawings and details showing the placement and orientation of lighting/screens including abrupt transitions from light to dark spaces and prevention from formation of patterns, shadows, and pools of light.
- c)** Specifications of lighting and calculation of illuminance level on the surface.

#### **Best Practice:**

Lighting specifications showing a color rendering index for areas mentioned under best practices.

### **3.5.12.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built lighting/screen specifications and calculations showing at least the glare rating and flicker frequency of each fixture/device.
- b)** As-built drawings and details showing the placement and orientation of lighting/screens including abrupt transitions from light to dark spaces and prevention from formation of patterns, shadows, and pools of light
- c)** Photographs of lighting/screens, demonstrating their compliance with the credit requirements.
- d)** Measurement of illuminance level on the surface.

#### **Best Practice:**

As-built lighting/screen specifications showing a color rendering index for areas mentioned under best practices.

## 3.5.13 EQC.1.13 Quiet room

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### 3.5.13.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 sqm.

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) E (e.g., colleges, schools, day care).
- g) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) Special Occupancy: transportation hubs and airports, covered/open malls, underground structures, high rise buildings.

### 3.5.13.2 Intent:

To ensure the provision of accessible quiet areas for all users in large buildings, designed to offer a calm, private, and comfortable environment with adequate features that provide a sensory refuge from overstimulation.

### 3.5.13.3 Requirements:

#### Mandatory:

Provide publicly available quiet room (Figure 27) that shall:

**a) 1 Credit in renovation.**

Be connected to an accessible path.

Be located away from areas with high pedestrian traffic and commotion.

**b) 3 Credits in renovation.**

i. Be an accessible room with a door or curtain access, or a semi-enclosed area.

ii. If provided, have doors/gate with minimum features in accordance with "**Sahel Building Rating System – 1.05 Accessible doors, doorways and gates (outdoor and indoor)**".

iii. Have a capacity for a minimum of two people.

iv. Be adequately signed and have the location marked on maps and directional signage. The signage shall be in accordance with "**Sahel Building Rating System – OC.1.01. Signage and other communication elements**".

v. Have a minimum size of 7 square meters.

vi. Have a clear turning circle with a minimum diameter of 1800 mm, not overlapping with the main circulation space or the clear floor space of 900 mm in width and 1500 mm in depth. (Figure 27).

**c) 2 Credits in renovation.**

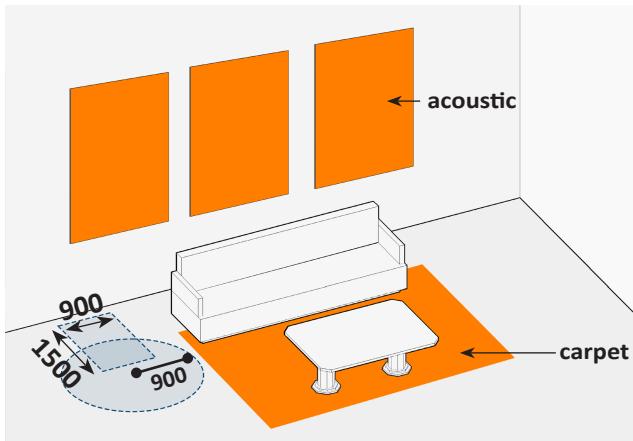
Have increased acoustic comfort (e.g., acoustic wall panels and sound absorptive soft finishes, located away from high traffic areas).

**d) 2 Credits in renovation.**

- i. Be equipped with at least a small table and/or a comfortable chair.
- ii. Have plain surface finishes (no patterns) in matt, muted, and natural colors (especially brown, blue, and green)
- iii. Have floor finishes in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- iv. Have a carpet with a maximum pile height of 13 mm (if relevant) above floor level.

**e) 2 Credits in renovation.**

Be available at assembly areas’ luxury box, club box, and arena suites.



**Figure 27:** Indoor quiet room with sound-absorbing elements

**3.5.13.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

**3.5.13.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

**3.5.13.6 Pre-certificate rating submission:**

- a) Narrative describing quiet room’s purpose, location, and accessibility features.
- b) Drawings of the quiet room, showing its dimensions, layout, and components, such as the door, table, chair, and wall panels.
- c) Table demonstrating compliance to the acoustic, lighting, material, furniture, and signage criteria of the quiet area, along with the corresponding specifications or calculations.

**3.5.13.7 Certificate rating submission:**

- a) Updated narrative describing the implementation of the quiet room, and any changes or deviations from the original design.
- b) As-built drawings of the quiet room, showing its dimensions, layout, and components, such as the door, table, chair, and wall panels.
- c) Updated table demonstrating compliance to the acoustic, lighting, material, furniture, and signage criteria that the quiet area meets, along with the corresponding measurements or reports.
- d) Photographs of the quiet room’s interior, focusing on the surface finishes, and the equipment.

## **3.5.14 EQC.1.14 Enhanced quiet room**

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### **3.5.14.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with Abu Dhabi International Building Code, 2013) with a floor surface of more than 2000 sqm.

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** E (e.g., colleges, schools, day care).
- g)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- h)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i)** Special Occupancy: transportation hubs and airports, covered/open malls, underground structures, high rise buildings.

### **3.5.14.2 Intent:**

To ensure the provision of accessible quiet areas for all users in large buildings, designed to offer a calm, private, and comfortable environment with adequate features that provide a sensory refuge from overstimulation.

### **3.5.14.3 Requirements:**

#### **Recommended:**

Provide a minimum of two publicly available quiet rooms (one for men and one for women and children) that shall:

- a)** Be equipped with color-changing, mood-enhancing, and/or dimmable lighting controls accessible and placed 400 mm minimum and 1200 mm maximum above the floor level and with an adequate luminance contrast and Light Reflectance Value (LRV) in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
- b)** Have doors/gate with minimum feature in accordance with “**Sahel Building Rating System – IC.1.06 Enhanced accessible doors, doorways, and gates (outdoor and indoor)**”.
- c)** Have a clear turning circle with a minimum diameter of 2500 mm, not overlapping with the main circulation space or the clear floor space of 900 mm in width and 1500 mm in depth.
- d)** Have windows (if provided) accompanied by curtains. Windowless rooms should have either a photograph of a tranquil natural scene or an artificial window and a curtain to hide such features when desired.

#### **Best Practice:**

Have ambient color temperature of light 3000 K.

### 3.5.14.4 Pre-certificate rating credits:

**Table 69: EQC.1.14 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design quiet areas within the certification boundary as per the minimum recommended requirements.
		<b>Best Practice:</b>
1	1	Design quiet areas within the certification boundary as per the best practice requirements.

### 3.5.14.5 Certificate rating credits:

**Table 70: EQC.1.14 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm the implementation of quiet areas within the certification boundary as per the minimum recommended requirements.
		<b>Best Practice:</b>
1	1	Confirm the implementation of quiet areas within the certification boundary as per the best practice requirements.

### 3.5.14.6 Pre-certificate rating submission:

- a) Narrative describing quiet area's purpose, location, and accessibility features.
- b) Drawings of the quiet area, showing its dimensions, layout, and components, such as the door, table, chair, and wall panels.
- c) Table demonstrating compliance to the acoustic, lighting, material, furniture, and signage criteria of the quiet area, along with the corresponding specifications or calculations.

### 3.5.14.7 Certificate rating submission:

- a) Updated narrative describing the implementation of the quiet area, and any changes or deviations from the original design.
- b) As-built drawings of the quiet area, showing its dimensions, layout, and components, such as the door, table, chair, wall panels and a window with curtains/picture.
- c) Updated table demonstrating compliance to the acoustic, lighting, material, furniture, and signage criteria that the quiet area meets, along with the corresponding measurements or reports.
- d) Photographs of the quiet area's interior, focusing on the surface finishes, and the equipment.

## 3.5.15 EQC.1.15 Enhanced view out

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### 3.5.15.1 Applicability:

Applicable to all buildings and areas of the buildings within the certification boundary.

### 3.5.15.2 Intent:

To provide necessary mental comfort by ensuring an unobstructed view of the external space for everyone.

### 3.5.15.3 Requirements:

#### Recommended:

Within the certification boundary, there shall be:

- a) Windows providing a view out with a windowsill no higher than 900 mm above the floor to provide a view for persons and children of short stature or for wheelchair users.
- b) Accessible windows at workspaces, and classrooms to enhance visual stimulation and conducive to well-being.
- c) In hotels, hospitals, and care facilities, lower windowsills in areas where occupants may be lying down, enable unrestricted views through the window.
- d) Provided with seating at important viewing points.
- e) Mitigate potential visual discomfort sources, such as direct sunlight glare or distracting views of busy streets.
- f) Railings and guards on balconies, porches, terraces, patios or at resting points shall secure unobstructed views below the rail or guard for seated individuals.

### 3.5.15.4 Pre-certificate rating credits:

**Table 71: EQC.1.15 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	6	Design windows, balconies and terraces following the recommended requirements

### 3.5.15.5 Certificate rating credits:

**Table 72: EQC.1.15 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	6	Confirm providing windows, balconies and terraces following the recommended requirements

### **3.5.15.6 Pre-certificate rating submission:**

- a)** Window, terraces and balconies design drawings and details showing the windowsill and handrails and guardrails height of each element providing a view out (minimum one per room/area).
- b)** Window specifications proving that the windowsill height is within the recommended range.

### **3.5.15.7 Certificate rating submission:**

- a)** As-built windows, terraces and balconies drawings and details showing the windowsill and handrails and guardrails height of each element providing a view out (minimum one per room/area).
- b)** Updated windows specifications prove the windowsill height is within the recommended range.
- c)** Photographs of the windows and other view-out elements in different spaces.

## 3.6 HC.1 Hygiene and Care

This category examines the provision of hygiene facilities such as restrooms, showers, and changing rooms. Hygiene and Care include aspects such as type, coverage and location.

**Table 73: Hygiene and Care**

HC	Hygiene and Care	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
HC.1.01	Accessible toilet rooms	Mandatory	R	10
HC.1.02	Enhanced accessible toilet rooms	Recommended	5	8
		Best Practice	5	8
HC.1.03	Family toilets	Mandatory	R	10
HC.1.04	Enhanced family toilets	Recommended	5	8
HC.1.05	Baby feeding rooms	Mandatory	R	4
HC.1.06	Enhanced baby feeding rooms	Recommended	2	2
		Best Practice	4	4
HC.1.07	Accessible shower rooms and bathrooms	Mandatory	R	10
HC.1.08	Enhanced accessible shower rooms and bathrooms	Recommended	2	3
		Best Practice	2	3
	<b>Total</b>		<b>25</b>	<b>70</b>

## 3.6.1 HC.1.01 Accessible toilet rooms

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### 3.6.1.1 Applicability:

Applicable to all buildings and facilities of public use with the provision of public toilets.

### 3.6.1.2 Intent:

To provide equitable access to essential facilities such as publicly accessible toilets for all users (Figure 28, 29).

### 3.6.1.3 Requirements:

#### Mandatory:

Define a minimum number and capacity of accessible public toilet rooms, wherever public toilets are provided, in accordance with Abu Dhabi International Building Code, 2013.

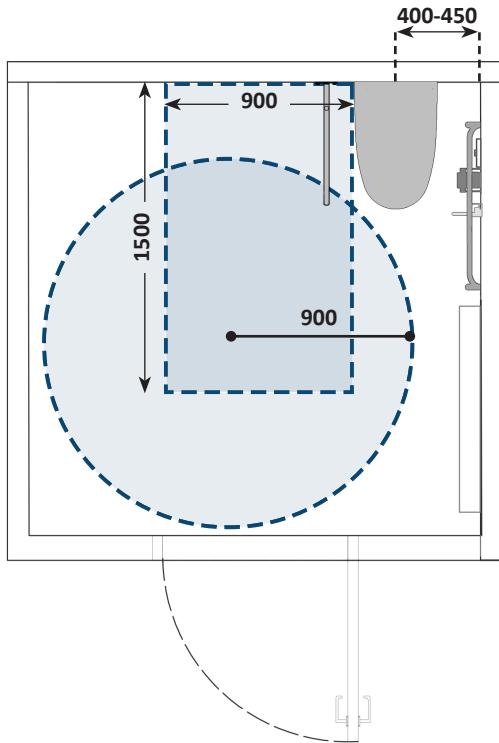
- a) Accessible toilets shall be integrated into the gender-specific cluster of toilets and where provided they shall have 5% of these toilets (not less than one) accessible.
- b) 1 in 6 toilet compartments shall be designated as ambulant toilet compartments.
- c) When multiple urinals are available, at least 50% (with a minimum of one) shall be designated as ambulant urinals. If there are two or more ambulant urinals, one shall be designed for individuals of short stature and another for those with limited mobility. If only one urinal is provided, accessibility requirements do not apply.

Additionally, portable accessible toilets shall be provided during outdoor events.

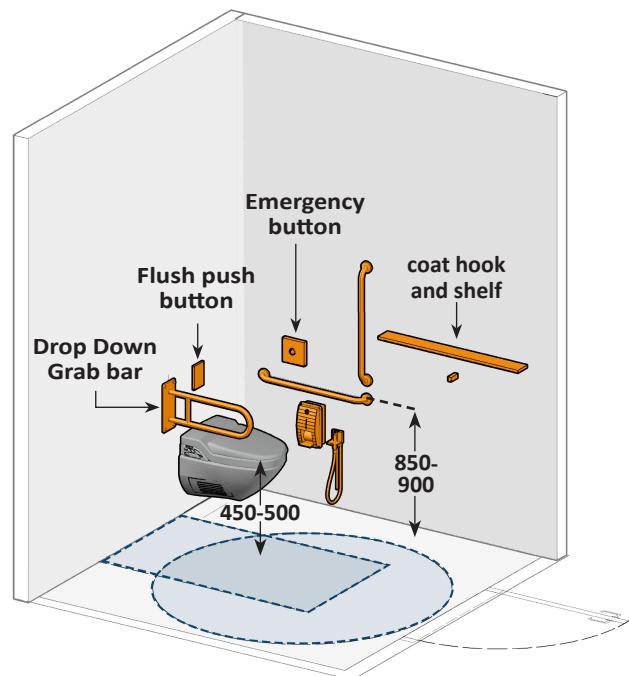
#### a) 2 Credits in renovation.

- i. All accessible toilets within the certification boundary shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and shall feature:
  - a. Minimum luminance contrast and Light Reflectance Value (LRV) in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - b. A clear turning circle with a minimum diameter of 1800 mm (Figure 28) in accordance with **Abu Dhabi International Accessibility Standards, 2013**.
- ii. A shattaf positioned on the side wall (Figure 29), and a flush control mounted in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**".
- iii. The toilet paper dispenser shall be placed on the side wall if clear floor space is provided on only one side. The distance from the rear wall shall be between 600 mm and 1050 mm, and the height should be between 600 mm and 700 mm above the floor surface. A minimum clearance of 60 mm is required above the dispenser for any grab bar, and a minimum clearance of 300 mm is required if the grab bar is placed underneath the dispenser.
- iv. A clearance of at least 1500 mm in depth beside the toilet bowl, measured perpendicularly from the rear wall, is required (Figure 28).
- v. Have toilet bowl installed between 450 mm and 500 mm above the floor surface, measured to the top of the toilet seat (Figure 29). Alternatively, a height-adjustable seat shall be provided.
- vi. Have flush controls that are either hand-operated or the lever-type controls (L-shape) or large push-button flushing controls or automatic. The flush control shall be located on the transfer side of the toilet bowl.

- vii. A left -hand or right-hand lateral wheelchair transfer option – one side transfer which shall:
  - a. Have the centerline of the toilet bowl 400 mm - 450 mm away from the wall/partition on the non-transfer side (Figure 28).
  - b. Have a minimum space beside the toilet bowl of 900 mm x 1500 mm on the transfer side.
  - c. Both forms of transfer shall be available if more than one accessible cubicle is provided (e.g., one compartment with a left-hand side transfer and one with a right-hand side transfer).
  - d. Have one drop-down/hinged support grab bar on the transfer side (Figure 28):
    - located 200 mm to 300 mm above the toilet seat, measured to the top of the gripping surface.
    - The distance between the toilet bowl and the grab bar shall be 300 mm to 350 mm, measured from the centerline of the toilet bowl to the centerline of the hinged support bar.
    - shall extend at least 100 mm to 250 mm beyond the edge of the toilet seat.
- viii. One wall-mounted vertical bar of a minimum length of 600 mm, installed at the front edge of the horizontal grab bar, positioned no higher than 50 mm above the horizontal grab bar, and with a minimum distance of 150 mm and a maximum of 200 mm from the front edge of the toilet seat
- ix. In existing facilities, vertical grab bars shall have a minimum length of 450 mm and shall be installed with their centerline positioned 1000 mm to 1050 mm from the rear wall. The lowest point of the vertical grab bars should be between 1000 mm and 1050 mm above the floor surface.
- x. Have horizontal grab bars on the non-transfer side/side wall with a minimum length of 600mm, located 200 mm to 300 mm above the toilet seat, installed a maximum of 350mm away from the toilet bowl's centerline.
- xi. In existing facilities, a horizontal grab bar shall be installed on the rear and side wall of the toilet bowl at a height ranging from 850 mm to 900 mm above the floor surface (Figure 29). The grab bar shall have a minimum length of 900 mm when placed on the rear wall and 1050 mm when placed on the side wall. It should be positioned a maximum of 150 mm from the side wall and 300 mm from the rear wall.



**Figure 28:** Accessible toilet stall plan view - one side transfer



**Figure 29:** Accessible toilet stall - one side transfer

or

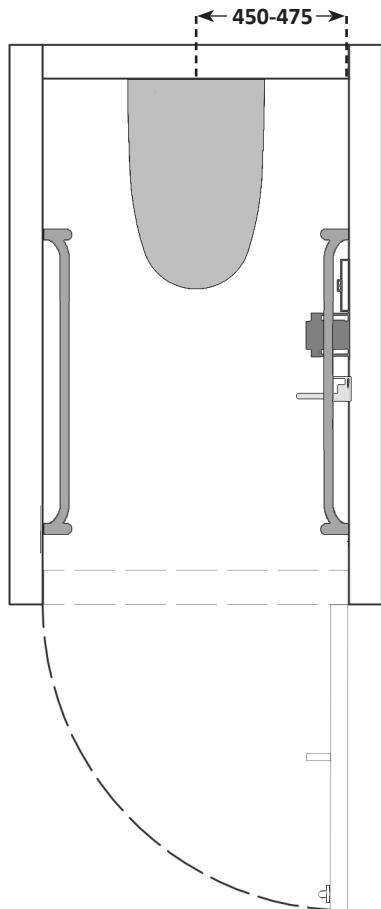
- xii. A two-sided (symmetric) lateral wheelchair transfer option which shall have:
  - a. A minimum space beside the toilet bowl of 900 mm by 1500 mm.
  - b. Have hinged support grab bars on both sides of the toilet bowl:
    - Located 200 mm to 300 mm above the toilet seat, measured to the top of the gripping surface.
    - One drop-down bar per side of minimum length 600mm, located at a distance of 300 mm to 350 mm, between the toilet bowl and the grab bars, measured from the centerline of the toilet bowl to the centerline of the hinged support bar.
    - Shall extend at least 100 mm to 250 mm beyond the edge of the toilet seat.
    - The toilet paper holder may be placed on the hinged support bars.

**b) 1 Credit in renovation.**

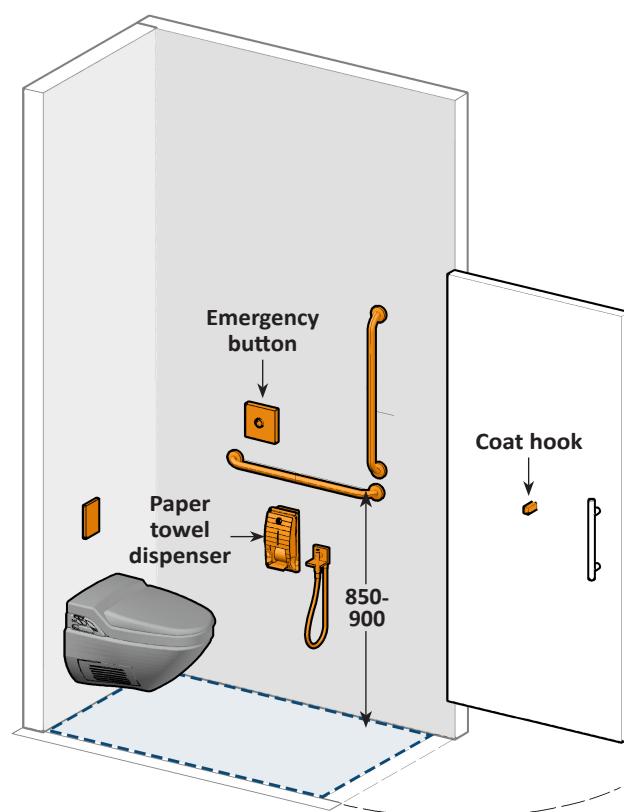
- i. Where ambulant toilets (Figure 30, 31) are provided within the certification boundary, they shall be in accordance with the **Abu Dhabi International Accessibility Standards, 2013** and shall feature:
  - a. Minimum luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
  - b. A clear floor space of minimum depth of 900 mm and a width of 900 mm to 950 mm in front of the toilet bowl.
  - c. The centerline of the toilet bowl (Figure 30) shall be positioned between 450 mm minimum and 475 mm maximum from the side wall or partition.
  - d. A toilet bowl installed between 450 mm and 500 mm above the floor surface, measured to the top of the toilet seat. Alternatively, a height-adjustable seat shall be provided.
  - e. A shattaf positioned on the side wall mounted in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.

f. Vertical and horizontal grab bars shall be installed on both sides of the toilet:

- Horizontal grab bars (Figure 31) shall be located 200 mm to 300 mm above the toilet seat, measured to the top of the gripping surface.
- In existing facilities, the horizontal grab bar shall be installed on the side walls of the toilet bowl at a height ranging from 850 mm to 900 mm above floor surface. Its minimum length shall be 1050 mm, and it shall be positioned at maximum 300 mm from the rear wall.
- Vertical grab bars shall be installed at the front edge of the horizontal grab bar, positioned no higher than 50 mm above it and shall have a minimum length of 600 mm. They shall be placed with a minimum distance of 150 mm and a maximum of 200 mm from the front edge of the water closet, with the lowest point between 800 mm and 850 mm above the floor surface.
- In existing facilities, vertical grab bars shall have a minimum length of 450 mm and shall be installed with their centerline positioned 1000 mm to 1050 mm from the rear wall. The lowest point of these vertical grab bars shall be between 1000 mm and 1050 mm above the floor surface.



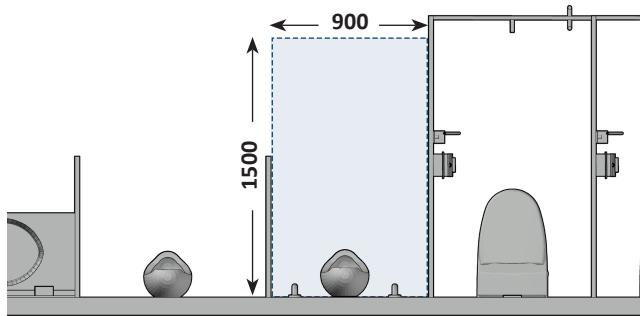
**Figure 30:** Ambulant toilet plan view



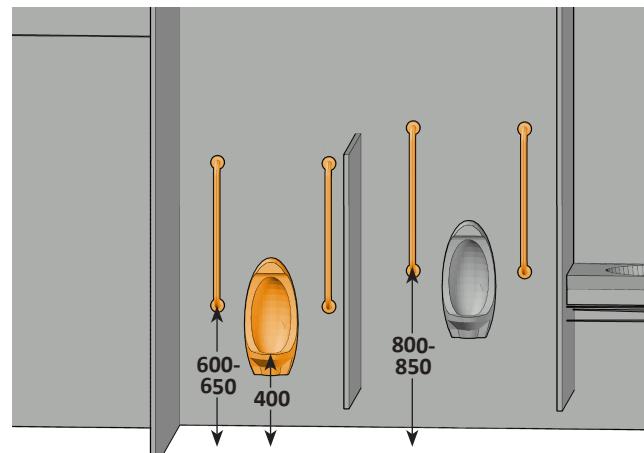
**Figure 31:** Ambulant toilet

**c) 1 Credit in renovation.**

- i. Where ambulant urinals are provided within the certification boundary, they shall be in accordance with the **Abu Dhabi International Accessibility Standards, 2013** and shall feature:
  - a. Minimum luminance contrast and Light Reflectance Value (LRV) in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
  - b. A maximum rim height of 400 mm above floor level (e.g. for people with low stature) or 500 mm (e.g. for people with limited mobility) and a minimum depth of 350 mm, measured from the outer face of the urinal rim to the wall.
  - c. Vertical grab bars on both sides, minimum of 600 mm in length, distance between the centerline of the grab bars shall be 300 mm to 350 mm from the centerline of the urinal, mounted with the lowest point of the bar 600 mm - 650 mm (e.g. for people with low stature) or 800 – 850 mm (e.g. for people with limited mobility) above floor level. (Figure 33).
  - d. An unobstructed frontal floor space (Figure 32) with a minimum dimension of 900 mm by 1500 mm
  - e. Either a large push button control with an operating force in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”** or be motion sensor operated.



**Figure 32: Ambulant urinal plan view**



**Figure 33: Ambulant urinals provided at varying heights**

- ii. All toilet doors within the accessible toilet rooms and accessible path leading to the accessible toilet rooms shall be swinging outwards with minimum requirements in accordance with **“Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)”**. Doors shall have a signage with the International Symbol for Accessibility and a signage for ambulant toilets placed on the latch side of the compartments indicating the type of toilet (accessible toilet compartment, ambulant toilet compartment with right-handed/left-handed/both side approach, etc.) in accordance with **“Sahel Building Rating System – OC.1.01. Signage and other communication elements”**.

**d) 2 Credits in renovation.**

- i. All accessories within all accessible toilet rooms including family and inclusive family toilets, and wherever applicable, shall be provided in accordance with the **Abu Dhabi International Accessibility Standards, 2013**, and shall:
  - ii. Have an access path in accordance with **“Sahel Building Rating System – IC.1.03 Circulation based on accessible paths (indoor)”**, linking the toilet entrance, accessible toilet compartment, accessible washbasin (if not provided within the compartment), and accessible hand dryer (if not provided within the compartment), not obstructed by opening doors.

- iii. Have washbasins which shall:
  - a. If six or more washbasins are provided, have at least one suitable for enhanced reach ranges. The faucet and soap dispensers shall be positioned on the side of the washbasin rather than at the back.
  - b. Have minimum luminance contrast and Light Reflectance Value (LRV) in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - c. Be accessible, located outside the necessary clear floor space of 900 mm by 1500 mm adjacent to the toilet bowl, with the centerline of the washbasin positioned at a minimum distance of 450 mm from the adjacent side wall and a maximum height of 800 mm above the floor level, and a clear depth of 450mm under washbasin.
  - d. Have a clear height of:
    - e. At least 700 mm, measured from the front edge of the washbasin to a point at least 200 mm back from the front edge.
    - f. At least 250 mm, measured from a point that is a minimum of 300 mm from the front edge of the washbasin.
  - g. Have mirrors above the top edge with height no higher than 900 mm from finished floor level.
  - h. Faucets shall feature automatic controls or lever-type designs without spring loading. They shall be positioned so that the distance from the centerline of the faucet to the edge of the washbasin does not exceed 480 mm in depth.
  - i. Have waterpipes covered or insulated below the washbasin.
- iv. All grab bars shall:
  - a. Have a diameter ranging from 30 mm to 45 mm.
  - b. Be stable with structural strength of at least 1100 N measured at any point, considering both horizontal and vertical types of forces.
  - c. Have a clearance between the wall and the grab bar or any object below the grab bars of a minimum of 60 mm, while the clearance to any object above at least 300 mm.
- v. Have coat hooks, shelves, soap and paper dispenser/hand dryer installed in accordance with the "**Sahel Building Rating System – EFE.1.13 Operable parts**".
- vi. Have all elements within the accessible toilet room used for navigation, designed for human interaction, or posing a potential hazard in adequate luminance contrast values against their background/neighboring elements in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- vii. Have soap dispenser located adjacent to the washbasin, positioned between 900 mm and 1200 mm above the floor. It shall be equipped with either an automatic or manual control mechanism that can be operated using a closed fist and requires a force of 20 N or less.
- viii. Have paper towel dispenser/hand dryers installed adjacent to the washbasin at a height between 900 mm and 1200 mm above the floor level. Paper towel dispensers and hand dryers shall not be located on the back wall over the washbasin and protrude excessively or obstruct the circulation path unless they are made detectable.

- ix. Have toilet paper dispensers which shall:
  - a. Be installed at a height ranging between 600 mm and 700 mm above the floor.
  - b. Have the outlet for the toilet paper dispensers be positioned within an area of 300 mm minimum to 600 mm maximum from the rear wall.
  - c. Not be of a type that restricts paper flow or controls delivery, ensuring continuous paper flow.
  - d. Have toilet paper dispensers mounted on grab bars, if swing-up grab bars are installed.
- x. Have sanitary trash cans placed within reach, of height between 600 mm to 700 mm, on the non-transfer side of toilet pans. Pedal-type trash cans are to be avoided.
- xi. Have a baby changing table which shall:
  - a. Be of a fold-away type and either height adjustable or installed at two fixed heights.
  - b. Not obstruct the circulation path unless they are detectable.
  - c. Have working surface positioned no more than 800 mm above the floor surface, ensuring a clear floor height of at least 700 mm.
  - d. Have a seating surface for the baby holder installed at a height ranging from 500 mm to 600 mm above the floor surface.
  - e. Have constraining belts or raised side barriers to ensure children remain secure and prevent any potential falls or injuries.
- xii. Have floor surface which shall:
  - a. Be obstacle-free (e.g., manholes, drains, hatches and floor boxes, shall be located outside of circulation routes or have a seamless cover design).
  - b. Provide at least one drainage hole and a cross-fall slope when installing a shattaf.
  - c. Have a slip-resistance in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- xiii. Call for assistance devices (e.g., emergency pull cords and/or push buttons) shall be provided in all accessible toilets and toilet compartments, as well as in ambulant toilets, mounted at a height in accordance with the "**Sahel Building Rating System – EFE.1.13 Operable Parts**". The alarm system shall include a visual alarm outside the accessible toilet door and send information to an occupied control room, reception area, or a similar location. Additionally, call for assistance devices shall feature an audible alarm that can be heard from outside the toilet, as well as a reset button located inside the toilet.
- xiv. Have a call for assistance devices installed in public toilets/shower rooms/bathtubs. The visual alarm shall be visible from the accessible toilet bowl, shower and bathtub.

**e) 2 Credits in renovation.**

- i. Accessible toilets in accessible hotel guestrooms shall be accompanied by an accessible bathroom which shall offer options to include those with both accessible showers and/or bathtubs. Accessible bathrooms shall:
  - a. Ensure that accessible guestrooms are evenly distributed, with 50% featuring a shower and 50% featuring a bathtub.
  - b. Have a clear turning circle with a minimum diameter of 1800 mm and ensure a minimum of lateral one-side transfer space adjacent to the toilet bowl of 900mm in width and 1500 mm in depth.

- ii. The minimum requirements of accessible toilet and their accessories within an accessible guest bathroom shall be in accordance with “**Sahel Building Rating System – HC.1.01 Accessible toilet rooms**”, wherever applicable, and shall:
  - a. Have retractable grab bars in accessible bathrooms, if feasible, to enhance flexibility and usability for individuals with varying needs.
  - b. Be accompanied by accessible roll-in shower rooms and/or accessible bathtubs in accordance with the “**Sahel Building Rating System – HC.1.07 Accessible shower rooms and bathrooms**”.

**f) 2 Credits in renovation.**

- i. Children’s toilets shall be provided in schools, playgrounds, recreational areas, sports arenas and other buildings and facilities which are widely used by children. Where children-use toilet is provided within the certification boundary, they shall ensure:
- ii. Children’s toilet compartments shall have the following dimensions:
  - a. With a wall-hung toilet, without an in-unit washbasin within the compartment, to have a minimum clear width of 1500 mm, measured perpendicular to the side wall, and a minimum clear depth of 1400 mm, measured perpendicular to the rear.
  - b. With a floor-mounted toilet, without an in-unit washbasin within the compartment, to have a minimum clear width of 1500 mm, measured perpendicular to the side wall, and a minimum clear depth of 1500 mm, measured perpendicular to the rear.
  - c. With an in-unit washbasin type that are less than 1700 mm deep and wider than 1700 mm, to have a toe clearance of at least 300 mm above the floor and extend 200 mm beyond the compartment wall on the front and one other side of the partition.
- iii. The toilet bowl shall be positioned with the centerline between 300 mm minimum and 450 mm maximum from the side wall.
- iv. The toilet bowl height shall be between 280 mm and 450 mm above the floor surface, measured to the top of the toilet seat.
- v. Toilet paper dispensers with outlet positioned within an area of 300 mm minimum to 600 mm maximum from the rear wall. The dispenser’s outlet shall be installed at a height of 350 mm minimum to 500 mm maximum above the floor.
- vi. Toilet paper dispensers are not of a type that restricts paper flow or controls delivery, ensuring continuous paper flow. If swing-up grab bars are installed, toilet paper dispensers may be mounted on these grab bars.
- vii. Grab bar for toilet bowl with lateral transfer from one side:
  - a. A hinged support bar shall be provided in the open side of the toilet bowl, located 150 mm to 200 mm above the toilet seat, measured to the top of the gripping surface. The distance between the toilet bowl and the grab bar shall be 250 mm to 300 mm, measured from the centerline of the toilet bowl to the centerline of the hinged support bar. Additionally, the grab bar shall extend at least 100 mm to 250 mm beyond the edge of the toilet seat.
  - b. A wall-mounted horizontal grab bar shall be provided on the side wall, located 150 mm to 200 mm above the toilet seat, measured to the top of the gripping surface. Additionally, the grab bar shall have a minimum length of 600 mm.
  - c. In existing facilities, a horizontal grab bar can be installed at a height ranging from 450 mm to 680 mm above the floor surface.
  - d. In existing facilities, a horizontal grab bar shall be installed on the rear and side wall of the toilet bowl at a height ranging from 450 mm to 680 mm above the floor surface. The grab bar shall have a minimum length of 900 mm when placed on the rear wall and 1050 mm when placed on the side wall. It should be positioned a maximum of 150 mm from the side wall and 300 mm from the rear wall.

- viii. The wall-mounted vertical grab bar shall start at the front edge of the horizontal grab bar, with a minimum distance of 150 mm and a maximum of 200 mm from the front edge of the water closet, measured to the centerline. The vertical grab bar shall have a minimum length of 600 mm and shall be positioned no higher than 50 mm above the horizontal grab bar.
  - a. In existing facilities, the grab bar shall have a minimum length of 450 mm.
  - b. In existing facilities, vertical grab bars shall have a minimum length of 450 mm and shall be installed with their centerline positioned 850 mm to 900 mm from the rear wall. The lowest point of the vertical grab bars should be between 450 mm and 680 mm above the floor surface.
- ix. Grab bar for toilet bowl with lateral transfer from both sides:
  - a. Hinged support bars shall be provided on both sides of the toilet bowl, located 150 mm to 200 mm above the toilet seat, measured to the top of the gripping surface. The distance between the toilet bowl and the grab bars shall be 250 mm to 300 mm, measured from the centerline of the toilet bowl to the centerline of the hinged support bar. Additionally, the grab bar shall extend at least 100 mm to 250 mm beyond the edge of the toilet seat.
- x. Children toilets per age groups shall be provided in all schools and educational centers where there are more than 100 children spending everyday more than 5 hours within the premises. The dimensions of the children's toilet shall be in accordance with the table 23 (below) and shall ensure:
  - a. Washbasins used by children aged 6 and younger shall not be required to have knee or toe clearance if a parallel approach is provided.
  - b. Washbasins used by children between 6 and 12 years shall have a minimum knee or toe clearance of 600 mm, provided the rim or counter is no higher than 750 mm.
  - c. Faucets shall be operable with the elbow or with a sensor. Turning or pressure systems that require greater effort than 2.5 N to 5 N of force, to be operated shall not be allowed.
  - d. Pre-school toilet groups shall have one toilet with toddler's dimensions in each toilet block.
  - e. Primary school toilet groups shall have one toilet with pre-school's dimensions and one assisted toilet in each toilet block.
  - f. Secondary school toilet groups shall have one toilet with primary school dimensions and one adult accessible toilet in each toilet block.

**Table 74: Dimensions of toilets depending on age and height**

	Infants	Toddlers	Pre-school	Primary school	Secondary school	Highschool and above
	(<1 y)	(1-3 y)	(3-6 y)	(6 – 10 y)	(11- 14 y)	(15- 18 y)
Usual child height rank (mm)	460-810	690-1030	870-1250	1050-1550	1330-1750	1480-1900
Distance from the finished wall and the toilet centerline (mm)	NA	300	300-380	380-455		455
Seat height (mm)	NA	280-300	300-380	380-430		430-480
Flush control height (mm)	NA	900	1000	1100		1200
Toilet tissue dispenser height (mm)	NA	350	350-430	430-485		485-600

#### **3.6.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.6.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.6.1.6 Pre-certificate rating submission:**

- a) Narrative describing how the project meets the credit requirements, including the number and type of toilet rooms, the percentage of ambulant and accessible urinals and compartments, and the design features that ensure accessibility and comfort for all users.
- b) Design drawings showing the layout and dimensions of the toilet rooms, the location and measurements of the urinals, compartments, doors, grab bars, shattaf, flush control, washbasin, mirror, soap and paper dispenser, hand dryer, coat hook. The drawings must also indicate the accessible path, the clear turning circle and clear floor space within the toilet rooms.
- c) Specifications and details of the materials, finishes, and fixtures used in the toilet rooms, such as the type and force of the door hinges, the type and height of the toilet bowl, the type and operation of the faucet, soap and paper towel dispenser etc. The specifications and details must also include the manufacturer's information.

### **3.6.1.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design.
- b)** As-built drawings showing the actual implementation of the toilet rooms, with the same level of detail and annotation as the design drawings. Any discrepancies or variations from the design drawings must be highlighted and explained.
- c)** Photographs of the toilet rooms, showing the overall appearance and the accessibility features, such as the grab bars, the shattaf, the flush control, the washbasin, the mirror, the paper dispenser, and the coat hook etc. The photographs must also show the accessible path, clear floor space and the clear turning circle within the toilet rooms.

### **3.6.1.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013
- c)** Abu Dhabi Public Toilet Planning and Regulation Manual
- d)** UAE Universal Design Code

## 3.6.2 HC.1.02 Enhanced accessible toilet rooms

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### 3.6.2.1 Applicability:

Applicable to all buildings and facilities of public use with the provision of public toilets.

### 3.6.2.2 Intent:

To provide equitable access to essential facilities such as publicly accessible toilets for all users.

### 3.6.2.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

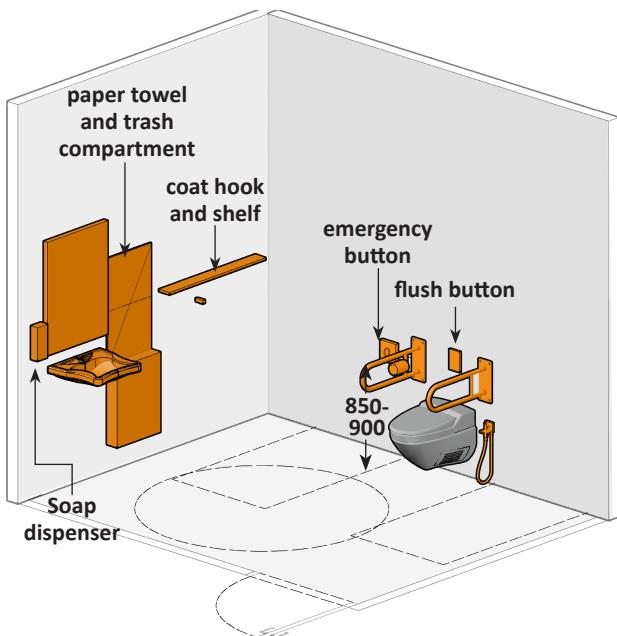
#### Recommended:

Define a minimum number and capacity of accessible public toilet rooms, wherever public toilets are provided:

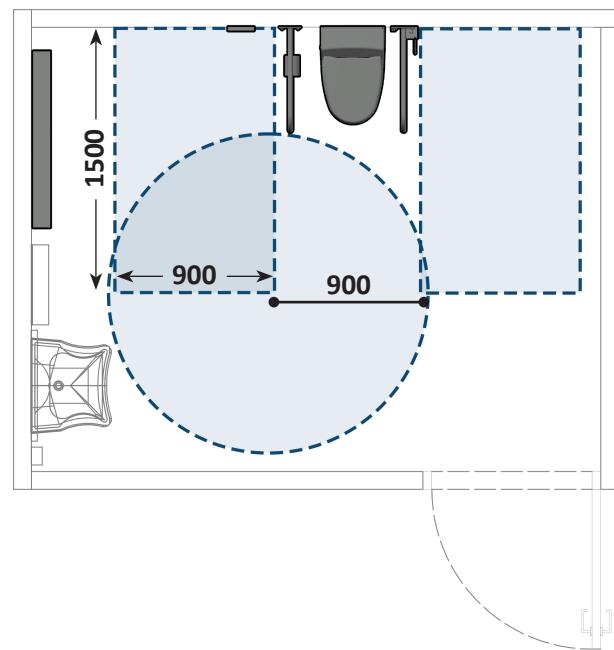
Accessible toilet rooms should be provided at a rate of 5% of all toilet compartments (with a minimum of one), accessible from a vestibule adjacent to or shared with the respective male or female toilet cluster.

All accessible toilet rooms provided within the certification boundary should feature:

- a) At least 5% of the peninsular toilet layout should include a two-sided (symmetric) design, offering both left-hand and right-hand wheelchair transfer options. (Figures 34, 35):
  - i. On both sides, there should be a minimum space beside the water closet of 900 by 1500 mm (Figure 35).
  - ii. Have drop-down/hinged support grab bar on both sides of the toilet bowl (Figure 34):
    - a. located 200 mm to 300 mm above the toilet seat, measured to the top of the gripping surface.
    - b. The distance between the toilet bowl and the grab bar shall be 300 mm to 350 mm, measured from the centerline of the toilet bowl to the centerline of the hinged support bar.
    - c. shall extend at least 100 mm to 250 mm beyond the edge of the toilet seat.
- b) An accessible washbasin within the compartment with drop-down/hinged support grab bar on both sides.
- c) All doors with an opening force of a maximum of 15 N (i.e., entrance and compartment doors).
- d) Automated locker push button with light indicator.
- e) A baby holder.
- f) A horizontal waterproof emergency call strip switch should be installed along the perimeter of the toilet, positioned at a height between 100 mm and 200 mm above the floor surface, to allow users to request assistance.



**Figure 34:** Accessible toilet room with two-sided transfer



**Figure 35:** Accessible toilet plan view with two-side transfer

**Best Practice:**

- a) All toilet rooms within the certification boundary should feature:
  - i. At least 5% (no less than one) of accessible toilet compartments should have full-height walls for increased privacy.
  - ii. Lighting with a color temperature between 3000 K and 5000 K, along with illuminance control, should be installed. The controls must be operable from a maximum height of 1200 mm above the floor.
- b) Where ambulant urinals are provided within the certification boundary, they should:
  - i. Within a bank of toilet compartments, 15% (not less than one) should be placed in ambulant compartments. If there are two or more ambulant urinal compartments, one shall be designed for individuals of short stature and another for those with limited mobility.
  - ii. A maximum rim height of 400 mm above floor level (e.g. for people with low stature) or 500 mm (e.g. for people with limited mobility) and a minimum depth of 350 mm, measured from the outer face of the urinal rim to the wall.
  - iii. Vertical grab bars on both sides, minimum of 600 mm in length, distance between the centerline of the grab bars shall be 300 mm to 350 mm from the centerline of the urinal, mounted with the lowest point of the bar 600 mm to 650 mm (e.g. for people with low stature) or 800 to 850 mm (e.g. for people with limited mobility) above floor level.
  - iv. An unobstructed frontal floor space with a minimum dimension of 900 mm by 1500 mm.
  - v. Automatic flush control.

- c) Where ambulant toilets are provided within the certification boundary, they should feature:
  - i. A clear floor space with a minimum width of 1000 mm and a depth of 1500 mm should be provided in front of the toilet bowl.
  - ii. A clear floor space with a width between 1000 mm and 1100 mm should be provided in front of a floor-mounted toilet bowl if bariatric individuals are anticipated.
  - iii. One horizontal and one vertical grab bars on each side of the toilet bowl.
  - iv. Position the water closet at the center of the total width.
- d) Where accessible toilets are provided within accessible guest rooms accompanied by accessible bathrooms, they should:
  - i. Have a peninsular toilet bowl with lateral transfer space on both sides of minimum 900 mm width and 1500 mm depth on both sides adjacent to the toilet bowl.
  - ii. Have a height adjustable toilet bowl.
  - iii. Have an automated lock push button with light indicator.
  - iv. Have a horizontal waterproof emergency call strip switch should be installed along the perimeter of the toilet, positioned at a height between 100 mm and 200 mm above the floor surface, to allow users to request assistance.
  - v. Have drop-down/hinged support grab bar provided on both sides of the washbasin.
  - vi. Have a baby fold up chair.

#### 3.6.2.4 Pre-certificate rating credits:

**Table 75: HC.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Design 5% of peninsular toilet bowls as per recommended requirements
1	2	Design it with washbasin as per recommended requirements
1	2	Design doors as recommended and foresee a baby holder
1	2	Design a horizontal waterproof emergency call strip switch
		<b>Best Practice:</b>
1	1	Design walls and lighting as per best practice requirements
1	2	Design urinals as per best practice requirements
1	2	Design ambulant toilets as per best practice requirements
2	3	Design guest room toilets as per best practice requirements

### 3.6.2.5 Certificate rating credits:

**Table 76: HC.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Provide 5% of peninsular toilet bowls as per recommended requirements
1	2	Provide a washbasin as per recommended requirements
1	2	Provide doors as recommended and foresee a baby holder
1	2	Provide a horizontal waterproof emergency call strip switch
		<b>Best Practice:</b>
1	1	Provide walls and lighting as per best practice requirements
1	2	Provide urinals as per best practice requirements
1	2	Provide ambulant toilets as per best practice requirements
2	3	Provide guest room toilets as per best practice requirements

### 3.6.2.6 Pre-certificate rating submission:

**Recommended:**

- a) Narrative describing how the project meets the additional requirements, including the number and type of toilet compartments with full-height walls and washbasins, and the reduced opening force of the doors, the percentage of ambulant and accessible urinals and compartments, and the design features that ensure accessibility and comfort for all users.
- b) Design drawings showing the layout and dimensions of the toilet compartments with full-height walls and washbasins and its grab bars, the location and measurements of the doors (also indicating the door hinges and the opening force), the urinals, compartments, grab bars, shattaf, flush control, mirror, paper dispenser, and coat hook. The drawings should also indicate the accessible path and the clear turning circle and clear floor space within the toilet rooms.
- c) Specifications and details of the materials, finishes, and fixtures used in the toilet compartments and doors, such as the type and height of the washbasin and its grab bars, the type and operation of the faucet, the type and size of the mirror, the type and force of the door etc.

### **Best Practice:**

- a) Narrative describing how the project meets the additional requirements, including the number and type ambulant and urinal compartments and guest room toilets, the walls in the accessible toilets, the reduced opening force of the doors, the percentage of ambulant and accessible urinals and compartments, and the design features that ensure accessibility and comfort for all users.
- b) Design drawings showing the layout and dimensions of the toilet compartments with full-height walls, number and type ambulant and urinal compartments and guest room toilets, and washbasins, the location and measurements of the doors (also indicating the door hinges and the opening force), the urinals, compartments, grab bars, shattaf, flush control, washbasin, mirror, paper dispenser, and coat hook. The drawings should also indicate the accessible path and the clear turning circle and clear floor space within the toilet rooms.
- c) Specifications and details of the materials, finishes, and fixtures used in the toilet compartments and doors, such as the type and height of the washbasin, the type and operation of the faucet, the type and size of the mirror, the type and force of the door hinges, etc.
- d) Narrative describing how the project meets the additional requirements, including the number and type of independent, accessible toilet rooms, the location and design of the vestibules, and the features of the peninsular toilet bowls.
- e) Design drawings showing the layout and dimensions of the independent, accessible toilet rooms, and the location and measurements of the vestibules, doors, toilet bowls, and grab bars.

### **3.6.2.7 Certificate rating submission:**

#### **Recommended:**

- a) Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design.
- b) As-built drawings showing the actual implementation of the toilet rooms, with the same level of detail and annotation as the design drawings. Any discrepancies or variations in the design drawings should be highlighted and explained.
- c) Photographs of the toilet rooms, showing the overall appearance and the accessibility features, such as the grab bars, the shattaf, the flush control, the washbasin, the mirror, the paper dispenser, the door hinges, and the coat hook. The photographs should also show the accessible path and the clear turning circle and clear floor space within the toilet rooms.

#### **Best Practice:**

- a) Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design.
- b) As-built drawings showing the actual implementation of the toilet rooms, with the same level of detail and annotation as the design drawings. Any discrepancies or variations in the design drawings should be highlighted and explained.
- c) Photographs of the toilet rooms, showing the overall appearance and the accessibility features, such as the grab bars, the shattaf, the flush control, the washbasin, the mirror, the paper dispenser, the door hinges, and the coat hook. The photographs should also show the accessible path and the clear turning circle and clear floor space within the toilet rooms. As-built drawings showing the actual implementation of the independent, accessible toilet rooms, with the same level of detail and annotation as the design drawings. Any discrepancies or variations in the design drawings should be highlighted and explained.
- d) Photographs of the independent, accessible toilet rooms, showing the overall appearance and the accessibility features, such as the peninsular toilet bowl.

## 3.6.3 HC.1.03 Family toilets

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### 3.6.3.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- c) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- d) A-5 (e.g., amusement parks, other outdoor assembly uses)
- e) E (e.g., colleges, schools, day care)
- f) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- g) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- h) Special Occupancy: public transportation terminals (airports and ferries), major transportation stations larger than 2000 square meters, covered/open malls.

### 3.6.3.2 Intent:

To provide equitable access to essential facilities such as family toilets, usable by people of all ages, sizes, abilities, and family compositions.

### 3.6.3.3 Requirements:

#### Mandatory:

Define a minimum number and capacity of family toilets, wherever public toilets are provided, in accordance with **Abu Dhabi International Building Code, 2013**:

- a) 2 Credits in renovation.**
  - i. At least one family toilet, located outside the gender-specific clusters, shall be provided wherever there are six or more male and female water closets, or in public transportation facilities that exceed 2000 square meters in a public use facility.
  - ii. It shall be identified by a sign placed on the latch side of the door in accordance with **“Sahel Building Rating System – OC.1.01 Signage and other communication elements”**.
  - iii. Family toilet when provided, shall be in accordance with Abu Dhabi International Accessibility Standards, 2013 and shall (Figure 36)
- b) 2 Credits in renovation.**
  - i. Have a clear turning circle with a minimum diameter of 2000 mm.
  - ii. Have a toilet bowl, a shattaf and a flush control mounted positioned on the rear wall in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
  - iii. Have a slip-resistance in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
  - iv. Have a two-sided (symmetric), left-hand and right-hand wheelchair transfer option with a minimum clear floor space of 900 mm in width and 1500 mm in depth, beside the toilet bowl with hinged support grab bars on both sides of the toilet bowl (Figure 36).
  - v. Grab bars shall be provided for two-side transfers in accordance with **“Sahel Building Rating System – HC.1.01 Accessible toilet rooms”**.

**c) 2 Credits in renovation.**

- i. Have the height of the toilet bowl between 450 mm and 500 mm above the floor surface, measured to the top of the toilet seat or a height-adjustable seat may be provided (Figure 37).
- ii. Have a longer toilet bowl, if a padded backrest is installed behind the toilet bowl, to accommodate it properly.

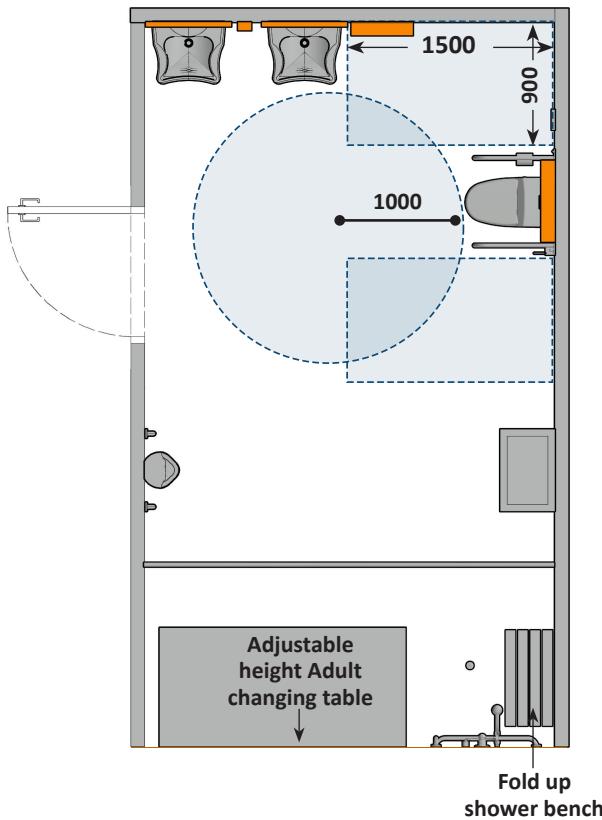
**d) 1 Credits in renovation.**

- i. Have flush controls that are either hand-operated or the lever-type controls (L-shape) or large push-button flushing controls or automatic.
- ii. All toilet doors within the family toilet and accessible path leading to the family toilet shall be in accordance with **“Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)”**.

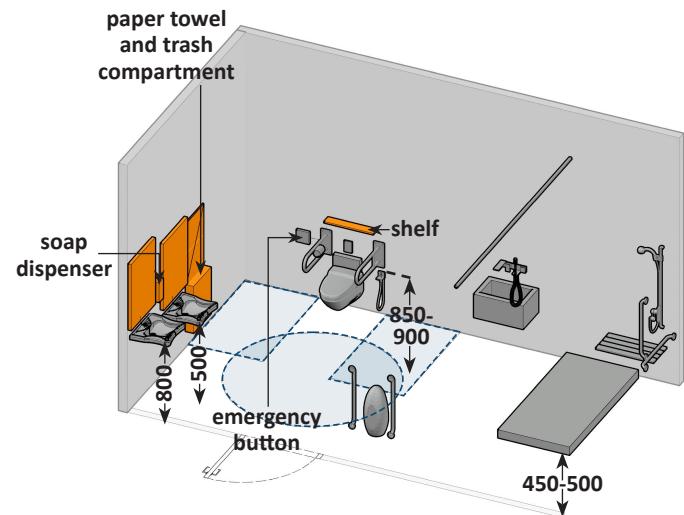
**e) 3 Credits in renovation.**

All accessories within a family toilet shall:

- i. Be on an accessible path.
- ii. Have two washbasins, one accessible at a height of 800 mm maximum and another at 500 mm maximum measured from the rim to the floor surface,
- iii. Have one urinal at maximum rim height of 400 mm.
- iv. Have an ostomy toilet with shelf, toilet paper dispenser, faucet and soap dispenser placed within reach in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
- v. Have a toilet paper dispenser, electrical outlets and other accessories provided that comply with **“Sahel Building Rating System – HC.1.01 Accessible toilet rooms”**.
- vi. Have an accessible roll-in shower with seat and grab bars in accordance with **“Sahel Building Rating System – HC.1.07 Accessible shower rooms and bathrooms”**.
- vii. Have an adult changing table positioned between 450 mm and 500 mm above the floor surface, with a working surface of minimum 800 mm width and minimum 1800 mm length made of durable, moist resistible material with a clear floor space of minimum 900 mm in width and 1500 mm in depth in front of it.
- viii. Have an additional shower head covering in range the entire adult changing table positioned close to it.
- ix. Have a call for assistance device in accordance with **“Sahel Building Rating System – HC.1.01 Accessible toilet rooms”**.



**Figure 36:** Family toilet plan view



**Figure 37:** Family toilet

### 3.6.3.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

### 3.6.3.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

### 3.6.3.6 Pre-certificate rating submission:

- Narrative describing how the project meets the credit requirements, including the number and location of family toilets, the features of a changing table, the toilet bowl, the shattaf, the flush control, the grab bars, the washbasin, the mirror, the paper dispenser, the coat hook, the call for assistance device, the signage, the luminance contrast, the illuminance, and the floor surface.
- Design drawings showing the layout and dimensions of the family toilets, the location and measurements of the changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, mirror, paper and soap dispenser, coat hook, call for assistance device, doors, and signage. The drawings must also indicate the accessible path, the clear turning circle, the clear floor space, the opening force, the luminance contrast, the illuminance, and the floor surface within the family toilets.
- Specifications and details of the materials, finishes, and fixtures used in the family toilets, such as the type and height of the changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, faucet, mirror, paper and soap dispenser, coat hook, call for assistance device, doors, and signage.

### **3.6.3.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design and the reasons for them.
- b)** As-built drawings showing the actual implementation of the family toilets, with the same level of detail and annotation as the design drawings. Any discrepancies or variations from the design drawings must be highlighted and explained.
- c)** Photographs of the family toilets, showing the overall appearance and the accessibility features, such as the baby holder, changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, mirror, paper dispenser, coat hook, call for assistance device, doors, and signage. The photographs must also show the accessible path, the clear turning circle, the clear floor space, the opening force, the luminance contrast, the illuminance, and the floor surface within the family toilets.

### **3.6.3.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013
- c)** UAE Universal design Code
- d)** Abu Dhabi Public Toilet Planning and Regulation Manual
- e)** PR-401: Public Realm Design Manual

## **3.6.4 HC.1.04 Enhanced family toilets**

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### **3.6.4.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- c)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- d)** A-5 (e.g., amusement parks, other outdoor assembly uses)
- e)** E (e.g., colleges, schools, day care)
- f)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- g)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- h)** Special Occupancy: public transportation terminals (airports and ferries), major transportation stations larger than 2000 square meters, covered/open malls.

### **3.6.4.2 Intent:**

To provide equitable access to essential facilities such as family toilets, usable by people of all ages, sizes, abilities, and family compositions.

### **3.6.4.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

At least one family toilet room shall be provided in locations in accordance with **“Sahel Community Rating System – HC.3.04 Enhanced family toilet”**.

At least one family toilet room provided within the certification boundary should:

- a)** Have doors with an opening force of a maximum of 15 N or automated.
- b)** Have a full-length mirror provided.
- c)** Have a baby holder provided.
- d)** Have a ceiling or portable hoist with use instructions and storage space, if portable.

### 3.6.4.4 Pre-certificate rating credits:

**Table 77: HC.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	2	Design at least one family toilet with doors having an opening force of a maximum of 15 N
1	2	Design at least one family toilet with a full-length mirror
1	1	Design at least one family toilet with a baby holder
2	3	Foresee a ceiling or portable hoist.

### 3.6.4.5 Certificate rating credits:

**Table 78: HC.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	2	Provide at least one family toilet with doors having an opening force of a maximum of 15 N
1	2	Provide at least one family toilet with a full-length mirror
1	1	Provide at least one family toilet with a baby holder
2	3	Provide a ceiling or portable hoist.

### 3.6.4.6 Pre-certificate rating submission:

- a) Narrative describing how the project meets the credit requirements, including the number and location of family toilets, features of the baby holder and changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, mirror, paper dispenser, coat hook, call for assistance device, signage, luminance contrast, illuminance, and floor surface.
- b) Design drawings showing the layout and dimensions of the family toilets, the location and measurements of the baby holder, changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, mirror, paper dispenser, coat hook, call for assistance device, doors, and signage. The drawings must also indicate the accessible path, the turning circle, the transfer space, the opening force, the luminance contrast, the illuminance, and the floor surface within the family toilets.
- c) Specifications and details of the materials, finishes, and fixtures used in the family toilets, such as the type and height of the baby holder, changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, faucet, mirror, paper dispenser, coat hook, call for assistance device, doors, and signage.

### **3.6.4.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design and the reasons for them.
- b)** As-built drawings showing the actual implementation of the family toilets, with the same level of detail and annotation as the design drawings. Any discrepancies or variations from the design drawings must be highlighted and explained.
- c)** Photographs of the family toilets, showing the overall appearance and the accessibility features, such as the baby holder, changing table, toilet bowl, shattaf, flush control, grab bars, washbasin, mirror, paper dispenser, coat hook, call for assistance device, doors, and signage. The photographs must also show the accessible path, the clear turning circle, the transfer space, the opening force, the luminance contrast, the illuminance, and the floor surface within the family toilets.

## 3.6.5 HC.1.05 Baby feeding rooms

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### 3.6.5.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- c) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- d) A-5 (e.g., amusement parks, other outdoor assembly uses)
- e) E (e.g., colleges, schools, day care)
- f) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- g) Special Occupancy: public transportation terminals (airports and ferries), major transportation stations larger than 2000 square meters, covered/open malls.

### 3.6.5.2 Intent:

To ensure provision of accessible and well-equipped baby feeding rooms in large buildings, offering essential amenities prioritizing the accessibility, safety and comfort for both guardians and babies.

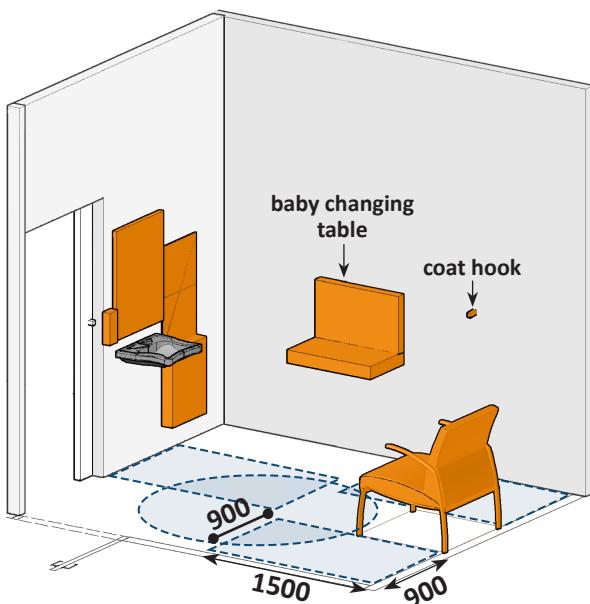
### 3.6.5.3 Requirements:

#### Mandatory:

At least one accessible baby feeding room shall be provided in accordance with **Abu Dhabi International Accessibility Standards, 2013** and shall (Figure 38):

- a) **2 Credits in renovation.**
  - i. Be located within 300 m from any point within the building, calculated via the Direct Route Indices Method.
  - ii. Be accessible and be independently placed away from any toilets.
  - iii. Be of a minimum surface area of 7 sqm for individual feeding rooms.
  - iv. Have an unobstructed minimum turning circle in front of the device with a diameter of 1800 mm.
  - v. Have a slip-resistance in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - vi. Have all doors within the baby feeding room in accordance with "**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**".
- b) **2 Credits in renovation.**
  - i. All accessories within the baby feeding room shall be on accessible path and shall have the necessary accessories, wherever applicable, in accordance with "**Sahel Building Rating System – HC.1.01 Accessible toilet rooms**", including:
    - a. Have a washbasin located outside the required clear floor space of minimum 900 mm in width and 1500 mm in depth and shall be accessible from a seated position as described in the "**Sahel Building Rating System – HC.1.01 Accessible toilet rooms**".
    - b. Have a minimum of one clothing hook, a soap and paper dispenser, minimum one electrical outlet with a clear floor space of minimum 900 mm in width and 1500 mm in depth in front of them in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**".

- c. Have a free-standing or wall-mounted baby changing table either foldable or fixed as described in the **“Sahel Building Rating System – HC.1.01 Accessible toilet rooms”**.
- d. Have accessible floor surfaces and visual contrast
- e. Have a sanitary disposable bin.
- f. Have a mirror with lower edge at minimum 600 mm above floor level.
- ii. Have a minimum of one comfortable and accessible chair, along with at least one table, shelf, or cabinet that can be easily reached from the chairs. Have a table, shelf, or cabinet that can be easily reached from the chairs.
- iii. Be adequately signposted in accordance with **“Sahel Building Rating System – OC.1.01 Signage and other communication elements”**.



**Figure 38: Baby feeding room**

#### **3.6.5.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.6.5.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.6.5.6 Pre-certificate rating submission:**

- a) Narrative describing how the project meets the credit requirements, including the number and location of baby feeding rooms, and the design features that ensure accessibility, comfort, and hygiene for users.
- b) Design drawings showing the layout and dimensions of baby feeding rooms, including the location and measurements of baby changing tables, washbasins, clear turning circles, clothing hooks, soap and paper towel dispensers, mirrors, sanitary disposal bins, chairs/armchairs, electrical outlets,).
- c) Specifications and details of signage, luminance contrast, lighting, and floor surface, demonstrating compliance with the relevant standards and guidelines.

### **3.6.5.7 Certificate rating submission:**

- a)** Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design and the reasons for them.
- b)** As-built drawings showing the layout and dimensions of baby feeding rooms, including the location and measurements of baby changing tables, washbasins, clear turning circles, clothing hooks, soap and paper towel dispensers, mirrors, sanitary disposal bins, chairs/armchairs, electrical outlets, and carpets (if relevant).
- c)** Updated specifications and details of signage, luminance contrast, lighting, and floor surface, demonstrating compliance with the relevant standards and guidelines.
- d)** Photographs of baby feeding rooms, showcasing features like signage, luminance contrast, lighting, floor surface, baby changing tables, washbasins, clear turning circles, clothing hooks, soap and paper towel dispensers, mirrors, sanitary disposal bins, chairs/armchairs, electrical outlets, and carpets (if relevant).

### **3.6.5.8 References:**

- a)** UAE Universal design Code
- b)** Abu Dhabi Public Toilet Planning and Regulation Manua

## 3.6.6 HC.1.06 Enhanced baby feeding rooms

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### 3.6.6.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- c) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- d) A-5 (e.g., amusement parks, other outdoor assembly uses)
- e) E (e.g., colleges, schools, day care)
- f) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- g) Special Occupancy: public transportation terminals (airports and ferries), major transportation stations larger than 2000 square meters, covered/open malls.

### 3.6.6.2 Intent:

To ensure provision of accessible and well-equipped baby feeding rooms in large buildings, offering essential amenities prioritizing the accessibility, safety and comfort for both guardians and babies.

### 3.6.6.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

At least one baby feeding room provided should:

- a) Have all doors with an opening force of a maximum of 15 N or an automated door opener provided and a microwave.
- b) An accessible diaper vending machine and ensure a lighting color temperature of 3000 K-5000 K in accordance with **“Sahel Building Rating System – EQC.1.12 Enhanced lighting and display”**.

#### Best Practice:

At least one baby feeding room provided should:

- a) Have a washbasin with an internal shape allowing for baby cleaning with a flexible faucet with an extendable spout.
- b) Have a continuous countertop that incorporates a changing table, a washbasin and space for food preparation, at a height of minimum 750 mm high and minimum clear height of 700mm high from floor surface.
- c) Have two armchairs provided.

### 3.6.6.4 Pre-certificate rating credits:

**Table 79: HC.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design at least one baby feeding room with a door having an opening force of a maximum of 15 N or automated and with a microwave.
1	1	Foresee at least one baby feeding room with a diaper vending machine and lighting color temperature.
		<b>Best Practice:</b>
3	3	Design at least one baby feeding room with a washbasin having an internal shape allowing for baby cleaning with a flexible faucet and a continuous countertop that incorporates a changing table and space for food preparation.
1	1	Foresee two armchairs

### 3.6.6.5 Certificate rating credits:

**Table 80: HC.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Provide at least one baby feeding room with a door having an opening force of a maximum of 15 N or automated and with a microwave.
1	1	Provide at least one baby feeding room with a diaper vending machine and lighting color temperature.
		<b>Best Practice:</b>
3	3	Provide at least one baby feeding room with a washbasin having an internal shape allowing for baby cleaning with a flexible faucet and a continuous countertop that incorporates a changing table and space for food preparation.
1	1	Provide two armchairs.

### **3.6.6.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Narrative describing how the project meets the credit requirements, including the number and location of baby feeding rooms, and the design features that ensure accessibility, comfort, and hygiene for users.
- b)** Design drawings showing the layout and dimensions of baby feeding rooms, including the location and measurements of washbasins, clear turning circles, clothing hooks, soap and paper towel dispensers, mirrors, sanitary disposal bins, chairs/armchairs, electrical outlets.
- c)** Specifications and details of signage, luminance contrast, lighting, and floor surface,
- d)** Additional documentation outlining the proposed features for baby feeding rooms, including: a diaper vending machine.

#### **Best Practice:**

- a)** Additional documentation outlining the proposed features for baby feeding rooms, including a continuous countertop with a changing table, a washbasin with extendable shower handle, and a space for food preparation.
- b)** Additional drawings including the placement of seating area and appropriate dimensions of the countertop.

### **3.6.6.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative describing how the project meets the credit requirements, including any changes or deviations from the original design and the reasons for them.
- b)** As-built drawings showing the layout and dimensions of baby feeding rooms, including the location and measurements, washbasins, clear turning circles, clothing hooks, soap and paper towel dispensers, mirrors, sanitary disposal bins, chairs/armchairs, electrical outlets, and carpets (if relevant).
- c)** Updated specifications and details of signage, luminance contrast, lighting, and floor surface.
- d)** Photographs of baby feeding rooms, showcasing features like signage, luminance contrast, lighting, floor surface, baby changing tables, washbasins, clear turning circles, clothing hooks, soap and paper towel dispensers, mirrors, sanitary disposal bins, chairs/armchairs, electrical outlets.
- e)** Updated documentation confirming the implementation of features for baby feeding rooms, including: a diaper vending machine.

#### **Best Practice:**

- a)** Updated documentation confirming the implementation of features for baby feeding rooms, including a continuous countertop with a changing table, a washbasin with extendable shower handle, and a space for food preparation.
- b)** As-built drawings including the placement of seating area and appropriate dimensions of the countertop.

## 3.6.7 HC.1.07 Accessible shower rooms and bathrooms

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### 3.6.7.1 Applicability:

Applicable to all buildings with showers/bathrooms, including:

- a) Buildings with workplaces requiring a change of clothes
- b) Religious institutions
- c) Prisons
- d) Hospitals, child-care facilities, for persons who are not capable of self-preservation
- e) Swimming pools, sports facilities, fitness centers, spas and saunas
- f) Hostels, hotels with common shower areas
- g) Amusement parks
- h) Public transportation terminals (airports and ferries), major transportation stations larger than 2000 sqm and malls.

### 3.6.7.2 Intent:

To ensure that public shower/bathroom facilities are provided with equitable access by implementing accessible and inclusive features for all users.

### 3.6.7.3 Requirements:

#### Mandatory:

Define a minimum number and capacity of shower rooms, wherever public shower facilities are provided, in accordance with **Abu Dhabi International Building Code, 2013**:

#### a) 2 Credits in renovation.

At least 15% (not less than one) of the shower compartments provided in a facility of public use shall be accessible.

#### b) 4 Credits in renovation.

Accessible shower rooms shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and shall:

- i. Be designed as a roll-in shower with a step-free entrance connected to an accessible path.
- ii. Have adequate floor surface:
  - a. With a slip-resistance rating of B in accordance with to **“Sahel Building Rating System – EQC 1.09 Wall and floor finishes”**.
  - b. With a maximum cross-fall of 1:50 (2%) at the shower drain.
- iii. Have a minimum clear inside dimension of 900 mm by 1500 mm. Additionally, a clear space measuring 900 mm by 1500 mm, positioned parallel to and along the long side of the shower, shall be provided adjacent to the outside of the shower area.
- iv. Be equipped with a foldable shower seat. Shower seat shall:
  - a. Have a depth of minimum 400 mm and a length of minimum 450 mm.
  - b. Possess a structural strength of at least 1100 N measured at any point, considering both horizontal and vertical force.
  - c. Be positioned within the range of 450 mm to 500 mm above the floor surface.
  - d. Have a maximum allowable gap between the seat and the rear wall of the shower seat of 65 mm

- v. Have grab bars provided inside each roll-in shower which shall:
  - a. Include a horizontal grab bar affixed to the back wall adjacent to the seat, starting from the edge of the seat, but it shall not be situated above the seat. This horizontal grab bar along the back wall shall:
    - Extend the full length of the wall and come within a maximum distance of 150 mm from the adjoining side wall opposite the seat.
    - Be positioned so that its gripping surface is between 200 mm and 300 mm above the shower seat. In existing facilities, a horizontal grab bar shall be installed at a height ranging from 850 mm to 900 mm above the floor surface. If needed, integrate hinged support bars into the shower seat, that shall be installed at a height ranging from 200 mm to 300 mm above the shower seat.
- vi. Additionally, if a wall is positioned opposite the seat, and it is situated within a maximum distance of 1800 mm from the rear wall of the seat, an additional horizontal grab bar shall be installed to assist standing individuals. This horizontal side wall grab bar shall:
  - a. Extend the entire length of the wall and reach within a maximum distance of 150 mm from the adjacent back wall.
  - b. Be positioned so that its gripping surface is between 200 mm and 300 mm above the shower seat. In existing facilities, a horizontal grab bar shall be installed at a height ranging from 850 mm to 900 mm above the floor surface.
- vii. Have shower controls and the shower head shall be mounted on the side wall of the shower, positioned above the horizontal grab bar. They shall:
  - a. Be installed in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**".
  - b. Have a hot and cold-water outlet mixer.
  - c. Ensure roll-in showers are equipped with a height-adjustable handheld shower mounted on a vertical bar above the horizontal grab bar. Showers shall also be equipped with a flexible hose measuring a minimum of 1500 mm, ensuring convenient reach and keeping the shower head within grasp when seated.
  - d. Have a hand shower control with a non-positive shutoff feature.
- viii. Not have the compartment enclosures hindering the transfer from wheelchairs onto shower seats.
- ix. Have an access path linking the main shower room entrance with all the accessible shower compartments. The path shall be of a minimum of 1000 mm width, not obstructed by opening doors.
- x. Deliver water at a maximum temperature of 45°C.
- xi. Have soap dispensers and clothing hooks inside shower compartments installed in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**".
- xii. Have all accessories, floor and wall surfaces with a minimum luminance contrast in accordance with "**Sahel Building Rating System – EQC 1.09 Wall and floor finishes**".
- xiii. Have all doors in accordance with "**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**".
- xiv. Have call for assistance device(s) (e.g., an emergency pull cords and/or push button) provided in all accessible showers next to the entrance mounted with a height in accordance with "**Sahel Building Rating System – EFE.1.13 Operable parts**" and as described in "**Sahel Building Rating System – HC.1.01 Accessible toilet rooms**".
- xv. Have audible and visual emergency alarms installed in public shower room. The visual alarm shall be visible from the accessible shower.

**c) 4 Credits in renovation.**

Where bathtubs are provided in accessible bathrooms, they shall:

- i. Accessible bathtubs shall be equipped with either a fixed or a removable seat. They shall be installed at a height ranging from 450 mm to 500 mm above the floor surface. Fixed seats shall have a minimum depth of 400 mm, while removable seats shall measure between 380 mm and 400 mm in depth.
- ii. Accessible bathtubs shall have a minimum clear space measuring 900 mm by 1500 mm, positioned parallel to and along the long side of the bathtub. If a fixed seat is provided at the end of the bathtub, clearance shall extend a minimum of 300 mm beyond the wall at the head end of the bathtub.
- iii. Grab bars shall be installed on the long side of the bathtub and on the side opposite theseat.
  - a. Two horizontal grab bars shall be affixed to the back wall adjacent to the seat, starting from the edge of the seat, but it shall not be situated above the seat. These grab bars along the back wall shall extend the full length of the wall and come within a maximum distance of 300 mm from the adjoining side wall opposite the seat. One of the grab bars shall be placed 200 mm to 250 mm above the rim of the bathtub and the other one shall be positioned so that its gripping surface is between 750 mm and 850 mm above the floor surface. In existing facilities, the upper grab bar shall be installed at a height between 850 mm and 900 mm.
  - b. A horizontal grab bar, at least 600 mm in length, shall be installed on the control end wall. It shall commence near the front edge of the bathtub and extend towards the inner corner of the bathtub. The grab bar shall be positioned so that its gripping surface is between 750 mm and 850 mm above the floor surface. In existing facilities, the upper grab bar shall be installed at a height between 850 mm and 900 mm.
  - c. A vertical grab bar shall be installed, situated no more than 150 mm above the horizontal grab bar, with a minimum length of 600 mm. Additionally, the vertical grab bar shall be positioned 100 mm from the edge of the open side of the bathtub. In existing facilities, the vertical grab bar shall be placed between 75 mm and 150 mm above the horizontal grab bar and have a minimum length of 450 mm.
- iv. Controls, excluding drain stoppers, shall be positioned on the wall opposite the seat, situated between the bathtub rim and the grab bar, and between the open side of the bathtub and the centerline of the bathtub's width:
  - a. Bathtubs shall have a hot and cold-water outlet mixer.
  - b. Bathtubs shall be equipped with a height-adjustable handheld shower, which shall be mounted on a vertical bar positioned above the horizontal grab bar. Bathtubs shall be equipped with a flexible hose measuring a minimum of 1500 mm, ensuring convenient reach, with the shower head within grasp when seated.
  - c. The handheld shower head shall feature a control with a non-positive shutoff feature.
- v. Not have the compartment enclosures hindering the transfer from wheelchairs onto shower seats and shall not have the tracks at the rim of the bathtub.
- vi. Deliver water at a maximum temperature of 45°C.

- vii. Call for assistance devices (e.g., emergency pull cords and/or push buttons) shall be provided in all accessible bathrooms with a bathtub, positioned close to the bathtub and within reach while seated in the bathtub. These devices shall be mounted at a height in accordance with the **“Sahel Building Rating System – EFE.1.13 Operable parts”** and as described in **“Sahel Building Rating System – HC.1.01 Accessible toilet rooms”**.
- viii. Have audible and visual emergency alarms installed in bathrooms with a bathtub. The visual alarm shall be visible from the bathtub.

#### **3.6.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.6.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.6.7.6 Pre-certificate rating submission:**

- a) Design drawings illustrating the proposed locations of accessible shower and/or bathrooms.
- b) Detailed specifications of the shower compartments and/or bathtubs, including the design of roll-in showers, floor surface details, dimensions, equipment details (such as shower seat, grab bars, shower controls, and shower head), soap dispenser installation, and water temperature control.
- c) Layout drawings showing the clear inside dimensions of the shower compartments and/or bathroom with the bathtub, the clear space adjacent to the shower area/bathtub, and the locations of grab bars, shower controls, and shower head.
- d) Plans showing the accessible path linking the main entrance and each accessible shower compartment and/or bathroom with the bathtub.
- e) Design details ensuring a clear turning circle with a minimum diameter of 1800 mm and the clear floor space.

#### **3.6.7.7 Certificate rating submission:**

- a) As-built documentation confirming the implementation of accessible shower rooms and/or bathrooms with the bathtub in designated buildings.
- b) Updated specifications if any changes were made during the construction stage.
- c) As-built layout drawings showing the clear inside dimensions of the shower compartments/bathrooms with the bathtub, the clear space adjacent to the shower area/bathtub, and the locations of grab bars, shower controls, and shower head.
- d) Photographs of accessible shower compartments and/or bathroom with the bathtub, showcasing features like roll-in showers/bathtub, (shower) seats, grab bars, shower controls, shower head, soap dispensers, and clothing hooks.
- e) As-built accessibility drawings showing the accessible path linking the main entrance and each accessible shower compartment and/or bathroom with the bathtub.

### **3.6.7.8 References:**

- a) Abu Dhabi International Building Code, 2013**
- b) Abu Dhabi International Accessibility Standards, 2013**
- c) UAE Universal Design Code**
- d) Abu Dhabi Public Toilet Planning and Regulation Manual**

## **3.6.8 HC.1.08 Enhanced accessible shower rooms and bathrooms**

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### **3.6.8.1 Applicability:**

Applicable to all buildings with showers/bathroom, including:

- a) Buildings with workplaces requiring a change of clothes
- b) Religious institutions
- c) Prisons
- d) Hospitals, child-care facilities, for persons who are not capable of self-preservation
- e) Swimming pools, sports facilities, fitness centers, spas and saunas
- f) Hostels, hotels with common shower areas
- g) Amusement parks
- h) Public transportation terminals (airports and ferries), major transportation stations larger than 2000 sqm and malls.

### **3.6.8.2 Intent:**

To ensure that public shower/ bathroom facilities are provided with equitable access by implementing accessible and inclusive features for all users.

### **3.6.8.3 Requirements:**

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

- a) At least 20% (not less than 1) of the shower compartments/bathrooms with a bathtub should be accessible.
- b) Be equipped with a foldable height adjustable shower seat that includes integrated hinged support bars for added stability.
- c) Have a door of minimum width of 1100 mm.

#### **Best Practice:**

At least 30% (not less than 1) of the shower compartments/ bathrooms with a bathtub should be accessible.

### 3.6.8.4 Pre-certificate rating credits:

**Table 81: HC.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design at least 20%, not less than one of the shower rooms/ bathrooms with a bathtub shall be accessible
1	2	Design all accessible shower rooms with foldable shower seat that is height adjustable that includes integrated hinged support bars with a door of minimum width of 1100 mm
		<b>Best Practice:</b>
2	3	Design at least 30% not less than one of the shower rooms/ bathrooms with a bathtub shall be accessible

### 3.6.8.5 Certificate rating credits:

**Table 82: HC.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Confirm that at least 20%, not less than one of the shower rooms/ bathrooms with a bathtub provided are accessible.
1	2	Confirm that all accessible shower rooms are provided with foldable, height-adjustable shower seats that includes integrated hinged support bars and have a door of minimum width of 1100 mm
		<b>Best Practice:</b>
2	3	Confirm that at least 30%, not less than one of the shower rooms / bathrooms with a bathtub provided are accessible.

### **3.6.8.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Design drawings illustrating the proposed locations of accessible shower rooms/bathrooms with bathtub.
- b)** Detailed specifications of the shower compartments and/or bathrooms, including the design of roll-in showers/bathtub floor surface details, dimensions, equipment details (such as shower seat, grab bars, shower controls, and shower head), soap dispenser installation, and water temperature control.
- c)** Layout drawings showing the clear inside dimensions of the shower compartments and/or bathrooms with bathtub. the clear space adjacent to the shower area/bathtub, and the locations of grab bars, shower controls, and shower head.
- d)** Plans showing the accessible path linking the main entrance and each accessible shower compartment and/or bathrooms with bathtub.
- e)** Design details ensuring a clear turning circle with a minimum diameter of 1800 mm and clear floor space.

#### **Best Practice:**

- a)** Design drawings illustrating the proposed locations and number of accessible shower rooms and/or bathrooms with bathtub.

### **3.6.8.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built documentation confirming the implementation of accessible shower rooms and/or bathrooms with bathtubs in designated buildings.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** As-built layout drawings showing the clear inside dimensions of the shower compartments and/or bathrooms with bathtub., the clear space adjacent to the shower area/bathtub, and the locations of grab bars, shower controls, and shower head.
- d)** Photographs of accessible shower compartments and/or bathrooms with bathtub, showcasing features like roll-in showers/bathtub, (shower) seats, grab bars, shower controls, shower head, soap dispensers, and clothing hooks.
- e)** As-built accessibility drawings showing the accessible path linking the main entrance and each accessible shower compartment and/ or bathrooms with bathtub.

#### **Best Practice:**

As-built drawings confirming the actual locations and number of accessible shower rooms and/or bathrooms with bathtub.

## 3.7 DA.1 Digital Accessibility

This category assesses how accessible digital technologies and services are for all users in public settings, including websites, apps, and programs. It looks at factors like ease of use, readability, compatibility, and security to ensure Digital Accessibility for all.

**Table 83: Digital Accessibility**

DA	Digital Accessibility	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
DA.1.01	Asset webpage	Mandatory	R	3
DA.1.02	Enhanced asset webpage	Recommended	3	3
		Best Practice	2	2
DA.1.03	Asset presence in common use apps	Mandatory	R	2
DA.1.04	Enhanced asset apps	Recommended	5	5
		Best Practice	4	4
DA.1.05	Digital maps/navigation systems (non-GPS)	Mandatory	R	R
DA.1.06	Enhanced digital maps/navigation systems (non-GPS)	Recommended	4	4
		Best Practice	4	4
DA.1.07	Online user feedback platform	Mandatory	R	2
DA.1.08	Enhanced online user feedback platform	Recommended	2	2
		Best Practice	2	2
DA.1.09	Enhanced Wi-Fi access	Recommended	3	3
DA.1.10	Augmented experience for heritage sites	Mandatory	R	8
DA.1.11	Enhanced augmented experience for heritage sites	Recommended	6	6
		Best Practice	10	10
	<b>Total</b>		<b>45</b>	<b>60</b>

## 3.7.1 DA.1.01 Asset webpage

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### 3.7.1.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 sqm:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m) Special Occupancy: transportation hubs, covered/open malls, underground structures.

### 3.7.1.2 Intent:

To ensure that all buildings for public use have accessible web pages with vital information accessible for all.

This is achieved by conforming to the **Web Content Accessibility Guidelines (WCAG) 2.2**, which are structured into three levels of accessibility:

- a) **Level A (Basic Accessibility):** Ensures non-text content has text alternatives, all functionality is accessible via keyboard, and content is correctly parsed.
- b) **Level AA (Mid-Level Accessibility):** Ensures adequate contrast, resizable text, multiple ways to navigate, language of content parts can be determined, and error suggestions are provided.
- c) **Level AAA (High-Level Accessibility):** Provides enhanced accessibility with sign language interpretation, enhanced contrast, no content having a flash rate within the range of one flash every second(1Hz) and two flashed per second (2Hz), detailed link purposes, and mechanisms for defining unusual words.

### 3.7.1.3 Requirements:

#### Mandatory:

##### a) 3 Credits in renovation.

The asset shall feature an AA level WCAG-compliant web page which shall be in accordance with "**Sahel Community Rating System – DA.3.01 Asset webpage**".

### **3.7.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 3.

For credits breakdown refer to “[Sahel Community Rating System – DA.3.01 Asset webpage](#)”.

### **3.7.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 3.

For credits breakdown refer to “[Sahel Community Rating System – DA.3.01 Asset webpage](#)”.

### **3.7.1.6 Pre-certificate rating submission:**

Refer to “[Sahel Community Rating System – DA.3.01 Asset webpage](#)”.

### **3.7.1.7 Certificate rating submission:**

Refer to “[Sahel Community Rating System – DA.3.01 Asset webpage](#)”.

## 3.7.2 DA.1.02 Enhanced asset webpage

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### 3.7.2.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m) Special Occupancy: transportation hubs, covered/open malls, underground structures.

### 3.7.2.2 Intent:

To ensure that important buildings have web pages with vital information accessible for all, which follows either recommended or best practice.

This is achieved by conforming to the **Web Content Accessibility Guidelines (WCAG) 2.2**, which are structured into three levels of accessibility:

- a) **Level A (Basic Accessibility):** Ensures non-text content has text alternatives, all functionality is accessible via keyboard, and content is correctly parsed.
- b) **Level AA (Mid-Level Accessibility):** Ensures adequate contrast, text resizing, multiple ways to navigate, language of content parts can be determined, and error suggestions are provided.
- c) **Level AAA (High-Level Accessibility):** Provides enhanced accessibility with sign language interpretation, enhanced contrast, no content having a flash rate within the range of one flash every second (1 Hz) and two flashes per second (2 Hz), detailed link purposes, and mechanisms for defining unusual words.

### 3.7.2.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

The design of the recommendations to enhance the asset webpage shall be in accordance with **“Sahel Community Rating System – DA.3.02 Enhanced asset webpage”**.

**Best Practice:**

The design of the best practice to enhance the asset webpage shall be in accordance with “**Sahel Community Rating System – DA.3.02 Enhanced asset webpage**”.

**3.7.2.4 Pre-certificate rating credits:**

Refer to “**Sahel Community Rating System – DA.3.02 Enhanced asset webpage**”.

**3.7.2.5 Certificate rating credits:**

Refer to “**Sahel Community Rating System – DA.3.02 Enhanced asset webpage**”.

**3.7.2.6 Pre-certificate rating submission:**

Refer to “**Sahel Community Rating System – DA.3.02 Enhanced asset webpage**”.

**3.7.2.7 Certificate rating submission:**

Refer to “**Sahel Community Rating System – DA.3.02 Enhanced asset webpage**”.

## 3.7.3 DA.1.03 Asset presence in common use apps

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### 3.7.3.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 sqm:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m) Special Occupancy: transportation hubs, covered/open malls, underground structures.

### 3.7.3.2 Intent:

To guarantee that accessibility information of buildings is provided in common use navigation apps like Onwani or Google Maps, among others.

### 3.7.3.3 Requirements:

#### Mandatory:

##### a) 2 Credits in renovation.

All mandatory design and provisional requirements to guarantee the information about accessibility in buildings shall be in accordance with "**Sahel Community Rating System – DA.3.03 Asset presence in common use apps**".

### 3.7.3.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

For credits breakdown refer to "**Sahel Community Rating System – DA.3.03 Asset presence in common use apps**".

### 3.7.3.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

For credits breakdown refer to "**Sahel Community Rating System – DA.3.03 Asset presence in common use apps**".

### **3.7.3.6 Pre-certificate rating submission:**

Refer to “Sahel Community Rating System – DA.3.03 Asset presence in common use apps”.

### **3.7.3.7 Certificate rating submission:**

Refer to “Sahel Community Rating System – DA.3.03 Asset presence in common use apps”.

## **3.7.4 DA.1.04 Enhanced asset apps**

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### **3.7.4.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g)** E (e.g., colleges, schools, day care).
- h)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j)** M (e.g., supermarkets, drug stores, retail stores)
- k)** R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l)** R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m)** Special Occupancy: transportation hubs, covered/open malls, underground structures

### **3.7.4.2 Intent:**

To develop an enhanced asset app that includes multisensorial access and improved wayfinding and ensures all facilities in important buildings are streamlined to provide access to resources and information, accessible to all individuals, fostering inclusivity and empowerment.

### **3.7.4.3 Requirements:**

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All recommended designs and provisional requirements to guarantee the information about accessibility in buildings shall be in accordance with **“Sahel Community Rating System – DA.3.04 Enhanced asset apps”**.

#### **Best Practice:**

All best practice designs and provisional requirements to guarantee the information about accessibility in buildings shall be in accordance with **“Sahel Community Rating System – DA.3.04 Enhanced asset apps”**.

### **3.7.4.4 Pre-certificate rating credits:**

Refer to **“Sahel Community Rating System – DA.3.04 Enhanced asset apps”**.

### **3.7.4.5 Certificate rating credits:**

Refer to **“Sahel Community Rating System – DA.3.04 Enhanced asset apps”**.

#### **3.7.4.6 Pre-certificate rating submission:**

Refer to “Sahel Community Rating System – DA.3.04 Enhanced asset apps”.

#### **3.7.4.7 Certificate rating submission:**

Refer to “Sahel Community Rating System – DA.3.04 Enhanced asset apps”.

## **3.7.5 DA.1.05 Digital maps/navigation systems (non-GPS)**

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### **3.7.5.1 Applicability:**

Applicable to all interstate and international transportation hubs including railway stations, cruise terminals, airports.

### **3.7.5.2 Intent:**

To ensure that additional navigation systems or maps provided by the asset are accessible.

### **3.7.5.3 Requirements:**

#### **Mandatory:**

The asset shall include kiosks listed on a static map with search and routing options, which shall:

- a)** Include clear visual and audio directions to services.
- b)** Include locations searchable by type (toilets quiet area, etc.).
- c)** Include turn-by-turn navigation steps with audio instructions.

### **3.7.5.4 Pre-certificate rating credits:**

This is a requirement for new and renovation projects. There are no credit points awarded.

### **3.7.5.5 Certificate rating credits:**

This is a requirement for new and renovation projects. There are no credit points awarded.

### **3.7.5.6 Pre-certificate rating submission:**

- a)** A specification of a navigation system (kiosks) that feature functionalities as described in requirements in compliance with an AA level WCAG Framework 2.2.
- b)** A Statement by the asset owner confirming that the asset will have a navigation system meeting an AA level WCAG Framework 2.2 featuring functionalities as described in the requirements.

### **3.7.5.7 Certificate rating submission:**

- a)** A report confirming the operation of the navigation system (kiosks) that features functionalities as described in requirements.
- b)** A Digital Accessibility Compliance statement issued by an auditor on behalf of the asset owner that the available navigation system (kiosks) meets an AA level WCAG Framework 2.2.

## 3.7.6 DA.1.06 Enhanced digital maps/navigation systems (non-GPS)

### 3.7.6.1 Applicability:

Applicable to all interstate and international transportation hubs including railway stations, cruise terminals, airports.

### 3.7.6.2 Intent:

To ensure that additional navigation systems or maps provided by the asset are accessible and follow either recommended or best practice.

### 3.7.6.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

- a) The asset should feature an online interactive map available on the website which should:
  - i. Have reliable, simple turn-by-turn directions including a feedback system to report errors users discover.
  - ii. Include vector maps (clear zoom), compatible with screen readers, and primary landmarks have basic text descriptions.
  - iii. Provide directory information clearly conveyed with an option to connect with contact information.

#### Best Practice:

The asset should provide QR codes leading to a digital map with audio narration, along tactile maps (for existing construction it is permitted to provide QR codes leading to a digital map with audio narration only).

### 3.7.6.4 Pre-certificate rating credits:

**Table 84: DA.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
4	4	Develop an online interactive map according to recommended requirements
		<b>Best Practice:</b>
4	4	Develop a strategy for providing QR codes that lead to a digital map with audio narration and tactile maps (if relevant)

### 3.7.6.5 Certificate rating credits:

**Table 85: DA.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
4	4	Verify that the online interactive map aligns with the design and has features according to the recommended requirements.
		<b>Best Practice:</b>
4	4	Verify that the QR codes are correctly implemented and lead to the intended digital map with audio narration and tactile maps (if relevant).

### 3.7.6.6 Pre-certificate rating submission:

#### Recommended:

A statement by the asset owner confirming that the asset will have a navigation system (webpage) meeting WCAG Framework 2.2 and feature the following recommended functions:

- a) Reliable, simple turn-by-turn directions including feedback system to report errors users discover.
- b) Vector maps (clear zoom) that are compatible with screen readers, primary landmarks have basic text descriptions.
- c) Directory information conveyed with an option to connect with contact information.

#### Best Practice:

A statement issued by the asset owner that the navigation system available at the asset will feature beyond mandatory and recommended functionalities the following:

- a) (New build assets): QR codes leading to digital map with audio narration, provided along tactile maps.
- b) (Existing assets): QR codes leading to digital map with audio narration, provided along tactile maps.

### 3.7.6.7 Certificate rating submission:

#### Recommended:

A report confirming that the asset has a navigation system (webpage) featuring the following recommended functions:

- a) Reliable, simple turn-by-turn directions including feedback system to report errors users discover.
- b) Vector maps (clear zoom) are compatible with screen readers, and primary landmarks have basic text descriptions.
- c) Directory information clearly conveyed with an option to connect with contact information.
- d) A Digital Accessibility Compliance report issued by an auditor on behalf of the asset owner that the available navigation system (webpage) meets WCAG Framework 2.2.

**Best Practice:**

A report confirming that the navigation system available at the asset features beyond mandatory and recommended functionalities of the following:

- a) (New build assets): QR codes leading to digital map with audio narration, provided along tactile maps,
- b) (Existing assets): QR codes leading to digital map with audio narration, provided along tactile maps,

## **3.7.7 DA.1.07 Online user feedback platform**

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### **3.7.7.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 sqm:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) M (e.g., supermarkets, drug stores, retail stores)
- j) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- k) Special Occupancy: transportation hubs, covered/open malls.

### **3.7.7.2 Intent:**

To ensure that the asset offers digital options via web for the mandatory asset user feedback collection in accordance with "**Sahel Building Rating System – CM.1.05 Users feedback collection**".

### **3.7.7.3 Requirements:**

#### **Mandatory:**

##### **a) 2 Credits in renovation.**

The asset shall offer digital options via the web for building user feedback collection, which shall:

- i. Be provided via accessible, (AA level WCAG2.2) online feedback forms for reporting accessibility barriers faced by all users.
- ii. Offer direct support in the completion of feedback forms.

### **3.7.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

### **3.7.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

### **3.7.7.6 Pre-certificate rating submission:**

- a) Statement by the asset owner that an AA level WCAG-compliant online feedback form will be available for asset users.
- b) Plan with proposed locations of information on the availability of online feedback forms.

### **3.7.7.7 Certificate rating submission:**

- a)** Pictures or screenshots confirming that the feedback form is available for users (screenshots from asset webpage information of feedback form availability posted in the lobby)
- b)** A sample feedback form in a digital format meeting an AA level WCAG Framework 2.2
- c)** A report issued by a Digital Accessibility auditor that the feedback form is an AA level WCAG Framework 2.2 compliant.

## 3.7.8 DA.1.08 Enhanced online user feedback platform

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### 3.7.8.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) M (e.g., supermarkets, drug stores, retail stores)
- j) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- k) Special Occupancy: transportation hubs, covered/open malls.

### 3.7.8.2 Intent:

To ensure that the asset offers digital options via web for the mandatory asset user feedback collection in accordance with **“Sahel Building Rating System – CM.1.05 Users feedback collection”**.

### 3.7.8.3 Requirements:

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

The asset should feature a publicly available user feedback platform, accessible to people with audio and visual access needs, which should:

- a) Have multi-modal interaction options offering input methods catering to all disabilities. These include as a minimum:
  - i. Clearly advertised, well-structured text forms.
  - ii. Simplified input forms optimized for assistive technologies like screen readers.
  - iii. Option to upload photos or videos to visually highlight specific barriers or successful features.

#### Best Practice:

The asset should feature a publicly available user feedback platform, accessible to people with audio and visual access needs, which should:

- a) Have multi-modal interaction options offering input methods catering to all disabilities. These include as a minimum:
  - i. Integration with SMS (text messages) and messaging apps for those uncomfortable with complex forms.

### 3.7.8.4 Pre-certificate rating credits:

**Table 86: DA.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Plan for a user feedback platform accessible to all, with multi-modal interaction options including text forms, simplified input forms, and the option to upload visual content.
		<b>Best Practice:</b>
2	2	Plan for a user feedback platform that is accessible to all, with integration options for SMS and messaging apps.

### 3.7.8.5 Certificate rating credits:

**Table 87: DA.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Confirm the implementation of the user feedback platform with the planned accessibility features and verify its functionality.
		<b>Best Practice:</b>
2	2	Confirm the implementation of the user feedback platform with the planned accessibility features and verify its functionality.

### 3.7.8.6 Pre-certificate rating submission:

#### Recommended:

A statement by the asset owner confirming that it will have an online feedback platform meeting an AA level WCAG Framework 2.2 and features the following recommended functions:

- a) Multi-modal interaction offering input methods catering to all disabilities. Include:
  - i. Clearly advertised, well-structured text forms.
  - ii. Simplified input forms optimized for assistive technologies like screen readers.
  - iii. Option to upload photos or videos to visually highlight specific barriers or successful features.

#### Best Practice:

A statement by the asset owner confirming that it will have an online feedback platform meeting an AA level WCAG Framework 2.2 and features the following best practice functions:

- a) Integration with SMS (text messages) and messaging apps for those uncomfortable with complex forms

### **3.7.8.7 Certificate rating submission:**

#### **Recommended:**

A report confirming that it will have an online feedback platform meeting an AA level WCAG Framework 2.2 and features the following recommended functions:

- a)** Multi-modal interaction offering input methods catering to all disabilities. Include:
  - i.** Clearly advertised, well-structured text forms.
  - ii.** Simplified input forms optimized for assistive technologies like screen readers.
  - iii.** Option to upload photos or videos to visually highlight specific barriers or successful features.

#### **Best Practice:**

A report confirming that it will have an online feedback platform meeting an AA level WCAG Framework 2.2 and features following best practice functions:

- a)** Integration with SMS (text messages) and messaging apps for those uncomfortable with complex forms
- b)** A Digital Accessibility Compliance report issued by an auditor confirming that the available online user feedback platform for the asset is AA level WCAG Framework 2.2 compliant.

## 3.7.9 DA.1.09 Enhanced Wi-Fi access

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### 3.7.9.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- b) E (e.g., colleges, schools, day care).
- c) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- d) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- e) Special Occupancy: transportation hubs, covered/open malls.
- f) Facilities accompanying fuel stations on interstate motorways.
- g) Residential, mixed-use, and commercial buildings are not included in the applicable occupancy groups. While there is no obligation to provide enhanced Wi-Fi in these types of buildings, they should at least offer a free Wi-Fi option and develop a plan for an accessible free Wi-Fi system to be awarded these credits.

### 3.7.9.2 Intent:

To propose a comprehensive plan for enhancing internet-based aids (e.g., navigation tools, communication with care, translation) free of charge, in open public spaces, ensuring seamless connectivity and inclusivity for all users.

### 3.7.9.3 Requirements:

#### Recommended:

The asset should offer publicly accessible free Wi-Fi which should:

- a) Offer wide device accessibility: user-friendly login and usability for varied tech in mind (laptops, assistive devices).
- b) Offer speed and reliability: ability to handle significant usage, reducing crowding if speeds falter when numerous people tap in.
- c) Provide physical and digital security strong encryption, user guide covering online safety precautions and recognizing potentially fraudulent networks.
- d) Have equitable placement: Even coverage to prevent exclusion of marginalized groups of users.

### 3.7.9.4 Pre-certificate rating credits:

**Table 88: DA.1.09 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Develop a plan for a publicly accessible free Wi-Fi system that is user-friendly, reliable, secure, and evenly distributed across the asset.

### 3.7.9.5 Certificate rating credits:

**Table 89: DA.1.09 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm the implementation of the planned Wi-Fi system, ensuring it meets the criteria for device accessibility, speed, security, and equitable placement.

### 3.7.9.6 Pre-certificate rating submission:

#### **Recommended:**

A statement by the asset owner confirming that it will have a publicly accessible free Wi-Fi featuring the following:

- a) Device Accessibility: User-friendly login and usability for varied tech in mind (laptops, assistive devices) and
- b) Speed and Reliability: Ability to handle significant usage, reducing crowding if speeds falter when numerous people tap in.
- c) Physical and Digital Security: Strong encryption, user guide covering online safety precautions and recognizing potentially fraudulent networks.
- d) Equitable Placement: Even coverage to prevent exclusion of marginalized groups of users.

### 3.7.9.7 Certificate rating submission:

#### **Recommended:**

A report confirming operational publicly accessible free Wi-Fi at the asset featuring the following:

- a) Device Accessibility: User-friendly login and usability for varied tech in mind (laptops, assistive devices) and
- b) Speed and Reliability: Ability to handle significant usage, reducing crowding if speeds falter when numerous people tap in.
- c) Physical and Digital: Security Strong encryption, user guide covering online safety precautions, and recognition of potentially fraudulent networks.
- d) Equitable Placement: Even coverage to prevent exclusion of marginalized groups of users.
- e) As-built documentation confirming:
  - i. Signal coverage on a site plan with measurement locations
  - ii. Network capacity and maximum number of users with guaranteed minimum transfer.

For residential, mixed-use, and commercial buildings, a statement by the owner confirming that it will have a publicly accessible free Wi-Fi connection.

## 3.7.10 DA.1.10 Augmented experience for heritage sites

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### 3.7.10.1 Applicability:

Applicable to all heritage buildings at the emirate and municipality level of importance, offering private or group tours to the public.

### 3.7.10.2 Intent:

To provide alternative augmented experiences for all asset users of heritage spaces that may not be fully physically accessible due to their historic character.

### 3.7.10.3 Requirements:

#### Mandatory:

##### a) 8 Credits in renovation

Heritage buildings and sites with limitations to full physical accessibility due to their historic character (buildings or sites of emirate or municipal significance) shall:

- Provide a web-based virtual walkthrough solution that meets an AA level WCAG 2.2 accessibility standards and integrates AR overlays to enhance the experience for users with disabilities.

These overlays could include, but are not limited to:

- Descriptive Audio i.e., detailed audio descriptions of the physical space and exhibits, synced with the virtual walkthrough.
- At least one accessible information kiosk with virtual walkthroughs and AR features must be installed along an accessible path on site.

### 3.7.10.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### 3.7.10.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### 3.7.10.6 Pre-certificate rating submission:

A Statement by the asset owner that the asset will feature a web-based virtual walkthrough solution that meets an AA level WCAG 2.2 accessibility standards and integrates AR overlays to enhance the experience for users with disabilities.

These overlays could include, but are not limited to:

- Descriptive Audio i.e., detailed audio descriptions of the physical space and exhibits, synced with the virtual walkthrough.
- At least one accessible information kiosk with a virtual walkthrough and AR features will be installed along an accessible path on the site.

### **3.7.10.7 Certificate rating submission:**

A report confirming that the asset features an operational web-based virtual walkthrough solution that meets an AA level WCAG 2.2 accessibility standards and integrates AR overlays to enhance the experience for users with disabilities.

These overlays could include, but not limited to:

- a)** Descriptive Audio i.e., detailed audio descriptions of the physical space and exhibits, synced with the virtual walkthrough.
- b)** As-built drawings and photographs confirming at least one accessible information kiosk with the virtual walkthrough and AR features installed along an accessible path on the site.

## **3.7.11 DA.1.11 Enhanced augmented experience for heritage sites**

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### **3.7.11.1 Applicability:**

Applicable to all heritage buildings at the emirate and municipality level of importance, offering private or group tours to the public.

### **3.7.11.2 Intent:**

To ensure advanced equitable access to experiences by providing alternative augmented experiences for all asset users of heritage spaces that may not be fully physically accessible due to their historic character.

### **3.7.11.3 Requirements:**

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

Heritage buildings and sites with limitations to full physical accessibility due to their historic character (buildings or sites of emirate or municipal significance) should:

- a)** Provide a web-based virtual walkthrough solution that meets an AA level WCAG 2.2 accessibility standards and integrates AR overlays to enhance the experience for users with disabilities.

These overlays should include:

- a)** 3D Reconstructions i.e., overlay historically accurate 3D models of inaccessible areas, allowing users to explore virtually.
- b)** Sign Language Interpretation i.e., integrate sign language interpretation into the virtual experience for users who are deaf or hard of hearing.
- c)** Tactile Maps i.e., offer downloadable tactile maps for visually impaired visitors to enhance their understanding of the physical layout.
- d)** 3D printable models i.e., develop accessible 3D printable models for visitors with visual impairments to experience the site's physical space.
- e)** At least two accessible information kiosks with the AR-integrated virtual walkthrough for better access throughout the site.
- f)** The info kiosks should be positioned near a resting point.

#### **Best Practice:**

Heritage buildings and sites with limitations to full physical accessibility due to their historic character (buildings or sites of emirate or municipal significance) should:

- a)** Provide a web-based virtual walkthrough solution that meets AA level WCAG 2.2 accessibility standards and integrates AR overlays to enhance the experience for users with disabilities.

These overlays should include:

- a) A dedicated AR Experience Space is available in a sheltered and air-conditioned assembly space with the capacity to accommodate at least 10 people, including at least 4 wheelchair users. Consider including seating and accessible device stands for user convenience.
- b) Staff Training i.e., train staff on the AR technology and its accessibility features to effectively assist visitors with disabilities.
- c) Offer the virtual walkthrough and AR features in multiple languages to cater to a wider audience, as a minimum: Arabic, English and two more.

#### **3.7.11.4 Pre-certificate rating credits:**

**Table 90: DA.1.11 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
6	6	Develop a comprehensive plan for a walkthrough solution that includes 3D reconstructions, sign language interpretation, tactile maps, 3D printable models, and accessible information kiosks near resting points.
		<b>Best Practice:</b>
10	10	Plan for a dedicated AR Experience Space that is sheltered, air-conditioned, and can accommodate at least 10 persons including 4 wheelchair users.
		Develop a comprehensive staff training program on the AR technology and its accessibility features.

#### **3.7.11.5 Certificate rating credits:**

**Table 91: DA.1.11 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
6	6	Confirm the implementation of the planned walkthrough solution, ensuring it meets the criteria for 3D reconstructions, sign language interpretation, tactile maps, 3D printable models, and accessible information kiosks near resting points.
		<b>Best Practice:</b>
10	10	Validate the implementation of the AR Experience Space, ensuring it meets the capacity and comfort criteria.
		Confirm that staff have been effectively trained on the AR technology and its accessibility features.

### **3.7.11.6 Pre-certificate rating submission:**

#### **Recommended:**

- a) A statement by the asset owner confirming that the asset will have a walk-through solution featuring apart mandatory functions the following recommended:
  - i. 3D Reconstructions: Overlay historically accurate 3D models of inaccessible areas, allowing users to virtually explore them.
  - ii. Sign Language Interpretation: Integrate sign language interpretation into the virtual experience for users who are deaf or hard of hearing.
  - iii. Tactile Maps: Offer downloadable tactile maps for visitors with visual impairments to enhance their understanding of the physical layout.
  - iv. 3D printable models: Develop accessible 3D printable models for visitors with visual impairments to experience the physical space of the site.

#### **Best Practice:**

- a) A statement by the asset owner confirming that the asset will have a walk-through solution featuring apart mandatory and recommended functions the following best practice:
  - i. Dedicated AR Experience Space i.e. The above solution should be available in a sheltered and air-conditioned assembly space with the capacity to accommodate at least 10 people including at least 4 wheelchair users. Consider including seating and accessible device stands for user convenience.
  - ii. Staff Training i.e., Train staff in the AR technology and its accessibility features to effectively assist visitors with disabilities.
  - iii. Offer the virtual walkthrough and AR features in multiple languages to cater to a wider audience, as a minimum: Arabic, English and two more.

### **3.7.11.7 Certificate rating submission:**

#### **Recommended:**

- a) A report confirming that the asset has an operational walkthrough solution featuring apart mandatory functions the following recommended:
  - i. 3D Reconstructions: Overlay historically accurate 3D models of inaccessible areas, allowing users to virtually explore them.
  - ii. Sign Language Interpretation: Integrate sign language interpretation into the virtual experience for users who are deaf or hard of hearing.
  - iii. Tactile Maps: Offer downloadable tactile maps for visitors with visual impairments to enhance their understanding of the physical layout.
  - iv. 3D printable models: Develop accessible 3D printable models for visitors with visual impairments to experience the physical space of the site.
- b) As-built drawings and photographs confirming:
  - i. Two or more accessible information kiosks with the AR-integrated virtual walkthrough for better access throughout the site.
  - ii. The info kiosks positioned at a resting point.

**Best Practice:**

- a) A report confirming that the asset has an operational walkthrough solution featuring apart mandatory and recommended functions the following best practice:
  - i. Dedicated AR Experience Space i.e. The above solution should be available in a sheltered and air-conditioned assembly space with the capacity to accommodate at least 10 persons including at least 4 wheelchair users. Consider including seating and accessible device stands for user convenience.
  - ii. Staff Training i.e., Train staff in the AR technology and its accessibility features to effectively assist visitors with disabilities.
  - iii. Offer the virtual walkthrough and AR features in multiple languages to cater to a wider audience, as a minimum: Arabic, English and two more.

## 3.8 OC.1 Orientation and Communication

This category assesses the facilitation of Orientation and Communication for people with varying access needs in public settings, such as events, traveling, and education. Orientation and Communication include signage, wayfinding, information, and interaction of Orientation and Communication systems.

**Table 92: Orientation and Communication**

OC	Orientation and Communication	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
OC.1.01	Signage and other communication elements	Mandatory	R	20
OC.1.02	Enhanced signage and other communication elements	Recommended	6	6
		Best Practice	2	4
OC.1.03	Tactile Walking Surface Indicators (TWSI)	Mandatory	R	12
OC.1.04	Enhanced Tactile Walking Surface Indicators (TWSI)	Recommended	4	6
		Best Practice	8	12
OC.1.05	Tactile maps and raised floor plans	Mandatory	R	8
OC.1.06	Enhanced tactile maps and raised floor plans	Recommended	3	3
OC.1.07	Hearing enhancement systems	Mandatory	R	8
OC.1.08	Enhanced hearing enhancement systems	Recommended	4	4
OC.1.09	Identification of main entrance	Mandatory	R	6
OC.1.10	Information points	Mandatory	R	6
OC.1.11	Enhanced information points	Recommended	5	5
	<b>Total</b>		<b>32</b>	<b>100</b>

## **3.8.1 OC.1.01 Signage and other communication elements**

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### **3.8.1.1 Applicability:**

Applicable to all types of buildings and their premises within the certification boundary.

### **3.8.1.2 Intent:**

To design and implement a comprehensive and intuitive signage system that promotes wayfinding, safety, and accessibility, ensuring seamless and confident navigation for all users.

### **3.8.1.3 Requirements:**

#### **Mandatory:**

- a) 20 Credits in renovation.**
  - i. Signage shall assist people in independent and group-led wayfinding at all public settings including buildings, ensuring the wayfinding strategy planned in accordance with "**Sahel Community Rating System – OC.3.01 Wayfinding and communication strategy**" shall be designed to:
    - a. Be in accordance with Abu Dhabi International Accessibility Standards, 2013.
    - b. Have a clear floor space of minimum 900 mm in width and 1500 mm in depth provided in front of functional and information signs to touch and read information provided in raised characters or braille. Signage shall be accessible from either the front or the side.
    - c. Provide plain Arabic and English for the information on signs and maps while Arabic shall always be displayed above English.
    - d. Ensure the type and format of language used within all signage shall be easy to understand and interpret allowing the text and terminology, when repeated, to be consistent along the path.
    - e. Ensure the visual characters, pictograms and raised characters be glare-free and have visual contrast from the background in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**", to ensure readability and accessibility.
    - f. Be adequately illuminated, in accordance with "**Sahel Building Rating System – EQC.1.12 Enhanced lighting and display**" for all signs and internal maps.
    - g. Use one or more of the following types of signs, for effective navigation, wherever applicable:
      - Visual characters
      - Raised characters
      - Braille
      - Pictograms
      - Variable message signs
      - Tactile maps and raised floor plans
      - Digital screens
  - ii. Indoor identity signage and information panels shall be mounted between 1000 mm and 1600 mm above the floor level if neither raised characters nor braille is used. The height is measured from the baseline of the character of the sign to the floor surface. Where the view of the sign may be obstructed (e.g., in a crowd), an additional sign shall be mounted at 2400 mm, displaying the same information and visible from a distance.

- iii. Signs mounted anywhere below 2200 mm and protruding into the circulation space shall be accompanied by warning borders mounted at a height between 50 mm and 300 mm, and easily detectable with a walking stick.
- iv. Signage shall be provided in all areas, to denote the functionality of the room/space such as (but not limited to):
  - a. All permanent rooms and spaces
  - b. At building and/or outdoor spaces (main entrances, parking, circulation, entrances, decision-making points, refuge areas, transportation and outdoor spaces).
  - c. Service animal relief areas signposted with 'for assistance animals only'.
  - d. Quiet rooms, baby feeding rooms, changing rooms and toilets including accessible toilets, family toilets, inclusive family toilets shall be signposted.
  - e. Directional signage in all critical decision-making points to all vertical circulation elements such as elevators, stairs, escalators, etc.
  - f. Emergency routes including areas of rescue and assembly points.
- v. All visual characters part of indoor/outdoor signage, maps, and digital display shall:
  - a. Be provided in upper- and lower-case characters. When single words or groups of words are provided, they shall begin with an upper-case letter followed by lower-case letters.
  - b. Be installed minimum 1000 mm above the floor, measured to the baseline of the character.
  - c. Use sans-serifs (no serif) font type such as Arial, Helvetica for Latin letters and Noto sans Arabic and Calibri for Arabic letters.
  - d. Ensure the height of visual characters shall be chosen according to viewing distances as shown in the table below:

**Table 93: Height of visual characters**

Reading	Force (N)	Height (mm)
≥50 meters	170 mm	200 mm
20 meters	140 mm	180 mm
5 meters	70 mm	150 mm
4 meters	55 mm	100 mm
3 meters	45 mm	85 mm
2 meters	30 mm	55 mm
1 meter	15 mm	30 mm
0.5 meters	5 mm	15 mm

- e. Have a spacing of 10% to 35% of character height, between each character and a spacing of 135% to 170% of character height, between each line.
- f. Be seen from a seated and standing position and there shall always be a clear line of sight to all kinds of signs.
- g. Avoid the following color combinations in tandem to ensure people with vision impairment, color blindness and/or visual differences are able to identify texts and visuals:
  - Red and green
  - White and red

- vi. Tactile signage when provided, shall:
  - a. Be installed where permanent signs are required to identify permanent rooms, exits, areas of refuge and spaces in buildings and in public open spaces such as toilets, location of public services, playground, and parks.
  - b. Be provided as floor numbers on each floor, at the top and bottom of stairs, as part of the handrail, and/or at door jambs of each elevator entrance door.
  - c. Have visual characters and raised characters be provided on the signage either on the same sign or on two separate ones.
  - d. Be provided on door information signs, featuring braille and raised characters positioned on the latch side of the door. For double-leaf doors, the sign shall be placed on the inactive leaf or on the nearest adjacent wall. It shall be centered within a minimum of 450 mm square area next to the door and positioned out of the arc of any door swing to ensure accessibility and ease of identification.
  - e. Indoor and outdoor paths shall be color coded and be distinguished by their importance using tactile surfaces.
- vii. Raised characters when provided, shall:
  - a. Be provided in uppercase characters only, of conventional font size and sans serif (no serif) font type such as Arial, Helvetica etc., making it easy to read and feel.
  - b. Have a depth of minimum 8 mm.
  - c. Have a spacing of 3.2 mm on upper surface with 4x of stroke width and a spacing of 1.6 mm on the base with 4x of stroke width.
  - d. Have a spacing of minimum 9.5 mm from borders and decorative elements.
  - e. Have a space of 135% to 170% of character height, between each line.
  - f. Ensure the baseline of the lowest raised character is installed at a minimum height of 1200 mm above the floor surface, while the baseline of the highest raised character shall be installed no more than 1500 mm above the floor surface.
- viii. Braille when provided on signs and maps shall:
  - a. Be of Grade 1 Braille (uncontracted) in English unless Arabic is used only.
  - b. Have Grade 1 provided in both languages.
  - c. Be positioned a minimum of 10 mm below the lowest edge of the corresponding text and kept clear from raised borders and decorative elements. If the text is multiline, braille should be positioned below the entire block of text.
  - d. Be positioned a minimum of 5 mm below the lowest edge of the corresponding text or adjacent to the corresponding button/symbol on control buttons of elevators.
  - e. Use only Uppercase letters in the following instances:
    - f. before the first word of a sentence
      - names and nouns
      - initials
      - acronyms
      - as an individual letter in the text
  - g. Be domed or rounded.
  - h. Refer to Table 94 for braille dimensions.

**Table 94: Braille dimensions**

Measurement range (center to center)	Dimension/Distance
Diameter dot base	1.50 mm - 1.60 mm
Distance between dots (same cell)	2.30 mm – 2.50 mm
Distance between corresponding dots (adjacent cell)	6.10 mm – 7.60 mm
Distance between corresponding dots (cells of another line)	10.00 mm – 10.20 mm

- i. Have a height of 0.60 mm to 0.90 mm for the dot.
- j. Have the baseline of a braille cell installed between 1200 mm and 1500 mm above the floor surface.
- k. If an arrow is used on tactile signs, an arrow shall also be provided for braille readers to ensure consistency.
- ix. Pictograms when provided in signs and maps, they shall:
  - a. Be always accompanied by text descriptors located below the pictogram.
  - b. Have a height of minimum 150 mm.
  - c. Avoid characters and braille to be included within the field of the pictogram, to maintain clarity and legibility for all users.
  - d. Use International Symbols for Accessibility at corresponding facilities and internationally known symbols. The following specific facilities shall be marked with internationally recognized symbols, e.g.,
    - accessible parking spaces, ambulant parking spaces and drop-off zones.
    - Accessible non-standard parking
    - accessible entrance
    - accessible check out aisles/service counters
    - elevators
    - accessible toilets, ambulant toilets and family toilets
    - baby-feeding rooms
    - assistance dog facilities
    - hearing enhancement systems
    - areas of refuge
    - Exit signs for an accessible path
- x. Where Variable Message Signs (VMS) are present, they shall:
  - a. Have high resolution variable message sign (VMS) characters used whenever possible and when uppercase characters are used, low-resolution characters shall be utilized.
  - b. Have characters of conventional font style and sans-serif type (no serif), making it easy to read. Italic font style shall be provided.
  - c. Have character and line spacing as per Table 95 and pixel count as per Table 96 for low-resolution Variable Message Signs (VMS).

**Table 95: Low-Resolution VMS Character Height**

Installation height characters (floor to baseline)	Viewing distance (horizontally)	Character height (minimum)
1000 mm - 1800 mm	< 3000 mm	50 mm
	$\geq 3000$ mm	50 mm
		And 5 mm per 305 mm
		Viewing distance $> 3000$ mm
1800 mm - 3000 mm	< 4600 mm	75 mm
	$\geq 4600$ mm	75 mm
		And 5 mm per 300 mm
		Viewing distance $> 4600$ mm
$\geq 3000$ mm	< 6100 mm	100 mm
	$\geq 6100$ mm	100 mm
		And 5 mm per 300 mm
		Viewing distance $> 6000$ mm

**Table 96: Pixel count for low resolution VMS signage**

Height character (in pixels)	Width character (in pixels)	Width stroke (in pixels)	Spacing character (in pixels)
7	5 - 6	1	2
8	6 - 7	1 - 2	2 - 3
9	6 - 8	1 - 2	2 - 3
10	7 - 9	2	2 - 4
11	8 - 10	2	2 - 4
12	8 - 11	2	3 - 4
13	9 - 12	2 - 3	3 - 5
14	10 - 13	2 - 3	3 - 5
15	11 - 14	2 - 3	3 - 5

- d. Have VMS characters installed at minimum 1000 mm above the floor surface, measured to the baseline of the character.
- e. Have backgrounds and protective coverings that are glare-resistant and visually contrasting with surrounding elements.
- f. Have automatic adjustments to the brightness, according to ambient light level, for outdoor signs.
- g. Have messages remain motionless for either  $\geq 3$  seconds or  $\geq 1$  second for every 7 characters.
- h. Be provided audibly, for all real-time messages.

- xi. Digital screens shall be universally accessible, and shall:
  - a. Be installed at a height of 900 mm to 2000 mm when no interaction is required and 900 mm to 1200 mm when interaction is necessary, with a clear floor space of minimum 900 mm in width and 1500 mm in depth provided in front of the screen.
  - b. Be positioned in well lit areas, but precautions shall be taken to avoid glare from light sources on the screen.
  - c. Have display characters at a height of minimum 5 mm, if they are to be seen from a distance of 500 mm, and up to 170 mm if the viewing distance exceeds 50 meters.
  - d. Have the visual characters and pictograms be visually contrasting from their background in accordance with “Sahel Building Rating System – EQC.1.09 Wall and floor finishes”.
  - e. Have messages remain motionless for  $\geq 3$  seconds.
  - f. Avoid being the sole means of interaction. A universally designed alternative shall be provided, such as a service counter or options utilizing speech input or push buttons, in close proximity.
  - g. Be free from flickering to reduce eye strain and improve visual comfort for all users.
- xii. Additionally, where QR codes and labels are provided, they shall:
  - a. Be positioned at a maximum height of 1200 mm above the ground, measured from the ground surface to the base of the QR labels.
  - b. Have sufficient luminance contrast between QR labels and the background in accordance with “Sahel Building Rating System – EQC.1.09 Wall and floor finishes”.
- xiii. Signage must be made from durable materials with low-heat-conductivity when placed outdoors.
- xiv. Additionally, clocks when provided in buildings and facilities of public use, shall:
  - a. feature uncluttered faces to ensure clear visibility of their elements.
  - b. Ensure the hands, numerals and digits are glare-free and visually contrast from the background with a luminance contrast in accordance with “Sahel Building Rating System – EQC.1.09 Wall and floor finishes”.

#### **3.8.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **20**.

#### **3.8.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **20**.

#### **3.8.1.6 Pre-certificate rating submission:**

- a) Design documentation detailing the complete wayfinding system.
- b) Drawings illustrating the layout, locations, and dimensions of the signs and other wayfinding elements.
- c) Specifications for materials and fixtures to be used ensuring they meet the required standards.

### **3.8.1.7 Certificate rating submission:**

- a)** Updated design documentation confirming the implementation of wayfinding and signaling system proposed.
- b)** As-built drawings and illustrating the layout, locations, and dimensions of the signs and other wayfinding elements.
- c)** Documentation of the actual specification of the materials and fixtures used, confirming their adherence to the required standards.
- d)** Photographs of key areas featuring signs demonstrating compliance with accessibility standards.

### **3.8.1.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013.
- c)** UAE Universal Design Code.

## **3.8.2 OC.1.02 Enhanced signage and other communication elements**

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### **3.8.2.1 Applicability:**

Applicable to all types of buildings and their premises within the certification boundary.

### **3.8.2.2 Intent:**

To design and implement a comprehensive and intuitive signage system that enhances wayfinding, safety, and accessibility, ensuring seamless and confident navigation for all users.

### **3.8.2.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

- a)** Demonstrate that enhanced braille provisions should be provided as following: Have Braille and tactile characters provided on handrails and walls at the floor landings.
- b)** Where QR codes and labels are provided, they should:
  - i.** Be accessible in multiple languages.
  - ii.** Include a tactile frame to assist users in locating and scanning the code effectively.
- c)** Demonstrate that digital navigation when provided, should ensure: Indoor and outdoor online navigation systems with audible information are provided.

#### **Best Practice:**

Demonstrate that enhanced braille provisions should be provided as following:

- a)** Braille and tactile characters should be used to identify:
  - i.** table numbers displayed on study desks, personal storage lockers and bookshelves in educational buildings
  - ii.** hallway intersections
  - iii.** workstations in offices, to inform about the location.

### 3.8.2.4 Pre-certificate rating credits:

**Table 97: OC.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design braille and tactile characters on handrails and walls.
2	2	Design multilingual QR codes
3	3	Design navigation supports indoor and outdoor.
		<b>Best Practice:</b>
2	4	Design braille and tactile characters signs to be installed in additional spaces.

### 3.8.2.5 Certificate rating credits:

**Table 98: OC.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Provide braille and tactile characters on handrails and walls.
2	2	Provide multilingual QR codes
3	3	Provide navigation supports indoor and outdoor.
		<b>Best Practice:</b>
2	4	Provide braille and tactile character signs to be installed in additional spaces.

### 3.8.2.6 Pre-certificate rating submission:

#### Recommended and Best Practice:

- a) Design documentation and technical specifications for braille and tactile character signage, QR coding, and navigation system proposed.
- b) Drawings illustrating the location and dimensions of all elements.

### 3.8.2.7 Certificate rating submission:

#### Recommended and Best Practice:

- a) Updated design documentation confirming the implementation of braille and tactile character signage, QR coding, and navigation system.
- b) As-built drawings illustrating the location and dimensions of all elements Updated documentation of materials and fixtures used in tactile maps and plans, confirming their adherence to the required standards.
- c) Photographs of key areas featuring the signs and services provided.

## 3.8.3 OC.1.03 Tactile Walking Surface Indicators (TWSI)

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### 3.8.3.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m) Special Occupancy: public transportation hubs, stations, terminals, covered/open malls, underground structures.

### 3.8.3.2 Intent:

To ensure that paths linking the facilities and key points of interest within buildings provide a continuous and consistent guiding system allowing for safe and inclusive navigation for all users. (Figures 39, 40).

### 3.8.3.3 Requirements:

#### Mandatory:

There are two types of Tactile Walking Surface Indicators (TWSI):

- a) Warning Tactile Walking Surface Indicators, which draw awareness to important objects, hazards, facilities, etc. within the plots.
- b) Guiding Tactile Walking Surface Indicators provide directional information about the direction to be followed (i.e.: from the public realm leading into the building's reception).
- c) **5 credits in renovation.**

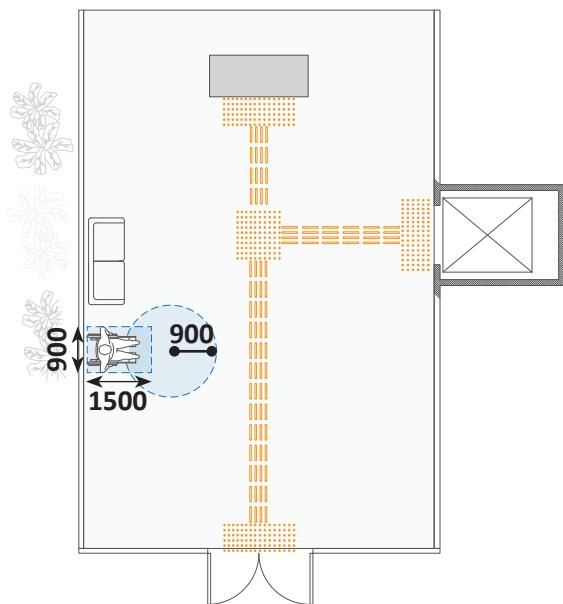
Warning TWSI shall be located:

By curb ramps, ramps, steps, stairs, and escalators and travellators, open boarding edges of public transportation platforms facing the vehicles, track crossing of public transportation and by an object or obstruction along the path of travel in accordance with **“Sahel Public Realm Rating System – OC.2.03 Tactile Walking Surface Indicators (TWSI)”**.

**d) 5 credits in renovation.**

Both, Warning TWSI and Guiding TWSI shall be located:

- i. At external areas without defined walking paths.
- ii. At public transportation stations and hubs, starting from the entrance and continuing to all essential accessible services and amenities such as vending machines, service counters, etc. In public administration buildings, from building entrances to information desks or receptions.



**Figure 39: Indoor TWSI from entrance to reception and elevator**

iii. All TWSI shall:

- a. Avoid being a substitute for physical safety elements such as guards against falls or impact.
- b. Provide consistent detection and durability, ensuring long-term effectiveness while minimizing the risk of tripping hazards.
- c. Be strategically employed logically and sequentially, ensuring consistency in installation to facilitate easy interpretation by users.
- d. Have a luminance contrast in accordance with **"Sahel Building Rating System – EQC.1.09 Wall and floor finishes"**, from their background.

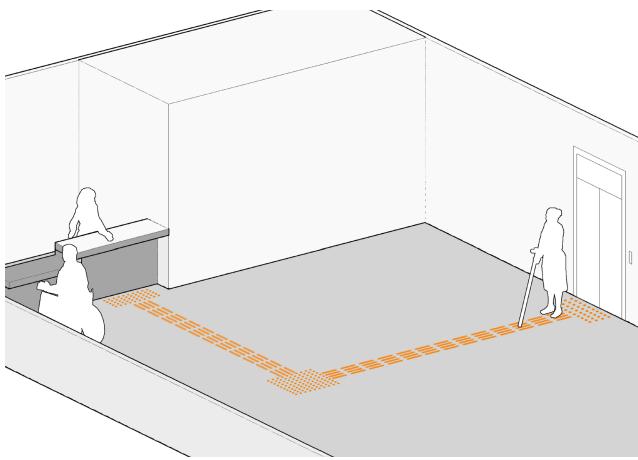
**e) 2 credits in renovation.**

Additionally Warning TWSI shall:

- i. Be standardized.
- ii. Have a pattern consisting of truncated domes or cones, 4-5 mm high, with a top diameter 12-25 mm wide and a bottom diameter 10 (+/-) mm wider than the top. Tolerance of the top diameter is +/- 1 mm. Domes/cones shall be arranged in a square grid either parallel or 45° diagonal to the principal direction of travel.
- iii. Have no gaps or the gaps between the tiles shall not exceed a maximum of 10mm in width and 2mm in depth.
- iv. Be surrounded by smooth surfaces.
- v. Be a minimum of 600 mm in depth for new facilities and a minimum of 300mm for existing facilities.

Additionally, Guiding TWSI shall:

- i. Offer flexibility in their implementation, allowing for customization based on the specific needs and layout of the space. They may range from physically built edges to integrated elements within existing floor surfaces, providing effective direction and orientation cues for users.
- ii. A width between 300 mm and 400 mm shall be provided.
- iii. Have a pattern consisting of parallel, flat-topped elongated bars, 4-5 mm high, with top width 17-30 mm, and bottom width 10 (+/-1) mm wider than the top. The top length shall be at least 250 mm, and the bottom length shall be 1-10 mm wider than the top, the distance between the ends of the bars shall be a maximum of 30 mm.



**Figure 40:** Guided TWSI from elevator to reception

#### **3.8.3.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **12**.

#### **3.8.3.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **12**.

#### **3.8.3.6 Pre-certificate rating submission:**

- a) Design documentation detailing the proposed TWSI features, including specifications for easily detectable features, slip resistance, logical and sequential installation, consistency, durability, smooth surroundings, and gap limitations.
- b) Drawings illustrating the layout, locations, and dimensions of the TWSI, showcasing compliance with the specified features.
- c) Specifications for materials and fixtures used in TWSI, ensuring they meet the required standards.

### **3.8.3.7 Certificate rating submission:**

- a)** Updated design documentation confirming the implemented features for TWSI, including easily detectable features, slip resistance, logical and sequential installation, consistency, durability, smooth surroundings, and gap limitations.
- b)** As-built drawings showcasing the actual layout, locations, and dimensions of TWSI, demonstrating compliance with the specified features.
- c)** Photographs of key areas featuring TWSI demonstrating compliance with accessibility standards.

### **3.8.3.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** Abu Dhabi Pedestrian Pathway Paving Strategy
- d)** TR 541-1 Abu Dhabi Standard Drawings Guidelines – Part 1
- e)** TR 541-2 Abu Dhabi Standard Drawings Guidelines – Part 2
- f)** TR-535 Metro Planning Standards
- g)** TR-536 - Railway Planning Standards
- h)** ROW-603: Abu Dhabi Urban Street Design Manual

## **3.8.4 OC.1.04 Enhanced Tactile Walking Surface Indicators (TWSI)**

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### **3.8.4.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g)** E (e.g., colleges, schools, day care).
- h)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j)** M (e.g., supermarkets, drug stores, retail stores)
- k)** R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l)** R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- m)** Special Occupancy: public transportation hubs, covered/open malls, underground structures.
- n)** Major transportation stations

### **3.8.4.2 Intent:**

To optimize the paths linking the facilities and key points of interest between the buildings premises and public realm by providing a continuous and consistent guiding system allowing for safe and inclusive navigation for all users.

### **3.8.4.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

Both, Warning TWSI and Guiding TWSI should be located:

- a)** Along the route from the closest car park to the main entrance of the asset.
- b)** From public building entrances to information desks, receptions, and service counters, tactile maps, nearest accessible elevators of all buildings of public use.

#### **Best Practice:**

Both, Warning TWSI and Guiding TWSI should be located along the entire, main accessible path within buildings of public use.

### 3.8.4.4 Pre-certificate rating credits:

**Table 99: OC.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
4	6	Design TWSI at the recommended locations (where relevant)
		<b>Best Practice:</b>
8	12	Design TWSI at the best practice locations (where relevant)

### 3.8.4.5 Certificate rating credits:

**Table 100: OC.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
4	6	Confirm that the TWSI has been implemented as per the recommended locations (where relevant).
		<b>Best Practice:</b>
8	12	Confirm that the TWSI has been implemented as per the best practice locations (where relevant).

### 3.8.4.6 Pre-certificate rating submission:

#### Recommended and Best Practice:

- a) Design documentation detailing the proposed features for TWSI, including specifications for easily detectable features, slip resistance, logical and sequential installation, consistency, durability, smooth surroundings, and gap limitations.
- b) Drawings illustrating the layout, locations, and dimensions of the TWSI, showcasing compliance with the specified features.
- c) Specifications for materials and fixtures used in TWSI, ensuring they meet the required standards.

### 3.8.4.7 Certificate rating submission:

#### Recommended and Best Practice:

- a) Updated design documentation confirming the implemented features for TWSI, including easily detectable features, slip resistance, logical and sequential installation, consistency, durability, smooth surroundings, and gap limitations.
- b) As-built drawings showcasing the actual layout, locations, and dimensions of TWSI, demonstrating compliance with the specified features.
- c) Photographs of key areas featuring TWSI demonstrating compliance with accessibility standards.

## 3.8.5 OC.1.05 Tactile maps and raised floor plans

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### 3.8.5.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 sqm:

- a) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- b) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- c) A-5 (e.g., amusement parks, other outdoor assembly uses).
- d) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- e) E (e.g., colleges, schools, day care).
- f) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- g) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- h) Special Occupancy: public transportation hubs, covered/open malls
- i) Major transportation stations

### 3.8.5.2 Intent:

To ensure that all users are provided with equitable access to the information of spatial layouts of open public spaces via accessible tactile maps or plans provided with essential elements and appropriately placed in the building (Figures 41).

### 3.8.5.3 Requirements:

#### Mandatory:

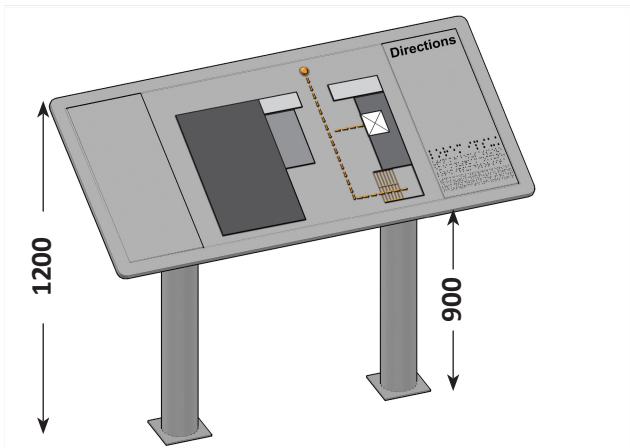
##### a) 8 Credits in renovation.

Tactile maps and plans shall be located at:

- i. The accessible main entrances or reception of public buildings (e.g., transportation facilities, shopping malls, recreational (amusement) parks, sports facilities, museums, religious buildings, hospitals, and government buildings).

All tactile maps and plans when provided, shall:

- i. Be located adjacent to an accessible path but be connected to it.
- ii. Include only essential information such as the location of services and paths, the position of elements (information desk, toilets, alternative accessible entrance, etc.), and fire safety infrastructure.
- iii. If fixed on a vertical surface, be centered at a height between 1250 mm and 1750 mm.
- iv. If horizontal or inclined, be mounted at a height between 900 mm and 1200 mm (inclined 30 ° - 45 °). Be oriented with the building or asset with consistency in location and layout of the maps and shall avoid sharp edges
- v. Have texts written in sans serif font of a minimum 20 mm.
- vi. Be designed with the North arrow in the upper right corner. Graphic plane representation (lines, surfaces) shall be defined through embossment.
- vii. Position the legend on the lower part of the map.
- viii. If outdoors, it should be made with durable, low heat-conductivity material.
- ix. If mounted in busy public places, include sound information to enhance accessibility.
- x. Provide information on emergency exit plans/floor plans in braille and raised characters.



**Figure 41:** tactile map

#### **3.8.5.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.8.5.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.8.5.6 Pre-certificate rating submission:**

- a) Design documentation detailing the proposed features for tactile maps and plans, including specifications for location, essential information, illuminance, height, orientation, legend placement, and the inclusion of recessed braille locators.
- b) Drawings illustrating the layout and dimensions of the tactile maps and plans, showcasing compliance with the specified features.
- c) Specifications for materials and fixtures used in tactile maps and plans, ensuring they meet the required standards.

#### **3.8.5.7 Certificate rating submission:**

- a) Updated design documentation confirming the implemented features for tactile maps and plans, including location, essential information, illuminance, height, orientation, legend placement, and the inclusion of recessed braille locators.
- b) As-built drawings showcasing the actual layout and dimensions of tactile maps and plans, demonstrating compliance with the specified features.
- c) Updated documentation of materials and fixtures used in tactile maps and plans, confirming their adherence to the required standards.
- d) Verification of the proper functioning of specific features, such as illuminance, height, orientation, legend placement, and the inclusion of recessed braille locators.
- e) Photographs of key areas featuring tactile maps and plans such as location, essential information, illuminance, height, orientation, and the inclusion of braille locators, demonstrating compliance with accessibility standards.

### **3.8.5.8 References:**

- a) Abu Dhabi International Building Code, 2013**
- b) Abu Dhabi International Accessibility Standards, 2013**
- c) UAE Universal Design Code**
- d) PR-401: Abu Dhabi Public Realm Design Manual**
- e) ROW-603: Abu Dhabi Urban Street Design Manual**
- f) DP-305: Safety and Security Planning Manual**
- g) TR-536 Railway Planning Standards**

## 3.8.6 OC.1.06 Enhanced tactile maps and raised floor plans

### 3.8.6.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- b) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- c) A-5 (e.g., amusement parks, other outdoor assembly uses).
- d) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- e) E (e.g., colleges, schools, day care).
- f) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- g) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- h) Special Occupancy: public transportation hubs, covered/open malls
- i) Major transportation stations

### 3.8.6.2 Intent:

To ensure that all users are provided with equitable access to the information of spatial layouts of open public spaces via accessible tactile maps or plans provided with enhanced essential elements and appropriately placed.

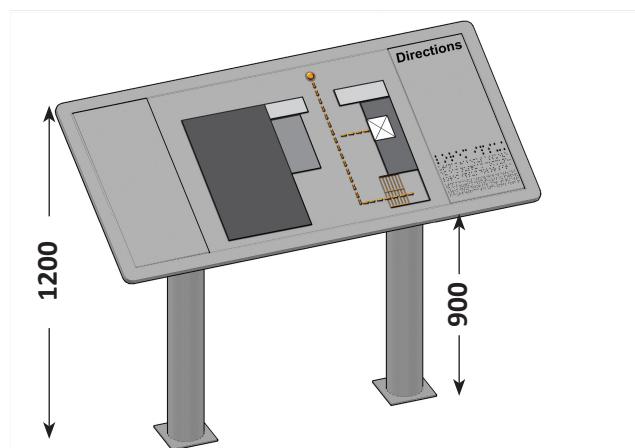
### 3.8.6.3 Requirements:

All designs, drawings and specifications of the development/redevelopment or renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All tactile maps and plans should:

- a) Be located in all buildings of public use above 2000 sqm.
- b) Be accompanied near all directional, visual maps within the certification boundary.
- c) Include sound information at all places, to enhance accessibility.



**Figure 42:** Indoor tactile map

### 3.8.6.4 Pre-certificate rating credits:

**Table 101: OC.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Ensure that all tactile maps and plans within the certification boundary are designed and planned to be located as per the recommended requirements.

### 3.8.6.5 Certificate rating credits:

**Table 102: OC.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm that all tactile maps and plans within the certification boundary are implemented and constructed as per the recommended requirements.

### 3.8.6.6 Pre-certificate rating submission:

- a) Design documentation detailing the proposed features for tactile maps and plans, including specifications for location, essential information, illuminance, height, orientation, legend placement, and the inclusion of recessed braille locators.
- b) Drawings illustrating the layout and dimensions of the tactile maps and plans, showcasing compliance with the specified features, including drawings, plans and specifications detailing the use of shading above the tactile map.
- c) Specifications for materials and fixtures used in tactile maps and plans, ensuring they meet the required standards.

### 3.8.6.7 Certificate rating submission:

- a) Updated design documentation confirming the implemented features for tactile maps and plans, including location, essential information, illuminance, height, orientation, legend placement, and the inclusion of recessed braille locators, and as-built drawings and photographic evidence presenting shading above the tactile map.
- b) As-built drawings showcasing the actual layout and dimensions of tactile maps and plans, demonstrating compliance with the specified features.
- c) Updated documentation of materials and fixtures used in tactile maps and plans, confirming their adherence to the required standards.
- d) Verification of the proper functioning of specific features, such as illuminance, height, orientation, legend placement, and the inclusion of recessed braille locators.
- e) Photographs of key areas featuring tactile maps and plans such as location, essential information, illuminance, shading, height, orientation, and the inclusion of braille locators, demonstrating compliance with accessibility standards.

## 3.8.7 OC.1.07 Hearing enhancement systems

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### 3.8.7.1 Applicability:

Applicable to all buildings with areas such as:

- a) Public service counters (e.g., reception/information desks/tellers).
- b) Auditoriums, and assembly rooms with sound reinforcement (e.g., theaters, convention halls, cinemas, places of worship, sports arenas, court halls).
- c) Schools and universities.
- d) Exhibition halls (e.g., museums, art galleries).
- e) PA systems, when provided.

### 3.8.7.2 Intent:

To ensure that necessary hearing enhancement systems are in place, where speech communication is critical to guarantee access to information and communication for all.

### 3.8.7.3 Requirements:

#### Mandatory:

Hearing enhancements (e.g., frequency modulation, infrared, or induction loop) shall be installed in:

- a) **5 Credits in renovation.**
  - i. At least one meeting room and conference room that is open to the public, in all assembly areas and auditorium spaces with sound reinforcement, at courtrooms, hotel lobbies, prayer rooms in religious facilities, exhibition spaces, classrooms.
  - ii. Public telephones and elevators (compatible with hearing aids).
  - iii. Information points, ticket counters, service counters/information desks/tellers, ticket exchange/box office in healthcare facilities, shopping malls, cinemas, public service desks, public transportation terminals/areas.
  - iv. Security checkpoints, and emergency warning intercom systems.
  - v. Public address, public announcements, and audio-visual systems in shopping malls, schools, mosques, airports and other transportation hubs, sporting venues and large public gathering areas, shall be compatible with hearing aids.
  - vi. All hearing enhancement systems shall:
    - a. Use receivers with a 3.2 mm standard mono jack.
    - b. Use receivers that interface with telecoils in hearing aids by providing neck loops.
  - vii. Be accompanied by identity signage with internationally recognized symbol for hearing enhancement system, when provided.

- b) **3 Credits in renovation.**

When an induction loop is provided, it shall:

- i. Cover at least 20% of each seating area or classroom, ensuring the area covered shall be near the lecture platform to allow lip reading.
- ii. Be accompanied by a fixed map indicating the area covered by the hearing enhancement.

### **3.8.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.8.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.8.7.6 Pre-certificate rating submission:**

- a)** Design documentation detailing the proposed features for induction loop systems in specified areas, including the requirement for coverage, placement of receivers, and the provision of fixed maps indicating the covered areas.
- b)** Drawings illustrating the layout and coverage of the induction loop systems, showcasing compliance with the specified features.

Specifications for materials and fixtures used in induction loop systems, ensuring they meet the required standards Certificate rating submission:

- c)** Updated design documentation confirming the implemented features for induction loop systems in specified areas, including coverage, receiver placement, and provision of fixed maps.
- d)** As-built drawings showcasing the actual layout and coverage of induction loop systems, demonstrating compliance with the specified features.
- e)** Updated documentation of fixtures used in induction loop systems, confirming their adherence to the required standards.
- f)** Verification of the proper functioning of the induction loop and receivers
- g)** Photographs of key areas featuring induction loop systems such as coverage, receiver placement, and the provision of fixed maps, demonstrating compliance with accessibility standards.

### **3.8.7.7 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013
- c)** UAE Universal Design Code
- d)** PR-405: Mosque Design Regulations
- e)** DP-305: Safety and Security Planning Manual

## 3.8.8 OC.1.08 Enhanced hearing enhancement systems

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### 3.8.8.1 Applicability:

- a) Applicable to all buildings with areas such as:
- b) Public service counters (e.g., reception/information desks/tellers).
- c) Auditoriums, and assembly rooms with sound reinforcement (e.g., theaters, convention halls, cinemas, places of worship, sports arenas, court halls).
- d) Schools and universities.
- e) Exhibition halls (e.g., museums, art galleries).
- f) PA systems, when provided.

### 3.8.8.2 Intent:

To ensure hearing enhancement systems follow recommended or best practice standards, where speech communication is critical.

### 3.8.8.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

Hearing enhancements (e.g., frequency modulation, infrared, or induction loop) should be installed in:

- a) Areas with sound reinforcement and all areas above 75 sqm regardless of sound reinforcement presence (e.g., places of worship, auditoria, training rooms, classrooms, school assembly areas, courtrooms, hotel lobbies, and cultural and sports venues).

When an induction loop is provided, it should:

- b) Cover all (100%) seating in each class (map not required).
- c) Be accompanied by publicly accessible receivers (minimum number: 20% of the capacity of the area).

### 3.8.8.4 Pre-certificate rating credits:

**Table 103: OC.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
4	4	Design the hearing enhancement systems and induction loops (when provided) as per the recommended requirements.

### 3.8.8.5 Certificate rating credits:

**Table 104: OC.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
4	4	Confirm that the hearing enhancement systems and induction loops (when provided) have been implemented and installed as per the recommended requirements

### 3.8.8.6 Pre-certificate rating submission:

- a) Design documentation detailing the proposed features for induction loop systems in specified areas, including the requirement for coverage, placement of receivers, and the provision of fixed maps indicating the covered areas.
- b) Drawings illustrating the layout and coverage of the induction loop systems, showcasing compliance with the specified features.
- c) Specifications for materials and fixtures used in induction loop systems, ensuring they meet the required standards.

### 3.8.8.7 Certificate rating submission:

- a) Updated design documentation confirming the implemented features for induction loop systems in specified areas, including coverage, receiver placement, and provision of fixed maps.
- b) As-built drawings showcasing the actual layout and coverage of induction loop systems, demonstrating compliance with the specified features.
- c) Updated documentation of fixtures used in induction loop systems, confirming their adherence to the required standards.
- d) Verification report of the proper functioning of the induction loop from the manufacturer and receivers.
- e) Photographs of key areas featuring induction loop systems such as coverage, receiver placement, and the provision of fixed maps, demonstrating compliance with accessibility standards.

## 3.8.9 OC.1.09 Identification of main entrance

---

### 3.8.9.1 Applicability:

Applicable to all buildings of public use and common entrances to residential apartments.

### 3.8.9.2 Intent:

To facilitate the identification of the main entrances including the accessible entrance for all.

### 3.8.9.3 Requirements:

#### Mandatory:

##### a) 6 Credits in renovation.

All buildings of public use shall ensure that the primary entrances including accessible entrances shall be planned in accordance with "**Sahel Community Rating System – OC.3.01 Wayfinding and communication strategy**", when entering into the building from other spaces of the plot and public realm. The main entrances of all buildings and facilities shall:

- i. Be clearly distinguishable (Figure 43).
- ii. Be accessible and connected to an accessible path.
- iii. Be identified in assistance with identity and directional signage designed in accordance with "**Sahel Building Rating System - OC.1.01 Signage and other communication elements**", when entering from the public realm or accessible parking.
- iv. Be at locations directly correlated with the official address of the building.
- v. Be accompanied by the address sign.



**Figure 43:** Main entrance location with address sign

### 3.8.9.4 Pre-certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

### 3.8.9.5 Certificate rating credits:

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

### **3.8.9.6 Pre-certificate rating submission:**

- a)** Design documentation detailing the proposed features for main entrances of buildings, including their location directly correlated with the official address, and the presence of address signs.
- b)** Drawings illustrating the layout and dimensions of the main entrances, showcasing compliance with the specified features.

### **3.8.9.7 Certificate rating submission:**

- a)** Updated design documentation confirming the implemented features for main entrances of buildings, including their location directly correlated with the official address, and the presence of address signs.
- b)** As-built drawings showcasing the layout and dimensions of main entrances, demonstrating compliance with the specified features.
- c)** Photographs of the main entrances, highlighting compliance with features such as location correlation and the presence of address signs, demonstrating compliance with accessibility standards.

### **3.8.9.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Code
- c)** UAE Universal Design Code
- d)** Abu Dhabi Architectural Facade Design Manual
- e)** Abu Dhabi Storefront Design Manual
- f)** PR-405: Mosque Design Regulations

## 3.8.10 OC.1.10 Information points

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### 3.8.10.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**) with a floor surface of more than 2000 sqm:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) M (e.g., supermarkets, drug stores, retail stores)
- j) Special Occupancy: public transportation hubs, covered/open malls
- k) Major transportation stations

### 3.8.10.2 Intent:

To ensure equitable access to information for all users in buildings by providing accessible, and strategically placed information points throughout the facility.

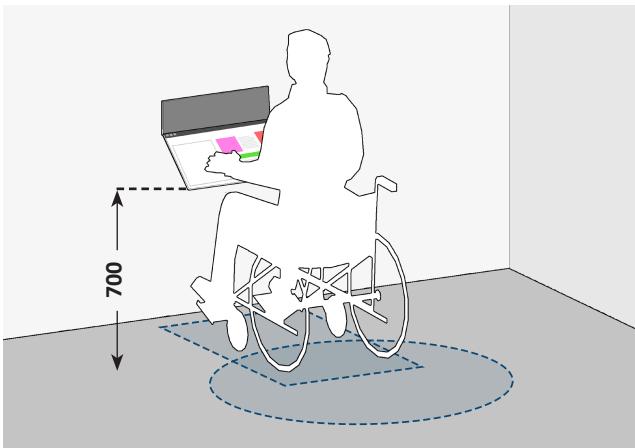
### 3.8.10.3 Requirements:

#### Mandatory:

##### a) 6 Credits in renovation.

Information points shall:

- i. Be adjacent to the accessible path and have a clear floor space of minimum 900 mm in width and 1500 mm in depth to interact from forward approach (Figure 44).
- ii. Have the International Symbol of Accessibility marking.
- iii. Not have any sharp edges.
- iv. Use simple language and symbols/pictograms, and touch-screen ICT (including ticket booths)
- v. Provide users with basic information about the asset. This includes but is not limited to, asset layout, services available, and access to transportation connections.
- vi. Biometric systems, when provided, allow for the use of fingerprints and eye scanning.
- vii. Provide information in Arabic and English, as a minimum requirement.
- viii. Provide information in audio and visual form.
- ix. If in the form of a stand, be accessible to persons of various statures and mobility levels at an operable height in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
- x. If in the form of a counter, feature an accessible counter for all users.
- xi. Digital screens, QR codes and other communication elements when designed and provided for Information points shall be in accordance with **“Sahel Building Rating System - OC.1.01 Signage and other communication elements”**.



**Figure 44: Indoor information point**

#### **3.8.10.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

#### **3.8.10.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

#### **3.8.10.6 Pre-certificate rating submission:**

- a) Design drawings illustrating the proposed locations of information points in relation to the layout of buildings.
- b) Specifications detailing the basic information to be provided, language requirements, and the provision of audio and visual forms.
- c) Design details ensuring accessibility, including varied stature, mobility levels, and different communication abilities.

#### **3.8.10.7 Certificate rating submission:**

- a) As-built documentation confirming the implementation of information points in designated buildings.
- b) Updated specifications if any changes were made during the construction stage.
- c) Photographs of information points, showcasing features like accessible counters and varied height accessibility.

#### **3.8.10.8 References:**

- a) Abu Dhabi International Building Code, 2013
- b) Abu Dhabi International Accessibility Code
- c) PR-405: Mosque Design Regulations
- d) TR-533: Bus Rapid Transit Planning Standards
- e) TR-534: Bus Services Planning standards
- f) TR-535: Metro Planning Standards
- g) TR-536: Railway Planning Standards
- h) TR-537: Tramways Planning Standards

## 3.8.11 OC.1.11 Enhanced information points

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### 3.8.11.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- i) M (e.g., supermarkets, drug stores, retail stores)
- j) Special Occupancy: public transportation hubs, covered/open malls
- k) Major transportation stations

### 3.8.11.2 Intent:

To ensure equitable access to information for all users in buildings by providing accessible, and strategically placed information points throughout the facility.

### 3.8.11.3 Requirements:

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

- a) Information points should be permanently staffed or offer an accessible contact point allowing audio and video connection with a live assistant.
- b) Alternative formats should be provided such as tactile keyboard and audio instructions, accompanied by volume control.

### 3.8.11.4 Pre-certificate rating credits:

**Table 105: OC.1.11 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Design all information points with staff assistance or be designed to allow accessible information through alternative forms using audio or video live assistance.

### 3.8.11.5 Certificate rating credits:

**Table 106: OC.1.11 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Confirm staff assistance to information points or implementation of accessible information using audio or video live assistance formats.

### 3.8.11.6 Pre-certificate rating submission:

- a) Design drawings illustrating the proposed locations of information points.
- b) Specifications detailing the basic information to be provided, language requirements, and the provision of audio and visual forms.
- c) Design details ensuring accessibility, including varied stature, mobility levels, and communication abilities.
- d) Accessibility service strategy outlining the plan for permanent staffing or providing an accessible contact point with audio and video connection to a live assistant.
- e) Specifications detailing the features and functionality of the accessible contact point, including audio and video capabilities.

### 3.8.11.7 Certificate rating submission:

- a) As-built documentation confirming the implementation of information points in designated buildings.
- b) Updated specifications if any changes were made during the construction stage.
- c) Photographs of information points, showcasing features like accessible counters and varied height accessibility.
- d) Documentation confirming the implementation of the accessibility service strategy (e.g. contract with the staff of the information point), demonstrating the permanent staffing or functionality of the accessible contact point.
- e) Updated specifications if any changes were made during the construction stage.

### 3.9 ESP.1 Emergency Systems and Procedures

This category examines the preparation and response to emergency situations in buildings, such as fire, flood etc. Emergency Systems and Procedures include aspects such as alert, evacuation, rescue, and recovery of Emergency Systems and Procedures considering all users.

**Table 107: Emergency Systems and Procedures**

ESP	Emergency Systems and Procedures	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
ESP.1.01	SOS points	Mandatory	R	6
ESP.1.02	Enhanced SOS points	Recommended	3	3
		Best Practice	3	3
ESP.1.03	Accessible emergency routes, areas of refuge, and areas of assembly	Mandatory	R	8
ESP.1.04	Enhanced accessible emergency routes, areas of refuge, and areas of assembly	Recommended	5	5
		Best Practice	2	2
ESP.1.05	Accessible public address systems	Mandatory	R	4
ESP.1.06	Enhanced accessible public address systems	Recommended	3	3
ESP.1.07	Evacuation plans for persons with access needs (procedure)	Mandatory	R	8
ESP.1.08	Enhanced evacuation plans for persons with access needs (procedure)	Recommended	3	3
	<b>Total</b>		<b>19</b>	<b>45</b>

## 3.9.1 ESP.1.01 SOS points

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### 3.9.1.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### 3.9.1.2 Intent:

To develop a network of accessible SOS points ensuring that all persons in distress can easily report their location and ask for assistance. (Figure 45).

### 3.9.1.3 Requirements:

#### Mandatory:

##### a) 6 Credits in renovation.

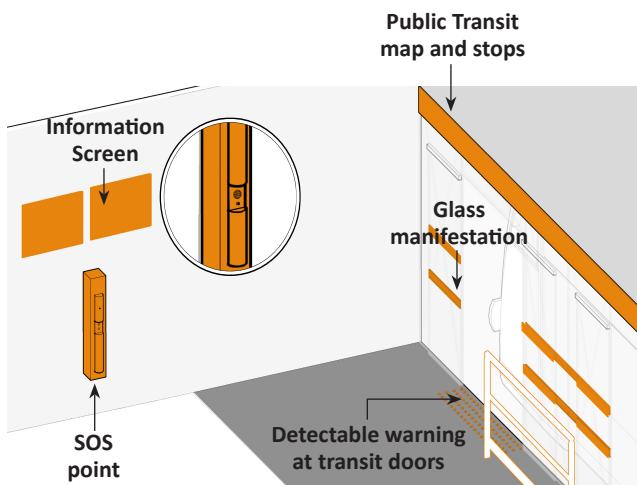
A SOS point system shall be provided in at least:

- Areas of refuge (if present).
- Elevators/platform lifts and elevator landings (if present).
- Public transportation stations (if present).

All SOS point systems shall:

- Have a clear turning circle with a minimum diameter of 1800 mm, connected with the accessible path.
- Have all operable parts in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
- Provide the equivalent level of information on or next to each SOS point in the following formats:
  - i. Written plain text.
  - ii. Embossed characters or braille.

- Provide at least one visual and audible two-way communication solution suitable for people with access needs, such as but not limited to:
  - i. a two-way message display with a system that allows for a text-based chat function between users with access needs and authorized persons.
  - ii. a direct link with the emergency call center through a voice connection.
  - iii. a hearing enhancement system.
  - iv. a CCTV intercom.
  - v. sending and receiving SMS messages from the SOS point.



**Figure 45:** SOS point at public transportation station

#### **3.9.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

#### **3.9.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

#### **3.9.1.6 Pre-certificate rating submission:**

- a) Design drawings illustrating the proposed locations of SOS points in areas of refuge, elevators/platform lifts and elevator landings, and public transportation stations.
- b) Detailed specifications of the SOS point systems, including the height of operable parts, the formats of information provided, and the features of the two-way communication solution.
- c) Design details of the handsets, if utilized, including the size of keys and numbers and the contrast between the numbers and the keypad.

### **3.9.1.7 Certificate rating submission:**

- a)** As-built documentation confirming the implementation of SOS points in the designated areas.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the SOS points, showcasing features like the height of operable parts, the formats of information provided, the features of the two-way communication solution, and the design of the handsets if utilized.
- d)** Documentation of system tests, demonstrating the functionality of the two-way communication solution, including the text-based chat function, the voice connection with the emergency call center, the hearing enhancement system, the CCTV intercom, and the method of sending and receiving SMS messages from the SOS point.

### **3.9.1.8 References:**

- a)** Abu Dhabi International Accessibility Code
- b)** Abu Dhabi International Building Code, 2013
- c)** UAE Universal Design Code
- d)** UAE Fire and Life Safety Code of Practice

## 3.9.2 ESP.1.02 Enhanced SOS points

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### 3.9.2.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### 3.9.2.2 Intent:

To develop a network and accessible SOS points ensuring that all persons in distress can easily report their location and ask for assistance.

### 3.9.2.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

SOS points should be provided in enhanced locations and should:

- a) Be provided in at least the following:
  - i. One main reception desk (if present)
  - ii. One security desk
  - iii. Under employees' desks in banks, and other civil buildings.
- b) Provide the equivalent level of information on or next to each SOS point in the following formats:
  - i. Push button with an audio output.
- c) If handsets are utilized, phones with large keys and numbers should be provided. The numbers should exhibit significant contrast to the keypad to facilitate easy recognition.

**Best Practice:**

SOS points should be provided in enhanced locations and should:

- a) Provide the equivalent level of information on or next to each SOS point in the following formats:
  - i. Embossed symbols.
- b) Provide two or more than two visual and audible two-way communication solutions suitable for people with access needs such as in accordance with the mandatory requirements and:
  - i. Two-way communication phone app
  - ii. Phone charging USB port available.

**3.9.2.4 Pre-certificate rating credits:****Table 108: ESP.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design SOS for the recommended places and with a push button and audio output according to recommended requirements.
		<b>Best Practice:</b>
3	3	Design SOS points according to best practice requirements
3	3	Design a SOS point with two visual and audible two-way communication solutions

**3.9.2.5 Certificate rating credits:****Table 109: ESP.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm implementation of SOS points in the recommended places and with a push button with an audio output according to recommended requirements.
		<b>Best Practice:</b>
3	3	Confirm implementation of SOS points according to best practice requirements.
3	3	Confirm implementation of SOS point with two visual and audible two-way communication solutions

### **3.9.2.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Design drawings illustrating the proposed locations of SOS points in areas of refuge, elevators/platform lifts and elevator landings, and public transportation stations.
- b)** Detailed specifications of the SOS point systems, including the height of operable parts, the formats of information provided, and the features of the two-way communication solution.
- c)** Design details of the handsets, if utilized, including the size of keys and numbers and the contrast between the numbers and the keypad.
- d)** Detailed specifications of the SOS point systems, including the push button with an audio output.

#### **Best Practice:**

- a)** Detailed specifications of the SOS point systems, including the embossed symbols.
- b)** Design a SOS point with two visual and audible two-way communication solutions

### **3.9.2.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built documentation confirming the implementation of SOS points in the designated areas.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the SOS points, showcasing features like the height of operable parts, the formats of information provided, the features of the two-way communication solution, and the design of the handsets if utilized.
- d)** Documentation of system tests, demonstrating the functionality of the two-way communication solution, including the text-based chat function, the voice connection with the emergency call center, the hearing enhancement system, the CCTV intercom, and the method of sending and receiving SMS messages from the SOS point.
- e)** Updated specifications including the push button with an audio output; (if any changes were made during the construction stage).

#### **Best Practice:**

- a)** Updated specifications including the embossed symbols (if any changes were made during the construction stage).
- b)** Confirm the implementation of an SOS point with two visual and audible two-way communication solutions.

### 3.9.3 ESP.1.03 Accessible emergency routes, areas of refuge and areas of assembly

---

#### 3.9.3.1 Applicability:

Applicable to all buildings within the certification boundary.

#### 3.9.3.2 Intent:

To ensure that accessible and inclusive emergency routes, areas of refuge and areas of assembly are provided in the building accommodating the safety and needs of all users.

#### 3.9.3.3 Requirements:

##### Mandatory:

###### a) 4 credits in renovation.

To ensure evacuation routes are accessible and remain safe, all evacuation routes shall:

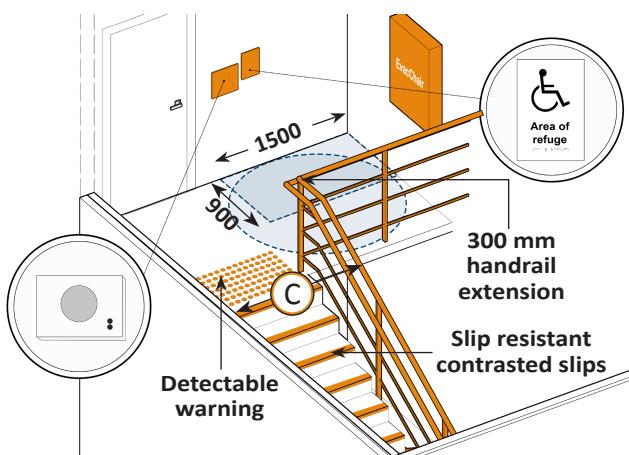
- i. Extend from the entry point to the exit discharge, ensuring an uninterrupted route with minimum width in accordance with **“Sahel Building Rating System – IC.1 Interconnectivity and Circulation”**.
- ii. Ensure that accessible means of egress and or refuge areas shall be guaranteed.
- iii. Have emergency breakout features on all accessible doors and full power automatic sliding doors.
- iv. Have doors capable of opening outwards, including doors to toilet facilities.
- v. Include hardware on windows and all operable parts in accordance with **“Sahel Building Rating System – EFE.1.13 Operable parts”**.
  - a. Have all indoor and outdoor accessible ramps designed in accordance with **“Sahel Building Rating System – IC.1.07 Accessible ramps”**.
- vi. Have all indoor and outdoor accessible staircases designed in accordance with **“Sahel Building Rating System – IC.1.13 Staircases”**.
- vii. Be provided with areas of refuges, if independent evacuation cannot be assured, particularly in buildings lacking sprinkler systems. Evacuation protocols with a designated companion shall be enacted in such cases.
- viii. Have a comprehensive evacuation plan at the main entrance of the building.
- ix. Door closers and stops shall not reduce the headroom clearance below 2000 mm.
- x. Unless an automatic sprinkler system is provided, have at least one required accessible means of egress such as elevators, to be provided in buildings where a required accessible floor is located four or more stories above or below a level of exit discharge and shall:
  - a. Be designed in accordance with **“Sahel Building Rating System – IC.1.17 Elevators and platform lifts (outdoor and indoor)”**.
  - b. Be equipped with an emergency voice/alarm communication system within the evacuation elevator lobby, which shall be accessible to the Civil Protection and Safety Department of Civil Defense.
  - c. Have platform lifts which shall serve as part of the accessible means of egress and shall be equipped with standby power.
- xi. In buildings equipped throughout with an automatic sprinkler system, the elevator shall not be required on floors provided with an accessible ramp.
- xii. Avoid having static escalators and moving walks as part of the evacuation route.

- xiii. Have signage designed to be accessible which shall include:
  - a. Signage indicating accessible emergency routes, evacuation points, and areas of refuge prominently displayed throughout and be easily visible.
  - b. Exit signs displaying the word "Exit" in both English and Arabic in clearly legible letters.
  - c. Tactile signs are installed at every exit location, including doors to an area of refuge, the exit ramp, the exit staircase, exit passageways and the exit discharge.
  - d. A sign, written in Arabic and English, and tactile information (raised characters and braille) are provided at each floor landing in exit enclosures connecting more than three stories. This sign shall designate the floor level, and the termination points of the top and bottom of the exit enclosure and identify the stair or ramp. Additionally, the signage shall indicate the floor of, and the direction to, and the door leading to the exit discharge.
  - e. Signs with a minimum width of 300 mm and a minimum height of 450 mm.
  - f. Provided with occupancy load limitation display at every room that includes info on occupancy area and occupancy load.
  - g. Elevator signage that indicates if elevators can be used as evacuation elevators during fire emergencies, written in Arabic and English, including braille and raised characters.
- xiv. Provide emergency protocols and information in Arabic and English. All translations between Arabic and English shall be culturally translated rather than directly translated to be clear and easily understandable.
- xv. Have luminous path markings and signs be installed in buildings with occupied floors exceeding 23 meters above ground level such as:
  - a. assembly areas
  - b. offices
  - c. educational and institutional facilities
  - d. retail spaces, play areas, food courts and cinemas in malls.
  - e. hotels, night Clubs and discos
  - f. amusement parks, indoor rides, theme parks, and play areas
  - g. theaters, cinemas and auditoriums.
  - h. hospitals
  - i. transportation terminals
- xvi. Have the building occupants, including staff and emergency responders, undergo training in the proper use of accessible emergency routes and evacuation procedures.
- xvii. Have the records of inspections, testing, maintenance activities, and any reported barriers or hazards along accessible emergency routes, properly maintained for reference purposes.

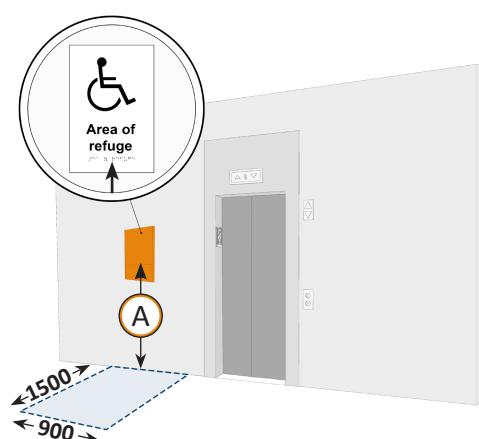
**b) 2 Credits in renovation.**

To ensure that areas of refuge are accessible (Figures 46, 47) and remain safe, all areas of refuge shall:

- i. Be provided in all buildings and facilities that are not equipped with sprinkler systems. These areas may also be planned in large facilities such as shopping malls or transit hubs to improve evacuation capabilities.
- ii. Have enough space in each refuge area to accommodate at least one wheelchair for every 200 occupants. Evacuation protocols with a designated companion shall be enacted in such cases.
- iii. Have areas within staircases, elevator lobbies, or separate rooms designated to accommodate users that require assistance, wherever space permits. These areas shall function as either interior or exterior refuges until assisted rescue is available.
- iv. Be shielded from heat, smoke, flames, and structural collapse.
- v. Be provided with clear floor space of minimum 900 mm in width and 1500 mm in depth, with an adjacent clear turning circle with a minimum diameter of 1500 mm for existing facilities or 1800 mm for new designs, in each area of rescue.
- vi. Be clear of any adjacent door swing and away from pedestrian exit routes.
- vii. Be equipped with separate emergency lighting and ventilation systems, which shall be supported by a backup generator.
- viii. Be equipped with two-way accessible communication system that shall include multi-sensory information including raised characters.
- ix. Include a direct line of communication between the refuge area and the management control point through instructions presented in:
  - a. Essential instruction information shall be presented in visual form, raised characters and braille.
  - b. Audible and visual notification devices shall be provided to indicate that "help is on the way".
- x. Include evacuation assistive aids.



**Figure 46:** Refuge area at stairs



**Figure 47:** Refuge area at elevator

- xi. To ensure all areas of assembly shall:
  - a. Be accessible, remain safe and free from obstructions.
  - b. Use parking lots or other open areas located away from busy streets, as exterior assembly areas for partial or complete evacuation.
- xii. To ensure information coming from an alarm shall be provided in both visual and audible formats. For existing facilities where fire alarm systems cannot be upgraded, portable, vibrating pager systems shall be considered.

**c) 1 Credit in renovation.**

Audible alarm systems shall:

- i. be provided, emitting a distinctive sound solely designated for fire alarm purposes and not for any other use.
- ii. Have a combined total sound pressure level comprising of the ambient sound pressure level and all audible notification appliances in operation, of:
  - a. Maximum 110 dba at the minimum hearing distance.
  - b. Minimum 60 dba in all areas other than sleeping units or mechanical equipment rooms.
  - c. Minimum 15 dba above average ambient sound or 5 dba above the maximum sound level with a duration of at least 60 seconds.
- iii. The sound pressure level in sleeping areas shall be of:
  - a. Minimum 75 dba in sleeping areas.
  - b. Minimum 15 dba above average ambient sound or 5 dba above the maximum sound level with a duration of at least 60 seconds.

**d) 1 Credit in renovation.**

Visual alarm systems shall:

- i. Be provided in areas where the average ambient sound level exceeds 95 dBA.
- ii. Be exclusively utilized for fire alarms and not for any other purpose.
- iii. Be used along with signals and flashes in:
  - a. Public and common areas, central lobbies, corridors.
  - b. Main assembly areas (e.g., auditoriums, conference rooms and cafeterias).
  - c. Places where a person with hearing loss may be alone (e.g., universal washroom or individual workspace).
  - d. In areas where employee workspaces are covered by audible alarm systems, the notification appliance circuits serving these areas shall be initially designed with a minimum of 20% spare capacity. This accounts for the potential addition of visible notification appliances in the future.
  - e. Accessible toilets and family toilets.
  - f. Dwellings shall be equipped with a fire alarm system capable of supporting visible alarms.

g. Institutional and care facilities for more than 16 persons and hotels shall have sleeping units with visual alarms. The number of units shall be as shown in the table below:

**Table 110: Provision of sleeping units with visible alarms**

Number of sleeping units	Sleeping units with visible alarms
6-25	2
26 - 50	4
51 - 75	7
76 - 100	9
101 - 150	12
151 - 200	14

- iv. Have synchronized strobes, ensuring simultaneous flashing to minimize the occurrence of multiple strobes flashing within an individual's field of view.
- v. Have a flash rate within the range of one flash every second (1 Hz) and two flashes per second (2 Hz) across the listed voltage range of the appliance.
- vi. Ensure lights used solely for fire alarm signaling or to indicate the intent for complete evacuation shall be clear or nominal white and be significantly brighter than the ambient light, exceeding 1000 cd (effective intensity). Lights used to signal occupants to seek information or instructions shall be clear, nominal white, or any other color as specified by the emergency plan.

#### **3.9.3.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.9.3.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.9.3.6 Pre-certificate rating submission:**

- a) Design drawings illustrating the proposed locations of evacuation routes, areas of refuge, and areas of assembly.
- b) Detailed specifications of the evacuation routes, including the width, emergency breakout features, door designs, window hardware, ramp designs, staircase designs, elevator/platform lift designs, signage designs, and lighting designs.
- c) Detailed specifications of the refuge area, including the size, location, signage designs, and evacuation assistive aids.
- d) Detailed specifications of the assembly area, including the location, signage designs, and lighting designs.
- e) Detailed specifications of the audible and visual alarms
- f) Emergency protocols and information in Arabic and English.

### **3.9.3.7 Certificate rating submission:**

- a)** As-built documentation confirming the implementation of evacuation routes, areas of refuge, and areas of assembly.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the evacuation routes, areas of refuge, and areas of assembly, showcasing features like the width, emergency breakout features, door designs, window hardware, ramp designs, staircase designs, elevator/platform lift designs, signage designs, and lighting designs.
- d)** Documentation of system tests, demonstrating the functionality of the evacuation routes, areas of refuge, and areas of assembly.

### **3.9.3.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** Abu Dhabi International Building Code, 2013
- c)** UAE Fire and Life Safety Code of Practice

## **3.9.4 ESP.1.04 Enhanced accessible emergency routes, areas of refuge and areas of assembly**

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### **3.9.4.1 Applicability:**

Applicable to all buildings within the certification boundary.

### **3.9.4.2 Intent:**

To ensure that accessible and inclusive emergency routes, areas of refuge and areas of assembly are provided in the building with enhanced features that accommodate the safety and needs of all users.

### **3.9.4.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

- a)** To ensure evacuation routes are accessible and remain safe, all evacuation routes should:
  - i.** Have luminous path markings installed in buildings higher than 23m for occupancy types such as arenas, stadiums, performing arts centers, large-scale industrial facilities, residential blocks.
- b)** To ensure areas of refuge are accessible and remain safe, all areas of refuge should:
  - i.** Use blinking electrical lights, such as strobe lights, to enhance the identification of areas of refuge.
  - ii.** Have a clear turning circle with a minimum diameter of 2000 mm provided adjacent to the area of refuge.
- c)** To ensure areas of assembly are accessible and remain safe, all areas of assembly should:
  - i.** Be equipped with seating and shelter (from rain/sun where applicable) with a passenger loading zone, used for the emergency services.
- d)** Have emergency communication systems serve as an alternative alarm system in institutional dwelling units or hospitals.
- e)** Have visual alarms visible from each toilet cubicle.

#### **Best Practice:**

To ensure areas of refuge are accessible and remain safe, all areas of refuge should:

- a)** Have a clear turning circle with a minimum diameter of 2500 mm provided adjacent to the area of refuge.

### 3.9.4.4 Pre-certificate rating credits:

**Table 111: ESP.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Design evacuation routes according to recommended requirements
		Design areas of refuge according to recommended requirements
		Design areas of assembly according to recommended requirements
		<b>Best Practice:</b>
2	2	Design an enlarged clear turning circle adjacent to refuge area

### 3.9.4.5 Certificate rating credits:

**Table 112: ESP.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	5	Confirm the implementation of evacuation routes according to recommended requirements.
		Confirm the implementation of areas of refuge according to recommended requirements.
		Confirm the implementation of areas of assembly according to recommended requirements
		<b>Best Practice:</b>
2	2	Confirm the provision of an enlarged clear turning circle adjacent to refuge area

### **3.9.4.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Design drawings illustrating the proposed locations of evacuation routes, areas of refuge, and areas of assembly.
- b)** Detailed specifications of the evacuation routes, including the width, emergency breakout features, door designs, window hardware, ramp designs, staircase designs, elevator/platform lift designs, signage designs, and lighting designs.
- c)** Detailed specifications of the refuge areas, including the size, location, signage designs, and evacuation assistive aids.
- d)** Detailed specifications of the assembly areas, including the location, signage designs, and lighting designs.
- e)** Detailed specifications of the audible and visual alarms
- f)** Emergency protocols and information in Arabic and English.
- g)** Detailed specifications of the evacuation routes, including the hardware on windows, sliding doors, and the installation of luminous path markings and signs.
- h)** Detailed specifications of the refuge areas, including the use of blinking electrical lights and the provision of a clear turning circle.
- i)** Detailed specifications of the assembly areas, including seating, shelter, and passenger loading zones, and location relative to the wind direction.

#### **Best Practice:**

- a)** Drawings showing an enlarged clear turning circle adjacent to the refuge area

### **3.9.4.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built documentation confirming the implementation of evacuation routes, areas of refuge, and areas of assembly.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the evacuation routes, areas of refuge, and areas of assembly, showcasing features like the width, emergency breakout features, door designs, window hardware, ramp designs, staircase designs, elevator/platform lift designs, signage designs, and lighting designs.
- d)** Documentation of system tests, demonstrating the functionality of the evacuation routes, areas of refuge, and areas of assembly.
- e)** Updated specifications if any changes were made during the construction stage.
- f)** Photographs of the evacuation routes, areas of refuge, and areas of assembly, showcasing features like the hardware on windows, sliding doors, luminous path markings and signs, blinking electrical lights, clear turning circles, seating, shelter, and passenger loading zones.

#### **Best Practice:**

- a)** As-built drawings showing an enlarged clear turning circle adjacent to the refuge area.

## 3.9.5 ESP.1.05 Accessible public address systems

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### 3.9.5.1 Applicability:

Applicable to all buildings with an occupant load of more than 500 persons, in particular:

- a) Covered mall and open mall assets.
- b) Special amusement assets, a temporary or permanent structure, or part thereof, occupied for amusement, entertainment, or educational purposes, where the means of egress may not be readily apparent.
- c) Schools and Universities
- d) Mosques
- e) Airports and other public transportation hubs
- f) Sporting venues

### 3.9.5.2 Intent:

To ensure that information by public announcement systems is distributed and received equally by all building users.

### 3.9.5.3 Requirements:

#### Mandatory:

##### a) 4 Credits in renovation.

PA systems within the asset are designed to be accessible which shall ensure:

- i. Be provided within the following areas of assets:
  - a. Corridors.
  - b. Assembly and meeting rooms
  - c. Recreational facilities
  - d. Entertainment and educational facilities
  - e. Common use areas located in institutional settings.
  - f. Public toilets
  - g. Religious spaces and areas
- ii. Be supplemented by visual indicators, video screens or displays with variable message signs or sign language interpretation provided.
- iii. Consist of pre-recorded or live emergency captions which shall originate from an approved location staffed by trained persons who are constantly available to respond to emergencies.
- iv. Announcements that cannot be prerecorded in advance of the event shall not be required to be displayed.
- v. Use at least two channels (audio and visual) or be coupled with a hearing loop, in transportation hub and healthcare contexts.
- vi. Be compatible with any hearing enhancement system (e.g., frequency modulation, infrared, or induction loop).
- vii. Have sound levels of at least 5 dbA above the ambient background noise, causing no distortion or feedback, especially for prayer announcements.
- viii. Have speakers positioned strategically to cover the desired area effectively, ensuring there is no feedback, echoes, or reverberation. Speakers shall be mounted 2200 mm above floor or round level to provide effective sound coverage in required areas.

- ix. Have sounds levels of at least 15 dBA above the average ambient sound recorded in each desired area, for announcements related to emergencies as follows:
  - a. covered mall/open mall (min floor area 2000 square meters)
  - b. amusement/education buildings
- x. Include content regarding manual fire alarm activation which takes precedence over all other forms of content.
- xi. Have voice instructions after the sound of an alert tone activated by any automatic fire detector, sprinkler water flow device, or a manual fire alarm box.
- xii. Have voice instructions that shall provide approved information and directions for general and staged evacuations based on the asset's fire safety and evacuation plans.
- xiii. In high-rise assets, the emergency voice/alarm communication system shall be functional on the floor where the alarm is activated, and on the floors directly above and below.

#### **3.9.5.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.9.5.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.9.5.6 Pre-certificate rating submission:**

- a) Detailed specifications of the PA systems, including the use of at least two channels (audio and visual) or coupling with a hearing loop.
- b) Detailed specifications of the emergency captions, sound levels, speaker positions, and content of announcements.
- c) Detailed specifications of the visual indicators, video screens, or displays supplementing the PA systems.
- d) Emergency protocols and evacuation plans in Arabic and English.

#### **3.9.5.7 Certificate rating submission:**

- a) Updated specifications if any changes were made during the construction stage.
- b) Photographs of the PA systems, showcasing features like speaker positions, visual indicators, video screens, or displays.
- c) Documentation of system tests, demonstrating the functionality of PA systems.

#### **3.9.5.8 References:**

- a) Abu Dhabi International Accessibility Standards, 2013
- b) Abu Dhabi International Building Code, 2013
- c) UAE Fire and Life Safety Code of Practice
- d) UAE Universal Design Code

## 3.9.6 ESP.1.06 Enhanced accessible public address systems

### 3.9.6.1 Applicability:

Applicable to all buildings with an occupant load of more than 500 persons, in particular:

- a) Covered mall and open mall assets.
- b) Special amusement assets, a temporary or permanent structure, or part thereof, occupied for amusement, or entertainment, where the means of egress may not be readily apparent.
- c) Schools and Universities
- d) Mosques
- e) Airports and other public transportation hubs
- f) Sporting venues

### 3.9.6.2 Intent:

To ensure that information by public announcement systems is distributed and received equally by all building's users through advanced features.

### 3.9.6.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

PA systems within the asset are designed to be accessible which should:

- a) Include integrated tactile feedback into the overall emergency voice/alarm communication system, such as vibrating alarms.

### 3.9.6.4 Pre-certificate rating credits:

**Table 113: ESP.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design PA systems including integrated tactile feedback

### 3.9.6.5 Certificate rating credits:

**Table 114: ESP.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm implementation of PA systems including integrated tactile feedback

### **3.9.6.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Detailed specifications of the PA systems, including using at least two channels (audio and visual) or coupling with a hearing loop.
- b)** Detailed specifications of the emergency captions, sound levels, speaker positions, and content of announcements.
- c)** Detailed specifications of the visual indicators, video screens, or displays supplementing the PA systems.
- d)** Emergency protocols and evacuation plans in Arabic and English.
- e)** Detailed specifications of the PA systems, including the use of hearing enhancement systems and integrated tactile feedback
- f)** Detailed specifications of the PA system's ability to direct information to specific key locations to minimize background noise in other areas of the asset.
- g)** Protocols for emergency situations detailing how the PA system will be used during such events.

### **3.9.6.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated specifications if any changes were made during the construction stage.
- b)** Photographs of the PA systems showcasing features like speaker positions, visual indicators, video screens, or displays.
- c)** Documentation of system tests demonstrating the functionality of the PA systems.

## **3.9.7 ESP.1.07 Evacuation plans for persons with access needs (procedure)**

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### **3.9.7.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1** (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2** (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3** (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4** (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5** (e.g., amusement parks, other outdoor assembly uses).
- f) B** (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E** (e.g., colleges, schools, day care).
- h) I-1** (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2** (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M** (e.g., supermarkets, drug stores, retail stores)
- k) R-1** (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy:** public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.9.7.2 Intent:**

Ensure that buildings have accessible and inclusive evacuation procedures and equipment that meets the safety and needs of all users.

### **3.9.7.3 Requirements:**

#### **Mandatory:**

- a) 2 Credits in renovation.**
  - i.** To ensure evacuation plans for persons with access needs (procedure) are robust, assets and facilities shall maintain records of individuals or user groups who may require assistance during evacuations in the form of:
    - a. Personal Emergency Evacuation Plan (PEEP).** A PEEP shall:
      - Be developed for individuals with specific needs or disabilities that may require assistance during an evacuation.
      - Be created based on an individual's capabilities, mobility, and specific requirements, ensuring they can safely evacuate in an emergency.
      - Include details such as the preferred evacuation method, designated assistance personnel, evacuation routes, assembly points, and any required evacuation aids or equipment.

**b. General Emergency Evacuation Plan (GEEP).** A GEEP shall:

- Outline procedures and protocols for evacuating all occupants in an asset or facility during emergencies, considering trained personnel or volunteer teams responsible for assisting individuals with access needs during evacuations.
- Cover evacuation routes, assembly points, communication methods, personnel's responsibilities, emergency equipment locations, and procedures for coordinating evacuations with emergency services.

**b) 2 Credits in renovation.**

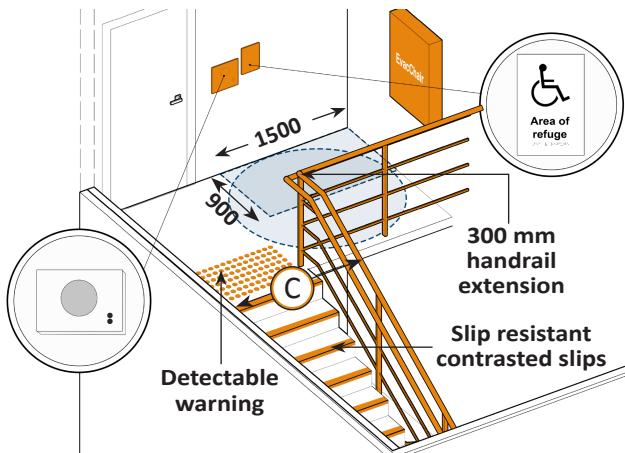
- i. The procedure for evacuation plans for persons with access needs required to be followed shall consist of (where applicable):
  - a. Assigning specific personnel or teams responsible for assisting individuals with access needs during evacuations to ensure a coordinated and efficient response.
  - b. Introducing and using a buddy system throughout the entire asset to cover the user population and comprise at least three to four people.
  - c. Using a fire warden/marshal to facilitate the independent evacuation of asset users within a specified and limited part of that asset, e.g. a floor, and to render appropriate assistance to users when necessary.
    - A fire warden/marshal shall not hinder or prevent people from evacuating an asset during a fire emergency.
    - The presence of fire wardens/marshals in an asset shall not be used to justify any compromises with essential passive and/or active fire protection measures.
  - d. Implementing and establishing clear communication methods to alert people with access needs of an emergency and provide instructions for evacuation.
  - e. Regularly conduct training sessions and evacuation drills to familiarize all asset users, including staff, visitors and guests, with evacuation procedures and protocols.
  - f. Regularly reviewing, evaluating and updating all evacuation procedures based on feedback, lessons learned from drills or real emergencies, and changes in accessibility standards or regulations.

**c) 1 Credit in renovation.**

- i. All evacuation floor plans shall:
  - a. Highlight the accessible means of egress, assembly areas and assisted evacuation locations.
  - b. Highlight fire compartments when no immediate evacuation is possible such as in healthcare facilities.
  - c. Be written in Arabic and English using linguistically clear words, written in clearly legible letters.
  - d. Be installed at a maximum height of 1200 mm above floor or ground level, measured from the base of the plans to the floor or ground surface.
  - e. Be posted in a continuously illuminated location.
  - f. Be regularly practiced, reviewed, updated, and updated to reflect technological changes, personnel, and procedures.

**d) 2 Credits in renovation.**

- i. Evacuation assistive aids shall:
  - a. Be used by fire safety or security personnel, rescue teams, or designated volunteers serving as emergency response assistants which offer assistance to individuals who are unable to evacuate independently down the stairs to a safe area through the use of evacuation devices such as:
    - An evacuation chair Figure 48).
    - Evacuation mattresses.
    - Evacuation slides.



**Figure 48:** Staircase area of refuge with two-way communication and Evac chair

- ii. Be located in the one of the following areas:
  - a. Consistently located near the designated staircases/flight of steps/all emergency exits.
  - b. Where located nearby staircases, a cabinet for evacuation aids, such as evacuation chairs and stretchers, shall be installed in multi-story high-rise assets, particularly on floors that have accessible units or services.
  - c. On every floor of the asset which consists of two or more floor levels.
  - d. Near areas of high occupancy, such as auditoriums, conference rooms, or gathering spaces.
  - e. Areas of refuge.
  - f. In multi-story high-rise building, a cabinet for evacuation chairs and stretchers shall be provided close to the staircase.
- iii. Be capable of:
  - a. Being safely and easily operated.
  - b. Being suitable to serve as a bariatric evacuation aid (minimum of 150 kg working load).
  - c. Going down staircases/flight of steps stably – when required to go up an evacuation staircase, the evacuation chair shall be electrically powered.
  - d. Travelling long distance horizontally, internally and externally, stably.
  - e. Successfully negotiating any challenging features of a fire evacuation route, such as inside an asset, and external routes over rough and uneven ground.

**e) 1 Credit in renovation.**

- i. Fire extinguishers, first aid kits and defibrillators shall:
  - a. Have a clear floor space of 900 mm in width and 1500 mm in depth.
  - b. Have controls operable with one hand and provided at a height in accordance with "Sahel Building Rating System – EFE.1.13 Operable parts".

#### **3.9.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.9.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.9.7.6 Pre-certificate rating submission:**

- a)** Design drawings illustrating the proposed locations of evacuation aids and evacuation plans.
- b)** Detailed specifications of the evacuation aids and evacuation plans, including the use of different types of evacuation aids (such as evacuation chairs, evacuation mattresses, and evacuation slides), and the details of Personal Emergency Evacuation Plan (PEEP) and General Emergency Evacuation Plan (GEEP).
- c)** Protocols for emergency situations, detailing how evacuation aids and plans will be used during such events.

### **3.9.7.7 Certificate rating submission:**

- a)** As-built documentation confirming the implementation of evacuation aids and evacuation plans in designated areas.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the evacuation aids and evacuation plans.

### **3.9.7.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** Abu Dhabi International Building Code, 2013
- c)** UAE Fire and Life Safety Code of Practice

## **3.9.8 ESP.1.08 Enhanced evacuation plans for persons with access needs (procedure)**

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### **3.9.8.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-1** (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2** (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3** (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4** (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5** (e.g., amusement parks, other outdoor assembly uses).
- f) B** (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E** (e.g., colleges, schools, day care).
- h) I-1** (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2** (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M** (e.g., supermarkets, drug stores, retail stores)
- k) R-1** (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy:** public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.9.8.2 Intent:**

Ensure that buildings have accessible and inclusive evacuation procedures and equipment with enhanced features that meet the safety and needs of all users to meet either recommended and/or best practice.

### **3.9.8.3 Requirements:**

All designs, drawings, and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

To ensure evacuation plans for persons with access needs (procedure) are robust, assets and facilities should maintain records of individuals or user groups who may require assistance during evacuations in the form of:

- a) All evacuation plans should:**
  - i.** Provide tactile information (e.g., tactile maps).
  - ii.** Provide a tactile guidance system on the floor surface leading to the evacuation plans.
  - iii.** Provide illuminated evacuation plans.
- b) Evacuation assistive aids should:**
  - i.** Evacuation assistive aids should allow for more than 150 kg, to serve as bariatric evacuation aids.

### 3.9.8.4 Pre-certificate rating credits:

**Table 115: ESP.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Propose evacuation plans according to recommended requirements.
		Propose a protocol for evacuation aids' approval.

### 3.9.8.5 Certificate rating credits:

**Table 116: ESP.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm implementation of evacuation plans according to recommended requirements.
		Confirm implementation for a protocol of evacuation aids' approval.

### 3.9.8.6 Pre-certificate rating submission:

#### Recommended:

- Design drawings illustrating the proposed locations of evacuation aids and evacuation plans.
- Detailed specifications of the evacuation aids and evacuation plans, including the use of different types of evacuation aids (such as evacuation chairs, evacuation mattresses, and evacuation slides), and the details of Personal Emergency Evacuation Plan (PEEP) and General Emergency Evacuation Plan (GEEP).
- Protocols for emergency situations, detailing how evacuation aids and plans will be used during such events.
- Design drawings illustrating the proposed locations of tactile maps, tactile guidance systems on the floor surface, and illuminated evacuation plans.
- Detailed specifications of the tactile maps, tactile guidance systems, and illuminated evacuation plans, including their design, materials, and installation process.
- A copy of the Emergency manual that approves the type and quality of emergency assistance aids.

#### Best Practice:

- Design drawings illustrating the proposed locations of the tactile guidance system on the wall surface and handrails.
- Detailed specifications of the tactile guidance system and handrails, including their design, materials, and installation process.
- Documentation of the evacuation plan that includes the tactile guidance system on the wall surface and handrails.

### **3.9.8.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built documentation confirming the implementation of evacuation aids and evacuation plans in designated areas.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the evacuation aids and evacuation plans
- d)** As-built documentation confirming the implementation of tactile maps, tactile guidance systems on the floor surface, and illuminated evacuation plans in designated areas.
- e)** Updated specifications if any changes were made during the construction stage.
- f)** Photographs of the implemented tactile maps, tactile guidance systems, and illuminated evacuation plans.
- g)** Documentation confirming that the provided emergency manual approved the type and quality of emergency assistance aids.

#### **Best Practice:**

- a)** As-built documentation confirming the implementation of the tactile guidance system on the wall surface and handrails in designated areas.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Photographs of the implemented tactile guidance system on the wall surface and handrails.
- d)** Documentation confirming the final version of the evacuation plan that includes the tactile guidance system on the wall surface and handrails.

## 3.10 CM.1 Considerate Maintenance

This category evaluates the quality and performance of the building maintenance and management throughout its lifespan. Considerate Maintenance includes aspects such as proficiency, reliability, and transparency of maintenance activities.

**Table 117: Considerate Maintenance**

CM	Considerate Maintenance	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
CM.1.01	Accessibility focused maintenance	Mandatory	R	8
CM.1.02	Enhanced accessibility focused maintenance	Recommended	2	4
CM.1.03	Safe zone under construction or maintenance	Mandatory	R	3
CM.1.04	Enhanced safe zone under construction or maintenance	Recommended	2	2
		Best Practice	2	2
CM.1.05	User feedback collection	Mandatory	R	2
CM.1.06	Enhanced user feedback collection (survey)	Recommended	2	2
		Best Practice	2	2
CM.1.07	Accessibility training	Mandatory	R	3
CM.1.08	Enhanced accessibility training	Best Practice	2	2
	<b>Total</b>		<b>12</b>	<b>30</b>

## 3.10.1 CM.1.01 Accessibility focused maintenance

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### 3.10.1.1 Applicability:

Applicable to all public realm and buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### 3.10.1.2 Intent:

To establish mechanisms and procedures for monitoring and evaluating the effectiveness and continued functionality of a facility for public use, improving the quality of life, accessibility, safety, satisfaction, and overall well-being in the building.

### 3.10.1.3 Requirements:

#### **Mandatory:**

The asset shall develop a building and public realm operations and maintenance manual and building logbook that includes a monitoring, maintenance, and cleaning program for the facility and staff-training schedules to ensure its accessibility features are in good condition and operable. The building operations and maintenance manual shall include at least:

- a) **8 Credits in renovation.**
  - i. The procedure for documentation and archiving inspection records.
  - ii. These inspections shall be undertaken at least annually, and records of the maintenance problems encountered, and solutions implemented shall be kept, being submitted for the certificate renewal.
  - iii. Schedule for regular inspection, cleaning, and maintenance works. The schedule shall allocate cleaning, maintenance, and temporary works during off-peak/closure hours.
  - iv. Schedule for accessibility training programs.
  - v. Provision of suitable storage and inventory of cleaning materials and equipment. The storage/ inventory shall not obstruct any accessible paths or features of the asset.
  - vi. The procedure for cordoning off potential temporary hazards related to cleaning/ maintenance (e.g., wet floors) including adequate warning signs.
  - vii. The warning signs shall have a minimum width of 300 mm and a minimum height of 450 mm.

- viii. The warning signs shall have a luminance contrast in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”
- ix. The procedure of regular inspections of potential, unauthorized, or unintentional modifications that could impact universal access to services and facilities.
- x. The maximum inoperability times for critical accessibility features. These features include, but are not limited to, elevators, toilets, ramps, doors, and emergency exits.
- xi. The procedure of regular inspections of the accessible paths and accessible features within the asset. The procedure of inspections shall include at least:
  - xii. Floor surface checks:
    - a. Ensuring surfaces are free from cracks, holes, or unevenness, and flooring junctions do not pose tripping hazards.
    - b. Ensuring slip resistance and proper drainage are maintained,
    - c. Ensuring visibility and contrast are maintained.
    - d. Ensuring that paths are cleared of debris, sand, leaves, and any obstructions that could hinder safe passage.
  - xiii. Clear space checks:
    - a. Ensuring accessible paths remain clear of all temporary or permanent obstacles (e.g., seating, signage, merchandise displays, toolboxes, file boxes, vending machines, or photocopiers).
    - b. Ensuring clear floor spaces of 900 mm in width and 1500 mm in depth, safety zones, and emergency assembly points are free from obstructions.
    - c. Ensuring adequate headroom throughout the asset (e.g., avoiding trailing cables or other dangerous elements) on floors or at heights below 2200 mm, and properly positioning architectural features such as focus lights and lamps to avoid obstructions).
    - d. Ensuring planting adjacent to access routes is regularly trimmed to prevent encroachment onto the paths at heights below 2200 mm.
  - xiv. Signage and wayfinding checks:
    - a. Ensuring signage and communication systems are current and reflect changes in services and facilities. Temporary signage shall be removed once it becomes irrelevant.
    - b. Ensuring all new tactile signs are integrated smoothly with existing ones in accordance with “**Sahel Building Rating System – OC.1.05 Tactile maps and raised floor plans**”.
    - c. Ensuring all signage is visible, legible, and in good condition.
    - d. Ensuring external signage is visible from all directions, including trimming any adjacent plants that may obstruct the view.
    - e. Ensuring illuminated sign bulbs are replaced to maintain performance, always ensuring clear visibility.
    - f. Ensure access space to tactile and braille signs is maintained, and that TWSI and guidance systems are secure and effective.
    - g. Ensuring color schemes maintain visual contrast between surfaces and fixtures for optimal visibility and navigability.

xv. Lighting checks:

- a. Ensuring lighting installations are properly maintained to prevent glare and provide optimal visibility in all areas. Utilize a balanced lighting scheme incorporating illuminance from diverse sources, including the ceiling, walls, and floors, for visual comfort. Implement a glare protection strategy considering users of various statures, such as tall individuals, children, and wheelchair users.
- b. Ensuring uniform lighting levels are consistently maintained throughout all areas, including steps, ramps, and access routes, to ensure optimal safety and accessibility around the clock. These levels should be verified using a light meter. Ensuring no light bulbs or fluorescent tubes are broken or flickering. Regularly test for flicker frequency, ensuring it does not exceed once per two seconds. This helps maintain a stable lighting environment and avoids visual discomfort.
- c. Ensuring windows, lamps, and lighting diffusers are cleaned regularly to maintain effective illuminance. Regular cleaning prevents dirt buildup that can reduce light output and uniformity. This ensures that the lighting remains effective and consistent across all areas.

xvi. Lift and platform lift checks:

- a. Ensuring battery supplies for platform lifts are kept permanently charged.
- b. Ensuring lifts are aligned with floor levels and controls are unobstructed.
- c. Ensuring emergency communication systems, including induction loops and intercoms, have full operational status (e.g., by routine testing).
- d. Ensuring alternative arrangements are provided and communicated in the event of a lift failure or maintenance to maintain the same level of accessibility in the asset.

xvii. Ramp and curb ramp checks:

- a. Ensuring good condition and stability of handrails, floor surfaces, curb cuts, and Warning TWSI, to prevent accidents.
- b. Ensuring ramps remain free of any obstructions, whether permanent or temporary, especially on landings and at the top and bottom of each ramp, to ensure unimpeded access.

xviii. Stairs checks:

- a. Ensuring good condition and stability of handrails, floor surfaces, color strip with high contrast on nosings, and Warning TWSI, to mitigate accident risks.
- b. Ensuring flights of steps are kept clear of any obstructions, permanent or temporary, especially on landings and at the top and bottom of each flight, to ensure safe passage.

xix. Doors and entrance checks:

- a. Ensuring approaches to bells, intercoms, access controls, and door handles remain free from obstructions.
- b. Ensuring entrances are kept clear of any obstructions, including those that are temporary, such as delivered goods, to facilitate smooth entry and exit.
- c. Ensuring access control systems, including door operation and communication facilities, are always operational (e.g., by regular monitoring and testing).
- d. Ensuring powered door systems maintain their designed operational speeds and activation timing in accordance with "**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**"
- e. Ensuring the opening force of manual door in accordance with "**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**".

- xx.** Parking and passenger loading zone checks:
  - a. Ensuring accessible parking spaces and access aisles are kept clear of vehicles and other obstructions at all times.
  - b. Ensuring designated parking bays and setting down areas are monitored, with penalties enforced for unauthorized use.
- xxi.** Accessible communication device checks:
  - a. Ensuring hearing enhancement systems, public address systems, and other accessible communication devices are well functioning and operable (e.g., by regular testing and maintenance).
  - b. Ensuring a system is in place for the loan of headsets for infrared and radio hearing enhancement systems (where provided), including retrieval, cleaning and testing.
- xxii.** Accessible toilets checks:
  - a. Ensuring a routine schedule for inspecting, cleaning, restocking, and maintaining all sanitary facilities.
  - b. Ensuring transfer spaces within accessible WCs remain unobstructed, and wheelchair maneuvering spaces are always free from any obstacles.
  - c. Ensuring a readily accessible key is provided near all accessible toilets, accompanied by clear instructions indicating its location in case the toilets are locked.
  - d. Ensuring information regarding the operation of hoist systems and compatibility with slings is readily available and provided to users (when hoist systems are present).
  - e. Ensuring alarm systems, including any assistance call provisions from accessible toilets, showers, and bathtubs, undergo regular checks. Additionally, new staff members shall be trained in alarm response procedures to ensure prompt and effective action in case of emergencies.
- xxiii.** Furniture checks:
  - a. Ensuring furniture and fittings are positioned in a manner that does not obstruct circulation routes or accessible operable parts.
  - b. Ensuring items stored on furniture or in storage areas do not risk being easily knocked over, and heavy items are stored at lower levels.
  - c. Ensuring no furniture is broken or poses a health risk.
- xxiv.** Emergency equipment and system checks:
  - a. Ensuring the emergency evacuation equipment, and the approach to and egress from all lifts and stairs are kept free of obstruction to ensure unimpeded access.
  - b. Ensuring means of escape remain uncompromised by unauthorized changes to the asset layout or the inappropriate storage of materials.
  - c. Ensuring internal and external emergency exit routes, and access for firefighting vehicles are available and usable at all times.
  - d. Ensuring visual and audio fire alarms are always functional (e.g., by regular inspections, statutory testing, and servicing).
- xxv.** HVAC or AC system checks (indoors):
  - a. Ensuring HVAC or AC systems are well functioning (e.g., by regular testing).
  - b. Ensuring HVAC or AC filters are timely replaced.

#### **3.10.1.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.10.1.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.10.1.6 Pre-certificate rating submission:**

- a)** A draft of the monitoring, maintenance, and cleaning program that includes all the required procedures and schedules.
- b)** A draft of the inspection records documentation and archiving procedure.
- c)** A draft of the storage and inventory management plan for cleaning materials and equipment.
- d)** Drafts of the procedures for cordoning off potential temporary hazards related to cleaning/maintenance, including the design of adequate warning signs.
- e)** Drafts of the procedures for regular inspections of potential, unauthorized, or unintentional modifications that could impact universal access to services and facilities.
- f)** Drafts of the procedures for regular inspections of the accessible paths and accessible features within the asset.

#### **3.10.1.7 Certificate rating submission:**

- a)** The final version of the monitoring, maintenance, and cleaning program that includes all the required procedures and schedules.
- b)** The final version of the inspection records documentation and archiving procedure.
- c)** The final storage and inventory management plan for cleaning materials and equipment.
- d)** The final versions of the procedures for cordoning off potential temporary hazards related to cleaning/maintenance, including the design of adequate warning signs.
- e)** The final versions of the procedures for regular inspections of potential, unauthorized, or unintentional modifications that could impact universal access to services and facilities.
- f)** The final versions of the procedures for regular inspections of the accessible paths and features within the asset.
- g)** Evidence of the program's implementation, such as inspection records, maintenance logs, photographs of the storage areas, photographs of the warning signs, and any other relevant documents or records. This evidence must demonstrate that the program is being effectively implemented and ensuring the good condition and operability of the asset's accessibility features.

#### **3.10.1.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** Abu Dhabi International Building Code, 2013
- c)** UAE Universal Design Code

## **3.10.2 CM.1.02 Enhanced accessibility focused maintenance**

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### **3.10.2.1 Applicability:**

Applicable to all public realm and buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g)** E (e.g., colleges, schools, day care).
- h)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j)** M (e.g., supermarkets, drug stores, retail stores)
- k)** R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l)** Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.10.2.2 Intent:**

To establish optimized mechanisms and procedures for monitoring and evaluating the effectiveness and continued functionality of a facility of public-use, to improve the quality of life, accessibility, safety, satisfaction, and overall well-being in the building.

### **3.10.2.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

**Recommended:**

- a) To undertake the annual inspections every three months and records of the maintenance problems encountered, and solutions implemented shall be kept, being submitted for the certificate renewal.
- b) The asset should develop a monitoring, maintenance, and cleaning program to ensure good condition and operability of its accessibility features. The building operations and maintenance manual should include at least:
- c) Develop a scent-free, allergy-friendly cleaning and maintenance program to ensure the comfort of persons with respiratory issues, chemical sensitivities, and allergies. The program should include at least:
  - i. Limitations on the use of scented products including citrus• and/or pine-based products. Scented products should not be used in all circulation areas, public facilities (e.g., service desks, toilets), and workstations.
  - ii. Limitation on the use of materials containing allergy-triggering substances during replacement or maintenance. Specifically, substances such as nickel, chromium, cobalt, and certain rubber and wood types, should not be utilized in the construction of buttons, controls, handles, or handrails in the publicly accessible areas of the asset.
  - iii. Integrated Pest Management (IPM) program including strategies of prevention, monitoring, record-keeping, and control of pesticides. Pest control, maintenance, and cleaning should prioritize non-toxic methods, or be performed during closure hours and followed by air flush.
  - iv. Policy on non-allergenic landscaping and planting. The replacement of plants and trees should prioritize species less likely to trigger allergic reactions in individuals prone to allergies (e.g., species with low pollen production and minimal irritants).

**3.10.2.4 Pre-certificate rating credits:**

**Table 118: CM.1.02 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	4	Develop a draft of scent-free, allergy-friendly cleaning and maintenance program according to the best practice requirements.

**3.10.2.5 Certificate rating credits:**

**Table 119: CM.1.02 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	4	Confirm implementation of a scent-free, allergy-friendly cleaning and maintenance program according to the best practice requirements

### **3.10.2.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** A draft of the Scent-Free, Allergy-Friendly Cleaning and Maintenance Program, detailing the policies, standards, and procedures outlined in the requirements.
- b)** Specifications of the scented products and allergy-triggering substances to be avoided, and the proposed alternatives.
- c)** A proposed schedule for regular inspections and compliance checks.

### **3.10.2.7 Certificate rating submission:**

#### **Recommended:**

- a)** The final Scent-Free, Allergy-Friendly Cleaning and Maintenance Program, incorporating any changes or updates made during the design stage.
- b)** Updated specifications if any changes were made during the construction stage.
- c)** Records of inspections, maintenance activities, and any reported issues or incidents related to scents and allergies.
- d)** A report summarizing the compliance checks, including any issues identified and actions taken to address them.

### 3.10.3 CM.1.03 Safe zone under construction or maintenance

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#### 3.10.3.1 Applicability:

Applicable to all public realm and buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

#### 3.10.3.2 Intent:

To establish mechanisms and procedures for monitoring and evaluating the continued functionality of a public use facility during construction and alterations to improve the quality of life, accessibility, safety, satisfaction, and overall well-being in the building and its surroundings. (Figures 49, 50).

#### 3.10.3.3 Requirements:

##### Mandatory:

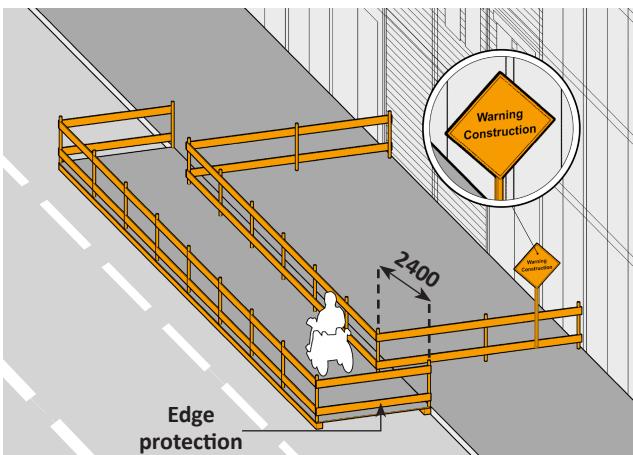
###### a) 3 Credits in renovation.

The asset must establish an accessible and safe zone during construction or maintenance to ensure safety and accessibility throughout the renovation/maintenance process. The public realm and building operations and maintenance manual shall include at least:

- i. Safe, accessible, uninterrupted access policy: Roads, sidewalks, and related infrastructure undergoing repairs, resurfacing, construction, or maintenance activities shall ensure the preservation of areas specifically designated for the safe passage of all users. External redecoration using ladders, scaffold towers, or mobile lifting platforms near access routes shall not obstruct or pose a hazard on access routes.
- ii. Accessible safe zone policy: An accessible and safe zone shall be established throughout the duration of any construction or maintenance works. Hazardous materials, equipment, or machinery shall be appropriately stored and secured within the safe zone, thereby mitigating any potential dangers to pedestrian traffic.

- iii. The standard for advanced warning and guidance signs:
  - a. The area around the construction site shall be marked with bright colors such as yellow, white/red, flashing lights, or similar warning devices.
  - b. The warning signs shall be at least 300 mm wide and 450 mm high.
  - c. The warning signs shall have a luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - d. Warning lights and audible signals shall be provided to alert individuals of the construction site during nighttime hours.
- iv. Signage shall be installed at the near and far sides of intersections preceding a pedestrian path that is temporarily and completely obstructed, to inform of the construction activity adequately.
- v. Directional signage and warnings shall be strategically placed to eliminate or significantly reduce the necessity for pedestrians to backtrack, particularly in scenarios where there is no safe waiting area at a corner of an intersection undergoing construction. Directional signage and warnings shall be prominently displayed to indicate alternative accessible pedestrian paths whenever construction or maintenance activities impede the regular accessible path.
- vi. Additional directional signage shall be prominently displayed to indicate alternative accessible pedestrian paths whenever construction or maintenance activities impede the regular accessible path from one site element to another, such as from parking spaces, bus stops, or drop-off areas to entrances.
- vii. Signage and communication efforts shall effectively inform pedestrians about temporary changes to accessibility routes and potential hazards, ensuring their safety and convenience during construction or maintenance periods.
- viii. The standard for adequate illuminance and reflectors:
  - a. Any obstructions shall be marked with particular attention to visibility during nighttime.
  - b. Nighttime illuminance shall be provided in areas with insufficient lighting.
  - c. Minimum required lighting levels shall be ensured in and around work areas and the safe zone to maintain visibility and safety, encompassing both day and night.
  - d. The standards for temporary, accessible pedestrian paths:
    - An unobstructed accessible pedestrian path shall be provided, aiming for a preferred clear width of 1800 mm, or a minimum of 1500 mm where site constraints exist. This path shall be firm, stable, slip-resistant, and glare-free, and equipped with accessible curb ramps at intersections. Surfaces, including stair treads and landings in wet conditions, stair nosing, ramps and sidewalks shall be in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- ix. Additional travel time and distance shall be kept to a minimum.
- x. Loading, unloading, and material supply shall not impede accessible paths.
- xi. Materials and debris from the construction stored on the road shall be conspicuously marked and safeguarded to prevent any risk to pedestrians or vehicles.
- xii. Pedestrians shall be protected from overhead dangers. Clear space of a minimum height of 2200 mm shall be provided.

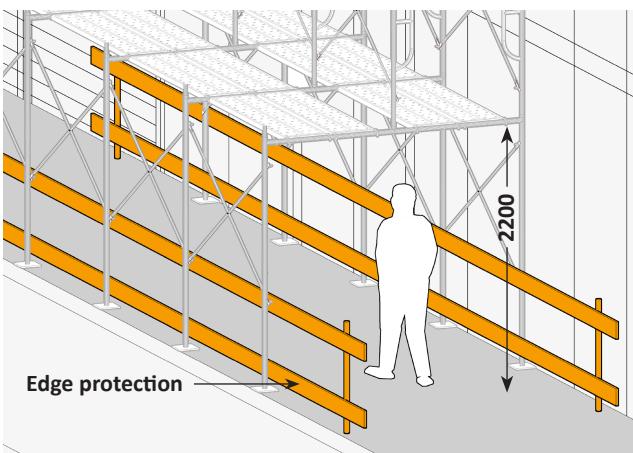
- xiii. When pedestrians are required to walk over trenches covered with metal plates, these plates shall:
  - a. Have a minimum width of 900 mm.
  - b. Offer a stable surface.
  - c. Be flush with the surrounding ground.
  - d. Be flanked by guardrails on both sides.
- xiv. Accessible parking spaces and paths to public assets shall be consistently maintained and clearly marked in accordance with "**Sahel Building Rating System – TA.1.01 Accessible parking**".
- xv. Surfaces including stair treads and landings in wet conditions, stair nosing, ramps with a maximum incline in accordance with "**Sahel Building Rating System – IC.1.07 Accessible ramps**", sales areas, markets, parking zones, colonnades, sidewalks, pedestrian crossings, balconies, verandas, driveways, courtyards, roof decks, and external entrances/lobbies shall be in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- xvi. For ramps with inclines steeper than 1:12 (rounded to 8%), including driveways and footpaths that require efficient drainage, the slip resistance rating shall be applied in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- xvii. The standard for channeling and barricading:
  - a. A delineation shall be established between the accessible pedestrian circulation route and any adjacent construction site to ensure safety and clarity of passage.
  - b. A safe distance shall be kept between the alternative accessible pedestrian path and any protruding objects, drop-off zones, or other hazards to pedestrians to prevent accidents.
  - c. Detoured routes shall be clearly defined using channelizing devices, with continuous, detectable edges provided throughout the length to guide pedestrians, including marking temporary crosswalks.
  - d. A continuous, clearly visible (e.g., high color/tonal contrast) and cane-detectable pedestrian channelization system shall be ensured to facilitate navigation for all pedestrians.
  - e. At intersections where the "up" curb ramp is temporarily and completely blocked, and no adjacent accessible alternative pedestrian path is provided, the "down" curb ramp shall be clearly marked.
  - f. The top of pedestrian guardrail shall be installed at a minimum height of 1200 mm above the ground level to ensure visibility and effectiveness.
  - g. Protective and warning elements used in construction zones shall be stable, solid, and designed to prevent individuals from falling into trenches or the construction site.
  - h. All protective and warning elements shall feature a detectable edge with a luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**", to ensure visibility and safety.
  - i. Protective devices like drums, cones, or markers shall be closely placed to form a continuous, cane-detectable barrier at least 900 mm in height, with the lowest part not exceeding 300 mm from the ground.
  - j. Fencing footings shall be visible, contrasting in color, and set away from pedestrian paths to avoid tripping hazards, clearly marking the boundaries of the safe zone with signage or barriers.



**Figure 49:** Construction and rerouting of accessible path

**xviii.** The standard for scaffolding on pedestrian paths:

- a.** Scaffolding designed to protect pedestrians during construction activities shall ensure that any temporary or alternative paths maintain a clear width of at least 900 mm and a headroom clearance of 2200 mm, without any obstructions (Figure 49).
- b.** In areas where the path changes direction, a minimum space of 1800 mm by 1800 mm shall be maintained to accommodate the change without impeding movement.
- c.** When the existing sidewalk width is insufficient for scaffolding installation, an alternative accessible path next to the sidewalk shall be created to facilitate pedestrian passage.



**Figure 50:** Scaffolding

**xix.** The procedure of compliance checks:

- a.** Regular inspections shall be carried out to verify adherence to accessibility and safety standards within the construction/maintenance zone.
- b.** The path shall be routinely checked for debris and tripping hazards to ensure a safe passage.
- c.** Pedestrian traffic control devices shall undergo frequent reviews to maintain effectiveness and safety.

**xx.** The procedure for documenting and archiving inspection records shall include records of inspections, maintenance activities, and any reported barriers or hazards to serve as a reference and ensure accountability.

### **3.10.3.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

### **3.10.3.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

### **3.10.3.6 Pre-certificate rating submission:**

- a)** A draft of the Accessible and Safe Zone Under Construction or Maintenance Program, detailing the policies, standards, and procedures outlined in the requirements.
- b)** Preliminary drawings showing the proposed safe and accessible zones, pedestrian paths, lighting, and signage during construction or maintenance works.
- c)** Specifications of the warning signs, lighting, temporary sidewalks, channeling and barricading devices, and scaffolding, ensuring they meet the required standards.
- d)** A proposed schedule for regular inspections and compliance checks.

### **3.10.3.7 Certificate rating submission:**

- a)** The final Accessible and Safe Zone Under Construction or Maintenance Program, incorporating any changes or updates made during the design stage.
- b)** As-built drawings confirming the implementation of the safe and accessible zones, pedestrian paths, lighting, and signage.
- c)** Updated specifications if changes were made during the construction stage.
- d)** Records of inspections, maintenance activities, and any reported barriers or hazards.
- e)** A report summarizing the compliance checks, including any issues identified and actions taken to address them.

### **3.10.3.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013
- c)** UAE Universal Design Code

## **3.10.4 CM.1.04 Enhanced safe zone under construction or maintenance**

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### **3.10.4.1 Applicability:**

Applicable to all public realm and buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g)** E (e.g., colleges, schools, day care).
- h)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j)** M (e.g., supermarkets, drug stores, retail stores)
- k)** R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l)** Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.10.4.2 Intent:**

To establish optimized mechanisms and procedures for monitoring and evaluating the continued functionality of a public use facility during construction and alterations, to improve the quality of life, accessibility, safety, satisfaction, and overall well-being in the building and its surroundings.

### **3.10.4.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

The asset should be developed in an accessible and safe zone under construction or maintenance program to ensure its safety and accessibility during renovation/maintenance works. The building operations and maintenance manual should include at least:

- a)** Notification of construction or maintenance works procedure:
  - i.** The asset should issue a formal notification to all users at least one week before the commencement of any construction or maintenance works.
- b)** Details of the notification and alternative accessibility arrangements:
  - i.** This notification should detail the nature, duration, and impact of the work, and the specific dates and times when the work will be carried out.
  - ii.** The notification should also include a comprehensive description of alternative accessibility features implemented to ensure that the asset remains fully accessible during work. The alternative arrangements should provide an equivalent level of accessibility to the original features, allowing all users to continue to use the asset with minimal disruption.
- c)** Communication regarding construction or maintenance works must be disseminated in multiple formats (minimum audio and visual).

d) Physical copies of the communication should be made available in prominent locations throughout the asset and in public access areas.

**Best Practice:**

The asset should develop an accessible and safe zone under construction or maintenance program to ensure the safety and accessibility of the asset during renovation/maintenance works. The program should include at least:

- a) The procedure of consultation with an accessibility specialist for alternative arrangements:
  - i. Any alternative arrangements, such as the provision of alternative paths, made necessary due to construction or maintenance works, should be developed in consultation with a certified accessibility specialist.
  - ii. The accessibility specialist should have the credentials proving their qualifications.
  - iii. The consultation process should involve a thorough assessment of the proposed alternative arrangements to ensure they are practical, safe, and accessible for all users.
  - iv. Documentation of the consultation, including the specialist's recommendations and any subsequent actions taken, must be maintained as part of the asset's accessibility records.

**3.10.4.4 Pre-certificate rating credits:**

**Table 120: CM.1.04 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Description of the plan for prior notification and dissemination in multiple formats according to the recommendations.
		<b>Best Practice:</b>
2	2	Develop a draft of the Accessible and Safe Zone Under Construction or Maintenance Program including Accessibility Consultation procedure

**3.10.4.5 Certificate rating credits:**

**Table 121: CM.1.04 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	A fully developed report describing the plan for prior notification and dissemination in multiple formats according to the recommendations.
		<b>Best Practice:</b>
2	2	A fully developed report of the Accessible and Safe Zone Under Construction or Maintenance Program including Accessibility Consultation procedure

### **3.10.4.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** A draft of the Accessible and Safe Zone Under Construction or Maintenance Program, detailing the policies, standards, and procedures outlined in the requirements.
- b)** Preliminary drawings showing the proposed safe and accessible zones, pedestrian paths, lighting, and signage during construction or maintenance works.
- c)** Specifications of the warning signs, lighting, temporary sidewalks, channeling and barricading devices, and scaffolding, ensuring they meet the required standards.
- d)** A proposed schedule for regular inspections and compliance checks.
- e)** A draft of the Accessible and Safe Zone Under Construction or Maintenance Program including the process for issuing notifications, developing alternative arrangements, and disseminating the communication.

#### **Best Practice:**

- a)** A draft of the Accessible and Safe Zone Under Construction or Maintenance Program including Accessibility Consultation procedure (the selection procedure of the accessibility specialist and the process for developing alternative arrangements)

### **3.10.4.7 Certificate rating submission:**

#### **Recommended:**

- a)** The final Accessible and Safe Zone Under Construction or Maintenance Program, incorporating any changes or updates made during the design stage.
- b)** As-built drawings confirming the implementation of the safe and accessible zones, pedestrian paths, lighting, and signage.
- c)** Updated specifications if any changes were made during the construction stage.
- d)** Records of inspections, maintenance activities, and any reported barriers or hazards.
- e)** A report summarizing the compliance checks, including any issues identified and actions taken to address them.
- f)** The final Accessible and Safe Zone Under Construction or Maintenance Program includes the process for issuing notifications, developing alternative arrangements, and disseminating communication.

#### **Best Practice:**

- a)** The final Accessible and Safe Zone Under Construction or Maintenance Program including the Accessibility Consultation procedure (the selection procedure of the accessibility specialist and the process for developing alternative arrangements)

## 3.10.5 CM.1.05 User feedback collection

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### 3.10.5.1 Applicability:

Applicable to all public realm and buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### 3.10.5.2 Intent:

To ensure all users have access to report issues, drawbacks, or feedback about an accessible service or facility such as an accessible assembly area and audiences or service animal relief areas provided, incorporate user feedback mechanisms.

### 3.10.5.3 Requirements:

#### Mandatory:

##### a) 2 Credits in renovation.

The asset shall develop a comprehensive feedback system that allows users to express concerns and provide feedback on accessibility through physical formats. The system shall:

- i. Ensure that every asset user has the right and ability to register a complaint or provide feedback concerning accessibility issues. This includes offering clear, simple instructions, and accessible forms available at key locations such as the information desk. Ensure multiple submission methods are available to accommodate various user needs.
- ii. Record all feedback and complaints in physical formats for comprehensive documentation and effective tracking and shall be kept being submitted for the certificate renewal. This system should be easy to use and navigate, accommodating all users.
- iii. Assign a dedicated staff member to manage all accessibility feedback and complaints, ensuring prompt and efficient processing.
- iv. Establish a clear and strict timeframe for responding to feedback and complaints, ensuring that the designated individual addresses them within no more than five working days.

- v. Offer necessary assistance to users who may require help in providing their feedback, thus ensuring that no one is excluded from the process due to physical barriers. Assistance should be available at physical feedback points.
- vi. Make detailed information about how to submit complaints and feedback readily available and easily accessible at designated points such as the information desk or reception.
- vii. Continuously monitor and regularly update the feedback system to address any emerging issues or suggestions from users. Maintain detailed records of all feedback received and actions taken to enhance accessibility based on this feedback, fostering ongoing improvement of the asset's accessibility features.

#### **3.10.5.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

#### **3.10.5.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **2**.

#### **3.10.5.6 Pre-certificate rating submission:**

- a) A draft of the Accessibility Feedback and Complaints System, detailing the policies and procedures outlined in the requirements.
- b) Preliminary report showing the proposed implementation of the system, including the process for registering complaints, documenting, and tracking complaints, designating a responsible individual, and setting a response timeframe.

#### **3.10.5.7 Certificate rating submission:**

- a) The final Accessibility Feedback and Complaints System, incorporating any changes or updates made during the design stage.
- b) Updated report confirming the implementation of the system, including the process for registering complaints, documenting, and tracking complaints, designating a responsible individual, and setting a response timeframe.
- c) Records of complaints registered (if any) and addressed, including the nature of the complaints, the response provided, and the timeframe within which the complaints were addressed.

#### **3.10.5.8 References:**

- a) Abu Dhabi International Building Code, 2013

## **3.10.6 CM.1.06 Enhanced user feedback collection (survey)**

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### **3.10.6.1 Applicability:**

Applicable to all public realm and buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g)** E (e.g., colleges, schools, day care).
- h)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j)** M (e.g., supermarkets, drug stores, retail stores)
- k)** R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l)** Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.10.6.2 Intent:**

To ensure all users have access to report issues, drawbacks, or feedback about an accessible service or facility provided in the building through an enhanced system of surveys initiated by the asset owner or manager to measure user gratification and satisfaction.

### **3.10.6.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

The asset should develop an accessibility survey program. The program should include at least:

- a)** A procedure of the annual accessibility survey:
  - i.** A survey is conducted at least once a year to gather feedback on accessibility within the certification boundary.
- b)** A survey should achieve a minimum of a 30% response rate from asset users. If the response rate is too low, the survey should be repeated.
- c)** A survey content description, which covers at least:
  - i.** User satisfaction with the level of accessibility.
  - ii.** User awareness of accessibility features.
  - iii.** User suggestions for accessibility improvements.

**Best Practice:**

The asset should develop an accessibility survey program. The program should include at least:

- a) A procedure for publication of the survey results:
  - i. The asset should publish a report on the survey results annually.
  - ii. The report should be made available to the asset staff and visitors in a physical format (e.g., on a wall-mounted information board) and a digital format (e.g., on the asset's webpage).

**3.10.6.4 Pre-certificate rating credits:****Table 122: CM.1.06 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Develop a draft of an accessibility survey program according to the recommended requirements.
		<b>Best Practice:</b>
2	2	Develop a program of accessibility surveys to be implemented upon handover of the asset, including a procedure for the publication of the survey results.

**3.10.6.5 Certificate rating credits:****Table 123: CM.1.06 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Verify and provide proof for an accessibility survey program according to the recommended requirements.
		<b>Best Practice:</b>
2	2	A fully developed report describing the program of accessibility surveys including a procedure for publication of the survey results.

### **3.10.6.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** A draft of the Accessibility Survey Program, detailing the policies and procedures outlined in the requirements. This includes the procedure of the annual accessibility survey, the target response rate, and the survey content.
- b)** A proposed schedule for conducting the annual accessibility survey.
- c)** A sample of the survey form to be used, including questions on user satisfaction, awareness of accessibility features, and suggestions for improvements.

#### **Best Practice:**

- a)** A draft procedure for publishing of survey results, including the proposed format and frequency of the reports.
- b)** A plan for making the report available in physical and digital formats, including the proposed locations for the physical reports and the webpage design for the digital reports.

### **3.10.6.7 Certificate rating submission:**

#### **Recommended:**

- a)** The final Accessibility Survey Program incorporates any changes or updates made during the design stage.
- b)** Documentation confirming the implementation of the annual accessibility survey, including the number of surveys conducted, the response rate achieved, and any actions taken in response to the survey results.
- c)** Updated survey form if any changes were made during the implementation stage.
- d)** A summary report of the survey results, including user satisfaction levels, awareness of accessibility features, and suggestions for improvements. The report should also include any actions taken or planned in response to the survey results.

#### **Best Practice:**

- a)** Documentation of the implemented procedure for the publication of survey results, including evidence of annual report publication (if any were conducted already).
- b)** Copies of the published reports in their physical and digital formats.
- c)** Screenshots of the webpage where the digital reports are published, showing the date of publication and the accessibility features of the webpage.

## 3.10.7 CM.1.07 Accessibility training

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### 3.10.7.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).
- f) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g) E (e.g., colleges, schools, day care).
- h) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j) M (e.g., supermarkets, drug stores, retail stores)
- k) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### 3.10.7.2 Intent:

To ensure that all staff members are trained in communication and accessibility requirements and inclusion to support the needs of all asset users. Training schedules shall also be included in the building operations and maintenance manual.

### 3.10.7.3 Requirements:

#### Mandatory:

##### a) 3 Credits in renovation.

The asset shall develop an accessibility training program for staff. The program shall include at least:

- i. Onboarding Training:
  - a. Ensure that new staff members, especially those interacting with visitors or tenants, receive training on effective communication with individuals with various needs.
- ii. Universal Design Principles Training:
  - a. Provide training on universal design principles to all staff.
  - b. Educate staff on actions that may create barriers.
  - c. Educate staff on maintaining clear signage, suitable seating, and unobstructed paths.
- iii. Equipment Utilization and Upkeep Training:
  - a. Conduct thorough training for staff on properly using and maintaining accessibility equipment.
- iv. Evacuation Drills:
  - a. Perform periodic evacuation drills.
  - b. Train staff to be proficient in using emergency evacuation aids.
  - c. Ensure staff can assist individuals requiring help during evacuations.
  - d. Training of staff to use Information points and other digital screens where the public would need assistance to interact.

#### **3.10.7.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.10.7.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.10.7.6 Pre-certificate rating submission:**

- a)** A detailed proposal of the accessibility training program, outlining the scope, content, and frequency of each training module.
- b)** Draft training materials for each module, including lesson plans, presentations, and handouts.
- c)** A proposed schedule for the onboarding training, universal design principles training, equipment utilization and upkeep training, evacuation drills, and allergy-friendly practices training.
- d)** A plan for evaluating the effectiveness of the training program and making necessary adjustments.

#### **3.10.7.7 Certificate rating submission:**

- a)** The finalized accessibility training program document, including any changes made during the implementation stage.
- b)** Documentation of the conducted training sessions, including attendance records and training materials used.
- c)** Evidence of periodic evacuation drills, such as drill schedules and participant feedback.
- d)** Documentation of allergy-friendly practices training, including training materials and participant feedback.
- e)** An evaluation report of the training program, including feedback from staff and any plans for future improvements.

#### **3.10.7.8 References:**

- a)** Abu Dhabi International Building Code, 2013

## **3.10.8 CM.1.08 Enhanced accessibility training**

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### **3.10.8.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a)** A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b)** A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c)** A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d)** A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e)** A-5 (e.g., amusement parks, other outdoor assembly uses).
- f)** B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- g)** E (e.g., colleges, schools, day care).
- h)** I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- i)** I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- j)** M (e.g., supermarkets, drug stores, retail stores)
- k)** R-1 (e.g., hotels, boarding houses, and other transient spaces)
- l)** Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.10.8.2 Intent:**

To promote the provision of all staff members with enhanced training by accessibility professionals on communication, accessibility requirements, and inclusion to support the needs of all asset users. The training schedule shall be included in the “Building Operations and Maintenance” manual.

### **3.10.8.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

The asset should develop an accessibility training program for staff. The program should include at least:

- a)** Scent-free, Allergy-friendly Practices Training:
- b)** Offer adequate training to staff on allergy-friendly practices to accommodate individuals with allergies, respiratory issues, or neurodivergent conditions.

Staff Training Completion:

- a)** At least 50% of staff must complete the accessibility training program.

Training Conductor:

- a)** The training must be conducted by an accredited professional.
- b)** Both online and in-person course formats of the training are accepted.

### 3.10.8.4 Pre-certificate rating credits:

**Table 124: CM.1.08 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Develop a draft of an accessibility training program according to the recommended requirements.

### 3.10.8.5 Certificate rating credits:

**Table 125: CM.1.08 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Confirmation of implementing an accessibility training program according to the recommended requirements.

### 3.10.8.6 Pre-certificate rating submission:

**Recommended:**

- a) A proposed content of allergy-friendly practices training.
- b) A plan for evaluating the effectiveness of the training program and making necessary adjustments.
- c) Information about the accredited professional who will conduct the training, including their qualifications and experience.

### 3.10.8.7 Certificate rating submission:

**Recommended:**

- a) Documentation of allergy-friendly practices training, including training materials.
- b) Proof of completion of the accessibility training program by at least 50% of the staff.
- c) Information about the accredited professional who conducted the training, including their qualifications and experience, and the training format (online or in-person).

### 3.11 USSP.1 Use Specific Special Provisions

This category assesses the provision of amenities applicable only to special typologies such as mosques, workplaces, public parks, beaches etc. with a special consideration for persons with varying access needs. Use Specific Special Provisions include aspects such as availability, accessibility, and suitability of special provisions.

**Table 126: Use Specific Special Provisions**

USSP	Use Specific Special Provisions	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
USSP.1.01	Enhanced service animal relief areas	Recommended	6	6
		Best Practice	2	2
USSP.1.02	Accessible assembly areas and audiences	Mandatory	R	8
USSP.1.03	Enhanced accessible assembly areas and audiences	Recommended	5	5
		Best Practice	3	3
USSP.1.04	Accessible changing rooms and lockers	Mandatory	R	4
USSP.1.05	Enhanced accessible changing rooms and lockers	Recommended	2	2
USSP.1.06	Accessible playgrounds and play areas	Mandatory	R	10
USSP.1.07	Enhanced accessible playgrounds and play areas	Recommended	3	3
USSP.1.08	Accessible pools	Mandatory	R	10
USSP.1.09	Enhanced accessible pools	Recommended	6	6
		Best Practice	20	20
USSP.1.10	Accessible gyms	Mandatory	R	8
USSP.1.11	Enhanced accessible gyms	Recommended	8	8
USSP.1.12	Accessible courts and sports fields	Mandatory	R	20
USSP.1.13	Enhanced accessible courts and sports fields	Recommended	4	4
USSP.1.14	Accessible camping facilities	Mandatory	R	6
USSP.1.15	Enhanced accessible camping facilities	Recommended	14	14
USSP.1.16	Accessible amusement and thematic parks	Mandatory	R	150

USSP	Use Specific Special Provisions	Requirement type	Credit points applicability	
			New building development/redevelopment	Existing building renovation/retrofitting
USSP.1.17	Accessible dwellings	Mandatory	R	30
USSP.1.18	Dwellings: Accessible units	Mandatory	R	50
USSP.1.19	Enhanced dwellings: Accessible units	Recommended	20	20
		Best Practice	10	10
USSP.1.20	Dwellings: Type A units	Mandatory	R	30
USSP.1.21	Enhanced dwellings: Type A units	Recommended	14	14
USSP.1.22	Dwellings: Type B units	Mandatory	R	25
USSP.1.23	Enhanced dwellings: Type B units	Recommended	2	2
USSP.1.24	Dwellings: Type C units	Mandatory	R	10
USSP.1.25	Enhanced dwellings: Type C units	Recommended	2	2
USSP.1.26	Distance from workstation to critical amenities	Mandatory	R	25
USSP.1.27	Enhanced distance from workstation to critical amenities	Recommended	5	10
USSP.1.28	Accessible workplace kitchenettes	Mandatory	R	10
USSP.1.29	Enhanced accessible workplace kitchenettes	Recommended	3	3
USSP.1.30	Accessible workplace dining and rest areas	Mandatory	R	5
USSP.1.31	Enhanced accessible workplace dining and rest areas	Recommended	1	1
USSP.1.32	Accessible ablution areas and shoe racks	Mandatory	R	6
USSP.1.33	Enhanced accessible ablution areas	Recommended	3	3
		Best Practice	1	3
USSP.1.34	Accessible praying areas	Mandatory	R	3
USSP.1.35	Enhanced accessible praying areas	Recommended	2	3
	<b>Total</b>		<b>136</b>	<b>554</b>

## 3.11.1 USSP.1.01 Enhanced service animal relief areas

---

### 3.11.1.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- f) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- g) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- h) M (e.g., supermarkets, drug stores, retail stores)
- i) Special Occupancy: public transportation hubs, covered/open malls, major transportation stations
- j) All open spaces with:
  - i. Areas under strict security control of national importance (e.g., nature parks, historic areas).
  - ii. Long stay enclosed areas (e.g., amusement parks) and tourist destinations (e.g., beaches, parks)

According to Decision No. 46 of 2021 (قرار 46 سنة 2021 بشأن تعديل بعض احكام لائحة الرقابة على الحيوانات), service dogs are generally permitted, but there are exceptions, such as mosques. This is in line with respecting cultural and religious sensitivities in areas where certain animals are not traditionally welcomed in specific settings like places of worship.

### 3.11.1.2 Intent:

To provide optimized accessible, clean, and well-maintained relief areas for service animals accompanying their handlers, which should be strategically located and designed to support the health and well-being of the animals and their handlers, promoting inclusivity and accessibility.

### 3.11.1.3 Requirements:

#### **Recommended:**

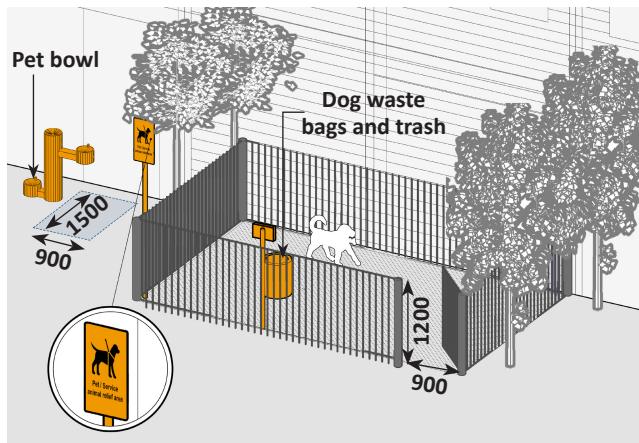
Public assets with security checks (Airports, harbors) should provide one indoor or outdoor service animal relief area before and after the check points, reachable within 15 minutes of walking from any point. Other assets such as shopping malls, leisure or entertainment facilities, and mass transportation facilities should provide at least one indoor or outdoor service animal relief area within the certification boundary.

- a) All service animal relief areas should:
  - i. Be located 30 to 50 meters from the accessible entrance to minimize odors, calculated via the Direct Route Indices Method, and not being directly visible from the entrance to avoid negative visual effects.
  - ii. Be connected to a continuous accessible path.
  - iii. Provide service animal owners with information regarding the location and availability of relief areas and any specific guidelines or procedures for their use. This information should be provided in visual and tactile formats (braille and raised characters).

- iv. Have a minimum surface floor area of 12 square meters to accommodate a clear turning circle with a minimum diameter of 1800 mm, allowing service animals to circle their owners.
- v. Be set back from areas with a higher intensity of pedestrian traffic to prevent impacts from odors or conflicts between users. Similarly, they should be located away from high-traffic vehicular areas like drive aisles and access routes.
- vi. Be marked with signage “For assistance animals only”. If a detectable guidance system is in place, the relief area should be connected to it:
  - a. The signs should have a minimum width of 300 mm and a minimum height of 450 mm.
  - b. The signs should have a luminance contrast in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.

b) Additionally, all outdoor service animal relief areas should (Figure 51):

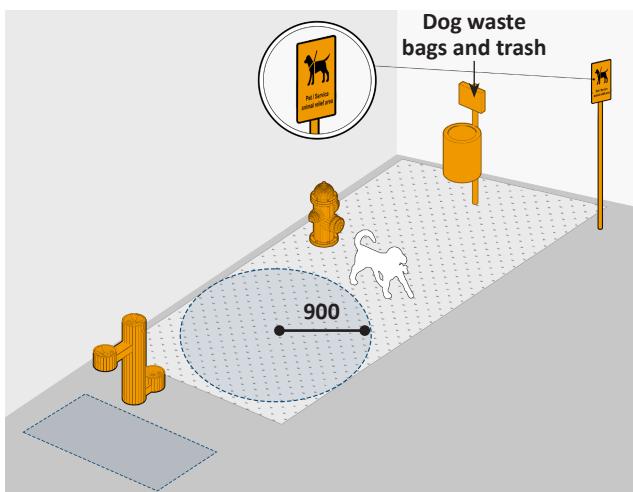
- i. Have a “Fire hydrant” style post, along with waste bags, water bowls or dispensers, and access to a water source like a faucet, should be made available.
- ii. Be cleaned and maintained with pet-safe cleaning products to ensure the safety of service animals.
- iii. Be equipped with a hose-bib connection and proper drainage to facilitate regular cleaning of the space with a cross fall of 1:50 (2%).
- iv. Be equipped with appropriate surfacing materials, such as gravel, mulch, or artificial turf, to facilitate waste cleanup and drainage. A Protective membrane should be installed on concrete slabs to prevent damage from urine, if applicable.
- v. Be enclosed by fencing, with a minimum height of 1200 mm and should be easy to operate and to find by a person with vision impairment.
- vi. Have litter baskets available.



**Figure 51:** Outdoor service animal relief area

c) Additionally, all indoor service animal relief areas shall (Figure 52):

- i. Clearly marked with signage “For assistance animals only.” If a detectable guidance system or a TWSI is in place, the service animal relief area should be connected to it and shall be in accordance with **“Sahel Building Rating System – OC.1.03 Tactile Walking Surface Indicators (TWSI)”** of this handbook.
- ii. Be furnished with suitable surfacing materials, such as well-contained pea gravel or pet-friendly artificial turf. If concrete floors are used, the relief areas should be covered with a protective membrane to mitigate corrosion from urine. Provide several feet of urine-resistant piping from the drain to allow dilution before collection into central drainage.
- iii. Provide a linear trench drain or gravel strip to wash off solid waste residue. Designate indoor service relief areas as “wet rooms” to accommodate regular hosing down and washing.
- iv. Have scratch resistant wall paneling or tiles provided.
- v. Be adequately ventilated and positioned near building waste chutes or centralized organics collection areas for convenient access. Waste disposal within the relief area should be avoided to prevent bacterial buildup, odor issues, and potential health risks.
- vi. Feature sealed cracks or spaces between walls and the edge of relief areas.
- vii. Have a wash station to consolidate the amenities provided within the indoor service relief areas.



**Figure 52:** Indoor service animal relief area

**Best Practice:**

Public assets with security checks (Airports, harbors) should provide one indoor or outdoor service animal relief area per public sterile area, reachable within 15 minutes of walking from any point. Other assets should provide at least one indoor or outdoor service animal relief area within the certification boundary.

- a) All service animal relief areas should:
  - i. Have a clear turning circle with a minimum diameter of 3000 mm.
  - ii. Have a tethering hook.
  - iii. Provide a pooper scooper with a long handle.
  - iv. Incorporate multiple indoor service animal relief areas distributed throughout the asset (for taller buildings [20 stories and above])

- b) Additionally, all outdoor service animal relief areas should:
  - i. Be screened from adjacent spaces with low shrubs or other plantings (if feasible)
  - ii. Provide shelter or shade structures.
  - iii. A natural tree is provided instead of fire hydrant.
- c) Additionally, all indoor service animal relief areas should:
  - i. Have a motion-activated automatic door in accordance with “**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**” of this handbook.
  - ii. Natural or artificial trees are provided instead of fire hydrant.

### 3.11.1.4 Pre-certificate rating credits:

**Table 127: USSP.1.01 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design according to all service animal relief areas as per recommended requirements.
3	3	Design according to all outdoor or indoor service animal relief areas as per recommended requirements.
<b>Best Practice:</b>		
1	1	Design according to all service animal relief areas as per best practice requirements.
1	1	Design according to all outdoor or indoor service animal relief areas as per best practice requirements.

### 3.11.1.5 Certificate rating credits:

**Table 128: USSP.1.01 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Provide all service animal relief areas as per recommended requirements.
3	3	Provide all outdoor or indoor service animal relief areas as per recommended requirements.
<b>Best Practice:</b>		
1	1	Provide all service animal relief areas as per best practice requirements.
1	1	Provide all outdoor or indoor service animal relief areas as per best practice requirements.

### **3.11.1.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** Details of the wash station for indoor service relief areas.
- b)** Detailed specifications of the relief areas, including information on the clear turning circle, tethering hook, and pooper scooper with a long handle.
- c)** Landscape drawings showing the proposed low shrubs or other plantings for screening outdoor relief areas and drawing for indoor relief areas.
- d)** Design details of the shelter or shade structures for outdoor relief areas.

#### **Best Practice:**

- a)** Electrical drawings showing the motion-activated automatic door for indoor relief areas.
- b)** Plans of multiple service animal relief areas.
- c)** Design details for the provision of a natural tree.

### **3.11.1.7 Certificate rating submission:**

#### **Recommended:**

- a)** Photographs of the service animal relief areas, showcasing features like the clear turning circle, tethering hook, pooper scooper with a long handle, screening plantings, and shelter or shade structures.
- b)** As-built drawings of the service animal relief areas.

#### **Best Practice:**

- a)** Photographs showing the motion-activated automatic door for indoor relief areas.
- b)** As-built drawings of the service animal relief areas in different floors (if applicable).

## 3.11.2 USSP.1.02 Assembly areas and auditoriums

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### 3.11.2.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).

### 3.11.2.2 Intent:

To ensure inclusivity and accessibility in assembly areas and auditoriums by providing well-designed spaces that accommodate all audience members, promote easy access, and create a welcoming environment for everyone (Figure 53).

### 3.11.2.3 Requirements:

#### Mandatory:

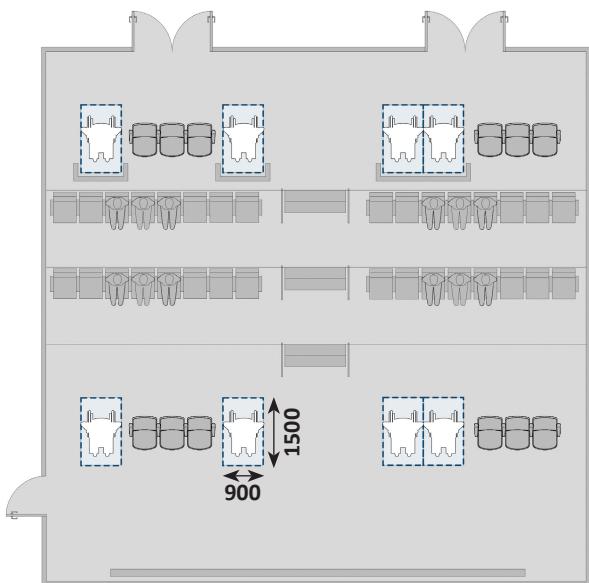
All assembly areas and auditoriums within the certification boundary shall be accessible. Accessible assembly areas and auditoriums shall:

##### a) 2 Credits in renovation.

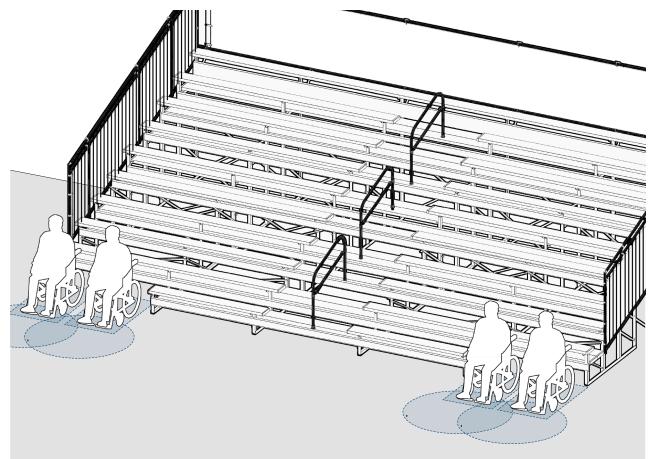
- i. Be accessible via an accessible path and linked with the entrance, queuing lines, ticket offices, performance area, backstage areas, accessible seating sections including companion seats, toilets, refreshment areas, egress paths, as well as facilities such as first aid rooms, quiet rooms, physio rooms, acoustic booths, sound control/editing rooms (whichever present).
- ii. Provide accessible, adaptable, and designated seating spaces that shall:
  - a. Provide line of sight of visitors (both seated and in wheelchairs) overheads or over shoulders and between heads and not impeded by structural columns, handrails, guardrails, or technical equipment so that the C value is not less than 90 mm (The "C"-value defines the quality of sightlines measured from the eye level of the person in front to the sightline from the eye level of the person behind).
- iii. In assembly areas with 300 or fewer seats, even though vertical dispersion is not required, ensure that wheelchair spaces and companion seats offer fair viewing angles (Figures 53, 55).

##### b) 2 Credits in renovation.

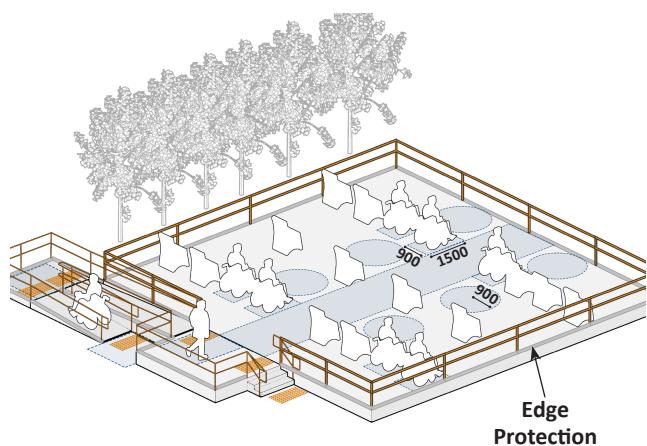
- i. Provide wheelchair space locations and companion seats within each distinct seating area including areas dedicated to team or player seating during sports activities (Figure 54).
- ii. If designated for viewing motion pictures, provide wheelchair space locations and companion seats within the rear 60% of the seats available, ensuring a clear view of the entire screen. Alternatively, wheelchair spaces can be located in areas with a viewing angle equal to or better than 60% of the seats.
- iii. Make at least 2% of seats foldable or removable to increase the number of designated areas for wheelchair spaces as needed.



**Figure 53:** Auditorium accessible seating



**Figure 54:** Bleachers with accessible seating



**Figure 55:** Outdoor assembly area

iv. Be provided in an adequate quantity as presented in the table below:

**Table 129: Minimum required number of wheelchair spaces and locations in the assembly area**

Total number of seats provided	Minimum number of required wheelchair spaces	Minimum number of required wheelchair space locations
4 to 25	1	
26 to 50	2	1
51 to 150	4	
151 to 300	5	
301 to 500	6	2
501 to 5000	6, plus 1 additional space for every 150 seats, or a fraction thereof, between 501 through 5000	3
1001 to 5000	6, plus 1 additional space for every 150 seats, or a fraction thereof, between 501 through 5000	3, plus 1 additional space for every 1000 seats, or a fraction thereof, over 1000
5001 and over	36, plus 1 additional space for every 200 seats, or a fraction thereof, over 5000	7, plus 1 additional space for every 2000 seats, or a fraction thereof, over 5000

**c) 2 Credits in renovation.**

- i. For venues for more than 100 spectators, provide accessible backstage areas connected via an accessible path with the stage or playfield, including:
  - a. Toilets
  - b. Showers and changing rooms,
  - c. Storage areas
  - d. Have Orientation and Communication features including:
  - e. Hearing enhancements for spectators at audiences' assembly areas, and service counters.
  - f. Audio-visual communication for call alerts for performers or players.
  - g. Audio-visual information in refreshment and retail areas (if present).

**d) 2 Credits in renovation.**

- i. Comprehensive wayfinding system in Arabic and English featuring:
  - a. Visual characters, pictograms that are raised, glare-free and visually contrasting with a luminance contrast in accordance with **"Sahel Building Rating System – EQC.1.09 Wall and floor finishes"**.
  - b. Consistent, international pictograms.
  - c. Character and pictogram height corresponding to the viewing distance.
- ii. Have floor, wall surfaces, doors, hardware, and furniture that are low glare and have a minimum luminance contrast in accordance with **"Sahel Building Rating System – EQC.1.09 Wall and floor finishes"**.
- iii. Controls, operating devices, glass manifestation, nosing of stairs, and Warning TWSI shall have a minimum luminance contrast in accordance with **"Sahel Building Rating System – EQC.1.09 Wall and floor finishes"**.
- iv. Have firm, stable, slip-resistant, and glare-free floor surfaces.

- v. Have space where service animals can be temporarily left, if the facility is larger than 2000 square meters, which shall:
  - a. Be equipped with a hook and shaded.
  - b. Enable provision of water via a bowl or water outlet.
  - c. Have designated quiet areas or quiet rooms, if the facility is larger than 2000 square meters.
  - d. Have low-heat-conductivity material on seating and other touchable surfaces, if outdoors.
  - e. Ensure that balcony or mezzanine areas on an accessible path have wheelchair spaces available.

#### **3.11.2.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.11.2.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

#### **3.11.2.6 Pre-certificate rating submission:**

- a) A comprehensive description of how the design meets the accessibility requirements for assembly areas and audiences, detailing the accessible path and facilities.
- b) Detailed drawings showing the layout of the accessible path, entrance, seating areas, and facilities such as toilets and refreshment areas.
- c) Drawings and specifications for accessible seating spaces, ensuring line of sight and compliance with the “C” value.
- d) Plans for backstage areas, including accessible toilets, showers, changing rooms, and storage areas for venues with more than 100 spectators.
- e) Specifications for hearing enhancements, audio-visual communication systems, and wayfinding systems in Arabic and English.
- f) Details of floor and wall surfaces, including luminance contrast and Light Reflectance Value (LRV) specifications.
- g) Drawings and specifications for artificial lighting, including lux levels for outdoor and indoor circulation paths and specific areas like sign language interpreter stations and lecterns.

#### **3.11.2.7 Certificate rating submission:**

- a) Reflect on any changes made during construction and confirm that the project meets the accessibility requirements for assembly areas and audiences, including accessible paths, seating areas, and facilities.
- b) Showcasing the accessibility features, including seating spaces, Orientation and Communication features, and lighting.
- c) Verification of the accessibility features such as the “C” value for seating spaces, luminance contrast for surfaces, and adequate lighting levels.
- d) Confirmation of assistance animal relief areas, service animal temporary spaces, designated quiet areas, and low-heat-conductivity material used for outdoor seating.

#### **3.11.2.8 References:**

- a) Abu Dhabi International Accessibility Standards, 2013
- b) Abu Dhabi International Building Code, 2013
- c) UAE Universal Design Code

### 3.11.3 USSP.1.03 Enhanced assembly areas and auditoriums

#### 3.11.3.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) A-1 (e.g., theatres, concert halls, assembly spaces with fixed seating)
- b) A-2 (e.g., restaurants, night clubs, spaces for food and beverages)
- c) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- d) A-4 (e.g., pools, arenas, indoor sports facilities for spectator viewing)
- e) A-5 (e.g., amusement parks, other outdoor assembly uses).

#### 3.11.3.2 Intent:

To ensure inclusivity and accessibility in assembly areas and auditoriums by providing well-designed, accessible spaces with optimized features that accommodate all audience members, fostering easy access and creating a welcoming environment for everyone.

#### 3.11.3.3 Requirements:

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

##### Recommended:

All assembly areas and auditoriums within the certification boundary should be accessible. Accessible assembly areas and auditoriums should:

- a) Have seats with adjustable armrests at the end rows which can be lifted to allow transfer from a wheelchair. The end seats should also be accompanied by a space for an unoccupied wheelchair of a minimum of 900 mm by 1500 mm, so it does not obstruct the circulation path.
- b) Have a minimum of 1/3 of border seats that are bariatric fitted:
  - i. Minimum width of 700 mm.
  - ii. Minimum working load of 350 kg.
- c) Include wheelchair spaces provided in an adequate quantity as presented in the table below:

**Table 130: Minimum required number of wheelchair spaces and location in the assembly area**

Total number of seats provided	Minimum number of required wheelchair spaces	Minimum number of required wheelchair space locations
4 to 25	2	1
26 to 50	3	
51 to 150	5	
151 to 300	6	2
301 to 500	8	

Total number of seats provided	Minimum number of required wheelchair spaces	Minimum number of required wheelchair space locations
501 to 5000	10, plus 1 additional space for every 150 seats, or a fraction thereof, between 501 through 5000	3
1001 to 5000	4, plus 1 additional space for every 1000 seats, or a fraction thereof, over 1000	
5001 and over	36, plus 1 additional space for every 200 seats, or a fraction thereof, over 5000	7, plus 1 additional space for every 2000 seats, or a fraction thereof, over 5000

**Best Practice:**

All assembly areas and auditoriums within the certification boundary should be accessible. Accessible assembly areas and auditoriums should:

- a) Have a minimum of two bariatric fitted seating next to each other in a wider row of at least 2400 mm width
- b) Have at least one area with a minimum of 15 foldable seats to be able to accommodate a group of wheelchair users. The area should be located either in the front row or in a wider row of at least 2400 mm in width.

**3.11.3.4 Pre-certificate rating credits:**

**Table 131: USSP.1.03 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Foresee adjustable armrests and bariatric seats.
3	3	Design the assembly areas and audiences with the additional number of wheelchair spaces and locations.
<b>Best Practice:</b>		
1	1	Foresee additional bariatric seats together in wider row.
2	2	Foresee foldable chairs.

### 3.11.3.5 Certificate rating credits:

**Table 132: USSP.1.03 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Provide adjustable armrests and bariatric seats.
3	3	Provide the assembly areas and audiences with the additional number of wheelchair spaces and locations.
		<b>Best Practice:</b>
1	1	Provide additional bariatric seats together in wider rows.
2	2	Provide foldable chairs.

### 3.11.3.6 Pre-certificate rating submission:

#### **Recommended:**

- a) Drawings indicating the distribution of wheelchair seats throughout the venue, ensuring at least two are adjacent and detailing the mechanism for lifting armrests at the end rows.
- b) Specifications for bariatric seats, including dimensions and load capacity, and their distribution among border seats.

#### **Best Practice:**

- a) Drawings showing the specific rows where foldable seats for a group of wheelchair users are located.

### 3.11.3.7 Certificate rating submission:

#### **Recommended:**

- a) As-built drawings and photographs showing the placement of wheelchair seats, including details of armrest mechanisms and bariatric seating.
- b) Photographs demonstrating the accessibility and practicality of wheelchair seats, lifted armrests, bariatric seats, and the unobstructed space for unoccupied wheelchairs.

#### **Best Practice:**

- a) As-built drawings and photographs showing the specific rows where foldable seats for a group of wheelchair users are located.
- b) Photographs of the foldable seats for a group of wheelchair users.

## **3.11.4 USSP.1.04 Accessible changing rooms and lockers**

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### **3.11.4.1 Applicability:**

Applicable to all buildings from the following occupancy groups:

- a) With more than 500 full-time employees.
- b) All buildings with workplaces that require asset users to change clothes (e.g., uniforms, safety gear, specialized clothing)
- c) Sports and recreation facilities that require a change of clothes for asset users (e.g., swimming pools, fitness centers, spas and saunas)
- d) All other buildings with accessible showers compartments such as religious institutions, hostels, amusement parks.

### **3.11.4.2 Intent:**

To ensure providing well-designed, accessible changing rooms in public areas and workplaces, ensuring convenience, privacy, and ease of use for all users. (Figures 56, 57).

### **3.11.4.3 Requirements:**

#### **Mandatory:**

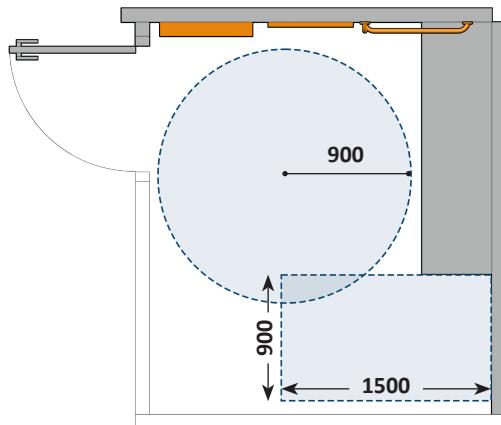
##### **a) 2 Credits in renovation.**

At least 5% of changing room compartments, with a minimum of one, shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and shall:

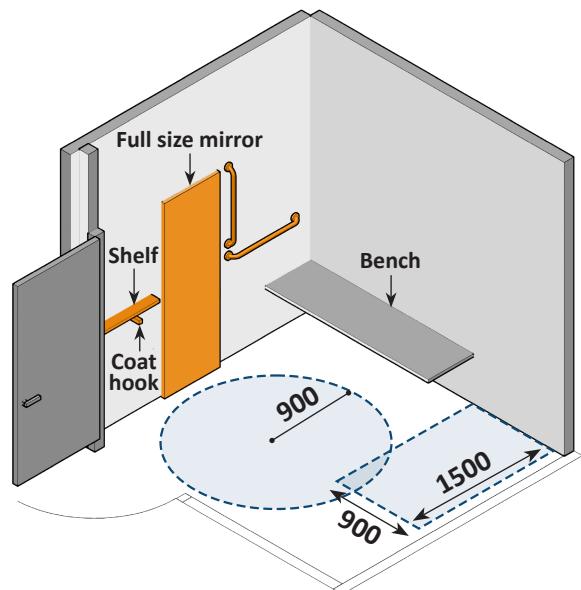
- i. Be included in gender-specific clustered changing rooms only. If it is technically not feasible in existing buildings to provide accessible changing room compartments within gender-specific changing rooms, one accessible changing room on the same building level shall be provided for each gender up to 45 m away from the existing gender-specific changing rooms.
- ii. Have a floor surface which shall:
  - a. Be firm, stable, slip-resistant, and glare-free.
  - b. Where wet and dry areas are present, they shall have a minimum slip-resistant value in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - c. Have a maximum cross slope of 1:50 (2%).
- iii. Provide a clear turning circle with a minimum diameter of 1800 mm.
- iv. Have a door which shall be in accordance with "**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**" and shall have a minimum luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".

**b) 1 Credit in renovation.**

- i. Have accessories which shall:
  - a. Include clothing hooks located between 850 mm and 1200 mm above floor level, positioned either on the interior side of the door, on the adjacent wall of the bench or on the opposite wall.
  - b. Include shelves located between 1000 mm and 1200 mm above floor level.
  - c. Include full length mirrors located on the adjacent wall of the bench or on the opposite wall.
- ii. Have a bench which shall:
  - a. Either be placed against a wall or be equipped with a backrest. If a backrest is provided, it shall be at least 400 mm and no more than 460 mm in length, measured from the seat surface to the top of the backrest.
  - b. Not have armrests.
  - c. Have a seat height between 450 mm and 500 mm above floor level.
  - d. Be at least 1800 mm long and between 500 mm and 600 mm deep.
  - e. If located in wet areas, be made of durable and waterproof material.
- iii. Have grab bars which shall:
  - a. Be provided in the form of:
    - A horizontal grab bar affixed to the back wall adjacent to the bench, starting from the edge of the seat and not above the seat, with its gripping surface positioned between 650 mm and 800 mm above floor level.
    - A vertical grab bar affixed to the back wall adjacent to the bench (Figure 56), starting from the front edge of the horizontal grab bar, set between 150 mm and 200 mm away from the front edge of the seat, measured to the centerline. The vertical grab bar shall be a minimum of 600 mm in length and positioned at a maximum of 50 mm above the horizontal grab bar.
    - Have a diameter between 30 mm and 45 mm.
    - Have a minimum structural strength of 1100 N measured at any point, considering both horizontal and vertical force.
    - Provide a minimum clearance below the grab bar between the wall or any object of 50 mm, and minimum clearance above the grab bar of 300 mm.
    - Have a minimum luminance contrast in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
    - Have a clear floor space of minimum 900 mm in width and 1500 mm in depth either next to or in front of the bench, or both, allowing for either a forward or parallel approach for transferring onto the bench.



**Figure 56: Changing room plan view**



**Figure 57: Changing room**

**c) 1 Credit in renovation.**

- i. At least 10% of lockers in locker rooms or changing room compartments, with a minimum of one locker, shall be designed to be accessible (if lockers are envisioned).
- ii. Accessible lockers shall:
  - a. Provide a clear floor space of 900 mm in width and 1500 mm in depth, allowing for a forward or parallel approach.
- iii. Have a locking mechanism which shall:
  - a. Be operable with one hand and do not necessitate tight grasping, pinching, or twisting of the wrist.
  - b. Be positioned between 900 mm and 1200 mm above the finished floor level.
  - c. Ensure that the mechanism does allow for locking from the inside without the ability to release from the outside.
- iv. Have the base be installed between 400 mm and 800 mm above the finished floor level.
- v. Where designed to accommodate walking and mobility aids, orthotic braces, or prosthetics, the minimum height shall be 1200 mm.
- vi. Have finishes and identification numbers that shall be glare-free and have a minimum luminance contrast in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**3.11.4.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

**3.11.4.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **4**.

#### **3.11.4.6 Pre-certificate rating submission:**

- a) Design drawings illustrating the proposed locations of accessible changing room compartments and lockers.
- b) Specifications detailing the design of accessible changing room compartments and lockers, including illuminance levels, floor surfaces, clear turning circles, door designs, accessory placements, bench designs, grab bar designs, clear floor space of 900 mm in width and 1500 mm in depth, and luminance contrasts.
- c) Design details ensuring accessibility, including varied stature and mobility levels.
- d) Details of the proposed materials for accessible changing room compartments and lockers.

#### **3.11.4.7 Certificate rating submission:**

- a) As-built documentation confirming the implementation of accessible changing room compartments and lockers in designated areas.
- b) Updated specifications if any changes were made during the construction stage.
- c) Photographs of accessible changing room compartments and lockers, showcasing features like varied height accessibility and luminance contrasts.

#### **3.11.4.8 References:**

- a) Abu Dhabi International Accessibility Standards, 2013
- b) Abu Dhabi International Building Code, 2013
- c) UAE Universal Design Code

## 3.11.5 USSP.1.05 Enhanced accessible changing rooms and lockers

### 3.11.5.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) With more than 500 full-time employees.
- b) All buildings with workplaces that require asset users to change clothes (e.g., uniforms, safety gear, specialized clothing)
- c) Sports and recreation facilities that require a change of clothes for asset users (e.g., swimming pools, fitness centers, spas and saunas)
- d) All other buildings with accessible showers compartments such as religious institutions, hostels, amusement parks.

### 3.11.5.2 Intent:

To provide improved accessible changing rooms in public areas and workplaces, ensuring convenience, privacy, and ease of use for all users.

### 3.11.5.3 Requirements:

All designs, drawings, and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

Ensure at least 20% (minimum 1) of lockers in changing/locker compartments are accessible and have identification numbers provided in braille and raised character formats.

Additionally, all accessible change rooms within the certification boundary should:

- a) An automated sliding door in accordance with “**Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)**” shall be installed in accessible changing rooms.
- b) Provide the following items:
  - i. Privacy screen within communal changing rooms.
  - ii. Changing seats in addition to a bench.
  - iii. Clear turning circle with a minimum diameter of 2000 mm
  - iv. Call for assistance device, such as an emergency pull cord or push button.

### 3.11.5.4 Pre-certificate rating credits:

**Table 133: USSP.1.05 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Design the accessible changing room compartments and lockers according to recommended requirements.

### 3.11.5.5 Certificate rating credits:

**Table 134: USSP.1.05 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Confirm the implementation of the accessible changing room compartments and lockers according to recommended requirements

### 3.11.5.6 Pre-certificate rating submission:

**Recommended:**

- a) Specifications detailing the design of accessible changing room compartments and lockers, including privacy screens, changing seats, clear turning circles, call-for-assistance devices, automated sliding doors, and locker identification numbers in braille and raised character formats.
- b) Design details ensuring accessibility, including varied stature and mobility levels.
- c) Details of the proposed materials for accessible changing room compartments and lockers.

### 3.11.5.7 Certificate rating submission:

**Recommended:**

- a) As-built drawings illustrating the proposed locations of accessible changing room compartments and lockers.
- b) Photographs of accessible changing room compartments and lockers, showcasing features like privacy screens, changing seats, clear turning circles, call for assistance devices, automated sliding doors, and locker identification numbers in braille and raised character formats

## **3.11.6 USSP.1.06 Accessible playgrounds and play areas**

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### **3.11.6.1 Applicability:**

Applicable to all buildings featuring playgrounds and play areas (particularly childcare facilities).

### **3.11.6.2 Intent:**

To ensure that playgrounds within the certification boundary are accessible, inclusive, and safe, providing a welcoming and attractive environment for users of all ages and their caregivers to enjoy and interact comfortably.

### **3.11.6.3 Requirements:**

#### **Mandatory:**

When provided, all playgrounds and play areas within the certification boundary shall be in accordance with “**Sahel Public Realm Rating System – USSP.2.06 Accessible playgrounds and play areas**”.

### **3.11.6.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

For credits breakdown refer to “**Sahel Public Realm Rating System – USSP.2.06 Accessible playgrounds and play areas**”.

### **3.11.6.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

For credits breakdown refer to “**Sahel Public Realm Rating System – USSP.2.06 Accessible playgrounds and play areas**”.

### **3.11.6.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – USSP.2.06 Accessible playgrounds and play areas**”.

### **3.11.6.7 Certificate rating submission:**

Refer to “**Sahel Public Realm Rating System – USSP.2.06 Accessible playgrounds and play areas**”.

### **3.11.6.8 References:**

- a)** Abu Dhabi International Accessibility Code
- b)** Abu Dhabi International Building Code, 2013
- c)** PR-403 Design Manual - Minimum Requirements for Private School Facilities
- d)** UAE Universal Design Code

## 3.11.7 USSP.1.07 Enhanced accessible playgrounds and play areas

### 3.11.7.1 Applicability:

Applicable to all buildings featuring playgrounds and play areas (particularly childcare facilities).

### 3.11.7.2 Intent:

To ensure that playgrounds within the certification boundary are accessible, inclusive, and safe, providing a welcoming and attractive environment for users of all ages and their caregivers to enjoy and interact comfortably.

### 3.11.7.3 Requirements:

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

All recommended requirements for playgrounds should be in accordance with “**Sahel Public Realm Rating System – USSP.2.07 Enhanced accessible playgrounds and play areas**”.

### 3.11.7.4 Pre-certificate rating credits:

**Table 135: USSP.1.07 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design all playgrounds within the certification boundary that provides interaction with natural features including a variety of plants with loose parts to encourage explorative play, ensuring the use of non-toxic, non-allergenic plants.
		Design the play area to provide three types of experiences.

### 3.11.7.5 Certificate rating credits:

**Table 136: USSP.1.07 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirmation that all playgrounds within the certification boundary provide an interaction with natural features including a variety of plants with loose parts to encourage explorative play, ensuring the use of non-toxic, non-allergenic plants.
		Confirmation of implementing the play area with three types of experiences.

**3.11.7.6 Pre-certificate rating submission:**

- a) Narrative describing how the project meets the recommended requirements for accessible playgrounds and play areas.
- b) Design drawings showing the proposed locations of play equipment to provide different play experiences.

**3.11.7.7 Certificate rating submission:**

- a) An update narrative describing how the project meets the recommended requirements for accessible playgrounds and play areas.
- b) As-built drawings showing the locations of play equipment to provide different play experiences.
- c) Photographs of the playground areas.

## 3.11.8 USSP.1.08 Accessible pools

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### 3.11.8.1 Applicability:

Applicable to all buildings that have swimming pools accessible to the public including residential buildings.

### 3.11.8.2 Intent:

To ensure accessible and universally designed swimming pools within the certification boundaries by incorporating physical access provisions, safety measures, and inclusive facilities for all users.

### 3.11.8.3 Requirements:

#### Mandatory:

Accessible sports swimming and recreation pools shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall:

#### a) 2 Credits in renovation.

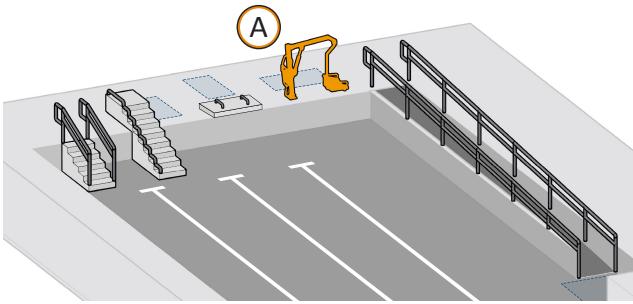
- i. Be accessible via an accessible path with accompanying facilities like car parking, public transportation stops, passenger drop-off areas, toilets, drinking fountains, shower rooms, locker and storage rooms and seating, the pool deck and associated play areas, reception, as well as emergency egress and refuge assembly areas (whichever is present). Accessible paths shall be dimensioned considering users on sport wheelchairs, in particular corridors and pedestrian paths of a minimum of 2000mm width.

#### b) 2 Credits in renovation.

- i. Have at least one means of entry if pool perimeter smaller than 90 m and two means of entry if pool perimeter 90 m or more (Pool walls where swimmers cannot enter because of landscaping or adjacent structures shall still be counted as part of the pool's perimeter).
- ii. Have a ladder, which can be removable, if necessary.
- iii. Have adjacent floor surfaces with low-heat-conductivity material.
- iv. Have underwater illuminance for night use in the pool.
- v. Indicate the depth of each pool zone every 7.5 meters (maximum) along the pool edge, ensuring that depth markers or floor gradient pictograms are visible and properly installed.
- vi. Ensure that accessible means of pool entry are provided at condominiums, including for tenant requests, and at Accessible, types A and B dwellings.

#### c) 2 Credits in renovation.

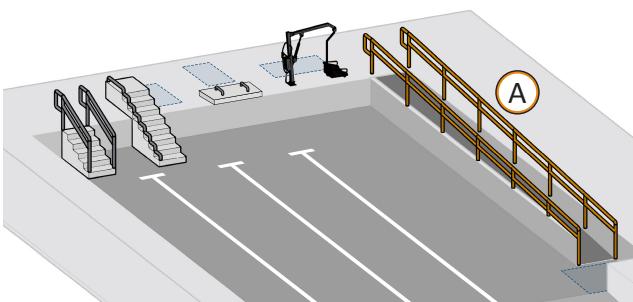
- i. Have means of entry be provided by one or more of the following:
  - a. Swimming pool lift (Figure 58 A) which shall:
    - Have a clear floor space of minimum 900 mm in width and 1500 mm in depth next to the pool lift.
    - Have seat with backrest installed between 400 mm and 450 mm measured to the top of the seat, 400 mm wide with centerline over the deck with minimum 400 mm from the pool's edge.
  - ii. Have clear floor space extending 300 mm behind the rear edge of the seat.
  - iii. Be capable of unassisted operation from both the deck and water with controls reachable from both the water and the deck and easily operable (not requiring tight grasping, pinching, or wrist twisting, not requiring more than 20N of force)
  - iv. Be capable of submerging to a water depth of 450 mm minimum.
  - v. Have a load capacity of 135kg.



**Figure 58:** Accessible lift

**b.** Sloped ramp entry (Figure 59 A) which shall:

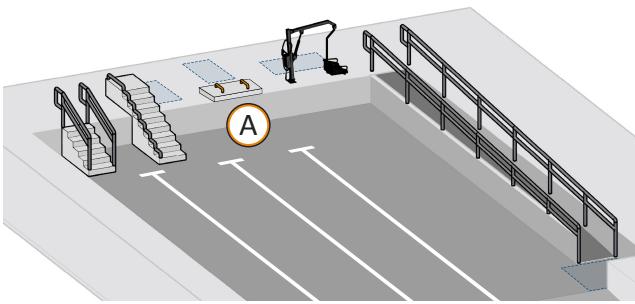
- Have a clear path of 900 mm wide with a maximum slope for new and existing construction and handrails in accordance with “**Sahel Building Rating System – IC.1.07 Accessible ramps**”.



**Figure 59:** Accessible ramp

**c.** Transfer walls (Figure 60 A) which shall:

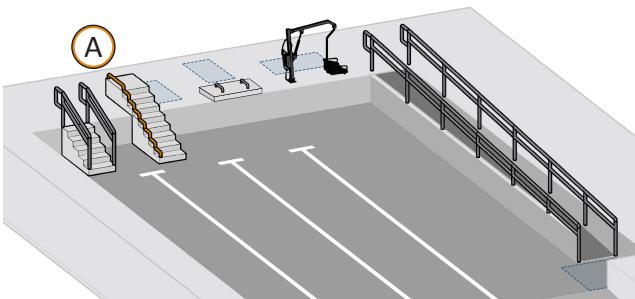
- Be one of the primary entry options for hot tubs and spas.
- Be connected to an accessible path and have a clear turning circle with a minimum diameter of 1800 mm and a cross slope of maximum 1:50 (2%) at the base of the transfer wall to allow transfer. If one bar is provided, the clear space shall be centered with the grab bar. If two grab bars are provided, the clear space shall be centered with the 600 mm clearance between the grab bars.
- Have grab bars perpendicular to the pool wall and extend the full width of the wall.
- Have top of the gripping surface of the grab bars at 100 mm to 150 mm above the wall.
- Shall have 600 mm clearance when 2 bars are provided.
- The grab bars shall have a diameter between 30 mm and 45 mm.
- The transfer wall shall have a maximum transfer height of 400 mm to 450 mm measured from the deck.
- Have a transfer wall width between 300 mm and 450 mm and the wall must be minimum 1800 mm long and centered on a clear deck space.
- Have rounded edges on the transfer wall to prevent injuries.



**Figure 60:** Accessible transfer wall

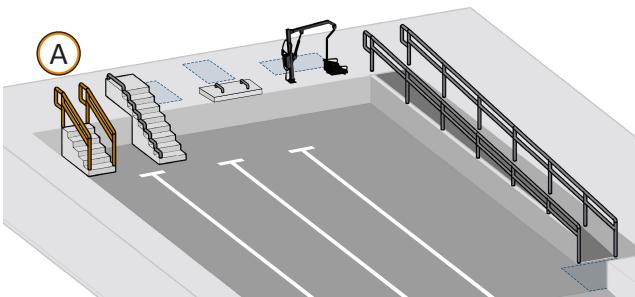
vi. Transfer systems (figure 61 A) which shall:

- Be made up of a transfer platform and steps.
- Have a transfer platform located at the head of the transfer system on the deck space.
- Have a platform of minimum 500 mm deep and 600 mm wide and must be 400 mm to 500 mm high maximum.
- Have 1800 mm X 1800 mm clear transfer space centered along the 600 mm unobstructed side of the transfer platform and a maximum cross slope of 1:50 (2%)
- Have transfer steps with closed risers at a maximum height of 200 mm and threads of minimum 600 mm in width and 350 mm to 450 mm in depth. The surface of the bottom tread shall extend to a water depth of 450 mm minimum below the stationary water level. The surface and edges of the transfer system shall not be sharp or abrasive and shall have rounded edges. Have grab bars on at least one side of the steps and transfer platform and the top of the gripping surface shall be 100 mm to 150 mm maximum above each step or have one continuous grab bar. If continuous, the grab bar shall not obstruct transfer to the platform and the top of the gripping surface shall be 100 mm to 150 mm maximum above each step nosing.
- Shall have grab bars with a gripping surface with a diameter ranging from 30 mm to 45 mm.



**Figure 61:** Accessible transfer system

- vii. Pool stairs (Figure 62 A) which shall:
  - a. Have treads of stable and firm surfaces, with a cross slope of maximum 1:50 (2%).
  - b. Have treads of color-contrasted nosing strips, 50 mm in width and installed horizontally at the edge of the nosing.
  - c. Have treads with openings to a maximum width of 12mm and perpendicular to the direction of travel.
  - d. Have a minimum thread width of 300 mm measured from riser to riser. (Open risers prohibited).
  - e. Have 500 mm to 600 mm width between the handrails.
  - f. Have handrails provided along both sides of the pool stair at two heights and shall range between 850 mm and 950 mm for the higher handrail and between 600 mm and 750 mm for the lower handrail, measured from the top of the gripping surface to the floor surface. The clear space between the handrail and the wall shall be 50 mm.
  - g. Have Handrails with a clear width of 500 mm to 600 mm between the handrails.
  - h. Have handrails with low-heat-conductivity material.



**Figure 62: Accessible stairs**

**d) 2 Credits in renovation.**

- i. Have primary means of entry provided by:
  - a. Swimming pool lifts,
  - b. Sloped (ramp) entry.
- ii. (if to be used as wading pool) Be shallow and have primary means of entry provided by a sloped ramp with a slope smaller than 1:20 (5%) to the deepest place (no need for railings)
- iii. Have firm, stable, and slip-resistant, providing a firm foothold and good wheel grip and durable surface around and inside the pool.
- iv. Have a surface around the pool for comfortable barefoot walking - of low-heat-conductivity material if outdoor and with openings of maximum 12 mm in diameter and where applicable, drain grate openings perpendicular to the path of travel.
- v. Provide accessible counters at least one sales and information point (if present).

**e) 2 Credits in renovation.**

- i. Be accompanied by the following facilities:
  - a. Public toilets
  - b. Changing rooms
  - c. Showers
  - d. Family toilet (new facilities only)
  - e. Baby feeding room (new facilities only)

#### **3.11.8.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.11.8.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.11.8.6 Pre-certificate rating submission:**

- a)** Narrative of the design approach to ensure accessibility of sports swimming and recreation pools, including the accessible path and its dimensions, the design of entry means, and the accompanying facilities.
- b)** Design drawings showing the accessible path with a minimum width of 2000mm, the location and design of pool entry means (lifts, ramps, transfer walls, transfer systems, and stairs), and the layout of accompanying facilities like car parking, public transportation stops, and other mentioned amenities.
- c)** Technical details of the pool lifts, ramps, transfer walls, transfer systems, and stairs, including dimensions, materials, and operational features.
- d)** Lighting Plans: If night use is anticipated, drawings indicating the lighting design for the pool bottom and adjacent promenades and paths, ensuring adequate lux levels.

#### **3.11.8.7 Certificate rating submission:**

- a)** Updated narrative describing the executed design and any changes from the initial plans, focusing on the accessibility features and compliance with the requirements.
- b)** As-built drawings and photographs showing the actual implementation of the accessible path, entry means, and accompanying facilities, confirming their dimensions and locations.
- c)** Photographs capturing the completed pool with its entry means and surrounding facilities, highlighting the accessibility features and the lighting levels if applicable.
- d)** Lighting Verification: If night use is envisioned, photographs and technical data about the provided lighting levels at the pool bottom, promenades, and paths.

#### **3.11.8.8 References:**

- a)** Abu Dhabi International Accessibility Code
- b)** Abu Dhabi International Building Code, 2013
- c)** UAE Universal Design Code

## **3.11.9 USSP.1.09 Enhanced accessible pools**

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### **3.11.9.1 Applicability:**

Applicable to all buildings that have swimming pools accessible to the public including residential buildings.

### **3.11.9.2 Intent:**

To ensure accessible and universally designed swimming pools within the certification boundary by incorporating enhanced physical access provisions, safety measures, and inclusive facilities for all users.

### **3.11.9.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

Accessible sports swimming and recreation pools should:

- a)** Have at least one of each enhanced means of entry:
  - i.** Transfer wall: length greater than 1800 mm
  - ii.** Slope entry:
    - Have a minimum 1500 mm landing at the bottom of the sloped surface.
    - Provide a waterproof wheelchair when a ramp is available.
  - iii.** Pool lift:
    - With load capacity exceeding 155 kg
    - With different height options to accommodate all users.
    - Have foldable armrests and footrests.

#### **Best Practice:**

The following are enhanced improvements that are considered best practice:

- a)** Include a height-adjustable pool platform as a means of entry, either as a primary or secondary option.
- b)** Ensure wading pools that sloped entry has the same width as the pool and the slope is less than 1:20 (5%).
- c)** Ensure floor surfaces have low-heat-conductivity material in outdoor pools and water parks.

### 3.11.9.4 Pre-certificate rating credits:

**Table 137: USSP.1.09 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
6	6	Design the pool with at least one enhanced means of entry for transfer wall, sloped entry and pool lift.
		<b>Best Practice:</b>
16	16	Design the pool with height-adjustable platform
4	4	Foreseen low-heat-conductivity material on floors and entry to wading pool < 1:20 (5%)

### 3.11.9.5 Certificate rating credits:

**Table 138: USSP.1.09 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
6	6	Provide the pool with at least one enhanced means of entry for transfer wall, sloped entry and pool lift.
		<b>Best Practice:</b>
16	16	Provide the pool with height-adjustable platform
4	4	Provide low-heat-conductivity material floors and entry to wading pool < 1:20 (5%)

### 3.11.9.6 Pre-certificate rating submission:

#### Recommended:

- a) Drawings showing the dimensions and location of the transfer wall, the sloped entry with the landing area, and the pool lift with its various height options, armrests, and footrests.
- b) Technical details of the transfer wall, sloped entry, and pool lift, including materials, dimensions, and load capacity.

#### Best Practice:

- a) Technical details of height-adjustable platform, entry slope and flooring.

### **3.11.9.7 Certificate rating submission:**

#### **Recommended:**

- a)** As-built drawings showing the transfer wall, sloped entry, and pool lift, confirming their dimensions and compliance with the design requirements.
- b)** Photographs showcasing the completed transfer wall, sloped entry with the waterproof pool wheelchair, and pool lift, focusing on their accessibility features and usability.

#### **Best Practice:**

- a)** Updated technical details if height-adjustable platform, entry slope and flooring.
- b)** Photographs showcasing the height-adjustable platform, entry slope and flooring.

## 3.11.10 USSP.1.10 Accessible gymsnasiums

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### 3.11.10.1 Applicability:

Applicable to all buildings that have indoor or outdoor gymsnasiums accessible to the public including residential buildings.

### 3.11.10.2 Intent:

To provide accessible outdoor and indoor gymsnasiums within the certification boundaries, including inclusive equipment, easy navigation, and safety measures to accommodate all users.

### 3.11.10.3 Requirements:

#### Mandatory:

All gymsnasiums within the certification boundary shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi Guideline Practice to increase opportunities for physical activity in the Emirate of Abu Dhabi (ADG-027)**.

All accessible gymsnasiums shall:

#### a) 2 Credits in renovation.

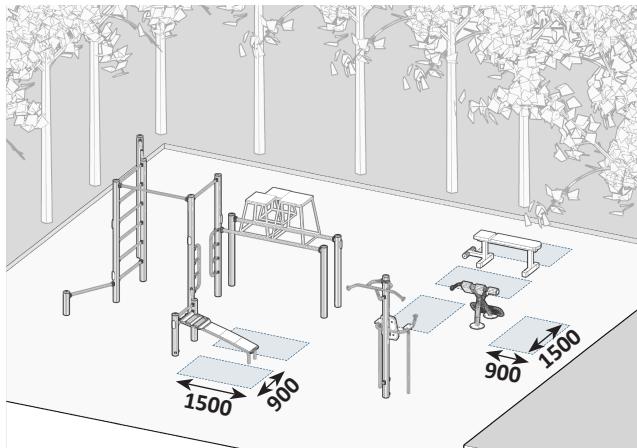
- i. Have level access to exercise areas.
- ii. Be connected via an accessible path with accompanying facilities like car parking, toilets, reception, buildings, fields of play, play spaces, drinking fountains, swimming pools, toilets, shower rooms, locker and storage rooms and seating, as well as emergency egress and refuge assembly areas (whichever present). Accessible paths (horizontal and vertical) shall be dimensioned taking into account users on sport wheelchairs, in particular: corridors and paths shall be a minimum of 2000 mm in width, elevator cars (if provided) shall be in accordance with **“Sahel Building Rating System – IC.1.17 Elevators and platform lifts (outdoor and indoor)”**.

#### b) 2 Credits in renovation.

- i. Have doors with a minimum width in accordance with **“Sahel Building Rating System – IC.1.05 Accessible doors, doorways, and gates (outdoor and indoor)”**.
- ii. Have equipment that can be approached, accessed, exited, and operated without assistance.
- iii. Feature at least one of each type of exercise equipment or machine with a clear floor space of minimum 900 mm in width and 1500 mm in depth (Figure 63).
- iv. Provide bleachers at activity locations.
- v. Have a clear turning circle with a minimum diameter of 1800 mm next to equipment.
- vi. Have exercise equipment accessible via an accessible path with passing space between units of a minimum of 1200 mm.

**c) 2 Credits in renovation.**

- i. Have at least 20% or at least 3 exercise machines (whichever is the highest) that are dual use (not including universally accessible equipment such as free-standing weights).
- ii. Have all fitness suites (if provided) with a range of cardiovascular and resistance IFI (Inclusive Fitness Initiative) accredited equipment.
- iii. If saunas and steam rooms are provided shall be clustered, ensure that at least 5% (or a minimum of one) of each type is accessible with a clear turning circle with a minimum diameter of 1800 mm and an accessible bench at a height of 450-500 mm.
- iv. Equipment, multi-station equipment, wall pulleys, and exercise cycles (if provided) shall have removable swing-away seats and small weight increments.
- v. Have floor surfaces that are smooth, firm, stable, slip-resistant, and glare-free (e.g. pour-in-place, rubber mats/tiles and artificial grass) and have slip-resistance value in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.



**Figure 63: Outdoor gym**

Additionally, all outdoor gyms shall:

**d) 2 Credits in renovation.**

- i. Be shaded.
- ii. Be accompanied by a drinking fountain within a maximum distance of 30 m.
- iii. Be accompanied by a cycle parking within a maximum distance of 30 m (when applicable).

**3.11.10.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

**3.11.10.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **8**.

### **3.11.10.6 Pre-certificate rating submission:**

- a)** A comprehensive description of how the gymnasium design adheres to accessibility standards, including level access and connections to facilities.
- b)** Detailed drawings showing the gymnasium layout, accessible paths, door widths, and equipment locations.
- c)** Drawings highlighting features such as corridors, paths, and elevators designed for sports wheelchairs.
- d)** Documentation of exercise equipment, ensuring at least one of each type meets the clear floor space of 900 mm in width and 1500 mm in depth.
- e)** Plans of the implemented shade structures. (if applicable)
- f)** Evidence showing the location of drinking fountains and cycle parking within the required distance from the gym area. (if applicable).

### **3.11.10.7 Certificate rating submission:**

- a)** Updated description reflecting the completed gymnasium's adherence to accessibility standards.
- b)** As-built drawings showing accessible paths and equipment placement.
- c)** Photographs showcasing the accessibility of exercise areas, equipment, and connections to other facilities.
- d)** Proof of compliance with the minimum lighting level and slip resistance rating for floor surfaces.
- e)** As-built drawings and photographs of the implemented shade structures. (if applicable)
- f)** Evidence showing the location of drinking fountains and cycle parking within the required distance from the gym area. (if applicable).

### **3.11.10.8 References:**

- a)** Abu Dhabi International Accessibility Code
- b)** Abu Dhabi International Building Code, 2013
- c)** Abu Dhabi Guideline Practice to increase opportunities for physical activity in the Emirate of Abu Dhabi (ADG-027).

## **3.11.11 USSP.1.11 Enhanced accessible gyms**

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### **3.11.11.1 Applicability:**

Applicable to all buildings that have indoor or outdoor gyms accessible to the public including residential buildings.

### **3.11.11.2 Intent:**

To provide accessible indoor or outdoor gyms within the certification boundary, encompassing enhanced features like inclusive equipment, easy navigation, and safety measures to accommodate all users.

### **3.11.11.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All gyms within the certification boundary should be accessible and should:

- a) Have at least 50% or at least 4 exercise machines (whichever is highest) that are dual use (not including universally accessible equipment such as free-standing weights).
- b) Have trained staff to assist users.

### **3.11.11.4 Pre-certificate rating credits:**

**Table 139: USSP.1.11 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design all gyms with the recommended share of dual use equipment
5	5	Foresee trained staff.

### **3.11.11.5 Certificate rating credits:**

**Table 140: USSP.1.11 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Provide all gyms with the recommended share of dual use equipment
5	5	Guarantee trained staff.

### **3.11.11.6 Pre-certificate rating submission:**

#### **Recommended:**

- a)** A comprehensive description of how the gymnasium design adheres to recommended requirements.
- b)** Documentation of exercise equipment, ensuring at least 50% or 4, are dual use
- c)** Outline of the staff training program to assist all gym users.

### **3.11.11.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated description of how the gymnasium design adheres to recommended requirements.
- b)** Photographs showcasing the accessibility of exercise areas, equipment, and connections to other facilities.
- c)** Demonstrate the presence of trained staff to assist all gym users.

## 3.11.12 USSP.1.12 Accessible courts and sports fields

### 3.11.12.1 Applicability:

Applicable to all buildings that feature sports fields and courts, including residential developments.

### 3.11.12.2 Intent:

To ensure equitable access to courts and sports fields by providing a strategically designed and maintained facility to offer accessible opportunities for all (Figure 64).

### 3.11.12.3 Requirements:

#### Mandatory:

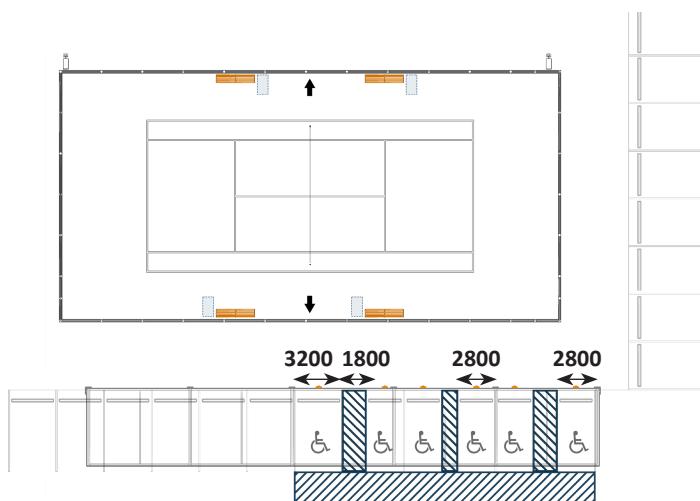
All sports fields and courts within the certification boundary shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi Guideline Practice to increase opportunities for physical activity in the Emirate of Abu Dhabi (ADG-027)** and shall:

#### a) 3 Credits in renovation.

Be accessible via an accessible path (without crossing a court to reach another one).

#### b) 5 Credits in renovation.

Be connected via an accessible path with accompanying facilities like car parking, toilets, reception, buildings, fields of play, play spaces, drinking fountains, swimming pools, toilets, shower rooms, locker and storage rooms and seating, as well as emergency egress and refuge assembly areas (whichever present). Accessible paths (horizontal and vertical) shall be dimensioned considering users on sport wheelchairs, particularly corridors and pedestrian paths of minimum 2000mm width, elevator cars (if provided) in accordance with **“Sahel Building Rating System – IC.1.17 Elevators and platform lifts (outdoor and indoor)”**.



**Figure 64: Tennis court**

**c) 2 Credits in renovation.**

- i. Have entry points/doors/gates easily identifiable and have a minimum luminance contrast in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- ii. Have level access, with a clear door width in accordance with **“Sahel Building Rating System – IC.1.05 Accessible doors, doorways and gates (outdoor and indoor)”, “Sahel Building Rating System – IC.1.03 Circulation based in accessible paths (indoor)”** and **“Sahel Building Rating System – IC.1.01 Circulation based in accessible paths (outdoor)”**.

**d) 2 Credits in renovation.**

Feature a clear floor space for transferring to a sports chair independently, with a sliding board, or with the assistance of one, or two persons. The minimum size of the clear floor spaces shall be 1900 mm by 2000mm, 2000 mm by 2000 mm, 1900 mm by 1300 mm and 2200 mm by 2200 mm, respectively.

**e) 5 Credits in renovation.**

- i. Feature equipment and adjustments typical for a given discipline to allow the use of all players including (but not limited to):
  - a. Bowling (if present) shall have a minimum of 5% and not less than one accessible lane for each type of bowling lane connected to an accessible seating area.
  - b. Areas for basketball and netball (if present) with adjustable goalposts.
  - c. Accessible ramps at specific locations, (for example, to bowling alleys) where playing surfaces are provided at different heights.
  - d. Horse riding facilities (if present) shall have horse mounting ramps in accordance with **“Sahel Building Rating System – IC.1.07 Accessible ramps”**.
  - e. Feature a visual scoring system (scoreboard) and digital clock visible for players (including team bench if present) and spectators (if spectator area is present).
  - f. Golf courses shall count with an accessible transport means (accessible golf carts, personal assistance service or others) to reach different greens and guarantee shaded areas where seats can be provided.

**f) 3 Credits in renovation.**

- i. Be accompanied by a drinking fountain at a maximum distance of 30 m.
- ii. Be accompanied by a cycle parking at a maximum distance of 30 m (if applicable).
- iii. Tiered dining areas in sports facilities with seating shall be required to have accessible paths serving at least 25% of the dining area, provided that accessible paths serve accessible seating and where each tier is provided with the same services.
- iv. Have floor surfaces that are smooth, firm, stable, slip-resistant, and glare-free providing a firm foothold and good wheel grip (e.g., pour-in-place, rubber mats/tiles and artificial grass) and have slip-resistance values in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.

**3.11.12.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **20**.

**3.11.12.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **20**.

### **3.11.12.6 Pre-certificate rating submission:**

- a)** A comprehensive description of how the accessible courts and sport fields design adheres to accessibility standards, including level access and connections to facilities.
- b)** Detailed drawings showing the courts and sport fields layout, accessible paths, door widths, and equipment locations.
- c)** Drawings highlighting features such as corridors, paths, and elevators designed for sports wheelchairs and concrete aspects of specific sports.
- d)** Plans of the implemented shade structures. (if applicable)
- e)** Evidence showing the location of drinking fountains and cycle parking within the required distance from the gym area. (if applicable).

### **3.11.12.7 Certificate rating submission:**

- a)** Updated description reflecting the completed accessible courts and sport fields adherence to accessibility standards.
- b)** As-built drawings showing the accessible paths and equipment placement.
- c)** Photographs showcasing the accessibility of sport areas and equipment, and connections to other facilities.
- d)** Proof of compliance with the minimum lighting level and slip resistance rating for floor surfaces.
- e)** As-built drawings and photographs of the implemented shade structures. (if applicable)
- f)** Evidence showing the location of drinking fountains and cycle parking within the required distance from the gym area. (if applicable).

### **3.11.12.8 References:**

- a)** Abu Dhabi International Accessibility Code
- b)** Abu Dhabi International Building Code, 2013
- c)** Abu Dhabi Guideline Practice to increase opportunities for physical activity in the Emirate of Abu Dhabi (ADG-027).

## 3.11.13 USSP.1.13 Enhanced accessible courts and sports fields

### 3.11.13.1 Applicability:

Applicable to all buildings that feature sports fields and courts, including residential developments.

### 3.11.13.2 Intent:

To ensure equitable access to courts and sports fields by providing an enhanced, strategically designed and maintained facility to offer accessible sports opportunities for all.

### 3.11.13.3 Requirements:

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All sports fields and courts within the certification boundary should be accessible. Accessible sports fields and courts should:

- a) Be accompanied by sheltered (outdoor) rest points at a maximum distance of 10 m from the playing field.
- b) In horse ride facilities, ensure that an adjustable platform, hoist, or lifting device is provided next to or on the platform.

### 3.11.13.4 Pre-certificate rating credits:

**Table 141: USSP.1.13 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Design sheltered (outdoor) rest points by sports fields and courts according to recommended requirements
2	2	Foresee lifting device in horse ride facilities.

### 3.11.13.5 Certificate rating credits:

**Table 142: USSP.1.13 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Provide sheltered (outdoor) rest points by sports fields and courts according to recommended requirements
2	2	Provide lifting device in horse ride facilities.

### **3.11.13.6 Pre-certificate rating submission:**

#### **Recommended:**

- a) Drawings that indicate the proposed locations of sheltered rest points in relation to the accessible courts and sports fields, including dimensions and details of the shelters.
- b) Technical details of lifting device.

### **3.11.13.7 Certificate rating submission:**

#### **Recommended:**

- a) Photographs demonstrating the proximity of the sheltered rest points to the accessible courts and sports fields, highlighting their accessibility and compliance with the maximum distance requirement or photographs of lifting device.

## **3.11.14 USSP.1.14 Accessible camping facilities**

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### **3.11.14.1 Applicability:**

Applicable to all facilities that provide opportunities for camping within the certification boundary.

### **3.11.14.2 Intent:**

To achieve that camping facilities are accessible, ensuring inclusivity and equitable access in adherence to universal design, provision of accessible amenities and accommodation promoting an enjoyable outdoor environment experience for all users.

### **3.11.14.3 Requirements:**

#### **Mandatory:**

##### **a) 6 Credits in renovations.**

All camping facilities shall provide the minimum number of accessible services in accordance “Sahel Public Realm Rating System – USSP. 2.14 Accessible camping facilities”.

### **3.11.14.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

### **3.11.14.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

### **3.11.14.6 Pre-certificate rating submission:**

- a) Drawings showing the layout of the camping facilities, indicating the accessible paths, tent pads, platforms, camping shelters, and outdoor constructed features. The drawings must also detail the slope measurements, and the materials used for tent paths.**

### **3.11.14.7 Certificate rating submission:**

- a) As-built drawings depicting the actual layout of the camping facilities, including the accessible paths, tent pads, platforms, camping shelters, and outdoor constructed features, with precise measurements and specifications.**
- b) Photographs showcasing the accessible camping units, highlighting the features such as the level tent pads or platforms, outdoor constructed features, signage with the International Sign for Accessibility, and the continuous accessible path. Photos must also show the accessible parking spaces and any raised tent platforms with their edge protection.**

### **3.11.14.8 References:**

- a) Abu Dhabi International Accessibility Code, 2013**

## **3.11.15 USSP.1.15 Enhanced accessible camping facilities**

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### **3.11.15.1 Applicability:**

Applicable to all buildings that provide opportunities for camping within the certification boundary.

### **3.11.15.2 Intent:**

To achieve that camping facilities are accessible, ensuring inclusivity and equitable access in adherence to optimized universal design, providing accessible amenities and accommodation, and promoting an enjoyable outdoor environment experience for all users.

### **3.11.15.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All recommended requirements for camping facilities should be in accordance with “**Sahel Public Realm System – USSP.2.15 Enhanced accessible camping facilities**”.

### **3.11.15.4 Pre-certificate rating credits:**

Refer to “**Sahel Public Realm System – USSP.2.15 Enhanced accessible camping facilities**”.

### **3.11.15.5 Certificate rating credits:**

Refer to “**Sahel Public Realm System – USSP.2.15 Enhanced accessible camping facilities**”.

### **3.11.15.6 Pre-certificate rating submission:**

Refer to “**Sahel Public Realm System – USSP.2.15 Enhanced accessible camping facilities**”.

### **3.11.15.7 Certificate rating submission:**

Refer to “**Sahel Public Realm System – USSP.2.15 Enhanced accessible camping facilities**”.

## **3.11.16 USSP.1.16 Accessible amusement and thematic parks**

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### **3.11.16.1 Applicability:**

Applicable to all indoor and outdoor facilities over 2000 square meters that feature various attractions, such as rides and games, as well as other events for entertainment purposes.

### **3.11.16.2 Intent:**

To ensure that amusement and thematic parks offer enjoyable experiences for all users guaranteeing inclusivity and equitable access to all attractions and activities addressed to the public.

### **3.11.16.3 Requirements:**

#### **Mandatory:**

The following facilities and services shall be provided:

**a) 10 Credits in renovation.**

Accessible parking provisions and EV parking provisions within the certification boundary shall be in accordance with "**Sahel Building Rating System - TA.1.01 Accessible parking**" and "**Sahel Building Rating System - TA.1.07 Accessible e-vehicles charging stations**", wherever applicable.

**b) 15 Credits in renovation.**

Accessible passenger loading zones and accessible taxi stands provisions within the certification boundary shall be in accordance with "**Sahel Building Rating System - TA.1.05 Accessible passenger loading zone and accessible taxi stands**", wherever applicable and shall be located near the accessible entrances.

**c) 20 Credits in renovation.**

Accessible pedestrian paths both indoors and outdoors between all accessible services and facilities along with accessible elevators, escalators and travellators at all floors shall be in accordance with "**Sahel Building Rating System - IC.1 Interconnectivity and Circulation**", while the tactile surfaces for navigation shall be in accordance with "**Sahel Building Rating System - OC.1.03 Tactile Walking Surface Indicators (TWSI)**", wherever applicable.

**d) 5 Credits in renovation.**

All areas of the park shall fulfill the lighting, glare, sound, air quality requirements in accordance with "**Sahel Building Rating System - EQC.1 Environment Quality and Comfort**", wherever applicable.

**e) 6 Credits in renovation.**

All information points (if provided) in accordance with "**Sahel Building Rating System - OC.1.10 Information points**", wherever applicable.

**f) 3 Credits in renovation.**

At least one of each self-service vending and check-in machines be accessible in accordance with "**Sahel Building Rating System - EFE.1.08 ATMs and vending machines**".

**g) 2 Credits in renovation.**

Queues at ticket offices and attractions shall be in accordance with "**Sahel Building Rating System – EFE.1.10 Barriers in queuing areas**". When queuing is required to enter or use a facility, a priority line shall be provided for people that may require it. Moreover, when people are standing in line, signs and sound announcements should inform them of the expected time to enter in the facility. Seating places shall be provided for people that cannot stand in a line. The number of seats will be defined according to the expected age and number of users.

**h) 8 Credits in renovation.**

Tactile maps shall be provided, located near the accessible entrances or ticket counters in accordance with "**Sahel Building Rating System - OC.1.05 Tactile maps and raised floor plans**".

**i) 20 Credits in renovation.**

All identity and directional signage shall be in accordance with "**Sahel Building Rating System - OC.1.01 Signage and other communication elements**".

**j) 6 Credits in renovation.**

Emergency intercom/SOS points in the platforms (where applicable), in accordance with "**Sahel Building Rating System - ESP.1 Emergency Systems and Procedures**", wherever applicable.

**k) 4 Credits in renovation.**

Accessible drinking fountains, electric charging stations for assistive devices, seats and rest points should be in accordance with the requirements of "**Sahel Building Rating System - EFE.1 Ergonomic Furniture and Equipment**".

**l) 20 Credits in renovation.**

Accessible toilets for men and women located in accordance with the requirements of "**Sahel Building Rating System - HC.1 Hygiene and Care**".

**m) 6 Credits in renovation.**

Accessible ticket offices and information counters, self-information points in accordance with the requirements of "**Sahel Building Rating System - EFE.1 Ergonomic Furniture and Equipment**" and "**Sahel Building Rating System - OC.1 Orientation and Communication**".

**n) 10 Credits in renovation.**

Family toilets and Baby feeding rooms shall be distributed in the parks guaranteeing that the distances between them do not exceed 100 m, in accordance with the requirements of "**Sahel Building Rating System - HC.1 Hygiene and Care**".

**o) 5 Credits in renovation.**

Quiet rooms, in accordance with the requirements of "**Sahel Building Rating System - EQC.1.13 Quiet room**".

**p) 10 Credits in renovation.**

- i. Amusement Rides shall be accessible and shall be in accordance with dimensional requirements applicable to approach, clear turning circle, obstacles, floor surfaces, clearances and slopes.
- ii. Side Entry: Where wheelchair spaces are entered only from the side, amusement rides shall be designed to permit sufficient maneuvering clearance for individuals using a wheelchair or mobility aid to enter and exit the ride.
- iii. Objects are permitted to protrude a distance of 150 mm maximum along the front of the wheelchair space, where located 250 mm minimum and 700 mm maximum above the floor of the wheelchair space. Objects are permitted to protrude a distance of 600 mm maximum along the front of the wheelchair space, located more than 700 mm above the floor of the wheelchair space.
- iv. Ride Entry: Openings providing entry to wheelchair spaces on amusement rides shall provide a clear width of 900 mm minimum.
- v. Approach: One side of the wheelchair space shall adjoin an accessible path when in the load and unload position.
- vi. Companion Seats: Where the interior width of the amusement ride is greater than 1400 mm, seating is provided for more than one rider, and the wheelchair is not required to be centered within the amusement ride, a companion seat shall be provided for each wheelchair space.
- vii. Shoulder-to-Shoulder Seating: Where an amusement ride provides shoulder-to-shoulder seating, companion seats shall be shoulder-to-shoulder with the adjacent wheelchair space.
- viii. Amusement Ride Seats Designed for Transfer shall provide:
  - A clear floor space complying with Section 305 shall be provided in the load and unload area adjacent to the amusement ride seats designed for transfer.
  - The height of amusement ride seats designed for transfer shall be 350 mm minimum and 600 mm maximum measured from the surface of the load and unload area.
  - Where openings are provided for transfer to amusement ride seats, the openings shall provide clearance for transfer from wheelchair or mobility aid to the amusement ride seat.
- ix. Wheelchair storage spaces shall be provided in or adjacent to unload areas for each required amusement ride seat designed for transfer and shall not overlap any required means of egress or accessible path.
- x. Transfer devices for use with amusement rides shall provide:
  - A clear approach floor space in the load and unload area adjacent to the transfer device.
  - The height of transfer device seats shall be 350 mm minimum and 600 mm maximum measured from the load and unload surface.

**3.11.16.4 References:**

- a) Abu Dhabi International Accessibility Code
- b) UAE Universal Design Code

## 3.11.17 USSP.1.17 Accessible dwellings

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### 3.11.17.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- b) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- c) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- d) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- e) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- f) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)

### 3.11.17.2 Intent:

To provide equitable access to inclusive housing, usable by people of all ages, sizes, abilities, and family compositions by means of different typologies of dwellings and rooms. The Accessible Units, Type A Units, Type B Units and Type C Units present different characteristics to meet the requirements of the diversity of users.

### 3.11.17.3 Requirements:

#### Mandatory:

All types of units shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall meet the following requirements:

#### a) 5 Credits in renovation.

Provide corridors that are at least 1200 mm wide for a double path and 900 mm wide for a single path. In existing and retrofit constructions all paths shall be at least 900 mm.

#### b) 7 Credits in renovation.

Have doors with adequate widths in accordance with "**Sahel Building Rating System – IC.1.05 Accessible doors, doorways and gates (outdoor and indoor)**".

#### c) 15 Credits in renovation.

- i. Not feature stairs as part of critical vertical circulation. Irrespective of where stairs are provided, at least one accessible elevator, ramp or platform lift shall also be provided.
- ii. Elevators (if present) shall be in accordance with "**Sahel Building Rating System – IC.1.17 Elevators and platform lifts (outdoor and indoor)**".
- iii. Provide a clear interior path to each operable piece of equipment or furniture.
- iv. Have safe floor surfaces in all indoor and adjacent outdoor areas, which shall:
  - a. Be firm, stable, slip-resistant, and glare-free, as well as obstacle-free.
  - b. Have slip-resistance values in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- v. If provided, ensure carpets are securely fastened to the floor, and have a pile height of maximum 15 mm.
- vi. Not have the main entrance enter a bedroom unless it is a studio apartment.
- vi. Pocket/cavity doors can be used internally, where inadequate space is available for a hinged door's swing.
- vii. Have two-way audio, text, and visual communication provided at between 900 mm and 1200 mm above floor level by door entrances.

- viii. Ensure that operable parts (such as controls, switches, furniture, and appliances) comply with the **“Sahel Building Rating System – EFE.1.13 Operable Parts”**. In kitchens with two or more outlets above an uninterrupted length of countertop (uninterrupted by a sink or appliances), one outlet is not required to be accessible.
- ix. All navigational elements within the unit that are designed for human interaction or pose a potential hazard must have adequate luminance contrast values against their background and neighboring elements, in accordance with the **“Sahel Building Rating System – EQC.1.09 Wall and Floor Finishes”**.

d) **Credits in the mentioned section.**

- i. The minimum luminance contrast shall be in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- ii. Have indoor residential noise levels in accordance with **“Sahel Building Rating System – EQC.1.07 Acoustics”**.

e) **3 Credits in renovation.**

- i. Have ventilation and air conditioning systems that are safe, healthy to use, and do not contribute to allergic symptoms or high noise levels.
- ii. Provide accessible windows to ensure natural light and unrestricted view.
- iii. Operable windows allowing natural ventilation shall be provided where feasible.
- iv. Where windows are part of an emergency escape route/exit, they shall be clearly signed and be accessible for approach and egress.
- v. Not feature sharp edges or abrasive surfaces.
- vi. Restrictions on door swings part of the means on egress shall not apply to doors within individual dwelling units and sleeping units of Group R-2 and dwelling units of Group R-3.

#### **3.11.17.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **30**.

#### **3.11.17.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **30**.

#### **3.11.17.6 Pre-certificate rating submission:**

- a) A detailed description of how the design of the units meets the accessibility requirements, including clear turning circles, paths, and operable parts.
- b) Drawings showing the layout of units with dimensions for clear turning circles, paths, door widths, and locations of operable parts.
- c) Features: Specifications for accessible windows, lighting levels, floor surfaces, and contrast values.
- d) Information on accessible appliances, including their controls and operating mechanisms.
- e) Drawings showing the layout of the living and dining areas, including dimensions and locations of accessible dining tables, seating, and two-way switches.

### **3.11.17.7 Certificate rating submission:**

- a)** Updated narrative detailing how the built units comply with the accessibility requirements.
- b)** As-built drawings of the units showing all accessibility features as constructed.
- c)** Photographs demonstrating the accessibility features in use, such as clear paths, operable parts.
- d)** Documentation verifying compliance with the required lighting levels and slip resistance ratings.
- e)** Updated information on accessible appliances, including their controls and operating mechanisms.
- f)** As-built drawings of the living and dining areas showing all accessibility features.

### **3.11.17.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** Abu Dhabi International Building Code, 2013
- c)** UAE Universal Design Code

## 3.11.18 USSP.1.18 Dwellings: Accessible units

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### 3.11.18.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- b) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- c) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- d) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- e) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- f) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)

### 3.11.18.2 Intent:

To provide equitable access to inclusive housing, usable by people of all ages, sizes, abilities, and family compositions. (Figures 65 to 69).

### 3.11.18.3 Requirements:

#### Mandatory:

Accessible Units shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall be provided as follows:

**Table 143: Accessible Units required per building occupancy groups**

Building category	Sub-category	Accessible Unit
Group I-1	<b>1.</b> >16 occupants <b>2.</b> Residing on 24h basis maximum <b>3.</b> Providing personal care <b>4.</b> Rehabilitation centers	A minimum of 4% or at least one if less than 25 units of rehabilitation institutions, and prison cells.
Group I-2	Nursing homes	50% to be accessible
Group I-2	General purpose hospitals, residential care, psychiatric	10% to be accessible
Group I-2	Hospitals and rehabilitation facilities	100% to be accessible
Group I-3	<b>1.</b> Special /Housing cells in: <b>2.</b> Detention centers <b>3.</b> Correction centers <b>4.</b> Sleeping units/isolation cells in medical care facilities	A minimum of 2% or at least one and at least one of the special rooms

Building category	Sub-category	Accessible Unit
Group R-1	<ol style="list-style-type: none"> <li>1. &gt; 10 occupants</li> <li>2. Sleeping units (transient or nature)</li> <li>3. Hotels, serviced apartments</li> </ol>	<p>A minimum of 5% but not less than one of the hotel units shall be Accessible Units designed with accessible communication features for all users.</p> <p>One of each class/type of hotel unit shall be accessible where there are multiple unit types.</p>
Group R-2	Permanent occupation: Other than apartment houses, monasteries and convents (i.e.: non transient hotels, boarding houses)	A minimum of 5% but not less than one.
Group R-4	Assisted Living of 5 to 16 occupants	At least 1 unit.

All Accessible Units shall meet the following requirements:

**a) 5 Credits in renovation.**

- i. Provide a clear turning circle with a minimum diameter of 1800 mm in every unit room.
- ii. Provide a clear interior path of 1200 mm for each operable piece of equipment or furniture.
- iii. Be accompanied by at least one, continuous accessible path provided from the front boundary of the plot to the accessible main entrance and all areas/spaces of the unit. The outdoor path shall be a minimum of 1200 mm in width for new developments and 900 mm for existing units or for renovations.
- iv. Have corridors with handrails along their lengths.
- v. Have peepholes (if present) positioned at two different heights: 1000 mm and 1500 mm above the floor level. Both shall have angled view of a minimum of 180 degrees.
- vi. Not feature any sharp edges and abrasive surfaces.
- vii. Provide an emergency power feature to charge phones, make SOS calls, and power assistive devices.

**b) 10 Credits in renovation.**

Additionally, the Accessible Units shall feature, when a kitchen is provided, at least one accessible kitchen at the same level as the main entrance, accessible via an accessible path. Accessible kitchen shall:

- i. Have a minimum clearance of 1500 mm between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas, when provided as a pass-through kitchen type, with access from one side and exit from another side.
- ii. Have a minimum clearance of 1800 mm , between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas, when provided as a U-shaped kitchen type with three bordering sides, one entrance, and one exit only.
- iii. Keep the travel distances between the cook top, oven, sink, and work surfaces to a minimum.

- iv. Feature at least one section of the counter with an accessible work surface, which shall:
  - a. Be a minimum of 1500 mm in length.
  - b. Offer clear floor space of 900 mm in width and 1800 mm in depth in U-shaped kitchens and a clear floor space of 900mm in width and 1500 mm in depth for pass-through kitchens, knee and toe clearances aimed for forward approach.
  - c. Be placed at least next to the oven,
  - d. Have minimum clearances (h & i) between opposing cabinets or walls as follows:
    - e. Next to the latch side of the door at a side-hinged door.
    - f. On either side of the door at a bottom-hinged door.
    - g. Have a height between 700 mm and 800 mm (Figure 68) measured from top the edge to the floor surface.
    - h. Have a depth of a maximum of 600 mm to enable comfortable forward and side/parallel reach.
- v. Feature trash cans placed within reach, in a suitable drawer, in an under-counter cupboard, or free-standing beneath the work surface, between 400 mm and 900 mm above the floor level. Pedal-type bins are not allowed.
- vi. Provide essential kitchen appliances (oven, refrigerator, etc.) to be usable by people from a standing and seated position. A worktop shall be located beside all appliances.
- vii. Provide a clear floor space of minimum 900 mm in width and 1500 mm in depth for forward and side approach at each kitchen appliance, centered at the appliance.
- viii. Feature appliances with controls that are easy to identify and locate, and the settings shall be easy to understand and use.
- ix. Feature automatic gas and water shut-off valves and cooker/oven shut-down devices.
- x. Feature at least one accessible kitchen sink, which shall:
  - a. Be heat insulated in the underside of an exposed sink bowl and any exposed hot water pipes.
  - b. Have faucets with clear markings indicating hot and cold settings.
  - c. Have a lever operated faucet, or automatic. Opening time for hand-operated or sensor operated faucets shall be  $\geq 10s$ .
  - d. Have a faucet fitted to the sink within easy reach of wheelchair users, if necessary, at the side of the sink bowl. The distance between the centerline of the faucet to the edge of the washbasin shall be a maximum of 480 mm.
  - e. Provide a warning notice, where water can be emitted at a temperature greater than 43 °C. Where particular care is needed for people who are insensitive to temperature and who are therefore at risk of being scalded, a control mechanism shall be provided to limit water temperature to 43 °C.
  - f. Have a maximum internal depth of 180 mm.
  - g. Have a height of the front part of the top of the kitchen sink located 800 mm above the floor (Figure 68) and set to maximum 50 mm from the front edge. The height of the kitchen sink shall be 800 mm if knee clearance cannot be provided.
- xi. Feature at least one microwave, which shall:
  - a. Be located on a work surface or mounted to ensure the base of the oven is not higher than 800 mm above floor level.
  - b. Have operating controls not higher than 1200 mm above floor level. Any part thereof shall not protrude into the clear turning circle with a minimum diameter of 1800 mm.

- xii. Feature at least one refrigerator and freezer (as one combined unit or one of each) which shall:
  - a. If combined, have at least 50% of the freezer compartment shelves, including the bottom of the freezer located maximum 1200 mm maximum above the floor when the shelves are installed at the maximum heights possible in the compartment (in units with freezer at the top).
  - b. Allow for the clear floor space of minimum 900 mm in width and 1500 mm in depth in front of the refrigerator and freezer to be offset. The offset of the centerline of the clear floor space cannot exceed 600 mm.
  - c. Have reach ranges of the content between 400 mm and 1200 mm above floor level.
  - d. Have temperature controls in reach range and easy to operate at a height of maximum 1200 mm above floor level.
  - e. Have a well-lit internal content.
- xiii. Feature at least one dishwasher, which shall:
  - a. Have a drop-down door or drawer type door which does not obstruct the clear floor space of 900 mm in width and 1500 mm in length provided adjacent to the unit's door. The clear floor space shall either be under the counter or under the kitchen sink as applicable.
  - b. Have rack spaces to be accessible from the front and or sides during loading and unloading of the dishes.
- xiv. Feature at least one stovetop, which shall:
  - a. Be located near the oven.
  - b. Have an adjacent area for preparation.
  - c. Be insulated on its underside, where a knee recess is provided under the stovetop.
- xv. Feature at least one oven, which shall:
  - a. Have a clear floor space of minimum 900 mm in width and 1500 mm in length adjacent to the unit, and unobstructed when the oven's door is in an opened position.
  - b. Have a hinged door, with either left or right side opening, to allow for a pull-out shelf below the oven.
  - c. Be installed so that the surface of the pullout shelf below the oven is at a maximum of 800 mm above finished floor level, when intended for use from seated position or be installed with the base of the oven interior at a minimum of 850 mm above floor level, when intended for use from standing position.
- xvi. Feature adequate storage (hooks, shelves, cupboards etc.):
  - a. If hooks and shelves are provided in the kitchen, at least one of each type shall be accessible and allow forward or side reach.
  - b. At least one cabinet shall feature pull-out shelves or a carousel inside the cabinet.
  - c. No cabinets and shelves shall be installed above the stove tops to avoid reaching above hot surfaces.

**c) 5 Credits in renovation.**

Additionally, the Accessible Units shall feature at least one accessible living and/or dining area, which shall:

- i. Have at least one accessible dining table, which shall:
  - a. Allow access via forward approach including toe and knee clearance.
  - b. Have a height of dining surface between 750 mm and 800 mm above the floor surface.
  - c. Have a depth of at least 600 mm.
- ii. Have a minimum of 50% of accessible seating (not less than one), which shall:
  - a. Be accompanied by a clear floor space of minimum 900 mm in width and 1500 mm in depth for parallel approach to chairs.
  - b. Offer seating options at a height between 450 mm and 500 mm above the floor level.
  - c. Have the depth between 400 mm and 450 mm.
  - d. Have a back support at a height of 400 mm and no more than 460 mm, measured from the seat surface to the top of the backrest for sofas and armchairs.
  - e. Offer at least one seat with armrests and at least one without armrests and with a minimum transfer space of 900 mm by 1500 mm provided on one side allowing transfer from a wheelchair.
- iii. Be located as close to the kitchen area as possible.
- iv. Have a two-way switch installed in the living room: one by the door and the other by the living room suite.

**d) 10 Credits in renovation.**

Additionally, the Accessible Units shall feature at least one accessible bathroom in accordance with “**Sahel Building Rating System – HC.1.01 Accessible toilet rooms**” and with “**Sahel Building Rating System – HC.1.07 Accessible shower rooms and bathrooms**”, which shall:

- i. Have a roll-in shower or accessible bathtub.
- ii. Have an accessible toilet.
- iii. Have an accessible washbasin.
- iv. Feature reinforced walls and ceilings to enable an overhead hoist installation to assist with transfers.
- v. Provide a light strip along the bathroom jamb.

**e) 5 Credits in renovation.**

Additionally, the Accessible Units shall feature at least one accessible bedroom, which shall:

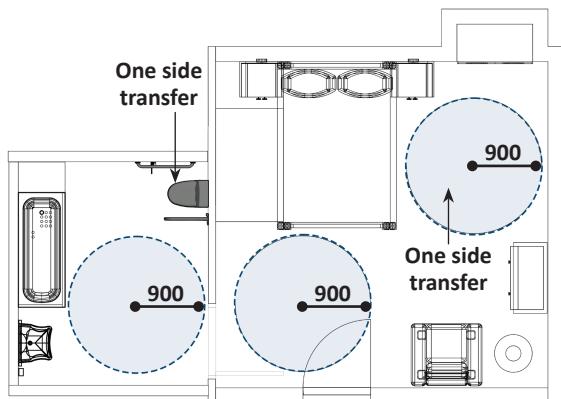
- i. Ensure bed height is between 450-500 mm, bed elevation from the floor is not less than 150 mm, allowing for a portable hoist upon request, and provide a clear turning circle with a minimum diameter of 1800 mm adjacent to the bed.
- ii. Be accompanied with an ensuite bathroom.
- iii. Have a clear floor space of minimum 900 mm in width and 1500 mm in depth provided beside the bed shall also provide for an electric charging station.
- iv. Feature controls for temperature, ventilation, lighting, curtains or window blinds, radios, televisions, and sockets for phone chargers, and electronic devices accessible from a bedside position.
- v. Feature accessible storage space near the bed for e.g., medical devices and lighting.
- vi. Have wardrobes to feature at least one clothes rail at a level between 400 mm and 1200 mm above floor level, or with an adjustable pull-down mechanism.

- vii. Provide all furniture as movable to allow an alternative layout and accommodate different user requirements.
- viii. Feature storage with outward-opening or sliding doors in accordance with “**Sahel Building Rating System – IC.1.05 Accessible doors, doorways and gates (outdoor and indoor)**”.
- ix. Install low lighting around the bedroom walls.
- x. Ensure under-pillow vibrating units or vibrating under-mattress pads that plug into the fire alarm system are provided in the event of an emergency.

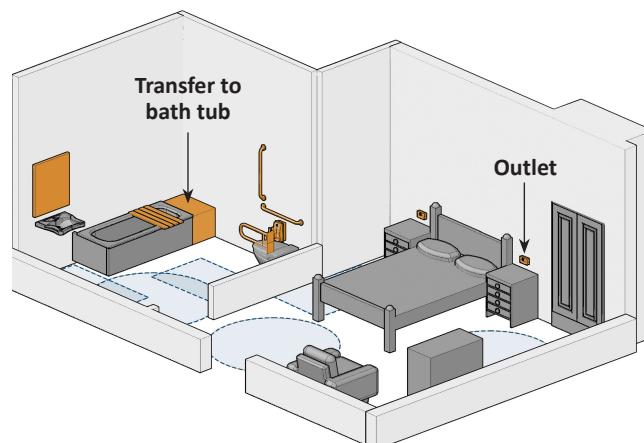
**f) 15 Credits in renovation.**

Additionally, when accessible rooms are provided in hotels (Figure 69), the following requirements shall be fulfilled:

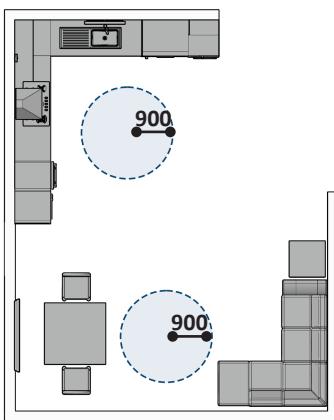
- i. Provide at least one accessible toilet for each gender near the key public areas of the facility such as reception, lobby, dining areas or meeting rooms.
- ii. Have room locking systems that are easy to locate and operate. This applies to the mounting height, the visually contrasting design, and the application of the multi-sensory approach.
- iii. The signage shall also include raised characters and braille.
- iv. Provide assistive devices such as vibrating/digital display alarm clocks, vibration pads, synchronized room lighting with buzzers, smart technologies, etc. The assistive devices shall be compatible with the telephone and fire alarm systems.
- v. If a kitchen or kitchenette is available, it should be fully accessible, as described above.
- vi. Additionally, at least 50% (not less than one) of accessible guest rooms in new constructions shall feature a roll-in shower, and the remaining 50% (not less than one) have an accessible bathtub connected to an ensuite bedroom. Each accessible bathroom shall be equipped with a call-for-assistance device.
- vii. Additionally, at least 10% (not less than one) accessible guest room shall be connected to a standard guest room, providing separate adjacent accommodation for a carer.
- viii. Connecting rooms for carers or companions shall have accessible doors in accordance with “**Sahel Building Rating System – IC.1.05 Accessible doors, doorways and gates (outdoor and indoor)**”.



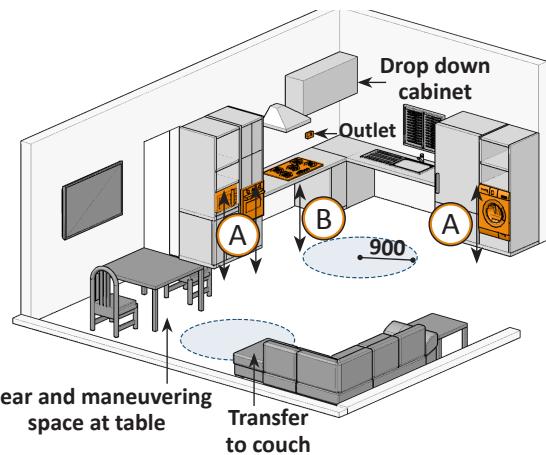
**Figure 65:** Accessible dwelling plan view



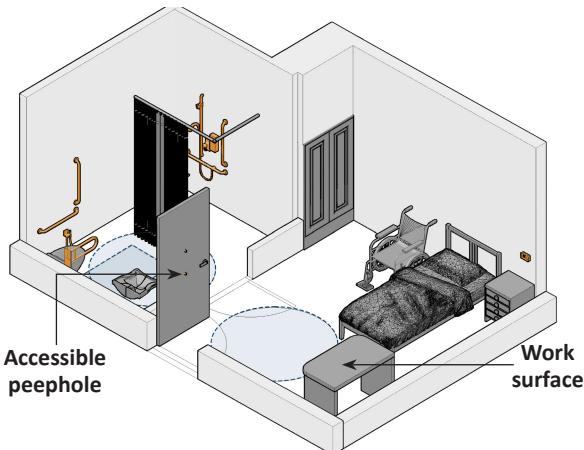
**Figure 66:** Accessible dwelling



**Figure 67:** Accessible living plan view



**Figure 68:** Accessible living and kitchenette



**Figure 69:** Accessible hotel room

#### **3.11.18.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **50**.

#### **3.11.18.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **50**.

### **3.11.18.6 Pre-certificate rating submission:**

- a) Narrative describing how the design of the units meets the accessibility requirements, including clear turning circles, paths, and operable parts.
- b) Drawings showing the layout of units with dimensions for clear turning circles, paths, door widths, and locations of operable parts.
- c) Features: Specifications for accessible windows, lighting levels, floor surfaces, and contrast values.
- d) Detailed drawings showing the layout of accessible kitchens, including clearance spaces and appliance locations.
- e) Information on accessible appliances, including their controls and operating mechanisms.
- f) Drawings showing the layout of the living and dining areas, including dimensions and locations of accessible dining tables, seating, and two-way switches.
- g) Drawings showing the layout of the bathroom, including dimensions and locations of fixtures and reinforced walls and ceilings for hoist installation.

### **3.11.18.7 Certificate rating submission:**

- a) Updated narrative detailing how the built units comply with the accessibility requirements.
- b) As-built drawings of the units showing all accessibility features as constructed.
- c) Photographs demonstrating the accessibility features in use, such as clear paths, operable parts.
- d) Documentation verifying compliance with the required lighting levels and slip resistance ratings.
- e) As-built drawings showing the layout of accessible kitchens, including clearance spaces and appliance locations.
- f) Updated information on accessible appliances, including their controls and operating mechanisms.
- g) Photographs of the accessible kitchen showing clear floor space of 900 mm in width and 1500 mm in depth, appliance accessibility, and sink insulation.
- h) As-built drawings of the living and dining areas showing all accessibility features.
- i) As-built drawings of the bathrooms showing all accessibility features.
- j) Photographs demonstrating the accessibility of the bathroom fixtures and any installed overhead hoists.

### **3.11.18.8 References:**

- a) PR-405 Mosque Design Regulations
- b) Abu Dhabi International Accessibility Standards, 2013
- c) Abu Dhabi International Building Code, 2013
- d) UAE Universal Design Code

## 3.11.19 USSP.1.19 Dwellings: Enhanced accessible units

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### 3.11.19.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- b) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- c) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- d) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- e) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- f) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)

### 3.11.19.2 Intent:

To provide equitable access to inclusive dwellings, usable by people of all ages, sizes, abilities, and family compositions according to recommended and best practice standards.

### 3.11.19.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

- a) In Group I-2, general purpose hospitals, residential care, psychiatric, a minimum of 50% of rooms shall be accessible.  
In Group R-1, a minimum of 10% of hotel rooms and apartments shall be accessible.  
In Group R-2 and R-3, residential apartments and detached houses, the developers have to show 1-2 options in their catalog on how to provide or order a fully accessible dwelling/house.
- b) All Accessible Units should: Have a shaded front entrance.  
Additionally, the Accessible Units, if kitchen is provided, should feature at least one accessible kitchen at the same level as the main entrance, accessible via an accessible path. Accessible kitchen should:
  - c) Have height adjustable work surfaces and tables.
  - d) Feature at least one dishwasher, which should:  
Have a low operating noise level.
  - e) Feature at least one stovetop, which should:
    - i. Have a heat-resistant work surface on at least one side, to provide a support surface for hot pans.
    - ii. Provide alternative arrangement of individual cooking rings, with the furthest edge of the cooking ring not more than 400 mm from the front edge of the work surface (where necessary to cater for people with severely restricted reach).
    - iii. Have controls indicating the position of the burner not only visually (e.g., with bumps, embossed marks, or a sound).
    - iv. Not feature combinations of an oven and stovetop. Ovens and stovetops should be provided separately to ensure comfortable operability from the front.
    - v. Be accompanied by silent, ducted exhaust fan.

- f) Feature at least one oven, which should:
  - i. Feature telescopic rails to prevent trays and shelves from tipping.
 Additionally, the Accessible Units should feature at least one accessible bedroom, which should:
- g) Feature storage with built-in lighting for enhanced vision to identify objects.

**Recommendations specific for hotel rooms:**

- h) Where accessible toilets are provided within accessible guest rooms accompanied by accessible bathrooms, they should:
  - Have a peninsular toilet bowl with lateral transfer space on both sides of minimum 900 mm width and 1500 mm depth on both sides adjacent to the toilet bowl.
  - Have a height adjustable toilet bowl.
  - Have an automated lock push button with light indicator.
  - Have horizontal SOS string provided along the perimeter of the toilet.
  - Have foldable handrails provided at washbasin.

**Best Practice:**

- a) All Accessible Units should:
  - Have a quiet room (in non-transient housing).
  - Ensure window viewing is possible from all positions, including standing, seated, and lying down.
- b) Additionally, the Accessible Units should feature at least one accessible kitchen at the same level as main entrance, accessible via an accessible path. Accessible kitchen should:
  - Feature at least one oven, which should feature doors of a pulldown and slide-away type, to avoid obstructing approach space.
  - Feature adequate storage (hooks, shelves, cupboards etc.)
- c) Alternatively, provide automatic storage system (e.g., powered height adjustable lifting system, electric rise and fall units or pull-down shelves and baskets)
- d) Additionally, the Accessible Units should feature at least one accessible bathroom, which should:
  - Features a continuous overhead track with hoist between the bedroom and the bathroom.
  - Additionally, the Accessible Units should feature at least one accessible bedroom, which should:
    - Features a remote-controlled height-adjustable bed.

### 3.11.19.4 Pre-certificate rating credits:

Table 144: USSP.1.19 pre-certificate credits

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
12	12	Provide an increased percentage of accessible rooms/dwellings in the occupancy groups recommended.
1	1	Design a shaded front entrance.
1	1	Design a kitchen with height-adjustable work surfaces.
1	1	Design a kitchen with a dishwashing machine with a low operating noise level.
1	1	Design the stovetop according to the recommended requirements.
1	1	Design an oven with telescopic rails.
1	1	Design bedroom storage with built-in lighting.
2	2	Design toilets in hotel rooms in accordance with the recommended requirements.
		<b>Best Practice:</b>
3	3	Design a quiet room in the unit.
1	1	Design an oven with doors according to best practice.
1	1	Design a kitchen with an alternative storage system.
5	5	Design a bathroom with an overhead track with hoist and bedroom with adjustable bed

### 3.11.19.5 Certificate rating credits:

**Table 145: USSP.1.19 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
12	12	Provide an increased percentage of accessible rooms/dwellings in the occupancy groups recommended.
1	1	Provide a shaded front entrance.
1	1	Provide a kitchen with height-adjustable work surfaces.
1	1	Provide a kitchen with a dishwashing machine with a low operating noise level.
1	1	Provide the stovetop according to the recommended requirements.
1	1	Provide an oven with telescopic rails.
1	1	Provide bedroom storage with in-built lighting.
2	2	Provide toilets in hotel rooms in accordance with the recommended requirements.
		<b>Best Practice:</b>
3	3	Provide a quiet room in the unit.
1	1	Provide an oven with doors according to best practice.
1	1	Provide a kitchen with an alternative storage system.
5	5	Provide a bathroom with an overhead track with hoist and bedroom with adjustable bed

### 3.11.19.6 Pre-certificate rating submission:

**Recommended:**

- a) Description, technical data and drawings of how the project meets the credit requirements, including entrance shadow, kitchen, bathroom and bedroom recommended improvements. In R-2 and R-3, design Accessible Units models to be offered to the public.

**Best Practice:**

- a) Detailed drawings that outline the layout of the Accessible Units, highlighting the quiet room, kitchen, and bathroom, and showing the integration of the specified features.

### **3.11.19.7 Certificate rating submission:**

#### **Recommended:**

- a)** Updated narrative technical data, as-built drawings and photographs showing how the dwelling meets the credit requirements, including entrance shadow, kitchen, bathroom and bedroom recommended improvements. In R-2 and R-3, demonstrate that Accessible Units have been offered to the public.

#### **Best Practice:**

- a)** As-built drawings that outline the layout of the Accessible Units, highlighting the quiet room, kitchen, and bathroom, and showing the integration of the specified features.
- b)** Photographs that demonstrate the functionality and accessibility of the quiet room, oven, kitchen storage, and bathroom with the overhead track with hoist, highlighting their ease of use and adherence to best practice.

## 3.11.20 USSP.1.20 Dwellings: Type A units

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### 3.11.20.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) Residential Groups R-2 (e.g., hotels, apartment houses, dorms and other transient spaces with sleeping units)

### 3.11.20.2 Intent:

To provide accessible living spaces to accommodate all users with assistive mobility devices, according to codes and standards. These units are also regarded as easily convertible to fully Accessible Units.

### 3.11.20.3 Requirements:

#### Mandatory:

- a) Type A units are designed to be easily converted to meet the requirements of an **“Accessible Unit”** as per the **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** but will not be accessible at first occupancy. Type A units shall be provided as per table 146:

**Table 146: Type A units per occupancy group**

Building category	Sub- category	Type A
Group R-2	Permanent occupation: apartment houses, monasteries and convents.	Buildings with more than 20 dwelling units or sleeping units, at least 2% but not less than one of the units.

- b) All type A units shall fulfill general requirements in accordance with **“Sahel Building Rating System – USSP.1.17 Accessible dwellings”**.
- c) **15 Credits in renovation.**
  - i. Provide a clear turning circle with a minimum diameter of 1800 mm.
  - ii. Ensure all rooms and spaces are served by an accessible path.
  - iii. Feature adequate vertical circulation (stairs, elevators, platforms, and stair lifts)
  - iv. At least one accessible elevator or platform lift shall be provided, or planned for future installation, if vertical circulation is necessary.
  - v. Ensure private residential elevators shall be in accordance with **“Sahel Building Rating System – IC.1.17 Elevators and platform lifts (outdoor and indoor)”**.
- d) **10 Credits in renovation.**
  - i. Feature adequate toilets and bathrooms, which shall:
    - a. Have at least one roll-in shower or bathtub, with a clear floor space of minimum 900 mm in width and 1500 mm in depth adjacent to the shower and/or bathtub.
    - b. Have at least one toilet, with an adjacent clear floor space of minimum 900 mm in width and 1500 mm in depth for transfer, which shall be easily convertible to an accessible toilet. Walls designated for future grab bars installation shall possess sufficient strength to withstand the applied force of at least 1100 N.

**e) 5 Credits in renovation.**

- i. Feature at least one accessible kitchen or kitchenette, which is adaptable to the same requirements as for an Accessible Unit. The kitchen or kitchenette shall:
  - c. Provide a clear floor space of minimum 900 mm in width and 1500 mm in depth in front of all appliances allowing a forward or side approach.
  - d. Feature adaptable sink with knee and toe clearance
  - e. Feature at least one accessible work surface.
  - f. Have a minimum clearance of 1500 mm between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas, when provided as a pass-through kitchen type, with access from one side and exit from another side.
  - g. Provide a clear turning circle with a minimum diameter of 1800 mm. It is allowed for the clear turning circle to overlap under-counter cabinets and/or shelves underneath the sink or work surface, if they are easily removable to allow quick adaptation.
  - h. At least one type of storage facility, excluding kitchens, shall be accessible and within reach.

**3.11.20.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **30**.

**3.11.20.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **30**.

**3.11.20.6 Pre-certificate rating submission:**

- a) Narrative outlining the design approach to meet accessibility standards for corridors, paths, and floor surfaces.
- b) Design drawings detailing the layout of corridors, clear paths to equipment, and specifications for safe floor surfaces.
- c) Door design details, including clear opening widths and threshold treatments.
- d) Specifications for communication systems, operable parts of elements, and lighting design.
- e) Measures for contrast and glare prevention on all surfaces and elements.
- f) Noise level control and ventilation system design plans.
- g) Window accessibility features and emergency intercom system specifications.
- h) Kitchen and bathroom design drawings showing accessibility features.

**3.11.20.7 Certificate rating submission:**

- a) Updated narrative detailing the implemented accessibility features.
- b) As-built drawings and photographs showing accessible corridors, paths, and safe floor surfaces.
- c) Evidence of door designs meeting the specified clear opening widths and threshold treatments.
- d) Documentation of installed communication systems, operable parts of elements, and lighting fixtures.
- e) Verification of contrast and glare prevention measures for all surfaces and elements.
- f) Certification of noise level control and ventilation system performance.
- g) Photographs of window accessibility features and emergency intercom systems.
- h) Confirmation of kitchen and bathroom features as per accessibility standards.

### **3.11.20.8 References:**

- a) Abu Dhabi International Building Code, 2013 ,**
- b) Abu Dhabi International Accessibility Standards, 2013**

## 3.11.21 USSP.1.21 Enhanced dwellings: Type A units

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### 3.11.21.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) I-2 (e.g., hospitals, childcare facilities, asylums, and other buildings that provide custodial or medical care for persons who are not capable of self-preservation)
- b) Residential Groups R-2 (e.g., hotels, apartment houses, dorms and other transient spaces with sleeping units)

### 3.11.21.2 Intent:

To provide accessible living spaces to accommodate all users with assistive mobility devices, according to recommended and best practice standards. These units are also regarded as easily convertible to fully Accessible Units.

### 3.11.21.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

- a) In Group I-2, general purpose hospitals, residential care, a minimum of 50% of rooms shall be Type A.  
In Group R-2, in buildings with more than 20 dwelling units or sleeping units, at least 20% of the units shall be Type A.
- b) All enhanced type A units should fulfill general requirements for Type A units and additionally enhanced Type A units should:
  - i. Feature kitchen appliances with a low operating noise level.
  - ii. Provide an emergency power feature to charge phones, make SOS calls, and power assistive devices.

### 3.11.21.4 Pre-certificate rating credits:

**Table 147: USSP.1.21 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
12	12	Design an increased percentage of Type A units.
2	2	Foresee kitchen appliances with a low operating noise level and emergency power provision.

### 3.11.21.5 Certificate rating credits:

**Table 148: USSP.1.21 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
12	12	Demonstrate the provision of an increased percentage of Type A units
2	2	Confirm implementation of kitchen appliances with a low operating noise level and emergency power provision

### 3.11.21.6 Pre-certificate rating submission:

**Recommended:**

- a) Drawings and specifications showing the design of additional Type A rooms, additional features in kitchen appliances and bathrooms as recommended.

### 3.11.21.7 Certificate rating submission:

**Recommended:**

- a) As-built plans, drawings and specifications showing the design of additional Type A rooms
- b) Photographs and specifications showing the additional features in kitchen appliances and energy provision as recommended.

## 3.11.22 USSP.1.22 Dwellings: Type B units

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### 3.11.22.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- b) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- c) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- d) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- e) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- f) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)

### 3.11.22.2 Intent:

To provide accessible living spaces to accommodate users of all ages and all users with simple assistive mobility devices (e.g., walkers, canes, crutches).

### 3.11.22.3 Requirements:

#### Mandatory:

Type B units shall be in accordance with **Abu Dhabi International Accessibility Standards, 2013** and **Abu Dhabi International Building Code, 2013 (ADIBC)** and shall be provided as follows:

**Table 149: Type B units per occupancy group**

Building category	Sub- category	Type B
Group I-1	<b>1.</b> > 16 occupants <b>2.</b> residing on 24h basis maximum <b>3.</b> providing personal care <b>4.</b> Rehabilitation centers	Where four or more dwelling units or sleeping units intended to be occupied as a residence, 100% of the remainder not allocated as designated Accessible Units.
Group I-2	Nursing Homes	100% of the remainder of Nursing Homes not allocated as designated Accessible Units.
Group I-2	General purpose hospitals, residential care, psychiatric	100% of the remainder of Nursing Homes not allocated as designated Accessible Units.
Group I-3	Special /Holding cells in: <b>1.</b> Detention centers <b>2.</b> Correction centers <b>3.</b> Sleeping units/isolation cells in medical care facilities	All holding units, except those allocated as designated Accessible Units.

Building category	Sub- category	Type B
Group R-1	<ol style="list-style-type: none"> <li>1. &gt; 10 occupants</li> <li>2. Sleeping units (transient of nature)</li> <li>3. Hotels, serviced apartments</li> </ol>	10% of the remainder not allocated as designated Accessible Units.
Group R-2	Permanent occupation: apartment houses, monasteries and convents.	100% of the remainder not allocated as designated Type A units.
Group R-2	Permanent occupation: Other than apartment houses, monasteries and convents (i.e.: non transient hotels, boarding houses)	100% of the remainder not allocated as designated Accessible Units.
Group R-3	<p>Permanent occupancy:</p> <ol style="list-style-type: none"> <li>1. buildings with maximum 2 dwelling units</li> <li>2. adult/childcare facilities for 5 or less on 24hr basis</li> <li>3. Congregate living for 16 or less persons</li> <li>4. Mosques (Imam)</li> <li>5. small/individual housing</li> </ol>	100%.
Group R-4	Assisted Living of 5 to 16 occupants	100% of the remainder not allocated as designated Accessible Units.

All type B units shall fulfill general requirements for accessible dwellings in accordance with **“Sahel Building Rating System – USSP.1.17 Accessible dwellings”**.

All type B units shall fulfill additional requirements for type B units. Consequently, all type B units shall:

**a) 15 Credits in renovation.**

- i. Feature adequate vertical circulation (stairs, elevators, platforms, and stair lifts)
  - a. At least one accessible elevator or platform lift shall be provided, or planned for future installation, if vertical circulation is necessary.
  - b. Private residential elevators shall in accordance with **“Sahel Building Rating System – IC.1.17 Elevators and platform lifts (outdoor and indoor)”**. A telephone and emergency signal device shall be provided in the car.

**b) 5 Credits in renovation.**

- i. Feature adequate toilets and bathrooms, which shall:
  - a. Have at least one roll-in shower or bathtub, with a clear floor space of minimum 900 mm in width and 1500 mm in depth adjacent to the shower and/or bathtub.
  - b. Have at least one toilet, with a clear floor space of minimum 900 mm in width and 1500 mm in depth for transfer, which shall be easily convertible to an accessible toilet. Walls designated for future grab bars installation shall possess sufficient strength to withstand the applied force of at least 1100 N.

**c) 5 Credits in renovation.**

- i. Feature at least one accessible kitchen or kitchenette, which is adaptable to the same requirements as for an accessible unit. The kitchen or kitchenette shall:
  - a. Provide a clear floor space of minimum 900 mm in width and 1500 mm in depth in front of all appliances allowing a forward or side approach.
  - b. Have a minimum clearance of 1200 mm between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas, when provided as a pass-through kitchen type, with access from one side and exit from another side.
  - c. Have a minimum clearance of 1500 mm by 1500 mm, when provided as a U-shaped kitchen type with three bordering sides, one entrance, and one exit only.

**3.11.22.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **25**.

**3.11.22.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **25**.

**3.11.22.6 Pre-certificate rating submission:**

- a) Narrative outlining the design approach to meet accessibility standards for corridors, paths, and floor surfaces.
- b) Design drawings detailing the layout of corridors, clear paths to equipment, and specifications for safe floor surfaces.
- c) Door design details, including clear opening widths and threshold treatments.
- d) Specifications for communication systems, operable parts of elements, and lighting design.
- e) Measures for contrast and glare prevention on all surfaces and elements.
- f) Noise level control and ventilation system design plans.
- g) Window accessibility features and emergency intercom system specifications.
- h) Kitchen and bathroom design drawings showing accessibility features.

**3.11.22.7 Certificate rating submission:**

- a) Updated narrative detailing the implemented accessibility features.
- b) As-built drawings and photographs showing accessible corridors, paths, and safe floor surfaces.
- c) Evidence of door designs meeting the specified clear opening widths and threshold treatments.
- d) Documentation of installed communication systems, operable parts of elements, and lighting fixtures.
- e) Verification of contrast and glare prevention measures for all surfaces and elements.
- f) Certification of noise level control and ventilation system performance.
- g) Photographs of window accessibility features and emergency intercom systems.
- h) Confirmation of kitchen and bathroom features as per accessibility standards.

**3.11.22.8 References:**

- a) Abu Dhabi International Building Code, 2013
- b) Abu Dhabi International Accessibility Standards, 2013.

## 3.11.23 USSP.1.23 Enhanced dwellings: Type B units

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### 3.11.23.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- b) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- c) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- d) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- e) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- f) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)
- g) Multi-unit buildings in planned developments
- h) Detached single-family dwellings
- i) Temporary housing.

### 3.11.23.2 Intent:

To provide accessible living spaces to accommodate users of all ages and all users with simple assistive mobility devices (e.g., walkers, canes, crutches), according to recommended and best practice standards.

### 3.11.23.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

To design Type B dwellings in renovation projects according to the table below.

**Table 150: Type B units per occupancy group**

Building category	Sub- category	Type B
Multi-unit buildings in existing developments		80% of units. Provide at least type B for renovated existing units.
Detached single-family dwellings		80% of units. Provide at least type B for renovated existing units.
Temporary housing		80% of temporary units, where four or more dwelling units or sleeping units in a single structure Provide at least type B for renovated existing units.

All type B units should fulfill general requirements for accessible dwellings. Consequently, all type B units should:

- a) Feature kitchen appliances with a low operating noise level.
- b) Provide an emergency power feature to charge phones and make SOS calls and power assistive devices.

#### **3.11.23.4 Pre-certificate rating credits:**

**Table 151: USSP.1.23 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Design kitchen appliances with a low operating noise level. Foresee emergency power provision.

#### **3.11.23.5 Certificate rating credits:**

**Table 152: USSP.1.23 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Confirm implementation of kitchen appliances with a low operating noise level. Confirm providing emergency power.

#### **3.11.23.6 Pre-certificate rating submission:**

##### **Recommended:**

- a) Technical documentation of low-noise kitchen appliances and emergency power systems.

#### **3.11.23.7 Certificate rating submission:**

##### **Recommended:**

- a) Photographs and technical data and drawings confirming the implementation of low-noise kitchen appliances and emergency power system.

## 3.11.24 USSP.1.24 Dwellings: Type C units

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### 3.11.24.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- b) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- c) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- d) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)
- e) Multi-unit buildings in planned developments
- f) Detached single-family dwellings
- g) Temporary housing.

### 3.11.24.2 Intent:

To provide living spaces with a minimum level of accessibility allowing people with access requirements to visit them and to use the basic facilities.

### 3.11.24.3 Requirements:

#### Mandatory:

Type C units shall be in accordance with Abu Dhabi International Accessibility Standards, 2013 and shall be provided as follows:

**Table 153: Group types**

Building category	Sub- category	Type C
Group R-1, Group R-2, Group R-3, Group R-4		Only if type B cannot be provided in retrofits.

- a) All type C units shall fulfill general requirements for accessible dwellings in accordance with “**Sahel Building Rating System – USSP.1.17 Accessible dwellings**”.

All type C units shall fulfill additional requirements for type C units. Consequently, all type C units shall:

- a) **5 Credits in renovation.**
  - i. Have at least one toilet, with an adjacent clear floor space of minimum 900 mm in width and 1500 mm in depth for transfer, which shall be easily convertible to an accessible toilet. All other toilets shall have reinforcement for future grab bars and seats. Walls designated for grab bars shall possess sufficient strength to withstand the applied force of at least 1100 N.
- b) **2 Credits in renovation.**
  - i. Have at least one toilet with a washbasin on the same level as an accessible entrance.
- c) **3 Credits in renovation.**
  - i. Have kitchens and kitchenettes offering access to a sink, one cooking appliance and a fridge. A clear space of at least 900 mm by 1500 mm shall be provided for side approach.

#### **3.11.24.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.11.24.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.11.24.6 Pre-certificate rating submission:**

- a)** Narrative describing the design solutions to meet accessibility requirements in corridors, paths, and floor surfaces.
- b)** Design drawings showing the layout of corridors, clear paths to equipment, and specifications for safe floor surfaces.
- c)** Details of door designs, including clear opening widths and threshold treatments.
- d)** Kitchen and bathroom accessibility features.

#### **3.11.24.7 Certificate rating submission:**

- a)** Updated narrative with implemented accessibility features.
- b)** As-built drawings and photographs showing accessible corridors, paths, and safe floor surfaces.
- c)** Evidence of door designs meeting the specified clear opening widths and threshold treatments.
- d)** Confirmation of kitchen and bathroom features as per accessibility standards.

#### **3.11.24.8 References:**

- a)** Abu Dhabi International Building Code, 2013
- b)** Abu Dhabi International Accessibility Standards, 2013.

## 3.11.25 USSP.1.25 Enhanced dwellings: Type C units

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### 3.11.25.1 Applicability:

Applicable to all buildings from the following occupancy groups:

- a) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- b) R-2 (e.g., apartment houses, dorms and other non-transient spaces)
- c) R-3 (Buildings with less than 2 dwelling units such as adult and child-care facilities providing accommodation for less than five persons for 24 hours)
- d) R-4 (residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff)
- e) Multi-unit buildings in planned developments
- f) Detached single-family dwellings
- g) Temporary housing.

### 3.11.25.2 Intent:

To provide living spaces with a minimum level of accessibility allowing people with access requirements to visit, according to recommended standards.

### 3.11.25.3 Requirements:

#### Recommended:

All type C units should fulfill some of the enhanced requirements for accessible dwellings. Consequently, all type C units should:

- a) Feature kitchen appliances with a low operating noise level.
- b) Provide an emergency power feature to charge phones, make SOS calls, and power assistive devices.

### 3.11.25.4 Pre-certificate rating credits:

**Table 154: USSP.1.25 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Design kitchen appliances with a low operating noise level. Foresee an emergency power feature to charge phones, make SOS calls, and power assistive devices.

### 3.11.25.5 Certificate rating credits:

**Table 155: USSP.1.25 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	2	Confirm implementation of kitchen appliances with a low operating noise level and provision of an emergency power feature to charge phones, make SOS calls, and power assistive devices.

### 3.11.25.6 Pre-certificate rating submission:

**Recommended:**

- a) Technical documentation of low-noise kitchen appliances and emergency power systems.

### 3.11.25.7 Certificate rating submission:

**Recommended:**

- a) Photographs and technical data and drawings confirming the implementation of low-noise kitchen appliances and emergency power systems.

## **3.11.26 USSP.1.26 Distance from workstation to critical amenities**

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### **3.11.26.1 Applicability:**

Applicable to all buildings with workplaces that provide toilets or dining.

### **3.11.26.2 Intent:**

To ensure that the distances between workstations and critical amenities allow equitable and independent access for all users at convenient and accessible locations.

### **3.11.26.3 Requirements:**

#### **Mandatory:**

##### **a) 15 Credits in renovation.**

The distance for a person to travel from any workstation to an accessible toilet or changing room shall never be further than 45 m horizontally from a standard toilet and also not exceeding a combined horizontal and vertical (if the accessible toilet is located on another level) distance of 25 m from a standard toilet (vertical distance not counted).

##### **b) 10 Credits in renovation.**

The distance from any workstation to an accessible kitchenette shall never be further than 45 m horizontally from a standard toilet and also not exceeding a combined horizontal and vertical (if the accessible toilet is located on another level) distance of 25 m from a standard toilet (vertical distance not counted).

### **3.11.26.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **25**.

### **3.11.26.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **25**.

### **3.11.26.6 Pre-certificate rating submission:**

- a)** Design drawings illustrating the proposed locations of workstations and accessible toilets, and the paths connecting them.
- b)** Detailed specifications of the paths, including their lengths and any changes in level.

### **3.11.26.7 Certificate rating submission:**

- a)** As-built documentation confirming the implementation of workstations, accessible toilets, and the paths connecting them.
- b)** Updated specifications if any changes were made during the construction stage.

### **3.11.26.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013
- b)** Abu Dhabi International Building Code, 2013

## 3.11.27 USSP.1.27 Enhanced distance from workstation to critical amenities

### 3.11.27.1 Applicability:

Applicable to all buildings with workplaces that provide toilets or dining.

### 3.11.27.2 Intent:

To ensure that the distances between workstations and critical amenities allow equitable and independent access for all users at convenient and accessible locations at the same level.

### 3.11.27.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

Every workstation has an accessible toilet and accessible kitchenette provided on the same level and shall never exceed 30 m in distance traveled.

### 3.11.27.4 Pre-certificate rating credits:

**Table 156: USSP.1.27 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	10	Designed all workstations to have access to critical amenities on the same level at a recommended distance

### 3.11.27.5 Certificate rating credits:

**Table 157: USSP.1.27 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
5	10	Confirmed implementation of all workstations to have access to critical amenities on the same level at a recommended distance

### 3.11.27.6 Pre-certificate rating submission:

- Design drawings illustrating the proposed locations of workstations, kitchenettes and accessible toilets, and the paths connecting them.
- Detailed specifications of the paths, including their lengths and any changes in level.

### 3.11.27.7 Certificate rating submission:

- As-built documentation confirming the implementation of workstations, kitchenettes and accessible toilets, and the paths connecting them.
- Updated specifications if any changes were made during the construction stage.

## 3.11.28 USSP.1.28 Accessible workplace kitchenettes

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### 3.11.28.1 Applicability:

Applicable to all buildings with workplaces which feature kitchenettes for staff and users.

### 3.11.28.2 Intent:

To ensure that kitchenettes allow equitable and independent use for all staff and users.

### 3.11.28.3 Requirements:

#### Mandatory:

Every workplace within the asset shall feature at least one accessible kitchenette (Figure 70) for employees, which shall:

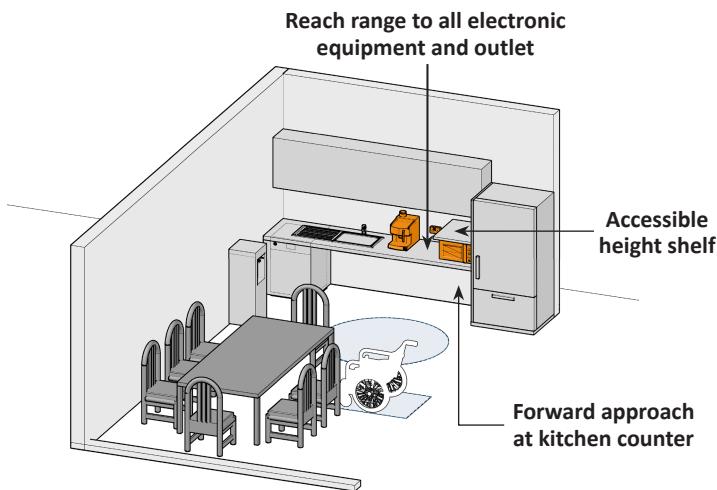
#### a) 6 Credits in renovation.

- i. Have a minimum clearance of 1500 mm between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas, when provided as a pass-through kitchen type, with access from one side and exit from another side. The height should be between 700 mm and 800 mm measured from the top edge to the floor surface.
- ii. Have a minimum clearance of 1800 mm, when provided as a U-shaped kitchen type with three bordering sides, one entrance, and one exit only.
- iii. Provide a clear floor space of minimum 900 mm in width and 1500 mm in depth for forward and side approach at each kitchen appliance, centered at the appliance.
- iv. Keep the travel distances between the cook top, oven, sink, and work surfaces to a minimum.
- v. Feature at least one section of the counter with an accessible work surface, which shall:
  - a. Be a minimum of 1500 mm in length.
  - b. Offer clear floor space of minimum 900 mm in width and 1500 mm in depth and knee and toe clearances aimed at a forward approach.
  - c. Have minimum clearances between opposing cabinets or walls having a side-hinged door or a bottom-hinged door.
  - d. Have a height between 700 mm and 800 mm measured from the top edge to the floor surface.
  - e. Have a depth of maximum 600 mm to enable comfortable forward and side/parallel reach.

#### b) 4 Credits in renovation.

- i. Feature trash cans placed within reach, in a suitable drawer, in an under-counter cupboard, or free-standing beneath the work surface, between 400 mm and 900 mm above the floor level. Pedal-type bins are not allowed.
- ii. Provide essential kitchen appliances (such as oven and refrigerator) that are usable by people standing and sitting in wheelchairs. A worktop shall be located beside all appliances.
- iii. Feature appliances with controls that are easy to identify and locate, and the settings shall be easy to understand and use.
- iv. Feature automatic gas and water shut-off valves and cooker/oven shut-down devices.

- v. Feature at least one accessible kitchen sink, which shall:
  - a. Be heat insulated in the underside of an exposed sink bowl and any exposed hot water pipes.
  - b. Have faucets that have clear markings indicating hot and cold settings.
  - c. Ensure the faucet to be lever-operated or automatic. The opening time for hand-operated or sensor-operated faucets shall be  $\geq 10$ s.
  - d. Have a faucet fitted to the sink within easy reach of wheelchair users, if necessary, at the side of the sink bowl. The distance between the centerline of the faucet and the edge of the washbasin shall be a maximum of 480 mm.
  - e. Provide a warning notice, where water can be emitted at a temperature greater than 43 °C. Where particular care is needed for people who are insensitive to temperature and at risk of being scalded, a control mechanism shall be provided to limit water temperature to 43 °C.
  - f. Have a maximum internal depth of 180 mm.
  - g. Have the height of the front part of the top of the kitchen sink located 800 mm above the floor and set to a maximum of 50 mm from the front edge. The height of the kitchen sink shall be 800 mm if knee clearance cannot be provided.
- vi. Feature at least one microwave, which shall:
  - a. Be located on a work surface or mounted such that the base of the oven is not higher than 800 mm above floor level.
  - b. The controls not higher than 1200 mm above the floor level. Any part thereof shall not protrude into the clear turning circle.
- vii. Feature at least one refrigerator and freezer (as one combined unit or one of each) which shall:
  - a. If combined, have at least 50% of the freezer compartment shelves, including the bottom of the freezer, located a maximum of 1200 mm maximum above the floor when the shelves are installed at the maximum heights possible in the compartment (in units with freezer at the top).
  - b. Allow the clear floor space of minimum 900 mm in width and 1500 mm in depth in front of the refrigerator and freezer to be offset. The offset of the centerline of the clear floor space cannot exceed 600 mm.
  - c. Have reach ranges of the content between 400 mm and 1200 mm above floor level.
  - d. Have temperature controls in reach range and easy to operate at a height of maximum 1200 mm above floor level.
  - e. Have a well lit internal content.
- viii. Feature at least one dishwasher, which shall:
  - a. When open, do not obstruct the clear floor space of minimum 900 mm in width and 1500 mm in depth next to the dishwasher with the dishwasher's door.
  - b. Have rack spaces accessible from the front or side during the loading and unloading
- ix. Feature adequate storage (hooks, shelves, cupboards etc.):
  - a. If hooks and shelves are provided in the kitchen, at least one of each type shall be accessible and allow forward or side reach.
  - b. At least one cabinet shall feature pull-out shelves or a carousel inside the cabinet.
  - c. No cabinets and shelves shall be installed above the stove tops to avoid reaching above hot surfaces.



**Figure 70: Office Kitchenette and break room**

#### **3.11.28.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.11.28.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **10**.

#### **3.11.28.6 Pre-certificate rating submission:**

- a) Narrative of how the kitchenette design meets the accessibility requirements, including the layout and the specific features that accommodate employees with disabilities.
- b) Design Drawings showing the kitchenette layout, clearances, appliance placement, and the accessible work surface. The drawings must detail the pass-through or U-shaped configuration, as well as the location of storage, trash cans, and appliances in relation to the work surface.
- c) Appliance and Fixture Specifications of the kitchen appliances and fixtures, ensuring they meet the required standards for usability by people both standing and sitting in a wheelchair, including details on the controls, automatic shut-off valves, and insulation for safety.
- d) Material Specifications on the materials used for countertops and other surfaces, confirming they are non-metallic and suitable for all weather conditions.

#### **3.11.28.7 Certificate rating submission:**

- a) Updated narrative reflecting any changes made during construction, confirming the project's adherence to the credit requirements.
- b) As-built drawings showing the completed kitchenette, including exact measurements and any adjustments made during the building stage.
- c) Photographs showcasing the installed kitchenette, focusing on accessibility features such as clear floor space of 900 mm in width and 1500 mm in depth, the height of work surfaces, and the placement of appliances and storage.
- d) User Manual or Guide that explains how to use the kitchenette's features safely and efficiently, including instructions for appliances with accessible controls and safety devices.
- e) Maintenance and Safety Records of the automatic shut-off valves' installation and testing, ensuring they function correctly for gas and water safety.

#### **3.11.28.8 References:**

- a) Abu Dhabi International Accessibility Standards, 2013

## 3.11.29 USSP.1.29 Enhanced accessible workplace kitchenettes

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### 3.11.29.1 Applicability:

Applicable to all buildings with workplaces which feature kitchenettes for staff and users.

### 3.11.29.2 Intent:

To ensure that kitchenettes improve the equitable and independent use for all staff and users.

### 3.11.29.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

The Accessible Units should feature at least one accessible kitchen at the same level as main entrance, accessible via an accessible path. Accessible kitchen should:

- a) Have height adjustable work surfaces and tables.
- b) Feature at least one dishwasher, which should:
  - i. Have a low operating noise level.
  - ii. provide automatic storage system (e.g., powered height adjustable lifting system, electric rise and fall units or pull-down shelves and baskets).

### 3.11.29.4 Pre-certificate rating credits:

**Table 158: USSP.1.29 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design at least one workplace kitchenette according to the recommended requirements.

### 3.11.29.5 Certificate rating credits:

**Table 159: USSP.1.29 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm implementation of at least one workplace kitchenette according to the recommended requirements

### **3.11.29.6 Pre-certificate rating submission:**

#### **Recommended:**

- a) Drawings showcasing additional features of height adjustable work surfaces, dishwasher, alternative storage system

### **3.11.29.7 Certificate rating submission:**

#### **Recommended:**

- a) As-built drawings and photographs showcasing additional features of height adjustable work surfaces, dishwasher, alternative storage system

## **3.11.30 USSP.1.30 Accessible workplace dining and rest areas**

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### **3.11.30.1 Applicability:**

Applicable to all buildings with workplaces providing dining for staff and users (canteens).

### **3.11.30.2 Intent:**

To ensure that dining and rest areas allow equitable and independent use for all staff and users.

### **3.11.30.3 Requirements:**

#### **Mandatory:**

Every workplace within the asset shall feature at least one accessible dining and rest area, which shall:

##### **a) 3 Credits in renovations.**

- i. Have at least one accessible dining table, which shall:
  - a. Allow access via forward approach including toe and knee clearance.
  - b. Have a height of the dining surface between 750 mm and 800 mm above the floor surface.
  - c. Have a depth of at least 600 mm.

##### **b) 2 Credits in renovations.**

- i. Have a minimum of 10% of accessible seating (not less than one), which shall:
  - a. Be accompanied by a clear floor space of minimum 900 mm in width and 1500 mm in depth for a parallel approach to chairs.
  - b. Offer seating options between 450 mm and 500 mm above the floor level.
  - c. Have a depth between 400 mm and 450 mm.
  - d. Have a back support at a height of 400 mm and no more than 460 mm, measured from the seat surface to the top of the backrest for sofas and armchairs.
  - e. Offer at least one seat with armrests and at least one without armrests and with a minimum transfer space of 900 mm by 1500 mm provided on one side, allowing transfer from a wheelchair.
- ii. Be located as close to the kitchen area as possible.

### **3.11.30.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 5.

### **3.11.30.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: 5.

### **3.11.30.6 Pre-certificate rating submission:**

- a) Narrative describing how the design meets the requirements for accessible dining and rest areas, including the approach for toe and knee clearance, table height, depth, and seating arrangements.
- b) Drawings showing the layout of the dining and rest area, the location and measurements of the accessible dining table, and the placement of accessible seating relative to the table.
- c) Specifications of the clear floor space for chair access, seating heights, depths, back support heights, and armrest provisions.

### **3.11.30.7 Certificate rating submission:**

- a)** Updated narrative reflecting any changes made during construction, confirming that the project meets the credit requirements for accessible dining and rest areas.
- b)** As-built drawings showing the implemented layout and measurements of the dining and rest area, including the accessible dining table and seating.
- c)** Photographs showcasing the accessibility features of the dining and rest area, focusing on the table's height, depth, clear floor space for seating, and proximity to the kitchen area.

### **3.11.30.8 References:**

- a)** Abu Dhabi International Accessibility Standards, 2013

## 3.11.31 USSP.1.31 Enhanced accessible workplace dining and rest areas

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### 3.11.31.1 Applicability:

Applicable to all buildings with workplaces providing dining for staff and users (canteens).

### 3.11.31.2 Intent:

To ensure that dining and rest areas allow equitable and independent use for all staff and users, providing additional accessible seating places.

### 3.11.31.3 Requirements:

All designs, drawings and specifications of the development/redevelopment within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### Recommended:

Every workplace within the asset should feature at least one accessible dining and rest area, which should:

- Have a minimum of 30% of accessible seating (not less than two).

### 3.11.31.4 Pre-certificate rating credits:

**Table 160: USSP.1.31 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Design a workplace dining and rest area according to recommended requirements

### 3.11.31.5 Certificate rating credits:

**Table 161: USSP.1.31 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
1	1	Confirm implementation of a workplace dining and rest area according to recommended requirements

### 3.11.31.6 Pre-certificate rating submission:

#### Recommended:

- Drawings and specifications displaying additional accessible seating places.

### 3.11.31.7 Certificate rating submission:

#### Recommended:

- As-built drawings, specifications and photographs displaying additional accessible seating places.

## **3.11.32 USSP.1.32 Accessible ablution areas and shoe racks**

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### **3.11.32.1 Applicability:**

Applicable to all buildings with prayer areas that are required to feature ablution spaces and shoe racks (Refer to the applicability of Section USSP.1.34 Accessible prayer areas).

### **3.11.32.2 Intent:**

To ensure ablution areas allow equitable and inclusive use for all. (Figure 71).

### **3.11.32.3 Requirements:**

#### **Mandatory:**

At least 5% of ablution spaces, with a minimum of one, shall be designed to be wheelchair accessible for each gender-specific ablution space, and at least 5% of ablution spaces, with a minimum of one, shall be designed to be accessible for people with limited mobility for each gender-specific ablution space.

In prayer rooms with a floor area of less than 80 square meters, an accessible toilet containing an accessible washbasin may be used as an ablution space if the distance to the prayer room does not exceed 45 meters and the space is maintained dry at all times.

All ablution spaces (e.g. wuzu/wudu or shuddhi areas) shall be in accordance with the **Mosque Design Regulations (PR-405)** and shall:

#### **a) 1 Credit in renovation.**

- i. Be located adjacent to the prayer hall to allow direct access for worshippers as specified in the **Abu Dhabi Mosque Development Regulations** and appendices.
- ii. Have continuous accessible paths of travel to the accessible areas within ablution spaces and to all accessible areas of religious buildings and praying areas which shall:
  - a. Have floor surfaces that shall:
    - Be firm, stable, slip-resistant, and glare-free.
    - Have carpets with a maximum pile height of 15 mm and securely fastened (if present).
    - Not include carpets with strong and bold patterns (if present).
    - Have flooring with a slip resistance value in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
    - Have a minimum luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- iii. Present a minimum luminance in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**" between the washbasin (if present), hinged support bars (if present), shattaf (if present), and accessories.

**b) 2 Credits in renovation.**

Additionally, all ablution spaces designed to be wheelchair accessible shall:

- i. Have a clear turning circle with a minimum diameter of 1800 mm.
- ii. Have a wheelchair space instead of a seat in front of the faucet with the minimum measurements of 900 mm in width and 1500 mm in depth, with extra space on one side to allow another person to assist.
- iii. Have an accessible washbasin for balance and to offer support when transferring to/from the ablution seat which shall:
  - a. Have the centerline positioned at a minimum distance of 450 mm from the adjacent side wall.
  - b. Have the top surface positioned at a maximum height of 700 mm above floor level.
  - c. Have a clear floor space of minimum 900 mm in width and 1500 mm in depth centered to the washbasin.
  - d. Have a maximum clear space under the washbasin of 450 mm in depth.
  - e. Be located 700 mm high at 200 mm back from the front edge.
  - f. Be 250 mm high, over the distance from a point 300 mm to a point 450 mm back from the front edge, for toe space clearance.
  - g. Feature automatic control or lever-type faucets without spring loading. The faucets shall be positioned from the centerline of the faucet to the edge of the washbasin at a maximum depth of 480 mm.
  - h. Have water pipes covered or insulated below washbasins.
- iv. Have horizontal hinged support bars located on each side of the washbasin, or include a washbasin with integrated recessed handles which shall:
  - a. Have horizontal hinged support bars which shall (if applicable):
    - Be located between 650 mm and 800 mm above floor level.
    - Have a diameter between 30 mm and 45 mm.
    - Have a minimum structural strength of 1100 N measured at any point, considering horizontal and vertical force.
  - b. Have recessed handles and provide support for the whole length of the washbasin (if applicable).
- v. Have a shattaf which shall:
  - a. Be located next to the washbasin and within reach of a wheelchair.
  - b. Be installed between 400 mm and 800 mm above the finished floor level.
- vi. Have a soap and paper towel dispenser adjacent to the washbasin, positioned between 900 mm and 1200 mm above floor level.
- vii. Not have paper towel dispensers and hand dryers located on the back wall over the washbasin and protrude excessively or obstruct the accessible circulation path unless they are made detectable.
- viii. Have a call for assistance device (e.g. an emergency pull cord).

**c) 2 Credits in renovation.**

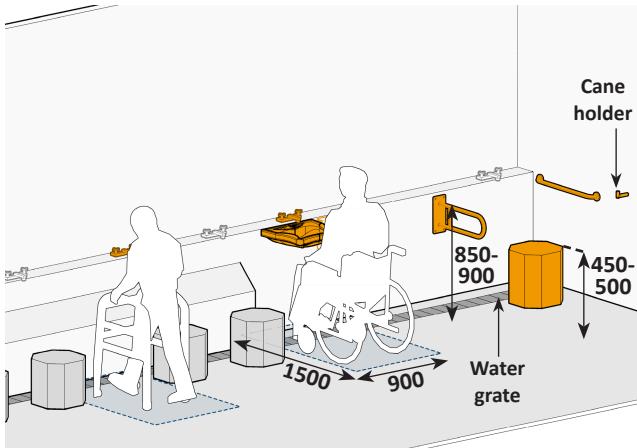
Additionally, all ablution spaces designed for people with limited mobility shall:

- i. Have a seat which shall:
  - a. Be made of water-resistant and slip-resistant material and self-draining.
  - b. Have a seat height between 450 mm and 500 mm above floor level, measured from the top of the seat.
  - c. Be 450 mm wide by 450 mm deep.
  - d. Have rounded corners with a minimum radius of 10 mm, rounded top edges with a minimum radius of 2 mm, and not have sharp edges.
  - e. Provide a minimum clear space of 900 mm wide to one side of the seat.
  - f. Have a minimum structural strength of 1700 N measured at any point, considering both horizontal and vertical force.
- ii. Have vertical grab bars which shall:
  - a. Be located adjacent to the faucet.
  - b. Be a minimum length of 600 mm.
  - c. The distance between the centerline of the grab bars shall be 300 mm and 350 mm from the centerline of the faucet.
  - d. Be located between 600 mm and 650 mm above floor level, measured from the lower surface of the grab bar.
- iii. Have the spout of the faucet located 750 mm above floor level and 400 mm away from the front edge of the accompanying seat.
- iv. Have trash cans which shall:
  - a. Not impede on the minimum accessible circulation width.
  - b. Not include the pedal-type.
  - c. Be either free-standing or as a recessed unit.
  - d. Include openings located between 400 mm and 900 mm above floor level.

**d) 1 Credit in renovation.**

All shoe rack spaces shall be designed to be accessible which shall:

- i. Not impede on the minimum accessible circulation width.
- ii. Provide a clear turning circle with a minimum diameter of 1800 mm in front of shoe racks.
- iii. Have a minimum luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
- iv. Provide accessible seating options with armrests which shall:
  - a. Be located next to the shoe rack, either placed against a wall or equipped with a backrest. If a backrest is provided, it shall measure between 400 mm and 460 mm in height, measured from the seat surface to the top of the backrest.
  - b. Have a seat height between 450 mm and 500 mm above floor level.
  - c. Have a seat depth between 400 mm and 450 mm above floor level.
  - d. Have a minimum luminance contrast in accordance with "**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**".
  - e. Have at least 50% of shoe rack shelves installed between 400 mm and 800 mm above floor level, measured from the base of the shelf.



**Figure 71: Accessible ablution options**

#### **3.11.32.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

#### **3.11.32.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **6**.

#### **3.11.32.6 Pre-certificate rating submission:**

##### **For ablution spaces:**

- a)** Design drawings illustrating the proposed locations of ablution spaces, their measurements, components, and accessibility from the accessible path.
- b)** Detailed specifications of the materials used in the construction of ablution spaces, ensuring they are firm, stable, slip-resistant, and glare-free, and have a slip resistance value in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- c)** Lighting drawings showing an illuminance level of 200 lux in ablution spaces.
- d)** Detailed designs of the wheelchair space, washbasin, hinged support bars, shattaf, soap and paper towel dispenser, and call for assistance device in ablution spaces.

##### **For shoe rack spaces:**

- a)** Design drawings illustrating the proposed locations of shoe rack spaces, their measurements, components, and accessibility from the accessible path.
- b)** Detailed specifications of the materials used in the construction of shoe rack spaces, ensuring they are firm, stable, slip-resistant, and glare-free, and have a minimum slip resistance value in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- c)** Lighting drawings showing an illuminance level of 200 lux in shoe rack spaces.
- d)** Detailed designs of the accessible seating options with armrests in shoe rack spaces.

### **3.11.32.7 Certificate rating submission:**

#### **For ablution spaces:**

As-built documentation confirming the implementation of ablution spaces in designated buildings.

- a) Updated specifications if any changes were made during the construction stage.
- b) Photographs of ablution spaces, showcasing features like wheelchair space, washbasin, hinged support bars, shattaf, soap and paper towel dispenser, and call for assistance device.

#### **For shoe rack spaces:**

- a) As-built documentation confirming the implementation of shoe rack spaces in designated buildings.
- b) Updated specifications if any changes were made during the construction stage.
- c) Photographs of shoe rack spaces, showcasing features like accessible seating options with armrests.

### **3.11.32.8 References:**

- a) UAE Universal design Code
- b) Abu Dhabi International Building Code, 2013
- c) PR-405 Mosque Design Regulations
- d) Abu Dhabi Mosque Development Regulations

## **3.11.33 USSP.1.33 Enhanced accessible ablution areas**

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### **3.11.33.1 Applicability:**

Applicable to all buildings with prayer areas that are required to feature ablution spaces and shoe racks (Refer to “**Sahel Building Rating System – USSP.1.34 Enhanced accessible prayer areas**”).

### **3.11.33.2 Intent:**

To ensure ablution areas allow improved equitable and inclusive use for all following either recommended or best practice.

### **3.11.33.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovations within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

At least 30% of ablution spaces, with a minimum of one, should be designed to be wheelchair accessible for each gender-specific ablution space, and at least 30% of ablution spaces, with a minimum of one, should be designed to be accessible for people with limited mobility for each gender-specific ablution space.

- a)** All ablution spaces designed to be wheelchair accessible should provide faucets which should:
  - i. Be flexible.
  - ii. Have extendable spouts allowing washing of body parts far from the faucet.
  - iii. Be easily operable with a faucet lever (no circular handles).
- b)** All ablution spaces designed to be wheelchair accessible and for people with limited mobility should:
  - i. Be located adjacent to praying areas.
  - ii. Provide a visual alarm.
  - iii. Provide a holder for walking aids in limited mobility holy washing spaces.
- c)** At least one gender-specific ablution space designed for people with limited mobility should provide a holder for walking aids nearby.

#### **Best Practice:**

All ablution spaces (e.g wuzu/wudu or shuddhi areas) designed to be wheelchair accessible and for people with limited mobility should provide TWSI leading from the accessible parking space(s) to the ablution spaces designed to be wheelchair accessible and for people with limited mobility, in accordance with the specifications of “**Sahel Building Rating System – OC.1.03 Tactile Walking Surface Indicators (TWSI)**”.

### 3.11.33.4 Pre-certificate rating credits:

**Table 162: USSP.1.33 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Design all ablution spaces to be wheelchair accessible and for people with limited mobility according to recommended requirements for quality and form.
		<b>Best Practice:</b>
1	3	Design all ablution spaces to be wheelchair accessible and for people with limited mobility according to best practice requirements.

### 3.11.33.5 Certificate rating credits:

**Table 163: USSP.1.33 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
3	3	Confirm implementation of all ablution spaces to be wheelchair accessible and for people with limited mobility according to recommended requirements for quality and form.
		<b>Best Practice:</b>
1	3	Confirm implementation of all ablution spaces to be wheelchair accessible and for people with limited mobility according to best practice requirements.

### 3.11.33.6 Pre-certificate rating submission:

#### Recommended:

- a) Detailed specifications of the faucets ensuring they are flexible, have extendable spouts, and are easily operable with a faucet lever.
- b) Design details ensuring the ablution spaces are adjacent to prayer rooms and provide a visual alarm.
- c) Design drawings illustrating the proposed locations of holders for walking aids in ablution spaces designed for people with limited mobility.

#### Best Practice:

- a) Detailed specifications of the TWSI ensuring they are designed to be wheelchair accessible and for people with limited mobility.

### **3.11.33.7 Certificate rating submission:**

#### **Recommended:**

- a) Updated specifications if any changes were made during the construction stage.
- b) Photographs of ablution spaces, showcasing features like faucets, visual alarm, and holders for walking aids in ablution spaces designed for people with limited mobility.

#### **Best Practice:**

- a) Photographs of TWSI, showcasing features like accessibility from the parking spaces to the ablution spaces

## 3.11.34 USSP.1.34 Accessible praying areas

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### 3.11.34.1 Applicability:

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**), with a floor surface of more than 2000 square meters:

- a) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- b) A-5 (e.g., amusement parks, other outdoor assembly uses).
- c) E (e.g., colleges, schools, day care).
- d) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable to function independently)
- e) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- f) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- g) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### 3.11.34.2 Intent:

Ensure that prayer areas allow for equitable and inclusive use for all.

### 3.11.34.3 Requirements:

#### Mandatory:

##### a) 3 Credits in renovation.

All praying areas (e.g., prayer halls, praying rooms) shall be in accordance with the **Mosque Design Regulations (PR-405)** and shall:

- i. Be connected to a continuous accessible path to all accessible areas of ablution spaces, with floor and ground surfaces that shall:
  - a. Be firm, stable, slip-resistant, and glare-free.
  - b. Have carpets with a maximum pile height of 15 mm and shall be securely fastened (if present).
  - c. Not include carpets with strong and bold patterns (if present).
  - d. Have a minimum slip resistance value for external paths (if present) and internal circulation spaces, as well as minimum luminance contrast in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- ii. For prayer rooms with a floor surface of more than 80 square meters, include a perimeter zone within the prayer space that shall:
  - a. Have a clear width of 1800 mm.
  - b. Be in accordance with **“Sahel Building Rating System – EQC.1.09 Wall and floor finishes”**.
- iii. Provide an accessible seating option which shall:
  - a. Be either placed against a wall or be equipped with a backrest. If a backrest is provided, it shall measure between 400 mm and 460 mm in height, measured from the seat surface to the top of the backrest.
  - b. Have a seat height between 450 mm and 500 mm above floor level.
  - c. Have a seat depth between 400 mm and 450 mm above floor level.
- iv. In religious buildings other than Muslim religious facilities seating area shall be in accordance with **“Sahel Building Rating System – USSP.1.02 Accessible assembly areas and audiences”**.

- v. In Muslim religious spaces and buildings (e.g. Riwaq and Sahan, and Mosque and Prayer Halls), prayer rows shall:
  - d. Guarantee the space for prayers seating or using a wheelchair.
  - e. Where dedicated space is provided, be identified by signage displaying the international symbol of accessibility.
  - f. Have a floor surface with a minimum luminance contrast in accordance with “**Sahel Building Rating System – EQC.1.09 Wall and floor finishes**”.
  - g. Identify rows with embossed numbers and braille to the side of each row in new facilities.
- vi. Ensure that the PA (Public Address) system is accessible.

#### **3.11.34.4 Pre-certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.11.34.5 Certificate rating credits:**

This is a requirement for new assets. There are no credit points awarded.

Credit points for renovation projects: **3**.

#### **3.11.34.6 Pre-certificate rating submission:**

- a) Design drawings illustrating the proposed locations of prayer areas, their connections to ablution spaces, and the continuous accessible paths.
- b) Detailed specifications of the floor and ground surfaces, carpets, illuminance levels, perimeter zones, seating options, and prayer rows.
- c) Lighting specifications and adequate location drawings which provide evidence of sufficient lux values in designated places.

#### **3.11.34.7 Certificate rating submission:**

- a) As-built documentation confirming the implementation of prayer areas, their connections to ablution spaces, and the continuous accessible paths.
- b) Updated specifications if any changes were made during the construction stage.
- c) Photographs of praying areas, showcasing features like floor and ground surfaces, carpets, illuminance levels, perimeter zones, seating options, and prayer rows.

#### **3.11.34.8 References:**

- a) Abu Dhabi International Accessibility Standards, 2013
- b) Abu Dhabi International Building Code, 2013
- c) PR-405 Mosque Design Regulations

## **3.11.35 USSP.1.35 Enhanced accessible praying areas**

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### **3.11.35.1 Applicability:**

Applicable to all buildings from the following occupancy groups (in accordance with **Abu Dhabi International Building Code, 2013**):

- a) A-3 (e.g., museums, courtrooms, indoor sports facilities without spectator seating, lecture halls, spaces for worship, recreation or amusement)
- b) A-5 (e.g., amusement parks, other outdoor assembly uses).
- c) B (e.g., banks, outpatient clinics, post offices, laundry services, other uses for office, professional or service-type transactions).
- d) E (e.g., colleges, schools, day care).
- e) I-1 (e.g., assisted living facilities, social care homes, for persons who are capable of functioning independently)
- f) I-2 (e.g., hospitals, child-care facilities, for persons who are not capable of self-preservation)
- g) R-1 (e.g., hotels, boarding houses, and other transient spaces)
- h) Special Occupancy: public transportation hubs, covered/open malls, underground structures, major transportation stations, gas stations.

### **3.11.35.2 Intent:**

Ensure that prayer areas allow for equitable and inclusive use for all providing additional space and wayfinding improvements. (Figures 72, 73, 74).

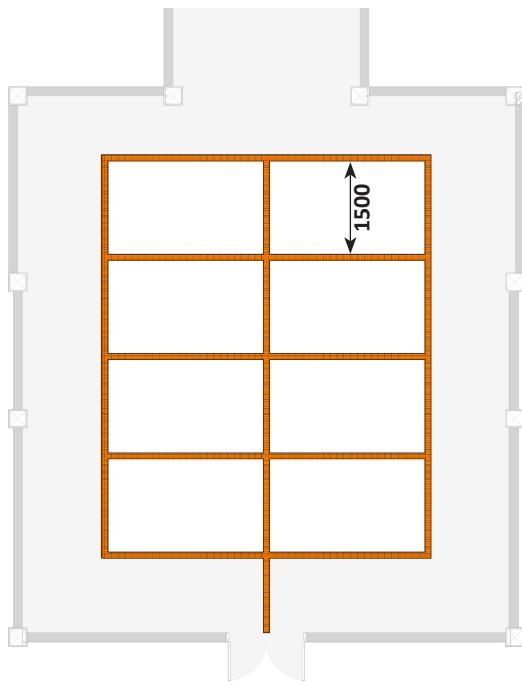
### **3.11.35.3 Requirements:**

All designs, drawings and specifications of the development/redevelopment and renovation within the certification boundary, submitted for pre-certificate and certificate rating credits shall adhere to mandatory requirements, in addition to the following:

#### **Recommended:**

All praying areas should be designed to be accessible which should:

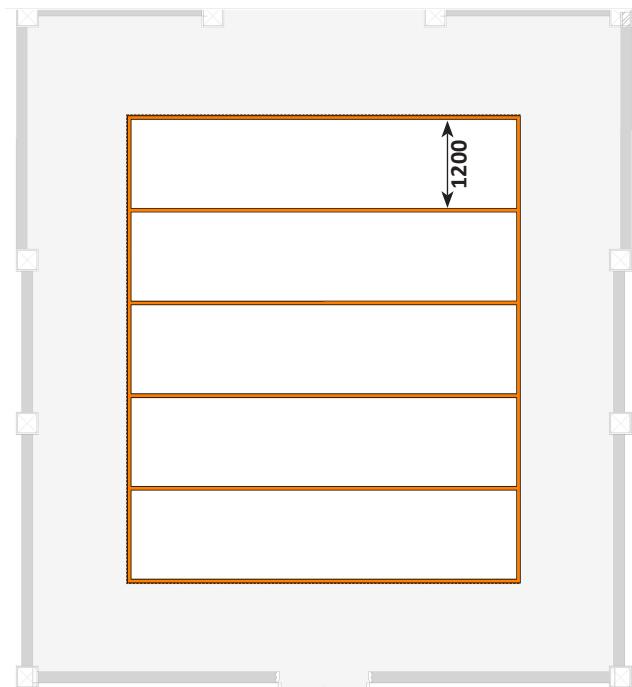
- a) Provide TWSI leading from the accessible parking space(s) to the religious buildings and prayer spaces (Figure 72) designed to be accessible, in accordance with **“Sahel Building Rating System – OC.1.03 Tactile Walking Surface Indicators (TWSI)”**.



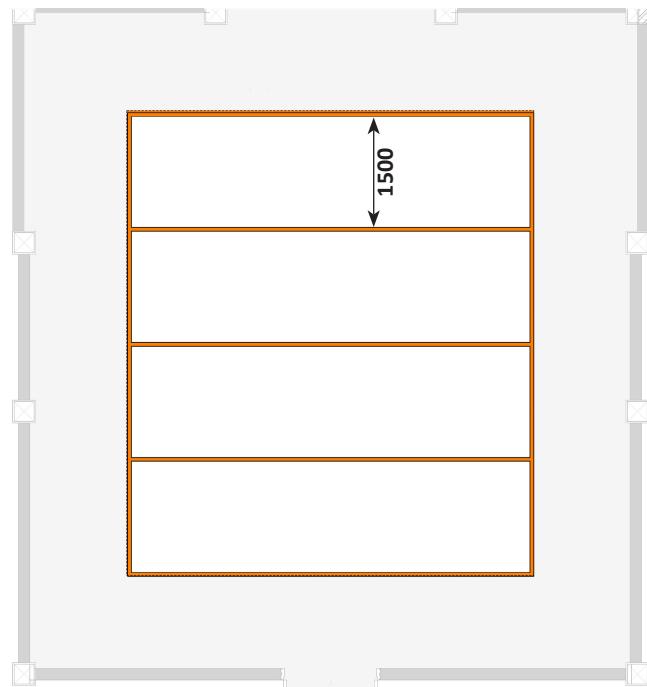
**Figure 72:** Prayer room TWSI

**b)** In Muslim religious spaces (e.g. Sahan), prayer rows should:

- Identify rows with embossed numbers and braille to the side of each row in new facilities.
- If utilized for praying during the day, placed in a fully shaded location.
- Have prayer rows with a minimum depth of 1500 mm (Figure 74) in new facilities and 1200 mm (Figure 73) in existing facilities.



**Figure 73:** Prayer rows existing facility



**Figure 74:** Prayer rows new facility

### 3.11.35.4 Pre-certificate rating credits:

**Table 164: USSP.1.35 pre-certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	3	Design all praying areas according to recommended requirements

### 3.11.35.5 Certificate rating credits:

**Table 165: USSP.1.35 certificate credits**

Credit points		Requirements
New assets	Renovation projects	<b>Recommended:</b>
2	3	Confirm implementation of all praying areas according to recommended requirements.

### 3.11.35.6 Pre-certificate rating submission:

#### Recommended:

- Detailed specifications of the TWSI, prayer rows, and their shading (if applicable).
- Design details ensuring accessibility and prayer rows dimensions, including embossed numbers and braille on the side of each row in new facilities.

### 3.11.35.7 Certificate rating submission:

#### Recommended:

- Updated specifications if any changes were made during the construction stage.
- Photographs of praying areas, showcasing features like TWSI and prayer rows, and their shading (if applicable).

## 4 Glossary and acronyms:

**Accessible/Accessibility** refers to design or features that allow easy use and interaction for people of all ages, faith, cultures, gender, abilities and disabilities people with disabilities. It ensures that everyone can access and use a space, product, or service effectively regardless of their abilities.

**Accessibility advisor:** a senior-level technical professional specializing in accessibility and inclusion within the built environment who will provide expert guidance throughout the project cycle. They oversee larger scale projects and are deeply involved in addressing complex technical challenges and intricacies such as renovating existing structures, addressing unique design considerations for diverse user groups, and resolving accessibility-related disputes or issues that arise during the project lifecycle. This role requires advanced knowledge and experience in accessibility regulations, standards, and best practices across various domains such as architecture, engineering, construction, and urban planning.

**Accessibility body:** is a collaborative entity that includes representatives from diverse stakeholder groups, such as persons with disabilities, accessibility experts, advocacy organizations, government agencies, industry representatives, and relevant professionals. Its primary purpose is to champion accessibility initiatives by advocating for the needs of different user groups or other access challenges.

**Accessible non-standard cycle parking:** refers to cycle parking that is wider and is designed to be used by individuals utilizing larger or non-traditional cycles such as cargo cycles, handcycles, or recumbent cycles. Such parking areas are easily reachable and navigable for all users.

**Accessible parking:** refers to designated parking spaces specifically designed to accommodate individuals with disabilities and families with a stroller with different access needs, providing them with convenient and barrier-free access to facilities and services. The following extended designated accessible parking spaces are provided as types of accessible parking spaces:

- **Standard accessible parking space** refers to designated parking spaces intended for individuals who have disabilities and qualify for a disabled parking permit.
- **Ambulant parking space** refers to designated parking spaces intended for individuals who have temporary or permanent mobility impairments but may not qualify for a disabled parking permit.
- **Family parking space** refers to designated parking spaces that are specifically intended for families with young children, strollers, or expectant mothers. Family parking spaces are usually wider than standard spaces to allow for the extra room needed to maneuver strollers, car seats, and other child-related items.
- **Accessible van parking space** refers to parking spaces for larger vehicles equipped with ramps or lifts, such as wheelchair-accessible vans. These spaces are wider than the standard accessible parking spaces to accommodate the additional space needed for deploying ramps or lifts and allow for easier maneuvering of the vehicle.

**Accessible toilets:** restroom facilities designed for inclusivity, featuring accommodations like grab bars and wider doorways for individuals with diverse abilities.

**Accessible path** is a continuous, accessible and unobstructed path of travel, connecting all accessible and universally designed elements and spaces in a built environment and transportation. Synonymous with unobstructed travel ways, walking paths, and pedestrian areas, constitutes a dedicated and well-designed path within the urban landscape. It encompasses primary and secondary paths, pedestrian paths, and footpaths, creating a pedestrian-friendly infrastructure that ensures safe and convenient movement for individuals on foot. This path, whether part of a segregated or shared-use facility, provides a level surface, encouraging inclusive and seamless circulation opportunities.

**Accessible passenger loading zones and accessible taxi stands** refers to designated areas designed to facilitate the safe and convenient loading and off-loading of passengers with disabilities. These zones typically provide extra space for deploying wheelchair ramps or lifts, clear signage indicating their use, and may include curb cuts or lowered curbs to ensure a smooth transition between the vehicle and the sidewalk. The design of these zones ensures that passengers with mobility impairments can easily and safely access vehicles or enter and exit a facility.

**Assets** refer to both New and Existing Assets in which:

**New assets: Development and Redevelopment**

New assets refer to either the development of a new property or the complete redevelopment of an existing one, where the structure is rebuilt from scratch.

Both types follow the same requirements, as they are treated as entirely new constructions.

**Existing assets: Renovations and Retrofitting**

Existing assets include properties that undergo renovations or retrofitting. These processes involve modifying or upgrading the structure without rebuilding it from scratch, and they are subject to specific requirements tailored to maintaining or improving the existing framework.

**Bariatric seating:** specifically designed seating to accommodate individuals with higher weight or body mass. Bariatric seating provides comfort and safety for larger individuals.

**Braille alphabet:** a tactile writing system used by people who are blind or visually impaired. It consists of raised dots arranged in a grid, representing letters, numbers, and punctuation. Braille enables reading through touch.

**(Certification) Asset: the subject of certification – a building, part of a public realm or community** (depending on the tier of certification used) – which is assessed in the certification process.

**Certification boundary:** the clear definition of the scope of the project pursuing certification. It ensures that the project is physically distinct from any other spaces and not part of the certification process. The boundary can include both interior and exterior spaces. Usually, it is defined by limits of a plot (buildings or public realm parts or administrative border (communities) or planning zones.

**Certifying institution:** an organization responsible for maintaining, managing, and operating the certification system, providing training and issuing certificates as well as credentials to professionals. It is assumed that for this system the certifying institution will be a dedicated division of DMT.

**CIE Glare Rating Method:** a method developed by the International Commission on Illuminance (CIE) to assess glare in lighting environments. It quantifies the discomfort caused by excessive brightness or reflections.

**Color Rendering Index (CRI):** a metric that measures how accurately a light source renders colors compared to natural sunlight. Higher CRI values indicate better color fidelity.

**Direct Route Indices Method:** refers to a technique often used in optimization, logistics, or data management contexts to identify and utilize the most efficient or direct routes. While this specific term might not be universally recognized, it can be related to various methods and approaches in these fields.

**Family toilets:** Restrooms designed to accommodate the needs of families with children, equipped with features such as changing tables, additional space, and amenities suitable for caregivers, providing a convenient and family-friendly environment.

**Gloss Units (GU):** a measurement of glossiness or shininess of a surface. It quantifies how much light is reflected from a surface at a specific angle. Gloss meters are used to measure GU.

**HVAC or AC systems calculations and testing report:** refers to Heating, Ventilation and Air Conditioning, or Air Conditioning (also refer to ASHRAE Standard 90.1 Appendix G\_section G3.1.1 and Estidama Pearl Rating System DP-306: RE-R2: Energy Monitoring & Reporting, LBi-5.2: Thermal Comfort & Controls: Occupant Control)

- a) **Heating:** This system warms indoor spaces. Common heating methods may include:
  - i. **Furnaces:** Heat air and distribute it through ductwork.
  - ii. **Heat Pumps:** Move heat from one place to another; can provide both heating and cooling.
  - iii. **Boilers:** Heat water and distribute it through radiators or underfloor heating.
- b) **Ventilation:** This involves the exchange of indoor and outdoor air to ensure good air quality. Ventilation can be:
  - i. **Natural:** Through windows, vents, or openings.
  - ii. **Mechanical:** Using fans, ducts, and air handling units to control airflow.
- c) **Air Conditioning:** This system cools indoor spaces and can also control humidity. Types include:
  - i. **Central Air Conditioning:** Cools air in a central unit and distributes it through ducts.
  - ii. **Split Systems:** Includes an indoor unit and an outdoor condenser, often used in individual rooms or small areas.
  - iii. **Window Units:** Self-contained units installed in a window, suitable for cooling single rooms.

The **supplier** tests it once it is installed then it needs to be inspected by an engineer that it is running correctly. After construction, it will be the responsibility facility manager for cleaning/maintenance schedule, it will be tested on a regular base. The following measures assist asset owners /managers to monitor and evaluate HVAC or AC systems via:

  - a. Manually adjustable temperature controls
  - b. Regular maintenance and replacement of filter

**Hearing enhancement systems:** technologies designed to improve sound perception for individuals with hearing loss. These systems include hearing aids, assistive listening devices, and loop systems that enhance speech clarity and reduce background noise.

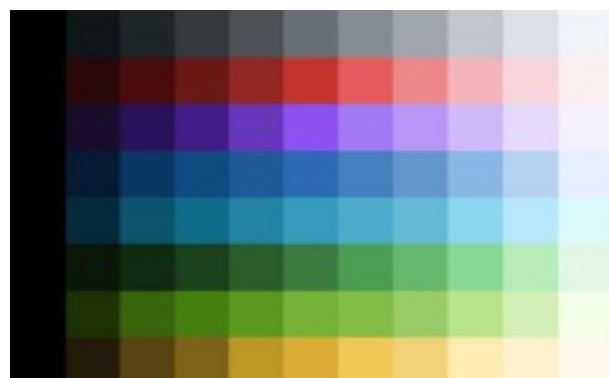
**Illuminance:** the amount of light (usually measured in lux) falling on a surface. It indicates the brightness of an area due to artificial or natural lighting.

**Inclusive family toilet:** builds on the concept of a family toilet but places a stronger emphasis on additional features accommodating people needing extra space and facilities for personal care. Larger than the usual family toilet and often include features like a hoist system and sufficient space for a carer or assistant to help.

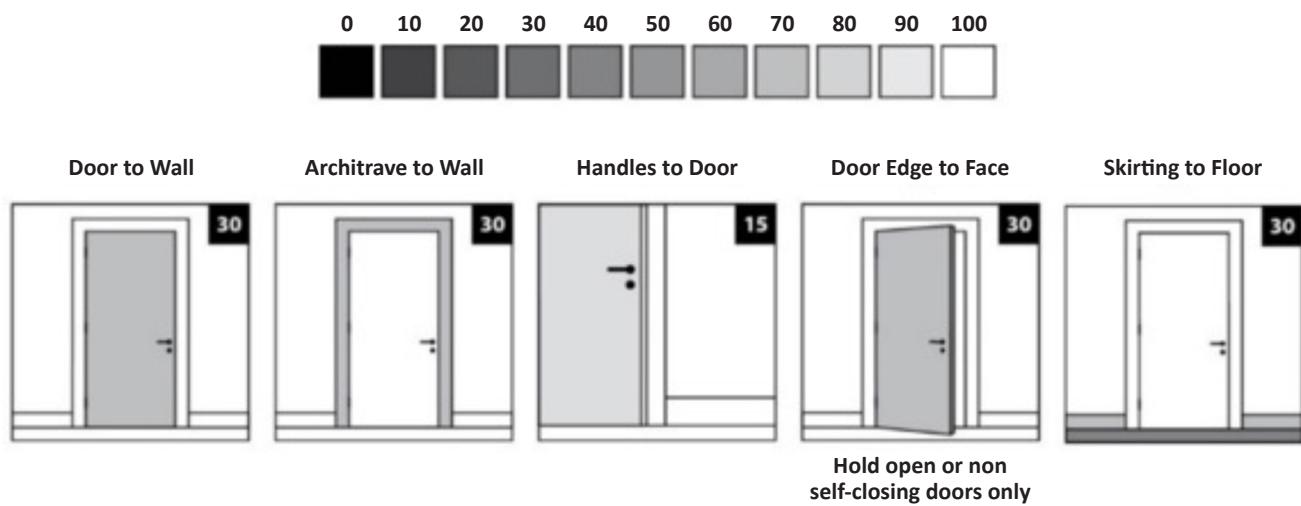
**Ischiatic support:** refers to ergonomic support for the ischial (seat bone) area. Proper ischiatic support is essential for comfortable seating.

**Light Reflectance Value (LRV):** LRV is a measurement that quantifies the amount of visible light reflected by a surface. It is expressed as a percentage, with 0% representing absolute black (no reflection) and 100% representing absolute white (full reflection). LRV is commonly used in interior design and architecture to assess the lightness or darkness of paint colors, flooring, and other materials. Higher LRV values indicate lighter colors, while lower values indicate darker colors.

**2-10** = Dark paint color  
**10-20** = Medium-dark paint color  
**20-40** = Medium-depth paint color  
**40-55** = Light-medium color  
**55-72** = Light color  
**73-81** = Off-white color  
**82-94** = White paint color



**Figure Glossary 1:** Light reflectance examples



**Figure Glossary 2:** Examples of light reflectance contrast

#### LRV testing method:

Light Reflectance Value (LRV) is tested using an LRV meter (Figure Glossary 3), ensuring the meter is calibrated and the surface clean. By positioning the meter probe against the surface, take a reading by pressing the button, and record the LRV value displayed.

The LRV is tested following 6 steps which are:

- a) Samples:** The first step is to gather samples of the surface or the material that is tested. The samples are big enough to cover the testing area and represent the texture and finish of the material.
- b) Calibration:** Calibration is a must for the testing equipment to make sure that the measurements are accurate. One of the steps to follow is zeroing the instrument and to ensure that it is specifically ready to measure LRV.
- c) Measurement setup:** The LRV meter is placed in a perpendicular position to the sample's surface. Then a light emits a beam of light onto the surface that measures the light reflected.
- d) Taking measurements:** LRV meter records and calculates the reflected light intensity according to the ratio of reflected light to incident light. The measurement is in percentage, therefore 0% equals a total absorption which is also known as black and 100% is a total reflection or also known as white.
- e) Average reading:** To be more accurate and take into consideration the variety in the surface studied, multiple readings take place at many different points on the surface, and then followed by an averaged to get the final LRV value for the sample studied.
- f) Recording and reporting:** For documentation purposes the LRV values are recorded and measured, these records are the tool that helps making decisions regarding surface's colors, contrasts... in many applications, and more specifically those involving accessibility standards.



**Figure Glossary 3:** Cromocon LRV meter

Source : <https://www.grestec.co.uk/lrv-light-reflectance-values-explained/>

**Luminance:** the brightness of a surface as perceived by the human eye. It's measured in candelas per square meter ( $cd/m^2$ ).

**Luminance contrast:** the difference in brightness between adjacent surfaces. High luminance contrast enhances visibility and legibility.

**Michelson Formula (Contrast Calculation):** is used to calculate the contrast between two objects. It quantifies the difference in brightness or luminance between these objects. Specifically, it can be applied to assess the contrast between text and background in visual displays, ensuring readability and legibility.

**Multi-sensory approach:** The multi-sensory approach ensures that individuals, including those with intellectual, vision and or hearing impairments, can effectively perceive information and environmental cues. By providing information, signage, wayfinding and orientation in combinations of at least two senses, such as e.g., text and audio, or audio and tactile/Braille text, it helps them make safe, easy, and comfortable decisions to function effectively within environments to the greatest extent possible.

Non-standard cycles: refer to cycles that are different from traditional designs, structure wise, features or usage. Each type of non-standard cycle has different advantages that depends on the usage, terrain and personal preferences as per the following photographs (Figures Glossary from 4 to 9):



**Figure Glossary 4:** Recumbent bicycle



**Figure Glossary 5:** Velomobile



**Figure Glossary 6:** Tandem bicycle



**Figure Glossary 7:** Folding bicycle



**Figure Glossary 8:** Handcycle



**Figure Glossary 9:** Cargo bicycle

**Non-standard cycle parking:** refer to parking spaces for cycles that are different from traditional designs, structure wise, features or usage. Each type of non-standard bike has different advantages that depends on the usage, terrain and personal preferences as per the following photographs (Figures Glossary 10, 11):



**Figure Glossary 10:** Non-standard cycle parking with cycle



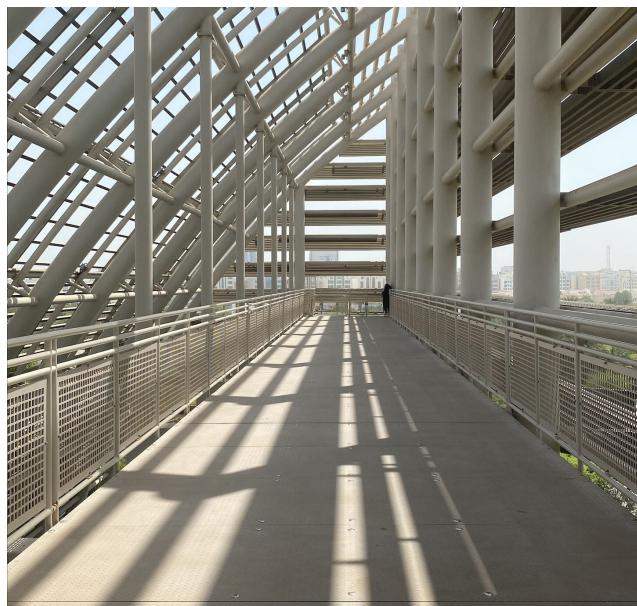
**Figure Glossary 11:** Non-standard cycle parking with handcycle

**Occupiable space:** areas within a building or room where people can work, live, or perform activities. These spaces are designed for human occupancy.

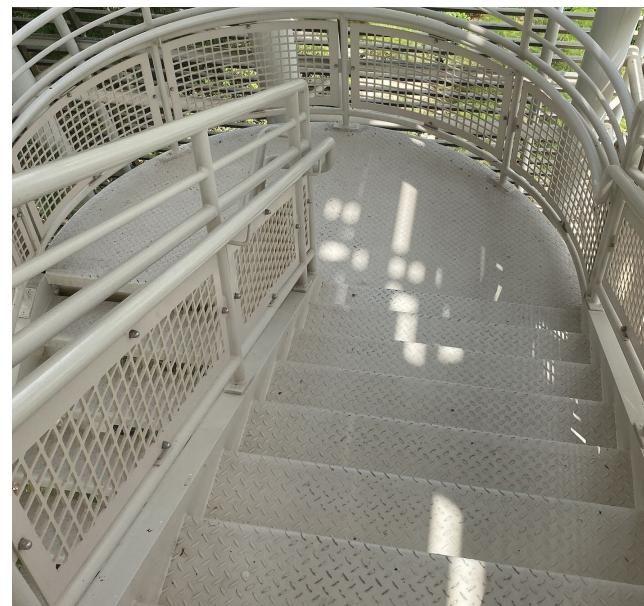
**Orientation and navigation:** Orientation refers to how users understand their current position relative to their environment or the system they are using. It's about providing users with the information they need to get a sense of where they are. Navigation involves the methods and tools users use to move from one location to another, whether in a digital or physical environment. It's about making it easy for users to find their way and access the information or places they need.

**Oil-wet ramp test:** refers to the standardized method used to evaluate and measure the slip-resistance of surfaces, designed to assess how well a surface maintains traction under slippery conditions.

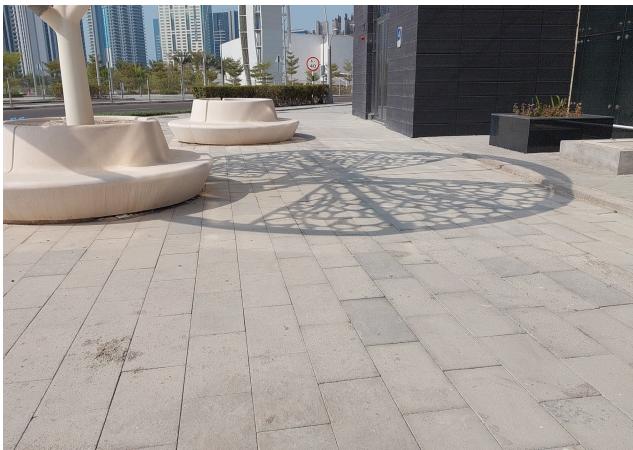
**Pattern glare:** refers to the phenomenon where light passing through slits or openings in shadings creates bright patterns of light (Figures Glossary 12, 13, 14). These patterns can be distracting and stressful for individuals, particularly those sensitive to light and the flickering effect caused by such light patterns has the potential to trigger seizures in people with epilepsy.



**Figure Glossary 12:** Umm Al Emarat Park



**Figure Glossary 13:** Abu Dhabi - Elevated Crossing



**Figure Glossary 14:** Shams, Reem Island

**Public transportation shelter:** is an enclosed structure at a stop, designed to provide protection from weather elements such as rain, wind, or sun. It includes seating and informational display, to make the wait for public transportation more comfortable and weather resistant.

**Public transportation stop:** a designated location where passengers can wait for public transportation vehicles to make a stop and pick up/drop off passengers. It includes a sign or marker indicating the stop. The types of transportation stops are:

- **Bus/tram stops with signposts only:** refers to an open public transportation stop but shaded and has accessible seating options.
- **Bus/tram stops and Bus Rapid Transportation (BRT) with shelters** refers to an enclosed public transportation stop provided with accessible features such as a clear floor space of minimum 900 mm in width and 1500 mm in depth next to the seating options, interior lighting level of at least 50 lux, and clocks provided for public use.
- **Bus, metro and railway stations, ferry, and airport terminals** refers to transportation facilities where passengers embark and disembark, offering amenities like ticket counters, waiting areas, and various shops and services.

**Regularly occupied spaces:** areas where people typically spend more than one hour continuously per day. These spaces include offices, classrooms, and living rooms.

**Shading calculations:** refers to determining how light and shadows interact with surfaces to create realistic visual effects or manage light in practical applications. Shade calculations must be undertaken on the equinox (March 21st) and the summer solstice (June 21st) at 1 PM. The compliant shaded area must be in shade at both the equinox and summer solstice.

As required from **Estidama Pearl Rating System:**

- a) Shading calculations can assume that the sun will be directly overhead, to mimic the timing of the summer solstice.
- b) All trees included within the shading calculation must be planted between Southeast and Southwest of the area shaded, to ensure comfort during transition months.
- c) All shade structures must be designed to provide adequate shade during transition months and must be offset between the Southeast and Southwest of the area shaded.
- d) Shade from adjacent buildings and/or structures can be included in calculations.

**Significant sources of pollution:** refers to factors or elements that contribute to environmental pollution, such as emissions from vehicles, industrial processes, or waste disposal.

**Slip-resistance:** this measures a surface's ability to prevent slipping, particularly in wet or oily conditions. Slip-resistant surfaces are crucial in various settings to enhance safety and prevent accidents. A distinction can be made between the following values:

**Table Glossary 1:** Slip-resistance values.

R- Values	
R9	Indicates low slip resistance, suitable for dry indoor areas such as corridors, lobbies, and stairs. This rating provides minimal traction, making it appropriate for environments that do not frequently encounter water or other slippery substances.
R10	A moderate level of slip resistance. It is suitable for areas that may occasionally get wet, such as toilets, washrooms, and covered parking areas. This rating provides adequate safety for both dry and wet conditions.
R11	Provides higher slip resistance and is ideal for wet areas, such as stair nosing, ramps (up to a maximum incline of 1:16 (6%), external entrances, and some market and parking areas. This level ensures a safer environment where slipping hazards may occur due to wet surfaces.
R12	A high level of slip resistance for more challenging conditions, such as ramps steeper than 1:16 (6%), driveways, footpaths, and areas requiring efficient drainage. It is designed to provide enhanced traction in environments that are frequently wet or exposed to more intense conditions.

Barefoot Area Ratings	
Category A	This rating is suitable for communal changing rooms where the likelihood of slipping is lower, but some protection is still needed.
Category B	Applied to areas surrounding swimming pools, shower rooms (both private and communal), and holy washing areas. This rating indicates a higher level of slip resistance suitable for wet and potentially slippery environments, ensuring safety for barefoot users.

**Sound level meter:** a tool used to measure and manage noise in an area from a variety of sources, including industrial and transportation noises, and construction work.

**Tactile Walking Surface Indicators (TWSI):** raised or textured patterns installed on walking surfaces (such as sidewalks, pedestrian crossings, or train platforms) to provide tactile cues for individuals with visual impairments. TWSIs help guide pedestrians by indicating changes in direction, hazards, or transitions (e.g., approaching a road crossing or a stairway). The patterns are detectable by touch and serve as an essential navigational aid for people who are blind or visually impaired.

**Unified Glare Rating (UGR):** shall assess the uncomfortable glare levels originating from light sources. Lighting shall feature glare protection considering users of various statures (e.g., tall people, children, and wheelchair users).

$$\text{UGR} = 8 \log \frac{0.25}{L_b} \sum_n \left( L_n^2 \frac{\omega_n}{p_n^2} \right)$$

### Figure Glossary 15

**Verification report for luminance contrast:** refers to a document that details the process and results of assessing the contrast between two elements and their background in terms of luminance. This is crucial for ensuring accessibility and readability, especially for individuals with visual impairments. The following processes are applicable to a typical report:

- a) Benchmark Standards and Guidelines
- b) Measurement Tools and Equipment
- c) Testing Procedure
- d) Results with photographic evidence
- e) Analysis and Interpretation
- f) Conclusion
- g) Compliance Status

**View out:** visual access or sightlines from within a building or space to the outside environment, natural landscapes or high-value heritage objects. Its purpose is to provide pleasant or interesting views that can enhance the aesthetic experience of a space, making it more enjoyable and engaging for occupants and have positive effects on mental well-being, reducing stress and improving overall mood.

