A Study Of Parklet Planning, Design And Planting Criteria Examples In Izmır And Istanbul

Gökçen Firdevs Yücel Caymaz[1,*], Mohammed Abderraouf Zerriouh[2]
[1] Department of Architecture, Istanbul Aydın University, 34295,Turkey; gokcenfyucel@aydin.edu.tr
[2] Department of Architecture, Istanbul Aydın University, 34295,Turkey; mohammedzerriouh@stu.aydin.edu.tr
* Corresponding author

Abstract
The objective of this study is to research the planning, design, planting and maintenance requirements of a quality parklet by means of the examples of Izmir and Istanbul parklets in Turkey. In this regard, planning and design (important elements=wheel stops, flexible posts, raised platform/recommended elements=open guarded-railing, the sub-structure/urban furniture=flooring, seating, lighting, bicycle stands, shades, art, signage), as well as planting and maintenance were tested on two example parklets with a checklist created using on-site detection, photography and observation methods. As a result of the research in question, it was concluded that the use of reflective surfaces and wheel stoppers critical for safe usage are insufficient in parklet designs; that vertical elements don't meet the minimum usage standard; that there are no lighting, trash, art and game elements in neither area; and that it was determined the Istanbul parklet example was insufficient in terms of shade and planting compared to the Izmir example.

Keywords
parklets; design-build; community, urban interior; Istanbul, Izmir

1. Introduction

As an example of tactical urbanism initiated by Rebar in San Francisco in 2005, PARK(ing) offers a social and spatial innovation in the form of temporary, one-day installations that aims to expand the social life and the pedestrian area of the pavement by transforming parking lots into seating areas, continues to be utilized in different parts of the world with various purposes and scales. (Bermúdez, Traunmueller, 2019) Brozen, Loukaitou-Sideris, 2013; Hou, Spencer, Way, Yocom, 2014). What originally started off as a guerrilla movement built over transience, Park Day began to be transformed into a permanent form in 2010, with arrangements made by the local government in San Francisco and support programs such as 'From Pavements to Parks.' Taking an innovative tack in the form and function of public spaces, they provide opportunities for collaboration between local government, businesses, customers, designers and residents livng in the vicinity (De Lange, & De Waal, 2019, Gould, 2012; Jackson, 2020). The results of a study conducted in Baltimore and Long Beach indicated that parklets around cafes and restaurants increased revenue of surrounding shops by 20% (Kenny et al., 2020).

As researchers have pointed out, parklets improve the comfort of their environment and the quality of urban life (Birdsall, 2013; Ghandi, 2019; Ocubillo, 2012; Owens, 2018; Smith, 2016; Southworth, 2014; Young, 2018). While increasing pedestrian movement on the street (New York City Dep't. of Transportation, 2011; Pratt, 2011) and people's face-to-face interaction, they also provide opportunities for interaction with their environment (Ghandi, 2019; Perkins+Will Consulting Team, 2013; Southworth, 2014). Created by widening the pavement, parklets are designed to replace one to three car parking spaces, and include activities such as sitting, talking, eating, reading, parking one's bike or observing the surroundings (Loukaitou-Sideris et al., 2013; Sasaki, 2018). As with Seattle's parklets (Bela, 2021), they can be used for commercial purposes

during business hours and then be opened to the public. In site selections, it is recommended that the risk of being hit by a motorized vehicle is low, they are far from intersections and street corners, and they are installed on streets with speed limits of 40 kilometeres or less (NACTO, 2013; Watson, PTP, 2014). Quality parklet design components may be listed as crucial elements (wheel stops, flexible posts, raised platforms), recommended elements (open guarded-railing, sub-structure), urban furniture (flooring, seating, lighting, bicycle stands, shades, art, signage) as well as vegetation (Corey, 2014).

As an extension of the sidewalk, parklets can create additional pedestrian traffic or aid pedestrian flow, creating a new public space for assembly (Dai, 2012). In order to help protect against moving traffic and parked cars, parklets in parallel parking spaces should be buffered using a wheel stops 1.2m from parked cars and 91cm from the curb edge. Wheel stops should be 91 cm long, black rubber material with yellow stripes should be used, and be mounted with bolts. Parklets need to be clearly defined with either vertical pole-like that make them visible to traffic, or else with flexible poles, both with retro-reflective tape. They should be placed at a distance of 60cm from the edge in both directions of the parklet (Figure 1).

Railings mark the boundary between the parklet and the avenue or sidewalk. They can feature planters, rails, cabling, or some other appropriate enclosures to increase durability against drops and pushes. The rail gaps must hinder passage of a 10.16-cm sphere. The height from the parklet platform base to the top of the guardrail shouldn't exceed 91 cm. All guardrails/guards should have retro-reflective reflectors or retro-reflective tape at the corners of the parkway facing the travel lane, visible to vehicular traffic at night (NACTO, 2013). Sub-structure designs will vary depending on the general design of their structures and the slope of the street. Appropriate ground should be provided with 'bison pedestals' or a steel sub-structure and angled beams (Kaufman, 2015).

Parklets have the potential to improve street spaces, providing permanent seating, vegetation, connection to bicycle networks and bicycle parking spaces in their design will boost their success (Lavine, 2012; Littke, 2016). The platform surface should be installed with a permeable, high quality floor covering.

Finishing materials should be wood, composite or brick. Tiles, rugs, artificial turf shouldn't be allowed. Also, loose particles such as sand or loose stone are not allowed in

Vertical elements, San Francisco, CA, Credit: Nelson\Nygaard

Min width of 1.82 m, New York, NY, Credit: NYC DOT

A flush transition at the sidewalk and curb San Francisco, CA, Credit: Nelson\ Nygaard

Incorporate seating, Oakland, CA, Credit: Oakland DPW

Figure 1. Parklet design details (NACTO, 2013)

the parklet and surfaces should be non-slip. The seat must be provided either as movable furniture or as integral elements in the structure of the parklet. The results of Dai's (2012) study show that crowded pedestrian activity and nearby traffic attract people, and the use of parklets with seating and table areas is preferred. 5% of the seating areas should be suitable for disabled use. Undoubtedly, the choice of open, visible and street lighting in the immediate vicinity for the parklets will boost safety at night (Loukaitou-sideris et al., 2012). Lighting should be aimed away from the road so as not to prevent the risk of glare for vehicles. Light strips should be hung to allow a minimum clearance of 254mm above the pavement and parklet platform. Bicycle parking spaces; can be included in the parklet in various ways; Wherever deemed appropriate, meter heads can be replaced with meter hangers. For sites with a concrete roadbed, standard inverted U-shaped bike racks can be mounted on the roadbed adjacent to the parklet. As for shading, they should made of fire resistant material and 2m from the platform. For a Parklet, if umbrellas are to be recommended, they will be the center posted and not exceed 1.8m by 1.8m with a vertical span of 2m. Ensuring air protection around the parklet seating will render use of the space comfortable throughout the year. Weather protection can be provided with mounted or movable canopies, umbrellas and awnings. Art elements can create identity while increasing the charm of parklets. While the artefacts can be permanent, their temporary placement can also be made. Some art, depending on size, design, and placement, may require additional review. Signs are allowed provided the sign area does not exceed 61cm x 91cm. Illuminated markings are not recommended. If the parklet is intended to serve the general public, it must be identified by labelling signage. Outdoor heaters and elements that use gas or propane fuel will deem parks usable year-round. It's important for parklets to appeal to all age groups. Playing elements can be used in parklets, especially for children (and adults) to spend time. Play tools can be toys, games and swings. These apparatus can be mounted or movable within the parklet structure.

The planting design around the parklet will act as a buffer along the street-side facade while promoting the use of space (Weglarz, 2018). Landscape elements can include plant pots, hanging baskets, green walls as well as elevated plants. In taking the maintenance issue into account, it would be good to prefer drought-tolerant and native plants. Due to their texture and seasonal effects, the use of edible or fragrant plants will inevitably increase the quality of herbal design. The aim of this study is to assess the parklet uses in the Turkish cities of Istanbul and Izmir by examining the issues of parklet planning, design, planting and maintenance.

2. Materials And Method

2.1. Methods of the study

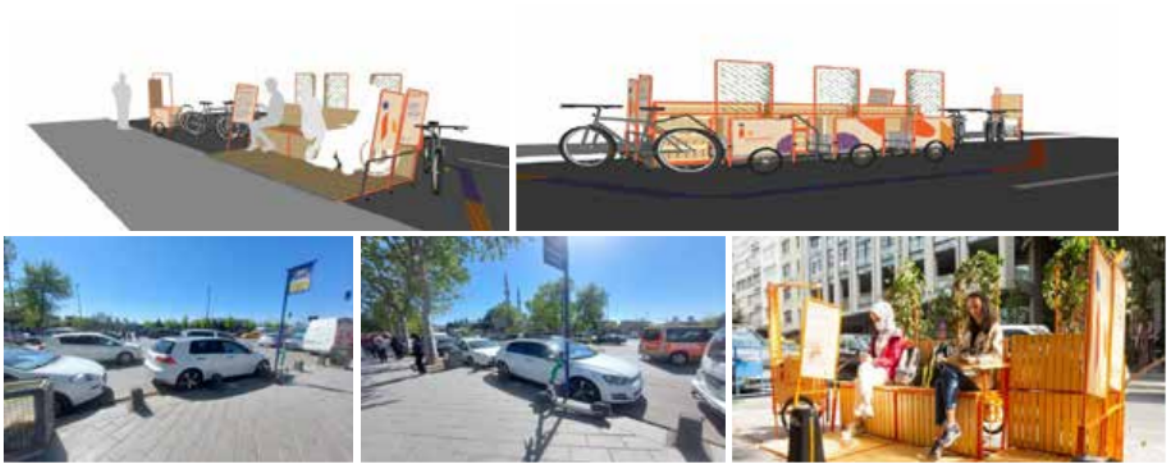
Which physical characteristics should be included for a successful parklet were investigated in the study. Since the Istanbul example was temporarily established and is currently unavailable, an on-site determination study was conducted through photographs taken of the unit which was first installed in Üsküdar and then by travelling to the area it was subsequently placed. On the other hand, the Izmir example was analyzed by on-site detection, observation and photographing methods in May 2022.

2.2. Research areas

Parklets installed in different parts of the world are not commonly used in Turkey. There are only two parklet examples in Turkey which were not introduced until 2021. One was in Istanbul, the other was in Izmir. The parklet model in Istanbul was temporary, and was displayed along Hakimiyet-i Milliye Avenue in the district of Üsküdar on 16 September, to mark the start of 'European Mobility Week 2021,' then it was moved to the European side of the city, to Ihlamurdere Ave. in the Beşiktaş district between 18-19 September, then to Halaskargazi Ave. in the Şişli district on 20-21 September, and finally the Abdi Ipekçi Ave. in the Şişli district on Wednesday, 22 September (WRI, 2021). In terms of total area, the Istanbul parklet was smaller, with just wrapping plants in its vegetation design, in addition to the seating and bike tie-up spots. The Izmir parklet is at a permanent location and is comprised of two modules, each covering an area of 5 x 2.5 meters. One of these three 'pocket' parks features a mini playground for children, another has a canopy and table, while the other features a bike tie-up spot. Its vegetation design includes tree species such as; *Iris enstata, Viola odorata, Lonicera nitida, Platanus orientalis tetto, Rosmarinus officinalis prostra-*

Table 1. Descriptions of the Istanbul and Izmir Parklets (WRI, 2021; UrbanGreenUP, 2022)

	İstanbul Parklet **Example**	İzmir Parklet **Example**
Location	Üsküdar district Hakimiyet-i Milliye Ave., Beşiktaş district Ihlamurdere Ave., Şişli district Halaskargazi Ave., Şişli district Abdi İpekçi Ave.	Girne Ave., Karşıyaka District
Usage	Temporary	Permanent
Type of Parklet	2 Parallel, Transit road, Bike tie-up spot	2 Parallel, Comfortable, Transit road
Property	Public	Public



Istanbul Example

Izmir Example

tus, Aganthus 'Navy blue', Vinca major, Trachelospermum jaminoides, and mostly shrubs and ground cover groups (UrbanGreenUP, 2022). (Table 1).

3. Research Findings

Regarding parklet planning issues, we observed that while they generally complied with international planning principles, It has been determined that the 5% slope that needs to be on the ground plane was not accounted for with the Istanbul example, the sidewalk and parklet were not at the same level at either parklet, that there was no light-colored or reflective materials for night vision, that the min. 1.27 cm standard between the sidewalk and parklet was not followed, that reflective materials were not used along the border and in the corners of the street, and that there are tree pits along the parklet in the Izmir example.

In examining said parklet design features, a noticeable lack of both wheel stop elements, at least two strike posts (only one was seen in the Izmir example), as well as vertical elements was observed. It was also determined that lighting, trash bin, play and artistic elements were inadequate in the urban furniture layouts of both areas; shaded area wasn't available with the Istanbul example, as well

as no bike tie-up point or proper markings with the Izmir example. While vegetation layouts were sufficient in the Izmir example, vegetation was inadequate with the Istanbul example. It was determined that upkeep of the Istanbul example was sufficient, while that of the Izmir sample was inadequate (Table 2).

4. Discussion

NACTO (2013) has described parklets as places set up where narrow or congested sidewalks prevent the installation of traditional sidewalk cafes, or where local property owners or residents see the need to expand seating capacity and public space on a particular street. In taking examples aroud the world into consideration, it can be said there are a considerable number of parklets with cafes and restaurants in their immediate vicinities. When choosing a location for parklets, the fact they are along commercially-zoned avenues and in areas with dense housing units will boost their utilization, so they serve as additional urban interior spaces along avenues with narrow, congested sidewalks. From the use of cafes to visitors, the two examples in Turkey in question are viewed as 'pocket' parks. In addition to picking the right location in its planning, the safety of the parklet itself is important due to its users being right next to vehicle roads. When considered as property, public ownership supports the use of the area throughout the day (Gould, 2021), whereas the examples of those found in Izmir and Istanbul are beneficial in terms of encouraging public use.

It's important to consider permanent sitting, vegetation and particularly bike tie-up points for these parklets. It is worth noting that with the original design of the Izmir parklet example, there was a module planned for a bike tie-up point, as such, it wasn't implemented in the final product. Also, the working platform floor with slip-resistant material for one such parklet produced by the City of Francisco (2013) emphasizes the necessity of having sufficient maneuvering space for the physically handicapped. When we notice the working areas in question, it's seen that wood has been used as flooring in both areas and there are sufficient areas for the physically handicapped to approach. It's crucial that the street side of the parklets is cordoned off from the traffic by vegetation or barriers. While this condition was met with the Izmir example, it was determined that the barrier deemed inadequate with the Istanbul example. Although wheel stops were drawn up in the plans of both parklets, the fact that neither set of stoppers were applied posed a hazard, whereas it was also noted the wheel holder (preferably two pieces) reflective tapes were excluded as well. The presence of such (preferably yellow) reflective bands on parklets will undoubtedly increase their visibility at night (NACTO, 2013).

As a result of a similar study he conducted in San Francisco, Littke (2016) also mentions the importance of providing permanent seating in many parklets since most of them do not feature such seating. In particular, the fact that the Izmir parklet had a fixed seating arrangement boosts its usage time and comfort. It was also determined that lighting, trash bin, play and artistic elements were inadequate in both of the urban furniture layouts, there was no shade offered in the Istanbul example, and that there was no bike tie-up point or marking with the Izmir example. With the Istanbul example, a shadow element with a minimum height of 2.13m could have been added. Although there no trash bins were made available in neither case, such bins at 9.14m distances are clearly specified in the standards. As Loukaitou-Sideris, Brozen and Callahan stated in their 2012 study, positioning a clearly visible parklet near street illumination will increase its safety. In other words, self-contained, low-voltage lighting is recommended for both areas. Transforming parking lots and green areas in urban environments into parklets will also be beneficial in terms of sustainability and ecological aspects of the city (Bain, Gray, Rodgers, 2012; Bertulis, 2013; Islam, Das, Baschar, 2020). While the vegetation design of the Izmir example was found to be sufficient, it was ascertained that the maintenance of the Istanbul example was adequate, while the Izmir example was inadequate.

Table 2. Analysis of Istanbul and Izmir Parklet examples (City of Melford, 2022; NACTO, 2013; Shelby, Turner, Kerber, 2021; The Planning Division - Community & Economic Development Department Of Salt Lake City, 2013)

	Istanbul Parklet Example		Izmir Parklet Example	
	Suitable	Unsuitable	Suitable	Unsuitable
PARKLET PLANNING				
Speed Limit (<40kmh)	√		√	
Away from Intersection or Street Corner	√		√	
In Front of Driveway	√		√	
<5% Street Slope		X	√	
No longer than three parking spaces	√		√	
min. 1.82m wide	√		√	
Alignment of parklet and parking space		X		X
min. 1.27cm between parklet and parking space		X		X
At least 1.8m on side of the road facing sidewalk	√		√	
Guardrail positioned 45 cm. from the road lane	√		√	
Night vision light color material	√			X
Use of reflective material on the restraint		X		X
Reflective tape on streetside and ledges		X		X
Access for the disabled	√		√	
Parklets can't block public utilities	√		√	
Minimum 91.44cm accessible entrance	√		√	
Located away from entrance tree pits	√			X
DESIGN ELEMENTS				
Non-slip surface	√		√	
Important Elements				
Wheel Stop		X		X
Minumum 2 items				
Located at a distance of 90 cm				
Height of between 120-180 cm				
Vertical elements (post and bollards)				
Limitation h= min. 91.44cm max. 106.68 cm	√		√	
Minumum 2 items		X		X
6 cm away from wheel stop		X		X
Reflective surface			√	
Cylindrical shape		X		
Recommended Elements				
Open guardrail (railings) h < 91cm	√		√	
The sub-structure	√		√	
Urban Furniture				
Floor Covering	√		√	
Seating	√		√	
Two 'Public Parklet' signs indicating hours of operation	√			X
No advertising, logos	√		√	
At least 1 trash bin		X		X
Bike Tie-up Spot	√			X
Lighting		X		X
Shades (Minumum 2.13 m)		X	√	
Art		X		X
Game apparatus		X		X
Vegetation		X	√	
Drought-tolerant plants		X	√	
Non-poisonous, noxious or invasive	√		√	
Edible plants		X		X
MAINTENANCE	√			X

5. Conclusion

As studies conducted by Young (2018), Loukaitou-Sideris et al. (2013), etc. attest, parklets spark community interaction amongst folks of different ages, ethnicities, and incomes. Not only do they create spaces for imagination, play, and enjoyment, but parklets also bring more foot traffic to business, as well as improved perceptions of the street in terms of aesthetics, vitality and safety. This particular study shows the necessity of establishing parklet programs in Turkey as a result of examining such programs in various other countries and cities abroad. As a result of the research carried out, it was concluded that the use of reflective surfaces and wheel stoppers, which are especially crucial for safe use, are insufficient in parklet designs; that vertical elements do not meet minimum usage standards; that no lighting elements were incorporated, and that trash bins and art elements were observed in both areas. It was also determined that the shade and vegetation elements of the Istanbul parklet example were inadequate compared to those of the Izmir example.

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