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# Towards a socially vibrant city: exploring urban typologies and morphologies of the emerging “CityWalks” in Dubai

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## Abstract

Vertical urbanization to maximize land use in many cities has led to a shortage of urban spaces that could adequately meet people’s needs. In response, CityWalk has emerged as a new urban form to solve this problem by attracting people to go from inside closed buildings to outside walks. Thus, it is promoting health, economy, and tourism. Locally in the United Arab Emirates (UAE), especially in Dubai, a limited number of CityWalks have been developed. Despite the increasing popularity of CityWalks, there has been a gap in research examining their distinct emerging urban typologies and their urban configuration. This study seeks to address this gap by first conceptualizing CityWalk as an emerging urban public space based on the exploration of global and local experiences. Second, the study categorized the morphological configuration of three selected case studies of CityWalks in Dubai using Geographic Information System (GIS) tools. These case studies represent three different developments of CityWalks in three different contexts in the UAE. First, CityWalks within the inner city’s urban context are represented by ‘City Walk’ in Al Wasel. Second, CityWalks surrounded by the sea represented by ‘The Walk’ in Marsa Dubai. Third, CityWalks developed next to traditional buildings represented by ‘Al Seef’ in Al Hamriya. The findings of the research investigations reveal that the emerging ‘CityWalks’ developments in each of the three different urban contexts in Dubai do not represent a single familiar urban space typology but rather a ‘harmonious’ blend of global and local urban design typologies. In addition, the urban morphological analysis of these three urban developments underscores the distinctive characteristics of each of them in terms of street network, urban form, urban compactness, land use, and shading. This contributes to better understanding of these emerging urban forms and hence pave the way for more research about their socio-economic robustness to ultimately contribute to more successful future designs of ‘CityWalks’ in Dubai and other cities in the region.

**Keywords** Urban form, Urban morphology, Urban typology, Configuration, CityWalk, public space, GIS, Dubai, UAE

## Introduction

Cities are complex entities comprising natural, built, economic, and social components, serving as living spaces for people (United Nations 2020). Urban public spaces play a significant role in attracting residents and

enhancing the overall livability of cities. Well-designed urban public spaces act as magnets for people, facilitating social interactions and contributing to the creation of vibrant and livable cities (Malhotra and Dobriyal 2021). Such spaces not only provide areas for people to gather but also encourage cultural exchange and foster socio-cultural interactions (Urban Design Guidelines 2015). However, the development of urban green spaces faces challenges due to population growth and the emphasis on re-densification policies in inner city areas (United Nations, Department of Economic and Social Affairs

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2013). These challenges are particularly pronounced in developing countries, where population growth exerts significant pressure on urban areas. Rapid urbanization leads to the expansion of urban spaces and the conversion of open land into residential areas, often neglecting the development of green spaces. As a result, urbanization and densification processes globally result in unequal access to urban green spaces, depriving residents of the environmental and social benefits associated with such spaces (Kabisch et al. 2015; Arnold et al. 2022). Socio-spatial networks within cities play a vital role in connecting people and providing resources during times of stress. The collective public character of a city is a key dimension of its quality, promoting social cohesion, inclusion, equal access to opportunities, and positive relationships among residents (Latham and Layton 2019; de Roode and Martinac 2020).

Extensively studied urban public spaces by wide spectrum of scholars have led to the exploration of various alternative terms to describe these spaces. Historically, urban public spaces were considered social hubs located in the heart of towns, where people would gather to share thoughts. They were referred to as plazas, piazzas, urban squares, town greens, city squares, and civic centers. Public squares were open spaces commonly found in traditional towns, primarily used for community gatherings (Ezzeddine and Kashwani 2019). Plazas have a rich historical lineage, with their existence dating back to the Greek-Roman period, representing a manifestation of urbanism as a science capable of organizing spaces and facilitating the flow of people (Atray 2023).

In contemporary times, urban public spaces have acquired new terminologies, such as community or social hubs. These spaces are characterized as multi-purpose environments that provide access to a range of facilities and services. Community hubs, according to Federico (2020), act as spaces that aggregate people, ideas, and energies, offering activities and services targeted towards the local community and provided by it. They serve as multi-purpose institutions that host social, educational, and health services, while simultaneously fostering social connectedness and community capacity (McShane and Coffey 2022). Furthermore, community hubs serve as central points where residents can access various services, programs, and activities offered by diverse organizations, community groups, or individuals, catering to the specific needs of the community. These spaces are conveniently located, recognized, and valued by residents (Community hub development toolkit 2019).

Urban social spaces are defined as discursive and tangible entities with real and sensory qualities, shaped through specific relations. They are considered social hubs, where individuals gather to share thoughts and

ideas. Additionally, they may be referred to as community centers, neighborhood associations, or community leagues. These multi-purpose institutions offer centralized access to a diverse range of services, including education, social engagement, health, cultural activities, and recreational pursuits, all contributing to the overall well-being of the community (Ciriaco and Wong 2022; ZARE 2015). A significant aspect of community hubs lies in their ability to create social infrastructure and networks, addressing vulnerabilities and meeting localized needs. By providing a platform for social interaction, these spaces enhance community cohesion and contribute to the overall social fabric of the locality (Jabareen and Eizenberg 2021). The concept of an urban public space, therefore, encompasses the characteristics of a social hub, serving as a gathering place for individuals to exchange ideas and foster community connections. These spaces play a multifaceted role by providing access to various services, promoting cultural activities, and facilitating social engagement to enhance community well-being (Ezzeddine and Kashwani 2019; Ciriaco and Wong 2022). The exploration of different terms and definitions for urban public spaces highlights the importance of these spaces as social and cultural hubs. Whether referred to as plazas, pizzas, community hubs, or social hubs, these multi-purpose institutions play a pivotal role in creating social infrastructure, fostering community connections, and meeting localized needs.

Traditionally, urban public spaces in the cities of the Arabian Gulf countries, especially in the United Arab Emirates, were identified based on their spatial hierarchy. So, this hierarchy, in its original Arab terms, could start with *Al Hosh*, the inner courtyard in houses and public buildings, followed by *Sikka*, the pedestrian walkway between houses, then, *Al Baraha*, that resembles the space around which houses are being clustered in modern urban design, and is mainly utilized for neighbors' gathering and as children's play area. Then comes a larger urban space called, *Al Musalla*, which represented an open space used for praying in front of a mosque. Meanwhile, *Al Saha*, is a larger open public space resembled a modern open public space at the district level that used to serve as a venue for social gatherings and open markets. Lastly, *Al Maydan*, is the largest open public space at the traditional city level, which was utilized for major public events, local sports activities, and public gatherings (Ezzeddine and Kashwani 2019; Malhotra and Dobriyal 2021). With the urban form change in modern times, such public urban spaces have almost disappeared. The heavy reliance on private cars, the harsh climate conditions, and the tendency towards urban densification and vertical development in the UAE's major cities have even worsened the case as illustrated in Fig. 1.



**Fig. 1** The urban form has changed in modern times, with public urban spaces nearly disappearing. This change can be attributed to the heavy reliance on private cars, harsh climate conditions, and the increasing trend toward urban densification and vertical development in the major cities of the UAE. **a** Bur Dubai area represents traditional planning elements, while **(b)** Sheikh Zayed Road 'E11' symbolizes urban densification and vertical development (Source: Author)

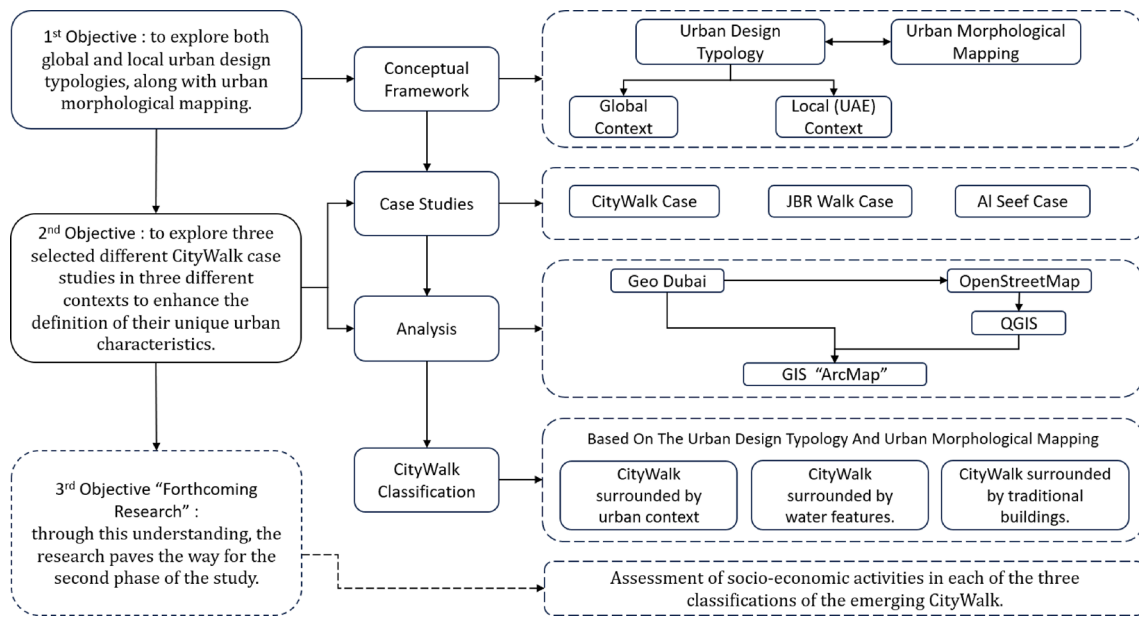
But very recently the attention has been directed towards the revival of urban public spaces in response to the adapted urban development sustainability agenda by the UAE's local and federal governments. As a result, the 'CityWalk' has started to gradually emerge as a new urban form in the UAE's major cities, especially in Dubai, where a limited number of CityWalks have been recently developed. These emerging CityWalks differ from the conventional practice of converting city centers into pedestrianized urban areas, as experienced in European cities, where in the UAE CityWalks are newly developed urban regions. The term 'CityWalk' itself, as revealed from the conducted literature review, has been almost absent in global scholarly work about walkable public urban spaces. It was only used once in 1993 in Florida, USA, to describe the 'Universal CityWalk', a family entertainment and retail urban public space development located by the waterfront (Universal CityWalk 2022; Universal Orlando 2023). On the other hand, the term has locally emerged in Dubai in 2017 to describe a new urban development called the 'City Walk' (Dubai Guides 2023). More recently, 'The Walk', a close term, has been used to name similar urban development projects in both Dubai and Sharjah cities. In this research and based on preliminary observations of these locally emerging urban design typologies, the term 'CityWalk' is initially identified as "an outdoor, mixed-use, and fully pedestrianized urban development designed to encompass various community facilities to cater for diverse population. Its aim is to attract people from indoor spaces to outdoor walkable areas, with the objectives of promoting healthier lifestyles, vibrant urban environments, economic activity, and tourism. While more of these newly emerging CityWalks are being developed in the major cities in the UAE with the announced aim of creating vibrant public spaces that encourage the currently largely absent socio-economic activity in these

cities, the resulting urban design typologies and morphological configurations of the developed CityWalks urban forms have not been accurately defined yet.

Accordingly, the objective of this research is threefold. First, is to develop a theoretical framework to help define the urban forms of CityWalks in Dubai through consulting the relevant global and local literature about urban design typologies and urban morphological configurations of public open spaces. Second, is to explore and hence define the urban typologies and morphological configurations of the emerging CityWalks urban forms as recently developed in three different urban contexts in Dubai where they have been largely developed through selected representative case studies for waterfront development, development juxtaposed to traditional urban regions, and development mingled with the inner-city urban agglomeration. Third, through this clear urban form definition of the CityWalks in Dubai, the research paves the way for the second future phase of the study, which will comparatively examine the socio-economic robustness of these CityWalks, as per their three distinctive urban contexts.

### Research methods and investigation tools

The research employed a mainly qualitative case study method, to comprehensively understand the urban design typologies and spatial morphological configurations, of CityWalks in the UAE. To achieve its aim, the research design encompasses two main components: a literature review, urban typology, and urban morphology analyses for three selected representative case studies as shown in Fig. 2. The literature review conducted for this study included a wide range of sources to gain a comprehensive understanding of the global and local urban design typologies and morphologies related to walkable public open spaces that constitute CityWalks. The aim is



**Fig. 2** Research framework illustrating the study's three objectives and their corresponding research methodology (Source: Author)

to initiate a conceptual framework that help analyze and explore the emerging urban typologies of CityWalks in Dubai. Selecting Dubai as the study location is influenced by its status as a global business hub, driving investments in the improvement of public amenities and motivating developers to prioritize multi-purpose projects that appeal to all segments of society. Moreover, the initiated conceptual framework through literature review defined the urban morphological configurations that were utilized in analyzing the selected CityWalks case studies.

The selection of the three case studies is primarily based on choosing one case from each urban context relevant to the generic definition of CityWalks. Accordingly, first, the 'City Walk' urban development in Al Wasel district in Dubai was selected as the only case study representing CityWalks mingled with the inner-city urban agglomeration. Second, 'The Walk' urban development project in Marsa Dubai district was selected as a case study representing the waterfront development CityWalks. This is the oldest and the largest waterfront CityWalk development in Dubai and the closest to the generic definition of CityWalks in this research. Third, 'Al Seef' in Al Hamriya district in Dubai was selected as the only case study representing CityWalks developed juxtaposed to traditional urban districts in the city. Meanwhile, data collection for this study involved a combination of primary and secondary sources. The primary data included site observations conducted at the selected CityWalk case studies, which involved visiting the sites, documenting their physical features, and capturing photographs. The

site observations provided firsthand information on the urban design elements of the visited CityWalks. Secondary data was collected from various sources, including reports, publications, websites, and official documents related to the selected CityWalks case studies.

The collected data, both primary and secondary, was analyzed using qualitative tools through utilizing the established conceptual framework. The urban typology and morphology analyses was conducted using map analysis and GIS tools to examine the spatial characteristics and configurations of the three selected case studies in Dubai. The investigation involved the acquisition and integration of spatial data from multiple sources, including Google Earth, GeoDubai, OpenStreetMap, and QGIS. The data consisted of shape files containing information on street networks, building footprints, land uses, and other relevant attributes. The ArcMap GIS software was utilized to visualize and analyze the data. The analysis included mapping the street patterns, building typologies, and planning compactness of the selected CityWalks. The street network maps provided insights into the layout and connectivity of the streets within the CityWalk areas. The building top view maps depicted the distribution and arrangement of buildings, highlighting their compactness and spatial organization. The urban morphology analysis allowed for a deeper understanding of the urban form and urban design characteristics of the selected case studies. It provided visual representations of the street patterns, building configurations, and their relationships with the surrounding built environment.

The analysis also facilitated the identification of patterns and variations among the different CityWalks, enabling categorizations based on their spatial attributes. The findings from the data analysis were presented in a comprehensive manner, highlighting the key characteristics of urban typologies and morphological configurations of the analyzed CityWalks developments.

### **The established conceptual framework**

The established conceptual framework of this study encompasses three key components: urban open space design typology, within the global context, urban open space design typology within the contemporary local context in the UAE, and aspects of urban morphological configuration. As detailed below, these three components provided a comprehensive foundation for exploring and analyzing the selected case studies of the emerging urban forms of CityWalks in Dubai.

#### **Urban open space design typologies- global context**

The classification of urban open spaces encompasses multiple dimensions, such as their function, size, location, and activities. In addition to these factors, other influential aspects in this classification include the historical significance of the space, the demographics of its users, the ownership status, and the overall condition of the open space. It is important to note that the underlying concept guiding the development of urban spaces also plays a crucial role in their classification (Henry 2015). Moreover, urban open spaces, as revealed by multiple global studies, have been categorized using various scalar perspectives, enhancing understanding of their diverse and interconnected characteristics. A comprehensive study conducted by Carmona (2018) has significantly contributed to the categorization of urban open spaces. This study identified distinct types of urban spaces, grouped into four main categories: positive spaces, negative spaces, ambiguous spaces, and private spaces, providing a comprehensive framework for understanding the diverse nature of urban open spaces. These categories represent a distinct set of characteristics and attributes that contribute to the overall classification and understanding of urban open spaces. Two out of those four categories were selected based on the relevance to the definition of CityWalks. First category is Positive Spaces which refer to urban spaces that are openly accessible to the public, positively serving people's needs, even if owned by the government. Examples of those positive spaces include natural or semi-natural urban spaces, civic spaces, and public open spaces. Second category is Ambiguous Spaces which are ambiguous spaces pertaining to urban areas owned by the private sector or subject to public-private partnerships but are accessible to

the public or specific categories of people. These spaces exhibit varying degrees of public accessibility and ownership. Examples of Ambiguous Spaces include interchange spaces, internalized 'public' spaces, and retail spaces.

In another urban open space categorization Middle (2017) categorized urban public spaces into three types: public places, public spaces, and public non-spaces. The first two categories are relevant to the generic definition of CityWalks in this research where Public Places are the areas owned publicly with regular users having a sense of ownership, such as neighborhood parks, sporting places, and town squares, and Public Spaces includes publicly owned areas with passers-by, like boulevards, open malls, piazzas, and large urban parks. Moreover, urban open spaces can be categorized into eight types, as defined by Farag in a 2015 study. Farag describes urban open spaces as all types of spaces between buildings in the town accessible to the public and hence he categorized them as follows.

- a. Water bodies: Natural and artificial bodies like lakes or rivers, providing habitats for diverse wildlife and recreational opportunities.
- b. Preservation areas: Natural spaces set aside for recreational use.
- c. Open areas: Available spaces for recreational activities.
- d. Sports fields: Designated areas for sports activities.
- e. Children's play areas: Specifically, designed and equipped spaces for children's recreation.
- f. Plazas: Open spaces serving civic and commercial purposes.
- g. Squares: Open areas for civic activities, strategically located at intersections of significant thoroughfares.
- h. Boulevards: Connecting main spaces and regarded as spaces in themselves.

#### **Urban open space design typologies—contemporary local context in the UAE**

In the context of the local environment, the classification of urban design spaces follows the framework outlined in the book "Public Design Realm." This framework categorizes these spaces into twenty types, which are grouped into four distinct categories. The classification is based on the concept of the public realm, which encompasses all exterior places, linkages, and built form elements that are physically and/or visually accessible, regardless of ownership. The public realm extends beyond traditional notions of public spaces and includes a wide range of elements. Examples of these elements include streets, pedestrian ways, bikeways, bridges, plazas, nodes, squares, transportation hubs, gateways, parks, waterfronts, natural

features, view corridors, landmarks, and building interfaces. The inclusion of these diverse elements recognizes the importance of creating a cohesive and accessible urban environment that promotes connectivity, social interaction, and a sense of place. By considering the various components of the public realm, urban designers and planners can shape the physical and visual character of a city, creating inviting and functional spaces for residents and visitors alike (Abu Dhabi Public Design Realm Book 2012).

The local classification based on Abu Dhabi Public Design Realm Book includes the following four categories:

1. **Parks:** This category encompasses public spaces within a community that are designated for recreational use. Parks may include natural areas, such as mountain ridges and wadi systems. Notable examples of parks in the local context include Baraha, community park, heritage park, Meyadeen, and oasis park.
2. **Streetscape:** streetscape refers to the visual elements that contribute to the character of a street, encompassing various components such as the road, sidewalk, street furniture, trees, and open spaces. The combination of these elements shapes the overall ambiance of the street. Local streetscape examples

include Sikka (paved pedestrian path), transit corridor, ceremonial route, and Mushtarak.

3. **Waterfronts:** this category refers to the land areas adjacent to water bodies, encompassing the entire waterfront area. Examples of waterfront spaces in the local context include waterfront access, preservation area, recreation area, and urban area.
4. **Public Places:** public places encompass all open areas within a community that are visible to the public and intended for public gathering or assembly. These spaces often possess distinctive features and serve as landmarks or cultural destinations. Examples of public places in the local context include heritage features, Souq, plaza, landmark destinations, and cultural destinations.

Table 1 below illustrates the first component of the initiated conceptual framework of the study about the urban open space design typologies globally and locally, as extracted, combined, and summarized from literature review.

**Urban morphological configuration**

Urban morphology, which is the study of spatial form in cities, offers valuable insights into the arrangement and structure of buildings and public spaces. Urban

**Table 1** Urban open space typologies based on the global and local urban context

Urban open space design typologies					
	Global context		Local context		
1	Positive Spaces	Natural urban spaces	Parks	Natural areas	
2		Semi-natural urban spaces		Mountain ridges	
3		Civic spaces		Baraha	
4		Public open spaces		Community Park	
5	Ambiguous Spaces	Interchange spaces		Heritage Park	
6		Internalized 'public' spaces		Meyadeen	
7		Retail spaces		Oasis Park	
8	Public Places	Neighborhood parks	Public Places	Heritage features	
9		Sporting places		Souq	
10		Town squares		Plaza	
11		Plazas		Landmark destinations	
12		Children's play areas		Cultural destinations	
13		Squares		Waterfronts	Waterfront access
14		Water bodies		Recreation area	
15	Preservation areas		Recreation area		
16	Waterfront area		Urban area		
17	Public Spaces	Open malls	Streetscape	Sikka	
18		Large urban parks		Transit corridor	
19		Boulevards		Ceremonial Route	
20		Piazza		Mushtarak	

morphology configuration involves treating the city as a composite of different layers of information, including building footprints, types, functions, and street networks. These layers are selected based on specific analytical objectives (Pafka 2020; Alawadi 2018). The field of urban morphology encompasses researchers from diverse backgrounds, contributing to a multidimensional understanding of urban form. However, this diversity has also given rise to various theoretical perspectives, influenced by different epistemological orientations (Gauthier and Gilliland 2006). Mapping morphology is the process of visually representing the urban form through thematic layers, such as built-up spaces, building heights, land uses, pedestrian areas, and road networks. This approach enables the differentiation of various patterns within urban spaces and serves as a foundation for behavioral mapping (Kyriazis et al. 2019). Urban morphology serves as an abstract depiction of physical reality, reflecting shapes, properties, and categories, often conveyed through map representations (Marshall 2011). In essence, urban morphology can be described as encompassing the physical attributes of settlements, including their shape, size, density, and layout (Williams 2014). As defined by M. Elzeni et al. (2021), urban morphology consists of four primary components: streets, plots, building blocks, and open spaces.

One aspect of urban morphological configuration is the configuration of street networks. It is closely linked to population density within urban environments. It is observed that areas with higher population density tend to exhibit traditional irregular patterns. Shorter blocks and streets with diverse functions and characteristics are key components in restoring the traditional urban fabric (Barrington-Leigh 2019; Jacobs 1961). Street networks are diverse and can be categorized into several patterns. These patterns include the regular grid, and irregular grid layouts (Barrington-Leigh 2019). Alternatively, some street networks follow an orthogonal grid pattern, as highlighted by Ge and Han (2020). Further contributes to this classification introduce several distinct street network patterns. these patterns encompass rectangular patterns, radial pattern, hexagonal pattern, and linear patterns (Rahman 2022). These classifications offer a comprehensive framework for understanding the diverse nature of street networks within urban areas.

Another aspect of urban morphological configuration is the theory of ground figure, which examines the textural relationship between building forms and open spaces. This method helps identify the texture and patterns of urban spatial configurations, revealing architectural differences in urban activities (Permana et al. 2019). Two main types of urban form exist: organic and planned. Organic urban form characterizes cities that developed

without a central plan, often evolving over many years through gradual construction and limited planning. While some cities were planned before the Industrial Revolution, today, most cities have a planned urban form to varying extents. This planning can involve architects and urban designers creating overarching plans or governments implementing policies to guide development (Cataliotti 2022; Boeing 2019). Furthermore, the figure-ground map illustrates the level of compactness within the urban area. The concept of compact development is widely advocated as a critical factor in promoting the sustainable growth of cities. Hence, evaluating the current level of urban compactness is of great importance in directing future urban development (Hamidur Rahman et al. 2022). The degree of compactness in urban areas can vary from compacted 'dense' to semi-compacted, or uncompact 'loose' urban areas. Additionally, the figure-ground map is employed to identify various building shapes. Building forms can vary significantly depending on their intended use, whether residential, commercial, institutional, or mixed-use, resulting in diverse shapes such as U-shapes, L-shapes, T-shapes, X-shapes, C-shapes, closed courtyards, open courtyards, linear, parallel, square, and rectangular configurations (Merlier et al. 2018; Yazıcı and Tore 2014).

On the other hand, land use mapping is also considered as part of the urban morphological configuration. Land use reflects the location and the degree of spatial accumulation of activities (Raza 2022). Land use can be categorized into various types, including residential, commercial, industrial, recreational, institutional, utility lands, transportation and communication, Mixed-use, and water bodies (Balasubramanian 2015). Moreover, shading analysis is essential, especially in the context of the UAE's climate. Google Earth Pro satellite imagery reveals the shading elements integrated into building designs. Various types of roof shading elements are utilized, including glass reinforced polymer, glass canopy, cantilever shade canopy, fabric canopy roofing, shade sails, custom shade, mesh canopy, and perforated metal canopy (Different Types of Canopy Roofing 2023).

In this study, geospatial mapping techniques will be employed to analyze the three selected CityWalk case studies in Dubai in terms of their urban morphological configuration, as summarized in Table 2, drawing upon previous literature. The physical form and spatial location of these case studies will be explored to identify them based on figure-ground relationships, street networks, and aerial imagery. In addition to analyzing the use of land in each case. This morphological analysis enhances our understanding of the dynamics associated with different forms of CityWalks. Geographic Information System (GIS) tools will be utilized to classify the urban fabric into distinct patterns

**Table 2** The principles and variables of Urban Morphological Configuration

Urban Morphological Configuration		
	Principles	Variables
1	Street networks	Regular grid Irregular grid Orthogonal grid Dead-end pattern Radial pattern Linear pattern
2	Urban form	Organic urban form Planned urban form
3	Degree of compactness	Compacted 'dense urban area Semi-compacted urban area Uncompacted 'loose' urban area
4	Building shape	U-shape L-shape T-shape Closed courtyards Open courtyards Linear Square
5	Land use	Residential Commercial Industrial Recreational Institutional Utility land Transportation & communication, Water bodies Mixed-use
6	Shading	Glass reinforced polymer Shade sails Custom shade Mesh canopy Perforated metal canopy

based on these urban form characteristics. The application of GIS enhances the accuracy and efficiency of the analysis, enabling meaningful insights to be derived from the spatial data. By employing mapping morphology techniques and geospatial tools, this study aims to contribute to the knowledge and understanding of CityWalks in Dubai. The analysis will shed light on their design, functionality, urban form, and spatial relationships within the urban fabric.

### Selected CityWalks case studies in Dubai

In this section, we will focus on the analysis of three selected cases of three different developments located within the emirate of Dubai. These cases have been

chosen based on their significance in the urban landscape and will be examined in terms of their location within the city, design style, unique characteristics, and the people who utilize these spaces. These cases are drawn from a pool of over 30 CityWalk developments that have been established in the UAE since 2010. Notable examples include Ajman Heritage District, Marsa Ajman, Al Zawra, Al Jada, Al Majaz Waterfront, Al Qasba Canal, Al Mamsha, HPZ District, Heart of Sharjah, JBR Walk, City Walk, La Mer, Marsa Ajman, The Pointe, and Al Seef, among others. By analyzing these cases, various aspects of urban design will be gained. Through an exploration of their location, architectural style, distinctive features, and the activities they facilitate, we can gain a comprehensive understanding of how these CityWalks contribute to the urban fabric and enhance the overall urban experience in Dubai.

### City Walk

City Walk, an urban precinct located in the Al Wasl district of Dubai at the junction of Al Wasl and Al Safa Road on Sheikh Zayed Road, is a vibrant and partially pedestrianized shopping and leisure neighborhood. The Al Wasl district, situated in a central area of Dubai, is surrounded by various neighboring districts, including Jumeirah, Downtown Dubai, Business Bay, and Al Satwa, which contribute to the overall dynamic nature of the urban landscape (City Walk 2023). Figure 3 showcases the location of City Walk, as exported from Google Earth Pro, providing a visual representation of its positioning.

The development of City Walk was carried out by Meraas, owned by the Merex Investment Group, and was guided by the architectural expertise of Dewan Architects and Engineers. City Walk opened its doors in 2017, offering a diverse range of amenities and experiences (Dubai Guides 2023). Encompassing a substantial land area of over 4,662,900 square meters, City Walk provides ample space for its various facilities and attractions (GeoDubai 2023). Within this expansive precinct, visitors can discover an array of international retail outlets, upscale fresco dining destinations, coveted residential properties, automobile showrooms, office spaces, and several prominent establishments, including Talabat's regional headquarters, Canadian University Dubai, The Green Planet, Roxy Cinemas, and hotels (Urban Destination in Dubai 2023).

### The Walk JBR

The Walk at JBR is a prominent urban precinct situated in Marsa Dubai, known for its captivating ambiance and diverse range of amenities. It was developed by Dubai Properties Group. This mile-long avenue, adorned with palm trees on both sides, offers an array of shops and

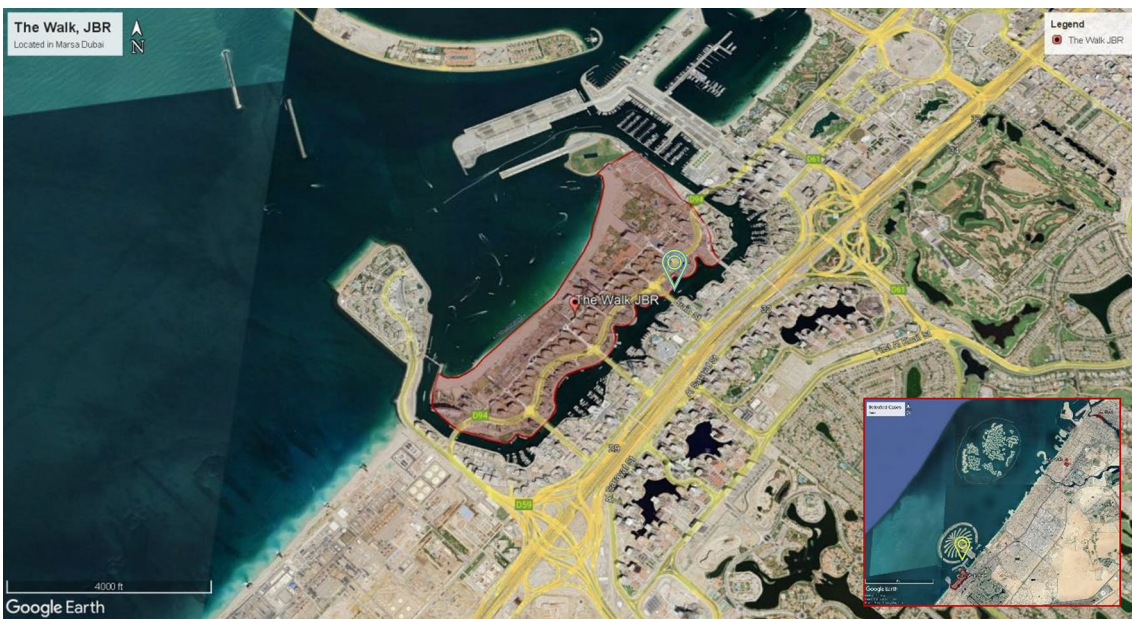




**Fig. 3** City Walk location from Google Earth Pro, it is located in Al Wasel district at the junction of Al Wasel and Al Safa Road on Sheikh Zayed Road (Source: Author)

restaurants to cater to its visitors. Plazas and arcade doorways enhance the streetscape, creating a vibrant atmosphere for pedestrians and adding to the appeal of the area (The Walk at JBR 2023). Figure 4 showcases the location of The Walk, as also exported from Google Earth Pro, providing a visual representation of its positioning. Hosting multiple events and festival venues, The

Walk has become a vibrant cultural hub. It extends alongside six towering structures, including Shams, Amway, Rimal, Bahar, Sadaf, and Murjan, with Shams positioned on the east side and Murjan on the west side (JBR Walk 2022). The precinct also boasts various dining establishments, enriching the experience for visitors. Most outlets along The Walk are conveniently located at ground



**Fig. 4** The Walk location from Google Earth Pro, it is located in in Marsa Dubai, along King Salman bin Abdulaziz Al Saud Street (Source: Author)

level, offering easy access to the vibrant strip. Some establishments can also be found on elevated plazas nestled between the towers. Additionally, the beach area lies between The Walk and the sea, housing an assortment of restaurants, shops, and a cinema, further enhancing the appeal of this vibrant destination (The Walk Dubai JBR 2020).

Marsa Dubai district, where The Walk at JBR is located, is surrounded by several neighboring districts that contribute to the overall urban environment. These districts include Dubai Marina, Palm Jumeirah, Knowledge Village, Al Sufouh, and Al Barsha, each offering unique characteristics and amenities (The Walk at Jumeirah 2023). The interconnected network of these districts creates a vibrant and diverse urban landscape, providing visitors with a range of experiences to explore. Covering a substantial land area of over 2,675,500 square meters, The Walk at JBR stands as a significant landmark within the Marsa Marina district (GeoDubai 2023).

### Al Seef

Located along the picturesque shoreline of Dubai Creek, Al Seef is a vibrant waterfront promenade that seamlessly blends the charm of the past with the amenities of the present (Al Seef 2022). This captivating destination encompasses two distinct zones: an old-world heritage area and a modern section featuring malls, hotels, and restaurants. The historical fabric of Al Seef is evident in its narrow traditional winding alleyways known as “Sikah” and the iconic wind catchers, locally referred to as “Barjeels” (Awad et al. 2022). Situated on the shores of Dubai Creek, Al Seef holds significant cultural and historical value as it played a pivotal role in the city’s development as a trading port, dating back to the year 1587 (Ezzeddine and Kashwani 2019).

Al Seef is meticulously designed to reflect the essence of Dubai’s rich heritage and embrace its Emirati culture. The renowned property developer, Meraas, sought to create a harmonious blend of contemporary elements and nostalgic influences from the mid to late 1900s (Assi 2020). This innovative approach aims to bring together the cultural legacy of Dubai with the conveniences and aspirations of modern-day living. The architectural design of Al Seef draws inspiration from the old-fashioned charm of Dubai’s historical era. With its narrow corridors, bustling market stalls, and buildings adorned in an old-style finish, Al Seef captures the spirit of Old Dubai while offering a contemporary experience (Maspul 2021). Situated adjacent to Bur Dubai and near Port Rashid, Al Seef stands as a testament to the city’s commitment to preserving its cultural heritage and showcasing its unique character. The development of this waterfront destination adds to the tapestry of Dubai’s

diverse urban fabric and raises the heritage value (Al Seef 2022). Figure 5 showcases the location of Al Seef in Al Hamriya, as also exported from Google Earth Pro, providing a visual representation of its positioning.

### Results

In this section, we will discuss and analyze the urban design typology of the selected case studies, followed by an exploration of the urban morphological configuration of these CityWalks in Dubai. The analysis will provide valuable insights into the combination of global and local influences on the urban design typologies and the variations in street configuration, building typologies, and planning compactness among the case studies. By exploring both the design characteristics and the spatial arrangement of each CityWalk, we can gain a comprehensive understanding of their unique urban fabric and character, contributing to the knowledge base of urban design practices and inspiring future developments that harmoniously blend global and local influences to create vibrant and engaging urban environments.

#### Analysis of urban design typology of the selected case studies

This section aims to discuss and analyze the urban design typology of the selected cases, drawing upon literature from global and local sources, as well as data collected through site observations. Each case study reveals a unique and complex combination of global and local typologies that contribute to the emergence of the CityWalks. By exploring the design characteristics and elements of each case, we can gain a deeper understanding of how global design principles have been integrated with local cultural and environmental contexts. The analysis of CityWalks in Dubai provides valuable insights into the urban design typologies that are a combination of both the global and local contexts compared with the observed sites of the cases.

#### City Walk

Through the analysis of collected data from secondary resources and on-site observations, it becomes evident that City Walk case exemplifies a complex combination of urban design typologies from both the global and local contexts. In the global context, City Walk in Dubai exhibits elements of positive spaces by providing civic spaces and public open spaces that are accessible to the public. These areas serve as meeting points, recreational spaces, and gathering spots, contributing to the overall vibrancy and liveliness of the urban environment. Moreover, City Walk also falls under the category of ambiguous spaces, comprising urban areas considered as interchange spaces used by pedestrians to move from one neighborhood



**Fig. 5** City Walk location from Google Earth Pro, it is located in Al Wasel district at the junction of Al Wasel and Al Safa Road on Sheikh Zayed Road (Source: Author)

to another. It also includes retail spaces, which are also considered part of the ambiguous spaces. Although some spaces fall under more than one category, especially the main space of City Walk, which is considered as a center connecting all spaces. Figure 6 visually depicts the different subcategories within the global context that various spaces in City Walk can fall under, highlighting the diversity and complexity of the urban design typologies present. The incorporation of these distinct typologies within City Walk contributes to the overall diversity and richness of the urban experience offered to visitors and residents alike.

When considering the local context, City Walk incorporates elements of the streetscape category, functioning as a vital transit corridor that seamlessly connects different areas of the city and facilitates pedestrian movement. The streetscape design boasts well-designed sidewalks, pedestrian-friendly pathways, thoughtfully placed street furniture, and beautifully landscaped elements, all contributing to a delightful walking experience. Moreover, City Walk holds the distinction of being a prominent public space, renowned for its iconic status as a popular landmark. The inclusion of a plaza within City Walk further enhances its public nature, serving as a vibrant focal point for public gatherings, cultural events, and recreational activities. This dynamic plaza acts as a social hub, providing a welcoming space for people to relax, socialize, and indulge in a variety of entertainment options. Figure 7 visually portrays the diverse subcategories

within the local context of City Walk, showcasing how various spaces can encompass typologies from both the global and local contexts. Moreover, the location of City Walk within the city allows for more diversified facilities, such as institutional and residential, rather than being limited to commercial use only. This includes the Canadian University and the housing apartments, as shown in Fig. 8.

The urban layout of City Walk incorporates various design typologies, drawing from both global and local influences, as demonstrated in Fig. 9. Its strategic location within the inner urban context designates it as an interchange and transit space, owing to its high level of connectivity with the surrounding neighborhood. The Middle Plaza serves as a prominent landmark within the area, providing visitors with multiple perspectives to enjoy. The inclusion of diverse facilities such as a university, hotels, mall, Musalla, and residential areas enhances the versatility and appeal of City Walk. The plaza is centrally located and connected to the transit and interchange spaces, which encompass public open areas featuring landscaping, cafes, and restaurants that are publicly accessible. This comprehensive integration of design elements firmly establishes City Walk as a distinguished urban destination.

#### **The Walk JBR**

The comprehensive analysis of The Walk JBR, as the second case study, revealed a compelling combination of



**Fig. 6** City Walk exemplifies a complex combination of urban design typologies from the global context: **a** Public Spaces: Open Mall; and Ambiguous Spaces: Retail Spaces; **b** Ambiguous Spaces: Interchange Space; **c** Public Spaces: Plaza, Civic Space; and Positive Spaces: Public Open Space; **e** Positive Spaces: Public Open Space; and Public Spaces: Piazza; **d** a, b, c, and e location within City Walk map (Source: Author)

urban design typologies that combine both global and local contexts. On a global scale, The Walk exemplifies the essence of positive spaces, with a pronounced emphasis on incorporating civic areas and natural elements into its design. Situated along the picturesque Jumeirah beach, this urban precinct thoughtfully embraces its natural surroundings, providing visitors with an enchanting environment for leisure and recreation. The thoughtful inclusion of natural elements not only amplifies the overall aesthetic appeal but also contributes to a sense of tranquility within the urban fabric.

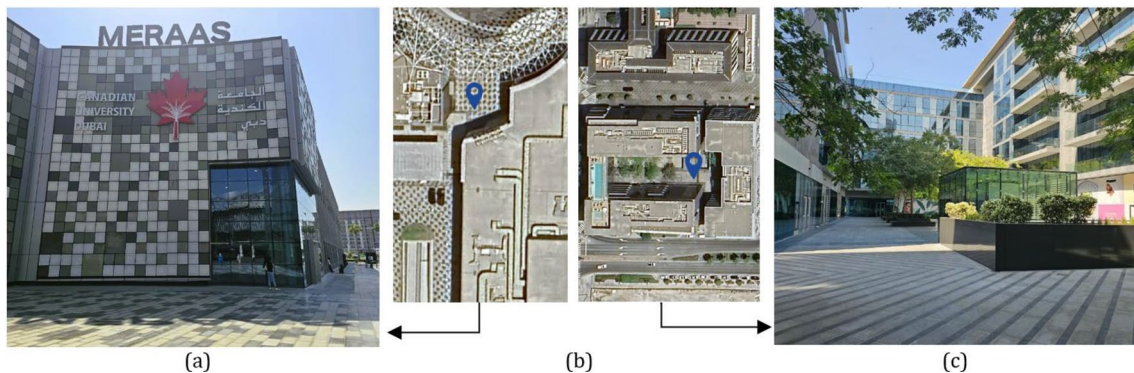
As shown in Fig. 10, the visual representation underscores the global design characteristics that define The Walk, showcasing its commitment to civic spaces and natural areas. Moreover, The Walk seamlessly integrates aspects of ambiguous spaces, serving as interchange areas and retail spaces housing numerous markets. This distinctive urban composition fosters a diverse range of experiences for visitors, making it a dynamic and engaging destination. The Walk is notable for including sports facilities and kids' play areas, making it a versatile and family-friendly entertainment hub. Recognizing JBR Walk as a Boulevard solidifies its status as a key landmark in Dubai, boosting its appeal as a top tourist spot. The

mix of design, nature, and recreation makes The Walk significant in the cityscape, drawing both residents and visitors to its charm.

Exploring the Walk within the local context reveals notable similarities with the earlier-discussed CityWalk case study, particularly in the presence of *Mushtarak* spaces. *Mushtarak* refers to shared spaces that accommodate both pedestrians and vehicles, and it is a recurring feature across various CityWalk developments in the UAE. This design approach enhances connectivity and encourages pedestrian movement, contributing to the overall urban fabric of The Walk. Furthermore, The Walk falls within the waterfront category due to its strategic location along the seafront. This prime positioning grants visitors' scenic views and convenient access to the beach area, making it an attractive destination for leisure and recreation. Moreover, it is also considered a park due to its inclusion of natural areas. Additionally, The Walk effectively functions as a public space, drawing the attention of a diverse range of tourists and locals seeking to enjoy the sea view and engage in various activities. Its status as a prominent landmark destination is further solidified by the inclusion of a lively plaza, which serves as a focal point for social



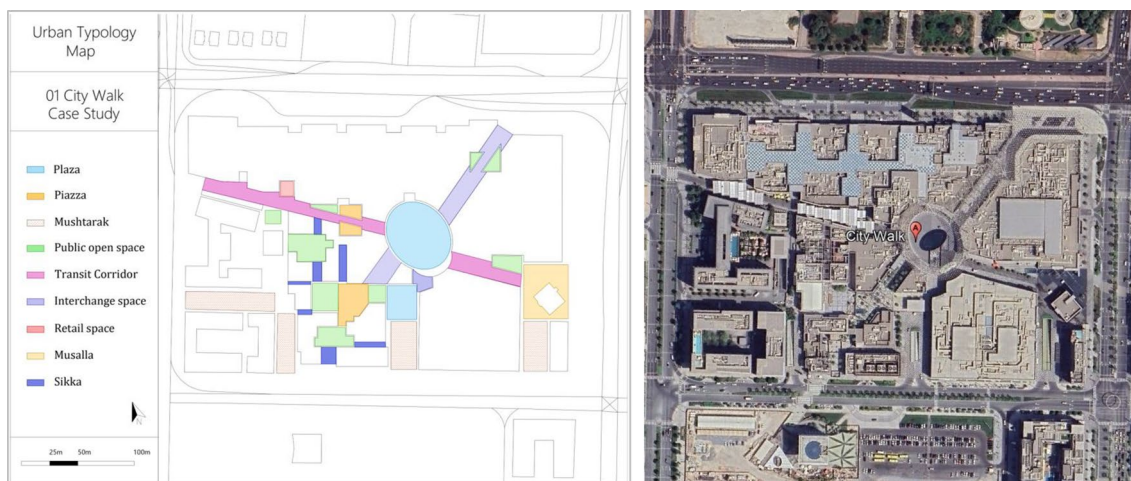
**Fig. 7** City Walk exemplifies a complex combination of urban design typologies from the local context: **a** Public Places: Souq; Streetscapes: Transit corridor **b** Public Places: Plaza; **c** Streetscapes: Mushtarak **e** Waterfronts: Recreation area; Public Spaces: Landmark Destination; **d** a, b, c, and e location within City Walk map (Source: Author)



**Fig. 8** City Walk’s location expands its offerings beyond commercial facilities, encompassing additional amenities not accounted for in the global or local context: **a** Institutional Facilities; **c** Residential Facilities; **b** a, and c location within City Walk map (Source: Author)

gatherings, cultural events, and recreational activities. The vibrant and dynamic atmosphere created by the plaza enhances the overall urban experience, reinforcing The Walk’s position as a vibrant and engaging urban precinct. In addition, Fig. 11 shows the diverse subcategories within the local context of The Walk JBR.

The Walk JBR showcases a blend of both global and local urban design typologies, as shown from the previous on-site images. Its prime location by the sea allows for the creation of recreational spaces within the open public spaces. Additionally, there is a boulevard that is consider also as “Mushtarak” space that accommodates



**Fig. 9** City Walk case exemplifies a complex combination of urban design typologies from both the global and local contexts such as including plaza, piazza, Mushtarak, public open space, transit corridor, interchange space, retail spaces, Musalla, and Sikka (Source: Author)



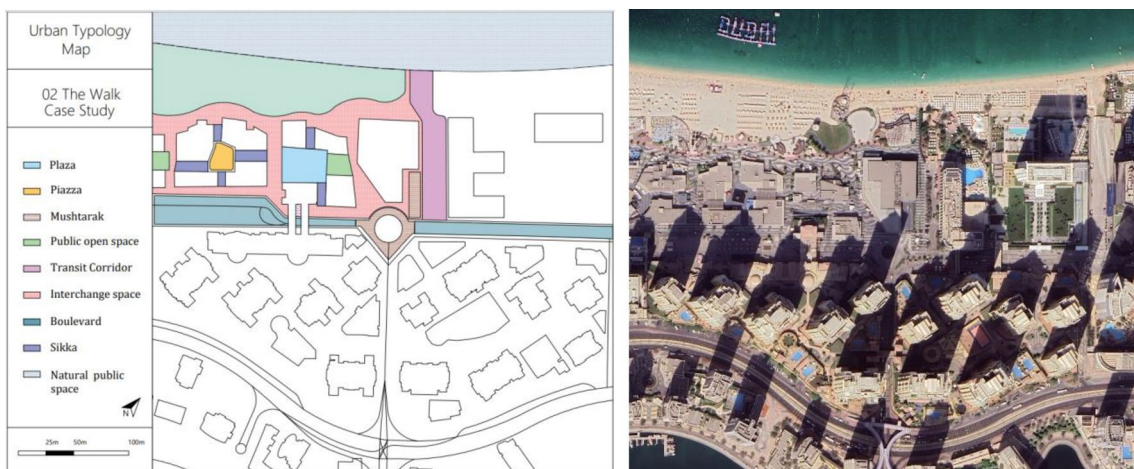
**Fig. 10** The Walk JBR exemplifies a complex combination of urban design typologies from the global context: **a** Positive Spaces: Open Public Space; **b** Ambiguous Spaces: Interchange spaces; **c** Public Spaces: Boulevards; **e** Public Spaces: Piazza; Public Places: Square; Ambiguous Spaces: Retail spaces; **d** a, b, c, and e location within The Walk map (Source: Author)

both pedestrians and cars, extending along the entire JBR Walk area. This area is designated as mixed-use, encompassing residential spaces, hotels, offices, retail outlets, as well as private and public spaces. Our focus is on the open public spaces which are primarily

situated on the left side facing the sea. These areas feature plazas and piazzas, surrounded by publicly accessible retail spaces, as shown in Fig. 12. The transit corridor serves as a central pathway connecting The Walk street directly to the JBR beach. On the right and



**Fig. 11** The Walk exemplifies a complex combination of urban design typologies from the local context: **a** Streetscapes: Mushtarak; **b** Public Spaces: Recreation Area; Waterfronts: Waterfronts Access **c** Public Space: Souq; **E** Public Space: Landmark Destination; Streetscape: Transit Corridor; **d** a, b, c, and e location within The Walk map (Source: Author)



**Fig. 12** The Walk case exemplifies a complex combination of urban design typologies from both the global and local contexts such as including plaza, piazza, Mushtarak, public open space, transit corridor, interchange space, boulevard, Sikka, and natural public spaces (Source: Author)

down side of the sea in Fig. 12, where the open spaces are not identified and colored on the map, are open private spaces exclusively accessible to residents or hotel guests.

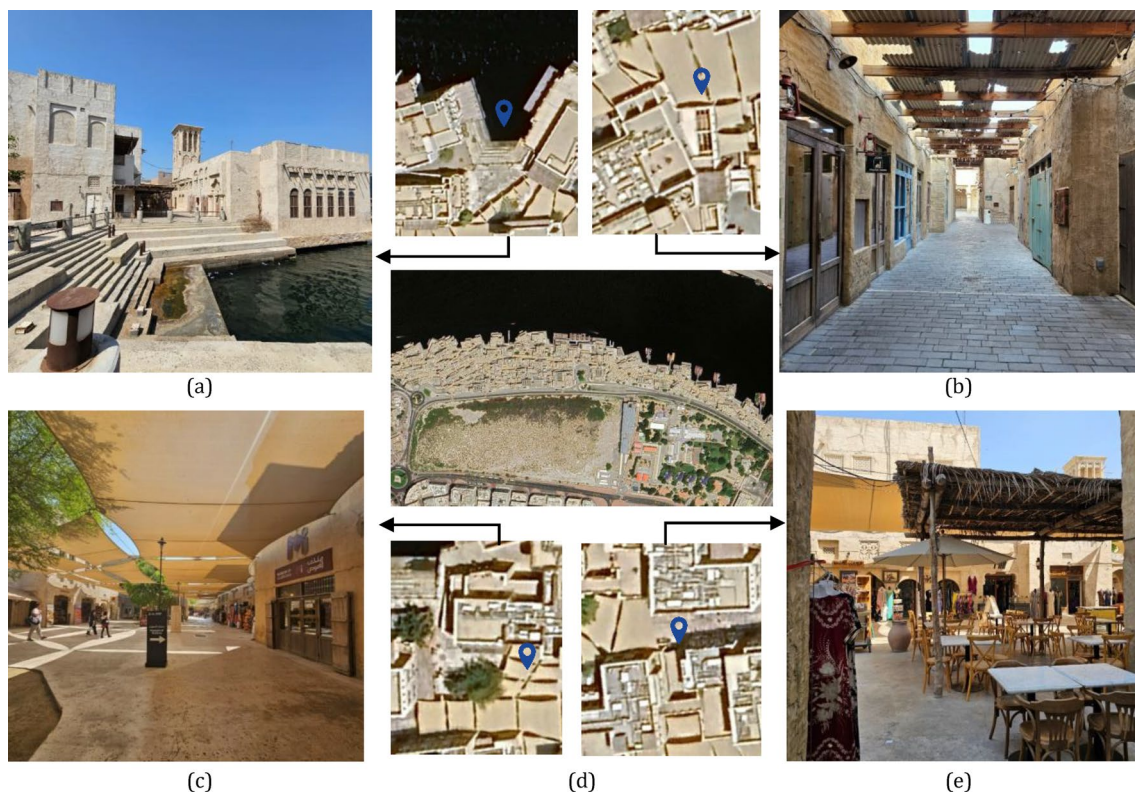
### Al Seef

The analysis of Al Seef, the final case study, reveals a harmonious blend of global and local urban design typologies. Emphasizing its strong connection to the UAE's rich heritage, Al Seef showcases elements from both global

and local contexts, with a greater emphasis on the local aspects. From a global perspective, as shown in Fig. 13, Al Seef's urban design types align well with the positive space category, characterized by open areas easily accessible to the public. These civic spaces embody a traditional design approach strategically placed along the waterfront, enhancing Al Seef's natural urban character. These open spaces provide opportunities for relaxation and socialization, encouraging engagement with the surrounding environment. The inclusion of traditional design elements in these spaces reflects the global trend of valuing open and inviting public areas, promoting community interaction and well-being. Furthermore, specific sections within Al Seef show characteristics of ambiguous spaces, including interchange spaces and retail areas reminiscent of traditional small shops. By combining a modern approach similar to CityWalk yet rooted in traditional design principles and incorporating Emirati-themed brands, Al Seef achieves a vibrant mix that attracts tourists, making it a widely recognized and popular tourist destination.

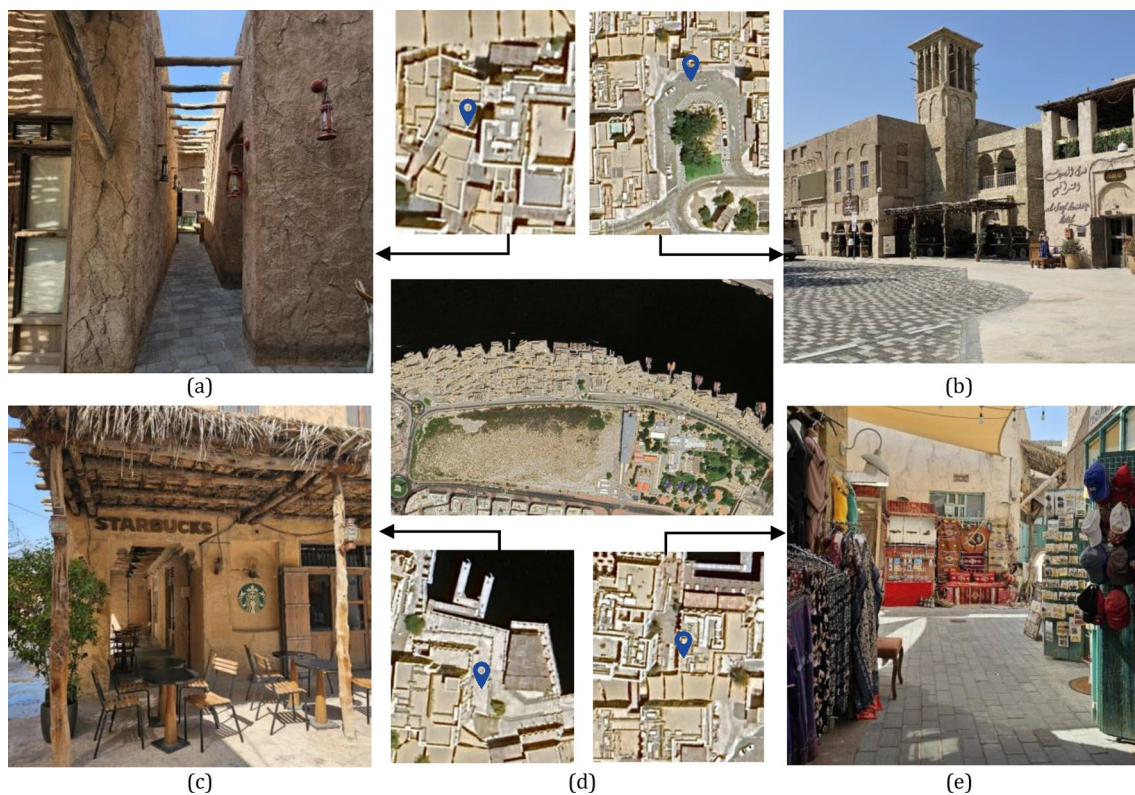
In terms of the local context as shown in Fig. 14, Al Seef's design places a strong emphasis on traditional typologies, reflecting the historical significance of its

location. The prominent use of Sikka, characterized by narrow winding alleyways, not only serves as a connecting element within the spatial typology but also represents a historical urban design feature deeply rooted in the UAE's heritage. These traditional alleyways were historically designed to provide shelter from the intense heat and sun, as well as to facilitate social interactions and community cohesion. The integration of Sikka within Al Seef creates a unique pedestrian experience, allowing individuals to wander and explore the various spaces that evoke a sense of nostalgia and authenticity. This traditional approach to design resonates with the old architectural charm that has been popular in the UAE for centuries, reflecting the historical evolution of urban planning and design in the region. It gives a sense of identity to the place, connecting residents and visitors to the cultural heritage and traditions of the Emirati people. Furthermore, Al Seef features elements akin to parks, such as Meydan and Baraha, which offer spaces for leisure and recreation. These open green spaces provide opportunities for residents and visitors to connect with nature, relax, and engage in outdoor activities. The inclusion of parks within the urban fabric of Al Seef adds to the overall attractiveness and livability of the destination.



**Fig. 13** Al Seef exemplifies a complex combination of urban design typologies from the global context: **a** Positive Spaces: Natural Urban Space; Water Bodies: Waterfront Area **(b)** Ambiguous Spaces: Interchange Space; **c** Ambiguous Spaces: Retail Area; Public Places: Plaza; **e** Ambiguous Spaces: Retail; Public Spaces: Piazza; **d** a, b, c, and e location within Al Seef map (Source: Author)





**Fig. 14** Al Seef exemplifies a complex combination of urban design typologies from the local context: **a** Streetscapes: Sikka; **b** Parks: Meydan; Public Places: Landmark Destinations **(c)** Public Spaces: Cultural Destination, Heritage Features; **e** Public Places: Souq; **d** a, b, c, and e location within Al Seef map (Source: Author)

The location of Al Seef along the waterfront enhances its urban locale and adds to the allure of the place. The historical significance of waterfront areas in the UAE can be traced back to the country's historical reliance on sea trade and transportation. The positioning of traditional urban areas along the coast allowed for easy access to shipping routes and facilitated commercial activities. This historical context contributes to the unique charm and attractiveness of Al Seef's waterfront environment, providing residents and visitors with opportunities to enjoy scenic views and engage with the seafront ambiance.

The incorporation of traditional elements into the planning design of Al Seef not only gives a sense of nostalgia but also underscores the city's dedication to preserving its cultural heritage while embracing modern urban development. Al Seef showcases a seamless integration of both global and local urban design typologies. This includes traditional Emirati design features like Al Hosh, Al Saha, Al Baraha, and Al Meydan, all connected through Sikkas. Additionally, the central linear space of Al Seef hosts a Souq, with a Plaza located nearby to enhance its identity. Furthermore, the transit corridor and interchange spaces are thoughtfully integrated into the layout, connecting

the main spaces. Moreover, Al Seef street functions as a "Mushtarak"—a paved shared space accommodating both cars and pedestrians, as depicted in Fig. 15.

#### Analysis of urban morphological configuration of the selected case studies

The objective of the mapping morphology analysis was to gain insights into the six various principles of the urban morphological configuration which are street networks, urban form, degree of compactness, building shape, land use, and shading elements among the case studies. To achieve this, a comprehensive data acquisition process was undertaken, utilizing various resources and software tools. The primary dataset was obtained from GeoDubai, which involved a request letter issued by UAE University to the Geo Department of Dubai Municipality. The collected data consisted of shape files accompanied by attribute tables containing relevant details. However, it was noted that certain data was missing and needed to be completed before proceeding with the analysis. To address the missing data, OpenStreetMap was utilized as a valuable resource. An.OSM file was sourced from OpenStreetMap, which contained the missing data.



**Fig. 15** Al Seef case exemplifies a complex combination of urban design typologies from both the global and local contexts such as including Sikka, Al Hosh, Al Saha, Al Baraha, Al Meydan, Souq, plaza, piazza, Mushtarak, public open space, transit corridor, interchange space, and natural public spaces (Source: Author)

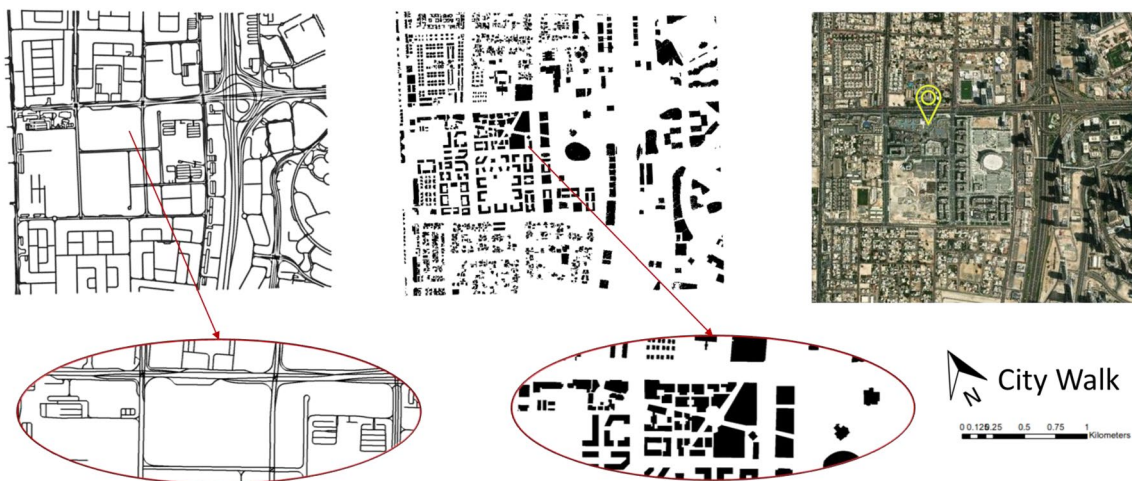
However, this file could not be directly opened using GIS software. The attribute table within the OSM file required manual completion within ArcMap at a later stage. To process and analyze the data effectively, QGIS software was employed. The exported data from OpenStreetMap, in the form of an OSM file, was imported into QGIS. Each layer within the file was then converted into shape files and categorized into polylines, lines, polygons, and dots based on their respective spatial characteristics. In addition to the primary data from GeoDubai, the exported data from QGIS was integrated into the main file using GIS software, specifically ArcMap. Prior to integration, the shape files were rescaled to align with the main data from GeoDubai. AutoCAD software facilitated this process, ensuring the consistency and compatibility of the data.

To finalize the mapping morphology configuration, several steps were undertaken. First, the building layer was selected, and its color was changed to black to represent the building mass and void for the figure-ground map. Subsequently, the layer was exported. Similarly, the road layer was selected, and its color was changed to black before being exported. A standard legend was applied to the land use map for each case. The shading elements' types were also included in the urban morphological mapping analysis and represented in the shading map. These actions ensured that the necessary data preparations and transformations were performed, laying the groundwork for the subsequent mapping morphology analysis. The analysis revealed several distinct urban patterns within the CityWalks in Dubai, each closely related to the specific locations of the selected cases. The following sections provide a detailed discussion of the urban

morphological features observed within each case study, shedding light on their unique characteristics and design elements.

#### **City Walk**

The analysis of City Walk case demonstrates a regular grid design pattern that defines the city walk area in terms of the street network that seamlessly integrates with the surrounding neighborhood as shown in Fig. 16. Positioned within the urban context, City Walk places a strong emphasis on mobility and integration with the local area, catering to the diverse transportation needs of its users, including private cars, public transit, and pedestrian access. However, the urban form of City Walk case followed the planned urban design that is iconic. The spatial arrangement of City Walk in Al Wasel showcases a harmonious alignment with the neighboring districts. The organized layout exemplifies how the surrounding environment has influenced the design, ensuring a seamless blending of City Walk with its surroundings while preserving its unique character. This approach facilitates a smooth transition between City Walk and the adjacent areas, creating a cohesive urban fabric that promotes connectivity and accessibility. Furthermore, the examination of building compactness within City Walk reveals a thoughtful and purposeful approach to design. The buildings are deliberately designed to be semi-compact urban area, optimizing land use and promoting efficient space utilization. The design strategy employed in City Walk demonstrates a balanced approach to urban development, considering both functional and aesthetic considerations. By prioritizing semi-compact building designs and integrating ample open spaces, City Walk



**Fig. 16** Mapping morphology of City Walk in Al Wasel using GIS shows regular street network patterns, semi-compacted area with planned urban form that is well-connected to the neighborhood (Author)

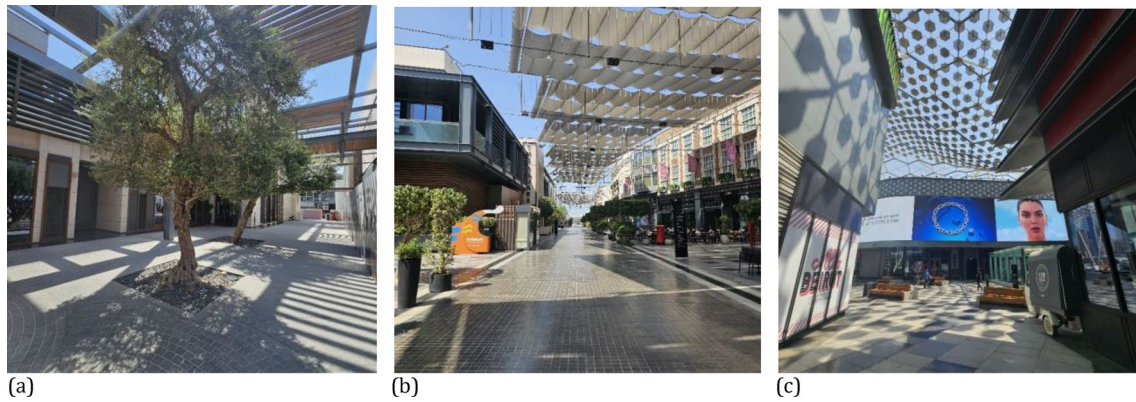
achieves a harmonious balance between built form and natural elements.

The City Walk case includes a variety of building shapes that are connected with the function of each building. For example, hotels and residential areas have U-shaped buildings with open courtyard designs, while the university and the cinema follow approximately square and triangular shapes. Furthermore, the mall has a unique design as a bulk building composed of small squares connected through closed corridors, as shown in Fig. 17a. Moreover, the location of City Walk, surrounded by an urban context, adds more variety to land use spaces. It contains a university and a mosque as institutional spaces, hotels and offices as

mixed-use spaces, and a mall and outdoor retail areas as commercial spaces, as shown in Fig. 17b. In terms of shading, the City Walk case contains a diverse array of shading strategies; however, it does not completely cover all open spaces and boulevards, as shown in Fig. 17c. The shading elements in this instance serve a dual purpose, acting as both functional coverings and design features, prioritizing aesthetics alongside practicality. The approach leans towards enhancing the visual appeal rather than solely focusing on shielding areas from direct sunlight. This is exemplified by the inclusion of three distinct types of shading: custom shading, shade sails, and perforated metal canopy, as illustrated in Fig. 18.



**Fig. 17** Mapping morphological configuration of City Walk case which is located in Al Wasel: **a** figure ground map; **b** land use map; and **c** shading map (Author)



**Fig. 18** Three types of shading are represented in City Walk case, such as **a** custom shading, **b** shade sails, and **c** perforated metal canopy (Author)

**The Walk JBR**

The analysis of The Walk, characterized by its proximity to water features, reveals an intriguing regular street network in a linear pattern that harmoniously follows the contours of the adjacent sea as shown in Fig. 19. This distinctive street pattern demonstrates a deliberate effort to align the design of The Walk with the natural surroundings. Moreover, the urban form of The Walk case followed the planned urban design to be matched with sea line. Notably, The Walk exhibits a strong connection with the neighboring hotels situated along the coastline, highlighting the influence of the aquatic context on its design. The intentional alignment of The Walk with the shape of the sea fosters a seamless integration, establishing a cohesive relationship between the urban environment and its aquatic surroundings. Moreover, the spatial arrangement of The Walk in Al Wasel emphasizes its accessibility by various modes of transportation. This accessibility is particularly evident in the careful planning of transportation

routes, enabling convenient access for residents and visitors alike. Furthermore, an examination of building compactness level within The Walk reveals a distinct configuration. The buildings are intentionally dispersed across the sea area, creating a smooth and carefully uncompacted distribution that seamlessly blends with the natural surroundings. This strategic arrangement reflects a deliberate effort to create a visually cohesive and harmonious composition within the coastal setting. The distribution of buildings considers the topography and aesthetics of the waterfront, resulting in a design that is in harmony with the coastal environment.

The intentional alignment of The Walk with the natural contours of the sea, along with the dispersed arrangement of buildings, exemplifies their shape. Most of the buildings have a mixed-use function, serving as both residential and hotel spaces, with a squared high-rise design shape. The commercial area consists of low-rise buildings following L-shaped design, with open space in the



**Fig. 19** Mapping morphology of The Walk case in JBR using GIS shows regular linear street network that follows the sea shape, and compacted area with planned urban form that is well-connected to the neighborhood (Author)

middle, as illustrated in Fig. 20a. Furthermore, The Walk's strategic location provides opportunities for tourism. It features numerous residential towers, all under the JBR name, and includes both low-rise and high-rise hotels in the area, as shown in Fig. 20b. However, in terms of shading, The Walk lacks sufficient coverage. Only a few shading elements are present, covering less than 10% of the area, as depicted in Fig. 20c. These shading elements primarily serve as design features rather than fulfilling a functional purpose. They are custom-made from wooden elements in a modern style, as shown in Fig. 21.

**Al Seef**

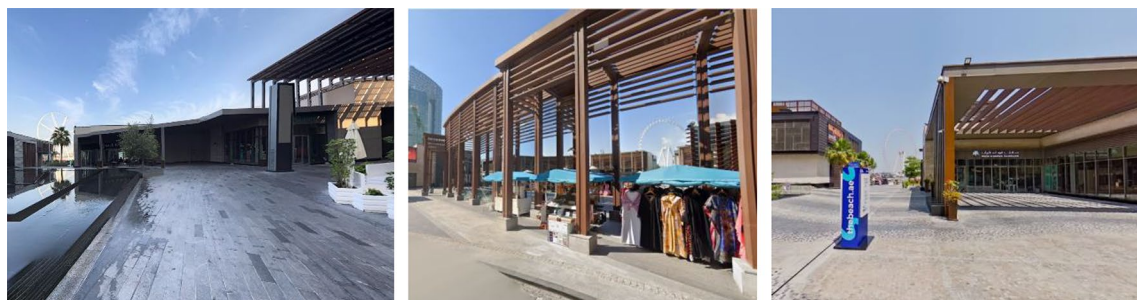
The mapping morphology analysis of Al Seef provides valuable insights into the urban characteristics of this distinctive area. Situated along water features, Al Seef showcases a unique blend of traditional design elements and irregular street patterns. The irregular street patterns are due to the organic planning of the space, align with the traditional design approach prevalent in the region, contributing to the distinct character of Al Seef as shown in Fig. 22. A compacted pattern presence of small-scale

plot sizes densely packed along the seafront. This compact arrangement, characterized by irregularity, is further accentuated by the narrow Sikkas that add an additional layer of spatial complexity and charm to the area. These narrow passages not only enhance the visual appeal but also contribute to the overall pedestrian experience within Al Seef. The historical context of Al Seef sheds light on its original purpose and design. These spaces were historically conceived along the sea to facilitate trade activities and establish connections with the harbor. This historical significance underscores the emphasis placed on transportation access within the area, deviating from a pedestrian-centric design approach often observed in other urban contexts. The layout of Al Seef reflects the historical importance of accessibility for maritime trade, emphasizing the integration of transportation infrastructure with the urban fabric.

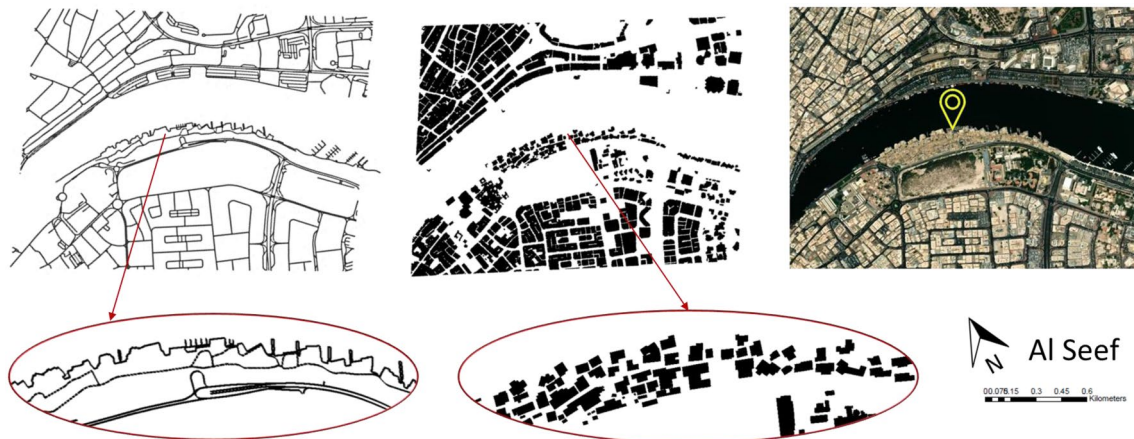
The compacted Al Seef area follows a traditional building shape, with most buildings featuring an open courtyard design in U-shape and L-shape configurations. These open inner courtyards known as Al Hosh. While the other buildings have irregular designs, as shown in



**Fig. 20** Mapping morphological configuration of The Walk case which is located in Marsa Marina Dubai: **a** figure ground map; **b** land use map; and **c** shading map (Author)



**Fig. 21** Minimal Shading at The Walk: Custom-made wooden elements primarily serve as design features, covering less than 10% of the area, rather than providing functional coverage (Google Earth Pro)



**Fig. 22** Mapping morphology of Al Seef using GIS shows irregular street patterns, compacted dense area, and organic urban form (Author)

Fig. 23a. Furthermore, Al Seef primarily houses commercial facilities including retail shops, restaurants, cafes, and shops. In terms of shading, Al Seef is predominantly covered by traditional shading elements such as shade sails (see Fig. 24a), custom-made shading structures crafted from traditional Emirati materials like wood (see Fig. 24b), and Al Areesh structures constructed from dried plain fronds of palm leaves (see Fig. 24c). These shading elements not only reflect the essence of traditional Emirati design but also serve as functional elements that provide coverage for the open urban public spaces.

**Discussion: exploring urban typologies and morphologies of CityWalks in Dubai**

The study findings provide insights into the three distinct categories of emerging CityWalks in Dubai, as summarized in Table 3. The table presents a comprehensive

classification of the selected CityWalk cases in Dubai based on their urban design typology and urban morphological configuration. These cases include City Walk, The Walk JBR, and Al Seef, each surrounded by different urban contexts: urban features, water bodies, and traditional buildings, respectively.

In terms of urban design typology on a global scale, City Walk is characterized by positive spaces such as civic and public open areas, along with ambiguous spaces like interchange and retail spaces. It also features public places including plazas, water bodies, and recreation areas, offering a diverse range of urban experiences. The Walk JBR similarly exhibits positive spaces and ambiguous spaces, with additional emphasis on sporting places and waterfront areas. Al Seef, on the other hand, showcases positive spaces, ambiguous spaces, and public places, with a focus on squares, waterfront areas, and recreation spaces. In the local context, City Walk’s urban



**Fig. 23** Mapping morphological configuration of Al Seef case which is located in Al Hamriya: **a** figure ground map; **b** land use map; and **c** shading map (Author)



**Fig. 24** Traditional types of shading are represented in Al Seef case, such as **a** shade sails, **b** custom shading “Wood”, and **c** custom shading “Al Areesh” (Author)

design typology is defined by streetscapes, transit corridors, and public places like plazas and landmark destinations. The Walk JBR maintains a strong emphasis on streetscapes and transit corridors, complemented by waterfront spaces, recreation areas, and urban areas. Al Seef is distinguished by parks, streetscapes, waterfronts, and public places featuring heritage and cultural destinations.

Regarding the urban morphological configuration, City Walk exhibits a regular street grid, a planned urban form, semi-compacted degree of compactness, and various building shapes including U-shape, square, and triangle. The land use is mixed, comprising commercial, institutional, residential, and mixed-use spaces. Shading elements such as shade sails, custom shading, and perforated metal canopies contribute to the area’s overall design. In contrast, The Walk JBR features a regular street grid, a planned urban form, uncompacted degree of compactness, and building shapes primarily in L-shape and square forms. The land use is a mix of commercial, residential, and mixed-use spaces. Custom shading elements enhance the area’s aesthetics and functionality. Finally, Al Seef showcases an irregular street grid, an organic urban form, compacted degree of compactness, and various building shapes including U-shape, L-shape, and irregular forms. The predominant land use is commercial, with custom shading and shade sails providing functional and design elements.

Providing other examples of CityWalks in the UAE, for the first category, ‘CityWalks surrounded by inner urban context,’ include Al Jada in Sharjah and HPZ area in Al Ain. For the second category, ‘CityWalks surrounded by water features,’ include Marsa Ajman in Ajman, Al Majaz Waterfront in Sharjah, and Al Qasba Canal in Sharjah. Furthermore, for the third category, ‘CityWalks

surrounded by traditional buildings,’ include Ajman Heritage District and Sharjah Heritage District. Overall, the classification provides a detailed insight into the unique urban characteristics and configurations of these three CityWalk cases in Dubai, highlighting their distinctive features in terms of design typology and morphological configuration.

## Conclusions

In conclusion, this study conducted a comprehensive analysis of three emerged CityWalks in Dubai: City Walk, The Walk, and Al Seef. Through an exploration of urban design typologies and urban morphological configuration, the study aimed to discern the unique characteristics and contextual influences that shape these urban developments. The first category consists of CityWalks located within the inner city’s urban context, exemplified by City Walk. These areas are semi-compacted, following planned urban form, and feature regular street patterns which are seamlessly integrating with the surrounding neighborhoods. The design style of these CityWalks tends to follow a modern or simple aesthetic. The second category comprises CityWalks surrounded by water features, with JBR Walk serving as an example. These spaces exhibit a regular street pattern that follows the shape of the sea, planned urban form, and uncompacted urban area. They establish strong connections with neighboring hotels. The third category encompasses CityWalks developed next to traditional buildings, with Al Seef serving as an exemplar. These areas are characterized by organic urban form, compacted urban area, and irregular street patterns.

The urban morphological configuration conducted through GIS analysis provided valuable insights into variations in street configuration, building typologies, and

**Table 3** “Citywalk Classification” in Dubai; based on an exploration of the urban design typology and urban morphological configuration of the three selected CityWalk cases in Dubai

Citywalk Classification	CityWalk surrounded by urban context	CityWalk surrounded by water features	CityWalk surrounded by traditional buildings
Selected Cases	City Walk	The Walk JBR	AL Seef
CityWalk Urban Design Typology (Global context)	-Positive Spaces Civic space Public open space -Ambiguous Spaces Interchange spaces Retail spaces - Public Places Plazas - Water bodies Recreation area - Public Spaces Open malls Piazza	-Positive Spaces Natural urban space Civic space Public open space -Ambiguous Spaces Interchange spaces Retail spaces - Public Places Plazas Sporting places - Water bodies Waterfront area - Public Spaces Open malls Piazza Boulevards	-Positive Spaces Natural urban space Civic space Public open space -Ambiguous Spaces Interchange spaces Retail spaces - Public Places Plazas Squares - Water bodies Waterfront area Recreation area - Public Spaces Open malls Piazza
CityWalk Urban Design Typology (Local context)	-Streetscapes Musharak Transit Corridor -Public Places Plaza Landmark Destination Souq	-Streetscapes Mushtarak Transit Corridor -Waterfronts Recreation Area Urban Area Waterfront access -Public Places Landmark Destination Plaza Souq	-Parks Baraha, Meyadeen Heritage Park -Streetscapes Sikka, Mushtarak -Waterfronts Waterfront Access Urban Area -Public Places Heritage Feature Landmark Destination Cultural Destination
Urban Morphological Configuration	Street Network: - Regular grid Urban Form: - Planned form Degree of Compactness: - Semi-compacted Building Shape: - U-shape - Square - Triangle Land Use: - Commercial - Institutional - Residential - Mixed-use Shading Elements: - Shade sails - Custom shading - Perforated metal canopy	Street Network: - Regular grid Urban Form: - Planned form Degree of Compactness: - uncompact Building Shape: - L-shape - Square Land Use: - Commercial - Residential - Mixed-use Shading Elements: - Custom shading	Street Network: - Irregular grid Urban Form: - Organic form Degree of Compactness: - Compacted Building Shape: - U-shape - L-shape - Irregular shape Land Use: - Commercial Shading Elements: - Custom shading - Shade sails

planning compactness among the three CityWalks. The analysis not only shed light on their unique characteristics but also highlighted how these urban developments are influenced by their specific contexts. The classification of CityWalks in Dubai into three distinct categories—those surrounded by urban context, water features, and traditional buildings—provides a framework for understanding their diverse urban design typologies. In addressing the research objective, this study contributes

to the field of urban design and planning by providing exploration of CityWalks in Dubai, offering valuable insights for future urban development projects.

This study of the CityWalk classification represents phase one of the research. Moving forward, phase two of the research will aim to test and analyze how successful the existing experiences of CityWalk development in the UAE are. Additionally, it will focus on exploring social sustainability and user perceptions to enhance



their functionality and livability. Studies on social sustainability will examine the social dynamics and impacts of CityWalks, aiming to foster social cohesion, inclusivity, and community well-being. This research will investigate the social interactions, perceptions, and behaviors of residents, visitors, and business owners within these urban spaces, contributing to the development of strategies that promote social sustainability. Future research will delve into the factors that contribute to the attractiveness of CityWalks, examining how different user groups, such as residents, tourists, and business owners, interact with and perceive these spaces. This research will provide insights into improving the design and functionality of CityWalks to meet the needs and preferences of their diverse users. By focusing on these aspects of research, stakeholders can make informed decisions to enhance the functionality, livability, and overall success of CityWalks in Dubai and beyond. This knowledge will help urban planners and policymakers create vibrant and inclusive urban spaces that foster social interactions and contribute to the well-being of residents, visitors, and surrounding communities.

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#### Author contributions

Contribution of first author "Alaa Omar Kordi"; methodology, software, validation, formal analysis, investigation, resources, data curation, writing—original draft preparation, and visualization. Contribution of corresponding author "Khaled Galal Ahmed"; Conceptualization, validation, review and editing, supervision, project administration, and funding acquisition.

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#### Availability of data and materials

Please note that due to privacy and ethical considerations, certain data may be restricted and subject to specific access conditions.

#### Declarations

#### Competing interests

The authors state that they have no conflicts of interest. The funders did not participate in the study's design, data collection, analysis, interpretation, manuscript writing, or the decision to publish the findings.

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