

Evaluation of Ground Floor and Base Design Decisions of Tall Buildings in the Context of Design Guidelines

Zeynep Yeşim İlerısoy¹, Melek Adışen Akilli¹ and Yenal Takva^{1,*}

¹ Department of Architecture, Faculty of Architecture, Gazi University, Ankara, Türkiye

* Correspondence: yenaltakva@gazi.edu.tr (Yenal Takva)

Abstract

High-rise buildings, which have significantly shaped the city's silhouette and density, have become essential parts of the city's identity. The fact that the height, size, and human density of tall buildings are higher than those of other buildings requires a thorough investigation of factors such as the city's functioning, silhouette, image, density, and economy in the design process. For designers, the most fundamental resources for addressing these problems are design guidelines. The starting point of this research is the identification of common issues in design guidelines that offer guidance on establishing relationships between high-rise buildings and the elements around them. Within the scope of the content analysis method, 40 design guides belonging to 5 continents were examined. Since the ground-floor/base designs are of great importance in shaping people's perception of the building, the contents of the guides were researched in detail. 41 criteria were obtained using the keywords, and the guidelines were compared. By highlighting the elements outlined in the guidelines, it is emphasized that, although prepared in different geographies, the guidelines propose similar solutions to the problems high-rise buildings can pose to cities.

Keywords: high-rise, ground floor, base, design, guidelines

Submitted: 28/12/2025 — **Revised:** 27/02/2026 — **Accepted:** 10/03/2026 — **Published:** 25/04/2026

1. Introduction

The popularity of high-rise buildings has increased steadily as they meet the demands of modern life, and factors such as social amenities and security have driven the preference for high-rise buildings. In dense city centers, one of the most important reasons for selecting high-rise buildings is that they occupy less ground space than other buildings and offer vertical solutions. High-rise buildings, which are long-lasting and have symbolic value, lead to higher density in many areas, such as infrastructure and transportation. Therefore, their environmental effects are also higher. Due to the impact on the silhouette and the rising cost, expectations for high-rise buildings are to attract attention. As a result of the tourists and income the Guggenheim Museum brought to Bilbao, it was discovered that iconic structures were an effective marketing tactic for attracting attention from a tourism perspective, and this strategy was referred to as the "Bilbao Effect" in the literature [1]. What is expected of high-rise buildings is that they be iconic structures that attract attention in both the building and the city, as in Bilbao. The fact that high-rise buildings take longer and cost more at every stage, from the design phase to demolition, leads to their being built to last longer than other building types. Moreover, the formal characteristics and designs of high-rise buildings' effects on cities' mechanisms, silhouettes, images, densities, and economies should be thoroughly researched. They should be produced with a unique design approach and positively affect the surroundings and the city. With the rise of the buildings, the relationship established with the city almost disappears, like stairs that have practically disappeared with the development of elevator technology. For this reason, the biggest problem with skyscrapers is the relationship they require with the city. The changing design concept in the 21st century has produced iconic tall buildings by focusing on the effect of structure and silhouette. High-rise buildings have been built thanks to advances in materials and construction technologies, focusing on the symbolic impact and height of the buildings without considering their relationship with the city or their effects on humans [2]. The topography and built environment that shape the city's dynamics take on new silhouettes with the construction of iconic high-rises, leading to skyscrapers that have an overwhelming impact on the human scale due to their size, which exists only there and has almost no relation to their surroundings. For this reason, ground-floor designs, where high-rise buildings first interact with the city, have great importance in the urban setting. The ground floors of high-rise buildings, which affect the city's culture and lifestyle, produce different effects depending on configuration and have the potential to help buildings interact with the city [3]. While designing an architectural form, considering and designing not only the building form and interior spaces but also the city's public spaces helps integrate the building into the city [4]. To ensure architectural forms contribute to

the city and respect and protect its values, design guidelines are prepared worldwide. In this way, structures that do not belong to that city are tried to be obtained. Among the design guidelines prepared in different types, there are also guidelines for high-rise buildings. This study aims to reveal similarities and differences by examining suggestions for integrating high-rise buildings into cities and the problems they may cause in design guides prepared in various parts of the world. In this direction, the subject has been addressed conceptually through a literature review, and accessible design guides have been examined using document analysis. Document analysis is a qualitative research method used to rigorously and systematically analyze the contents of written documents [5]. Afterward, the titles, subtitles, and explanations in the guidelines were scanned for keywords selected from the literature review. The design criteria were obtained, and a descriptive evaluation was made by presenting the findings in comparative tables.

One of the issues at the center of urbanization discussions and emphasized in the urbanization literature is the high-rise building, and there are differences in perceptions, design, and effects of such structures. The basis of all these discussions is the design principles, and they differ in the context of the design decisions. With the rapid increase in urbanization, detailed descriptive research is required to manage both urban operations and user perceptions of high-rise buildings, which have become the dominant typology in today's modern cities. At this point, to close the gap in the literature, the focus is on the ground floor and base designs, which are the most fundamental parts of the high-rise buildings that relate to the city and its citizens. The universe of the research conducted using the document analysis method comprises design guides approved by official institutions, focusing on the design of high-rise buildings in the cities where they are located. After identifying appropriate documents and verifying their originality, 40 guides were systematically analyzed using referenced keywords for coding and cataloging. Keywords have been determined by considering different theoretical infrastructures in line with the building-city-user relationship within the scope of architectural literature and academic research. In this context, design guides were examined in depth, and 41 criteria used as design components in the guides were identified. The frequency of repetition of the criteria compiled from guides prepared in 8 countries indicates their importance and validity, as it shows that the same issues are emphasized to varying degrees across different places. Afterward, the obtained design criteria were grouped into four keywords, with their interrelationships taken into account. Thus, the main headings on which the designers would focus were obtained.

This study focuses on the systematic classification of design criteria that govern the interaction between high-rise buildings and the urban fabric. To address this, 40 officially approved design guidelines from eight different countries were rigorously analyzed. The original contribution of this research lies in the extraction of 41 recurring design criteria and their subsequent synthesis into four primary design domains: form, human, open space, and built environment. By providing a comparative framework, this paper offers a consolidated tool for architects and urban planners to optimize the design of tall building ground floors and bases, ensuring a more harmonious relationship between vertical structures and the public realm.

2. The Relationship Between the City and the Skyscraper

The city is a dynamic phenomenon with many functions that change in response to its citizens' goals and perceptions [6]. While providing the opportunity to meet people from different cultures and ethnicities, it is constantly evolving. Cities formed by the combination of the built environment and open spaces have a significant impact on human life; for this reason, urban planning emerged with the transition to settled life and has reached the present day by developing alongside different theoretical approaches to meet the needs of different periods. Urban planning, with thousands of years of experience, has become a necessity due to the growth of cities in the modern world and the proliferation of building typologies. Also, local governments have targeted planned growth.

High-rise buildings, which have different effects at different scales in their relationship with the city and their interactions with surrounding structures, elicit different responses at all levels regarding the attitudes and relationships expected of them. They are evaluated as three main sections and exhibit independent attitudes in each section (Figure 1). The tops of high-rise buildings, which affect the silhouette, are visible far from the city. In contrast, the ground floors that connect with the city are visible only from the immediate surroundings of the building. For this reason, it is accepted that high-rise buildings, which have various effects on perception at different distances and on their participation in the city, can be divided into three parts: the ground floor/base, the tower, and the top [2]. Thanks to the separate consideration of parts that require different solutions in terms of their effects on the city and the problems they cause, a detailed examination can be conducted, leading to better alternatives.

The tops of tall buildings are perceived from a distance and affect the city's silhouette. The tower's design conveys its symbolic value through its impact on surrounding structures and its silhouette at a distance. On the other hand, the ground floor/base is the point of connection where the building first comes into contact with the street and people, and where first impressions are formed (Figure 2). While the form of the building on the ground establishes a relationship with the human scale and surrounding structures in terms of scale, height, and location, it also provides interaction between public and private

spaces. The ground floors, the first step of the relationship between the tall building and the city, are of great importance in reducing the impact of the overwhelming feature of high-rise buildings in terms of their height.

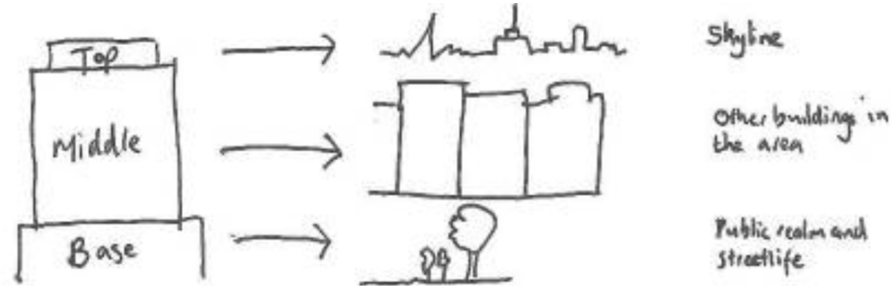


Figure 1. Top, middle, and ground floor/base display and domains [7]

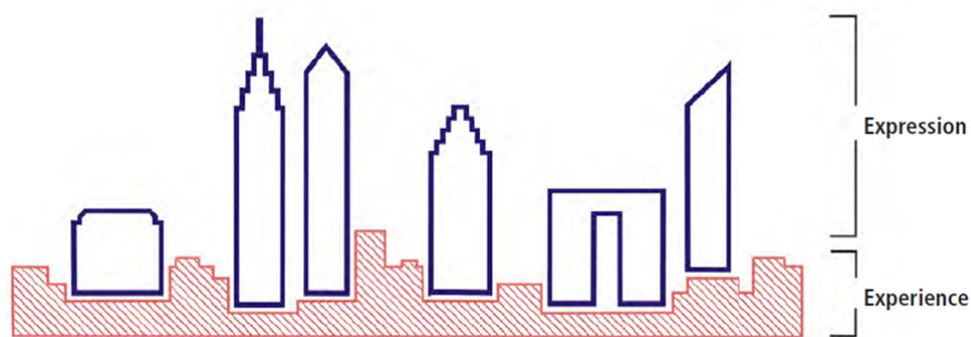


Figure 2. Expression and experience sections of tall buildings [8]

Jacobs stated that "The city has the capacity to give something to everyone, but only because everyone created it" [9]. The author indicated that the actors of the city are not just buildings and open spaces. The existence of cities is possible with the existence of people and their use of that place, so the built environment and the people that make up the city are parts of a whole. The fact that high-rise buildings create public or semi-public spaces at the points where they meet the city contributes to integrating the buildings into the city, enabling them to affect city life. Since public, semi-public, and private open spaces are among the main elements that create the city, skyscrapers can appeal to both the public and their users through a successful design of these spaces.

Attitudes toward high-rise buildings, independent of their surroundings, have increasingly been seen as a problem over time, and solutions have been developed for high-rise design to avoid similar situations [10]. To address this problem, which requires a solution not only in building design but also in an urban context, local governments in countries such as England, the U.S.A., and Canada have prepared design guidelines. In this way, it is aimed to maintain the high-rise building's design and its relationship with its environment at a high standard in terms of quality of life, planning, construction, accessibility, functionality, energy efficiency, and sustainability.

3. Emergence of Design Guidelines

The forms of production and globalization that appeared after the Industrial Revolution negatively affected urban identities. With the implementation of zoning theory in cities, housing and production functions were separated. While production and commercial functions were located in the city centers, the houses were relocated to the city peripheries. "Increasing crime rates have caused negative consequences such as the formation of dead areas at certain times of the day, unnecessary loss of time, energy, and money for transportation to city centers, and interruption of urban life" [11]. To reduce the effects of this situation, the houses were relocated to city centers, and thus the intensity of day and night use of the city was intended to be balanced. In the cities that started to be restructured, standardization started with the effects of globalization, and factors such as the universalization of regional values, the acceleration of the information flow, and the meeting in a common language unity, and it has undergone a wide-ranging change with the societies living in the cities [12]. While materials and construction technologies accessible worldwide contribute to the production of buildings, cities that have lost their originality to globalization are seeking identity, aiming to become popular by being different. After these developments, "with the concept of urban design developing

and gaining importance, the necessity of the emergence of urban design guidelines has emerged to ensure the emergence of sustainable, livable cities for future generations as cities enter into competition with each other” [13]. Design guidelines are instructions prepared by city councils that do not limit design imagination but aim to keep buildings in the city above a certain standard; they are not obligatory but advisory. It is a methodology that uses conceptual organizers to create unique and characteristic cities. By creating functional, accessible, and sustainable cities, it is aimed to produce built environments and open spaces that enhance quality of life and meet all physical and psychological needs, using urban design guides [14].

Urban planning for balanced city growth has led to guidelines that directly produce solutions for details such as urban design, housing design, and tall building design. However, they lack sufficient detail on architectural design and urban identity [3]. Urban design guidelines, which are the most comprehensive of these guides, are prepared with the aim of preserving the characteristics of the place, such as the identity, individuality, and quality of the city, ensuring environmental continuity, and creating a whole by supporting each other with the built environment and open spaces [13]. In addition, creating a safer environment in public spaces and streets, and producing buildings that contribute to this, are among the purposes of urban design guidelines. While housing design guides focus on building elements to improve residents’ quality of life, high-rise design guidelines address issues such as the relationship between tall buildings and their environment and the effects of tall buildings on neighboring structures or open spaces. Although these design guidelines are similar in general terms and perspectives, they incorporate regional features of the places where they are prepared, in the context of preserving the locality, which is the purpose of their preparation. These guidelines are sometimes prepared to preserve the historical texture and sometimes to contribute to the planning of developing cities.

4. Method of the Study

This study employs a four-step methodological framework to identify and classify design criteria for the ground floors and bases of high-rise buildings. To ensure the reliability and replicability of the findings, the following procedure was followed:

4.1 Selection of Design Guidelines (Inclusion criteria)

A comprehensive search was conducted to identify officially approved urban design guidelines and tall building manuals published by relevant local or national authorities. The selection of the documents was based on three primary inclusion criteria: (i) being published or updated recently to reflect modern urban dynamics, (ii) being publicly accessible, and (iii) containing specific explanations or regulations regarding the design of high-rise buildings. This process resulted in a final dataset consisting of 40 guidelines from eight different countries.

4.2 Identification of Theoretical Keywords

By examining the architectural literature and academic research, keywords were identified that enable high-rise buildings to establish a relationship with the city below. Based on Aydemir et al. [15] and Gehl [16]’s books and studies containing data that will shed light on the research [4, 17, 18]. Four keywords have been identified: form, human, open space, and built environment. Among the guidelines, these keywords were scanned alongside the ground floors/base, which serves as the starting point of the research (Figure 3).

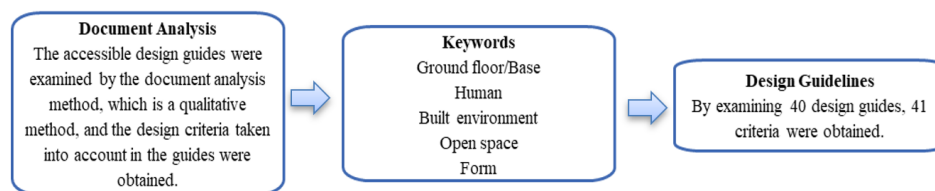


Figure 3. Flow chart of the study

4.3 Data Coding and Extraction

Since investigations on towers and the tops of high-rise buildings were not included in the scope of the research, only the titles, subtitles, and explanations that contained information about ground floors and base design of high-rise buildings were scanned using the mentioned keywords. Criteria affecting the form of tall buildings on the ground were obtained (Table 2).

4.4 Derivation of the 41 Design Criteria

Through an iterative coding process, recurring recommendations and design instructions across the 40 documents were identified. Similar suggestions were grouped and synthesized, leading to the derivation of 41 distinct design criteria. These criteria were then mapped onto the four main design domains to create a comparative and descriptive framework.

5. Evaluation of the Obtained Data

The design guides in the research are listed based on the number of criteria [19]. The number of criteria for each guide, the location where it was developed, whether it applies to urban or tall building types, and the publication date are given in Table 1.

Table 1. Data on the number of criteria, country, type, and publication date of the guides

	City/Area	Number of Criteria	Country	Type	Publication Date
1	Richmond Hill	36	Canada	Urban	[20]
2	Toronto	35	Canada	Tall Building	[21]
3	Cape Town	32	South Africa	Tall Building	[22]
4	Kitchener	32	Canada	Tall Building	[23]
5	Los Angeles	31	USA	Urban	[24]
6	Pickering	31	Canada	Urban	[25]
7	San Francisco	31	USA	Urban	[26]
8	Kensington&Chelsea	31	England	Urban	[27]
9	Watford	30	England	Tall Building	[7]
10	Ottawa	30	Canada	Tall Building	[8]
11	St. Catharines	30	Canada	Urban	[28]
12	Waterloo	30	Canada	Urban	[29]
13	Elizabeth Quay	28	Australia	Urban	[30]
14	Tower Hamlets	28	England	Tall Building	[31]
15	Hamilton	28	Canada	Tall Building	[32]
16	Naperville	28	Canada	Urban	[33]
17	Mississauga	27	Canada	Urban	[34]
18	Seattle	26	USA	Urban	[35]
19	Newcastle	26	England	Tall Building	[36]
20	Markham	26	Canada	Urban	[37]
21	New Westminster	26	Canada	Urban	[38]
22	Hong Kong	24	China	Urban	[39]
23	Northampton	24	England	Tall Building	[40]
24	Cardiff	23	Wales	Tall Building	[41]
25	Leeds	23	England	Tall Building	[42]
26	Bristol	22	England	Urban	[43]
27	Hackney	22	England	Tall Building	[44]
28	Worthing	22	England	Tall Building	[45]
29	Milton	22	Canada	Tall Building	[46]
30	Nelson Mandela Bay	21	South Africa	Tall Building	[47]
31	West Loop	21	USA	Urban	[48]
32	Cambridge	21	England	Tall Building	[49]
33	Burlington	21	Canada	Tall Building	[50]
34	Melbourne	20	Australia	Urban	[51]
35	Merton	18	England	Urban	[52]
36	Auckland	14	New Zealand	Urban	[53]
37	Sydney	14	Australia	Tall Building	[54]
38	Oklahoma	14	USA	Urban	[55]
39	Edmonton	12	Canada	Tall Building	[56]
40	Islington	12	England	Tall Building	[57]

The urban and tall building design guidelines obtained are from 8 countries: China, Wales, New Zealand, South Africa, Australia, the U.S.A., England, and Canada. Twenty of these guides are urban design guidelines that include items for high-rise design, while 20 are prepared for tall building design. The contents of these guides, for urban or high-rise buildings across different countries, are shown in Figure 4. As can be seen from the data, which includes 30 or more criteria in the guides, there are 7 guides in Canada, 2 in the U.S.A., 2 in England, and 1 in South Africa. The number of criteria ranges from 19 to 30, with 8 guides in England, 7 in Canada, 2 in the U.S.A., 2 in Australia, and one each in China, Wales, and South Africa. The number

of criteria is between 11 and 19, and there are two guides in England and one guide in each of the U.S.A., Australia, Canada, and New Zealand.

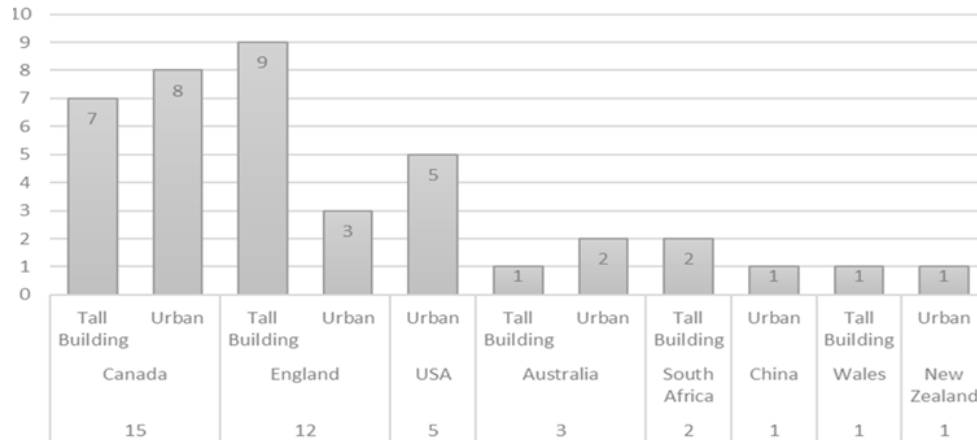


Figure 4. Distribution of urban and tall building design guides within countries

Considering Table 2, which examines the frequency of the criteria, the criteria are repeated 5-38 times. It was determined that in the guidelines, 3 criteria repeated 35 or more times, 10 criteria repeated in the range of 29-35, 8 criteria repeated in the range of 24-30, 8 criteria repeated in the range of 19-25, 7 criteria repeated in the range of 14-20, 3 criteria repeated in the range of 9-15, and 2 criteria repeated in the range of 4-10.

Table 2. Ranking of the criteria according to the number of repetitions

Placement	Criteria	Number of Repetitions	Placement	Criteria	Number of Repetitions
1	Streetscape	38	22	Relationship with human scale	24
2	Facade material	37	23	Public Art	24
3	Shadow, sun, and sky	37	24	Building placement	22
4	Scale and Mass relationship with neighboring structures	34	25	Vista and views	22
5	Historical fabric	34	26	Weather protection	22
6	Active street	33	27	Lighting	22
7	Public space	33	28	Urban furniture	21
8	Attractive facade	32	29	Roof terrace	20
9	Open space for public use	32	30	Signage	19
10	Base presence, setbacks, and balconies	31	31	Height of base	18
11	Interaction with the street on the ground floor	30	32	Color and texture on the facade	17
12	Building entrances	30	33	Building form	16
13	Parking	30	34	Ground floor height	16
14	Height	29	35	Accessibility	15
15	Mass	29	36	Visual impact	15
16	Service entries	29	37	Public-private separation	13
17	Articulation on the facade	28	38	Base-tower separation	12
18	Wind	28	39	Continuity of facade	11
19	Architectural quality	26	40	Corner entrance	7
20	Landscape Design	26	41	Mass of base	5
21	Security	25			

As can be seen in Table 2, where the ranking of the criteria according to the number of repetitions is given, the criterion of "street texture" ranks first, followed by "facade material, shade, sun and sky, height/ratio relationship with neighboring buildings, and historical texture" as the five most repeated criteria. "Street texture" is an element that affects a city's identity, reveals its unique features, or makes a place so indistinguishable from others that it is seen in 38 guides for the unique qualities it can add to the city [58]. While "facade material" is essential in terms of urban aesthetics, being the first element in the perception of the building by pedestrians, and exhibiting a harmonious attitude towards the environment [59], "shade, sun and sky" is seen in 37 guides because it is related to the public space around the high-rise buildings and to prevent the neighboring buildings from getting sunlight by constantly shading them or to deprive them of natural factors by preventing the sky view. "Scale and Mass relationship with neighboring structures", being effective in creating a harmonious environment with neighboring buildings in height and proportion [2]; the "historical texture", on the other hand, is related to the design decisions to be taken in an environment of historical importance, the rules to be followed, and the relationship to be established between the old and the new [60]. They are therefore seen in 34 guides.

After this quantitative evaluation, the criteria were grouped to identify the main headings important to the concept of design, using the relationships among the criteria as a scale. All the criteria in the design guidelines are important for creating the urban environment. However, in the context of the ground floor and base design, which is the point where high-rise buildings first touch the city and meet the people for the first time, 41 criteria were obtained by analyzing the data within the scope of the formation decisions that will guide the relations that the building is expected to establish with its environment. These criteria were grouped based on their similarities and differences. Thus, it was learned that the criteria important to the relationship between high-rise buildings and the city are effective in which context (Table 3).

Table 3. Criteria and groupings obtained from design guidelines

Repetition interval	Form		Human	Open Space	Built Environment
	Facade	Shape			
>35	1. Facade material				1. Streetscape 2. Shadow, sun, and sky
30-35	2. Attractive facade	1. Base presence, setbacks, and balconies	1. Active street 2. Interaction with the street on the ground floor	1. Public space 2. Open space for public use	3. Scale and Mass relationship with neighboring structures 4. Historical fabric
25-30	3. Building entrances	2. Architectural quality	3. Wind	3. Landscape Design	5. Height
	4. Parking		4. Security		6. Mass
	5. Service entries				
	6. Articulation on the facade				
20-25		3. Building placement	5. Relationship with human scale 6. Vista and views 7. Weather protection 8. Lighting	4. Public Art 5. Urban furniture 6. Roof terrace	
15-20	7. Color and texture on the facade	4. Building form 5. Ground floor height 6. Visual impact	9. Signage 10. Accessibility		7. Height of base
15-Oct	8. Continuity of facade	7. Base-tower separation		7. Public-private separation	
<10	9. Corner entrance				8. Mass of base

In light of the sources from which the keywords used to create the criteria were obtained and the information in the design guides, a clustering was performed to identify criteria that affect a building in similar contexts. First, the building’s form was evaluated under the headings of facade and form. The building is divided into two because its striking facades contribute to the formation of lively streets around it [60], while the elements that make up the building’s form affect the city’s participation by creating distinct effects [15]. Second, the 2nd group was obtained by separating the criteria directly affecting the human element, an indispensable element of urban life. Finally, the criteria compatible with the neighboring buildings and streets, as well as those necessary for the formation of public space around the building, were separated. Thus, the last two groups were obtained. The separation of these two similar concepts stems from their different purposes. The public space has a physical character that influences the city’s form and is the key to thriving city life. It is possible to preserve and maintain the city’s character, contribute to the city’s development by fusing the old with the new, and establish a harmonious relationship with the built environment [15].

According to the repetition number of the criteria (Table 2), ”street texture” and ”shadow, sun and sky”, which are among the first three criteria, are under the title of Built Environment, while ”facade material” is under the title of Form. From this point of view, the guidelines emphasize factors affecting the building’s relations with the existing context more. However, when the criteria are divided into 4 groups, the distribution is numerically balanced, and no main heading is emphasized any more than the others. In addition, the number of criteria across the four groups is similar. Considering the distribution of numerical and criterion repetitions across the groups, it is possible to say that the four groups place similar importance on the guidelines.

6. Conclusion

While tall buildings are often designed as isolated icons, their success as urban elements depends fundamentally on how they integrate with the street level. This study has demonstrated that despite the geographical, cultural, and economic differences across eight countries, a common design language exists for the ground-floor and base configurations of tall buildings.

The identification of 41 recurring design criteria and their classification into four primary domains (form, human, open space, and built environment) fills a significant gap in the architectural literature. Beyond a theoretical classification, this research provides a structured and actionable framework for three key stakeholders:

- *For designers and architects:* It offers a comprehensive checklist to ensure that the building’s base remains porous, active, and integrated, rather than creating a physical or visual barrier at the street level.
- *For city authorities and policy makers:* It serves as a benchmark for developing or refining local design guidelines, ensuring that new high-rise developments contribute positively to the existing urban fabric.
- *For researchers:* It establishes a comparative framework that can be expanded to broader contexts or used to evaluate the post-occupancy success of existing tall buildings.

In conclusion, by systematically analyzing diverse design guidelines, this research supports a more context-sensitive and city-integrated approach to high-rise design. It emphasizes that buildings, as vertical objects, should integrate into the city not merely through their silhouettes but as contributors to the public realm through meaningful urban interaction.

References

- [1] Gang, J. (2008, March). Wanted: tall buildings less iconic, more specific. In *CTBUH 8th World Congress on Tall & Green: Typology for a Sustainable Urban Future* (pp. 496-502).
- [2] Al-Kodmany, K. (2012). Guidelines for tall buildings development. *International Journal of High-Rise Buildings*, 1(4), 255-269.
- [3] Zehir, C., Çelikyay, H. H., & Mamedov, Z. (2022). New urban design in management: The case of Türkiye in the context of metropolitan law. *New Design Ideas*, 6(3), 335-355.
- [4] Erdönmez, M. E., & Akı, A. (2005). Açık kamusal kent mekanlarının toplum ilişkilerindeki etkileri. *Megaron*, 1(1), 67.
- [5] Wach, E., & Ward, R. (2013). *Learning About Qualitative Document Analysis*.
- [6] Lynch, K., (2010). *The Image of the City*. Turkish Translation: Başaran, İ., Türkiye İş Bankası Cultural Publications.
- [7] Watford Borough Council (2016). Skyline - Watford's Approach to Taller Buildings Supplementary Planning Document. Retrieved from https://www.watford.gov.uk/downloads/file/939/skyline_-_watfords_approach_to_taller_buildings_-_supplementary_planning_document
- [8] Ottawa City Council (2018). Ottawa Urban Design Guidelines For High-Rise Buildings. Retrieved from https://documents.ottawa.ca/sites/documents/files/design_guide_tall_bldgs_en.pdf
- [9] Jacobs, J., (2011). *The Death and Life of Great American Cities*, Turkish Translation: Doğan, B., p258. Metis Yayınları.
- [10] İlerisoy, Z. Y., & Başgöl, M. (2019). Yapılarda yükselme ve başkent Ankara örnekleri üzerinden tarihsel incelenmesi. *Online Journal of Art and Design*, 7(2), 125-140.
- [11] Varol, A. İ, (2009). Yapı-kent İlişkisi Bağlamında Karma Kullanımlı Yapılar, Mixed-Used Buildings In The Context of The Building-City Relations, Master Thesis, Yıldız Technical University, Graduate School of Science and Engineering, Istanbul.
- [12] Yaylı, H. (2012). Küreselleşmenin kentler üzerine etkisi: "İstanbul örneği". *Sosyal Ekonomik Araştırmalar Dergisi*, 12(24), 331-356.
- [13] Arısu, S. (2018). Kentsel tasarım kavramında kentsel tasarım rehberlerinin yeri ve önemi. *Kent Akademisi*, 11(2), 243-255.
- [14] CABE, Commission for Architecture and the Built Environment, (2007). Guidance on tall buildings. Retrieved from https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/guidance-on-tall-buildings_0.pdf
- [15] Aydemir, Ş., Aydemir, S., Beyazlı, D., Ökten, N., Öksüz, A. M., Sancar, C., ... Özyaba, M.(2004). *Kentsel Alanların Planlanması Ve Tasarımı*. (Planning and Design of Urban Areas), (in Turkish), Trabzon: Akademi Press.
- [16] Gehl, J. (2012). *Life Between Buildings: Using Public Space*. Princeton University Press.
- [17] Ünlü, T. (2009). Mekansal planlamanın kentin biçimlenmesine etkisi: Mersin örneği. *Planlama Dergisi*, 3(4), 27-42.
- [18] Ye, Y., Wang, Z., Dong, N., & Zhou, X. (2020). Tall Buildings' Lower Public Spaces: Impact on Health and Behavior. *CTBUH J*, 1, 26-33.
- [19] Basha-Jakupi, A., Osmani, K., & Hoxha, E. (2021). Public art the catalyst for the creation and regeneration of public spaces—case study Prishtina, Kosovo. *New Design Ideas*, 5(2), 124-134.
- [20] Richmond Hill City Council (2013). Richmond Hill Urban Design Guidelines. Retrieved from <https://www.richmondhill.ca/en/shared-content/resources/documents/685-urban-design-guidelines-processed.pdf>

- [21] Toronto City Council (2013). Tall Building Guidelines, Toronto. Retrieved from <https://www.toronto.ca/wp-content/uploads/2018/01/96ea-cityplanning-tall-buildings-may2013-final-AODA.pdf>
- [22] Cape Town Strategy and Planning Department of Spatial Planning and Urban Design (2012). Draft Urban Design Guidelines For Tall Buildings, City Of Cape Town. Retrieved from https://www.woodstock.org.za/wp-content/uploads/2012/03/Draft_UD_Guidelines_PP_Mrt12.pdf
- [23] Kitchener City Council (2017). Kitchener Design For Tall Buildings. Retrieved from https://www.kitchener.ca/en/resourcesGeneral/Documents/DSD_PLAN_Tall-Building-Urban-Design-Guidelines.pdf
- [24] Los Angeles City Council (2009). Downtown Design Guide City of Los Angeles. Retrieved from <http://www.urbandesignla.com/resources/docs/DowntownDesignGuide/hi/DowntownDesignGuide.pdf>
- [25] Pickering City Council (2017). Pickering City Centre Urban Design Guidelines. Retrieved from <https://www.pickering.ca/en/city-hall/resources/city-centre-urban-design-guidelines.pdf>
- [26] San Francisco Planning Department (2018). San Francisco Urban Design Guidelines. Retrieved from https://default.sfplanning.org/plans-and-programs/planning-for-the-city/Urban-Design-Guidelines/Urban_Design_Guidelines.pdf
- [27] Kensington & Chelsea Borough Council (2011). Royal Borough of Kensington & Chelsea Design Guidelines. Retrieved from <https://www.rbkc.gov.uk/idoxWAM/doc/Other-777343.pdf?extension=.pdf&id=777343&location=VOLUME2&contentType=application/pdf&pageCount=1>
- [28] St. Catharines City Council (2012). St. Catharines Downtown Urban Design Guidelines. Retrieved from https://www.stcatharines.ca/en/documents/documentuploads/OfficialDocumentsAndPlans/doc_634823671496214364.pdf
- [29] Waterloo City Council (2012). City of Waterloo Urban Design Manual. Retrieved from <https://www.waterloo.ca/en/government/resources/Documents/Development-charges-and-guidelines/Urban-Design-Guidelines-Part-3.pdf>
- [30] Elizabeth Quay Metropolitan Redevelopment Authority (2012). Elizabeth Quay Design Guidelines. Retrieved from <http://cdn.mra.wa.gov.au/production/documents-media/documents/central-perth/elizabeth-quay/file/elizabeth-quay-design-guidelines.pdf>
- [31] Tower Hamlets City Council (2018). London Borough Tower Hamlets Tall Buildings Study. Retrieved from https://www.towerhamlets.gov.uk/Documents/Planning-and-building-control/Strategic-Planning/Local-Plan/Submission_2018/Tall_Buildings_Study_2018.pdf
- [32] Planning Staff of City of Hamilton (2016). Hamilton Tall Building Guidelines. <https://www.hamilton.ca/sites/default/files/media/browser/2018-03-16/downtownhamilton-dhtallbuildingsstudyguidelines-mar2018-1.pdf>
- [33] City of Naperville (2007). Naperville Building Design Guidelines. Retrieved from <https://www.naperville.il.us/contentassets/7fed1bf2ba19496fa9a037f019616748/cdg-building-design-guidelines.pdf>
- [34] Mississauga Development and Design Department Urban Design Division (2020). Mississauga Downtown Core Built Form Standards. Retrieved from <https://www.mississauga.ca/wp-content/uploads/2020/12/10090708/Downtown-Built-Form-Standards.pdf>
- [35] Department of Planning and Development City of Seattle (2013). City of Seattle Design Review Guidelines For Downtown Development. Retrieved from https://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpds021321.pdf
- [36] Newcastle City Council (2006). Tall Buildings Guidance for Newcastle upon Tyne. Retrieved from https://www.newcastle.gov.uk/sites/default/files/2019-01/tall_buildings_spd_text_version.pdf

- [37] Town of Markham Planning and Urban Design (2010). Markham Built Form, Height, and Massing Study, Built Form Principles. Retrieved from https://www.markham.ca/wps/wcm/connect/markham/29f0a460-1239-4cda-9dad-b87a0fab273d/Markham+Built+Form+height+and+massing+Principles.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_2QD4H901OGV160QC8BLCRJ1001-29f0a460-1239-4cda-9dad-b87a0fab273d-msjOr3e
- [38] City of New Westminster (2016). New Westminster Downtown Buildings And Public Realm Design Guidelines And Master Plan. Retrieved from https://www.newwestcity.ca/database/files/library/Final_Version___NW_Downtown_Building_and_Public_Realm_Design_Guidelines_and_Master_Plan.pdf
- [39] Planning Department of the Government of the Hong Kong Special Administrative Region (2017). Hong Kong Planning Standards And Guidelines. Retrieved from https://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/pdf/ch11.pdf
- [40] Northampton Borough Council (2010). Northampton Tall Building Strategy. Retrieved from <https://www.northampton.gov.uk/download/downloads/id/3063/character-assessment-and-tall-buildings-strategy---section-3-tall-buildings.pdf>
- [41] City of Cardiff Council (2017). Tall Buildings Supplementary Planning Guidance Cardiff. Retrieved from <https://www.cardiff.gov.uk/ENG/resident/Planning/Planning-Policy/Supplementary-Planning-Guidance/Documents/Tall%20Buildings.pdf>
- [42] Leeds City Council (2010). Tall Buildings Design Guide - Leeds City Council. Retrieved from <https://www.leeds.gov.uk/docs/Tall%20buildings%20design%20guide%20SPD.pdf>
- [43] Bristol City Council (2018). Urban Living Supplementary Planning Document. Retrieved from <https://www.bristol.gov.uk/documents/20182/34520/Urban+Living+SPD+Making+successful+places+at+higher+densities.pdf/ec07c68e-f068-8ff7-083e-04250462715a>
- [44] Hackney City Council (2005). Hackney Tall Buildings Strategy. Retrieved from <https://hackney.gov.uk/cs-evidence-base>
- [45] Worthing Borough Council (2013). Worthing Tall Building Guidance Supplementary Planning Document. Retrieved from <https://www.adur-worthing.gov.uk/media/Media,117751,smxx.pdf>
- [46] Milton City Council (2018). Milton Tall Building Guidelines. Retrieved from <https://www.milton.ca/en/business-and-development/resources/Tall-Building-Guidelines.pdf>
- [47] Nelson Mandela Bay Municipality (2015). Nelson Mandela Bay Tall Building Policy. Retrieved from <http://www.nmbm.co.za/datarepository/documents/nmbm-tall-building-policy-for-ppp-v5c-draft.pdf>
- [48] West Loop Department of Planning and Development (2017). West Loop Design Guidelines. Retrieved from https://www.chicago.gov/content/dam/city/depts/dcd/temp/20171009_WestLoopDesignGuidelines_LowRes.pdf
- [49] The Urban Design and Conservation Team, Cambridge City Council (2006). Guidance for the application of Policy 3/13 (Tall Buildings and the Skyline) of the Cambridge Local Plan. Retrieved from <https://files.cambridge.gov.uk/public/ldf/coredocs/RD-SPD-240.pdf>
- [50] Burlington City Council (2017). City of Burlington Tall Building Guidelines. Retrieved from https://www.burlington.ca/en/services-for-you/resources/Planning_and_Development/Urban-Design/May_2017_Tall_Building_Guidelines.pdf
- [51] City of Melbourne (2018). Central Melbourne Design Guide. Retrieved from https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.com-participate.files/9015/4882/4707/Central_Melbourne_Design_Guide_November_2018.pdf
- [52] Merton Council (2010). Merton Tall Buildings Background Paper. Retrieved from https://www.merton.gov.uk/assets/Documents/tall_buildings_background_paper_july_2010_lores.pdf

- [53] Auckland City Council (2013). Unitary Plan Research Paper: City Center Zone, Urban form, height, site intensity, and built form. Retrieved from <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/history-unitary-plan/documentssection32reportproposedaup/appendix-3-6-4.pdf>
- [54] The Central Sydney Planning Strategy (2012). Erection of Tall Buildings in Central Sydney. Retrieved from <https://meetings.cityofsydney.nsw.gov.au/documents/s38157/Attachment%20B29%20-%20Draft%20Central%20Sydney%20Planning%20Strategy%20-%20Appendix%20N%20-%20Erection%20of%20Tall%20Buildings%20in.pdf>
- [55] City of Oklahoma City Planning Department (2015). Oklahoma Downtown Development Framework. Retrieved from <https://downtownokc.com/wp-content/uploads/2019/04/DDF-Draft.pdf>
- [56] Edmonton City Council (2020). Tall Building Guidelines - City of Edmonton. Retrieved from https://www.edmonton.ca/city_government/documents/PDF/UDM_Guidelines_SAMPLE.pdf
- [57] Islington City Council (2018). London Borough Of Islington Tall Buildings Study. Retrieved from <https://www.islington.gov.uk/-/media/sharepoint-lists/public-records/planningandbuildingcontrol/publicity/publicnotices/20182019/20181121islingtontallbuildingsstudypart1.pdf?la=en&hash=E64CA07485F195CD3200553F225263036BB8929B>
- [58] Al-Kodmany, K. (2011). Placemaking with tall buildings. *Urban Design International*, 16(4), 252-269.
- [59] Sarı, T., & Dülgeroğlu Yüksel, Y. (2017). Istanbul: The characteristics of vertical dense structuring and image making in high-rise housing architecture. *A— Z ITU Journal of Faculty of Architecture*, 14(3), 113-126.
- [60] Boake, T. M. (2015). It's not about the skyline, it's about the base condition. *Global Interchanges: Resurgence of the Skyscraper City (CTBUH, Chicago)*, 494-501.