## **CONTENTS**

	Page
Acknowledgement	iii
Abstract in Thai	iv
Abstract in English	vii
List of Figures	X
Chapter 1 Introduction	1
1.1 Research Statement	1
1.2 Literature Review	3
1.3 Objectives	3
1.4 Research Questions	3
1.5 Benefits of the Study	4
1.6 Hypotheses	4
1.7 Research Approach	4
1.8 Methodological Framework	5
1.9 Scope and Limitations	6
Chapter 2 History of Phnom Penh	8
2.1 Choosing a Capital by Chiang Mai University	8
2.2 Phnom Penh Urbanization	12
2.2.1 During the Reign of King Ponhea Yat (1396–1466)	12
2.2.2 During French Protectorate (1863-1953)	14
2.2.3 Post-independence Era	21
2.2.4 During 1970s and Khmer Rouge	29
2.3 Boeung Keng Kang	32
Conclusion	41
Chapter 3 Modern Development During the 1960s	43

3.1 Sihanouk's Policy	43
3.2 Architecture of Post-independent	50
3.2.1 Architects	50
3.2.2 Modern Khmer Architecture	53
3.2.3 Architectural Style	60
3.3 Infrastructure	63
3.3.1 Sihanoukville Port	64
3.3.2 Sihanoukville Urbanization	67
3.3.3 Modern Architecture in Sihanoukville	68
3.4 Social Development	69
3.4.1 Art and Culture	69
3.4.2 Education	70
3.4.3 Social Housing	72
3.4.4 Public Services	73
3.5 Modern Life	74
Conclusion	76
Chapter 4 Data Collection	78
4.1 Empirical Data	78
4.2 Data Summary	106
Chapter 5 Analysis	107
5.1 Modern Aesthetics	107
5.2 Cultural Identity	111
5.3 New Technology	115
5.4 Ways of Living	116
Conclusion	119
Chapter 6	120
Bibliography	124
Images Index	1247
Curriculum Vitae	158

## LIST OF FIGURES

	Page
Figure 1.1 Modern Private Houses in Boeung Keng Kang	2
Figure 1.2 Location of Boeung Keng Kang in Phnom Penh city	7
Figure 2.1 Sketch of Phnom Penh by Henri Mouhot in 1887	10
Figure 2.2 Map of Phnom Penh in 15 <sup>th</sup> century sketched by George Coedès in 1867	14
Figure 2.3 Zoning of Phnom Penh according to ethnicity	17
Figure 2.4 Key map of major projects developed in 1960s	22
Figure 2.5 (a) Council of ministers (demolished), (b) Chamkarmon State Place	23
Figure 2.6 Royal University of Phnom Penh	23
Figure 2.7 Khmer-Soviet Hospital	24
Figure 2.8 (a) Master Plan of the Bassac River Front Project, (b) Olympic apartmer	ıts,
(c) Exhibition hall and Preah Suramarit National Theater	25
Figure 2.9 (a) National Sports Stadium, (b) Athlete Olympic Village	26
Figure 2.10 Location of important markets in Phnom Penh	27
Figure 2.11 Phnom Penh Thmei or New Phnom Penh	27
Figure 2.12 Major infrastructure construction	28
Figure 2.13 Image of victory of Khmer Rouge in Phnom Penh	30
Figure 2.14 Map showing the development Phnom Penh and, particularly, Boeung	
Keng Kang	31
Figure 2.15 Major development projects around Boeung Keng Kang	32
Figure 2.16 Sketch of master plan of Chamkarmon Compound	33
Figure 2.17 Bird's eye view of Bassac River Front Project	35
Figure 2.18 Bird's eyes view of National Sports Stadium	36
Figure 2.19 Independence Monument	37
Figure 3.1 Photograph of Prince Norodom Sihanouk	44
Figure 3.2 Architects and Engineers of the 1960s in Cambodia	53
Figure 3.3 (a) Chaktomuk Conference Hall (b) Canadiana Hotel	54

Figure 3.4 Eglise Sainte Jeanne d'Arc à Rouen designed by Louis Arreche;	
exterior (left), interior (right)	55
Figure 3.5 Design Concept of National Sports Stadium	57
Figure 3.6 Climatic adaptation features of National Sport Stadium	58
Figure 3.7 Design Concept of Teacher Training College	59
Figure 3.8 Master Plan of Teacher Training College	59
Figure 3.9 Climatic adaptation features of Teacher Training College	60
Figure 3.10 Staff apartment of National Bank of Cambodia	61
Figure 3.11 Illustration graphic of modern architectural style	62
Figure 3.12 Norodom Sirivuth's Mother designed by Vann Molyvann	62
Figure 3.13 Vann Molyvann's house	63
Figure 3.14 Sihanoukville master plan zoning	64
Figure 3.15 Modern architectures of Sihanoukville	69
Figure 3.16 Cultural centers constructed during 1960s	70
Figure 3.17 Education institution constructed during 1960s	71
Figure 3.18 Apartments in Bassac River Front Project	72
Figure 3.19 The 100 houses project	73
Figure 3.20 Soviet-Khmer Friendship Hospital	74
Figure 4.1 Photographs of house No.18	78
Figure 4.2 Drawing of floor plans of house No. 18	79
Figure 4.3 Drawing of Elevations and section of house No. 18	80
Figure 4.4 Photograph of house No. 04	81
Figure 4.5 Drawing of floors plan of house No. 04	82
Figure 4.6 Drawing of elevations and section of house No. 04	83
Figure 4.7 Location map of the houses	84
Figure 5.1 the differences roof style	107
Figure 5.2 Example of roof design with simple gable roof line and coping	107
Figure 5.3 Similarity of architectural element of public buildings and those of	
private buildings	109
Figure 5.4 Material used in public buildings and private houses	110
Figure 5.5 Similarity between public building design and private house design	111

Figure 5.6 Example of house having trees in font	112
Figure 5.7 Conceptual air flow pattern of in the house of house No. 04 and 18	113
Figure 5.8 Modern building that adopt traditional features	113
Figure 5.9 Symbol of Bayon temple on gable of modern house	114
Figure 5.10 Bayon Temple and face of King Jayavarman VII	115
Figure 5.11 House foot print relative to land size and access road	117
Figure 5.12 Analysis of planning of houses No. 18 and No. 04	118



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright<sup>©</sup> by Chiang Mai University All rights reserved