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Designating a Procedure for Appropriate Development of Tall Building in Iran: Regulating an Ongoing Process to Reduce its Negative Consequences

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Abstract

This paper argues the unregulated construction of tall buildings in many cities, which has led to negative impacts on urban environments. It emphasizes the need for regulations to address the rising demand for tall buildings and ensure their proper location, design, and construction. The paper also introduces the "General Principles of Tall Buildings Development" developed by the Road, Housing and Urban Development Research Center in Iran, which provides a framework for regulating tall building construction in the country. The importance of regulating the location of tall buildings is highlighted, considering factors such as aesthetics, zoning restrictions, prevention of speculation and corruption, safety codes, climate impact, and environmental considerations. The article further explores the background, definition, and regulations of tall buildings in Iran. The methodology used for developing the regulation is described, including qualitative studies, interviews, and brainstorming sessions with experts. The approach of the regulation is presented, focusing on policies for directing the construction of tall buildings and ensuring safety, public rights, and coordination with the urban context. The location of tall buildings is discussed, proposing three types of zones: district, edge, and landmark. Finally, the process for implementing the regulation is outlined, involving ratifying the necessity of constructing tall buildings and following specific steps for site selection and approval.

***Keywords*:** Tall building; Tall buildings; Building policy; Building regulation

1. Introduction

Constructions of tall buildings in many cities are somewhat unregulated since many mechanisms and policies cannot deal with the rising demand for them because of the constant changes brought by modern technology. As a result, unregulated processes emerged from the construction of tall buildings, especially in existing cities, leading to increasing sprawl in urban areas. There are many examples of tall buildings that have been inappropriately located, designed, and built without referring to planning requirements. This caused huge problems as the initial city planning strategy did not consider the impact of those buildings on the surrounding urban context. It resulted in many negative impacts on the urban environment of most existing urban areas, especially areas with distinctive urban design characteristics. (Mohamed et al., 2022) On the other hand, residence confirmation is one of the most important factors in developing tall buildings in the cities. Decision-making, and organization as dimensions of the right to participation and the dimensions of monitoring and occupying space, the right to habitat and the right to urban citizenship affecting the dimension of the right to inhabit the city to the city described in combination with the components affecting the desirability of urban space in the category of functional, perceptual, physical and environmental components. (Shokoohfar et al., 2022) Tall buildings gained popularity in the 1960s in Iran affected by physical, economic, and social factors. A tendency for industrial construction of high-density housing resulted from increasing demand for public housing due to the high population growth rate, extensive immigration to metropolitan cities, and dramatic rise in the population of young people in recent decades. Geographical constraints, efficient use of the land, and deficiency of the horizontal development of cities are some of the justifications for this tendency for the construction of tall buildings. Additionally, tall buildings gain attraction due to their capacity to present the engineering capacity and to provide new experiences. Where these tall buildings can be located and how they can be constructed have been open questions that sometimes provide opportunities for speculation in the housing market. Following these challenge, Road, Housing and Urban Development Research Center (BHRC) developed the “General Principles of Tall Buildings Development” that was ratified by Iran High Council of Urban Development and Architecture in October 8, 2018 to be implemented in all cities around the county. This paper explains the main basis and framework of this important policy that will form the spatial structures of many Iranian cities in next decades.

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Regulating the location of tall buildings is important, because of: a) to be aesthetically in harmony with the skyline of the urban context around them; b) not to be located in districted zones; c) to prevent the speculation and illegal financial benefits of the land and its following corruption; d) to follow the safety codes and improve resiliency in disastrous situation; e) not to negatively affect the climate and obstruct the wind tunnels; and f) to limit the destructive effects on the environment at the region, city, and neighborhood scales.

Setting rules and limitations in granting permissions to construct tall buildings raises resistance and discontent among different stakeholders as it limits their financial gains, that is why regulating the current situation is of utmost significance. This article explains the approach, the content, and the process of developing this regulation, which was ratified in the highest body of urban development in the country to present a model for similar cases.

This paper have six sections including: a) the definition of tall buildings; b) the history of regulating tall building, 3)the Methodology, 4) The approach of this paper in regulating tall building in Iran and the method that we used to regulate tall building; and5) the process in which tall building will be regulated in Iran 6) Confirmation organization for the construction of tall buildings in cities and 7) The conclusion.

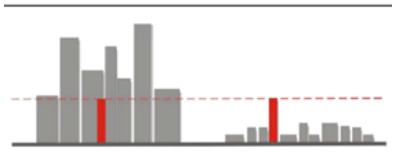
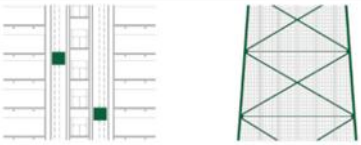
2. Background

2.1. Definition

The definition of a tall building is necessary to develop the regulation for the construction of such structures. Many definitions for tall buildings can be found in the reference books, which following approaches can be recognized among them:

- Definition of tall buildings based on interior appropriateness: in some definitions, tall individual buildings are those their height is bigger than the diameter of the plan enclosing circle. (Nategh-o-llahi 1996, 12)
- Definition of tall buildings based on technical requirements and functions of the building: in some definitions, buildings with more than five stories require to have an elevator and are defined as tall building. In another definition, a building with more than 11 stories is defined tall building because of lateral forces of the wind and the earthquake on design. The most significant of these definitions is related to the fire code, which determines the height of tall buildings according to their capacity to extinguish fire. (Mabhout et al, 2013)
- Definition of the tall building based on its scale and its context: a tall building is defined as the one which is clearly taller than its neighboring buildings and/or the one which changes the skyline. (Westminster city hall, 2009, Leicester city council, 2007)
- Tall buildings' definitions can differ due to the time and place conditions of this type. Different world cities have specific descriptions of tall buildings in different periods concerning urban criteria, fire stations, structure, and installation.(Karimimoshaver et al. ,2020)
- CTBUH (Council on Tall Buildings and Urban Habitat) define tall buildings as below:

Table 1
CTBUH standards for describing HRB

Height Relative to Context	Proportion	Embracing Technologies Relevant to HRB
		
A building is classified as HRB if the height of the building in an area is relatively higher to other surrounding buildings (www.ctbuh.org/resource/height, 2023)	Large buildings with very high altitude and a small flat width are classified as HRB	A building is considered tall if it contains technologies that reflect the height of the building.

Definition of tall building in this ratification is one which response to the planned requirements in the structure of policy-making and urban management. In Iran, the 1998 ratification and its amendment in 2000 in the High Council of Architecture and Urban Development, buildings with 6 stories and higher were defined as tall buildings. According to chapter three of the Building National Fire Code (Code 3, 2017), any structures which its height, the vertical distance between the floor base of the highest constructible floor to the lowest accessible base for firefighting trucks, is higher than 23m is considered as the tall building. In the master plan of Tehran, which was ratified in 2007,

buildings with 12 stories and higher are considered as tall buildings. (Tehran master plan, 2007)

The compilation of this ratification, at first contextual approach in the definition of tall buildings was considered. According to this approach, the minimum height of tall buildings is the permitted maximum height of zoning density, and the maximum height is the average heights in a homogeneous pattern multiply by k, a coefficient dependent on the economic, social, cultural and physical feature of the homogeneous zones. This approach was rejected due to the expected problems in various interpretations due to its relative nature, especially in small cities, and we decide to provide a more rigid and clear definition of the tall buildings. The buildings with a height of 27m or higher and buildings with 8 stories or higher, including the ground floor, or buildings which their highest floor is more than 23m from the base of the ground is defined as tall building; in cities with master plan (ratified in the High Council of Urban Development and Architecture) if another formula is decided for determining the height of tall building, that shall be regarded over other regulations of this ratification.

2.1. Tall buildings regulations in iran

The compiled regulations for tall buildings in Iran are categorized into site location and establishment model . The former is often local and has trivially addressed to the general issues. However, the latter is often more general.

Two of the main studies that have addressed the effects of tall buildings in cities are: "Analysis of Tall Buildings' Effect on Urban Landscape (An Aesthetic Approach)" conducted by the (Institute of Culture, Art and Architecture, n.d.); and "Determining the Effect of Purchasable Permit for Building Density on Dilapidated Urban Pattern", (Majlis, Iran Parliament, Research Center, 2014). Some other studies that focus on the principles and regulations of designing tall buildings are "Construction of Tall Buildings and Urban landscapes: a Guideline for the construction of Tall Buildings" (Iran's office of Municipalities and village administration, 1996); "Site Location Regulations, Tall Building Construction and Finalizing Design Regulations and Implementation in Cities based on Priority and Necessity" (Amakchi 2006); "Assessment and Revision of Tall Building Construction Regulation in Tehran" (Mashhoodi, 2005); and " Guideline for Architecture Design of Residential Tall Buildings" (Talebi, 1996).

Local site location regulations for tall buildings, which are usually conducted by engineering consulting firms, provide operating guidelines and instruction to the developers and monitoring administrations. In this research, we reviewed such regulations in Tehran (revised in several times), Mashhad, and Rasht. Analysis of these regulations regarding the site location for tall buildings have played a significant role in preparing the present ratification. A summary of this comparative analysis is presented in the following table.

Table 2
Current approach in regulating the tall buildings in Iran

Title	**Surplus Density Regulation**	**The regulation for building 6+ story building in Tehran**	**Tehran Comprehensive Plan (TCP)**	**The tall building regulation in the permitted zones in TCP**	**Site location regulation of Tall Building in Tehran**	**A Framework for tall building regulation in Tehran**
Date	1991-01-14		2008	2010	3/4/2015	2015-03-17
By	Iran High Council of Urban Development and Architecture	Iran High Council of Urban Development and Architecture	Iran High Council of Urban Development and Architecture	Tehran's Development Planning Agency	Tehran's Commission 5	Iran High Council of Urban Development and Architecture
Definition	5+ floor	6+ floor	12+ floor	12+ floor	12+ floor	
Justification	Efficient use of land, open space, less building footprint				Restricting subdivision of lands; preserving open spaces; allocating public service	Provide housing for the increasing population of Tehran

					in the floors of tall building	
Allocation	Undeveloped areas; renovating deprecating areas of the city	Restricted areas: buffer zone of highways, water bodies, infrastructures, faults, and heritage zones.	Authorized zones: R263, M111, S121, S125, S211 with disaster and environmental considerations	Restricted areas: along emergency roads,	Restricted zones: R211, R241, R231, R221, R212, S112, S111, M221, M222, S3, and historic and environmental sensitive zones	Authorized areas: considerations: hazard (earthquake, fire, etc.) and wind (corridors tunnels)
Restricting regulation	Minimum land area: 1000m2 Maximum height: 25% more than the authorized height in TCP	In the range of the Population Projection. Street width: 12+m, distance to another Tall Building: ½ height of tall building Considerations: Sun ray, wind corridors		Indicators: land area, FAR; floors, land use, residential floors, the area of residential units, and open space.	Service zones, hazard zones, districted zones, special zones.	vigorous assessment of water supply and other services
Design regulation	Distance from other tall building to provide air circulation and sun ray; minimum land width; minimum parking	Minimum open space		Indicators: landscape, topography, viewshed, shadow, sun ray, setback, material, entrance, etc.	Skyscraper zones: Height 300+m: H11, H12; 200+m: H21 140+m: H31	Must be reviewed by a special architecture and urban design committee

3. Methodology

The study was carried out using field studies base on qualitative method. In the first step, all the studies, practices and documents related to the tall building land locating criteria were collected. Then, using the conceptualization method, land locating principles and criteria were extracted. Also, approaches in regulating the tall buildings in Iran has been investigated by content analysis method.

In the next step, the pathology of the status quo and the understanding of priorities, needs, attitudes, and problems of developing tall buildings in cities were examined with a semi-structured interview and brainstorming sessions with a group of urban managers, specialists, and experts. It should be noted that in this process, more than 30 brainstorming sessions were held with experts(during one year), and reports were revised several times from the process of defining tall buildings to the formulation of codes.

One must note that the interviews were analyzed through the interpretation method in the study. According to Rubin and Gillham, the researcher must go through the following steps for the interpretive analysis of the text of the notes: 1- the texts used should be reviewed in order, 2- in each text, the basic statements should be highlighted - a line should be drawn under it or a more colorful one should be inserted. Moreover, repeated statements, objectionable sentences, deviant statements, and other irrelevant data should be overlooked, and 3- some similar statements that seem to suggest something new should be identified (Rubin, 2005 and Gillham, 2000).

A general approach that present a framework is given in this document to compile rules for site location, the establishment of rules and special design of the city based a combination of privative and affirmative process. Ultimately, suggestions were presented as: Removal of prohibited areas for the construction of tall buildings based on negative criteria and locating tall building in tree type of: district, edge and landmarks . Also the institutional structure related to the implementation of the location criteria, has been presented.

In this part the process of conceptualization, and also, principles and indicators for determining the field of tall buildings is given in this section:

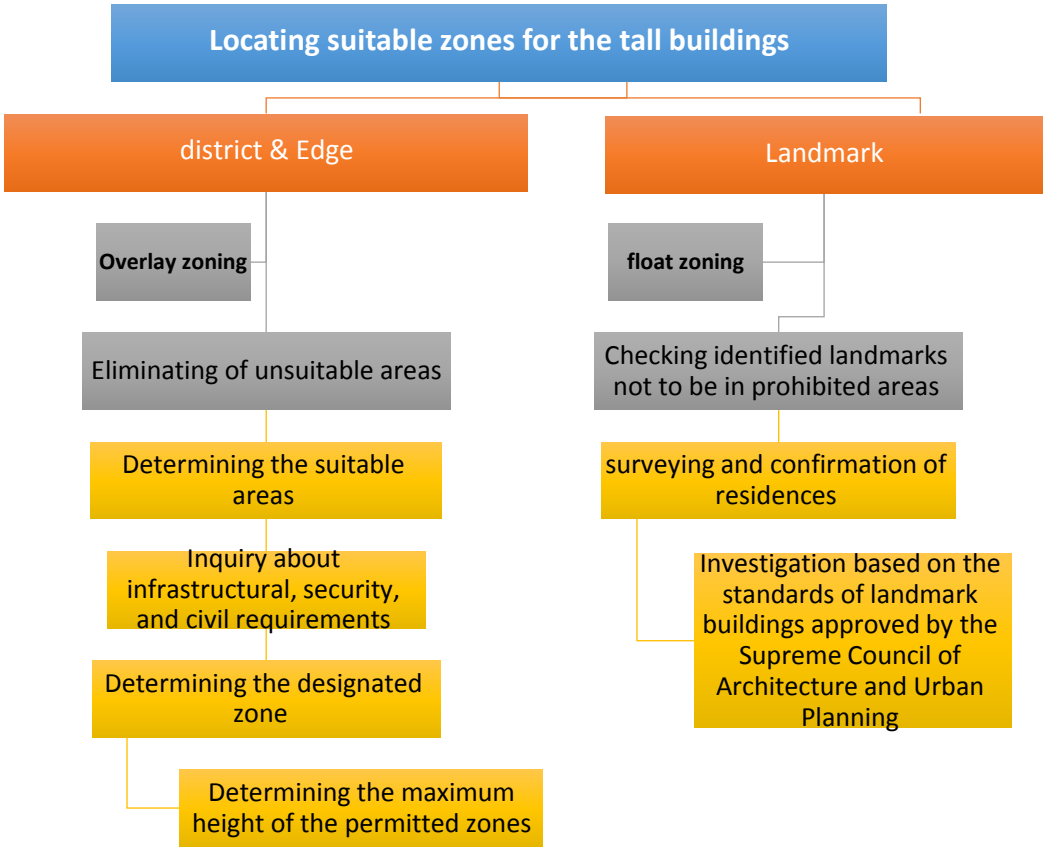
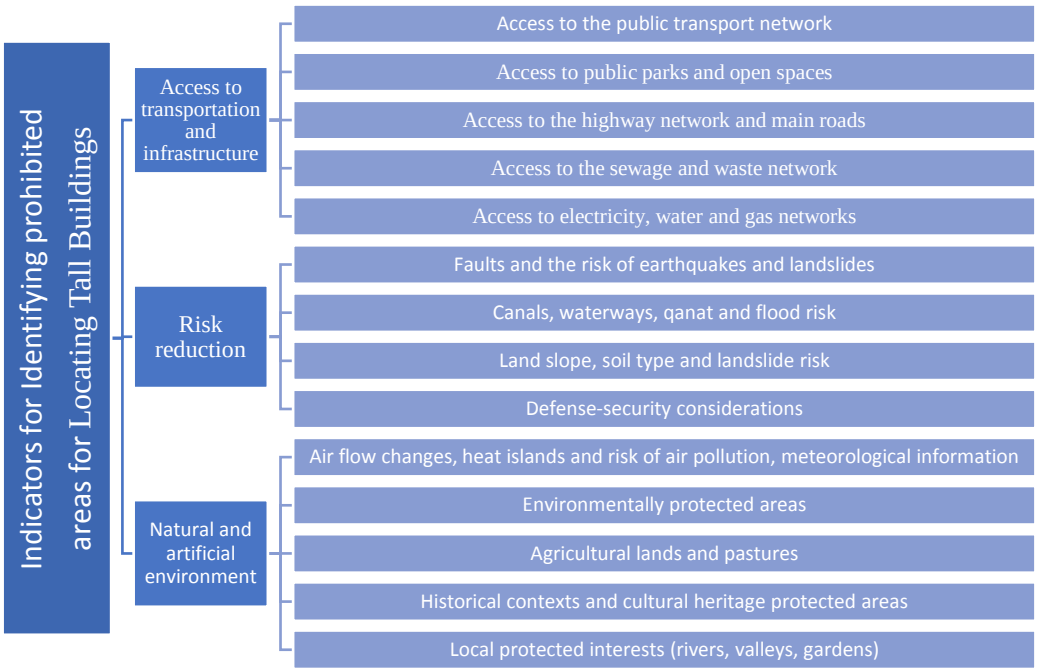


Fig.1. suitable zones for the tall buildings, Source: Authors.

Indicators for Identifying prohibited areas for Locating Tall Buildings are as follows:



Fi. 2. Diagram of the principles and indicators for locating tall buildings

4. Approach

4.1. Policies in providing regulation

This regulation does not seek to change the horizontal urban development to the vertical one. Also, it does not intend to ban the development of tall buildings. However, it addresses the role of public and governmental institutions in directing the prominent construction model through the privative and affirmative process in suitable locations in the cities. This approach is a general one, therefore, a city with a demand for tall buildings is required to follow the framework given in this document to compile rules for site location, the establishment of rules and special design of the city and then ratify them in High Council of Urban Development and Architecture. The basis of these principles is as the following:

1. This regulation does not present a universal model for all the cities in the county but a concept framework with technical requirements and a procedural structure for preparing and ratifying specific regulations for cities where the conditions allow the construction of tall buildings. This approach classifies the cities based the population.
2. Tall buildings are not necessarily an inherent privilege for cities and is merely a response to the demand of its inhabitants. However, a demand for such buildings is not a convincing reason for granting permission for their construction. Permission for the construction of tall buildings can be granted based on experts' comments and technical grounds, which had previously been presented in the master plan of the cities or is given by the administrative institutions. To preserve the social and physical structure of small cities, the permission process and requirements are different from the big cities.
3. The development of Tall buildings should not change the population projection of the cities and it is only acceptable as a change in the physical form of cities.
4. Safety and security of the residents of tall building is a priority and following privative policies should prevent their erection in the locations where it might endanger them.
5. The construction of tall building must not waive the public and the citizen's rights in favor of the benefits of private users and legal owners.
6. The neighbors' rights to have appropriate view and perspective and achieve natural light should be protected.
7. A suitable access to infrastructure services and public transportation for the inhabitants of tall buildings is a must.
8. Coordination in terms of the scale of new buildings with the context should be noted.

4.2. Location of tall building

A significant issue that this paper tries to address is where and how tall buildings can be constructed in the cities. Zoning has been the most conventional method in implementing urban development regulations in urban development plans. Although, it has been criticized for its inflexibility, it is often applied in most cities and countries in the world and has been used in developing this regulation. The zone is an area of the land with special properties, purpose, use, or limitation. According to this definition, although this term is widely used in urban development literature regarding land use, it is not limited to that, and also includes all the regulations which is anyhow related to specific geographical constraint.

Revision process and amendment of the present zoning is usually a complicated process and all the cities in the world do not necessarily follow a universal procedure. Therefore, due to some structural problems and the existing ratified master plans in most cities in Iran, the amendment of this zoning is not a separate zoning but a float one, which would overlay any other zoning system that exists in any cities:

Overlay zoning: it is a type of zoning which add to existing zoning and implements regulations in some parts of the cities with special conditions. According to this approach, tall building zone as an overlay zone, add an extra layer to the approved ratified zones.

Float zoning: it is a type of zoning that instead of determining a special location, it determines special features for a location. In this approach, privative and affirmative indicators determine the location. This approach for locating tall buildings is only applicable to the landmark.

In this approach, three types of tall building zones are defined:

- **District**: surfaces with the capability of constructing tall buildings that the minimum dedicated area is equal to an urban block. Tall buildings in the district zones can have residential, business, or residential business uses.
- **Edge**: is a collection of buildings alongside of a path with emphasi s on "cohesion". Tall buildings in the edge zones can only have non-residential use.
- **Landmark:** it is an individual structure that is significantly and distinctively taller than surrounding buildings. The main prominent feature of such building is their role as a symbol for a city. Tall building in landmark zones can only have non-residential uses.

Following table present the authorized location and land use of tall buildings in different cities with various populations. As the tables indicates, in cities with less than 200,000 people to preserve the horizontal form of the small cities, and avoid its negative consequences, tall building are only allowed in the landmark zones, if they are proven to be necessary and met the public approval.

Table 3
Location and land use of tall buildings in different cities with various populations

Zone	Land use	Scale	Requirements
District	Residential/ non-residential	Cities with 200,000+ population	Aaeneral requirement in this regulation
Edge	non-residential	Cities with more than 200,000 population	A general requirement in this regulation
Landmark	non-residential	Cities with less than 200,000 population	A general requirement in this regulation + Landmark regulation (ratified by High Council of Architecture and Urban Planning) + Public approval
		Cities with more than 200,000 population	General requirement in this regulation + Landmark regulation (ratified by High Council of Architecture and Urban Planning)

5. Results: Designation A Process For The Appropriate Development Of Tall Buildings In Iran

Upon the request of municipalities for constructing tall buildings, it is necessary for a qualified counselor to take following steps and the plan should be ratified within the designated authorities in each step. In cities with a ratified master plan, site location and their relevant regulations need to be determined as the overlaying zoning; and in the cities where master plan is going to be prepared, they should be considered in the master plan.

5.1. Ratification of the necessity of constructing tall buildings

In cities where their master plan does not indicate the construction of tall buildings, it is necessary to prepare a justification plan titled "the necessity of the construction of the tall buildings." Then it needs to be ratified in the High Council of Urban Development and Architecture through the following steps:

1. Compliance with other ratified documents and agreements about the vision and the role of the city in the national, provincial, and local documents and future development of the cities.
2. Population projection: in the ongoing master plans, the need for tall buildings with residential use regarding the maximum permitted population, the availability of land, and the settlement patterns of the cities should be assessed.
3. Physical assessment: it includes the following features: compliance and agreement of settlement patterns of tall buildings with social and cultural features and identity of the cities, the effect of constructing tall buildings on soil gradation and improving the quality of urban pattern, strong and weak points of constructing tall buildings with non-residential use regarding its cohesion with surrounding pattern and the whole city and present abilities and technical capacities in the city for construction and maintenance of tall buildings.
4. Environment assessment: assessment of the effect of tall buildings on a) the resiliency of physical and natural environment especially in environmentally sensitive areas, 2) imposing excessive pressure on resources and coordination with ecological capacity, 3) the land use, 4) cultural and historical heritages, and 5) disrupting the natural wind corridors and direction and speed of the dominant wind.
5. Economic assessment: assessment of the economic impact of the tall buildings on 1) land price and land speculation, 2) housing and economic value of the buildings in providing added value to the city

5.2. Site location and establishment

It includes two steps: locating the zones that can be assigned to tall buildings followed by determining the suitable land within the selected zone. Site location of tall buildings is based on the combination of the following two methods:

- Privation: according to this approach, restricting regulations for construction of tall buildings are listed as Do Nots. According to this regulation, areas where construction of tall buildings cannot take place are removed from the zone and the construction can take place in the other segments.
- Affirmation: according to this approach, the regulations for construction of tall buildings are listed as Dos and features that the area where tall buildings can be constructed are determined.

5.2.1. Locating suitable zones for the tall buildings

The following table provides required steps, based on privative and affirmative models, that must be followed to determine the suitable zone for construction of tall buildings.

5.2.2. Regulations for determining suitable land in the designated zones

After determining the suitable zones for the construction of tall buildings, the next step is determining the necessary features for the construction of buildings in the designated zones. Also, granting permission for construction of tall buildings in each parcel based on this regulation depends on the approval of the Urban Landscape Committee and the Commission of the Article Five. The assessment indicators for the construction of tall buildings in approved zones are as follow:

1. Meet the traffic requirements including the location ought to be in permitted routes for construction and access; impact assessment of traffic; assessment of the demand for parking spaces; reviewing the accessibility plan of the buildings especially its accessibility to public transportation

2. Meet the minimum area and land width and the permitted width of passway s for construction of tall buildings based on the number of floors within the framework of approved and ratified density according to the following table:

Table 4

Steps for identifying suitable zones for the tall buildings

Steps		**Indicator**	
1	Data gathering	Accessibility to infrastructure, Risk-taking, natural, and built environment	
2	Eliminating of unsuitable areas	High-risk areas regarding geological and geotechnical factors; Areas located in the buffer of registered historical heritage; Areas with security-defense considerations; Areas with environmental considerations; Areas located in the airspace; and Areas located in buffer zone of hazardous land use	
3	Determining the suitable areas	District	Locating within a 500-meter distance of public transportation stops; Accessibility to main roads; and Locating in proximity to district, regional, and city parks.
		Edge	Locating within a 500-meter distance of public transportation stops; Accessibility to main roads; Not blocking landscape corridors of the city; Not blocking the wind corridors of the city; and Not making widespread and inappropriate shadow over public spaces.
		Landmark	Locating within a 500meter distance of public transportation stops. Accessibility to main roads; Meeting the infrastructural, security, and civil requirements inquired from other authorities.
4	Inquiry about infrastructural, security, and civil requirements	Electricity supply capacity from the Power Distribution Compony Water supply capacity and sewage collection capacity from the Water and Sewage Company Natural gas supply capacity from the National Iranian Gas Company Considering the local concerns and consideration through the City Councils; Considering the effects of the population load on green space and public service per capita	
3	Determining the designated zone	District	Required areas are selected from eligible zones regarding the quality of urban spaces and with a cumulative approach to prevent dispersion
		Edge	Located in areas that help the legibility of the city and the quality of urban spaces with minimum dispersion; Public uses are prioritized to be assigned in these areas are in accordance with the land uses specified in the comprehensive and detailed plan of the city; and Edge zones are located between two main nodes of the city.
		Landmark	Locating tall building is allowed in any eligible location of the city the meet the previous steps' requirements.
6	Determining the maximum height of the permitted zones	The maximum number of floors and height of building shall be specified by the engineering consulting co. Within the population projection of the city.	

Table 5

Passways situation for construction of tall buildings

Number of Floors	**Minimum Area (Land)**	**Minimum Width (Land)**	**Type (Road)**
8-10 story	1,500 m^2	25m	Arterial 2
11-12 story	2,000m^2	30m	Arterial 1
13-25 story	3600m^2	40m	Arterial 1
26-40 story	10,000m^2	65m	Arterial 1

3. Compatibility of the building volume with soil gradation: the merging land parcels to meet the minimum required area is only acceptable when the merged area is less than the average area of urban block parcels in which the dedicated parcel is located.

4. Compatibility of the building with contextual landscape and view: the construction of tall buildings that monopolize the view to the natural landscapes such as the sea, mountains, jungles is forbidden
5. meet the requirements of risk reduction and accessibility of aid services in disaster situations based on the Chapter 3 of the National Building Code, and the requirements of passive defense
6. Limitation of occupied area: tall buildings can occupy up to 40 percent of the land area
7. Façade in landmark tall buildings: all the four side must have façade and be detached from other city features
8. Access to sewage network: if there is no sewage network, the construction of tall building can only be allowed if it is equipped with a purification system or hygienic wastewater disposal regarding geology features and water levels.

If the assigned land for the construction of tall buildings in the permitted zone cannot meet the abovementioned requirements, the maximum permitted height and site location requirements depends on density regulations in the overlay zone regulations.

5.3. Design regulations about built environment and urban landscape

After determining the regulations for tall building zones and parcels in the last two steps, urban design regulations need to be determined by setting specific indicators including: occupied area, volume shape, urban landscape, and the skyline. In this step, by prioritizing the principles based on climate, function, and cultural heritage, the design regulation in three levels of tall building is compiled:

- Landmark: emphasizing on the building's role as an urban symbol
- Edge: emphasizing on cohesion
- Area: emphasizing on vitality

Relevant design regulations are presented considering several criteria including:

Building footprint placement pattern (occupied area, height and shape of its volume) emphasizing sunlight shading function and vantage point, access to driveways and sidewalks, security and safety requirements, façade requirements (shape, material, openings, etc.) urban landscape considerations, and compliance with climate, open spaces, the impact of wind at a small scale on the climate, and so on. Then, relevant design regulations are presented.

5.4. Procedural requirements and preparing technical documents

The aim of this section is to present solutions for efficient implementation and supervision of these regulations to guarantee its results. This section includes two types of documents: the documents that need to be submitted to the municipality for granting permission for the tall buildings, and those that are required after the permission is granted.

6. Confirmation Organization For The Construction Of Tall Buildings In Cities

Potential and actual requests for the construction of tall buildings in a city must be answered by the local management institutions such as municipalities or General administration of road and urban development in the province. For this purpose, the responsible institution must obtain permission from the responsible institutions in the country, the most important of which is the High Council of Urban Planning and Architecture, which is responsible for approving comprehensive urban plans. In this case any permission for high-rise building construction before approving and communicating the designated areas for the construction of tall buildings is forbidden. The steps to obtain this permission are shown in the diagram below:

Table 6
Steps for approving the location of tall buildings

Requesting permission and approving the location of tall buildings in the city				
Stages	1. permission for tall building (For cities without a master plan or cities whose master plan does not include tall buildings)	2- approving the designated areas for tall buildings	3. approving the regulations for the establishment of tall buildings in the permitted areas	4. Confirmation local design criteria
Approval authority	High council of urban planning and architecture	High council of urban planning and architecture	Article 5 commission	Committee for urban landscape

7. Conclusion

In conclusion, the development of regulations for tall buildings in Iran has emerged as a necessary response to the challenges posed by unregulated construction practices. The increased demand for tall buildings, driven by factors such as population growth and urbanization, necessitated a comprehensive approach to ensure sustainable and harmonious urban development. The "General Principles of Tall Buildings Development" policy, ratified by the Iran High Council of Urban Development and Architecture, serves as a guiding framework for the location, design, and construction of tall buildings.

These regulations address critical aspects such as aesthetics, zoning restrictions, safety codes, climate impact, and environmental considerations. By defining different zones for tall building construction and providing guidelines for site selection, the regulations aim to ensure that tall buildings fit within the urban fabric, minimize negative visual impacts, and uphold safety standards. Furthermore, the regulations recognize the role of public and governmental institutions in directing the construction process, safeguarding the rights of citizens, and preserving the overall welfare of the community.

Developing these regulations involved extensive research, qualitative studies, and consultations with urban experts and stakeholders. Through a comprehensive methodology, the criteria for locating tall buildings were identified, and the regulations were formulated to meet the specific needs and priorities of Iranian cities.

The presented procedure was compiled within the existing limitations to meet future demands, and aims to use the maximum opportunities in the legal and regulatory structures of the country, and be in accordance with ongoing development plans which is summarized in the following chart. What is important is to gradually revise the process based on the feedback that it will receive during the implementation.

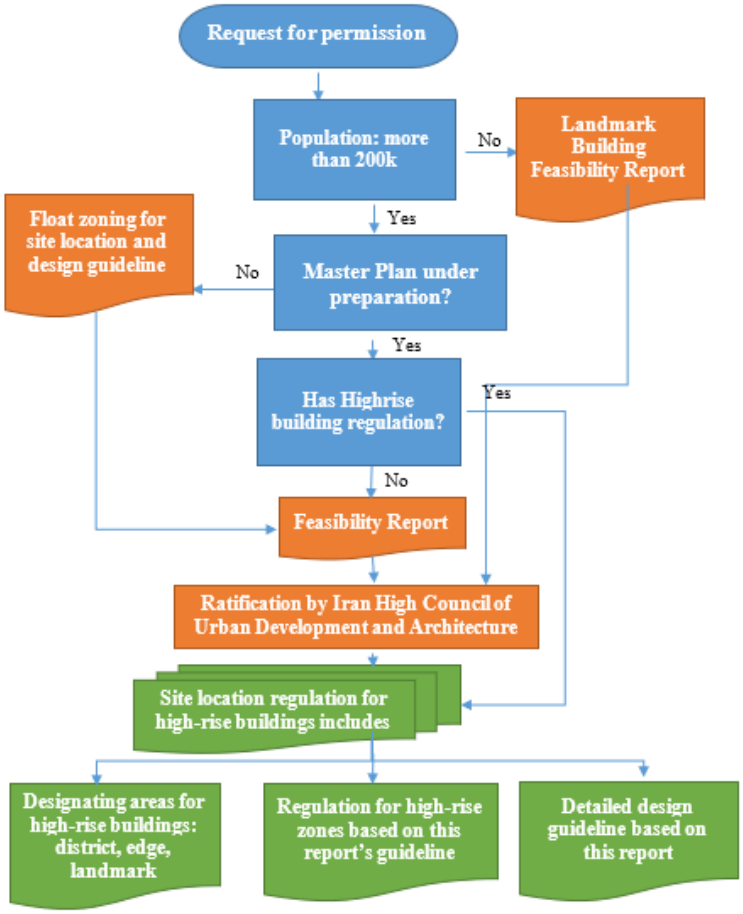


Fig. 3. A procedure for appropriate development of tall building in iran, source: authors

By implementing these regulations, Iran endeavors to achieve sustainable development while meeting the demand for tall buildings. The regulations act as a tool to balance economic growth, environmental conservation, and societal well-being. Ultimately, the aim is to create vibrant urban environments that integrate tall buildings seamlessly into the urban landscape, ensuring safety, preserving heritage, and promoting a high quality of life for

residents. Through effective regulation, Iran is poised to shape its urban future in a manner that fosters sustainable and resilient cities.

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