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## Pedestrian System of Jalan Tuanku Abdul Rahman and Jalan Sultan Abdul Samad, Kuala Lumpur, Malaysia

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**ABSTRACT:** The term and concept 'urban design' came into currency in the United States of America in the late 1950s, replacing and superseding the more traditional, narrower and somewhat outmoded term 'civic design'. Typified by the City Beautiful Movement, the latter was associated with a highly artistic and physical (visual and spatial) approach to urban design, focusing on the siting and design of major civic buildings – city halls, opera houses, and museums – and their relationship to open spaces. Contemporary urban design is more expansive than this. It is primarily concerned with the quality of the public realm – both physical and socio-cultural – and the making (and managing) of meaningful 'places' for people to enjoy and use.

The pedestrian plays a huge role in the activities and social interactions of a community. The pedestrian should be placed ahead of the vehicle and accommodated first. Many New Urbanism developments value the pedestrian over the car by providing pedestrian networks, narrow streets lined with trees and sidewalks and direct links to destinations, such as shops, schools and services. Pedestrian routes should be located along or visible from all streets and primary pedestrian routes and bikeways should be bordered by residential fronts, public parks, plazas or commercial use. In so far as Kuala Lumpur is the capital of the nation, its economic catchments encompass the entire country. The present range of human activities in the city, its infrastructure and buildings, its parks and monuments, its spectrum of social, spiritual, recreational and entertainment facilities, and its concentration of governmental and non-governmental institutions, are manifestations of the city's function as the capital of the nation. To enhance the role of Kuala Lumpur as an international commercial and financial centre, it is important for the City to enhance its attractiveness to international businesses. Improving selected street in Kuala Lumpur for pedestrians will make walking safer, faster and more efficient, thereby helping to strengthen the economic viability of the study area in terms of commercial activity, retailing, and tourism. Making walking more attractive, efficient, and enjoyable and reducing pedestrian-vehicular conflicts will also increase the proportion of pedestrian trips relative to vehicular trips, thereby improving air quality. The study seeks to improve the walking environment through pedestrian enhancements and traffic calming techniques, the development of feasible and realistic design proposals, and the testing and implementation of proposed interventions.

**KEYWORDS:** Pedestrian network, Jalan Tuanku Abul Rahman And Sultan Abdul Samad K.L Malaysia Improvement.

### I. INTRODUCTION

With a population over 1.4 million (and approximately twice that number in the greater metropolitan area), Kuala Lumpur is the largest city in Malaysia and is growing rapidly. K.L is better known through its iconic elements of the Twin Tower, notable buildings of the British past (Sultan Abdul Samad) and certain pocket around Petaling Streets, Bintang walk etc. By virtue of its past, certain areas around the Gombak and Klang Rivers marked the origin of K.L.

# International Journal of Innovative Research in Science, Engineering and Technology

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Vol. 4, Issue 12, December 2015

One of the major spines is around Jalan Tuanku Abdul Rahman to the Dataran Merdeka where the Headquarter of the British administration is located.

There are many reasons for building one of the pedestrian mall types or streetscapes, the primary one is to revitalize an area of the central business district in a given city in order to increase retail sales, to strengthen property values, to compete with suburban shopping centers, and to encourage private investment by creating a stable environment for retail business. [1]. For the most part, these people had good minds for business: it just did not make sense that in this car-culture, people would be more likely to shop on streets blocked off to their main form of transportation. Counter-intuitive as it may be, pedestrian malls have proven to be successful despite people's car dependency. [2]. Concluding the volume are 23 sophisticated and innovative European case studies .The author and architect Dominique Gauzin-Muller has specialized on energy and environmental issues and ecological architecture for over 15 years . [3]. In a semi-mall or transit way, pedestrian crossings over bus and traffic lanes should be well-marked and the use of crosswalks encouraged . [4]. In [5], The rising demand for child care has prompted increased awareness of the importance of developmentally appropriate play and learning environments; and increased attention is being focused on the specific outdoor space needs for the elderly, college students, and hospital patients and staff. The authors in [6] Learn all you need to know about design of urban spaces from this one-stop introductory guide. Gain a comprehensive overview of the topic through the authors' holistic approach. Complex ideas are presented logically for ease of understanding.

Following an introduction that maps out the theoretical terrain, outlines the principal issues, themes and arguments and defines the key terms, the contributors discuss : theoretical space and representation, visual culture and spectacle, class and capital, community and public space, nation, Diaspora and belonging. [7]. Lynch (1960) states that our "need to organize and pattern our surroundings is so crucial, and has such long roots in the past. That this image has wide practical and emotional importance to the individual. Lynch claims that "a distinctive and legible environment not only offers security but also heightens the potential depth and intensity of human experience. [8]. All of Earth's life is interconnected and sacred. An awareness of that sacred relationship opens a direct path to spiritual understanding. These powerful techniques join mind, will, spirit, and intuition to the plants, animals, and minerals sharing our world, aligning the practitioner in a deeper relationship with life's sacred matrix. [9]. Pedestrians and cyclists need routes which are positive, safe, direct , accessible and free from barriers. Generally streets which are designed for low traffic speeds are safe for walking and cycling (ideally 20mph or less), especially when the detailed layout design (of junctions, crossings and surfacing) has their needs in mind. People feel safer on streets where there is activity, where they can be seen by drivers , residents and other users. [10].

## II. SITE ANALYSIS

Designing a successful place involves bringing together the environmental , social and economic elements that are necessary for it to be truly sustainable. The purpose of this analysis is to specify the data sources, and instrumentations used by this study and analysis related to the study area. It is an important part that outlines the procedure by which relevant data is collected and analyzed .

As a result of street restructuring, there is a continuous pedestrian arcade , particularly along the shops. The average height of arcade is 3.5 metres, and its width is 3 meters, with some variations according to the segment of the street. The dimension of columns in the front side of the buildings varies as 30/30 cm, 45/45 cm , 60/45cm, 45/70 cm, 60/60 cm, and 60/75 cm. The distance between the columns of a building follows modular space arrangements, but varies amongst buildings .

As a channel of movement, street connects one place to another. The street provides a link between buildings, both within the street and in the city at large. As a link, it facilitates the movement of people, as pedestrians or within vehicles, and the movement of goods. In correlation to this function, Eichner and Tobey (1987) have identified various activities regarding the use of street as a channel of movement (Table 1 ).

# International Journal of Innovative Research in Science, Engineering and Technology

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Vol. 4, Issue 12, December 2015

Table 1: Street as a Channel of Movement

FUNCTIONAL USES	
<b>Vehicular Circulation</b>	
<ul style="list-style-type: none"> <li>•Through movement</li> <li>•Picking up/dropping off passengers</li> <li>•Curb side parking</li> <li>•Access to parking</li> <li>•Buses</li> <li>•On-street service</li> <li>•Off-street service</li> <li>•Emergency vehicle</li> </ul>	
<b>Pedestrian Circulation</b>	
<ul style="list-style-type: none"> <li>•Through movement</li> <li>•Waiting for, boarding and alighting from vehicles (buses, taxis, cars (</li> <li>•Entering and leaving subways</li> <li>•Crossing street</li> <li>•Entering and leaving buildings</li> </ul>	
Source: Eichner and Tobey, 1987	



(a)



(b)

Figure 1: Street as Channel of Movement; (a) pedestrian movement, (b) vehicle movement, Source: (Field Survey 2008)

Some streets function as a place for exchange of goods or a place to do business. People use the street as a place to offer goods and a place for display as much as they were ‘allowed’. Pedestrians see, compare, discuss with their companions, bargain and decide whether to buy an item or not. Street, besides being a public space, have traditionally served as a place to do commerce. While people use the street as a place for trading, numerous other forms of economic-based informal street activities, such as of street vendors and street musicians, occupy most part of the street space .

The road networks mainly serve the outer limits of the area. A network of narrow alleys, approximately 1.5 to 3 meters wide, serves most of the area of Tuanku Abdul Rahman Street. Heavy vehicles are not allowed to enter the alleys; most of the inhabitants use motorcycle or bicycle for their daily activities. Car and other kinds of heavy vehicles are parked outside the area, commonly in the street side of bigger alleys of Tuanku Abdul Rahman .

# International Journal of Innovative Research in Science, Engineering and Technology

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The study area was located on Kuala Lumpur Town nearby the more famous square in Malaysia (Dataran Merdeka), which located between the Gombak and Klang rivers, where Sultan Abdul Samad Building and the National History Museum are located .

On that area can find the physics evidence from the past time such as the Royal Selangor Club from the British period which built in 1910 rests on one corner of the square .

Circulation is important as a linkage between activities from and to Tuanku Abdul Rahman Street. Development of town can also increase amount of vehicle population and request for parking lot. Visually, street characteristic in Jalan Tuanku Abdul Rahman is fulfilling and one direction (Figure 3.9). Increasing of vehicle usage will not only generate the problem toward the area but also will influence to the Street image. Circulation for pedestrian and disabled persons also require to pay attention seriously. The street as an alternative way for pedestrian to go to another place such as market or mosque .

On the study area, there are few heritage buildings and smooth architecture elements. Assortment of pattern and architecture were created area form and interesting visual in study area. Therefore, addition or change by development or person need must be paid attention for aspects to contaminate visual quality especially new buildings with its height, if uncontrolled by government authority .

Most of buildings in study area are the story buildings like traditional old shop houses are three and four stories (Figure 3.10). These buildings will lose from people eyesight because new building were standing and amount of it stories are more than that, also do not have better visual quality of architecture. The problem must be stopped immediately with a clearly rule because it can eliminate visual quality and the image of Tuanku Abdul Rahman Street . Building height will influence a major impression of the place where people in, called sense of place. Sense of place does not only consider to what people feel , but also consider that building height can not be obstacle for people to find orientation to another place .

There are few old buildings along Jalan Tuanku Abdul Rahman and Jalan Abdul Samad which built during the British period with great Architecture style and must be protected (Figure 3.11). The variety of buildings composition can create an esthetic high value on study area, especially for increasing image as an old area in the Town. The old secretariat buildings that surround Merdeka Square with their Moorish motifs form the heart of the old city and have a consistency and solidity , which also makes clear references to Islamic culture and the tropical climate .

Surrounding the square are many buildings of historical interest including the Royal Selangor Club Complex which is situated on one corner of the square, the Sultan Abdul Samad Building, the National History Museum and the Memorial Library, a building dating back to 1909, St. Mary's Anglican cathedral, a Gothic style building which is more than a hundred years old and the impressive modern Dayabumi Complex .

The Sultan Abdul Samad Building was among the most significant landmarks built by the British, which grandly overlooks the Dataran Merdeka. This Moorish architecture beauty, completed in 1897, housed several important departments during the British administration. The quasi-Tudor style timber structure was built in 1890 and remains a place to watch a game of cricket on a Sunday afternoon. The Royal Selangor Club's Tudor-style building, built in 1890 is in stark contrast to the Moorish Sultan Abdul Samad government building across the square .

### III. CONCEPT AND DESIGN

The site continues to grow, there is need to put in place a viable transit system which is capable of meeting future pedestrianization demands, as well as reversing the declining quality of life in the study area. This is the last part started with the design concept and proposing follows by design recommendations or guidelines. Designing a successful place involves bringing together the environmental, social and economic elements that are necessary for it to be truly sustainable. Design in an urban context requires sensitivity to collective formed Images of the site would be influential to the design process. Three basic themes have guided the design strategy, provide an urban space in the existing open space in the middle of Jalan Tuanku Abdul Rahman to create a pleasant aesthetic and atmosphere to the pedestrian, also the conservation part to the historical and old buildings in the study area and surrounded to create good environment,

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Vol. 4, Issue 12, December 2015

finally concern and enhance the existing pedestrian system with the up-to-date environment amenities and pleasure facilities.

Figures shows the results of the study area. Figs. 1, 2, 3 (a) shows the original image. (b) and (c) is the image obtained by designing and developing the area.



Fig. 1. Buildings should be sited carefully to create defined public space. Build-to lines should be utilized to establish a consistent series of building facades, and to promote regular alignment. The street is an important form of public space, and the buildings that define it should be expected to reinforce and enhance the streetscape corridor, (Figures 1.a and 1.b) showed the existing open space and the open space after the development.



Fig. 2 Conservation is an integral part of urban planning which provides a vital link to past. The importance of building and monument conservation : sensitivity towards the past, emotional ties, continuity and stability of physical surroundings, absence of protection against economic pressure, importance of tourism industry, lower estimated cost of development and financial gain in redevelopment, Several types of conservation actions may take place simultaneously in different parts of the whole building. Several types are identified, Reinforcement is the physical addition or application of materials that strengthen or support the actual fabric of the monument or conservation building to ensure its continued durability or structural integrity .

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(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 12, December 2015

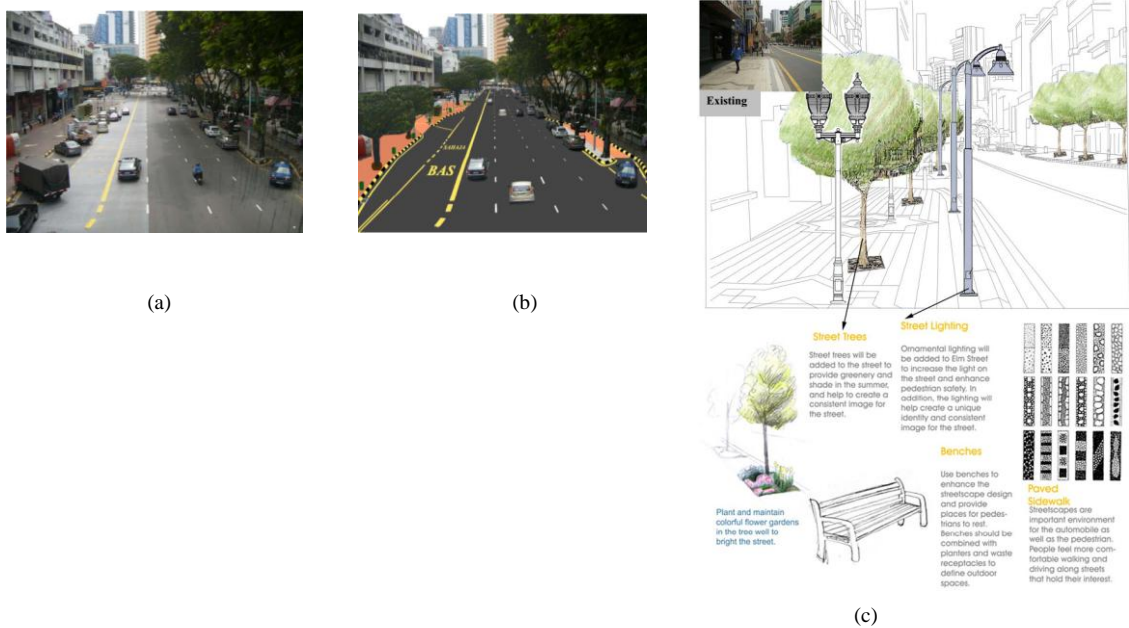


Fig. 3 ”For pedestrian only” is an idea to return street function as human public space. As pedestrianization area, pedestrian way as the important supporter infrastructure to make Tuanku Abdul Rahman street’s activities take place .

Pedestrian network plan was needed to strengthening of footpath network system at study area. At part of conducive certain area, required to create alleys to be enabling attainment to pedestrian movement from various direction .

The concepts of pedestrian network in the study area are :

- .1 Creating continuity of pedestrian way with relation to attraction and activities around it ;
- .2 Maintain and increase the existing vistas and views ;
- .3 Pedestrian way was equipped by street furniture; and turn on of area with facilities.

Urban design is one of the most important factors to be considered in future redevelopment of Winooski. Urban design concerns the visual form of both the built and natural environments; it includes the history and architecture of buildings, site improvements, patterns of development, open spaces, signage, street hardware , landscaping and other items visible to the public.

## IV. CONCLUSION

A high quality of design and materials will be required for the street environment. The design and provision of all important street elements and furniture) including public art) will be coordinated, wherever possible, to make a positive contribution, avoid unnecessary clutter, and ensure a safe, informative and attractive environment.

The quality of the interface between vehicular and pedestrian spaces has a substantial impact on the overall experiential quality of an urban setting. Planting buffers, walls, and fencing should be utilized wherever feasible to screen views to parked cars. Parking area landscaping should be utilized to direct and filter views to parked cars and site utilities. Street and parking area trees should be placed with respect to maintaining important views to architectural elements and storefronts and to permit clear views across plaza and pedestrian areas. Landscape plantings should be low enough to maintain surveillance throughout exterior spaces.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 12, December 2015

The quality of the pedestrian experience has a significant influence on the success of mixed-use urban commercial districts that rely on local residents for daily patronage. Site furnishing and landscape elements should clearly articulate boundaries between pedestrian and vehicular zones. Lighting and landscape design should afford clear visibility for safety and security while offering a well-organized system of way-finding and organizational signing. Textural changes in pavements should be considered as a means to reinforce the distinction of pedestrian zones and bring variety and interest to the street. Variation in the setbacks of buildings offers opportunities to activate the street through sidewalk cafes and passive gathering spaces.

The overall community design theme of the City's Vision document recognizes the importance of a positive community image and quality community design to assist the City in instilling a sense of pride and well-being in the community, assuring quality employment, and improving tourism. This theme is repeated throughout the Vision document and Comprehensive Plan policies in several ways. These documents emphasize sensitive integration of development to complement the natural environment; protection of views; development of attractively designed activity centres and streets; and designing for people at the human scale.

## REFERENCES

- [1] Harvey M. Rubenstein 1992. Pedestrian Malls, Streetscapes, and Urban Spaces. WILEY Publishers .
- [2] Michelle Wallar 2002. How to Create a Pedestrian Mall? Article, Culture Change ,California, USA .
- [3] Dominique Gauzin-Muller 2002. Sustainable Architecture and Urbanism: Concepts ,Technologies, Examples, Birkhauser Publishing .
- [4] Emanuel Berk 1976. Downtown Improvement Manual. ASPO Press
- [5] Clare Cooper Marcus 1998. People Places: Design Guidelines for Urban Open Space. WILEY Publishers .
- [6] Matthew Carmona at, el. (2003), public places- urban spaces, The Dimensions of urban design, Architectural press, London
- [7] Maria Balshaw, Liam Kennedy 2000. Urban Space And Representation. Pluto Press .
- [8] Lynch, Kevin. (1960). The Image of the City, the MIT Press, Massachusetts, USA
- [9] Loren Cruden 1995. The Spirit of Place. A Workbook for Sacred Alignment . Ceremonies. Inner Traditions / Bear & Company .
- [10] Office of the Deputy Prime Minister 2001. Better Places to Live. Thomas Telford Publishing