
ADAPTIVE STREETSCAPE ARCHITECTURE OF LOCAL BUSINESS NEIGHBORHOOD IN JALAN JENDRAL URIP SUMOHARJO

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ABSTRACT

Jalan Jendral Urip Sumoharjo in Surakarta is an example of a street in a big city in Indonesia that has adapted in terms of its streetscape architecture. This adaptation is influenced by many factors and possibilities that need to be explored in the future. One of the dominant determining factors is the discovery of facts about local business development in carrying out trading activities on this road section. This research explores forms of streetscape architectural adaptation in the context of the local business environment, with a focus on Jalan Jendral Urip Sumoharjo. The study explored the unique characteristics of the streetscape, emphasizing its role in responding to a dynamic local business community. The adaptive nature of streetscape architecture is observed by considering factors such as design, functionality, and its integration with local businesses. Jalan Jendral Urip Sumoharjo serves as a specific case study, showcasing the intersection between adaptive urban design and the vitality of the local business environment. Adaptation to the streetscape in terms of architecture is influenced by user needs, in this case the majority of traders who need flexibility.

KEYWORDS: adaptive, streetscape architecture, local business neighborhood, jalan jendral urip sumoharjo

Jalan Jendral Urip Sumoharjo di Surakarta adalah salah satu contoh jalanan di kota besar di Indonesia yang beradaptasi dari segi streetscape Architecture-nya. Adaptasi ini dipengaruhi oleh banyak faktor serta kemungkinan-kemungkinan yang perlu digali kedepannya. Salah satu faktor dominan penentu adalah ditemukannya fakta perkembangan bisnis lokal dalam menjalankan aktifitas dagang di ruas jalan tersebut. Penelitian ini mengeksplorasi bentuk adaptasi arsitektur streetscape dalam konteks lingkungan bisnis lokal, dengan fokus di Jalan Jendral Urip Sumoharjo. Studi yang dilakukan menggali karakteristik unik dari lanskap jalanan, menekankan perannya dalam merespon komunitas bisnis lokal yang dinamis. Sifat adaptif arsitektur streetscape diamati dengan mempertimbangkan faktor-faktor seperti desain, fungsionalitas, dan integrasinya dengan bisnis lokal. Jalan Jendral Urip Sumoharjo berfungsi sebagai studi kasus spesifik, yang menampilkan titik temu antara desain perkotaan adaptif dan vitalitas lingkungan bisnis lokal. Adaptasi pada streetscape dari segi arsitektur dipengaruhi oleh kebutuhan pengguna dalam hal ini mayoritas pedagang yang membutuhkan fleksibilitas.

KATA KUNCI: adaptif, arsitektur streetscape, kawasan bisnis lokal, jalan jendral urip sumoharjo

INTRODUCTION

Urban landscapes are undergoing a transformative shift, marked by the imperative need for adaptability to accommodate the changing dynamics of contemporary living. Streetscape according to The Delaware Complete Communities Toolbox (2015) is the term used to describe natural conditions and roads built and defined as design quality roads and visual effects. Within this framework, the concept of an adaptive streetscape emerges as a progressive urban design approach that seeks to address the multifaceted demands of a growing and diverse population (Ching, 1979). This essay delves into the

key components of an adaptive streetscape, emphasizing the importance of flexibility, multi-functionality, smart technology integration, accessibility, inclusivity, sustainability, community engagement, and climate resilience in fostering vibrant and resilient urban environments. Most of these were found on Jalan Urip Sumoharjo.

Flexibility in design stands as the cornerstone of an adaptive streetscape (Bobic, 2004). Instead of rigid structures, envisioning modular elements that can be easily reconfigured fosters a dynamic urban environment capable of responding swiftly to evolving needs (Thomas, 2002). From movable street furniture to adaptable public spaces, flexibility becomes a

catalyst for the seamless transition between various functions and events, promoting a fluid urban experience.

Multi-functionality amplifies the utility of urban streets, transcending their traditional roles as thoroughfares for vehicular traffic. By integrating green spaces, outdoor seating, and recreational zones, streets evolve into versatile public spaces that cater to diverse community activities (Alcock, 1993). This shift not only enhances the aesthetic appeal but also encourages social interactions, cultural celebrations, and communal engagement, turning streets into hubs of community life.

Smart technology integration infuses intelligence into the urban fabric, contributing to the real-time monitoring and adaptive response of the streetscape. Sensors, data analytics, and interactive displays enhance safety, traffic management, and overall user experience (Cullen, 2006). Smart street lighting, for instance, can adjust to pedestrian and vehicular traffic patterns, exemplifying the transformative potential of technology in shaping urban spaces.

Accessibility and inclusivity are fundamental principles in the design of an adaptive streetscape. Inclusive design ensures that public spaces are accessible to individuals of all abilities, promoting an environment where everyone can fully participate and navigate. Features like tactile paving, audible signals, and ramps become integral, fostering a sense of inclusivity and community cohesion (Cullen, 2006).

Green and sustainable elements contribute not only to the visual appeal but also to the ecological sustainability of the streetscape (Alcock, 1993). Incorporating green infrastructure such as trees and plants helps mitigate the urban heat island effect and improves air quality. Sustainable transportation options, including bike lanes and electric vehicle charging stations, further reduce the environmental impact of urban mobility.

Community engagement emerges as a vital aspect of an adaptive streetscape. Involving the community in the design process ensures that the streetscape aligns with the unique needs and desires of the residents. Regular feedback loops, public consultations, and community events create a sense of ownership (Alcock, 1993), fostering a stronger bond between the urban environment and its inhabitants.

The adaptability of an urban streetscape extends beyond the human-centric design to climate resilience. Urban streetscape plays important role in development urban life (Crankshaw, 2015). As cities face the increasing challenges of climate change, streetscapes must be designed to withstand extreme weather events. Integrating green infrastructure, water management strategies, and climate-responsive design enhances the overall resilience of the streetscape.

In conclusion, the adaptive streetscape represents a paradigm shift in urban planning, emphasizing the importance of dynamic, inclusive, and sustainable public spaces. By incorporating flexibility, multi-functionality, smart technology, accessibility, inclusivity, sustainability, community engagement, and climate resilience, cities can create streetscapes that not only respond to the current needs of their inhabitants but also evolve harmoniously with the changing dynamics of urban life. In doing so, streets become more than conduits for movement – they become integral components of a thriving, resilient, and people-centric urban landscape.

RESEARCH METHODS

Researching adaptive streetscapes involves employing various methods to understand, analyze, and evaluate the effectiveness of such urban design approaches. Here is an outline of research methods that could be applied to study adaptive streetscapes:

Case Studies:

- Analyze existing case studies of cities or neighborhoods that have implemented adaptive streetscapes. Examine the success stories, challenges faced, and lessons learned from these examples.
- Consider diverse geographic locations and urban contexts to understand how adaptive streetscapes vary and adapt to different environments.

Field Observations:

- Conduct on-site field observations to understand the current state of streetscapes in specific urban areas.
- Observe the usage patterns of public spaces, pedestrian flow, accessibility features, and the overall adaptability of the streetscape elements to different activities and events.

By employing a combination of these research methods, scholars and practitioners can gain a comprehensive understanding of the effectiveness, challenges, and potential improvements for adaptive streetscapes in urban environments

RESULTS AND DISCUSSION

Adaptive Streetscape Architecture

Adaptive streetscape architecture refers to a design approach that prioritizes flexibility, responsiveness, sustainability and versatility in creating urban spaces along streets (Ramadhan, 2018). This architectural style aims to accommodate the evolving needs of the community, changing environmental conditions, and advancements in technology. Here are elements and considerations associated with adaptive streetscape architecture (Nasar, 1994).

First, urban context such as understanding the geographical and demographic features of Jalan Jendral Urip Sumoharjo and Surakarta to grasp the urban context. Analyze the economic activities, industries, and businesses prevalent in the area. Second, commercial zones such as pinpoint areas with a concentration of businesses, shops, and markets. Understand the types of products and services offered. Consider the role of street vendors and informal economies in shaping economic behavior. They often contribute significantly to the local economy.

Explore the cultural aspects that influence economic behavior is important. For instance, certain areas may have cultural events or festivals that impact local businesses. Then analyze how social interactions in the streetscape contribute to economic exchanges. Street-level social connections can foster economic activities. Next, examine the design and layout of the streetscape. Consider factors such as sidewalks, road width, green spaces, and public amenities. Evaluate how accessible the area is for pedestrians, cyclists, and vehicles. Accessible spaces often attract more economic activity (Rehan, 2013).

Adaptive strategies also no less important. Examine how the streetscape adapts to economic changes, technological advancements, or shifts in consumer behavior. Consider the involvement of the local community in shaping the streetscape and economic activities. For urban planning policies it is important to understand the local government's urban planning policies and how they shape the streetscape. Policies related to zoning, permits, and business regulations play a crucial role.

Local Business Neighborhood

A local business neighborhood typically refers to a specific area or district within a city or town where numerous businesses are situated in close proximity to each other. These neighborhoods often contribute to the local economy, provide goods and services to nearby residents, and create a sense of community also place identity (Kavaratzis & Kalandides, 2015). Here are some common features and aspects associated with local business neighborhoods (Tiesdell, 1996).

First, local business neighborhoods often host a variety of businesses, including retail stores, restaurants, cafes, boutiques, salons, and more. This diversity enhances the shopping and dining experience for local residents. For community interaction, this kind of neighborhoods encourage community interaction and engagement. Residents may visit these areas not only for shopping but also to socialize, attend events, and participate in local activities.

Second, local business neighborhoods are frequently home to small and independent businesses.

Supporting these enterprises helps stimulate the local economy and preserves the unique character of the neighborhood. Many local business neighborhoods prioritize pedestrian-friendly environments. Sidewalks, pedestrian crossings, and outdoor seating areas contribute to a more walkable and inviting atmosphere. To foster a sense of community, local business neighborhoods often organize events and festivals. These could include street fairs, markets, or cultural celebrations that bring residents and visitors together. Parks, squares, or other public spaces within or near local business neighborhoods can provide residents with places to relax and enjoy the outdoors, further enhancing the overall appeal of the area. These neighborhoods often contribute to the overall identity of a city or town (Fisher, 2006). The unique characteristics and offerings of the businesses in the area contribute to the distinctive flavor and charm of the neighborhood. Good streetscape space design will not only influence function, but can also become the character of the area (De Vries, 2013)

Overall, local business neighborhoods especially for adaptive streetscape play a crucial role in creating vibrant, sustainable communities by fostering economic activity, community engagement, and a sense of local identity

Documentation of Jalan Urip Sumoharjo from time to time

The following is documentation of the atmosphere on Jalan Urip Sumoharjo which was processed from several sources. It is hoped that these images can provide an overview of the situation and forms of changes that have occurred over a certain period of time.



Figure 1. Jalan Urip Sumoharjo Past & Today
(Source: KITLV & Indonesia Tempo Dulu, 2019)

4. Segment B-A (Building):

The most interesting building is Hotel Trio, from the interior and exterior it maintains its original (vintage) because it has a courtyard (jutting in, not on the side of the road like a shophouse). There is a new building behind it, but the old building is still maintained and in good condition today. Controversial building showing that the new building is in front of the old Dutch style building which still retains its facade.



Figure 5. Existing Segment A-B Condition
(Source: Author Document, 2024)

1. Segment A-B (Accessibility):

At Pasar Gede, there are differences in height, color, material, texture as differentiators of function and as a barrier to the neatness of the order of goods. Equipped with guiding block for the visually impaired. With white lines on pedestrians that seem to divide the area (for parking). There are no slow lanes in the Pasar Gede section.

Table 1. Segment A-B

Design Character	Pasar Gede Building
	Has 2 pedestrian paths
	The majority of the buildings are original
Business & Activity	Trade
	Tour
Function & Need	Loading dock access
	Drop off access
	Free parking area
Flexibility & Public Use	Street vendors at night
	Parking at morning

2. Segment B-C (Accessibility):

There are left and right slow lanes which are not functioning optimally because they are used as street vendors and parking lots, there are no zebra crossings/human road crossings, intersections without red lights make it a little difficult for vehicles to cross. There are bus stops with different designs.



3. Segment C-D (Accessibility):

The slow lane is used as a parking area, the western area is more busy for street vendors and parking while the eastern area is less crowded because it is a student route. There is a small alley that does not allow 2 cars to cross each other. The sidewalk is too small and is used as a parking area and is in an unkempt/damaged condition.



Figure 6. Existing Segment B-C Condition
(Source: Author Document, 2024)

4. Segment D-E (Accessibility):

What is the slow lane actually for? Most likely for shop parking. The empty shophouse is really empty or perhaps as a storage/transit area.



Table 2. Segment B-C

Design Character	Mixed building area
	Shophouse with shop type at the front and house on the 2nd floor or back
	Has a wide slow lane (8m)

Business & Activity	Trade
Function & Need	Loading dock access Multifunctional zone Parking area
Flexibility & Public Use	Street vendors at night Parking at morning

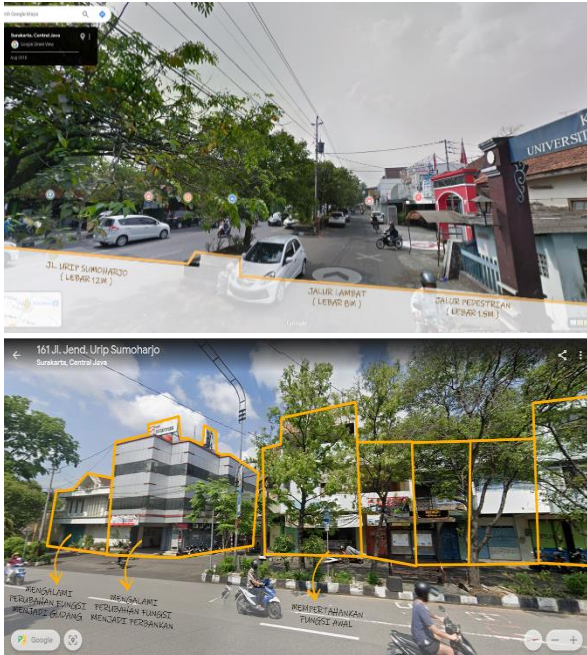


Figure 7. Existing Segment C-D Condition (Source: Author Document, 2024)

Table 3. Segment C-D

Design Character	Mixed building area Shophouse with a shop type at the front and a house on the 2nd floor or at the back Has a wide slow lane (8m) The majority of buildings have undergone renovation
Business & Activity	Trade Office
Function & Need	Loading dock access Multifunctional zone Parking area
Flexibility & Public Use	Street vendors at night Parking at morning



Figure 8. Existing Segment D-E Condition (Source: Author Document, 2024)

Table 4. Segment D-E

Design Character	Mixed building area Shophouse with a shop type at the front and a house on the 2nd floor or at the back Has a wide slow lane (8m) Has a pedestrian road on each side (1.5m) The majority of buildings have undergone renovation
Business & Activity	Trade Office Restaurant
Function & Need	Loading dock access Multifunctional zone Parking area
Flexibility & Public Use	Street vendors at night Parking at morning

CONCLUSION

The implementation of adaptive streetscape architecture in the local business neighborhood of Jalan Jendral Urip Sumoharjo has demonstrated a transformative impact on both the physical environment and the community. The thoughtful design and integration of adaptive elements have not only enhanced the aesthetic appeal of the streetscape but have also contributed significantly to the functionality and resilience of the neighborhood.

Economically, the adaptive streetscape architecture has proven to be a catalyst for local businesses. The enhanced accessibility and visual appeal have attracted more foot traffic, resulting in increased visibility and revenue for the shops and establishments along Jalan Jendral Urip Sumoharjo. The adaptive design has also accommodated the evolving needs of businesses, ensuring their sustainability in a dynamic urban environment.

In essence, the adaptive streetscape architecture in Jalan Jendral Urip Sumoharjo serves as a testament to the positive outcomes that can arise from thoughtful urban planning and design. As the neighborhood continues to evolve, it stands as a shining example of how adaptive streetscape

architecture can contribute to the overall well-being, connectivity, and prosperity of a local community.

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