

**THE STREETScape DESIGN :**

**AN EXAMINATION OF THE RELATIONSHIP BETWEEN THE  
ARCHITECTURAL COMPOSITION OF STREETScape AND LEGIBILITY  
OF URBAN SPACE**

A Dissertation

Submitted to the Department of Architecture of the  
University of Moratuwa in partial fulfillment of the

Requirements for the degree of  
Master of Science



Electronic Theses & Dissertations  
www.moratuwa.lk

In

Architecture

**LIBRARY  
UNIVERSITY OF MORATUWA, SRI LANKA  
MORATUWA**

72"04"  
72(043)

by

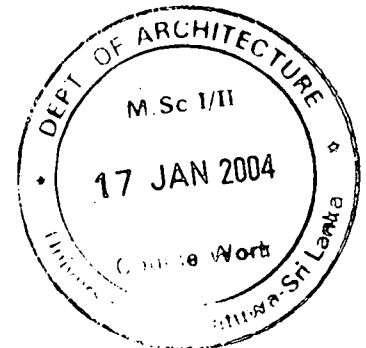
**T.D.G.K de Alwis**

17 / 01 / 2004

85440



University of Moratuwa



85440

85440

## DECLARATION

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualification.

### ***UOM Verified Signature***

Signed : .....


(Name of the student: De Alwis T. D. G. K.)



University of Moratuwa, Sri Lanka  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

**The Streetscape Design :  
Examination of the Relationship Between the Architectural Composition of  
Streetscape and Legibility of Urban Space**

**CONTENTS**

<b>Title</b>	<b>Pg.No</b>
LIST OF ILLUSTRATIONS	v
ABSTRACT	xii
ACKNOWLEDGEMENTS	xiii
<b>INTRODUCTION</b>	
0.1 The Study	xiv
0.2 Importance of the Study	xv
0.3 Intention of Study	xvii
0.4 Scope and Limitations	xvii
0.5 Methodology	xviii
 University of Moratuwa, Sri Lanka Electronic Theses & Dissertations www.lib.mrt.ac.lk	
<b>CHAPTER ONE – <u>Identification - Architectural Composition</u> <u>of the Streetscape.</u></b>	
1.1 <b>Constituents of Architectural Composition of Streetscape</b>	01
1.1.1 Streetscape as a Work of Architecture	01
1.1.2 The Principles of Architectural Composition in an Urban Streetscape	02
1.1.2.1 Unity	02
1.1.2.2 Elements of Contrast	07

1.2 The Determinant Factors of a Streetscape.	15
1.2.1 A Streetscape Determined by the Usage.	15
1.2.1.1 A Cultural Usage	15
1.2.1.2 A Residential Usage	16
1.2.1.3 Commercial Usage	17
1.2.1.4 An Executive Usage	18
1.2.1.5 An Institutional Usage	18
1.2.2 A Streetscape determined by the Context	19
1.2.2.1 Physical Setting and the Features of the Context	19
a)Topography	19
b)Views	19
c)Vegetation	20
d)Climate	20
1.3 The Expressive Quality According to the Determinant Factors	20
1.3.1 The Dominant Character	21
1.3.2 The Dynamic Character	21
1.3.3 The Sophisticated Character	21
1.3.4 The Grand Character	21
1.3.5 The Calm Character	22
1.3.6 The Festive Character	22
1.4 Concluding Remarks	22
<b>CHAPTER TWO – <u>Responsiveness of Urban Space</u></b>	
2.1 Definition of Urban Space	23



2.1.1 Architectural Space	23
2.1.2 Space	24
2.1.2.1 Center	24
2.1.2.2 Enclosure	24
2.1.2.3 Depth	25
2.1.2.4 Density	27
2.1.2.5 Continuity	29
2.2 Responsiveness	30
2.2.1 Permeability	31
2.2.2 Variety	32
2.2.3 Legibility	32
2.2.4 Robustness	32
2.2.5 Visual Appropriateness	33
2.2.6 Richness	33
2.2.7 Personalization	33
2.3 Legibility as the Key Factor of Responsiveness	33
2.4 Concluding Remarks	37

**CHAPTER THREE – Towards a Framework for a Legible Urban Streetscape**

3.1 Basis for selection of case studies	38
3.2 Considering the Activity Pattern of the Streetscape	40
3.2.1 Galle Road at Kollupitita	41
3.2.2 Galle Face Central Road – Colombo 3	45
3.2.3 York Street	49

3.2.4 Cross Streets, Pettah	53
3.3 Considering the Physical Layout of the Streetscape	57
3.3.1 Galle Road at Kollupitiya	58
3.3.2 Galle Face Central Road – Colombo3	61
3.3.3 York Street	65
3.3.4 Cross Streets, Pettah	70
Conclusion	74
Bibliography	76



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

## List of Illustrations

	Pg.No
Fig.1 Unity achieved by resolved duality.	03
Fig.2 The Selimiyo Mosque at Edrine (formally Adrianople). Unity can be one single unit or one visible unit.	03
Fig. 3 Illustrates the destruction of unity by competing duality.	04
Fig.4 Unresolved duality.	04
Fig. 5 and 6 Effect of duality lessened where shapes are less strongly marked.	05
Fig. 7 and 8 Duality lessened by differences of tone and texture.	05
Fig.9 Duality lessened by colour and tone. Given below shows two equal buildings which has a balance and have a center of interest producing unity in composition.	05
Fig.10 Unity in symmetrical composition	06
Fig.11 Achieving unity by correct proportions and interest of focal point.	06
Fig.12 Resolved duality by introducing trinity.	07
Fig. 13 Church of the Miracoli, Venice.	08
Fig. 14 Contrast in elementary form, the dome.	08
Fig.15 The Chiesa del santo, Padua. Contrast in proportion between forms of the same type and general contrast of geometrical shapes	09


Fig.16		
Contrast in proportions of same forms.		09
Fig. 17		
Contrast of line in the contour of form exemplified in a candelabrum.		10
Fig. 18		
The main line of elevation of building is horizontal.		11
Fig.19		
Contrast in colour.		11
Fig. 20		
Contrast in texture.		
Fig.21		
Solids clearly dominating overvoids.		13
Fig.22		
Church in Stolkholm, Contrast in shapes both in the main mass and in the form of the tower, dominating verticality.		14
Fig.23		
Contrast in shapes both in the main mass and in the form of tower.	 Sri Lanka Electronic Theses & Dissertations <a href="http://www.lib.mrt.ac.lk">www.lib.mrt.ac.lk</a>	14
Fig.24		
Streetscape with cultural use – Dalada Veediya, Kandy.		16
Fig.25		
Streetscapes with Residential Use.		16
Fig.26		
Streetscapes with Commercial Use.		17
Fig.27		
Streetscape with Executive Use – Raj Rath, India		18
Fig.28		
Streetscape with Institutional Use.		18
Fig.29		
From implicit to explicit space		23




Fig.30		
The effect of depth		25
Fig.31		
Attempt spatial decomposition of a painting by Le Corbusier		26
Fig.32		
Perspective and texture - as gradients of depth.		27
Fig.33		
Dense space Interior of the Mosque at Cordoba		27
Fig.34		
Absence of density, Universal space, Deep and empty		28
Fig.35		
The modulation of the floor and walls increases the density of space by subdividing its depth.		28
Fig.36		
Continuity of the ground and the wall creates tension between the observer's viewpoint, the end of the terrace and the framed landscape in the distance.		29
Fig.37		
The opening of a space is obtained by the reduction of its degree of definition		29
Fig 38		
To exist man too has to continue and make relationship with space		30
Fig.39		
Fundamental Layout Implications of Permeability		31
Fig.40		
The biggest open spaces were related to the most important public facilities		34



Fig.41	
The buildings which stood out from the rest were those of greatest public relevance.	35
Fig.42	
Where privacy and security permitted, many buildings allowed the passer-by to see the activities inside.	35
Fig.43	
Philadelphia, USA. Achieving Greater Legibility	36
Fig. 44	
Key to Maps	38
Fig 45	
Layout Plan Kollupitiya	41
Fig.46	
Pizza Hut - By the side of the Galle Road	42
Fig.47	
The Bus Halts are also Associated with Some Other Prominent Place and Have Become Part and Parcel of a Specific Place.	43
Fig.48	
People Rush to the Bus-Halt after the Office	43
Fig.49	
Galle Road at Kollupitiya, in the Festive Season.	44
Fig.50	
Lay-out Plan- Slave Island	45
Fig.51	
Vast Boundless Space with a Dynamic Sensation	46
Fig.52	
In the Evening, It creates a Festive Quality with different kind of users.	47
Fig.53	
The Line of trees provide Shade for the Users	47

Fig.54		
Lay out Plan – Fort		49
Fig.55		
York street, Colombo, at the beginning of the Century.		50
Fig.56		
Vehicles are parked blocking the Pedestrian's way.		51
Fig.57		
Arcades are created from the building itself to avoid Congestion.		51
Fig.58		
Security Barriers Blocking the Way		52
Fig.59		
Layout Plan - Pettah.		53
Fig.60		
Pettah in the late 19 <sup>th</sup> Centaury		54
Fig.61		
Towards Cross Streets from Olcott Mawatha		54
Fig.62		
The cross streets are known as a center for buying and selling goods and for whole sale goods for venders who come from outstation and wide range of consumer goods to customers.		55
Fig.63		
The streets are chocked by vehicles and people with various activities.		56
Fig.64		
Low scaled, Closely packed Shops along the Street.		56
Fig.65		
Low scaled Commercial activities happening in the Day time.		57
Fig.66		
The Patterns of the Places.		58
Fig.67		
The Built Pattern of Galle Road towards Kollupitiya		58

Fig.68	The Landmark tower is indeed actually a Landmark for Kollupitiya.	59
Fig.69	A Stretch of Buildings in a Larger Scale.	60
Fig.70	Map of the Area	61
Fig.71	Framed view of Fort from Kollupitiya.	62
Fig.72	Galle Road corridor opens out to the Spacious Galle Face Green.	62
Fig.73	Galle Face Court and Galle face hotel give correct punctuation and enclosure to the transition.	62
Fig.74	The Massive Esplanade and Panoramic View of the Sea gives a Festive Character to the Street.	63
Fig.75	The Old Parliament Building gives a Dominant Quality.	63
Fig.76	Hotel Taj-Samudra – Stands up with its Grandness.	64
Fig.77	Galle Face Hotel- High Recreational use.	64
Fig.78	Map of Area	65
Fig.79	View of York Street from Southern End	66
Fig.80	The York Street towards the end with the View of Ports Authority Building.	66
Fig.81	York Street as a Good Path.	67

Fig.82		
The Colonial Building Facades of the West Elevation		67
Fig.83		
Stands with the Monotonous Building Façade		68
Fig.84		
Section A – A ( First Segment of York Street )		
The trees of Eastern Side of the Street, contribute to provide the enclosure.		69
Fig.85		
Section B – B ( First Segment of York Street)		
High-rise building on Echelon Square on Southern side Contribute to provide enclosure.		69
Fig.86		
The Map of Area		70
Fig.87		
The statue at Col. Henry Olcott, is a meaning full landmark to Pettah, which is located in front of the Colombo Fort Railway Station.		71
Fig.88		
The Dutch Museum with the colonnaded front.		72
Fig.89		
The Mosque at Upper  Second Cross Street.		72
Fig.90		
Narrowness and Enclosure bring a feeling of intimacy.		72
Fig.91		
A section across a cross streets showings the relationship between height of the buildings and width of the street.		73

## **Abstract**

Architecture is not mere enclosure and shelter. It is neither the details nor materials and technology used. It is primarily a spatial experience. It is experiencing of space, which gives such a quality to a particular created space; in this study it is the urban streetscape. It needs to achieve, protect and enhance quality of space. The built environment has a profound influence on man and his behavior, in terms of modifying the physical world to accommodate his physical, psychological and social needs. Man is an emotional as well as an intelligent being. Therefore he is affected psychologically by the sociocultural and physical context as much as he is affected in terms of physical comfort. Thus, particular environment has a definite and definable influence on man and his behavior.

This has resulted in the evolution of different types of Architectural products such as; houses, churches, markets, offices and specially the urban streetscapes. The quality of the environment within such space has to encourage and propagate the activity within, in order to be success. This has been a major responsibility of Architecture through the ages.



University of Moratuwa, Sri Lanka  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

Urban spaces are always closely associated with functions. These spaces can be formal or informal and be large or small depending on their scale. Formal urban spaces usually have regular arrangements with strong, supporting elements and a strong sense of enclosure.

Every city consists of urban spaces, in the form of street space. The buildings should be designed with a correct understanding of the character of existing urban spaces and a clean conception of how to create meaningful 'places' with in a given context. At this point the principles of Architectural composition and legibility in an urban streetscape becomes more important.

## **Acknowledgements**

I take this opportunity to convey my deepest gratitude to all whom helped me in preparation of this dissertation.

- Prof. Nimal de Silva Dean, Department of Architecture, for the encouragement and initial guidance.
- Archt. Vidura Sri Nammuni, Head, Dept. of Architecture, for the inspiring discussions, advice and comments, the constant encouragement from the onset till the end and above all for believing in its worth.
- Archt. Prasanna Kulathilake, Senior Lecturer, Dept. of Architecture for countless discussions, criticism, comments and guidance .
- Dr. Harsha Munasinghe, Senior Lecturer, Dept. of Architecture for his kind supervise when ever needed.
- Mr. Alahakoon for spending his valuable time uncomplainingly, helping with the photographic work.
- For the police officers, who kindly listened to me and for 'curious pedestrians', who were alert, who poke their nose in to what I was doing and their valuable contribution.
- It is to them that I humbly pay tribute; to Nilantha aiya and Yasho akka for kind guidance and numerous help in the whole process.
- Dushshantha who helped me in many ways.
- My dear parents and akka for their blessings and sharing my tears and most of all accepting me as I am.
- And to my dearest Madhawa for his love, strength and courage for me for my success.

