

## Promoting city center parking qualities; using urban design guidelines

Mostafa Behzadfar<sup>1,\*</sup>, Amir Shakibamanesh<sup>2</sup>

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### Abstract

Quality is the most important consequence of an urban design project, and its promotion is the final duty of an urban designer. So "urban design guidelines" which use environmental improvement factors in their structure, have an effective role in promoting urban space quality. "Urban design guidelines" are the most important instruments in urban designers' authority, to reflect and appear improvement plans in urban spaces and create the bridge between research (theoretic studies) and practice (professional efforts). The paper guidelines are generic statements that specify the goals, the design pattern for achieving them and the evidence supporting the linkage between goal and pattern. On the other hand, decisions about how to address the issue of parking are among the most important in making the city center a high-quality place for people. The city center cannot have a pedestrian orientation, a concentrated diversity of uses, or a continuity of street-level activity if parking is not well designed. Attention to varied types of existing parking in city center area (such as on-street parking, surface lots or parking structures), the main idea of this paper is to promote the quality of city center spaces, by using different urban design guidelines.

Keywords: Urban design, Guidelines, City center, Parking, quality

### 1. Introduction

Design Guidelines provide a connection between general planning policies and implementing regulations. The principal purpose of design guidelines is to convey a sense of the preferred quality for a place [1].

Cooper Marcus (1986) has written about design guidelines as a link between research and practice. The most general such urban design guidelines are contained in the directives established by Christopher Alexander and his colleagues in their pattern language [2]. Such guidelines are generic statements that specify the goals, the design pattern for achieving them and the evidence supporting the linkage between goal and pattern. In all-of-a-piece urban design the concern is with writing directives that ensure the intent of the conceptual design is met. The focus here is thus on project-specific guidelines, or what have been called 'design directives' for completing the components of an all-of-a-piece

urban design.

The fundamental nature of design guidelines has changed little over the centuries. Facade guidelines prescribing the nature of fenestration to be incorporated on new buildings can, for instance, be traced back at least to fourteenth century Italy. What has changed and will no doubt change in the future are the perceptions of the mechanisms that achieve the design goals and the types of guidelines that are used to ensure those mechanisms are incorporated in a design [3].

Design guides are among the most common mechanisms used by local authorities (and others) to influence the design of development. The most successful guides have the committed support of all the relevant council officers and planning committee members, and are clearly understood by local developers, architects and other users.

Design guides can inspire innovative design appropriate to its context; raise standards of a particular type of development where problems have been identified; and provide answers to questions frequently asked by applicants.

Design guides enable local authorities to guide development in relation to particular design issues and type of development, elucidating the design policies in the development plan. Producing a design guide can be an effective use of a council's design skills, in cases where officers find themselves

\* Corresponding Author: behzadfar@iust.ac.ir

<sup>1</sup> Associate Professor, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran

<sup>2</sup> Ph.D. Candidate, School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran

repeatedly giving the same advice [4]. The effectiveness of a design guide, development brief, or any other supplementary planning guidance will also depend on: [4]

- the degree to which all relevant departments of the council are committed to it;
- the vigor with which council members and officers support it;
- the effectiveness of public participation in preparing it;
- how logically it is structured, how clearly it is written, and how well it is illustrated.

### 1.1. Types of Urban Design Guidelines

There are three types of design guidelines used to implement urban design objectives: prescriptive, performance and advisory. They may be specifications for open spaces - that is streets and squares - and/or for the buildings that frame them. Prescriptive guidelines describe the pattern that a building complex, building, or building component must take (e.g. all buildings must have purple stringcourses of brickwork at every 5 meters of height). Performance guidelines specify how a building should work (e.g. no shadows can be cast on a particular open space during the hours 11.00 a.m. to 2.00 p.m. at the winter solstice). Property developers overwhelmingly prefer the first because they state the design forms required without any ambiguity. It is easier to create enforceable guidelines when a public authority has a legal stake in the development (e.g. is a land holder or is contributing to the project's financing), or by creating covenants or other requirements in giving property developers permission to build. Advisory guidelines are suggestive in nature whereas prescriptive and performance are mandatory if they are adopted into law for specific constitutionally acceptable purposes. There is no legal requirement to comply with advisory guidelines [3].

### 1.2. What a Design Guide Contains

Though there is no universally applicable format for design guidelines, the most effective ones contain similar elements. A well-prepared design guide will usually include: [1] - [4]

1. The purpose of the guide;
2. Information on how to use the guide and who produced it;
3. An account of consultation on the guide and the authority's response;
4. Current status (draft for consultation, for example) and eventual status;
5. An explanation of the policy context, how the guide relates to plan policies, national guidance, other design guides, development briefs, and relevant initiatives such as any relating to town centre management, security or conservation;
6. An explanation of what context appraisals the guide is based on, and a summary of what they showed;
7. Links with Policies. As with any piece of regulation, support a set of guidelines through policies adopted by the legislative body. The initial portions of a document containing guidelines should refer to relevant policy provisions.

Annotations, footnotes or marginal notations can indicate the nexus between a specific guideline and a policy. The underlying intention, as expressed through policies, can be described in a separate initial section or can be tied to each guideline (or both). This creates an underpinning and, in the case of an appeal, indicates the supporting rationale for the decision; moreover, because guidelines may need to be revised from time to time, it serves as a reminder of the original objective.

8. The Principles. The listing and explaining of the design principles to be applied should comprise the largest amount of space in a set of guidelines. For each individual guideline, several sentences should be sufficient.

9. Amplify written information with graphics, such as diagrams, sketches, illustrations, photographs, or combinations of these. Also, use captions so that the point being illustrated is evident. If photographs are used, ideally they should be of exemplary buildings (or parts of them) within the community itself. If good examples cannot be found, it is legitimate to use examples from nearby communities. That said, avoid using examples from places that are radically different in climate, vegetation, topography, or culture. Many design solutions reflect these regional factors.

10. Focus. Design guidelines cannot be developed to cover every conceivable subject, but they should identify the most critical issues. This approach provides a focus for the review, so that extraneous issues are not interjected. It also informs the development community about what will receive the greatest amount of scrutiny. Setting forth key issues sharpens the scope and concentrates the energies of reviewers, designers, and decision makers. Finally, it can reduce the potential for contentious interchanges by declaring, in advance, what is truly important.

11. Glossary. Include a list of terms with definitions. This helps reduce the number of arguments caused by people using different meanings for the same terms. People often have different understandings of a term or concept; therefore, it is important that within the process at hand the same meaning should be used. A glossary also makes it evident that some words, such as "compatibility", do not lend themselves to a simple definition when used in the process. Such words should not be used at all within the guidelines themselves, but they may be appropriate for policies within a plan document. The guidelines should seek to achieve compatibility, if that is an objective. Note that courts will not support the use of vague language.

12. References to further information;

## 2. City Center

City center is the focal and central area of a city \_ not necessarily in geometric meaning\_ which is the context of occurrence, shaping and gathering of most important urban activity, public image and people presence manifestation. It is also the place which contain large portion of urban economic and administrative interactions. In addition, the city center creates urban identity and characteristic and be named as the most important part of the city by its inhabitants [5].

So, by this definition and with attention to performed experiences and studies, the most important characteristics and properties of the city center can be discussed as following terms: [5]

- City center is the most or at least one of the most important elements of a city in development process;
- There are always accesses from different part of city and also other cities or settlements to the city center;
- City center prepare social interactions and citizens memories manifestation context and also creates a symbol of social and cultural identity of a city;
- City center should always has different gravities and attractions for people;
- City center is often the main commercial and administrative focal point;
- City center supports different and diverse activities and functions;
- City center should appear the high quality place as a symbol of whole city; and finally
- City center should organize space and public places around itself.

Therefore, because of concentration and gathering a large amount of human, social, economic, historical, cultural, physical and functional resources in city center limited space, it can be known as a pulsating heart of city development.

#### 2.1. Increasing Vehicle and Pedestrian Access to the City Center

One of the cities advantages as compared with other human settlements is their good access. Without proper accessibility, usability of space also decreases and affiliation sense fades. "Lynch" expresses that access can be sort by elements which it being set up with and also by whom the costs will be sustained. Maybe access to people can be known as the most basic kind of access. Access to human activities, goods, special resources, places and finally information are also the other kinds of access which can be known in city environment [6].

In "Responsive Environment" (the book) access being considered as a key parameter of responsive evaluation [7].

Francis sorts access in form of physical, social and visual [8]. Carr et al also add symbolic access to above - mentioned sort [9].

Links that promote movement among the city center's uses and activities are also crucial in shaping the center's character as a place. Convenient and well- defined connections among offices, residential, retail, entertainment, and cultural uses encourage an extended cycle of intensive pedestrian activity and make it easier for the various uses in the central area to support each other.

Global experiences in recent decade show that closing the city center's retail spine to vehicles and converting it to a pedestrian street have undesirable effect on city center vitality and life continuity. Auto access and parking are critical to the city center's success as a market.

In fact, all central area streets should be designed with the pedestrian in mind, and on key retail streets, the pedestrian should receive top priority. While vehicular traffic and on-street parking should not be excluded, cars and parking should be carefully managed to avoid over whelming the human scale

of the streets. Parking lots, large parking structures, or overly wide streets must not create gaps or barriers between activity anchors or an unsafe, unpleasant environment for pedestrians.

In the following paragraphs will be discussed about creating parking and their design guidelines in city center.

### 3. Parking

According to studies and experiences in different countries, each vehicle approximately applies 400 hours in a year and in 95 percent of a time it is parked in origin or destination! [10]

Also, people desire to travel to the city core by their vehicle and this action increase pressure on the city center by lake of car parking. Many people who travel to the city center cause long traffic jam while searching a place to park their cars.

All these terms show just small parts of parking problems in the city centers. So because of high important of this topic, in recent article will be discussed about urban design considerations which can effectively improve parking quality in the city center.

### 4. City Centers Parking

Decisions about how to address the issue of parking are among the most important in making the city center a high-quality place for people. The city center cannot have a pedestrian orientation, a concentrated diversity of uses, or a continuity of street-level activity if parking is not well designed. Surface parking in particular can create large gaps in the development structure and isolate key uses from one another.

Parking in city center is expensive, space consuming, sometimes ugly-and critical to a successful city center. Office tenants, shoppers, and visitors must be attracted from competing locations in other parts of the city or in the suburbs, and many prefer to drive [11].

Although it is crucial to supply an adequate amount of convenient parking, it also is essential to minimize the land area required to do so. Especially in the center city where a retail core exists or can be created, preference should be given to short-term parking for retail patrons rather than to long-term parking for employees. To minimize the impact of parking on the visual quality of the street front, parking frontage on major arterials and key pedestrian streets should be curtailed. Wherever possible, parking should be located underground or in interior-block structures behind active uses [12].

#### 4.1. Parking Design Considerations

The major objectives in designing parking for city center are to reduce its impact on the quality of city center's visual environment and to minimize the extent to which it disrupts pedestrians' movement among retail and between the core and other activity centers.

##### 4.1.1. On-street Parking

Although it is generally desirable for on-street parking to be available for the convenience of short-term use, sometimes it must be eliminated to accommodate pedestrian amenities and

streetscape improvements. Either parallel or angled parking can work. Some prefer the urban look of parallel parking; others have found that the greater number of spaces associated with and the convenience of angled parking are worth the more suburban appearance [11].

#### 4.1.2. Surface Lots

Surface parking lots create gaps in the city center streetscape, interrupting the activities that make the street a vital and interesting place for people. Expanses of pavement and parked cars create a visually harsh environment that adversely affects city center's image.

Surface parking expansion in residential areas can fast weak sustainability of these areas and decrease vitality caused by mixed of uses that reinforce the city center as regional activity node. Consequently, surface parking lots must be located to minimize their visibility from major arterials and pedestrian-oriented streets. Their visual impact can be softened and screened with a perimeter landscape buffer of shade trees. Landscaped berms might not be an appropriate screening technique for the city center area because of the space they require and the suburban image they convey. Standards for the design of surface parking lots should also require interior landscaping, including islands defined by curbs and planted with shade trees to delineate each bay. Standards for illumination, criteria for the size and placement of signs, and booths for attendants in commercial lots are recommended [11].

#### 4.1.3. Parking Structures

While parking structures require less land (for the number of cars accommodated) and can be screened more effectively than surface parking, their design and placement must be carefully considered. On streets where a parking structure's ground level will be occupied by cars, a landscaped setback should be required to soften the visual impact on the street and sidewalk. Some cities have found success building parking structures on the interior of the block, providing space for multistory development on the street frontage. Development of such interior-block parking should be encouraged because it allows introduction of the active uses along pedestrian-oriented streets [13].

The scale of the parking structures should be modulated by interruptions of the facades, setbacks, and lowering the first level below the existing grade, where the water table allows, to reduce the total height and create proportional human scale.

The architecture of the parking structure should incorporate exterior finish materials of the same quality as those used on nearby buildings. Neutral colors and architectural forms that echo the characteristics of adjacent buildings are also recommended. The street facade of the parking structure can be designed to replicate the fenestration patterns of nearby buildings, thereby helping the structure to blend into the core. In no case should the design of a parking structure draw attention to itself through the use of exotic shapes, materials, or colors. Because security, perhaps more in terms of perceptions than reality, can be a concern and a disincentive to the use of parking structures, the design of the structure should incorporate safety considerations. Open or glass-enclosed stairwells, glass-enclosed elevators, and even levels of

illumination can enhance the psychological comfort for users. Retail shops at ground level can have the same effect. In sensitive locations (for example, adjacent to residences), careful lighting design should eliminate views of light sources in the garage.

Construction of parking structures can be encouraged through the provision of density bonuses by cities to developers who build such structures or through direct public assistance to finance or pay for their construction. However, there are limits to the economic feasibility of these approaches. Underground parking has the least visual impact on the central area and creates only minimal impacts on the pedestrian environment, but it is also the most expensive option—approximately twice the cost of an above-grade parking structure [13].

#### 4.2. Limiting Use of Long- Term Parking

Several cities have found they can support the expansion of office use while minimizing the need for long-term employee parking within the intensively developed core by implementing parking-related policies in concert with transit and transportation management initiatives. For example, in larger cities, the price of long-term parking within the core can be increased and the supply of commuter parking limited to encourage commuters to shift to use of transit. However, it is important to coordinate such major changes in parking policy with measures to upgrade the commuter transit system. Otherwise, the ability of the city center to attract and hold office and retail uses may suffer if people are forced to park too far from their desired destination.

Efforts to improve parking management also can be complemented by efforts to encourage carpooling, ridesharing, or "live-near-your-work" programs, or by subsidies for employee transit fares. Cities may even require participation in such transportation management programs sometimes encouraged through city tax rebates or reductions—before new high-density office development is allowed. Higher densities should be located along or near transit corridors where they can be supported most efficiently by the transit system.

When a significant shift to commuter transit is not feasible, efforts to control growth in the city center's long-term parking demand can focus on management strategies that reduce the number of single-occupant vehicles by encouraging use of van pools and ride sharing.

#### 4.3. Encouraging Use of Shared Parking

Shared parking is the use of a parking space by vehicles generated by two or more individual land uses without conflict or encroachment. The ability to share parking spaces is the result of two conditions: [1]

- Variation in the accumulation of vehicles by hour, by day, or by season at the individual land uses
- Relationships among the land uses that result in visiting multiple land uses on the same auto trip

The key goal of a shared parking analysis is to find the balance between providing adequate parking to support the

city center area from a commercial viewpoint and minimizing the negative aspects of excessive land area or resources devoted to parking.

A city center is one of the best examples of a mixed-use business district where the same parking space can serve many users: daytime commuters, shoppers, and visitors, and evening diners and theater goers. A mixed-use project offers a special opportunity to combine uses with parking demands that peak at different times of the day.

#### 4.4. Parking in Historic Areas

A special problem exists in providing parking in city center historic areas. In many cases, no on-site parking exists, as access was provided initially by public transit. Current parking requirements could be too high to be met on site without destroying some of the very structures that are being rehabilitated. In fact parking in historic area is the soft underbelly of redevelopment, necessary to make historic districts work, but not a desired use.

#### 4.5. Parking Location

The perception that there is a shortage of convenient parking in city centers often is based not on the actual supply of parking, but rather on a lack of awareness of its location and the absence of well-defined pedestrian connections between off-street or fringe parking facilities and city center destinations. Especially in smaller cities, shoppers tend to sense that the parking supply is inadequate and inconvenient unless they can find an on-street space either in front of the store or in a surface lot in the store's immediate vicinity. Because the suburban mall's parking is free and highly visible, users often ignore the fact that the walking distance between the car and the store entrance at the mall may be as great as, if not greater than, it is in the city center.

The perceived inadequacies in the amount and location of city center parking can be largely overcome if the central area's identity as a multipurpose destination is made more readily apparent. A central core that is compact, with well-defined physical links between activities and a strong pedestrian orientation, will be seen as a one-stop activity center—a place where several activities can be accomplished on foot from a single parking space. Simple actions such as an easy-to-understand system of directional signs, location maps, and other "way finding" devices can eliminate much of the confusion that first-time visitors may confront when reaching the city center.

Of course, the parking available within convenient walking distance of the core's retail concentration should be dedicated to customers. Shoppers on retail-only trips need a sufficient supply of short-term parking near stores in on-street spaces, surface lots, and structures, and a uniform signage program to help them find such parking. Retail employees should not use these spaces for their own cars, as often happens. In addition, a validation program offering free parking to shoppers can enhance the perceived convenience of parking.

Pedestrian connections between parking and the core area's major anchors and retail spine should be attractive and

convenient to use. Developers can help by providing through-block access ways that are edged by active uses. On the city center's principal retail spine, special efforts should be concentrated on upgrading rear facades and entrances to surface parking lots located behind retail establishments.

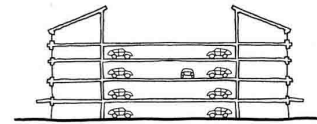
The size of parking facilities should be proportionate to the traffic carrying capacity of abutting streets. If possible, these facilities should not be located on the major arterial and primary pedestrian streets because of the important role these roadways play in shaping the city center's visual image and pedestrian circulation [13].

#### 4.6. Acceptable Parking Types in City Center

English Partnerships in the "car parking" book suggest ten types of parking which are acceptable and more appropriate for locating in city centers. These types will be explained in following terms: [14]

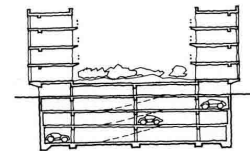
##### 4.6.1. Off plot: Multi-storey

Single or multiple entry point. Covered parking in marked bays, arranged over levels connected with ramps. Access generally controlled from residents' cars. No direct access to homes. Should be wrapped in buildings to maintain active streets.



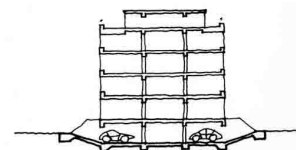
##### 4.6.2. Off plot: underground

Single or multiple entry point. Covered parking in marked bays, full storey height or more below street. Access generally controlled from residents' cars. No direct access to homes.



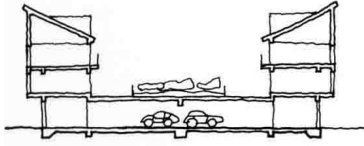
##### 4.6.3. Off plot: Undercroft

Open sided parking bays at street level or half level down for natural ventilation, best secured with grill or other bar to access from street. Accommodation over. No direct access to homes.



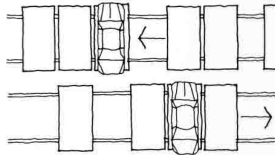
##### 4.6.4. Off plot: Podium

Distinction from underground/undercroft by the addition of private or shared outdoor space above parking. Naturally ventilated. Should be closed to street or it echoes open ground floor structures. No direct access to homes.



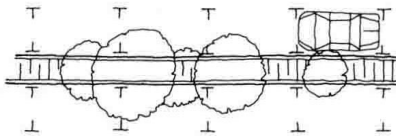
4.6.5. Off plot: Mechanical

Sliding, stacking or rotating system on one or more levels. Best when controlled by residents. No direct access to homes.



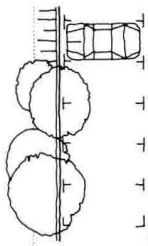
4.6.6. On street: Central Reservation

Curbside parking arranged both sides of strip dividing traffic flows with marked bays for parking in same direction as the traffic flow. Landscaping a benefit.



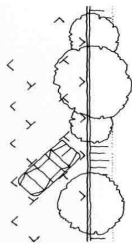
6.7. On street: Right Angled

Curbside parking at right angles to axis of pavement, generally in marked bays. Increase in building heights needed to compensate for wider street. Needs landscaping.



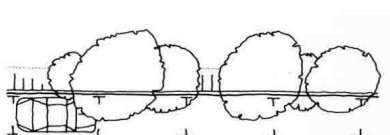
4.6.8. On street: Angled to Pavement

Curbside parking at less than right angle to axis of pavement, generally in marked bays. Needs landscaping.



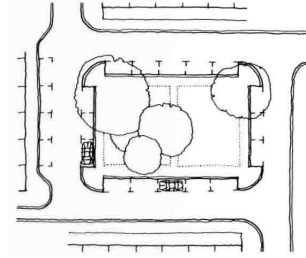
4.6.9. On-street: In Line with Pavement

Curbside parking parallel to the axis of the pavement, bays may be either marked or unmarked. Landscaping a benefit.



4.6.10. On street: Housing Square

In line curbside parking arranged around sides of landscaped central space, further parallel parking to other side of surrounding streets.



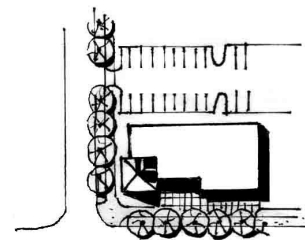
5- City Center Parking Design Guidelines

**Intent:**

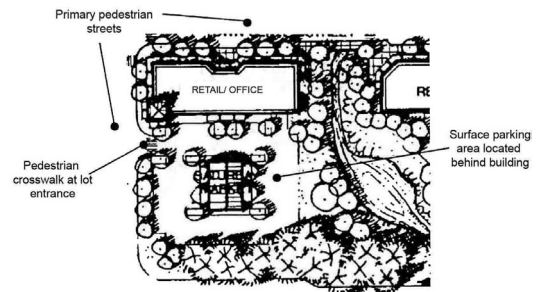
To ensure that parking lots are not the dominant element within the city center.

**Design Guidelines:**

- Along city center parking designated pedestrian streets shall not be located between a building and the street [15].
- Parking lots shall not be located at intersections.
- Parking shall be located at the rear of buildings (with through block connection to city center primary pedestrian streets) or at the side of buildings.

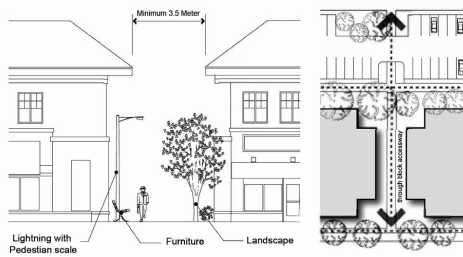


Locating parking at the side of buildings



Locating parking at the rear of buildings

- Parking lots shall not be located in front of commercial buildings along primary pedestrian streets.
- Pedestrian connections between parking and the core area's major anchors and retail spine should be attractive and convenient to use. Developers can help by providing through block access ways (between parking and city center) that are edged by active uses [13].



Example of a through block access way

- Surface parking shall not create large gaps in the development structure and isolate key uses from one another.
- Wherever possible, parking should be located underground or in interior- block structures behind active uses [13].
- While we need on- street parking parallel parking is preferable in an urban setting than angled parking.

**Intent:**

To soften the impact of surface parking on the streetscape by create screen.

To diminish the visual effect of large areas of surface parking.

To contribute to the amount of vegetation in the city center.

**Design Guidelines:**

• Consideration should be given to proposals for reduced off-street parking requirements based on analysis of potential for shared use of parking spaces by two or more uses which do not experience concurrent peak parking demands, or the potential for sharing adjacent existing off-street parking facilities.

• Off-Street Surface Parking should be designed according to environmental sustainability principles, including the minimization of storm water runoff and 'heat island' effects. Permeable pavement and tree planting should be implemented wherever possible.

• Snow storage or removal should be considered when designing parking lots, with special attention paid to the limited salt resistance of trees. Snow storage should occur at a low point, allowing melting snow to drain directly into catch basins or swales.

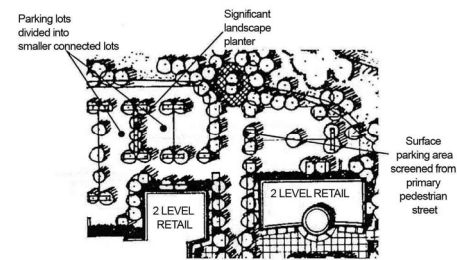
• Surface parking shall not locate in front of commercial building on city center's retail spine.

• Whenever possible it is desirable to decrease the parking lot frontage along the primary pedestrian street and maintain the sense of spatial enclosure by locating a small structure, such as a kiosk or retail stall, at the parking lot entrance or intersection corner.

• Mid-block parking lots of less than 18 meters along primary pedestrian street frontage are allowed. All interior mid-block parking shall be screened with landscaping (trees and evergreen shrubs) or other acceptable screening. Mid-block parking lots of greater than 18 meters are strongly discouraged. Where this is not practical, the mid-block parking lot shall not exceed 45 meters in length, not including the access driveway width. These areas shall include a pedestrian-oriented space with a combination of landscape, screening and amenities such as benches, kiosk(s), fountain, transit shelter, trellis, or other features to further enhance the pedestrian

experience [16].

- Whenever parking lots exceed 200 stalls they shall be divided into smaller connected lots to minimize the impact of parking. Use of significant landscape planters no less than 2.4 meters wide shall be provided to divide large parking areas. Perimeter shall create smaller parking "cells" [16].



Large parking lots shall be divided into smaller connected lots

• Curb cuts for parking lots in commercial area should be minimized by requiring shared entrances and exits, where appropriate.

• Site a parking lot so it will minimize gaps in the continuous building wall of a block.

• Consider the planting of shrubs, vines and small trees of at least 1.2 meter in height, which can aid in the circulation of pedestrians and vehicles by demarcating boundaries and aisles and drawing attention to desired openings and paths for pedestrians [17].

• High quality landscaping treatments should be used to define site boundaries, provide buffers between adjoining developments and screen storage and utility areas [18]. A perimeter landscape buffer of shade trees should soften and screen parking visual impact [11].

• Parking lot landscape shall be used to reinforce pedestrian and vehicular circulation, including: [15]

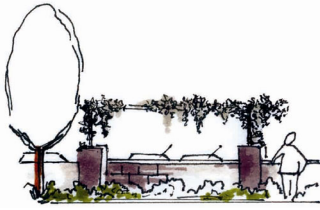
- Parking lot entrances
- Ends of driving aisles
- Defining pedestrian walkways through parking lots.
- Landscaped berms shall not be used for screening and separating levels within the central area.

• Low decorative walls or a combination of low wall and wrought iron fence, raised planters or shrubs between 0.6 to 0.9 meters in height at maturity should be used to screen parking lots from adjacent public streets and walkways [19].



• Walls and raised planters exceed a maximum height of 0.9 meter in height, shall obey all of the following: [19]

- Screen treatment should not create a site distance hazard at an intersection.
- Portion of treatment that is above 0.9 meter in height is a minimum of 75% transparent (i.e. metal railing, trellis, or other similar treatment).



• A setback shall be provided that allows space for all trees and shrubs where vehicle overhang extends into landscape areas.

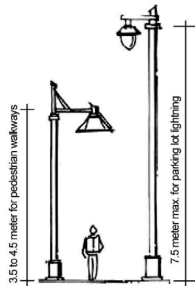
• Trees within planting areas shall be used to break up large parking areas, provide shade, reduce the heating effect of storm water on the parking lot surface and extend pavement life. The amount of interior landscaped area and trees shall be dependent upon the location of the parking lot in relation to the building and public right-of-way: [19]- [15]

• Where the parking lot is located between the building and the public right-of-way, one tree for every four spaces shall be provided (1:4).

• Where the parking lot is located to the side of the building and partially abuts the public right-of-way, one tree for every six spaces shall be provided (1:6).

• Where the parking lot is located behind the building and is not visible from the public right-of-way, one tree for every eight spaces shall be provided (1:8).

• Parking and landscaped area lighting shall lead to create visibility and prepare security. Lighting fixtures shall be limited to a maximum height of 7.5 meter and shall be shielded from producing off- site glare [19].



Lighting should be provided within parking lots and along pedestrian walkways.

• The use of an entire block for parking (either surface or structured) is generally discouraged [20].

• Parking lots that abut the public right-of-way shall be screened with one or a combination of the following treatments: [15]

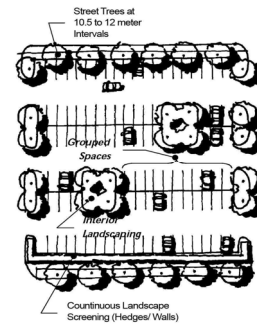
• Low walls made of concrete, masonry, or other similar material and not exceeding a maximum height of 0.9 meter.



• Raised planter walls planted with a minimum of 50% evergreen plant materials not to exceed a total height of 0.9 meter, including the plant material planted on top.

• Landscape planting consisting of 50% evergreen trees, shrubs, and groundcovers.

• Continuous landscape screening (along 100 percent of the street frontage except at entrances and exits) must be provided by an evergreen or deciduous hedge [20].



• Parking lots shall be separated from sidewalks, streets, or alleys by an open space of at least 1.5 meters between the parking area and the edge of the right-of-way. This area shall be landscaped with appropriate grass, ground cover, shrubs, and trees [20].

• Surface parking lots should be located to minimize their visibility from major arterial and pedestrian oriented streets.

• Screening shall not lead to exterminate environmental security.

• Chain link fencing shall not be permitted to screen or enclose parking along a public sidewalk [19].

**Intent:**

To diminish the visual impacts of parking structures in the city center.

**Design Guidelines:**

• Parking structures should strongly being encouraged in all city center districts to minimize the impact of parking lots.

• Incorporate design elements that emphasize human scale and avoid imposing monolithic structures.

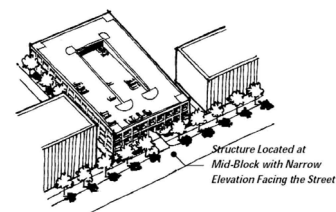
• Parking structures shall correspond to adjacent land uses and activities. Landscaping shall include a combination of shade trees, evergreen trees, shrubs, groundcovers, deciduous natives, ornamental shrubs and vines to further screen the structure [16].

• Minimize disruption to visual continuity of street.

• Widths of entries to parking facilities should be minimized.

• Where parking facilities interrupt the pattern of building facades on the street, the entry creating the break in the facade shall be minimized [17].

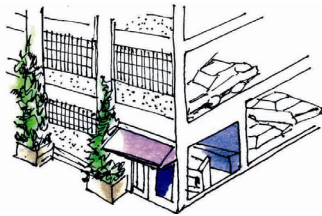
• Where possible, parking structures should be located within the block core, with actively programmed building space fronting on all streets [20].





- Street-facing facades of parking levels within the building as well as ground levels of freestanding parking structures shall be screened or treated architecturally. Treatment should allow the levels to appear more like a typical building floor, rather than open slabs with visible cars and ceiling lights. Two or more of the following architectural treatments shall be required: [19]

- Square openings, rather than horizontal
- Planting designed to grow on the façade
- Louvers
- Expanded metal panels
- Decorative metal grills
- Spandrel (opaque) glass
- Other treatments, as approved by the Director of Planning & Development that meet the intent

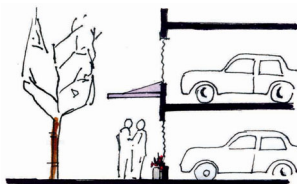


- No parking structure frontage should be permitted on city center's gateway, image, or pedestrian priority streets unless the structure's facade provides a compatible streetscape frontage and active programming on the ground floor.

- Any parking structure which is located adjacent to a street should be set back a minimum of 1.8 meters and a maximum of 3 meters from the sidewalk. This setback should be landscaped with trees, shrubs, and ground cover to soften views of the structure, provide visual interest, and establish a sense of human scale.

- Structured parking configured as a base level podium supporting a high-rise tower should not be permitted [20].

- Parking structures should obey from ground level facade details and also awnings and canopies design guidelines.



- Where parking structures are located on streets serving as primary pedestrian connectors, retail space should occupy at least 75 percent of the ground-level frontage to minimize interruption in pedestrian interest and activity [13].

- Designing parking structures should prevent creating distinct surfaces.

- Parking structure roof lines which are visible from the street should be level; ramping should occur within the structure or on the interior of the block where it is screened from the street.

- The scale of the parking structures should be modulated by interruptions of the facades, setbacks, and lowering the first level below the existing grade, where the water table

allows, to reduce the total height and create proportional human scale.

- Parking structures should be enclosed with retail or office uses on the exterior to blend in with other buildings along Primary Pedestrian Streets where this is not feasible, the visual impact should be softened with landscaping or screening.

- Parking structures shall create a visually attractive and active pedestrian environment in city center.

- When feasible, a parking structure in the city center should be wrapped with a multi-story retail/commercial space to shield the facility from the street and to make the entire building visually pleasing.

- Parking structures being created in a city center with traditional or historic identity, shall respect to the regular window patterns and other architectural elements of adjacent older buildings.

- In the city center streets in which parking structures ground level being occupied by parked vehicles, shall use a landscape setback to improve their visual effect on street and pedestrian ways.

- The length of parking structures exposure on any given street should be held to a maximum 76 to 91 meters, with a width of 55 meters [11].

- Among different types of placement three bays of parking, are preferred.

- The architecture of parking structure should incorporate exterior finish materials of the same quality as those used on nearby buildings [13].

- The street façade of the parking structure shall be designed to replicate the fenestration patterns of nearby buildings.

- Neutral colors and architectural forms (not eccentric shapes, materials or colors which draw attention) that echo the characteristics of adjacent building are recommended.

- All efforts to reduce glare into Town Center and surrounding community from street and parking area lights should be undertaken [16].

- Underground parking, because of their least visual impact on the central area and creating only minimal impacts on the pedestrian environment are preferred.

- The top floor of parking structures should include landscape screening in areas such as along the cornice and on the deck, either by trees or a screening trellis treatment [16].

**Intent:**

Design a parking facility so that there is quick access and clear, separate pedestrian routes to the outside.

**Design Guidelines:**

- Direct connections between a parking structure and its supporting businesses are desirable.

- Encourage pedestrian use of the street front access and observation points by providing pedestrian facilities.

- Develop mixed-use nodes of activity (such as espresso stands or other small vending kiosks or cafes) near pedestrian entries to parking areas.

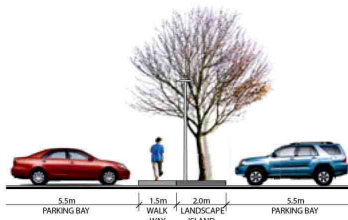
- Maximize visibility of pedestrians within the facility and avoid creation of dimly lit or isolated areas where miscreants can hide.

### Intent:

Providing parking safety and security

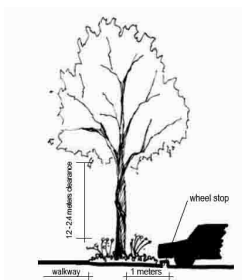
### Design Guidelines:

- Off-Street Surface Parking should be configured and designed to reduce the overall mass and visual dominance of paved areas. Surface parking lots should be defined as landscaped parking "courts" separated by planted internal walkways.
- A sidewalk or entrance area of at least 18.5 square meters raised 15 centimeter above the parking lot must be provided at the building entrance to provide for pedestrian safety and separation [16].
- Walkways should be a minimum of 3.5 meters wide, including a pedestrian zone of 1.5 meters wide and a landscaping zone of 2.0 meters wide. These walkways connect parking area to sidewalk adjacent to the building entrance [18]- [16].



Section demonstrating preferred design of pedestrian walkways located within the parking aisle. The walkway should be a minimum width of 1.5m.

- Wheel stops or curbing should be used in parking areas to prevent vehicles from overhanging into planting areas. At least 1 meter clearance should be maintained for tree locations [12].



Wheel stop allows a 1 meter clearance for tree locations

- For security, a clear zone of 1.2 to 2.4 meter should be maintained to ensure that the interior of parking lot is visible from the street [11].
- A pedestrian crosswalk shall be provided at parking lot entrances and exits.
- Internal vehicular routes should be clearly defined by raised and curbed landscape islands planted with trees and low level vegetation.
- For security, pedestrian routes should be visible and avoid enclosed, hidden areas.
- Appropriate lighting levels and consistency of coverage should be provided in parking areas to assist both pedestrian

and vehicular circulation. The height and intensity of light standards should be sensitive to adjacent land uses.

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