**ARCHITECTURAL TRANSFORMATION OF HERITAGE BUILDINGS
CASE STUDY: FOLK ART MUSEUM BUILDING
SONARGAON, BANGLADESH**

By

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A Thesis submitted to the
Faculty of Graduate Studies and Research
In partial fulfillment of
the requirements for the degree of
Masters of Architecture

School of Architecture
Carleton University
Ottawa, Ontario

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395 Wellington Street
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ISBN: 978-0-494-16473-0

Our file Notre référence

ISBN: 978-0-494-16473-0

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ABSTRACT

Heritage buildings and cities provide us with strong visual documents pertaining to regional history and form, comprising the basis of local culture. In the contemporary world scene, the built form cultural heritage seems to be generally ignored into oblivion. The example of Bangladesh as a small country with rich traditions, cultural heritage and long historical background is studied as a case from the viewpoint of Canadian heritage preservation practices.

This thesis articulates the process of transformation as the vehicle for adaptive reuse of heritage buildings in our contemporary condition. It includes the investigation of events, theories and methods of transformation in the context of Canadian contemporary practice. Examples of contemporary Canadian projects are studied in the transformation and integration of the old with the new to parallel the scenario observed in Bangladesh.

ACKNOWLEDGEMENT

I am grateful to all those who have directly or indirectly helped me in the preparation of this thesis. I am greatly indebted to Prof. Greg Andonian for his constant guidance, active help, valuable suggestions with ideas and criticism, and inspiration all through the time of carrying out this thesis work.

I would like to offer my gratitude to Professors Lucie Fontein, Kelly Crossman and Herb Stovel for their help and cooperation.

I would like to express my sincere and deep appreciation to Architect Julian Smith, Architect Barry Padolsky and Stuart Lazear (Heritage Planner, City of Ottawa) for their valuable time and for allowing me to conduct interviews and providing valuable information. I am grateful to Louise McGugan, Barry Craig (CMHC), Anna Buchon (Moriyama & Teshima architects), Nancy Dunton of CCA, and Peter Elliot for their endless support and inspiration. Thanks to Sadia Akhter, Hasan Khurshid and Jolly for their enormous help and assistance.

Finally, I acknowledge an enormous debt to my family; especially my husband Khaled Khurshid and my parents, for their patience, encouragement and support during the preparation of this thesis.

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CHAPTER 1: INTRODUCTION

1.1 Preamble

While working with a heritage consulting firm here in Canada, called Barry Padolsky Associates Architects Inc., I found that built heritage conservation is one of the major concerns of modern society. To save heritage buildings, the most common practice consists of the rehabilitation of the building by introducing a new use. This was an important first inspiration to discover why it is important to save built heritages and how they survive when they do not serve their original use anymore. Transformation is the process of rehabilitation of any old building. Thus, a keen interest was sparked to study the transformation of heritage buildings while they are still surviving with new building practices, and serving new functions successfully within an old shell.

1.2 Area of Interest

In this thesis, the intention is to study the transformation of heritage and historic buildings with respect to their conservation, restoration and preservation. The transformation of historic structures can include new functions and their impacts on form. This research includes the study of the guiding principles/resources of transformation of built heritage in different culturally diverse situations, with respect to need of the contemporary condition. The study first investigates the importance of saving the built heritage and understanding why the transformation of existing historic structures play an important role in preserving the built form as a living artefact over a long period of time, thus serving as the content for cultural identity. The objective of this study is to investigate the aspects of transformation of the built

heritage, how the new additions or the changes in the existing structure enrich the old in contemporary architectural practice as concept, and how the changes represent the cultural identity for the new era as a continuity in context. It is also important to discuss how the transformation is making statements of evidence of past history, as well as of the present and future.

Bangladesh, as a country rich with cultural heritage and history, has been chosen as a special case study in this thesis. There are many historic sites and built heritages, which evidence the country's glorious past. Many of these sites are in ruins because there is no proper strategy to save them. Some of these built heritages have gone through transformations, but they are losing their value because of the inappropriate application of transformation. As a result, many of these historic and heritage sites and buildings are under the threat of extinction.

In this thesis, several examples of the transformation of heritage/historic buildings in a Canadian context are studied to find out how transformation achieves the integration between existing structures and new functions or forms, while reflecting cultural identity in contemporary practice. The intention is to find the guiding resources for the transformation of Canadian architecture, thereby interpreting this concept in Bangladesh, with a goal to inspire cultural awareness.

1.3 Research Approach

The first intention of the study is to establish the importance of the transformation of architecture. Consequently, as explained in Aldo Rossi's book, The Architecture of the City, the concept of permanence represents architecture as a living phenomenon and a process of creating history over a period of time through transformation. The transformation of historic structures is the course which keeps buildings alive, instead of becoming a dead memory from the past.

The next step is to define transformation as a part of contemporary architectural practice. The transformation and rehabilitation of heritage or historic buildings are related to each other. Transformation is not just a functional make-over. It does not just change the interior of the existing structure by making it fit the new function but consists of many new concepts. The challenge is to integrate the new and old. It is important to discover how the existing shell adapts to new functions and how the form is changed as an addition or modification to accommodate to the new functionality, by being respectful of each other. This study includes the use of some contemporary projects to show the transformation of an architectural heritage.

Conservation principles and methods consist of guidelines on how to transform old buildings and theories of modern conservation that have an impact in formulating the concept of transformation, either as rehabilitation or as an addition to any heritage or historic building. This research explores the study of theories and concepts of conservation as a work of art in its historic settings. Hence values of the past are

juxtaposed against the contemporary ones in evaluating the transformation. The case studies consist mostly of the transformation of some Canadian heritage buildings. This study explores the understanding of the process of transformation, built evaluation guidelines and conservation principles at the government level, in order to help understand how the concept of transformation reflects these principles in the Canadian context.

One such project is the “Canadian Centre for Architecture” in Montreal. This is a work of restoration which incorporates the Shaughnessy House, one of Montreal’s distinctive 19th century grey stone buildings. The new building’s synthesis of classicism and modernism reflects the influence of history and place as well as the predilections of its architects. Another building of analysis is “The Ottawa Teachers’ College”, now designated as a heritage building. It was built in 1875, designed by W.R. Strickland, and was the second teachers’ college established in Ontario. This was designed in an eclectic Victorian spirit, with pointed Gothic and semi-circular Italianate windows, Romanesque columns, and a second Empire roof. In 1939, during the beginning of WWII, the federal government took over the college to establish wartime office space. It was designated as a national historic site in 1976. Later, in 1987, it was purchased by the regional government, which built office spaces to the rear. After the municipal amalgamation, the building became part of the Ottawa City Hall complex. In addition, the mayor’s office is located in this historic part of the building.

The third such building is the “Victoria Memorial Museum” in Ottawa, located on McLeod Street. This is a project still under construction, designed as the adaptive reuse of the VMMB building, with heritage resources to establish a new platform and infrastructure to ensure the success of the Canadian Museum of Nature for years to come.

To support this research, a concept design has been proposed for a historic building in Bangladesh. The site is located in Sonargoan, to the north of Dhaka, which is the capital. This site, having an age of thousands of years, possesses several historic buildings, which have not been cared for and have been constantly deteriorating. For this particular case, The Folk Art Museum building of Sonargoan was chosen, which was previously the Boro Sardar Bari and now houses the museum which displays folk artefacts depicting the traditional lifestyle of Bangladesh. The reason for using this building is to illustrate the concept of design. In addition, the building has already started the process of transformation by adapting to a new function. However, there was also an extension added to the museum, which does not correspond with the existing old building.

1.4 Methodology

Literature Review: Transformation is a major process to add permanency to urban artefacts, including built structures. To explore this study on the permanency of built structures and transformation, research is conducted on the concept of the permanency of urban artefacts, based on Aldo Rossi’s book, The Architecture of the

City. Here, Rossi explains how the cities are surviving generation after generation, with the transformation and the built structures existing as permanent objects, as their functions have changed over the years, and are adapting to new uses and forms as part of the history.

Transformation is an event where the use is changed or the form is modified to adapt to a new use. Transformation of use and form can also happen simultaneously, which can be successful or a struggle. It is important to know the types of transformation and the issues of a successful transformation (either use or form) for any heritage or historic buildings. To study this, there is research based on the transformation of some Canadian heritage structures, as published in magazines (House and Home, Heritage, Canadian Architecture etc.)

Besides, many publications by Folk Art Museum Foundation of Sonargaon have been studied, particularly to learn about the site, broaden the programming of folk art museums and other related issues.

Interviews: As all case studies are Canadian historical buildings, it is important to learn about Canadian architects and their ideas on rehabilitation. In particular, their concepts for the successful transformation of built heritage and how they interpret their value judgements in contemporary Canadian architecture must be discovered. To explore this, interviews were conducted with some professionals practicing in the field of heritage conservation in Canada. They are included in the Appendix F. The

interviews included Julian Smith and Barry Padolsky, two renowned heritage conservation architects in Ottawa, as well as Stuart Lazear, Heritage Planner of the City of Ottawa, and other heritage conservation professionals.

Survey: This includes the physical survey of the existing condition. Several site visits have been made to thoroughly photograph the folk art museum building and the site surroundings. The site visits also provided information about the current situation and the activities taking place within the site. The photographs were for documentation, including the preparation of drawings from historical drawings, photographs and current photographs.

A questionnaire survey has been conducted among the local people and visitors to identify the current problems and situations within the site, including the existing folklore museum building. (See Appendix – E)

CHAPTER 2: HERITAGE PRESERVATION & THE CONCEPT OF TRANSFORMATION

2.1: Modern Concern about Preserving Built Heritage

The definition of objects and structures of the past as consisting of heritage, and the policies related to their protection have evolved together with modernity, thus this is considered to be an essential need and responsibility of modern society. Since the eighteenth century, the goal of this protection has been defined as the cultural heritage of humanity, and gradually this has included not only ancient monuments and past work of art, but even entire theories for a variety of new values generated in recent decades.

For instance, in its medium term programme of 1989, UNESCO defined the full scope of such heritage (25 C/4, 1989:57) in the following:

“The cultural heritage may be defined as entire corpus of material signs – either artistic or symbolic – handed on by the past to each culture and therefore to the whole of humankind. As a constituent part of the affirmation and enrichment of cultural identities as a legacy belonging to all humankind, the cultural heritage gives each particular place its recognizable features and is the storehouse of human experience. The presentation and the preservation of the cultural heritage are therefore a cornerstone of any cultural policy.”¹

The built heritage is continuously subject to various types of deterioration, including the weather, the aging process and consumption by use. Buildings can also be modified, due to changes in function or changes in taste or fashion. Other than that, many historic buildings and works of art in many places risk damage due to natural

risk-phenomenon. Besides many heritage buildings are at risk due to armed conflicts, willful damage and demolition caused by humankind.

The preservation, restoration and conservation of heritage and policies, as related to their protection are one of the major concerns and responsibilities of modern society. The process from which these concepts and policies have emerged has been identified as the modern conservation movement. The concern of protection can be found long ago in European society. The main principles and concepts of the movement have found their first expression in the European context, particularly in the eighteenth century, although the roots can be identified either in the Italian Renaissance or even before. Later, the concern was for emotional sensitivity of the past, saving special quality works of art, learning from the past and also the impact of technology in society. Some of the key motives for the modern interest in heritage are found in a new sense of historicity and romantic nostalgia for the past, but this concern has also emerged from the eastern-held values for specific qualities of past achievements, the desire to learn from past experiences, as well as the shock caused by inconsiderate changes in familiar places, destruction and demolition of well known historic structures or pleasing works of art. Much of these destructive changes have been caused by the same technical and industrial developments, which has both qualitatively and quantitatively founded the emerging modern world society.

2.1.1 Impact of Technology

Technology driven societies and industrial development have a great impact on traditional societies and have developed the idea for the survival of traditions and heritage. Since the development of industrial society reflected a total rejection of historical references, modern practice in architecture led to the loss of identity in buildings.

“The architects of modern movement aimed to establish a universal style, both international and uniform. Exclusively modern, they rejected all earlier historical styles and adapted the architectural products of the industrial revolution.”²

The universal application of industrial imagery to all building types became the basis for much criticism and that initiated the need for the survival of tradition. Modernism enhanced the depersonalization of architecture and therefore there was a demand to return to traditional society for architectural practice of saving cultural identity, thus preservation of cultural heritage.

From mid nineteenth century and onward, cities were changed, More historic urban fabric was gradually lost and modern architecture became increasingly universal as a cultural expression and traditional building aesthetics disappeared, People became concerned about the loss of historical sites. A realization began to emerge that old buildings and old urban fabric were precious and should be conserved.

2.1.2 Saving Cultural Identity

Technology played an important role in the regeneration of urban environment and became a vehicle for advancing creative thoughts and interactive communication.

The explosive population increase in large metropolises however, has had the opposite effect. Anthony M. Tang, the former New York City Landmarks

Preservation Commissioner, stated the following in an interview published in

Heritage magazine,

“We have become an urban civilization. In the process we are becoming the civilization of the disappearing cultural roots as the rapid expansion of the modern metropolis renders widespread devastation of architectural patrimony. What does it mean when we loose one handsome familiar building? When an express way cutting through the city centre consumes a lovely 19th century district? It all adds up. The damage occurs. International experts currently estimated about 50 percent of the significant historic structures that existed in the year 1900 have been destroyed. A recent Canadian study documents the ruin of more than 20 percent of the nation’s heritage buildings in the last three decades alone. By the year 2100 will 60, 70, 80 percent of the global architectural legacy is erased? Are we closing the door to our past?”³

The Canadian philosopher Charles Taylor has identified concerns in modern society, including exaggerated individualism, disenchantment with traditional values in favour of maximum efficiency and restriction of choices in a mechanized environment in favour of mass production (Taylor 1991). Such types of detachment of people from their traditional values have contributed to severe limitations to their creative capacity, and have led to the fragmentation of society and to social conflicts. Due to this situation, there was a demand for the re-establishment of creative communication and improved social integrity, which may, however, take place through education and sensitization. In this process, cultural properties came to play an important role

in providing physical references for the re-establishment of collective memory and cultural identity.

2.1.3 Learning from the Past

Heritage and historical buildings are the sources and physical references of past cultures and settlements, thereby representing the resources to learn about past history. Jukka Jokilehto stated in his book A History of Architectural Conservation,

“Considering that ideas, values, acts and even emotions are cultural products, it follows that the built things are also cultural artefacts. So, built heritage is the evidence of, past culture, developments and settlements. These are the physical references that help individuals learn about architectural styles, structural systems, construction techniques, use of materials, space organization, scale proportion and other architectural aspects.”

Another issue embedded in older buildings is craft. Craftsmanship and detailing in many historic buildings survive even when there is not much evidence in the original pattern of use. Some of the building details are very difficult to replicate in the present time. These are the remnants of the past to learn about how and why they were done. For example, some national historic buildings are kept unchanged because of the level of workmanship and detailing.

2.2 Concepts of the Work of Art and Their Conservation Theories

Historic buildings and heritage structures are considered as works of art. But the concept of the work of art has been changed from the ancient period up to the modern time and thus their conservation theories have been altered. New value judgments have been added to evaluate past works of art, which have affected the

works of conservation and the restoration for past structures and architecture. This has a great impact on the transformation of any old building or work of art.

2.2.1 Early Concepts of the Work of Art

The concept of the work of art according to Martin Heidegger in A Work of Art, represents the result of a creative process undertaken by the artist. When referring to such a creative process, Heidegger compares the meanings of a 'thing', a 'tool' and a 'work of art'. He expresses that the thing is only a thing, which has no work done to it. It can be a piece of wood or rock. A tool on the other hand results from some work, but the goal of the tool is beyond itself, being designed as an instrument for a particular purpose. So a tool exists for its utility not for its own self. A work of art differs from the other two types of things in that it results from work that is aimed at the object itself. It becomes authentic through the creative process, and is unique in its material consistency as a work of art that makes truth happen in its being (Heidegger 1980a).

“The work of art as a whole is meaningful and establishes the truth as a being. It sets up its world. Its material in itself is effortless but as part of the work of art it receives a meaning in the creative process. The founding of truth is unique and historical. ‘The establishment of truth in the work means bringing forth a being as never was before and will never be again. So, preserving a work of art means to regenerate the perception of its truth and meaning through its world of relations in the consciousness of the society.’”⁴

Heidegger notes that cultural processes that lead to the dissolution of values and orders cannot be limited to one social group and not even to one state, but the processes must at least be broader –e.g. European. But this does not mean that it is

international and its consequences are acceptable by all other cultures. Each culture needs to go through its own process to define its relevant values.

2.2.2 Additions of Age Values and New Value Judgements

Alois Riegl has constituted the coherent basis for modern conservation theory with the definition of the work of art in its historical dimension by the definition of a “historical monument”, and the critical analysis of heritage values. According to Alois Riegl, an art historian should know about particular conditions and requirements of each period and culture, within which artistic production achieves its character to define the artistic values of the period. In his studies, he showed that the “late Roman” time is usually seen as inferior to earlier epochs, having its own characteristic concepts that should be understood for a proper assessment of relevant art. Riegl connects an artist with his time and culture, where this acting both as receiver and as contributor.

Riegl distinguishes between an “intended monument” and an “unintended monument” to define values and concepts related to modern conservation theory. Intended monuments are created as memorials, or signs of thinking. This represents a human product erected for the specific purpose of keeping human deeds and fates ever alive and present in the consciousness of successive generations.

On the other hand, unintended monuments refer to buildings with historic values, which were built to meet the practical needs and requirements of a particular time.

The latter, consisting of the monuments of art and history, is instead a modern concept referring to buildings that were built to satisfy contemporary practical and ideal needs. These only lately, have been taken as having historic value and therefore depend on modern perception.

Riegl divides these values in two main groups:

1. Memorial values – Age value, historical value and intended memorial value.
2. Present day values – Use value, art value, newness value and relative art value.

A work of art is generally a creation by humans that possesses artistic value. A historic monument is any work that has historic value. Considering history as a linear process, Riegl notes: "We call historical everything that has been and is no longer; in accordance with the modern notion, what has been can never be again, and everything that has been constituted an irreplaceable and irremovable link in chain of evolution."

So, for the evaluation of a work of art, it is not just an art value, rather it is the art value that corresponds with modern and the contemporary values. Thus it is the memorial value that characterizes the monuments. Riegl says, "Both intended and unintended monuments are characterized by commemorative value, and in both instances we are interested in the original, uncorrupted appearance of the work as it emerged from the hands of its author and to which we seek by whatever means to restore it. In the first case, however, the memorial value is imposed on us by others (the former authors), in the later case it is defined by ourselves."

The age value, according to Riegl, consists of the changes caused by weather and use over time, although it does not necessarily correspond with the historical value. Another value is the use value. Buildings, which are in use need to be maintained and repaired to keep them safe and functional, thus corresponding with the newness value.

The preservation of the monuments in the nineteenth century was essentially to preserve the originality of style. The policy at this time was to remove all traces of natural decay and re-establish the integrity that corresponds with the original intention. By the end of the century, the supporters of age value had a conflict with the removal of the additions and contributions of later periods from a historic building as an offence against all that the age value represented. Riegl was motivated in his work by the principle of respect for age value, and the protection of monuments from untimely destruction, as in the case of the 'Medieval parish Church of Altmunster' – when it was decided to reverse the earlier decision and keep the baroque choir.

Gustavo Giovannoni (1873 – 1947) drew attention to the significance of 'minor architecture' by providing continuity to the urban fabric in a historic city, and this became an important theme in his activities as planner of Rome. His approach to restoration was to treat it as a cultural problem of evolution and to rehabilitate the historic buildings with respect to all significant periods instead of constructing them to their ideal form.

Gustavo Giovannoni puts emphasis on the maintenance, repair and consolidation of historic structures and even on the use of modern technology, if necessary. His concerns included the preservation and respectfulness of the authenticity and the art value of the building. He considered the changes due to later additions as integral part of the structure. Essentially the aim was to preserve the authenticity of the structure, and respect the whole aesthetic life of the monument, not only the first phase. Any modern addition should be dated and considered as an integration of mass rather than an ornament, as well as being based on absolutely "sure data".

Professor Roberto Pane (1897 – 1987) of the University of Naples was a conservation expert at UNESCO. Having an interest in sociology, historic towns and the environment, Pane pointed out the fact that the earlier guidelines were too rigid and initiated the idea of exploring modern aspects in the restoration of historic structures and restoration itself as a work of art, thus formulating a method for transformation. His emphasis was on aesthetic demands of restoration, not on stylistic restoration. He thought it is legitimate to conserve all historic and artistic characters whatever period they belonged to, but also saw the need to be critical about what to conserve.

"In 1944 he wrote about the restoration of the medieval church of Santa Chiara in Naples, which was badly damaged in bombing on 4th July of 1943, and its rich baroque interior was almost completely lost. After a critical assessment, it was decided only to restore the medieval structures, and to complete the rest in modern forms. The problem that Pane posed was not technical but rather how to do the work so as to give new life to the church, and to show its historic and modern aspects in a balanced way. He felt the rigidity of the imposed limits of the earlier guidelines. To him, restoration should be conceived in a new dimension, including a creative element and if well done could itself become a work of art." ⁵

According to Cesare Brandi (1906 – 1988) architecture is a result of a creative process as it is a work of art as a whole. This concept is not just a geometrical total of its parts, but includes all elements together that form the whole, according to the concept of the artist or architect and the particular manner in which it has been constructed. He also mentioned that a historic building is a work of art as we see it today. And its restoration should be according to its present condition, rather than pursuing the ideal for stylistic restoration.

“Taken separately, the *tessere* of mosaic are not works of art, even an *ad hoc* collection of these in itself does not produce art. Furthermore a work of art or a historic building is indeed and only as it appears. It cannot be referred to an external model for its ideal reconstruction according to a stylistic scheme as was often the case in the nineteenth century. Instead, the ‘whole’ manifests itself in an indivisible unity that potentially may continue to exist in its parts, even if the original is broken in pieces, i.e. becomes a ruin. Restoration must be limited to the original work and be based on what is suggested by the potential unity of the work of art, taking into account the demands of its historical and aesthetic aspects.”⁶

Fig 1:
The front of Wells Cathedral was conceived and built together with the statues; its potential unity is expressed in all its elements.

Restoration of any work of art thus depends on its two aspects or instances, including aesthetic and historical, which simultaneously form a whole with potential

unity. Its historicity is independent from its aesthetic value. Both of these instances need to be taken into account when contemplating restoration. In case of additions to the historic buildings, Brandi takes this as another phase in history which should be considered, while undertaking conservations.

John Ruskin (1819 -1900) saw historic buildings as unique creations of the artists in a specific historic context. To him, the beauty and value of a historic structure depends on its age and, for him, the older it gets, the more glorious it becomes. He was thus against restoration, as articulated in his book, The Seven Lamps of

Architecture:

"Neither by the public nor by those who have care of public monuments, is the true meaning of the word restoration understood. It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed...Do not let us talk then of restoration. The thing is a lie from beginning to end. You may make a model of a building as you may of a corpse, and your model may have the shell of the old walls within it as your cast might have the skeleton, with what advantage I neither see nor care: but the old building is destroyed, and that more totally and mercilessly than if it had sunk into a heap of dust, or melted into a mass of clay: more has been gleaned out of desolated Nineveh than ever will be out of rebuilt Milan." ⁷

Morris, after Ruskin also upheld the attitude of minimal intervention, emphasized proper maintenance for the protection of an historic structure. According to them, imitating the past style represented an insult rather than complementing the builder of the past. Every generation should build according to the needs and manners of its own age.

The emerging new consciousness of historicity in the second half of the eighteenth century fundamentally changed the approach to the evaluation of historic structures and thus was the beginning of modern conservation. The new historicity emphasized the need to preserve the genuine and original, the different layers of the past, the transformations of history, as well as the signs of aging. Modern conservation authenticity of historic structures as a work of art must receive a new meaning as a representation of the universal value of humanity.

2.3: Formulating the Concept of Transformation – Adaptive Reuse of Heritage Buildings

Historic buildings have their own character and, previously, it was thought that they should be respected absolutely. This can be done by restoration and by avoiding any additions, if not indispensable. Any new work should be made distinguishable from the old, and should not harm the artistic effect of the original monument. The issue of dividing the monuments into dead monuments and living monuments brought up the concept of transformation more significantly. Dead monuments are those that only possess documentary values. Living monuments are similar to churches and other buildings with contemporary values. So their preservation concept is different and this has an impact on the evolution of transformation, because the issue of reusing the historic buildings has been recognized. Dr Jan Kalf (1873 – 1954), who was in favour of the continuous use of historic buildings, disagreed with the stylistic restoration approach and stated that any addition should be made in the style of the time, in order to avoid falsification.

After the second world war, a trend that favoured the reconstruction or stylistic restoration of principal historic places and monuments emerged. In the Venice Charter – recognized as an official document in the USSR, one of the important criteria of the reconstruction was the introduction of contemporary use, such as the introduction of a museum functions, tourism or other public uses. An example was the transformation of Suzdal from a historic town into a tourist complex. This involved restoring important churches into museums, adapting the old monastery as a tourist's hotel, and building wooden houses in traditional styles to provide accommodation for visitors (Raminsky 1992). The destruction and modern reconstruction of cities such as Moscow itself, have continued through the following decades until the turn of the millennium (Dushkina 1995:95).

Thus, it is observable that the idea of transformation, consisting of the reusing and reconstruction of old buildings, evolved from that time. Eventually the intention of intervention has shifted from taking care, to guiding the process of rehabilitation and appropriate utilization, thus forming an approach to reconstruction.

CHAPTER 3: ARCHITECTURE AS LIVING PROCESS AND TRANSFORMATION

The history of buildings that have been created by people over thousands of years is in constant change. Buildings loom over humans and persist beyond them. Buildings contain the history and memory of many civilizations. Greek and Roman temples became churches, English monasteries were recycled as country houses and Russian places became post - Revolution museums of the people. More currently, American mills and railway stations have been changed into shopping malls and hotels.

“Renovation of the San Francisco Ferry Building has been completed after a four-year effort. In a public-private collaboration, the landmark building is being redeveloped as a mixed-use property with a world-class public food market on the ground floor and premier quality view office space on its upper floors.”¹

Fig 2: San Francisco Ferry Building interior (Old)

Fig 3: San Francisco Ferry Building interior (New)

Fig 4: San Francisco Ferry Building interior (New)

Architecture as a creative process exists through the living history. Buildings go through many different changes as they adopt different styles and modifications, especially by changing of functions. The history of any type of architecture

incorporates the memories related to that structure. New human events comprised of people, activities, and physical settings advance new spatial behaviour, which mandates modifications of form. This necessitates the issue of studying the transformation of architecture.

According to Aldo Rossi as he expressed in his book The Architecture of the City, the permanency or persistence of any structure is achieved through transformation, as described below:

“Permanence of any structure is determined not only by space but also by time, topography and form, as well as by having been the site of a succession of both ancient and recent events. It accommodates a series of events and it also in itself constitutes an event. Its singularity is recognizable in signs that come to mark the occurrence of these events. Architecture gives form to the singularity of place, and it is in this specific form that it persists through many changes, particularly transformation of functions.”²

So, the permanence of any structure or form is related to its transformation, representing the living process which is creating history of different events and time. The form of architecture itself does not only represent its individuality but also a record of events and collective memories. As Rossi says, “History exists so long as an object is in use that means so long as a form relates to its original function. However when form and functions are served and only form remains vital, history shifts into the realm of memory. Where history ends, memory begins, the singular form not only signifies its own individuality, but at the same time it is also a sign, a record of events that are part of collective memory. History comes to be known

through the relationship between a collective memory of events, singularity of place and the sign of the place as expressed in form. “

Historic buildings and heritage structures are similar symbols of the past. They portray records of human events and embody collective memories of places.

Cultural heritage is something that is handed down by the past in each culture, and therefore to the whole of mankind. The cultural heritage gives a particular place its recognizable features and, at the same time, stores human experiences over that period of time. It lives through the process of being the succession of events of the past and projects the potential events of the future through its transformation. Thus, the transformation of form is a sign of the current events. In order to explain a historic artefact, one is forced to look at it beyond the present day scenario. Indeed, the form itself is able to show the changes of a place by indicating the way its past evolved into the present, which holds the promise of change for the future as well. This is not just the form of the past that is experienced; rather the transformation makes the form living and brings life to the place. Thus, the heritage buildings, instead of being frozen in time to preserve their historic or cultural value, should go through transformations to re-enter the stage, where the rituals and the artefacts come together in a new way. Eventually, they become part of the living process that creates history.

3.1 Concept of Permanence in Monumentality

“Past is something that we experience in present time unlike future and that is what makes things persistence over time. Rossi says, the difference

between the past and the future from the point of view of the theory of knowledge, in large measure reflects the fact that the past is partly being experienced now, and this may be the meaning to give permanencies; they are the past that we are still experiencing.”³

Permanence presents two varying aspects. It can be considered as a propelling element that serves to bring the past into the present, by providing a past that can still be experienced. On the other hand, it can be a pathological element which persists just as a memory of the past. To find out the distinction between the permanent propelling elements and those that are pathological, the example of ‘Palazzo Della Ragione in Padua’ can be used. As Rossi articulates “permanence” by virtue of its role in the context and urban condition that “not only one can still experience the form of the past in the monument but that the physical form of the past has assumed different functions and has continued to function, conditioning the urban area in which it stands and continuing to constitute an important urban focus.” Since the historic building is still in use despite being a work of art, it “still functions at ground level as a retail market. This proves its vitality.”

Fig 5: Palazzo Della Ragione, Padua, Italy

Fig 6: Palazzo Della Ragione, Padua, Italy

Fig 7: Palazzo Della Ragione, Padua, Italy. Ground floor plan as it has existed since 1425

An example of pathological permanence can be seen in the Alhambra in Granada. Although it no longer houses either Moorish or Castilian Kings, if one accepted functionalist classifications, one would have to say that this building once represented the major functions of Granada.

Fig 8: Exterior, column and arch details, Alhambra in Granada

Fig 9: Courtyard facade overview and reflection, Alhambra in Granada

Fig 10: Exterior wall, tower, Alhambra in Granada

In both examples above, one's experience of the form of the past is quite different. At Pauda, this form has assumed a unique function but it is still intimately tied to the city. Also, it has been modified and has further potentiality for future modifications. But in the second, it stands virtually isolated in the city, with nothing being added to it. It constitutes, in fact, an experience so essential that it cannot be modified. The

Alhambra at Granada is an example of one such part of a city that functions as a museum piece. This building is just a skeleton of existence. It is like a museum piece similar to an embalmed body -- a memory that portays the appearance of being alive. But, in the case of the Palazzo Della Ragione in Pauda, it tends to synchronize with the process of urbanization, because it is not defined by an original and previous function, or by context. It has survived physically because of its form that has remained intact – one which is able to accommodate different functions overtime.

3.2 Concept of Permanence in Memorials

Musee Archeologique Pointe-a-Calliere, by Dan Hanganu, was the winner of the 1993 Prix d' excellence en architecture of the Ordre des architectes du Quebec and 1994 Governor General's Award. In this project Dan Hanganu embodied the layers of history and memories in built form. The archaeological research, started in 1989, revealed artefacts buried before 1942. One after the other, different buildings have been built, demolished, the new ones have been built on top of the previous foundations, as described as follows:

“Hanganu took the inspiration from the vestiges of five centuries of human settlement inscribed on this wedge of land that was the original site of Montreal, he has created a building that captures and reveals multiple layers of meanings. The building is respectful to the cityscape, responding to its historical context of that area and at the same time it represents the layers of memories of the past events. The building facades are designed to reflect the history of the settlement of that place through built form and use of material, as the south facade was inspired by the naval architecture and 19th century industrial buildings in the port and use of stone facing acknowledges the city's legacy of grey limestone, or 'piere grise' construction. The building also preserves the original stone structures of the Berthelet, Papineau and Royal insurance buildings built during the 17th,

18th and 19th centuries, respectively, and their foundations are preserved in the museum crypt where one encounters multiple layers of civilization unearthed in the graves of native peoples who first lived here, and the stone wall and floors of the first buildings.”⁴

If one goes back to Rossi's The Architecture of the City, he expresses that any place is a theatre of human events, which is not just representation but also a reality. It absorbs events and feelings, and every new event contains within it a memory of the past and potential changes of the future. The singularity of the place is recognizable in signs that come to mark the occurrence of these events. Architecture gives form to the place and, in this specific form, the place persists through many changes, particularly the transformation of functions. He used the example of the City of Split in Yugoslavia. He expresses that, the City of Split which grew up within the walls of Diocletian's place gave new uses and new meanings to unchangeable forms. Now, the forms of the City of Split not only signify its own individuality, but at the same time, it is a sign and record that are part of that collective that is urban history. History comes to be known through the relationship between a collective memory of events, the singularity of place and the sign of that place as expressed in form.

CHAPTER 4: DEFINING TRANSFORMATION

Through all the decades of change, numerous buildings have survived as the witnesses of the past history of nations. There are many buildings of the past which are still relatively sound, but no longer serve their original use as they are now sitting either abandoned or obfuscated. To preserve these buildings, transformation has been undertaken to adapt new uses to bring life into them. But the question remains about how best to accomplish this.

Transformation simply means undertaking change or make-over, and the transformation of old buildings can be of use or form. Sometimes, the use changes before enough evidence accumulates of the change of form. Also, the form can be modified to accommodate the new use or the changes of the original use. In both cases, buildings have to adjust with the changes they are going through. The old form has to merge with the new use or form. It has to meet today's needs and adjust with the ongoing culture. So, the transformation of heritage or historic buildings goes beyond just changes of use or form, since it includes a lot of challenges to make it fit for today's life in a continuity. They include adaptation, intervention and addition. The transformation of old buildings can be of use or form, or this can happen simultaneously. When the original use of a building ends, a new use is introduced and the building and its environment are adjusted to reflect the new use. But the skin remains unchanged. Similarly when some abandoned buildings adapt a new use, the form is changed or modified to fulfil the need of a new use pattern that further

leads to the transformation of the physical form of the existing building. It may include the addition of new forms or demolitions or even major modifications of the existing physical form of the building. For any type of transformation, it can be either successful or a struggle. In an interview with Julian Smith, one of the heritage restoration architects in Ottawa, he pointed out that, for the transformation of old buildings, the strengths of the original form are taken advantage of and are used carefully to build a new reality that could bring out a successful transformation. If the weaker points are taken in disregard of the strong parts, this can become an exhausting process both for the architect or the builders. That is certainly not desired either for the building or for the new use of the building. It is thus very important to understand the relation between the form and the use and their values before going for any intervention either as a functional make-over or other physical changes.

4.1: Defining Functionality

The first thing for the transformation of any heritage building is to find a suitable use. While interviewing Barry Padolsky, one of the renowned heritage restoration architects in Ottawa, he said, “If the objective is to promote continued relevance – for heritage buildings, we have to find out the cultural values and aesthetic values, then finding a viable use with the original use of the building which means finding a use that suits the heritage structure. It is difficult but it is the key element. If we wish to preserve a building but we cannot find a good use for it, then we loose the battle.” When the form and the use have a strong compatibility, buildings tend to have a positive sense that people can relate to through the use and form.

The structure of the building is a major strength and represents the most permanent thing in any building. Indeed, appearance is mutable and changes according to fashion. Structure thus usually does not change in many years and can be even expensive to change.

“The foundation and load bearing elements are the building and the structural ranges from 30 to 300 years. Sometimes it is sound and sometimes it is not. If the structure is in good shape, the building has potentials for reuse and remodelling. Structure persists and dominates. In Santa Fe’s old State Capitol building, the original structure defined the remodelling possibilities – even with radical changes of skin, footprint, volume and interior design.”¹

Fig 11: Santa Fe's old State Capitol building (Before)

Fig 12: Santa Fe's old State Capitol building (After)

Understanding a building is essential for a successful transformation. If the building’s authenticity and integrity is understood properly, and then implemented into the new use pattern, these can contribute to a successful transformation. For example, the hierarchy of spaces, if the organization is properly understood, will help to find the compatibility between the use and form. It is important to identify how and why the building was organized in a particular fashion. This will help to organize the new hierarchy for the new uses, such as the creation of private, semi-private and public spaces. The same spaces can represent different uses but the essence will be somewhat similar. This will help people understand the logic of the old organization,

even with a new use. Understanding the organizational logic of the old from the new spaces is important. Any contemporary intervention can reinforce patterns and interpret them in a new way via contemporary design.

Craftsmanship is a major issue in historic buildings. Detailing and craftsmanship survive even after the original use is lost. It is essential to understand the original relationship between the detailing and how it was integrated into the building form. “19th century building detail and material are very difficult to replicate but in the long run if only the aesthetic remnant is taken and incorporated without understanding why they were done in that way, it may not give a satisfying result”. Such as many buildings have a level of detailing that responds to the sequence of arrival, the way that circulation pattern works and the way that the uses were developed. A building has certain logic in the way it was built and, if that can be understood and readapted into the transformation, the transformation can be a success, but if the logic is not properly understood and, if only some pieces are taken for aesthetic purposes and put into the new transformation that makes for an arbitrary project. How the building is approached, from the transformational point of view, and how the uses are organized from hierarchical point of view in a use that evolves over time even though the patterns of use are different.

Ottawa's Wallis House is situated on Rideau Street. This 19th century remarkable complex was built in 1873 and was initially the Carleton County Protestant General Hospital. Ottawa architect and engineer Robert Surtess designed the original

building as a three and a half storey brick structure, laid out on a T- plan with a wing at the rear. A wing was added later to expand the hospital designed by Montreal architect Alexander Hutchison in the Queen Anne Revival style. This building has subsequently served as the headquarters for the women's Royal Naval Services and a recruiting centre during the Korean War. In the late 1990s, Small-Wood of Andrex holdings bought the property from the federal government and since then, it has been transformed into loft condominiums.

The design of the units is very different from the original building with a completely different form and an envelope of different layers. So, there is a creative juxtaposition between the 19th century building and the late 20th century transformation.

“Entering through the oversized double sized double doors of Wallis House in Ottawa’s downtown core is like entering a time tunnel that immediately deposits anyone into the last century. The expansive corridors around the width of most principal room found today, ceiling heights that make one feel no less than Lilliputian and now extinct lathe and plaster walls – presently in the process of being removed, exposing the brick beneath. One can almost feel the ghostly presence of a proud structure fighting for its rightful place in today’s world.”²

Fig 13: Ottawa's Wallis House before (as hospital)

Fig 14: Ottawa's Wallis House before (as hospital)

Fig 15: Ottawa's Wallis House (after as condominium)

The building has many strengths including its structure, character, and others such as a long lost 19th century craftsmanship. Considering all these, the challenge consisted of the question about whether it is possible to restore it for today's market and what future response.

Two nationally renowned architectural firms were involved in this project including Vancouver based Paul Merrick, an expert in loft spaces of urban areas, and Julian Smith, one of Canada's foremost heritage restoration architects. The major concern of the project was on deciding upon the concept of Wallis House for the 90's. One of the challenges was to deal with the wide corridor which, treated carefully, could bring excitement to the interior space. The advantage of the wide corridor space (10' in width) has been taken to create a pleasant transition from the hallways to the inside of the units. Elements have also been introduced to create shared space.

Fig 16: Wallis House Corridor, sketch by Julian Smith

A streetscape has been created in the hallways, with doorway porches, benches and flower boxes, which have made excellent use of the corridor's size and showed them off to an advantage. At the same time, this approach was respectful to the original architecture of the building.

"The loft concept is more flexible for people to work in their living space according to their own individual taste and requirements. The units range from cosy 500 sqft to more than 1700 sqft. The purchasers are offered to choose from two groups of interior designer – Urban Keios and 2H Interior Design to work with, in implementing the layout and design of individual suites, as it was challenging job to bring in every ones own personal vision into an unconventional space like the given historical environment. Again the challenge was adapting building from 1870s and make it work in 1990s." ³

Fig 17

Fig 18

Fig 19

Fig 20

Fig 17-20: Wallis House interior after renovation

This transformation was challenging in many ways. One of the essential considerations was to make the building meet today's building codes, and maintain requirements for things that did not exist or were not a concern over a hundred years ago. As Smallwood said, "Nowadays, you have fire safety, accessibility, heating, cooling – and it goes on and on. All of these things are now requirements and they all have to be integrated into the building." The Wallis House had a lot of potential to adapt to a new use. According to Julian Smith the Wallis House was designed like a very large mansion instead of a typical institution both in exterior and interior.

The Wallis House offered a sophisticated ventilation system for its time, while the high ceilings allowed for more air circulation and did away with any feelings of claustrophobia. Since glass was more affordable, the general trend for larger windows and the building's huge windows let in a lot of light, which was considered important in the healing process at the time. All these features had a positive impact on introducing a residential use for the Wallis House. Again the Wallis House is a good example of the Victorian attitudes toward residential design, expressed in an

institutional building. Smith points out certain features, such as the exterior detailing of heavily bracketed cornice, which reflects high end residential design, the carved stone work in the gable, and the workmanship of that time which is now long gone represented by the patterned brick work. The unusual features existed in the Wallis House, such as the grand staircase and repeated ceiling height from the ground level to the third floor averaging 14ft, intended toward an unusual solution, and a social need for lofts that was perfect for the acceptance of the Wallis House for its new use as loft condominiums. (Resource: Julian Smith and Associates, Architects)

With the proper understanding of the logic of the building and utilizing every feature positively to reflect the new use pattern, the building was made to work and at the same time it is respectful to the existing heritage characters and values of the building. This also addressed the need to respond to the ongoing culture which is reflected in the unit designs that are contemporary in terms of the use of material and design. Through this transformation, Wallis House is still a living entity and, this way, it will be around for another generation.

4.2: Transformation of Idea of Form

Transformation in a larger scale, includes transformation of the whole as well as the context of the building. It may involve a large extension or the tearing down a part of a building and rebuilding something entirely different, involving huge transformations of form. In such case, many memories of the original building can be lost, but what is left is the intrinsic value of materials and evidence that is of cultural interest, then,

the building starts a new memory that operates in a different scale. The transformation of form of any historic building involves a proper understanding of the logic of the existing building, which includes the idea of form, material usage, and cultural and historic values. Any addition or extension or any type of alteration needs to be justified within the existing structure. It is also important to be respectful to the heritage or historic characters and values of the existing building, while using new material, colour or dealing with the proportion for any new addition or alteration. It may involve the use of contemporary materials and styles but everything needs to be rational and logical, so that it does not hamper the integrity of the existing while and at the same time, remaining acceptable for the contemporary society.

Looking back on the history of restoration, the purpose of adding of new elements to an existing historic building was to protect the building from future damage and strengthen its existing structural condition. This involved the addition of new elements or even the demolition of some parts. The intention remains to achieve structural stability and unity of architecture. There was conflict among the practitioners in terms of the concept of restoration at the beginning. One group wanted to preserve the remains as they were. According to their consideration, historic buildings are witnesses and their documentary evidence needs to be conserved intact and authentic without falsification. But others, on the other hand, considered historic buildings, especially those that are still in use, not only as historic monuments, but associated their uninterrupted traditions with these great works of art.

“There arises the question of traditional continuity. JJ. Bourasse – correspondent of the *Comites historiques* in Tours said that some ancient monuments like ‘Roman monuments’ which were part of a distant civilization – ‘a closed chapter’ in history – should be preserved in their present state as a document or as a fragment of a document.”⁴

But he also expressed ideas for buildings that still house such uses like Christian Churches. They are the living traditions and humans’ responsibility is to take care of these, and make sure that they are functioning as a part of the society. For the type of buildings which are still in use, the aim of restoration comes to the protection of the building, as well as the completion of the artistic idea with respect to documentary evidence. And thus, it establishes a method for transformation of form. As structure of the building was a concern, it was important not to repeat the same errors. Additions to improve the defective original structure are justified to be kept. But any addition, which makes the original structure weaker without having any other merits, should be avoided and is justifiable to restore the building to its original unity. It is important for restoration to know when it needs to be renewed, and the new work should respect the original form.

Recreation of architectural unity was also a concern for any additions or alterations to an existing building. The use of modern building materials and new additions to historic buildings had been treated with caution in the early days. This was initiated to re-establish the original structural system and, in principle, this was to be done with material similar to the original.

Since Carlo Scarpa (1906 – 78) was born in Venice, most of his work was in the city and in the surrounding region. And his work acquired a particular resonance for many late 20th century practitioners of transformation. Scarpa always preferred adding to an existing building, rather than designing new structures. Scarpa refused to design in a past style and his work is a constant dialogue with the history.

Scarpa's reconstruction of the Castelvecchio at Verona (1956 -64), is one of his best museum projects. It avoids the influence of an earlier historical restoration done in the 1920s, when the fortress first became a museum. At that time, the emphasis was on conversion. Scarpa wished to transform the building, and, with it, the visitors encountered the works of art it contained.

Fig 21

Fig 22

Fig 23

Fig 21-23: Museum of Castelvecchio at Verona (1956 -64), exterior and interior views

He juxtaposed old work with the new, using an extraordinary palette of materials, including concrete, stone, steel, bronze, timber and plaster. Scarpa also capitalized in the great variety of spaces within the Castello, regarding the proper use of natural light as a prime ingredient for the display of objects.

In his work, Scarpa prefigures a shift in approach to the new and old while also referencing the past. The old and the new have been integrated well while simultaneously being respectful of each other. Transformation of form has become more of a physical approach for transformation rather than just involving preservation or restoration. This is a more architectural approach, rather than a sentimental or historicist one, to creating new forms out of old fabric.

4.3 Transformation Beyond Form and Function

The recognition that reuse was a different issue from repair and restoration, opened the way for transformation to be integrated into the art of architecture. Adventurous additions and transformations reflect the understanding of what old buildings mean, instead of what they look like. As well, they make unique statements that address the demands of contemporary society. This transformation acknowledges the authenticity of old buildings. Transformations, as additions or changes, reflect new possibilities and the use the old buildings to see what is to be confronted. They welcome the dynamic of the future and address the lessons of the past. New structure respects the old architecture by acknowledging its positive strengths and interests. It invites old buildings to continue with the evolving challenge of architecture. Above all, they recognize the value of the old and new, both of modernity and tradition.

CHAPTER 5: PRACTICE OF TRANSFORMATION IN CANADIAN CONTEMPORARY ARCHITECTURE

5.1 Canadian Consciousness Regarding Heritage Buildings and Transformation

Canada is a fairly new country with a small portion of Canada starting in the sixteenth century. Since the first emigrants came from overseas, the nation started to build and grow, by creating a history, establishing an identity, and giving Canadians a distinct heritage and unique characteristics.

After the WWII, there was a desperate need for industrial expansion, new family housing, business enterprises and a demand to catch up. There was new construction to meet the demands for new buildings. At the beginning, it did not have any impact on older buildings, as there was still a lot of land available, so there was no need to destroy older buildings. But with the increasing pressure of the expansion of the city in business, industry and housing, massive demolition began either for urban renewal schemes, or major residential or commercial developments. Gradually, people started to realize that technology was destroying their familiar environments and the valuable elements of their communities. Older buildings were levelled to make way for monotonous office towers, and sterile high-rise apartments, built without any imagination in design or any thought for environmental repercussions. Also little consideration was given to those who were pushed aside or forced out of the demolished 'Urban Village'. However, people evolved a consciousness that this "progress" of the 1950s was going out of

control. They started to be concerned about the pleasure and safety of cities, and about desperate need for land vs. conservation of single buildings or entire neighbourhoods.

Another reason for this situation of lost heritage, as Ann Falkner mentioned in Without Our Past is people's negative views about preserving heritage. Being a young country, the common people's judgement to some extent is not mature enough yet pertaining to preservation, as compared to other ancient countries. But the concern arose that, if all that comprises the past was demolished, the history will be lost. So, bold steps need to be taken. The present and future are built on history, tradition and culture. It is important to protect and save Canadian history before these critical elements are totally lost.

5.2 Case Studies

5.2.1 Ottawa Teachers' College / Ottawa Carleton Centre Heritage Building

Ottawa Carleton Centre Heritage Building located on 195 Elgin Street was formerly the Ottawa's Teachers' College, built in 1875. It was the second such institution of its type established in Ontario and is the oldest one still standing today. The college was built in three phases, which were referred to as Normal School, Model School and Assembly Hall Wing. The Federal Government took over the college in 1939, the beginning of WWII, to establish wartime office space. It was reopened as a college in 1948 and closed in 1974, as the functions transformed to the University of Ottawa faculty of education. This

1987 to become a part of Regional Headquarters. The restoration and renovation of the building started in early 1988 allowed it to be, renamed as a Heritage Building. This building officially reopened with Regional Headquarters in May 1990.

Fig 24: Aerial view of Ottawa Teacher's College

Fig 25: Ottawa Teacher's college site plan (Source: Moriyama & Teshima architects)

The Ottawa Normal School was opened in October 1875. Its prime objective was to widen the opportunities in this province for the training of teachers. The name, Normal School, was replaced by Teachers' College in 1953. The Normal School, designed by Walter Reginald Strickland, was built on a four acre of site on the By Estate. This property was purchased by a committee of the Ottawa City Council from Robert Hardy for \$16,000. James Marther, an Ottawa architect supervised this construction by J. Forin, a Belleville contractor. The work was completed for the official opening on September 22nd, 1875. (Source: City of Ottawa Archives)

Fig 26: Ottawa Teacher's College 1961-62 (University of Ottawa Archive)

Fig 27: Ottawa Teacher's College 1961-62 (University of Ottawa Archive)

The construction of the Model School, built directly behind the Normal School, started in July 1879. It was designed by Kivas Tully, chief architect and engineer for the Ontario Department of Public Works. (Taylor 1975) The classes in the model school began in September 1880. ("The Model School" 1880) In 1882, the Normal and Model School were joined at both floor levels with an enclosure. The Assembly Hall wing, also designed by the Ontario Department of Public Works, was constructed during the years of 1891-92. During that time there was an addition to the boiler house and improvements were made to the heating system. Both the assembly Hall wing and the Model School were built in the same style as the Normal School. (Resource: City of Ottawa Archive)

Fig 28: Ottawa Teacher's College, roof plan

The two story building' in a 'T' form, complete with cupola like bell towers was constructed from rough hewn limestone. The cap of the 'T' which was the home of the teachers in training ran north to south along Elgin Street. The other part of the 'T' was the 'Model School' along the east west direction and which was adjacent to the Lisgar street.

There were separate entrances for the boys and girls, as well as for teachers and staff. In fact, the entire institution was divided by gender, with male teachers on one side and female teachers on the other. Beneath the foyer entrance, and down a flight of stairs were the lockers, wash basins and toilets. The south side was for boys and the north side for girls. In addition to all of the girls classrooms on the ground floor, the Kindergarten and Girls Home Economics rooms were at the east end, beneath the assembly room of the floor above. Along the corridor was the boy's manual training room. The boy's classrooms were on the upper floor with the Principal's office in the west end. The art class room and vice-principal's room was on the opposite side of the long corridor.

Fig 29: Ottawa Teacher's College gymnasium 1961-62

Fig 30: Ottawa Teacher's College classroom 1961-62

There were three play/recreation areas two of which were paved and located adjacent to the north and south side of the school. These two were used by the boys and the girls separately.

GROUND FLOOR PLAN

Fig 31: Ottawa Teacher's College original (Ground floor plan)

Fig 32: Ottawa Teacher's College original (2nd floor plan)

The building was designed in an eclectic Victorian spirit, with pointed Gothic and semi-circular Italianate windows, Romanesque columns and a second Empire roof. Rock-faced, grey Gloucester lime stone was used to build the entire complex including the low stone fence and posts. Later, the additions were built with the same design the as 1874 structure, except for some new features, such as stone light wells to illuminate basement rooms, a glassed –in sun porch along the north wall of the 1879 addition, and open timber porticos on the north and south walls of the 1892 -92 addition.

The oldest section still holds various sculptured details hanging from the drip stones. The pro-British bias of the period is apparent, as over the main entrance, there are roses, thistles and shamrocks at the bottom of the drip stone. On the upper left - hand side of the main façade, two bearded faces look down from the bottom of a drip stone, as described:

“A crowned bearded figure and a lion’s face look down from a drip stone on the upper right – hand side on the main façade, as a reminder of the security many Canadians felt as part of the British Empire. On the south façade of the front section, an owl and a child’s face look down from the drip stone, as a symbol of a knowledge and education.” ¹

Fig 33: Ottawa Teacher's College, entrance detail

Fig 34: Ottawa Teacher's College, entrance detail

Transformation:

Today when approached from Elgin Street, the entrance of the heritage building is the main receiving area for the Mayor where he welcomes members of the diplomatic corps, other dignitaries, such as royalty and celebrities when they visit City Hall. On the right hand side is the City Clerk's office, and the left hand side consists of the Elections and Policy office of the Secretariat Service Branch.

Fig 35: Ottawa Teacher's College, (Mayor's office), proposed floor plan. (Source: Moriyama & Teshima)

On the second floor, the Champlain room was built in 1892, and is the last addition to the college. In the last years of the college, a stage stretched across the front of the room, now used by the City of Ottawa Council Committees. The room is a public Gallery with public forum to speak and voice opinions. Also the assembly hall is now a hearing room.

Fig 36: Ottawa Teacher's College, (Mayor's office), current ground floor plan

Fig 37: Ottawa Teacher's College, (Mayor's office), 2nd floor plan

Fig 38: Ottawa Teacher's College,
(Mayor's office), interior

Fig 39: Ottawa Teacher's College,
conference room interior

For the renovation, stairways, treads balustrades, plaster walls, baseboards, trim, transoms and windows in corridor and stairways, window frames, metal ceilings, skylights, and doors have been saved and restored. A structural arched wall was stripped of plaster and exposed as a reminder of the past. Structural analysis was implemented to determine that the existing building met building code requirements for earthquake loading. (Source – Moriyama & Teshima Architects)

Fig 40: Ottawa Teacher's College, (Mayor's office),
showing the original brick wall

Because of the fact that the Teacher's College primarily provides for offices and meeting rooms, the original building's, generously proportioned rooms had to be

subdivided. Historically, the rooms of the Teachers' College had been painted in three colors: a light color for the ceiling, a tinted color for the walls, and a darker color for the baseboards and trim. The predominant colors were green, ochre, earth red and white, which represent the Teachers' College's three original building phases. The green is for the original 1875 structure, ochre for the 1880 addition, and earth red for the 1892 addition. All new partitions have been painted white with steel grey trim. These same colors were used for the linoleum floors (chosen for its popularity at the turn of the century). Patterned with earth red stepping stones, ribbons of green and ochre, and sweeping black curves, the flooring creates a sense of movement and arrival. Outside, the mortar was replaced, foundation walls were re-pointed and re-grouted and the building's exterior was entirely re pointed. Newly slated were installed with decorative banding to match the original patterns.

Fig 41: Exterior of Ottawa Teacher's College

Fig 42: Exterior of Ottawa Teacher's College

No attempt was made to integrate the new and old, rather, the distinction was clearly expressed. For example, intermediate ceilings that were required to hide new mechanical ducts and electrical services, were cut around existing windows, leaving them uninterrupted. (Resource – Moriyama & Teshima Architects)

The Heritage Building (former Ottawa Teachers' College) is a national historic building, with the building itself being an artifact. In this case, saving the building's documentary value is important, as the material value is one important issue needed to be considered for conservation. Its restoration is required that the building be returned to good health and full use while maintaining as much of the existing fabric as possible, so, as to preserve its sense of age and authenticity. Preserving authenticity also implies respecting the design values of the past and maintaining the distinction between the contributions of different generations. Another challenge has been the establishment of contemporary uses for the building and to make the building fit for that contemporary use. That has been done successfully by the design scheme and the use of contemporary material for the office interior of the 20th century, which is respectful to the heritage character and does not have any impact over the integrity of the building. At the same time, the architectural planning of interior spaces has taken the positive strengths of the building as its original use pattern is reflected in the contemporary use pattern. The authenticity of the building is complimented by the positive use of the building's original circulation pattern, and hierarchy of spaces, which makes it fit the contemporary office use. Ottawa Teachers' College is a work of art and a glorious evidence of the past, which is still undergoing this transformation and will survive and serve generation after generation.

5.2.2: Canadian Centre for Architecture

The Canadian Centre for Architecture is a cultural institution founded in 1979 and located west of the centre of Montréal on rue Baile, between rue du Fort and rue Saint-Marc. The CCA is an international research centre and museum founded to generate public awareness of the role of architecture in society, and to promote scholarly research in the field. Over 30 years ago, architect Phyllis Lambert began a collection which would become the cornerstone of CCA. Today, the CCA collection, comprising of works dating from the Renaissance to present day, documents the culture of architecture throughout the world and the past, present and future. The collection consists of a wide range of master drawings, prints, photographs, library volumes and important architectural archives. The CCA building is located on the western edge of Montreal's downtown, comprising a 130,000 square-foot structure which is a half underground. It shares the site of the historic Shaughnessy House built in 1874, which was designed by William T. Thomas. The new building was integrated with the Shaughnessy House in 1989, and was designed by Peter Rose Architect with the help of consulting architect Phyllis Lambert, and associate architect Erol Argun.

The conservation and restoration of the Shaughnessy House were completed under the supervision of Denis-Saint-Louis. With the conservatory and reception rooms, this historic building is one of Montreal's rare houses open to public. The CCA building accommodates vaults on two underground levels. On the ground level there are offices and conservation studios, and on the piano nobile, major public facilities

include exhibition galleries, an auditorium, and bookshop. A library and the study centre are also on this level. The existing structure, the Shaughnessy House has been restored and accommodates reception rooms, restaurants and executive offices. The site bounds the original 1874 structure on Rene-Leveque Boulevard, which is balanced on either side by a pavilion, one housing the scholars' wing and the other the auditorium. This strategy reflects the rhythm and character of the street. Also, an environmental park designed by Melvin Charney, being built across the street, incorporates a mock Shaughnessy "ruin".

Fig 43: Aerial view of Canadian Centre for Architecture

Fig 44: Canadian Centre for Architecture site plan

Shaughnessy House:

Although it appears as a single dwelling to the public, the Shaughnessy house is actually a double house, designed by William T. Thomas in 1874, evoking an era, when grand homes set in elaborate gardens, lined today's Boulevard Rene-Levesque. In 1973, the Historic Sites and Monuments Board of Canada declared it to be of national historical and architectural significance. It was then designated as an historic monument by the Ministere du Quebec in 1974. Currently it is part of the complex of the Canadian Centre for Architecture.

The Shaughnessy House was originally built as a double dwelling, capped by an ornate mansard roof with ornamental iron cresting. It is the work of Montreal's grey stone construction and exemplifies the impact of the French Second Empire architectural practice on the architectural traditions of the region. It has served as a private residence and as an institution but throughout its alterations, it has retained the essence of its original character. (Resource: J. Gerald Valiquette, CCA)

Fig 45: Shaughnessy House, old

Throughout the additions and renovations of the Shaughnessy House, the effect on the west house has been very little. The west house was owned by Duncan McIntyre and the east one by Robert Brown. In 1888, Donald Smith and later Lord Strathcona had purchased it as a guest house. After a year, he built his own residence in the adjoining lot to the west. Later, in 1890, a smoking room with mahogany walls and ceiling paneling and a glass and cast-iron conservatory, were added to the house. In 1901, these were connected to the adjoining conservatory of the Strathcona house. Thomas G. Shaughnessy purchased the east house in 1892, and lived there until 1923. There were additions of rooms and modifications over the years, which included additions and alterations by the prominent Montreal Architect Edward Maxwell. He was asked to add a two-story addition at the north of the entry, which

consisted of a billiard room with bedrooms above. Later there was an extension of the dining room by Edward Maxwell in 1897. In 1907, the addition of the library was done to the north of the earlier extension by David Spence of Finley and Spence.

Fig 46: Shaughnessy House, main floor plan showing changes 1886-1907

In 1945, two Shaughnessy Houses, were consolidated by the Sister of Service into one institutional building. At that time, the centre mitoyen wall was broken through to reorganize the spaces according to the owners' needs. So, the Shaughnessy House already had a complex history before it started to create a new history as part of the CCA.

Transformation:

The Canadian Centre for Architecture forms the shape of an E when seen from above, where the middle part is distinctive from the rest. This consists of the historical Shaughnessy House. The new building, which forms the shape of a C, symmetrically embraces this small scaled but more intricate piece. The geometrical organization of forms and the locking of the buildings into the ground bring out an impression that these forms have been together for years. The other face of the building, which is the straight edge of the E, forms an urban square. The other three sides of the open space are formed by the front of the consecutive town houses,

with the entire thing reflecting the nineteenth-century Montreal. Another part of the composition is the garden on the south which is a public and urban event. This is related to the CCA as a study centre, archive and museum of architecture, as well as neighborhood garden.

“The CCA building, classical in planning and overall formal expression and modern in detailing takes organizational cues from the Victorian structure it embraces. One of the major cues from the original structure is its duality: such as the existing structure houses two residences built as one structure, the Shaughnessy House has a party wall down its centre, and its façade is designed to express this. The Victorian building had symmetrical arrangement, two of everything, two entrances, two parlors, and so on—except it has one greenhouse on the west side.”²

The new structure is also arranged around a central ‘seam’, represented by a revealing in limestone exterior and a blind axis of columns and expansion joints within. Its major elements are balanced about the centre line. Also there are two similar but non-identical pavilions flanking the Shaughnessy House. On the entrance façade on the north, there are two major glazed openings, which are symmetrically disposed. One of these openings is the building entrance and the other one consists of library window. The new building has an off centre entry and a symmetrical façade which actually follows the pattern of the Shaughnessy House, which it lacks a central entrance. As Peter Rose states;

” The Shaughnessy House had a serious impact on the design of the entire building and site composition. The house has quirky qualities. It’s formal and symmetrical and rather grand in every respect. But at its centre lies a solid wall, a mitoyen wall; and it has not one but two entrances, one at each end. At first glance it looks like a mansion. At second glance you realize it’s pair of duplexes, two semidetached houses. The building seems to present two of everything and rarely lets you know which is the important one. The new building reflects the idea of solidity or structure at the centre and of bilateral symmetry – a frequent presentation of two of everything and a secondary presentation of the one which you should pay attention first. In the north

façade, the entrance and the library window work as a pair in that way, with the entrance dominating.”³

Fig 47: CCA building, north elevation

Fig 48: CCA building plan of the public level

“The centre line of the CCA composition is the most important element which has been originated from the property line. This is the bisection of the *cadastre* number 1630. This is the line on which the separation wall between the two houses were built and it has an impact on the new building since it gains an expression as a row of structural column. Three of these columns are freestanding and individually and hierarchically articulated, representing the progression from the Shaughnessy House link to the major galleries. This centre line breaks through the north façade which is visible as a vertical line in the stone cladding – a reflection, in Pete Ross’ words, of Shaughnessy House “zipper”. This centre line continues through the park to the north and the garden to the south, informing the landscape design.”⁴

Fig 49: Partial view of the south elevation at the Shaughnessy House

Fig 50: Partial view of the north elevation at the center line

Secondary symmetrically placed axes are located at the entrance court in the west, and at the library court in the east. Another pair of axes is located in the auditorium wing and the special gallery wing, which flank the Shaughnessy House. These axes are symmetrical on the north façade as each locates the centre window in the outer set of three, which defines the centre line of the major space in these areas.

Fig 51: Site of CCA including the CCA garden

There are two levels of collection storage and laboratory space which are below grade. The “System Control” level and the Curatorial are at grade level, and above the main floor where large-scaled public spaces are located. The new main floor level is determined by the primary room floor level of the Shaughnessy House and a heavy stone base, aligned with that of the mansion, which was established for the new building.

Lighting is brought into the interior space in many ways. For instance, the vertical top lighting (skylights) and horizontal side lighting are manipulated in such a way to provide a play of changing light throughout the day. The staircase axis, for example, is lighted at either end and from above, and the shifting diagonal shadows cast by the slim skylight structure enliven the space. The galleries’ skylights are designed to

provide filtered light inside, which change every moments. On the exterior, the cornice casts constantly varying shadows on the surface.

Fig 52: View of the entrance court of CCA building

The palette of materials used for the CCA building is very Canadian. The limestone reflect in the historic grey stone buildings of Montreal, the aluminum reflects the silver painted tin of traditional roofs in the city and, in the interior, maple, pinkish plays a contrast to the predominant grey.

“Looking back Lambert says she began to realize that she was determined to create a masonry building for the CCA, but “didn’t know how” in relation to the Shaughnessy House and thus kept pushing everything underground. At the same time she knew that a Montreal grey stone building is essential.”
5

The lime stone exterior is a veneer, but is laid up to resemble a load bearing condition. Aluminum is used for the windows, doors frame, the entrance pavilion and most interestingly in the cornice. The thoughtful use of stone and light expressively makes the Canadian Centre for Architecture distinctive of Montreal buildings, although its use of materials and metal work cannot be overlooked.

Fig 53: Partial view of the south elevation and scholar's wing with cornice under construction

Fig 54: One typical bay in the north elevation, CCA building

Fig 55: The scholar's wing showing the lime stone material and metal cornice

The restoration of the Shaughnessy House required specialized knowledge of restoration, since the intervention included the adaptation of new and elaborated functions. Thus, it required structural work, such as the reinforcement of structure to carry office loads, the addition of skylights and installation of new kitchens. It should be noted that major restoration work is artisanal, rather than industrial. The mahogany paneling of the Shaughnessy House, the banisters, paneled doors, wooden shutter and other decorative motifs were transported to workshops in Deschambault for refinishing, strengthening and replacement of parts as needed.

Fig 56: Wood frame for a Serlian dormer window, Shaughnessy House

Fig 57: Reception and dining rooms looking towards the entrance hall, Shaughnessy House

While working on a historic site, and undertaking any additions or changes to an old building, it is very important to understand the old, especially what it means rather than what it looks like. The new structure should be respectful to the old, by reflecting its positive aspects. Thus, the new elements can actually enrich and encourage the latter to continue with changes over time.

The Canadian Centre for Architecture building, with the new structure embracing the historic Shaughnessy House, reflects the influence of the Shaughnessy House in every part of its design. At the same time, it represents the traditions of Montreal in contemporary architecture. This is an example of how the new can enhance the old, especially when the old is authentic, persists with all its integrity and serves the requirement of contemporary needs with continuity. The CCA building is respectful to its context, by being inspired by the history and culture of the city. The building, as a work of architecture enhances the architectural quality of its neighborhood, while simultaneously fitting in. With commodity, firmness and beauty, the building is deeply embedded in its site and in the building traditions of Montreal. The new structure of the CCA building is respectful to the historic structure it surrounds. One can see the ghostly reflection of the Shaughnessy House in every aspect of the new design, such as its duality, symmetry, and use of materials, which reflects the traditional Montreal grey stone buildings. A reflection of the Shaughnessy House is also found in its layouts of structure and the organization of its spaces. This is a work that was inspired by the history and traditions of the city, starting with what exists and picking up clues from the city and its buildings. With this contemporary addition, the

Shaughnessy House entered into another phase of its history, but it still stands with all its integrity and authenticity, which will continue for centuries.

5.2.3: Victoria Memorial Museum Building, Ottawa

The Victoria Memorial Museum Building in Ottawa is located on McLeod Street. The distinctive Victoria Memorial Museum Building (VMMB) has been the home of the Canadian Museum of Nature (formerly the National Museum of Natural Sciences) since 1912. Over the many years since its construction, the VMMB has become a national monument and landmark in Ottawa, the nation's capital, as described below:

“The national Museum Corporation of Canada dates its origins to 1841, when Queen Victoria granted £1,500 for the establishment of the Geological and Natural History Survey of the Province of Canada, hereafter the survey. A museum to house the collections of survey results was set in a wing of survey office in Montreal, paid for in part by William Logan, the first director of the Survey.”⁶

When the museum moved to Ottawa, the collections were housed at the Clarendon Hotel on Sussex Street in Lower Town because there were no suitable quarters for the collections, although the area was highly prone to fires. Within five years, there was agitation to provide purpose-built, fire-proof accommodations where the collections could be properly displayed. In 1901, a supply motion was passed to begin the process of building the Victoria Memorial Museum. By June of 1911, parts of the building were ready for occupation. Eventually, the building opened through the year of 1912-13 as the public galleries were finished. The layout of the museum combined offices, laboratories and workshops for the staff of the museum in a

survey of the basement, third and fourth levels. The museum library, used by staff, occupied what is now the salon on third floor. Exhibitions were located on the first and second floors, including the central hall and tower hall, with access to the auditorium for public lectures. The National Gallery occupied the upper three floors of the East Wing, with a modest storage area in the basement.

“From 1916 to 1920, the building was appropriated by Parliament for use as the temporary legislature, while the new Centre Block was completed to replace the original, which was destroyed by fire on the night of February 3, 1916. The auditorium was prepared for the Commons, the exhibit halls were emptied, the delicate specimens “carefully wrapped, packed and taken away.”⁷

Fig 58: Victoria Memorial Museum Building, view of auditorium, House of Commons in session

“The Victoria Memorial Museum Building was to be demolished to make way for a new structure for which the designs were complete by 1964. The building survived this period of critical reassessment, and by 1966 the plan to rebuild was cancelled. Massive renovations to upgrade the display space and improve visitor services were undertaken in the late 1960’s to early 1970’s instead of demolition. In 1922, the Canadian Museum of Nature was authorized to occupy the entire building.”⁸

The Victoria Memorial Museum Building now stands as the first purpose built national museum. It has been home to several sections of the Museums Corporation in their early forms, and remains a vital part of the museum system. David Ewart was the chief architect who determined the architectural approach for the museum.

The plan of the museum is orderly and axial, anchored by a central entrance pavilion, which is the core of the building and comprises the tower, central hall and auditorium. The massing of the three pavilions, with connecting wings, is compact and symmetrical, typical of the Beaux-Arts style. The four storey Central Hall forms the core for the vertical circulation pattern. The area allows for access to the east and west halls and wings on each side, as well as the specialized spaces, the salon and the auditorium, on an axis with the entrance. All of the halls and wings are linked with tudor-arched openings, which allow for ease of circulation and highlight the transition from one area to another. The entrance pavilions formed by entrance tower and central hall, contains significant symbolic ornamentations which are aesthetic features that also reflect the purpose of the building. The stained glass of the entrance and tower depicts native flora and fauna, scientific and surveying instrument, and cultural attributes. Likewise, the patterns of the mosaic floor, a border incorporating oak leaves, and a large moose continue the nature theme. The central hall depends more on spatial character than ornament for its impact, but the use of native animals on the newel posts and as corbels at the skylight framing, speaks to the function of the building as a natural history museum.

Fig 59: Victoria Memorial Museum Building, : floor plan

The arrangement of space in the tower and central hall conveys a message to the visitor. From the exterior, the tower as it was built originally affords a presence and dignity suitable to the building for its function. Moving through the entrance and vestibule, up the steps and into the open, well-lit space of the central hall, the visitor experiences a figurative as well as literal elevation into the right frame of mind in order to be receptive to learning.

Fig 60: Victoria Memorial Museum Building,
view from entrance into central hall 1994

The exhibition halls are well lighted with natural light, with Skylight and light wells used to carry light down through the building as well. The fourth floor rooms are all lit by skylights, which suggest that they were always intended to be adaptable for workshops or exhibitions.

Fig 61: Victoria Memorial Museum Building,
original skylight locations in roof

By 1911, a crack was noticed at the tower, until it had reached to 13cm in 1914, and a decision was made to remove the tower. Other consequences of the shifting foundation include the heaving of the floors, the opening of joints in the walls, the differential settling of the foundations and the sagging of stairs. Over this period of time, the museum has gone through many such interventions. The exclusive materials of the building and craftsmanship contribute to its heritage values, which include its exterior stone walls, interior plaster work, bronze and metal work, marble, mosaic, tile and slate work as well as the stained glass.

Typical view of border, February 2000. HCP Roll 2, No. 8.

Fig 62: Victoria Memorial Museum Building.
Typical view of border

View of Newel Post c1970s. CIHB.

Fig 63: Victoria Memorial Museum Building.
View of the newel post

View of stained glass panels at main entry, February 2000.
HCP Roll 1, No. 1.

Fig 64: Victoria Memorial Museum Building.
View of the stained glass panels at main entry

Transformation: The Canadian Museum of Nature adopted a functional program in 2001, as the basis of the VMMB rehabilitation project, which includes emphasizing the museum's functional program in design, enhancing the visitor's experience with the building's improved circulation system as well as the exciting and coherent means of movement within the museum, bringing transparency in the image and identity of the museum to expose its attractions, respecting the heritage status of the VMMB, and creating a overall safe and healthy environment. (Resource: KPMB Architects) Three architecture firms are tackling the project in a joint venture, including Barry Padolsky Associate Inc. of Ottawa, Kuwabara, Payne, McKenna, Blumberg of Toronto and Gagnon, Letellier Cyr of Quebec City.

The Victoria Memorial Museum is considered the third most important heritage building in Canada, after the library of the Parliament and the Centre block. Based on the above consideration, the VMMB rehabilitation project has been designed as an adaptive reuse of the VMMB building, and the site as has been used heritage resource to establish a new platform and infrastructure for the successful continuation of the Canadian Museum of Nature for years to come. This includes the adaptive reuse of the heritage building by creating a strong new identity and transparency, enhancing the visitors' experiences, increasing revenue generation, enhancing site development and use and as well as many other issues. (Resource: KPMB Architects)

The VMMB, as a heritage building is often referred to as a castle. But, the building does not have a proper approach to its entrance in order to experience its exterior fabric. People, arriving by a car or bus, are dropped off or enter the building through the existing parking lot. Thus, this has been considered for the new design strategies of the project. The intention is to explore the possibilities within the building, and on the site, for visitors to experience and appreciate the exterior wall of the building up-close. This is to heighten the appreciation of architecture through the visceral, personal and close-up experience of material and details, experience of the form of the building , colours and surfaces of the stone, mortar joints, and windows, by enjoying the building as consisting of the overall heritage architecture. (Resource: KPMB Architects) To improve the visitor's experience, the surrounding area which is now the parking lot, has been designed to become a park with new landscaping, a waterfall, terrace, glass greenhouse as well as an outdoor amphitheatre.

Fig 65: Victoria Memorial Museum Building, proposed site plan (Source: KPMB Architects)

A particular approach has been taken to improve the building's public circulation system. The lantern has been introduced, which will be a glass tower of 33 meters in height and will sit on new foundation. There will be new butterfly stairs in the new

lantern addition, connecting the second, third and fourth floors to facilitate public access to the museum's upper floor levels. The introduction of this stair case will correct a deficiency in the original Beaux Arts plan of the building, which features a grand public stair only accessing the second floor. This stairway will also compensate for the removal of the existing staircase in the east and west hall, for more exhibition space. This new addition also completes the loops of movement along the existing walkways on the east and west sides of the Atrium. (Resource: KPMB Architects)

Fig 66: Victoria Memorial Museum Building, view of proposed Butterfly stairs (Source: KPMB Architects)

The addition of the lantern will also enhance the identity of the building, making it more transparent to the revealing of museum's attractions and programme. The lantern and the butterfly staircase provide interior spaces from which one can experience the building's exterior as part of the museum, alternating the viewing of exhibits with the appreciation of the northern façade of the museum. Visitors can also enjoy the exterior heritage walls without ever leaving the building. Consequently, going inside and outside will enhance the visitors' experience by

intensifying the perception and experience of the building and site, exhibits and grounds as well as the, museum and city. Transparency is achieved through the use of glass, enabling the movement of people and the display of artefacts within the lantern to be visible from the street. (Resource: KPMB Architects)

Fig 67: Victoria Memorial Museum Building, view of proposed lantern (Source: KPMB Architects)

As the original tower of the buildings was removed due to structural failure, the newly proposed lantern strongly restores the vertical accent in order to emphasize the museum entrance. The lantern is thus respectful to the original tower by using geometric proportions, glazing divisions and a crenulated profile in a contemporary glass form. This is like a contemporary gothic crown honouring the original plan.

Fig 68: Victoria Memorial Museum Building, view of proposed perspective view
(Source: KPMB Architects)

Along the argyle street, a water feature is introduced, which will become the face of the terrace. This water feature will enhance the existence of the building on Metcalfe Street, as it will become one of the main vehicular entrances from the Queensway into the downtown core. The water falls over a slightly sloped wall of black granite and rips over a diagonal grid of stainless steel cables that covers the stone surface. The result is a natural pattern of falling water with ever-changing white water effects. (Resource: KPMB Architects)

The Victoria Memorial Museum Building holds memories of different times and events. The latest transformation of the VMMB, which is still under construction, is a response to the needs of contemporary society. It is a sort of updating of the building, so that it fits and survives in the current 21st century. One of the interesting approaches in this transformation includes becoming inspired by history, like the restoring of the front tower with modern interpretations. The building itself is a work of art as the current transformation recognizes this fact and emphasizes the

experience of not only the exhibits but also the building itself, its material and details which show respect to the building and its heritage characters. Also, using classical proportions for the lantern and the recovery and rearranging of spaces to reflect the Beaux art character of the building, again show the consciousness of design, understanding of the building and respect of its authenticity and integrity.

CHAPTER 6: CONSERVATION PRACTICE IN BANGLADESH

6.1: The Bengal Delta

The plains of Indraprastha or the Lal Quila of Delhi, and the uniqueness of the eastern region, such as Vanga or Bangala were recognized by the “west” with a certain degree of apprehension, marked by a mixture of wonder and derision. The eastern region is largely a delta, a pure chemistry of land and water. The land was formed primarily by silt deposits, and is constantly shaped and reshaped by the river. These silts are perpetually shifting and changing. Thus, these features combine and give the land an amorphous nature, by characterizing region's climate, topography, ecology, and hydrology. In addition, the delta comprises now of Bangladesh and most of West Bengal. Bangladesh is located around the intersection of the 90°E Meridian and the tropic of cancer, approximately between 20°N and 27°N latitudes. Lying south of the Himalayas, it is a fertile extensive deltaic plain and its southern shore is washed by the Bay of Bengal. The soil is formed of old and new alluvium, carried by three of the mightiest rivers of Asia including the Ganges, Brahmaputra, and Meghna, together with their innumerable tributaries and distributaries. Bangladesh, in general, falls under the wet tropical monsoon climate characterized by high temperatures in summer, heavy rainfall during the monsoon seasons and a short winter.

6.2: Architecture of the Bengal

The architecture of Bengal is enriched with the influence of different social, cultural and political interventions at different periods of time. It represents the influx of

religion, and political power, For example, the Mughal emperor, British or colonial influence and the modernism all touched Bengal architecture. All these introduced different building types and styles in Bengal architecture. It is influenced by local culture, climate and social conditions, and thus formed its own unique character. An example is Bengal hut, which derived from pavilion structure and is the basis of Bengal's architectural ideas and concepts.

6.2.1: Early Monumental Architecture

The early monumental architecture of Bengal marks a moment of conscious creation, of metaphorical and symbolic construction. The earliest evidence of historical monumental architecture comes primarily from the Buddhist tradition and includes stupas, temples and monasteries. Travel accounts from around that period mention that the landscape was studded with stupas and temples, the remains of which now extend from Paharpur in the north, to Mainamati in the south-east. The 7th century bronze votive stupa found at Ashrafpur in Dhaka and the monastery of vihara-type, a unique combination of vihara and temple, are the earliest examples of monumental architecture in the Buddhist tradition.

6.2.2 Islam in Bengal

The arrival of the Turkish in the 13th century introduced a Turko-Persian culture to Bengal, and marked the beginning of the compelling influence of a totally new religious ethos, which was Islam. During the Sultani period, the Bengali environment was transformed into a collection of mosques and shrines. During the Sultani period,

the introduction of new building types were mosques, mazars and madrassas. The most important architectural phenomena during this period is the introduction of the mosque as the new building type, however, what is more significant is the development of a “Bengali” mosque type, the pavilion idea. This consists of singular, free standing volume, walls with real or suggested perforations, and a roof as a canopy similar to the village hut. The expressive quality of brick, which is often exposed, and the prolific use of terra-cotta, further strengthens their “localism”. Khania Dighi mosque of Nawabganj is one example of “Bengali” type mosque.

6.2.3: The Mughal Subah-e-Bangla

By 1596, the Mughal rule was consolidated all over Bengal, making it an eastern edge of the empire. The Mughals concentrated mostly on establishing an efficient imperial administrative system. Thus, the construction of forts, roads and *serais* was far more important than building memorable and awe-inspiring buildings, although there were a reasonable number of modest mosques, mausoleums, madrasas and other buildings built at this time. The Khwaja – i – Shahid complex in Burdwan (late 17th century), and the incomplete Lalbagh fort in Dhaka (1680s) are examples Mughal architecture. Formal gardens, pools, gateways and enclosures, and various buildings like mosques, tombs, madrasas, and sometimes pavilions in the water, as in the Khawaja Anwar-i-Shahid Complex, were organized in the characteristics of the Mughal axial relationship.

6.2.4: Bengal and Europe

In the late eighteenth century, British colonialism resulted in an overwhelming contact with European culture that eventually coincided with global modernization, dominated by themes of science, rationalism and technology. A complete overhaul of the social, cultural and urban systems was precipitated. New civic institutions were introduced along with the structure of a segregated dual city, including the European city and the “native city”. New economic and administrative structures naturally led to an unprecedented level of building activities, with a completely new range of building type such as office buildings, railway structures, bungalows, warehouses, hospitals, colleges etc. Religious buildings were also sites of Europeanization. The 19th century pair of temples at Sonarang, while continuing the traditional genre of plans, exhibit in their eclectic exuberance many European features such as Italianate arches, shuttered windows, Corinthian capitals, sharp dentils and cornices, fanlights, even a clock, all rendered as decorative relief in plaster. Temples were influenced by church spires when they were not adopting other unconventional shapes, such as a particularly the remarkable arrangement in the now destroyed 11-spired temple at Rajnagar.

6.2.5: Bengali Modernism

The modern period, which included both the political movement for the independence of the sub-continental nations, and the increasing influence of international modernist ideology and Bengal's relation with the “modern project”, the social vision of recreating the world anew, is quite intensive.

Two architectural phenomena stand out as seminal expressions of the Bengali modern period, including the pioneering work of Muzharul Islam and the powerful creations of the American architect Louis I. Kahn. Muzharul Islam single handedly established a modern architectural culture in the country. A modernist and essentialist language was practiced purposefully to announce a new promising vision, away from the stigmatized colonial forms or hybrid concoctions. His art college and public library, both built in 1953, achieved an iconic status where the lessons of European modernism were mediated and manipulated by “localism” (sthaniyata), the rationale of place and climate. Louis Kahn’s Capital Complex project has since been considered one of the most astounding groups of buildings of the twentieth century. The architecture of the Assembly the crown of the group, evokes many traditions, harkening, it may seem, to a kind of archetypal paradigm. Kahn’s architecture effectively suggested that sthanyata and modernism are compatible programmatically and symbolically, the assembly houses the highest institution of the country. Indeed, architecturally, it is a thoughtful essay on building in the delta. While Khan’s modernist iconography, including the clean, crisp geometries, climate control devices and brutalist surfaces, offered a whole new architectural language in Bangladesh, his work also showed, in response to the landscape, how beautiful shadows could become, how buildings, gardens, lakes could form an invisible unity, how brick could again form a renewed idiom, and how the age-old but straightforward deltaic practice of “dig and mound” could generate a modern expression.

(Source: Haque S (ed), Ahsan R (ed), Ashraf K.K (ed) Purdranagar to Sherebangla Nagar Architecture in Bangladesh Dhaka, Chetana Sthapatya Unnoyon Soceity: 1997)

6.3: Transformation and Heritage Conservation in Bangladesh

A little conservation work was done in Bangladesh so far on the government's initiative, consisting of the Archaeology Department (Ministry of Culture) or the department of Architecture (Department of Culture). A few buildings, which have gone through some transformations, have been conserved and renovated for the purpose of protecting them and saving cultural heritage. However, the major concern is the maintenance and repair of the buildings rather than a heritage, considered transformation. The following examples have been taken from the project completed by Shah Alam Zahiruddin, a former lecturer at the school of Architecture, at Bangladesh University of Engineering and Technology.

6.3.1: Ahsan Manjil

One such heritage building is Ahsan Manjil at Dhaka. Situated on the bank of the Buriganga river near Wiseghat, this monument was originally built in 1872 by Nawab Abdul Ghani and was named after his son, Nawab Ahsanullah Bahadur. The building was heavily damaged in the great tornado of 1888 but was later reconstructed completely with substantial alterations to its original appearance. This two storied grand palace, with a broad picturesque river-front, stands on a high podium, of which the central part is crowned by a lofty dome. An imposing flight of steps, from the riverside, leads directly to the prominently projecting grand triple-arched portal of the second storey. The place is divided into two symmetrical halves, accommodating different rooms, library, guest rooms, etc. On the ground floor, there is a Darbar Hall in the west wing, and a dining hall in the east wing.

Fig 69: Ahsan Manzil, ground floor plan

Recognizing the historical and architectural importance of the Ahsan Manzil, the government of Bangladesh undertook an initiative to renovate it. Thus, in 1985, Ahsan Manzil and its surroundings were acquired.

Fig 70: Ahsan Manzil, front elevation

Fig 71: Ahsan Manzil, front view

During the renovation of this building, documentation including architectural details, sections and elevations were prepared by consulting books and references, including some old exterior and interior photographs. Photographs were also taken of the still-existing damaged structure. After this documentation, experiments were carried out using both materials and craftsmanship. Some details of the woodwork were done in the wood workshop, while other details were done on site to test and establish workmanship standards. Most of the cast iron work railings and light posts were missing, and such missing parts were restored, as drawings were prepared based on interviews with elderly locals. The floor and roof, with a kari-barga system supporting flat burnt clay tiles covered with lime concrete work, were badly damaged in many places, which became a major problem for complete repair.

A portion of the palace compound and the original approach roads have unfortunately been acquired by the Municipal Corporation and the locals. Therefore, these had to be left out of the conservation and restoration scheme. The eastern gate has been repaired and renovated, and a brick-paved road forms the main entrance to the palace from the city. As the entry has been shifted to the side, this obstructs the view of the grand stair at the front, and thus affects the authenticity of the building within its context.

6.3.2: Star Mosque

The star mosque is located in Armanitola, close to the river. The area is named after the Armenians, the pioneers of the jute trade, who settled in to the locality during the early 18th century. The three-domed masonry structure, with a dominant central

dome 29 feet above the plinth level, reflects the provincial Mughal style. However, the mosque is famous for its extensive surface decorative work, consisting of stars which have been made with a striking mosaic work of broken chinaware pieces, strictly in the local tradition done at a later time. The new decoration, from which the mosque derives its present name, was done in 1926 by Ali Jan Bepari, then the Mutawali of the mosque. He also added an arched verandah to the east, although a verandah in a main mosque is not a common practice in provincial Mughal architecture.

Fig 72: Star Mosque, Interior details

Fig 73: Star Mosque, Interior details

Fig 74: Star Mosque, Interior details

The mosque is part of a living community which has outgrown it. As a result, a corrugated iron sheet structure, completely out of character with the mosque, was added to accommodate the enlarged community, since the Jumma prayer congregation spilled onto the road every Friday.

However, the major issue which confronted this sideways expansion was that the Mughal style of architecture consisting of either a single prominent dome or multiple domed roofs with a predominant central dome. The expansion space permitted the construction of only two additional domes on the sides, with the existing small western dome that would become the central dome. The other possibility was an eastward expansion which would be accomplished by expanding the verandah space with another series of colonnades. The impact of the domes would then have been reduced by the frontal addition, and the present front of the mosque would have to be covered over by a totally new façade. A decision was therefore taken to expand sideways with two additional domes.

The main problem consisted of the expansion of Shan, which was only 32 feet in depth, this limited space could not cater the larger number of devotees of Jumma prayers in the crowded locality. The appropriate choice was to remove a part of the structure on the east and clear the view. Buildings on the east were removed through mutual understanding within the community. A fountain has now been added to the lawn, which was expanded to a depth of 89 feet, and covered over with white marble. The work was completed in December 1987.

Fig 75: Star Mosque, view from the east

Fig 76: Star Mosque, view from the east

6.3.3: Old High Court Building

This two-storied attractive building was built in 1905, as a residence for the governor of the newly created provinces of Assam and Bengal. Symmetrical in plan, it was crowned with a dome resting on columns in a circle, and built opposite the Curzon Hall on the road then known as the Government House Road. It has been subsequently used as an office, college, high court and currently houses the Defense Ministry. Built in typical European renaissance style, the architectural elements of the classical period have been very skillfully incorporated into the outer facade. Designed to be very impressive to the outsider, the interior is relatively simple. Cast-iron fencing with intermediate masonry pillars allows the passerby a glimpse of the prestigious building. The building had all kinds of extensions, some in concrete and others in corrugated iron sheets and timber partitions. Below the triangular central pediment, there was a big iron verandah roof used to protect the rooms from rain water. The original design made in the European style, apparently made no consideration for the local climate. The outer plaster was falling off in many places, and therefore the work of repair and restoration was initiated to renovate the plaster work and building, which followed the usual process of photography and documentation. After climbing the flight of stairs to the first floor on the left, one sees a big ballroom with a wooden floor and a interesting mezzanine type gallery, designed to view the dancing in the hall. The whole ballroom is partitioned into small dark cubicles and even the mezzanine was walled off from the main hall and converted into cubicles. These all have been removed later to provide a more decent look.

A problem was encountered when the corrugated sheet iron verandah roof over the open terrace was to be removed. There were strong objections that, without covered protection from the rain and sun for the doors and windows, the rooms behind could not be used. Finally, in keeping with the climatic requirements and establishing a relationship with the plan elevation, a partly-covered verandah was added to the front terrace. This was the only addition to the restoration work, which was completed in 1985.

All the above examples show the idea that there existed consciousness about conserving the heritage of Bangladesh and some attempts have been taken to initiate the process of conservation. At the same time, it is reflected reflects that there is lack of strategic guidelines and conservation principles to carry out the work in a positive manner. Thus, in most cases, it appears to be a struggle and a restless process both for the structure and builders.

Fig 77: Old High Court building, original view

Fig 78: Old High Court building, after conservation

(Source: Zahiruddin, Shah Alam. "Bangladesh's Experience in Architectural Conservation: Five Projects.")

CHAPTER 7: CONCEPT DESIGN OF FOLK ART MUSEUM, SONARGAON

7.1: Historical Sonargaon

Sonargaon is situated on the Dhaka-Chittagong highway about 24 km south of Dhaka towards Chittagong. Sonargaon represents a glorious ancient place in the history of Bengal as it was the capital of Bengal. Since the 14th century Sonargaon evolved not only in administrative affairs but also in religion, culture, arts and science. The ancient Mazar, Tomb and Mosque architectural structures bear its actual testimony. In the middle ages, politics, economics and the sociocultural environment of Sonargaon attracted famous travelers and businessmen. Tourist and travelers like Ibne Batuta (1345), Ma Huan, Fa Heyan and Ralf Fitch visited Sonargaon. Ralf Fitch described that in that time sufficient handloom clothes, the world famous Muslin was exported to different countries of the world such as India, Sinhal, Pegu, Malakka, Sumatra. At one time there was communication between Sonargaon and Java Island with respect of trade and commerce through the sea route. At last, during the reign of the Mughal Emperor, Subadar Islam Khan in the 17th century, transferred the capital of Bengal from Sonargaon to Jahangir Nagar, present day Dhaka. After this transfer, the importance of Sonargaon began to diminish gradually.

7.2: Folk Art Museum of Sonargaon

The folk art museum of Sonargaon was established in 1975 to fulfill the dreams of the celebrated painter Shilpacharyya Zainul Abedin. This museum has a very rich

collection of folk objects of different materials and forms of aesthetic and utilitarian values. These undoubtedly reflect the sentiments, impulse, temperament, moods, idiosyncrasy, skills and expertise of the artists and artisans. Thus, it is a national institution which represents the traditional art heritage of Bangladesh, exhibiting objects of exceptional design and skill.

7.2.1: Objectives

According to the Bangladesh Folk Art & Crafts Foundation Act 1998 the activities of the foundation include:

- To preserve the traditional folklore and crafts of Bangladesh;
- To create training facilities about traditional folk arts and crafts;
- To establish folk art and crafts museum in different regions of the country;
- To establish a crafts village at Sonargaon;
- To conduct research on folk art and crafts, and publish the research findings;
- To preserve folk art and crafts specimens, and encourage traditional folk arts and crafts;
- To formulate and implement plans, programs and projects for the development of folk arts and crafts;
- To help cooperate with individuals and organizations engaged in research on folk arts and crafts;
- To assist the government in formulating programs on folk art and crafts with other organizations;
- To identify areas of cooperation and develop joint programmes on traditional folk arts and crafts with other countries;
- Other related and supplementary activities.

There are two museums with 13 galleries in this foundation. One is the Folk Art and Crafts Museum and the other is the Shilpacharya Zainul Abedin Museum. Folk Art Museum: There are 11 galleries in this museum. The galleries are:

- Wooden Crafts.
- Environment of Village Life;
- Scroll Painting, Mask;
- Boat;
- Tribal Life;

- Pottery, Terracotta Doll, Tile;
- Agricultural and other Iron Products
- Brass, Bell Metal;
- Bell Products and Jewellery;
- Bamboo, Cane Crafts;
- Special Gallery.
- Shilpacharya Zainul Folk Art Museum: There are 2 galleries in this museum, including:
 - Wooden crafts;
 - Nakshi Kantha & Jamdani Saree.

7.2.2: Broad Program

The pioneer of Bangladesh artists, Shilpacharya Zainul Abedin, was selected to establish the Bangladesh Folk Arts & Crafts Foundation for of collection, display, preservation, research, publication and revitalization of traditional Folk Arts & Crafts in Bangladesh. The Bangladesh Folk Arts & Crafts Foundation is a national institution which represents the traditional art heritage of Bangladesh for present and future generations. As a result of Zainul Abedin's hearty attempt, the Government established the Bangladesh Folk Arts & Crafts Foundation on 12 March, 1975 in the historical place of Sonargaon.

In light of the artistic sense of culture and inspiration of Zainul Abedin, the Bangladesh Folk Art & Crafts Foundation has taken the following project, called the Development of Craft Village at Sonargaon to portray the simplicity of Folk people, cultural heritage and way of life of the Bangladeshi people. The present government has taken a historical step for the expansion of the Folk culture. A project named 'Mini Bangladesh' has been undertaken to give tourists a clear idea about the geographical and environmental traditions of Bangladesh, including the following:

1. Making regional houses for earthen crafts.
2. Making regional houses for wooden crafts.
3. Making regional houses for bamboo, cane and carpet crafts.
4. Making regional houses for shell, osten and pearl crafts.
5. Making regional houses for Jamdani, Silk, Tangail Saree and Nakshi Katha crafts.
6. Making regional houses for jute & Jute crafts.
7. Making regional houses for copper, brass, iron crafts.
8. Making regional houses for hand made paper crafts.

Regional houses for the above eight classes of Crafts Village at Sonargaon signify that the crafts village development project has been implemented successfully. Besides these, in the proposed 'Mini Bangladesh' project, an attempt has been undertaken to develop a picture of village life including the tradition, culture and civilization of thousands of years. This project will show the actual infrastructure, land, village, architectural design, rivers, hills, lake, brook, forest, tea-garden, sea beach, lifestyle of the tribes of different parts of the country, environments and folk environments of different classes of people high and low in the whole region as well regional folk arts. There are also two Folk Art & Crafts Museums that show the traditional Folk Art & Crafts and Folk culture as if it were ever-living and never-ending in the national life of this country.

Besides, as a museum and a place of long-cherished tradition, Sonargaon has been considered as a famous centre of culture. Here, folk traditions, folk arts, an exhibition of folk artists and village songs, an expansion of village games, and a month-long folk arts & crafts fair and folk festival are arranged every year in the foundation complex. This festival and folk fair, arranged with multidimensional folk culture, has been turned into an established meeting occasion.

7.3: Evaluation of Existing Old Folk Art Museum Building

The house, located 460 meter south of Panam Nagar, with a structure built in 1308 B.S. (1901 A.D.), is known as Boro Shardar Bari and used only for residential purposes. This has now been converted into the Folk Art Museum.

7.3.1: History

The old museum building is one of the magnificent domestic houses of the colonial period, which was built by local merchants. During the Colonial rule, architecture appeared as a means of personal gratification by the emerging merchant class. In Sonargaon, Hindu merchants locally known as Sardars and poddarss were the main contributors for the monuments of the Colonial period today. Their approach was distinctly different from the traditional concept of simplicity in domestic design as they indulged in building luxury dwelling houses. The domestic houses were highly romanticized with extensive ornamentations to celebrate the wealth and power of individual owners. These elements are solely reflected in Boro Sardar Bari, which represents the typical luxurious houses built by the merchants of Sonargaon, and remains standing with all its glory.

7.3.2: Architectural Style

This theme represents one of the most refined examples of compound houses. The compound houses in the city followed the model of the Colonial Bungalow. The basic characteristics were to place one or two storied main houses in the middle of a large compound, with a garden of fruit and flowers around, as well as maintaining

subsidiary service structures at a distance with the accommodation of domestic service people further down, away from the main building. Since it was a powerful available model of the domestic architecture, this element was an obvious preference of the affluent merchant class. Nevertheless, the model was modified to suit the needs and desires of the local people.

The main differences in Sonargaon were that the buildings were much more massive and elaborate in plan than the Colonial Bungalows, in order to suit the diversified social demand. Colonial Bungalow had different domains for the separation of locals and non-locals. Also, this kind of separation was not necessary in the local version. The secondary structures were either an extension of the main building or additive units placed close to it. The importance of the domain is expressed through interior and exterior decorations and finishing, the location with respect to the approach, and the orientation in reference to view and climatic conditions. The complexity of creating social domains in the house and providing respective privacy gradients required more than one court in the house. The application of the inner court responded effectively with the demands of social domains and the climatic adaptation of the house. Therefore, in all the compound houses in Sonargaon, the existence of more than one court is one of the regulating elements of the design and layout. Boro Sardar Bari was designed with a double court. The main court on the south is square in shape measuring 15.24 x 15.24m and the rear court is oblong shaped measuring 15.24 x 7.62m. Also, courts are connected by corridors.

Fig 79: View of the inner courtyard

Fig 80: View of the inner courtyard

Fig 81: View of the formal courtyard

Fig 82: View from the south

Fig 83: Detailing at the entry

There are seventy chambers of different sizes arranged around the two courts of the double storied structures. The main entry to the building is through an arch-way of a relatively lower and highly ornamented frontal building on the south. The use of cement was also prominent during that time. The majestic facade of the building is on the west, overlooking a reflecting pond. Two equestrian statues are placed, flanking the steps leading down to the pond. Also, these statues are entirely made of cement and steel. The west facade is projected forward at the two ends and designed with nine arched openings, both at the ground and upper levels. The upper floor openings are slender in proportion. Indeed, highly ornamental parapet with floral decoration is placed on the top.

Fig 84: View from the west

In the main axis of this façade, inside the front court, a huge recess with high columns had been designed to accommodate a Krishna temple. To give further emphasis to temple axis, two massive parapets were built on the east and west facades of the second court on the north. This was designed as an informal court and therefore, is relatively simple in character. All other facades of the building were

left unornamented, with doors and windows placed directly on the walls with minimum technical details. In the building complex, there sits a large compound isolated by the natural barrier of canals. Therefore, the building is under a slow process of conservation by the Archaeology Department.

7.3.3: Craftsmanship and Materiality

This building is enriched with intrinsic detailing and ornamentation, although craftsmanship has been lost. This type of detailing and ornamentation was common for the domestic houses occupied by the local merchant class, as it was a symbol of wealth and power. Although the building followed the model of the Colonial Bungalow, the decorative treatments were transposed from European architecture and blended in different places with local motifs. This represents the traditional craftsmanship and motifs of detailing of that society, especially in the Hindu culture. The use of ceramic, mosaic and other valuable stones was a common practice at that time. Extensive work using mosaic stone is visible in the entrance block at the front of the building.

Fig 85: Detailing

Fig 86: Mosaic stone detail

Fig 87: Detailing

7.4: Concept Design

At present the foundation consists of a big complex on a land of 150 bighas or 50 acres, which includes a big artificial lake of 55 bighas, six ponds, a library, documentation centre, a sales centre of crafts, a folk stage, two Folk art museums, restaurants, a rest house, an Ansar camp, three crafts bridge, a crafts village, local fruit, forestry, medicinal trees and a charming garden of fruits and flowers. The historic Sardar Bari is an old folk art museum building and visitor attraction. The historic structures of the site are also a part of the attractions. The old folk art museum building, the Boro Sardar Bari, is the only historic structure standing within the museum complex. (Fig 88)

7.4.1: Evaluation of Present Situation

This historic building has deteriorated during the last few years and this is continuing, because of a lack of planning and strategies for saving and protecting this historic structure. The site has included a few other functions to accommodate the many new structures that have been introduced in the site to demonstrate the traditional crafts and lifestyle of the people of Bangladesh. But the development has been done in such a way that it ignores the presence of the historic old museum building, and thus, it damages the essence of this historic site. This building, which was the main focus of the complex, is now neglected and has lost its attraction to the visitors because no steps have been taken by the government or any other organizations to conserve this building. As a result this historic building is becoming more and more isolated in the complex, a trend which is not desirable.

Fig 88: Existing site plan and temporary structure development for the Craft Village

The building has major challenges about its structural stability. The structural condition of the building is still in good shape but needs proper maintenance and reinforcement for longevity. The museum authorities do not allow the visitors to go upstairs in its current situation, which is very discouraging. Thus, people are losing interest and are reluctant to come and see inside this magnificent historic structure. So, the displays inside the museum building are also losing their attraction.

The interior space organization does not show any respect or relation with the original flow of spaces, thus the visitors find it discouraging to walk through the building. As learned from surveys, people feel the interior spaces are not interesting enough. Also, it does not give any sense of flow for space as they are forced to move in only one direction. As a matter of fact, the museum authorities have covered the arches with steel fences in order to block the access to the court from the hallways surrounding the courtyard, so that people go in one direction (Fig 89). This hampers the architectural essence of the building. The hierarchy of spaces is an important issue to evaluate in this type of building. The formal courtyard with a square shape is at the front, just after the main entrance, and the arches and colonnade surrounding this courtyard are highly ornamented. There is another courtyard inside the building which is more informal and has less ornamentation. These two courtyards are linked by an intermediate space. The flow of spaces going from formal to informal to private is observed in the arrangement of spaces in the building. The hierarchy of spaces as created to surround the formal and the informal courtyard is lost in the current situation.

Fig 89: Layout of existing museum

Fig 90: Showing iron fences surrounding the courtyard

Fig 91: Old museum building

Fig 92: New museum building

A new administrative and museum building was constructed about 10 years ago, toward the south and far from the old museum building. It does not have any relation to the old building, either architecturally or physically (Fig 91, 92). The entrance from the main gate goes directly to the new museum building, by-passing the old building, as the entrance of the old museum building is not defined enough to work as a museum entrance. Besides, the west façade with arches also confuses people with the main entrance. In the current situation, the building functions as a museum but lacks some requirements to meet the needs of today's museum, like housing artefacts not having any public participating activities or defined public spaces where people can interact with each other. It needs some additional functions which will meet the needs of a modern museum and help people become informed about the museum and its exhibits, thereby increasing their knowledge of culture and tradition.

7.4.2: Program

At present, the old folk art museum building is occupied with different galleries to display the traditional crafts of Bangladesh. It also has a sales centre and curator's office. There are 11 galleries in the old museum building, including:

1. Gallery for wooden crafts
2. Environment of village life gallery
3. Gallery for scroll painting and masks
4. Gallery for different kinds of boats in Bangladesh
5. Tribal life gallery
6. Gallery for folk musical instruments, pottery, terracotta doll, tile
7. Gallery for agricultural and other iron products
8. Gallery for brass and bell metal crafts
9. Gallery for folk ornaments
10. Gallery for bamboo, cane and shital pati (cool mat)
11. Gallery for special exhibition

The new museum building has two galleries, one for wooden crafts and another is for the Jamdani Saree and Nakshi Katha.

New program: In the new program for concept design will include all the existing functions of the building. Besides, there will be some additional functions suggested to fulfil the requirement of a contemporary museum. The program includes:

- Permanent display – This will include all the existing galleries of the old museum building as mentioned above.
- Temporary display – including special exhibitions, contemporary arts and crafts display
- Live performance - This will include the performance of folk music dance and other activities by the folk artists and others.
- Outdoor display
- Curator's office
- Lecture room
- Information centre
- Cafeteria
- Sales centre
- Reception and others
-

In addition an atelier school has been proposed including workshops.

7.4.3: Design Approach

Preparing drawings:

An attempt has been made to prepare the approximate drawings for the old museum building. Plans, elevations, and sections have been prepared based on a historic plan, and historic and current photographs. This was undertaken to get a general idea about this historic structure, with an intention that these drawings will be helpful in preparing the proper documentation of the building. (Appendix H, Dwg. no. 1-8)

Design development:

The major consideration for the proposed design is to create two functional space zones, for temporary and permanent activities. The permanent activity areas are to become mainly museum galleries and the temporary activity areas produce an urban courtyard. The intention is to retrieve the functional character of the domestic house as a public area, arranged around the formal courtyard and a private area, placed in the informal inner courtyard. (Appendix H, Dwg. no. 10, 11)

Two major axes have been identified to organize the functions, with one in the east-west direction, with a west-side entrance at the front and Krishna Temple at the end and all going through the formal courtyard. All the public functions, like cafeteria, sales center, and lecture room, will be arranged along these areas around the formal courtyard. The other axis has been identified along the north-south, and all the galleries have been organised along this axis around the informal courtyard. The intention here is to re-call the original use pattern of the building as having both public and private areas. At the end of this axis is the photo gallery, displays the photographs of all religious festival performed traditionally and also part of the cultural activity (Appendix H, Fig 98-101). The courtyards are proposed to be linked a corridor, although this is blocked currently. This will help to regain the original flow of the spaces. The common functions, such as the washrooms, will be located on the sides of linking corridor between two courtyards. This will allow the opening of the public activity area during the festival season, while the museum remains closed.

Entry: The main entrance to the museum has been shifted to the west from the south. This will further emphasize the east-west axis of the building. This new entrance was proposed for the museum because the western façade facing the pond is grand and has more emphasis with the reflection of the pond (Fig 93).

Although the existing main entrance has a highly ornamental appearance, it is narrow and ends up being at the corner of the courtyard. This is suitable for the residence, but does not the functions of a public entrance for the museum. Instead, the proposed entrance will gradually approach the formal courtyard through the lobby and then will open to the verandah (semi-covered hallway) (Appendix H Fig 97). The existing main entrance is proposed to be used for administrative and service functions.

Fig 93: View of the west façade with reflection

Public area (courtyard activity): There will be a reception area and ticket counter at the entrance by the foyer space. After approaching the courtyard, the Temple of Krishna will be at the end. There will also be a lecture room where people can get more information about folk art and the traditional crafts of Bangladesh.

The cafeteria is to be placed on the south, facing the court through the verandah, so people can enjoy the courtyard from the inside as well. If required, there will also be outdoor sitting for the cafeteria on the courtyard. Thus, people can enjoy the courtyard and its surrounding space. This will also encourage the enjoyment of the buildings intrinsic detailing and ornamental works of art. The Krishna temple is the original feature of the building, which is proposed to be restored. People can also access this from the formal courtyard. All these activities will re-establish the functionality of the courtyard, with a modern interpretation, and will meet the need for new functionality. (Appendix H, Fig 99, 100)

The other courtyard will be more private, as the galleries surround the courtyard. There will be some displays, such as Terracotta display, and some seating arrangements, so people can have access to the courtyard from the galleries, through the verandah. The displays and seating facilities in the courtyard will provide an intimate environment where visitors can enjoy the building as well as the artefacts. They can thus sit and chat between visits to the galleries. The intention here is to retrieve the original character of the courtyard as a gathering and activity space, which has been lost in the current situation. This will also reflect the original

use of pattern in the new functionality, so people can connect the old with the new.

(Appendix H, Fig 101)

The removal of the steel fence used to control of the courtyards has been proposed, so that people can have the freedom to move around the building. The intention is not to force people to visit the display galleries, rather to encourage them to enjoy the display galleries, the building and its spaces, and its extensive detailing and ornamentation as a work of art. This will make the entire building more active and functional. On the second floor, there will be a temporary display in the public area in addition to the galleries. In this temporary display, contemporary artists will be able to show their modern arts in all traditional craft sectors such as pottery, ceramic works, dress wear, wrought iron etc. This will attract new generations to learn about the arts and crafts as well as showing the evolution of arts and crafts in Bangladesh, and the contemporary influence of the traditional arts in Bangladesh. Besides, there will be a seasonal display of the traditional arts as well, such as, Jamdani Saree, hand loom clothing etc. (Appendix H, Dwg. no. 11)

Photo gallery: The proposed photo gallery will contain the photographs showing the celebration all major religious festival of Bangladesh (Eid, Durga Puja, Christmas and Buddha Purnima). These festivals are celebrated nationally in Bangladesh; this also represents the traditions and culture of Bangladesh. (Appendix H, Fig 102-104)

Atelier school: It has been proposed to promote the local arts and crafts, which also generate revenue income by selling the product. This will enhance the reproduction of arts and crafts, by the process of doing and learning. It is the rejuvenation of art and artisans for present and for the future.

Addition: A simple addition of shade has been proposed over the courtyards, presently, the courtyards are covered with plastics sheets for weather protection. To improve this situation, the proposal includes a transparent double height shade supported by a central steel column for both courtyards. This shade will provide protection against torrential rain, defuse the bright sunlight to a tolerable level, thereby enhancing the courtyard space activity for the people. The double height is proposed, so that it does not conflict with the double height courtyard space nor does it obstruct people's view of the courtyard. The height shading is proposed to go beyond the top of the roof, in order to allow the natural flow of air and ventilation to the courtyard and become responsive to the local climate and weather.

The transparent shade will allow the sunlight to come inside, which will keep the courtyards open. Also, the cast shadow of the steel truss beams will create an interesting play of light and shade into the courtyard, which will further enhance the natural environment. The form of the shade has been chosen on the four sided pitch roof, which results in the tradition chau chala (four sided roof) of the Bengal hut, which is common for the local form of architecture. Artificial lighting at night has been proposed to be used in conjunction with the shade of the courtyard to create an interesting environment and to highlight the details and ornamentation around the courtyard, so that people can enjoy the building and the environment at night as well. An overall arrangement is proposed to create an urban courtyard, so that it attracts new generations, by providing an interesting place for enjoyment as well as allowing them to know and learn about the glorious past of the building.

Outdoor space: Currently, the indoor-outdoor relationship is very poor. In fact, the outdoor space is not considered at all in existing organization. In the proposed design, the outdoor pond on the west side and the surrounding has been incorporated with the museum's function. There will also be an outdoor display of sculpture, for the village people, like Baul Shilpi, Jelea others. The steps from the building will be on the western façade to be continued up to the pond. A deck is proposed on the bank of the pond against a backdrop of the building. There, a small stage for the live performance of folk music, dance and other performances was proposed. Indeed, a walkway and stepped sitting area have been proposed around the pond, so that people can enjoy live performances from the stage; enjoy the outdoor space and the panorama of buildings from the outside. This will highlight the existence of the pond with respect to the historic building. It will also reflect the natural relation that exists between greenery and water, which is the character of a compound house. At the same time, this represents the traditional picture of performing folk music near water or under trees. Thus, people can relate the traditional image in a modern interpretation. This will also attract the new generation so that they can enjoy the traditional music and arts (Appendix H Dwg. no. 9a & 9b, Fig 94-96).

Materials: For the proposed addition, glass has been chosen as the contemporary material. The use of glass is found commonly in many contemporary architectural works in Bangladesh, (ex-Basundhara city, Anchor tower etc, - central Dhaka). Thus, glass will represent the contemporary addition to this historic building as continuity of tradition. It is like living with the past during the present time.

7.4.4: Reflection

Authenticity: An attempt has been made to reflect a building's, like the Boro Sardar Bari, authenticity with respect to its setting in the proposed design. The relations between greenery, water (the pond) and buildings have turned into a lively outdoor scene with the functional arrangement of outdoor spaces. Outdoor displays, seats by the pond and stages for live performance will reconnect the building with the context within which it was built to reflect its authenticity.

The building's intrinsic detailing and material will be restored in a manner so it represents the patina of aging and its authentic character as a historic structure. With the courtyard activity inside the building, the space has regained its authenticity as an original essence of the spaces that reflect the new functionality. By recovering the hierarchy of space as formal or informal and the indoor-outdoor relationships all reflect the authentic character of the building.

Integrity: The building's intrinsic detailing and its signs of aging are integral parts of this historic structure. Its detail and sign of aging will be restored in such a manner that it reflects the integrity of the building. Again, integrity in the arrangement of spaces, the relationship of the building with nature and the contextual integrity as a whole are reflected in the proposed design, which defines the significance of this historic structure within the overall context. Indeed, it also justifies the minor elements which have meaning in relation to the whole.

Traditional continuity: Since culture is ever-changing, safe-guarding traditional aspects is an important issue for any transformation. At the same time, living cultures require the acceptance of change as an essential parameter in the process. Changes in the proposed design reflect this traditional continuity. In the new addition of the entrance, the use of glass reflects the use of contemporary material, which is already accepted by the local people. Inside the building, blending the use of courtyards with contemporary cultural activities as a continuity in changing cultural identity also reflects the continuity in the current tradition. At the same time, traditional courtyards and contemporary activities will maintain an interrelation between the old and new. The live performance stage of outdoor space is a modern interpretation of traditional stage performance. Here, contemporary artists will also contribute to living culture and reflect the change and continuity in cultural identity.

CHAPTER 8: CONCLUSION

Architecture is a metaphor for history. Buildings that survive for a long period of time carry narratives of the past and stand as evidence of yesteryear events.

Transformation reflects this process of creating history. Architecture has powerful presence indeed, but it can also give value to the site's memories of human interventions. Hence, transformation is a celebration of architecture and of its revealed history, thereby embodying successive layers of human engagement within the site, place and space.

In Bangladesh, there are about 200 historic sites across the country, which have been declared ancient monuments by the archaeological department, under the Antiques Act, as amended up to 1976. It states that a site is an ancient monument to be preserved under the law if it has been in existence for no less than the preceding hundred years. However, very little work is done to conserve the sites or structures. Since most of the structures are functionally abandoned, the ravages of nature and vandalism have occurred on masonry structures. In addition, the abuse by occupants defaced the buildings in such a way that they became unrecognizable in their original form and character.

Some conservation work in Bangladesh has been done in an isolated manner. This development, particularly in towns and cities, lead to the demolition of its precious heritage. Besides, there have been no proper strategies for conservation. The intention of this thesis was two folds: firstly, to study the

process of transformation in the Canadian context, and secondly, to attempt to implement the findings of conservation strategies to the Bangladeshi context. Work needs to be initiated at government level. Proper listing, evaluation and designation of historic buildings are required, which are considered to be worth while for conservation. Appropriate criteria for the buildings need to be developed so the value of the building can be identified; this will help guiding the intervention of the artefacts. For, the concept of design has been taken to juxtapose the building based on its historical value and architectural context. The reflection of values are sought in practical application of design.

Boro Sardar Bari, although a model of local domestic house, represents colonial architecture. Development during the colonial period in art, culture, science, education etc. is a milestone in the country's history. Colonial architecture is localised according to need; it reflects the revolution in the thoughts and lifestyle of historic dwelling, embodying in culture and tradition. It stands as an opening toward the outer world. So the buildings of the historic period represent today not just a work of art but the symbol of change and adaptation, a bridge between the past and the present. Hence, it is our responsibility to protect the historic artefacts for future generations.

Here, it has been revealed that, to save the historic buildings of the Sardar Bari, transformation is necessary within the local context of Bangladesh. In the design, an important concern for transformation includes an understanding of the

building, thereby finding its positive values. It is imperative to achieve the lost integrity of the building, and recover the authentic character of the structure. For the new additions, they have to claim a continuity and integration with the old.

For the proposed design, there is a recessed place for the accommodation of the Temple of Krishna, which still exists in the building. This represents the Hindu traditional and cultural activity of that period (Appendix H Fig 100). The use of cement, iron, and mosaic stones are the evidence of new material inclusion in architectural expression, which manifests the amazing craftsmanship of architecture by Hindus, during the British rule. The proposed contemporary additions will add another layer to the history of the building, which will reflect today's system of conservation.

The four important issues pertaining to the conservation of local social, economic, environmental and cultural aspects need to be considered during the development of concept design in the context of Bangladesh. The social aspect has been enhanced by bringing activities within the building for the residents. The museum itself and supporting functions, like the café, information centre and other outdoor activities, have been introduced. To enhance the social interaction with the local craftsmen, an atelier school has been introduced. It meant to rejuvenate the space in the new social melees. The atelier school has been proposed to enhance the production of artefacts, which is intended to cater to the needs of the consumer society, including tourists. The proposed addition of the

roofs over the courtyards is to take care of the immediate environmental aspects in support of the activity to be held in the transformed historic building. Cultural issues are considered in the proposed design, which include courtyard activities. Traditionally, the courtyard is a multipurpose space. It works as a gathering space, as a working ground for household activities, a playing ground for kids and many other events. It is a space which caters to all cultural activities. In the proposed design, an attempt is made to display the entrance courtyard as an extension of surrounding activities. Hence, it attempts to reveal the cultural and traditional character of the place (Appendix H, Dwg. no. 10, 11, Fig 99, 100). Outdoor display activities also represent cultural consciousness within the larger landscape setting. (Appendix H, Dwg. no. 9a, 9b, Fig 94-96)

Transformation requires the continual acceptance that the building had a past, defined by present form, which is projected into the future. The use of glass as a *contemporary material and the addition of simple forms* represent current architectural trends in historic conservation. They reflect changes in cultural aspects and enhance continuity with the ongoing tradition. In the overall transformation of the building, it is hoped that the proposed design will enhance the heritage value and authenticity.

Proper conservation strategies and guidelines are the key for the protection of historic and heritage structures. In Bangladesh, however, there are no such strategies, guidelines or legislation for conservation. In fact, there is no process

for the transformation of historic or heritage buildings. Interventions in the majority of the historic sites and buildings are controlled by the Department of Archaeology, but they do not provide any passing references or rules, pertaining to the regulations of conservation or intervention.

The East Bengal Building Construction Act (EBBC) of 1952, the Paurashava Act of 1977 and the Building Construction Regulation of 1984 are the only pieces of legislation that apply to buildings and land use control in Bangladesh. But, none of these legislations includes any references regarding conservation. Therefore, it is essential to establish a structural process of transformation for the changes in the historic structures. Regulations and proper guidelines on conservation are needed to protect the built heritage of Bangladesh.

Since the field of conservation is neglected in Bangladesh, many heritage and historical structures have perished due to negligence. Work needs to be done at the policy level about how to protect these historic structures by developing proper conservation strategies. Their implementation will guide the process of transformation and will re-establish the lost glory of these historic structures.

Foot Notes:

Chapter 2 Notes:

¹ Jokileto, Jukka. A history of Architectural Conservation. Oxford, Auckland, Boston, Johannesburg, Melbourne, New Delhi: Butterorth-Heineman, 1999. Page-1

² Hollingsworth, Mary. Architecture of the 20th Century. London: Grange Book, 1988. Page-148

³ Nasmith, Catherine. "In Conversation With Tony an Interview With Anthony M. Tung." 2003.

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⁴ Jokileto, Jukka. A history of Architectural Conservation. Oxford, Auckland, Boston, Johannesburg, Melbourne, New Delhi: Butterorth-Heineman, 1999. Page-214-216

⁵⁻⁷ Jokileto, Jukka. A history of Architectural Conservation. Oxford, Auckland, Boston, Johannesburg, Melbourne, New Delhi: Butterorth-Heineman, 1999. Page-227, 232, 175

Chapter 3 Notes:

¹ "Renovation of Ferry Building" URL

http://www.ferrybuildingmarketplace.com/html/renovation_details.html

² Rossi, Aldo. The Architecture of the City. Cambridge, Massachusetts and London: The MIT Press, 1984. Page-7

³ Rossi, Aldo. The Architecture of the City. Cambridge, Massachusetts and London: The MIT Press, 1984. Page-57

⁴ Craig, R. Barry, Architect Dan S. Hanganu: Ecole Des Hautes Studes Commercials and work from 1985-2000, from Remembrance to Renewal, A thesis submitted to the faculty of graduate studies and research. February 15, 2001

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¹ Brand, Stewart. How Buildings Learn What happens after they're built. Viking Penguin, 1994. Page-18

²⁻³ Sawchuk, Diane. "Wallis House Revisited" Interiors Spring 1996, Page-21,23

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Chapter 5 Notes:

¹ Ashcroft, Sheila Ed. Ottawa a Guide to Heritage Structure, Published under the authority of LACAC, 2000, Page 75

² Doubilet, Susan. "A Masterwork for Masterpieces" Progressive Architecture Magazine. August, 1989. Page 70

^{3, 4, 5} Richard, Larry Ed. Canadian Center for Architecture Building and Gardens. Cambridge, Massachusetts and London, England: The MIT Press, 1989, Page 70, 131, 127

^{6, 7, 8} Heritage Conservation Program, Real Property Services for Parks Canada. "Victoria Memorial Museum Building, Interior Conservation Guidelines, Vol 1-3 (Guidelines for the Building) HCP Project Number: 412184". June 2000. Page 21, 26, 27

GLOSSARY:

Bangala	Mughal and Indian term for roof with curved eaves resembling the traditional Bengali hut.
Baul Shilpi	Baul is one of the few widely known and appreciated types of folk music in Bengal. Baul is not only a kind of music, it is basically a Bengali religious sect. The members of the sect are themselves called Bauls, and the songs they sing are named for them, Baul-gAn (Baul songs). It has been suggested that, etymologically, the word derives from Sanskrit word "Vatula" means "affected by the wind disease, mad". On the other hand, it might be derived from Sanskrit word "Vyakula" means "restless, disordered".
Bengal hut	Traditional rural house.
Bighas	A unit of land area, approximately 6771.41 square meters (approximately 1.6732 acres).
Chuu chala	A distinct type of roof of traditional Bengali hut.
Colonial	A small number of people set up an organised settlement in a foreign land. They often keep their own laws and language. Many countries have established colonies.
Conservation	All the processes of looking after places or objects so as to retain their heritage significance.
Darbar hall	Local term of home office, where local people used gather for discussion with officials.
FHBRO	<p>The Federal Heritage Buildings Review Office (FHBRO) is an interdepartmental advisory body responsible for identifying and evaluating heritage buildings owned by the federal government and for monitoring the conservation and continued use of these buildings.</p> <p>To monitor the conservation of federally owned heritage buildings, FHBRO maintains and helps to implement the Federal Heritage Building Policy, which commits all federal departments to protect the heritage character of</p>

the buildings they administer.

FHBRO also has established an interdepartmental, interdisciplinary, Federal Heritage Buildings Committee which includes, in addition to experts on history, heritage conservation and real property management, representatives of the department which owns the building. The aim of this group is to advise on the heritage designation of federal heritage buildings and on proposed interventions (alterations, dismantlement, demolition, disposals, etc.)

FHBRO is located within Parks Canada, Department of Canadian Heritage and is the responsibility of the Minister of Canadian Heritage.

Folk Art	Folk means a great portion of the members of people the determines the group character and that tends to preserve its characteristics form of civilization and its customs, arts and crafts, legends, traditions and even superstitious beliefs from generation to generation. Folk art, therefore relates to the folk products, which are partly utilitarian and partly recreational, and often exhibiting social moorings and mystical significance.
Heritage	Those places, objects and indigenous languages that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the community today.
Jamdani Saree	Fabric of fine cotton muslin woven in Bengal. The Jamdani is woven painstakingly by hand on the old fashioned Jala loom, needing even one year in some cases to weave a single sari. It feels supple to the touch and drapes gently to reveal the contour of the wearer.
Jelee	Local term of a fisherman in Bengali language.
Krishna	Divine hero and central figure of the epic, Mahabharata, who is worshipped by the Hindus as the 8th incarnation of God.
Lal Quila	Completed in 1648, the Red Fort is the largest of Old Delhi's monuments. Its red sandstone walls dominate Old Delhi's Muslim district, rising above a wide dry moat to a height of up to 33m (108ft), and are lined with turrets

and bastions. Today, rather than repel enemy invaders, they keep out the noise of the surrounding city, and the serene gardens and pavilions within the fort hark back to the power and majesty of the Mughal emperors. The main entrance of the Red Fort opens onto a bazaar that was at one time home to the city's most skilled goldsmiths, carpet makers and jewellers. Farther within lies the Hall of Public Audiences, where the emperor would listen to the complaints of the common people, and the Royal Baths, three large domed rooms with a fountain in the centre.

Mazar Mazar is the tomb of a religious divine which is regarded as a sacred place.

Mughal The Mughal Empire, (Mughal Baadshah, alternative spelling Mogul) was an empire that at its greatest territorial extent ruled parts of Afghanistan, Balochistan and most of the Indian Subcontinent between 1526 and 1857. The empire was founded by the Mongol leader Babur in 1526, when he defeated Ibrahim_Lodi, the last of the Delhi_Sultans at the First Battle of Panipat. The word "Mughal" is the Indo-Aryan version of "Mongol." The religion of Mughals was Islam.

The empire was largely conquered by Sher_Shah during the time of Humayun, but under Akbar, it grew considerably, and continued to grow until the end of Aurangzeb's rule. Jahangir, the son of Akbar, ruled the empire between (1605-1627). In October 1627, Shah Jahan, son of Jahangir, "succeeded to the throne", where he "inherited a vast and rich empire" in India; and "at mid-century this was perhaps the greatest empire in the world". The Mughal Emperor Shah Jahan, commissioned between (1630 - 1653), the Taj Mahal, in Agra, India.

After Aurangzeb died in 1707, the empire started a slow and steady decline in actual power, although it maintained all the trappings of power in the Indian subcontinent for another 150 years. In 1739 it was defeated by an army from Persia led by Nadir Shah. In 1756 an army of Ahmad Shah looted Delhi again. The British Empire finally dissolved it in 1857, immediately prior to which it existed only at the sufferance of the

British East India Company.

The alternate spelling of the empire, Mogul, is the source of the modern word mogul.

Nakshi Kantha	Nakshi Kantha are embroidered quilts, bedspreads, wall hangings, and pillow shams made by artists in rural Bangladesh. Nakshi Kantha is a folk art that has been passed down through generations of Bangladeshi families. Scholars believe the word kantha originated from the word ketha, which describes quilts made from old saris (traditional Bangladeshi dresses) and dhotis (traditional Bangladeshi skirts). Eventually, artists began to add nakshi (embroidered designs) to the ketha as a form of both individual and cultural expression. Nakshi Kantha quilts are lightweight to compliment the tropical climate of Bangladesh.
Panam Nagar	Panam Nagar consists of a mile long street with houses on either side and is referred to as the first urban settlement of the region. Built around mid 19th century these houses belonged to rich Hindu merchants of the region and are now almost in ruins. Builders and craftsmen were brought from Kolkata and the houses display a rich blend of European and Sub continental building traditions.
Preservation	Keep or maintain in unaltered condition; cause to remain or last.
Shardar Bari	House of the local elites, mainly influential to the local people.
Sonargaon	It is difficult to determine the exact location of the medieval city of Sonargaon. Khasnagar, near the modern museum, is said to have been the administrative centre of the principality over which Dasaratha Deva, the Hindu king of Central Bengal during the medieval period was reigning. The pre-Muslim principality of Sonargaon was situated at the confluence of rivers the Dhaleswari, Sitalakhya, the old Brahmaputra and Meghna and included Vikrampur with which communications were maintained across the river routes.
Sultani	It refers to a ruling period of certain dynasty (Sultan Dynasty), during the period 1338-1353 AD.

Tangail Saree	Fabric of fine cotton muslin woven in Bengal.
Teracotta	Terracotta handicrafts are the most ancient arts and crafts known to man. Be it in India, Pompeii or the Greek civilization, Terracotta art was everywhere. The word 'terracotta' is derived from French 'terra', which means 'earth', and 'cotta' which means 'burnt'.
Transformation	A rule describing the conversion of one syntactic structure into another related syntactic structure.
UNESCO	UNESCO - the United Nations Educational, Scientific and Cultural Organization (UNESCO) was founded on 16 November 1945. For this specialized United Nations agency, it is not enough to build classrooms in devastated countries or to publish scientific breakthroughs. Education, Social and Natural Science, Culture and Communication are the means to a far more ambitious goal: to build peace in the minds of men.
Vanga	Vanga an ancient janapada or human settlement in Eastern Bengal. Like all other settlements of the region, its geographical connotation varied in different periods of history.
Vihara	The vihara essentially is a collection of cells for the monks placed around a courtyard. Vihara is an important example of Buddhist tradition.
Verandah	Open air balcony outside a room reached via a sliding glass door or French doors

APPENDICES

Appendix A:

FHBRO Code of Practice:

The protection of heritage character requires managers whose decisions affect buildings under Crown ownership both to understand and respect heritage character in their planning.

DEFINING HERITAGE CHARACTER

1. Heritage character may be defined as the synthesis of a building's heritage values.

Determining appropriate intervention on heritage properties requires measuring the impact of proposed actions on heritage character. The consistent and clear evaluation of heritage character becomes a key step in assuring respectful treatment of heritage buildings. Heritage character may be understood to be a composite amalgam of the various areas of heritage value perceived in a building. In some cases, heritage value may be linked to original building design and attributes, while in others to the changes and additions brought by time.

While the evaluation process may clarify the sources of heritage significance of a structure, in order to provide tangible assistance to designers it is equally important to ensure that the physical elements, materials, systems, patterns of use and relationships which reflect and reveal these sources are accurately identified and described. The Heritage Character Statement is the means used by FHBRO to clarify both the sources of heritage significance for a building ("reasons for importance") and supporting attributes ("character-defining elements").

SOURCES OF HERITAGE VALUE

2. The heritage values of Crown-owned buildings derive from many sources. These include historical associations, architectural significance, environmental importance and continuity of use.

Heritage character may reflect importance in a broad range of areas. These may include architectural design, but also, for example, the degree to which buildings may reflect important themes in Canadian history. Heritage character may also reflect the contextual importance of a building in its site or setting, or its influence on local development. This approach to heritage values acknowledges the innovative approach developed by architectural historian Harold Kalman for Parks Canada in his 1980 booklet *Evaluation of Historic Buildings*. The factors

assessed by FHBRO and their relative weighting represent adaptations of the Kalman system developed over time and modified with experience in the FHBRO context.

FHBRO's evaluation process is based upon research reports prepared by architectural historians working for Parks Canada. Their sources include plans, historic photographs, written documents, individuals within communities and as often as practically possible, the building itself. As well, the custodian department often brings privileged information about the building to the evaluation discussion which takes place in the Federal Heritage Buildings Committee.

LINKING HERITAGE VALUES TO BUILDING ATTRIBUTES

3. In order to guide design decision-making in practical fashion,

heritage character must be clearly defined by linking the primary areas of heritage value to related character-defining elements, patterns and relationships. In order to ensure that links between areas of significance identified during evaluation and character-defining elements or patterns are fully developed, it may be necessary to carry out additional research to focus on the nature, history and current state of such elements or patterns.

RESEARCH NEEDS

4. Full understanding of heritage character is essential to its protection. Substantial research investment is normally required to ensure this understanding, and its consistent application to all building elements and systems.

Research necessary to support understanding may involve professionals from a variety of research disciplines. Heritage recorders may document the as-found configuration of a building at a range of levels. Historians may use the written, oral, and visual record to present a picture of the circumstances of a building's origin and evolution. Archaeologists may amplify this understanding through excavation and interpretation of sub-surface materials.

SHIFTS IN PERCEPTION

5. The determination of heritage character in buildings reflects contemporary values in society, and may require adjustment over time.

The evaluation process reflects the common values of our time and place. By ensuring consensus about those values within a broad range of interested parties, our evaluations become informed judgements and their objectivity increases to the greatest extent possible within our temporal/cultural framework. This process imparts credibility and consistency to the decisions it supports and

permits departments to assign priorities for action and care with a high degree of confidence. At the same time, it must be acknowledged that as time passes, the values we attribute to buildings are likely to shift. This phenomenon reflects both changes in perspective about heritage importance within each generation, and also the need to recognize the value of changes introduced to buildings over time. FHBRO recognizes the importance of these shifts and may, as circumstances warrant, review its evaluation process and the inherent assumptions within it.

Appendix B:

FHBRO Evaluation Criteria - Architecture

<u>Aesthetic Design</u>	What is the visual quality of the building (proportion, scale, detail) in the context of an architectural style or type?	<i>A. Excellent (25)</i> <i>B. Very Good (13)</i> <i>C. Good (9)</i> <i>D. Fair or poor (0)</i>
<u>Functional Design</u>	What is the functional quality of the building (effectiveness of materials, layout and method of construction) in the context of engineering history and functional types?	<i>A. Excellent (15)</i> <i>B. Very Good (8)</i> <i>C. Good (5)</i> <i>D. Fair or poor (0)</i>
<u>Craftmanship and Material</u>	What is the quality of the workmanship and the handling of materials?	<i>A. Excellent (10)</i> <i>B. Very Good (6)</i> <i>C. Good (4)</i> <i>D. Fair or poor (0)</i>
<u>Designer</u>	What is the significance of this building as an illustration of the work of an important designer?	<i>A. One of the best examples (5)</i> <i>B. Very good example (3)</i> <i>C. Known example (2)</i> <i>D. Designer not identified (0)</i>

EXPLANATORY NOTES

Architecture

These four criteria, "Aesthetic Design", "Functional Design", "Craftsmanship" and "Designer" are meant to measure the intrinsic value of the physical structure both in design and in execution. The present condition (integrity) of the building should be taken into consideration in the application of these criteria, in the knowledge that inappropriate modifications and deteriorated fabric could weaken the architectural value of the building. These judgements will have to be made by the FHBRO.

Aesthetic Design

"What is the visual quality of the building (proportion, scale, detail) in the context of an architectural style or type?"

This criterion measures the architectural merit of the building, taking into account historical styles and/or building types. A building may deserve high marks if its design is successful and visually attractive, whatever its style or type. Evaluators, because they are rating buildings from a historical perspective as well as design, should attempt to discount their own personal stylistic preferences. The integrity of the building may affect the rating of "Aesthetic Design", since a structure that has suffered severe alterations may be weaker in visual qualities.

Functional Design

"What is the functional quality of the building (effectiveness of materials, layout and method of construction) in the context of engineering history and functional types?"

This criterion evaluates the functional merit of the building, apart from aesthetic considerations. It is intended to provide a means of giving value to our engineering and industrial heritage, where "high-style" solutions are not relevant. It measures how effectively a particular building programme has been carried out, taking into account available technology and previous solutions to particular functional problems.

Craftsmanship and Materials

"What is the quality of the workmanship and the handling of materials?"

This criterion evaluates the actual execution of the design, with a focus on quality. It takes into consideration both the choice and handling of materials. Knowledge of the historical context may shed light on the quality of craftsmanship and materials. The current physical condition of the building may

reveal the strengths and weaknesses of workmanship and materials over time. Good quality should be evident in spite of reversible changes. It is left to the FHBRO to judge whether to apply this criterion to the whole or just part of specific buildings.

Designer

"What is the significance of this building as an illustration of the work of an important designer?"

This criterion evaluates the importance of this building as an illustration of the work of an important designer?

This criterion evaluates the importance of the building in the designer's career.

"Designer" may include architects, builders or engineers, both private and public, both individually or as professional firms. The FHBRO will have to assess whether or not a designer is important (either in Canada or elsewhere) before evaluating the importance of the specific building in the designer's career. While buildings which have been demolished will contribute to the global understanding of a designer's career, evaluators should focus on surviving examples.

FHBRO Evaluation Criteria – Environment

<u>Site</u>	What is the integrity of the historical relationship between the building and its associated landscape?	<i>A. Unchanged (10)</i> <i>B. Changed and character retained (6)</i> <i>C. Changed and character heavily altered (4)</i> <i>D. Character destroyed (0)</i>
<u>Setting</u>	What is the influence of the building on the present character of the area with which it is	<i>A. Establishes present character (20)</i> <i>B. Reinforces present character (11)</i>

	associated?	<i>C. Compatible with present character (8)</i> <i>D. Negative influence (0)</i>
<u>Landmark</u>	What is the nature of the building's identity within the community?	<i>A. Symbol of city/ region (15)</i> <i>B. Conspicuous or familiar - city/ region (8)</i> <i>C. Conspicuous or familiar - neighbourhood (5)</i> <i>D. Not conspicuous or familiar (0)</i>

EXPLANATORY NOTES

Environment

The three criteria "Site", "Setting" and "Landmark" are intended to measure the present-day role of the building in the community's streetscape.

Site

"What is the integrity of the historical relationship between the building and its associated landscape?"

This criterion measures the degree to which the immediate environment enhances and strengthens the building. The associated landscape is normally that contained within the property lines and over which the owner has control. For some urban buildings, the evaluation may be limited to the interface between the building and the adjacent sidewalk or public space. Integrity is judged by considering the original or historic treatment in relation to the nature of what exists today.

Setting

"What is the influence of the building on the present character of the area with which it is associated?"

This criterion measures the influence of the building on its streetscape or surroundings, to be interpreted as broader than the limited space referred to under "Site". The "present character of the area" should be considered in an urban design sense, as well as in terms of building types. The character of urban space may be homogeneous or heterogeneous, depending on circumstances. The FHBRO will have to decide, in the case of complexes, how they wish to define "area".

Landmark

"What is the nature of the building's identity within the community?"

This criterion evaluates the importance of a building to the community. While it is partially a matter of physical landmark (i.e. a prominent church spire) it also applies to the symbolic value of a building to the community as a whole.

Appendix C:

Heritage Conservation Principles

It is the responsibility of managers whose decisions affect buildings under Crown ownership to apply the commonly accepted principles of heritage conservation to ensure interventions respect heritage character.

The principles of heritage conservation recognized internationally have been established through two centuries of exchange among conservation professionals. These principles may be found in a great number of international, regional, national, and thematic documents, such as the 1964 Venice Charter. These texts consolidate principles important in a range of particular contexts.

No one approach, no one set of principles is consistently suitable or universally applicable to all circumstances. Real-life situations demand a mix of approaches and principles, in reflecting the mixed values of complex sites. Successful conservation demands identification of the areas in which value lies, and some sense of their proportional importance. Conservation also prefers, in recognizing the rights of future generations, the most conservative approaches (those involving preservation of the existing state) and the most conservative principles (those involving caution or prudence), to ensure adequacy of evidence supporting proposals, and to minimize risk to the building.

DEFINITION: HERITAGE CONSERVATION

Heritage Conservation may encompass a range of activities dedicated to the protection and enhancement of heritage buildings, provided these are rooted in respect for the heritage character of those buildings.

Many words may be used to describe activities within the heritage conservation field, including, for example, repair, preservation, stabilization, restoration, reconstruction, replacement, rehabilitation, and so on. All such approaches may be seen to represent lesser or greater levels of intervention; all may be considered to be conservation activities, provided they have as their aim the protection or enhancement of heritage character. It is worth noting that contemporary definitions of conservation are both backward-looking (concerned with protecting important elements from the past) and forward-looking (using the past to enhance, by inspiring the form and direction of future development).

MINIMUM INTERVENTION

1. Heritage character is best protected by a minimum intervention approach, that is, by selecting approaches to meet functional goals which offer least harm to heritage character.

In developing appropriate conservation approaches for buildings, it is always best to employ the doctrine of minimum intervention. In practical terms, this means asking first: can functional goals be met at the lowest level of intervention (say through repair)? If yes, the questioning may stop, and refinement of the chosen approach begin. If no, the same question is posed at the next highest level of intervention (say restoration), proceeding incrementally upward along the intervention scale towards replacement until a fit with needs is made.

The same questioning process may be repeated inside the chosen level of intervention, as part of its articulation and refinement. For example, within restoration as a chosen level of intervention, the intervention scale might range from reduction to addition. The first question might be: can goals be met by reduction, that is, through removal of certain elements? If not, can goals be met through reinforcement, or addition? If not, must elements or motifs be entirely reconstructed or rebuilt? The questioning process is always linear, moving from those approaches offering least negative impact to those of highest impact on the building. If rehabilitation is the chosen level of intervention, can goals be met with the addition of reinforcement, with strengthening devices or laid-in systems? If not, can goals be met with selective replacement of systems or elements?

Gutting and stripping of interior systems, floors and finishes would only be considered, but only as a last resort, when all other less demanding approaches have been determined unable to meet needs.

The minimum intervention approach may also be applied to determining treatments appropriate for deteriorated building elements. Where windows require upgrading to meet contemporary standards of energy conservation, for example, it is useful to ask if those goals can be met through simple repair? If not, can they be met through addition (retrofitting) of additional elements? If not, through restoration of missing elements? And if not, can they be met finally by replacement? The thrust of this minimum to maximum orientation ensures that replacement is the last - not the first - option considered, in determining appropriate intervention.

EACH CASE UNIQUE

2. Respect for heritage character requires adoption of a case-by-case approach to intervention analysis and decision-making, built upon understanding of the unique values and circumstances of each heritage building.

Effective heritage conservation demands approaches for buildings and projects that are in tune with their particular qualities and with the conditions encountered. This demands a commitment to research and understanding sufficient to identify those qualities and conditions, and an avoidance of formula-like approaches which provide generalized responses to what are always unique situations.

BALANCING PRINCIPLES

3. Interventions respectful of heritage character will balance application of heritage conservation principles concerned with caution, with honesty and with fit, in relation to the most important values of the heritage building.

Generally speaking, the values of heritage buildings guide the selection of both approaches and principles appropriate for their care. While the body of doctrine in the heritage conservation field encompasses dozens of international, national, and thematic documents or "charters" and hundreds of individual principles, generally speaking these latter fall into three broad areas: those concerned with caution (prudent care), those concerned with honesty (concern for truthful expression), and those concerned with fit (concern for compatibility of the parts and the whole). Conservation approaches will define an appropriate balance among values to be respected, and accordingly require an appropriate balance in the areas of principles to be applied.

Values	Approaches	Principles of...
material values	preservation	caution
formal values	restoration	honesty
contextual values	adaptation/rehabilitation	fit/compatibility

PRINCIPLES OF CAUTION

4. Interventions respectful of heritage character should be guided by the principles of caution, particularly when dealing with material values. Here, the primary concern is preserving surviving building fabric.

Where material (or artifactual values) are pre-eminent, prolonging the life of surviving historic fabric becomes the primary concern; generally speaking, a preservation approach focused on stabilization/consolidation, and supported by a concern for caution in the conservation principles applied will provide the best means to respect these values. A principle of caution is investigation: for example, ensuring defects or problems are fully understood before prescribing treatments, and using solutions which have been well tested in the field.

PRINCIPLES OF HONESTY

5. Interventions respectful of heritage character should be guided by the principles of honesty (for example, basing choices on available evidence), particularly when dealing with formal or design values. Here, the primary concern is preserving the visual coherence of a significant form or stage in the evolution of a building in order to re-acquire perceived symbolic importance.

Where formal (or design) values are of most importance, efforts to recover lost or obscured forms become important; in general, approaches requiring restoration of lost coherence or clarity to reinstate symbolic significance, supported by concern for the principles of honesty, will be most appropriate in ensuring respect for those values. A principle of honesty is legibility: for example, the need to ensure added or altered materials are distinct from significant historic materials, without impairing the aesthetic value of the whole.

PRINCIPLES OF FIT/COMPATIBILITY

6. Interventions respectful of heritage character should be guided by the principles of fit (or compatibility), for example, harmonizing proportions, colour, texture, forms, materials or structural characteristics of added elements, when dealing with contextual values. Where contextual values are concerned with physical relationships, the primary concern may be preserving or re-establishing important relationships between and among building elements and the whole; where these values are concerned with functional context, re-establishing proper fit between a building and its use would become important.

When dealing with contextual values (where the values of individual elements or activities in a building are a function of their relations to a larger whole: building to site, building to use, or elements to the whole), efforts to maintain the quality of existing relations or to regain former relations are encouraged; generally, approaches that adapt or rehabilitate buildings to changing circumstances, supported by application of the principles of fit (or compatibility), will be most appropriate. A principle of fit is harmony: for example, the need to maintain or re-establish harmonious relations between a building and its site.

INTERDISCIPLINARY COLLABORATION

7. Interventions respectful of heritage character are best supported through wide and ongoing technical consultation with specialists in the field's pertinent disciplines.

Conservation problems are generally complex, and demand technical expertise in a wide variety of areas. Consequently, such problems require interdisciplinary collaboration for their resolution. Departments of the federal government rarely have the requisite expertise in-house; FHBRO technical support units such as the Heritage Conservation Program, Real Property Services, Canadian Heritage/Environment Canada Dedicated Unit are prepared to provide advice for FHBRO projects. This support may come in the form of direct consultation or in directing departments to the sources of expertise which they require.

RESEARCH PRIOR TO INTERVENTION

8. The understanding essential for respectful intervention can only be assured through adequate research prior to intervention.

The research efforts of historians, engineers, building and materials science specialists, architects, heritage recorders and any other disciplines whose skills contribute to achieving adequate levels of understanding of a heritage building should be integrated with research contributions coming from representatives of the custodians. All those involved in the research process must ensure adequate, permanent, and accessible documentation of their findings. Adequate means of information management must be established and full accessibility of data ensured. Achieving related goals may require the collaboration of information management specialists and custodians in designing information management systems which meet contemporary needs and employ appropriate information transfer technologies, be they computerized data-banks and electronic networks, or paper files.

Appendix D: History of Sonargaon

Background

It is difficult to determine the exact location of the medieval city of Sonargaon. Khasnagar, near the modern museum, is said to have been the administrative centre of the principality over which Dasaratha Deva, the Hindu king of Central Bengal during the medieval period was reigning. The pre-Muslim principality of Sonargaon was situated at the confluence of rivers the Dhaleswari, Sitalakhya, the old Brahmaputra and Meghna and included Vikrampur with which communications were maintained across the river routes. The administrative headquarters of the Hindu principality had access to the Meghna along the Menikhali which seems to have shifted at a later time.

Although no traces of the Muslim capital can be detected at present, one can assume on archaeological evidence, that a rich and extensive Muslim settlement must have grown over the entire Mograpara and Goidi region which contains

Fath Khan's mosque, ruined buildings and tombs of Dargabari, Azam Shah's tomb, two mosques of Goaldi and other relics of historical importance. Even in the later part of the nineteenth century, the people of Mograpara used to believe that the capital city was located in this area. Every metropolitan city of medieval India including those of Gawr and Pandua, used to be built within a fortified space. But traces of fortifications are not found in Sonargaon, which now has only scattered buildings and tombs interspersed by human habitations, meadows, jungles and cultivable land. Near Azam Shah's tomb, a large area called 'damdama' or fort exists, which consists of a raised circular ground surrounded on three sides by low lands and on the south by the Menikhali river. It is believed that a fortification enclosing the royal palace existed at this place.

But the absence of any traces of fortification in the 'damdama' area seems to negate this view. But to base a positive conclusion on a negative piece of evidence may be entirely misleading. James Wise advocates a similar view when he says that the fort stood on the coast of Baidyer Bazar where the Meghna flows. To accept this view, one has to presume the entire city has disappeared into the silt of the Meghna. On the archaeological evidence cited above, one has to assume that most of the residents, including probably some nobles and merchants, lived in the urban area of what is now known as Mograpara and Goaldi. When the administrative centers shifted to Muazzamabad towards the end of the fourteenth century, a considerable number from this population must have moved to this city.

The Bandar area, bounded on the west by the river Sitalakhya, which was connected with the river Meghna in the east by an artificial canal known as the Menikhali river, had a gradual expansion in so far as its commercial prosperity and growth of population were concerned. In 1345, when Ibn Battuta visited the place, the port was of considerable importance. He found gold and silver coins in circulation to facilitate exchange and also a Chinese junk ready to sail. But in the fifteenth and sixteenth centuries, wealthy merchants must have settled in Bandar to participate in the growing economic activities of Sonargaon and Muazzamabad. At present there are two Sultanate mosques here built by Haji Baba Saleh and his tomb. Several inscriptions recovered from this place indicate that there were similar other buildings here to meet the needs of the growing population of the port.

Muazzamahad, about 20 km. north of the Dhaka city and situated on the bank of the old Brahmaputra, was a mint town, an administrative headquarters as well as a port of considerable importance. As it was the heart of an iqlim (literally 'kingdom'), it must have occupied an extensive area peopled by officials of high positions, merchants and scholars. The Sultanate mosque constructed in the early part of the 15th century and the tomb of Shah Langar found at this place, do not speak of its former glory.

While pointing to the historical importance of the places mentioned above, one has adequate reasons to believe that at the present stage of knowledge, it is impossible to determine the exact location of the capital city of Sonargaon. Gawr and Pandua are very fortunate in this respect. Their ruins, though scattered over large areas, give a positive clue to the positions they occupied at different periods of time on the bank of the Ganges. But it is clear from the account of Fei-Sin and the early 17th century work of Baharistan-i-ghaybi, that the metropolitan city of Sonargaon and Bandar were both well-fortified urban centers.

Although most of the governors of Bengal in the early Sultanate period had the natural tendency to defy the Delhi authority either tacitly or by declaring independence, Shamsuddin Firuz (1301-1322) issued coins in his own name from several mints including that of Sonargaon. Taking advantage of the process of disintegration through which the Delhi kingdom was passing, local adventurers in Bengal tried to establish a dynastic rule for themselves. Out of this political chaos the independent Sultanate of Bengal came into being. During the period of 1338-1333, Sonargaon enjoyed the status of a capital city under the house of Fakhruddin Mubarak Shah. In fact, Sonargaon began to appear as a mint town on the silver coins of Shamsuddin Firuz, the earliest one dating in 705 A.H/1305 AD. His son and successor Ghiyasuddin Bahadur (1322-1328) struck silver and gold coins from this mint. On the gold coins dated in 728 A.H/ 1328 A.D., he added the epithet 'hadrat' to Sonargaon to indicate the political importance of the town. Fakhruddin Mubarak also issued a gold coin in 739 A.H./1339 A.D. on which Sonargaon has been termed the hadrat Sonargaon. His silver coins issued from Sonargaon bears the expression 'hadrat jalal', which indicates that the place had become by that time a royal residence. This appellation appears also on some silver coins of Ilyas Shah (1342-1358) and his successor Sikandar Shah (1355-1393). Thus, numismatic evidence points to the political and commercial importance of Sonargaon.

An inscription issued in the reign of Husayn Shah, indicates that Muslim rulers were expanding their territories using Muazzamabad, the new mint town near Sonargaon, as the military base. Although Sonargaon was no longer a mint-town, it was probably placed under a governor who had to attend the court of Gawr. The Portuguese mission, which came to Gawr in 1521, noticed a well-decorated big ship on the Ganges, which belonged to the Governor of Sonargaon. The port or Bandar seems to have been serviceable when Islam Khan's forces occupied it in the beginning of the seventeenth century.

It is very difficult to trace the growth of the city of Sonargaon. The present day Dargabari area seems to have been the earliest Muslim settlement. Sharafuddin Abu Tawwama, a great Hanafi scholar, came from northern India in the last decade of the thirteenth century to settle at this place where his tomb is found, together with those of some other saints. He established here a madrasa and a khanqa to teach both religious and mundane subjects. Adjacent to his tomb, a large area is shown to have contained the Abu Tawwamas madrasa. It is

interesting to note that in this area, there are two Gawripattas or the lower parts of Saivic phallic symbols. In those days, khanqas used to be erected on the ruins of earlier Hindu Buddhist temples and shrines with a view to attracting devotees of different ethnic affiliations. The place has a Sultanate mosque, which was renovated in the Mughal period. One does not know if the earliest administrative headquarters were also established near the madrasa complex. Some of the ruined buildings of the place are called tahkhana, takshal, or naubat khana, which indicate that the place was later on associated with an administrative centre of considerable importance.

It is perhaps no mere accident that Abu Tawwamah's arrival at Sonargaon almost coincided with the conquest of Bangal by Ruknuddin Kaikaus, who issued a coin in 1281 from the kharaj of this newly conquered territory, and that Bengal rulers like Shamsuddin Firuz struck coins from the mint of the city of Sonargaon as early as 1305. Solely territorial conquests would be meaningless unless followed by a process of peaceful conversion, and also by the building of religious and cultural institutions to educate converts. In other parts of Bengal, Muslim conquerors, warrior saints and peaceful Sufi missionaries cooperated with one another in order to strengthen the material and moral base of the newly established state system.

Fakhruddin Mubarak Shah (1338-1349) was the first Muslim ruler to establish an independent dynastic rule centering around Sonargaon.¹¹ He expanded his kingdom in the south-eastern direction by conquering Chittagong, which he connected with the metropolitan region by a road connecting the city and Chandpur opposite Sripur. The remains of this road were known until recently as the Fakhruddins Path. The early Ilyas Shahi rulers (1353-1415), the house of Raja Ganesh (1415-1435) and the Husayn Shahi Sultans (1494-1538) had direct control over Sonargaon. Two inscriptions of Jalaluddin Fath Shah (1481-1487) issued from Bandar and Muazzamabad in 1481 and 1484 respectively, show that this ruler and other Sultans of his dynasty ruled over this region. Although one knows nothing about the Abyssinian rulers' (1487-1494) relationship with Sonargaon, there seem to be no violent dislocation in its political history. Also, Alexander Cunningham detected in this region traces of the Grand Trunk Road constructed by Sher Shah (1538-1545). An inscription dated in 1569, shows that a mosque was constructed somewhere near Rekabi Bazar in Sonargaon in the reign of Sulaiman Karrani (1564-1574). But one does not know how effective the hold of the Surs and the Karranis was in this region.

Sonargaon developed into an independent kingdom under Isa Khan, chief of the Bara Bhuiyans. Before his death in 1599, Isa Khan had brought under his control parts of the Dhaka, Tippera and Mymensingh districts and some portions of Rangpur, Bogra and Pabna. These extensive territories were inherited by Musa Khan, Isa Khans son and successor. For his political supremacy, Musa Khan was dependent on the strategic region south-east of Dhaka. Lying at the confluence of the Padma, the Lakhya and the Meghna, it provided him with an

impenetrable natural defense. Also, the well-protected capital city of Sonargaon, about 3 miles (5 Km.) east of Khizirpur and 9 miles (15 Km.) south-west of Dhaka had a famous port which seems to have been protected by fortifications. Most of these places located at the confluences of rivers, gave to Musa Khan rare facilities of natural defense. Depending on these fortified positions and assisted by the coalition of twelve chiefs he had formed, Musa Khan fought the Mughal forces. He gave stubborn resistance to his formidable enemy by erecting temporary fortifications and attacking them with unexpected suddenness, particularly at Dakchara and near other strongholds. But the able generals of Islam Khan with their superior strategy and effective technology could occupy all the posts including Sonargaon, which fell to the Mughals in 1611.

Sonargaon, as one of the Sarkars (govt. of Bengal) of the Bengal Suba, had 52 mahals, in addition to the divisions and towns of Isa Khan's kingdom. In Raja Todar Mall's arrangement, the Brahmaputra shown as the western boundary of Sonargaon, is probably identical to the old Brahmaputra, which was a large river in those days flowing at earlier times along the course of what later came to be known as the Menikhal River. The Sarkar of Sonargaon was bounded on the east by the independent kingdom of Tippera and on the north by Syihet. Sonargaon became an insignificant place so that the European writers had no proper idea about its location. In Major Rennells' 'Memoir' published in 1785, Sonargaon is said to have dwindled to a village. When Buchanan-Hamilton visited the area in 1809, his informants could not give him any idea about its exact location.

Society:

It is possible to detect the several classes in the society that existed in medieval Sonargaon. At the top of the social hierarchy there was the Sultan decorated with a number of regal titles and possessing an impressive court, a well protected palace and other kinds of royal paraphernalia. He was the pivot around whom the entire administrative machinery and the cultural life of people of upper social grades evolved. Below the Sultan, there was a military aristocracy, mostly consisting of Turkish, Arab, Habshi, Iranian, Afghan and Mughal origins. The nobles and generals had very often decorative titles conferred upon them according to their ranks and possessed perhaps land assignments. The highest executive officer in a province or in charge of a town had the titles of wazir (literally minister; but, in reality, a high-ranking official controlling financial affairs) and sarlashkar (commandant) sometimes in combination with jamdar i-ghaymahalli (extra-ordinary ward-robe keeper).

The Sufis and the Ulama, generally regarded as religious groups, played a significant role in the religious and cultural life of the country. Sharafuddin Abu Tawwama, Yahya Maneri and their disciples, and Alaul Haq, Shaykh Anwar and Shaykh Zahid, were known for their personal piety and learning.

The upper class could be distinguished from the lower classes of the Muslim population who were converted from Hindu, Buddhist and tribal people, and who represented a variety of professions hardly distinguishable from those of their non-Muslim neighbors. Economically, weavers and cultivators were probably the important groups of the Muslims. It is not known how much tension existed between the ashraf (Noble man) and the atraf (Commoners) but it seems to have been acute in the Mughal period.

Hindus belonged to various castes. The Brahmans, Vaidyas and Kayasthas were at the top of the society. A considerable number of them formed the landed aristocracy functioning as the 'Zamidnars' and different kinds of revenue-farmers. Mixed castes included such professional groups as karanika (scribe), ambastha (physician), tan travaya (weaver), gandhavanika (dealer in spices), napita (barber), karmakara (blacksmith), kumbhakara (potter), kamsakara (worker in copper and brass), varajibi (betel-vine dealer), modaka (sweetmeat-maker), sutradhara (carpenter), suvarnakara (goldsmith), suvarna vanik (dealer in gold or bullion), tailakara (oilman), saundika (vintner), jalika (fisherman), chandala (an untouchable caste), charmakara (leather-worker), ghattajivi (ferryman), and dolavahi (palanquin-bearer). A number of tribal and lower-class groups could be regarded as antyaja or untouchables placed outside the boundary of the caste hierarchy.

In the absence of concrete archaeological and literary evidence, one has accepted a theoretical framework of the caste system, ideally existing in Sonargaon. One has good reason to believe that Vikrampur, a centre of caste rigidity accentuated by Sena orthodoxy, very often formed a part of Sonargaon. Therefore the social classes of this region were not likely to be quite different from those existing in Vikrampur. It may be mentioned here that a caste represented a profession as well as a particular ritual status for the group of people who belonged to it.

During the end of the 17th century, the Hindu-Buddhist society of Sonargaon was going through a process of religious transformation. Because of the caste distinctions characterizing this society, along with the simultaneous presence of a convincing faith presenting new ideas through missionary and administrative agencies, people began to convert. There came into being a new society which had inseparable ethnic and linguistic affiliations with its Hindu-Buddhist and tribal counterparts. How far conversion could change or transform the social or economic status of people is a moot point. The caste ethos, which permeated professions in the Hindu society, was now brought into the new social order. The masons, fishermen, dancers and similar other lower groups were ajalachala sudras or low-caste Hindus, from whose hands Brahmans would not accept water. Although some of these people of low-class origins had accepted Islam, their professions as well as their social status did not change. Thus, indigenous Muslim social classes were but the counterparts of the Hindu castes tied to their

original professions. Contrasted with these lower-class Muslims, who had a wide variety of professions as well as totemistic and animistic inclinations, indistinguishable from those of their Hindu-Buddhist neighbours, the upper class consisted of Arab, Turkish, Persian, Afghan and Mughal elements. While some of the immigrants had established dynastic rule, others constituted what may be called the nobility as well as the Ulama. There was hardly any communication between the upper and the lower classes of Muslims. This state of social isolation characterized the Muslims down to recent times. In the Mughal period, the people of alien identity came to be known as ashraf ('refined,' noble'), whose aristocratic lifestyle made them a distinct group in the Muslim society.

Traces of residential buildings do not exist at present in Sonargaon. The proverbial Isa Khan's gate near Panam, and the Naubat Khana and Tahkhana buildings in the Dargabari area indicate nothing about the brick-built houses of the upper-class people who had probably a life pulsating with wealth and luxury. No trace of the royal palace can be detected in the midst of the ruins which are found in the area. Sonargaon was the capital city of Bengal only for a short period of time, although as a provincial town, it had a longer life. It seems that the ups and downs of an unsettled political life that Sonargaon had experienced for a long time, prevented stately royal buildings from coming into being. Ibn Battuta has indicated how slavery and homosexuality were prevailing in a section of the people in the port area, which was visited by foreigners including merchants. Ethnically the upper class people of Sonargaon were not much different from those of Gawr and Pandua. So, the different accessories of life of the former were probably identical with those of the latter. David McCutcheon has contended that the do-chala type of thatched huts originated in eastern Bengal.

This kind of hut was made in the villages by the poorer classes. Ralph Fitch, who visited Sonargaon towards the end of the sixteenth century, states that the houses in this region were covered with straw, and had few mats round about the wall and door to keep out tigers and foxes. 'Many people are very rich. Here they will eat no flesh, kill no beasts; they live on rice, milk, and fruits. They go with a little cloth before them, and all the rest of their body is naked...'.

It has been said that the houses of these people were 'elevated above the highest tides as the whole area was traversed by many canals and natural creeks'.

The distribution of population in Sonargaon, as mentioned by James Wise about 125 years ago, indicates how Hindus and Muslims also lived in mutually exclusive areas in earlier times. To the north and west of Mograpara, nine-tenths of the villages had Muslim population and in those to the east.

Culture:

Islam spread rapidly in Sonargaon, after it had been conquered by the Muslims towards the end of the thirteenth century. This is proven by the extant mosques in Bandar, Mograpara and Mahjampur and also by those mentioned in the epigraphic records discovered in this area. Haji Baba Saleh, who lies buried in Bandar, built a number of mosques in the port towards the end of the fifteenth and beginning of the sixteenth century. He went to Mecca and Medina to perform hajj and visited also the footprints of the Prophet. Sharafuddin Abu Tawwama, the founder of the madrasa-khanqa complex of Sonargaon and Taqiuddin who lived in the reign of Nusrat Shah (1519-1532), was a great specialist in 'fiqh' and 'hadith'. In fact, the Ulama and the Sufis could convert a large number of people and thus built up a Muslim society of considerable importance.

Mosques, madrasas and khanqas were centres of learning and probably symbols of proselytisation. Abu Tawwama's madrasa was a great institution, which attracted students from different parts of the sub-continent. This scholar was a specialist in jurisprudence and traditions, and possessed an adequate knowledge of chemistry and of the natural and occult sciences.

Hinduism, in its puranic and animistic form, seems to have been deep-rooted in the country. Danuj Ray, the Hindu king who reigned in Sonargaon towards the end of the thirteenth century, was a vaisnava. Gawri-pattas found in Dargabari also, indicate that the fertility cult was popular in a section of the Hindu population.

The coins of Danuja-mardan and Mahendra (identified by N. K. Bhattasali with Raja Ganesh and Jadu respectively) issued from Suvarnagram in the early fifteenth century, styled them to be dedicated to the feet of 'Chandi'. At about this time of interest, many works on Tantricism were composed in Mymensingh and Tippera, which borders Sonargaon. Sakta-tantric elements could probably be detected in the Hindu religious life of the country. Beliefs in legendary stories led to the growth of such places of pilgrimage as Langalband and Panchami Ghat on the Brahmaputra, where many Hindus used to take ceremonial bath in the month of Chaitra when the moon was in a certain lunar mansion.'

During centuries of Muslim rule, a considerable number of ethnic and culturally diverse peoples came to this region to add to its historical complexity. Turks, Persians, Arabs, Abyssinians, Afghans and Mughals shaped the history and culture of Sonargaon, where before one could notice Hindus, Buddhists and tribal people of Mongolian origins living since the pre-Muslim period. It can hardly be believed that these groups of people could have always lived in a state of isolation, thereby retaining their own racial and cultural identity. There must have been mingling of people through marriage and conversion, creating a situation of race-color complexity, which characterized the people of the entire Gangetic Delta.

As in the earlier period of Muslim rule, so also during the times of Isa Khan and his son and successor, Musa Khan, the Muslim rulers had to depend upon Hindu officers and Hindu revenue farmers and tax-collectors that had a better knowledge of the peasantry. Although the administrative affairs at the central positions could be controlled by the military aristocracy of foreign origin, these groups of Hindu gentry and nobles had control over the local affairs at different levels of the society. Hindu officers were appointed to important administrative positions. Ramai Lashkar and Janaki Ballabh were commanders of the Musa Khan's land army and Mathuresh, Musa Khan's court poet, wrote Sabdaratnabali, a Sanskrit dictionary, Hindu Zamindars joined the coalition which this ruler had organized against the Mughals, and fought the Mughal forces desperately. In fact, feelings of a regional affinity grew among these Hindu and Muslim rulers, when they had been giving resistance to a common enemy.

Ibn Battuta founded Sonargaon in 1345 A.D. at the initial stage of its growth. The diversion of the international trade route from the Persian Gulf area to the Alexandria-Cush-Aden-Cambay-Malacca line, coupled with the growth of Malacca in the east and Cambay in the west, and the gradually increasing demand for spices in Europe which expedited the production of industrial goods, particularly cotton fabrics, in the coastal regions of the sub-continent, accelerated the progress of trade and commerce in India, in the fourteenth and fifteenth centuries. Sonargaon, feeder port in this commercial system, naturally had a share in the international trade. Corresponding to this centre of commerce, there was on the opposite side of the Meghna, another port, called Sripur, located at its confluence with the Kirtinasha. Ships could easily move from these ports towards Chittagong, Malacca in the Malay Peninsula and Samudra-Passe of north Sumatra. Naturally, wide varieties of cotton cloth and a considerable quantity of rice produced in this region could reach different parts of India, Ceylon and South-East Asia. So the economy of Sonargaon and also that of other parts of Bengal, were enriched by a stable monetary system as well as by a mercantile community, which must have grown centering around these important trade centers. As administrative centers of considerable importance, Sonargaon and Muazzamabad could acquire the additional dignity of metropolitan mint-towns. Naturally a cultural elite could flourish at each of these urban centers adhering to their own life-style.

The decline of Sonargaon started in 1608 with the establishment of the Mughal capital of Bengal in Dhaka, and with the conquest of the kingdom of Isa Khan by the forces of Islam Khan in 1611, it became one of the sarkars of the Bengal subah and lost its former political prestige forever. Mughal governors had to erect fortifications at Hajiganj and Sona Kanda to prevent Magh depredations, which must have devastated the cotton producing rural areas as well as the centres of textile production. But in reality, the decay of cotton manufacturers began when the English East India Company adopted a calculated policy of destroying artisans and industrial institutions of Bengal, with a view to accelerate the

progress of the Industrial Revolution in England in the later part of the eighteenth century.

Appendix E: Questionnaire Survey

A questionnaire survey has been conducted among the local people and the questionnaire is to know about the folk art museum and its site surroundings. It was also the primary source of information to know about the problems, within the building and the site, general people's ideas and opinion about saving the building and their expectation.

The Questionnaire:

Name: _____ Age: _____

Occupation: _____ Sex: _____

The purpose of visiting the site?

Number of times visited the site?

What do you know about Sonargaon?

What do you know about sonargaon as historic place?

In your opinion what is the main attraction of the site?

What do you know about this building?

In your opinion what are the problem of this building?

Do you think the building should be conserved?

What do you think about the building in socio-cultural context?

Analysis:

The outcome of the questionnaire survey is that about 80% visitors visit the site as it is a historic site. But they are disappointed that the historic building is not well maintained, and they are lacking proper functionality. Thus, they are losing their attraction, including the Old Folk Art Museum Building. Many people expressed their opinion indicating that the buildings should play more active role in the development of that area and should be conserved properly.

Appendix F: Interviews

Interview with Barry Padolsky:

The interview with Barry Padolsky was focused on the value of heritage structures, as well as their impact on the transformation. According to Barry Padolsky, for a successful transformation, we have to find out the cultural and aesthetic values and also viable use of the heritage structure. Otherwise, we cannot justify preserving the structure. The other key factor is to find out the source of income, to justify the economic values and will eventually be leading towards the historical and architectural values of the structure. He also added that, according to FHBRO for the highest respectfulness of the historic structure, a minimum intervention must be considered. But in some cases, if minimum change is considered to keep the highest level of respect to the structure, that may bring the risk of possible other uses of the structure. So, when the viable uses of the structure comes into question, then for the greater interest for the long-term protection of the historic structure, may be a need to consider a lot of changes.

Interview with Julian Smith:

In an interview with Julian Smith, the focus was on the architectural aspects and approaches for a successful transformation. He raised the issue of compatibility of use and form, creating the cultural landscape within the building so that the people could relate to the old building through the new use. He explained the old building as an artifact and evidence of the past, its original use can become only memory, but the artifact will contain some of the evidence of that old use. He discussed about the craftsmanship and materiality of the building, augmented with the social and cultural dimension of the building, which are a source for cultural identity. Overall understanding of the building before transformation with respect to its old use pattern, when a new use is introduced.

Interview with Stuart Lazear:

The focus of the interview with Stuart Lazear was to discover the government initiatives for protecting the built heritage, rules and regulations and the overall process of transformation in the Canadian context. He explained about the legislations and heritage acts at different levels of government, such as federal, provincial and municipal. He explained about the designation process of the heritage buildings and about the responsibilities of the governing bodies and the citizens for protecting the built heritages in Canada.

Appendix G:

Process of Transformation

In Canada historic preservation is considered at three levels: including the federal, provincial and municipal. Federal policies are national and serve equally for all. Federal contracts and agreements with the provinces have an effect on the municipalities, and, in turn, the individual citizen. Provincial influence exists within the boundaries of the province and for the benefit of those within those boundaries. Certain things may be done differently in various provinces, as a federal program is selected, implemented, or adopted by the provinces within the provincial realm. In turn municipalities take care of the needs of all individuals within their jurisdiction. They have enabling or direct legislation from the provincial government to establish those powers and decisions with respect to the conservation of historic resources. In addition, provisions have been made by the federal government, by all provinces and by a few municipalities within these areas of influence and responsibilities.

Stages of Transformation

Survey: "Surveying is the essential first step without which historic preservation is impossible. Nothing can be preserved unless it is known to exist, nor can an adequate case be made for preservation." (Carl Feiss, FAIA, Historic Preservation Tomorrow) The survey is the very first stage of any historic preservation. It is actually the inventory of the worthwhile buildings in a place. The Canadian Inventory of Historic Buildings is a nation wide survey of early buildings, which has been underway since 1970. This is basically a system to provide information about the buildings, so it is convenient to utilize that information for any preservation or intervention. The survey information is organized to provide a simple and comprehensive method of classifying the architectural elements and building techniques found in Canadian buildings from the earliest surviving ones. The system also includes the utilization of contemporary computer technology for tabulation and retrieval. At the first stage of the survey, the recording of exterior details and background information is undertaken. Later on, it includes the recording of the interior style, floor plans and also complex structural notations.

Evaluation and Selection: With the all information gathered from the survey, the next step is the evaluation and selection of buildings. Here, in Canada the legislation at both federal and provincial levels relate to a historic preservation that must be evaluated on a national or province-wide scale.

Evaluation Criteria: There exists some criteria based on which the buildings are evaluated for judgement. Professionals, such as architectural historians and architects, are involved in this process of evaluation. This process generally follows a scoring system in five basic considerations such as historical (30 points), architectural (25 points), urban design (15 points), physical condition (44 points), and modification of original design (44 points). Buildings scoring highest get the priority

of preservation. They are of interest at the national level as national significance structures and should be preserved at any cost.

Buildings with a second level of scoring are related to local interest, rather than national importance, and buildings at third level of total points are important enough to be published, for consideration by local planning authorities. Ann Falkner listed the criteria as below in the handbook for the preservation of Canada's architectural heritage:

History:

(a) Associated with a person of interest or significance

- Early settler or developer
- Town official, lawyer, doctor
- Member of provincial or federal government
- Inventor
- Artist or writer, architect or craftsman
- Royalty or prime minister or president
- First settler of an ethnic group
- Town character or black sheep or private or out law

(b) Associated with significant event or early use

- Coach stop, hotel, first school, hospital, church
- Discovery of gold, silver etc.
- First court house, jail, city hall
- Signing place for agreements, treaties
- First landing or land fall
- Beginning of early institutions or companies e.g. RCMP, Hudson's Bay Company, grain industry, shipping, mining, railways
- Association with an ethnic group, settlement, culture, industry
- Famous feud or battle
- Invention, scientific discovery

Architectural Significance:

(a) Example of particular style

(b) Example of unusual or a typical style

(c) Architect or builder of local interest

(d) Craftsman

(e) Group of structures from one period, homogeneous

(f) Unique building or structural technique

(g) Threat

(h) Environment ²

Appendix H: Graphics

Existing Drawings:

1 FOLK ART MUSEUM BUILDING
Existing Ground Floor Plan

2 FOLK ART MUSEUM BUILDING
Existing South Elevation

3 FOLK ART MUSEUM BUILDING
Existing West Elevation

4 FOLK ART MUSEUM BUILDING
Existing North Elevation

5 FOLK ART MUSEUM BUILDING
Existing East Elevation

FOLK ART MUSEUM BUILDING

6

Section AA

FOLK ART MUSEUM BUILDING

7

Section BB

FOLK ART MUSEUM BUILDING

8

Section CC

Proposed Drawings:

10 FOLK ART MUSEUM BUILDING
Proposed Ground Floor Plan

11 FOLK ART MUSEUM BUILDING
Proposed 1st Floor Plan

12 FOLK ART MUSEUM BUILDING
Proposed South Elevation

13 FOLK ART MUSEUM BUILDING
Proposed West Elevation

14 FOLK ART MUSEUM BUILDING
Proposed North Elevation

15 FOLK ART MUSEUM BUILDING
Proposed East Elevation

FOLK ART MUSEUM BUILDING

Proposed Section A'A'

16

FOLK ART MUSEUM BUILDING

Proposed Section B'B'

17

Images:

Fig 94: Proposed view of west façade (entry) from the main access to the site

Fig 95: Proposed view from the west showing the stage and sitting by the pond

Fig 96: Proposed view of the pond and outdoor display area

Fig 97: Access to the court from the lobby via hallway

Fig 98: Proposed view of the formal courtyard from the hallway

Fig 99: Proposed view of the formal courtyard

Fig 100: Proposed view of the cafeteria on the south and Krishna temple at the east end of the formal court

Fig 101: Proposed view of the inner courtyard with the photo gallery at the north end

Fig 102: View of the proposed photo gallery

Fig 103: View of the proposed photo gallery

Fig 104: View of the proposed photo gallery

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