
Heritage Conservation: Applying Scientific Method in Architecture The Lingayen Capitol Building (1918)

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Abstract

The practice of Heritage Conservation in the context of the regular practice of architecture has either been largely misunderstood or, at worse, regarded as architecture with an outdated twist. Far too many practicing architects see no need or utility for conservation and regard it as useless nostalgia and retrograde. The conservation and restoration of old structures in practical construction terms could even be qualified as plain “retrofitting” and expensive.

It is within scientific parameters that we approach the special branch of architectural practice called Heritage Conservation, and its preservation of human – in this case Philippine – values. The important link that architecture has as a manifestation of Philippine Identity can only be seen if we regard the expression of space as socio-cultural in nature, including the intangible connections of the design process to our own Philippine value systems and concepts. How we assess a heritage resource using the scientific method, in this case a heritage structure or site, will only help but aid in its judicious conservation and future use as a contemporary functioning building. The interpretation of this assessment aids us in the proper adaptive re-use of the historic building without losing its heritage value.

The Capitol Building of Lingayen, Pangasinan (1918), an outstanding example of Philippine state architecture in the American Colonial Period, will be the test case. The building is also embodied in the official provincial seal and is of historical value, and thus is of great heritage value to the people of Pangasinan as a symbol of their ethnic- and self-identity.

The building functions today as a typical capitol building of a prosperous province, with its typical problems found in almost all government buildings of overcrowding, misuse and chronic lack of maintenance - perhaps also a manifestation of the lack of

appreciation of state architecture as heritage. The conservation and restoration of this building type, retaining its heritage value without compromising its continued function as the prime administrative center of Pangasinan, will be the topic of this paper.

I. Background

Brief History of Pangasinan

“Pangasinan” means “salt pans” in Malayan and Javanese according to John Crawford. The Pangasinenses are of Malayan stock and are thought to have wandered in the archipelago from the south before settling in what is now called Pangasinan, said Dr. Baldomero Pulido, a historical researcher.

The people have their own native language. A large number also speak Ilocano plus the common Tagalog and English languages.

The province as narrated by Cortes, traces its beginnings as an administrative and judicial district as early as 1580 but its territorial boundaries were first delineated only in 1611. It has undergone several changes through the separation of some parts becoming independent territories, or by absorbing new political regions. Lingayen has always been its capital.

The name “Lingayen” allegedly originated from the phrase in the Pangasinan language meaning, “looking back.” The phrase was used to describe a certain conspicuous tamarind tree growing in the vicinity. The people passing by the area developed the habit of looking back at it until it vanished from view. It was the corruption of the phrase that the natives purportedly suggested as a name for the place, as told by Pulido in the book ‘A Pangasinan Portfolio ’70.”

The majority of the Pangasinenses are Roman Catholic as a result of three centuries of Hispanic cultural integration. In 1896, the Pangasinenses joined other Filipinos on March 7, 1898 (Pulido) in a demonstration of self-identity against the Spaniards. Pantaleon Perez, better known as Juan de la Cruz Palaris, led the Pangasinan revolt. Freedom was declared on July 22, 1898 and Pangasinan was within the sphere of the revolutionary government of Gen. Emilio Aguinaldo.

The celebration of freedom was short-lived with the arrival of the Americans. Several people lost their lives in the battle of San Fabian. Pangasinan was under the Americans effective on the 20th of November in 1899 under General Smith, the appointed Military Governor of the province.

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On February 15, 1901, Pangasinan was proclaimed as a Civil Province. Governor Perfecto Sison was the first Governor of the province and during the term of Daniel Maramba, the 7th governor, the Capitol building was erected.

Not long after the Americans were forced to leave the island as the Japanese took over. The people of Pangasinan fervently defended their land from marauding Japanese soldiers by organizing into guerilla units.

Pangasinan once again played a crucial role in Philippine history when General Douglas MacArthur landed at Lingayen Bay to fulfill his promise, "I shall return." The province had to pay the price for this role: the provincial capital was totally devastated during the shelling of Lingayen and Dagupan.

Properties were destroyed, and so was the morale of the people. The government of America assisted in the recovery of the province and through the Philippine Rehabilitation Act important buildings were reconstructed, including the Capitol building. The year 1946-1954 was a period of reconstruction and rehabilitation under the gubernatorial term of Gov. Enrique Braganza.

After the period of recovery, the province grew and prospered steadily. It has retained its first class rating from the Spanish period up to the present.

The need to preserve the heritage of Pangasinan goes beyond the conservation and rehabilitation of the Capitol building. A dignified and impressive Capitol building for the efficient service of a burgeoning population also carries with it the appreciation and value of Pangasinense cultural and historical heritage and identity as a symbol and point of reference distinct from its neighbors that glorify its people's achievements.



Figure 1: Old Photograph of the Capitol

The Concept of Value in Conservation

There is consequently a slow process of realization of the value of heritage; the existing negative reaction to anything Hispanic has to be overcome as a natural product of recent ultra-nationalism and American colonial policy. The introduction of modernist architectural precepts under the Americans with their progressive connotations must also be put in its right perspective.

National pride preaches purism: the unending search for a Philippine "Golden Age". But the rejection of classic principles of Western thought inherent in the Modernism of the early "twenties", the after-effects of post-modernism and

the damaging influence of a global culture have only made it more difficult for an emerging nation to value its roots. These roots cannot, in fact, be studied using western models, but in the context of Colonial culture and society and the inherent assimilation of indigent influences and practices.

Such existing examples of cross-cultural manifestation in all aspects of Philippine culture and the arts - first and foremost in its built heritage - must therefore be documented and preserved as a goal in itself. The value of built urban heritage as documents to exemplary Philippine milestones in art, culture, science and technology within the Asian environmental and sociological context cannot be overemphasized as a primary goal.

Its further use as a tool in understanding contemporary Philippine society, art and culture runs only second.

Private Property and the Concept of Nationalism and Self-Identity

It is also the concept of nationhood and national pride that has not been allowed to materialize in the Philippine value system. The value of a heritage structure or site as an object of national pride should be a natural development of one's pride in self and place. When the value of personal property takes precedence over national value, there is still a lack of the concept of the Filipino as a socio-cultural entity distinct and priceless, a product of all our historical experience, both good and bad. The precedence of national value over private value would then lead the way to the preservation of countless built heritage under the care of private individuals, whether religious or secular, because of its intrinsic national value as a rallying point for Philippine pride and identity.

Reasons behind the Capitol Building's Conservation as Heritage

The restoration and rehabilitation of the Capitol building would therefore be an interesting example of state architecture built during the American Colonial Period as a symbol of civic and secular precedence over religious concerns and the American brand of Democracy as colonial policy, but transformed into an inherent symbol of Philippine and "Pangasinense" self-identity and pride.

Statement of the Problem

It is with this concept that the Governor of Pangasinan, the Honorable Victor Agbayani took to task the necessary adaptive reuse of the building, making use of the inherent asset of the building as heritage to bolster its symbolism and pride of place for the Pangasinan people.

This would only be possible if the process utilized in its restoration and rehabilitation be scientifically based to ensure the integrity of the building while addressing contemporary use and future expansion. [The process presented below, therefore is conveniently structured to

follow a certain system of inquiry and pose possible solutions to problems.]

Scope of Work

The project entails the restoration and rehabilitation of the historic capitol building. This effort should bring back the capitol building to its original form and beauty without necessarily sacrificing authenticity. The monument must therefore be analyzed and appreciated to enable the recapturing of the original fabric and character of the heritage structure through judicious investigation and scientific methodology.

This can only be accomplished by conscripting a qualified restoration architect and trained and/or supervised contractors and local craftsmen.

The functions of the monument as a capitol building shall not however be compromised. Instead, it must be complemented and enhanced with the minimum of intervention and at a reasonable cost. The concepts of redistribution and adaptive re-use shall be applied.

Definition of Terms

Protection

In legal terms, the action required to provide the conditions for a monument, site or historic area to survive.

Also refers to the physical protection of historical sites to ensure their security against theft, vandalism, environmental attack, and visual intrusions. Protection also takes the form of establishing buffer zones for historic areas.

Preservation

Measures taken to ensure the survival and sustainability of a heritage structure. This involves: a) physical actions, such as conservation, consolidation, restoration and reconstruction needed to ensure the integrity of the fabric, b) programs that articulate the structure's significance for society as a whole, and c) economic and political programs that ensure the structure's future.

Conservation

Measures taken to keep the existing state of a heritage resource from destruction or change. Actions therefore that prevent decay and prolong life. This includes maintenance, repair, consolidation, and reinforcement.

Consolidation

The physical addition or application of adhesive or supportive materials to the actual fabric of the cultural property in order to ensure its continued durability or structural integrity. (See the Principle of Reversibility)²

Restoration (As quoted from the Venice Charter of 1964)

Article 9. The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins, and in this case, moreover, any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument.

Article 10. Where traditional techniques prove inadequate, the consolidation of a monument can be achieved by the use of any modern technique for conservation and construction, the efficacy of which has been shown by scientific data and proved by experience.

Article 11. The valid contributions of all periods to the building of a monument must be respected, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified in exceptional circumstances and what is removed is of little interest and the material which is brought to light is of great historical, archaeological or aesthetic value, and its state of preservation good enough to justify the action. Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work.

Article 12. Replacements of missing parts must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.

Article 13. Additions cannot be allowed except in so far as they do not detract from the interesting parts of the building, its traditional setting, the balance of its composition and its relation with its surroundings.³

Reconstruction

This means building anew. This may refer to work executed, using either contemporary or old material, or both, with the aim of rebuilding dismembered or destroyed elements, or parts of them. Reconstruction must be based on accurate archaeological and architectural documentation and evidence, never on conjecture.

Anastylosis

This "type" of restoration aims to make the spatial character of a ruined structure visually more comprehensible by reinstating its lost original form. It uses the original material that is in suitable condition and is located at the site. The work must be guided on the basis of the same rules as restoration and supported by firm archaeological evidence.

² NCCA Heritage Manual pp.8-9.

³ The Venice Charter, 1964

Authenticity

Ascribed to a heritage resource that is materially original or genuine (as it was constructed) and as it has aged and changed in time.

In the case of a heritage resource, its historical authenticity should generally reflect the significant phases of construction and utilization in different phases of its historical time line.⁴

Adaptive Re-use

A structure should be used to ensure its survival. However, its present use should be compatible with its history and its architectural integrity. Adaptive reuse is therefore neither renovation nor remodeling. These two terms imply total change and the disruption of the integrity of the original structure and its spaces.

Adaptive reuse goes beyond pure renovation and reconstruction. It necessarily includes “redistribution.”⁵

Redistribution

This refers to the arrangement of space in a structure. Past centuries had its own way of life with a different value system. This is shown in the way space is arranged. We should try to respect this difference. While this may mean a loss in terms of contemporary needs, this does not necessarily diminish utility.

Sensitive adaptive reuse would strive as much as possible to keep the original configuration and to prevent the useless destruction of structural features when installing contemporary conveniences such as air-conditioning, plumbing, etc. Proposed additions should not intrude on the original.

In ecological terms, conservation represents the ultimate in the recycling and harnessing of already existing resources. Basing itself on scientific and archival research, It highlights the value and potential of the heritage structure with the least possible expenditure.

Treatment of Utilities (the storm drainage; the plumbing and electrical wiring; the fire alarm systems)

Most heritage structures possess obsolete and unserviceable utility lines. They must be thoroughly tested—especially after more than 20 years have passed since the most recent renovation—and totally replaced with the most modern systems available.

Any proposals for air-conditioning and/or heating must take into account the additional electrical load and the possible damage to original materials resulting from a

change in humidity and temperature. Additional facilities for machinery and ductwork must be looked into.

In important buildings, a fire alarm system must be installed together with the appropriate fire fighting equipment that will do the least chemical damage to traditional building materials. In such cases water sprinkler systems are not recommended.

Measured Drawings (Documentation)

Line drawings that follow standard drafting conventions to portray in two dimensions a three-dimensional structure. Measured drawings are similar to as-built architectural drawings, except that they are generally produced years after a structure is built, not immediately after construction. Measured drawings portray conditions at the time of documentation, including the accretions, alterations, and deletions that have occurred on the original.

They are produced as a documentary record of a given structure, although they often serve as a basis for restoration work.⁶

Significance of the Study

The restoration of the Capitol Building of Lingayen, Pangasinan would show that conservation to preserve heritage as symbols of national Identity need not be limited to religious buildings or to any time period, whether colonial or not. It also debunks the premise that conserved buildings have no practical use, but that their restoration should in all cases try to retain their integrity as an integral part of architectural programming. This programming however differs from ordinary architectural planning in the sense that authenticity must always be paramount. The original intent of the builders should take precedence over any design interpretations of the facilitating stakeholders or architect; rather, a complementary use must be made to enhance its original significance.

Theoretical Framework

The theoretical framework of this project would necessarily take into consideration the integrity of the building, in this case its original intended use as a capitol building: an administrative center for the province of Pangasinan.

The first step would be to document the existing condition of the building, including all utilities and recent renovations for the past 10 years at least. Documentation would mean not only photographic but most especially measured drawings of its existing state.

Consultations would then be made with the stakeholders and owners of the heritage resource to determine the parameters of present and future use within budgetary

⁴ Feilden, B. & Jokilehto, J., Management Guidelines for World Cultural Heritage Sites, ICCROM, Rome, 1993.

⁵ NCCA, loc.cit.

⁶ John A. Burns et. al., ed., Recording Historic Structures, Wash.D.C. 1989.

constraints and maintenance realities, as well as to gain further data on the past history of the building.

Local socio-cultural behavior shall be studied and analyzed with respect to the various rehabilitation changes to be introduced to the general existing administrative process, so as to minimize opposition.

An appropriate committee will be created to aid in the proper decision-making and monitoring of conservation work.

Conservation, Adaptive Re-use and Restoration plans will be formulated, with an appropriate budget and schedule in place, as per local government requirements.

Recommendations will be made to narrow down choice as to qualifications of bidding for contractors, e.g. previous work on restoration projects etc.

Hypothesis

The principles of restoration and rehabilitation shall govern the manner of conservation of the building, but with Adaptive Re-use in mind. Modern facilities and laying-out of utilities will be coordinated with the original style and character of the old building without sacrificing practicality and appropriate building practice. Reconstruction of missing parts and incomplete details will be dealt with through thorough research and utmost care, and using as much as possible traditional materials and method of application.

There will be a need to analyze the condition of existing building surfaces for possible replastering and plasterwork. A documentation of missing and/or damaged stucco moldings and decorations will be facilitated.

The existing condition of doors and windows will also be documented. Any new or recent additions/alterations will be reevaluated to determine retention or demolition in keeping with the original building character, which will be determined by further research.

The condition of the roof tiles and storm drainage will be made. Although existing floor layouts may not be altered, their relationship to external window and door openings will have to be taken into consideration.

Methodology

a. Systems of Inquiry

1. Records on renovations of the last 10-20 years
2. Documentary Research on existing literature describing the building.
3. Architectural Documentation: measured drawings in the event that Original plans (1918) missing
4. Consultations with the client with respect to present and projected needs will be undertaken

5. Preliminary Investigation of heritage structure based on architectural knowledge on building-type, documentation and deductive reasoning

b. Research (Design) and Diagnosis

Architectural integrity and authenticity shall govern all decisions on adaptive-reuse.

All proposed conservation, restoration and reconstruction work should comply with contemporary scientific restoration, conservation and rehabilitation principles, as well as respect the function and service orientation of the provincial capitol building. adaptive reuse, see below

Restoration work should comply with the standards as required by the provincial government's use and all applicable codes.

Rehabilitation should not in any way alter the general performance/work plan of the capitol building as such, unless deemed essential to protection of original structure.

c. Tactics

There is a need for the documentation of the present condition of the heritage monument for proper problem diagnosis. There is a need for an ocular inspection with respect to the condition of existing facilities and utility lines.

After such inquiry, a study of the existing functional needs of the provincial government and the renovations that the structure has sustained.

After much consultation with the Governor and the Provincial Engineer and staff, attempts will be made to return the old building's inherent authenticity without detracting the necessary spatial needs and administrative function of the provincial government.

A continuous dialogue with the various department heads shall ensure transparency and understanding with respect to the principles of conservation and maintenance of the heritage resource, even after restoration work shall have ended.

d. Compilation of Data

Present Conditions Analysis

Project Checklist:

1. Collaborating Institutions:

Ownership: Pangasinan Provincial Government.

Restoration Architect: Arch. Rene Luis S. Mata

Contractor/s: (won through bidding) J. S. Lim Contractors

NGOs: Heritage Conservation Society

2. Legal Protection:

None – under process for local Ordinance protection

Application for Recognition by the National Historic Institute

3. Site Description:

Located in Lingayen, the capital of Pangasinan.

The province is basically a coastal plain with a land area of 5,368.2 square kilometers. It is bounded on the north by Lingayen Gulf, La Union and Benguet, on the northwest by Nueva Vizcaya, on the east and southeast by Nueva Ecija, on the south by Tarlac and Zambales, and the west by the South China Sea.

Agriculture and cottage industry are the major source of income in the province. Business and industry is always promising in the province with its rich resources and skilled laborers.

The Pangasinenses counted 2,178,412 as of September 1, 1995 census. They are a mixture bred of self-reliant, generous, hardworking, thrifty and provident citizens.

Climate

The province experiences two pronounced seasons: dry from November to April and wet during the rest of the year. Maximum rainfall is observed in August. Average monthly temperature is 27.91°C with the highest occurring in May and the lowest in January.⁷

The Seismic Factor

Of particular concern is the incidence of possible seismic activity in the region, with sometimes devastating results. The recent eruption of Mt. Pinatubo (June 1991) has led the undersigned to recommend a comprehensive structural analysis of the site, as well as the building, so as to ensure the building's protection from future earthquake damage.

The site is in a region of known moderate to high seismic activity (nominally Zone IV to the UBC2), and seismic risk and seismic design were fundamental considerations throughout. Mount Pinatubo, 100km south, erupted in June 1991 with global effects on weather and climate.

It discharged 5bnm3 of ash and pyroclastic debris (including 20 - 30 megatons of sulphur dioxide and aerosols) into the atmosphere via eruption columns 18km wide at the base and up to 30km high. The volcanic cloud circled the Earth in just three weeks and covered about 42% of the planet's surface within two months. It was the second largest eruption this century (after the 1912 Mount Katmai eruption) and managed to lower world temperatures by an average of 1°C. In the earliest stages, prior to agreeing project funding, Arup was commissioned to carry out a site-specific seismic hazard assessment and an initial ground investigation. The former was probably based on historical records of seismic activity, but did not evaluate the effects or properties of nearby fault sources. However, during the initial study, preliminary interpretation of aerial photography identified two lineaments crossing the site. Could they be active faults? Resolution of the issue was fundamental to project funding,

and a two-stage strategy was proposed by Arup, with Geomatrix Consultants from California:

- Stage 1, which had to be completed to enable financial close, involved a fault rupture hazard assessment to identify whether the lineaments crossing the site were active and to evaluate the potential for surface fault rupture during the operational life of the plant.
- Stage 2 comprised a seismic source characterization to identify potentially active faults within 25km of the site and to estimate the associated maximum earthquake magnitude and slip rate. The output of this study was then fed back into the seismic hazard assessment. The studies showed no inherently active seismic features on the site itself, but two potentially active faults were identified nearby:
 - the Hundred Islands Fault, 11km west, slip rate 0.2-1.2mm/year, fault capability magnitude M6.75
 - the East Zambales Fault, 5-6km east, slip rate 0.5-2.0mm/year, fault capability magnitude M7.05. Apart from these, another significant source is the subduction zone interface of the Manila Trench, approximately 45km from the site, capable of generating earthquake magnitudes around M7.8 - M8.9.⁸

The Capitol Building

The capitol building or the "kapitolyo" has always referred to the building of the provincial government located in the capital town or city. This building type was introduced during the American Period.

A typical capitol building follows the norm set by William Parsons, consulting architect of the Philippine government from 1905 to 1914.

The Lingayen Provincial Capitol building follows this norm. It is the centerpiece of a larger town plaza for Lingayen, located near the beach together with the provincial high school, the provincial trade school, and the governor's mansion; it forms the government center of the town plan. Separate from the center of the town and a park like environment gives the place a dignified and restful ambiance. A four-lane boulevard divided by a garden park replete with fountains connected the provincial government center with the main highway and the municipal center at the old town plaza. The entire building or its main portion is rectangular in plan, two to three stories in height, and set on a podium consisting of several steps. The entrance is at the center of the façade with one or several doors and sheltered by a two-story portico. The spacious rooms had high ceilings and large windows arranged along wide corridors. The architecture is characterized by the use of columns, entablatures and pediments.

Designed in Neoclassic [Federal] style under the supervision of Ralph Harrington Doane, consulting architect, it was constructed beginning with the laying of the cornerstone on

⁷ www.pagasa.dost.gov.ph

⁸ Fox, Adrian & Higson, Rick, Project Report, Sual Power Station, 1990--.

April 17, 1917 and was completed in December 1918 under the gubernatorial term of Daniel Maramba. There was a festive inauguration that lasted from February 10-19, 1919, featuring an agricultural and industrial fair, a carnival, parades and benefit balls, the inevitable coronation ball, and parade of the queen and her court of honor. The impressive capitol lists among the notable neo-classical style buildings in the Philippines.



Figure 2: The Capitol's facade before the restoration project

The monumental grandeur of the capitol building was ended during the Japanese bombing of the Lingayen during the Second World War. Only the shell of the beautiful building remained after the smoke subsided.

During the administration of Gov. Enrique Braganza (1946-1951), the provincial capitol, together with the schoolhouses and municipal buildings of Lingayen were rebuilt through the Philippine Rehabilitation Act Passed by the U.S. Congress in 1946. The provincial capitol was rebuilt and restored to its prewar grandeur.

At present, due to natural ageing, neglect and numerous alterations, the provincial capitol is facing serious defacement and loss of cultural and historical value if not properly conserved by the proper authority for future generations.

Diagnostics

From the Measured Drawings a Diagnosis of the building's present condition is made. Of paramount importance is the condition of the building materials relative to general wear and tear, weathering, seismic activity and war, in this case the damage during the Second World War, and the recent earthquakes and reactivation of Mt. Pinatubo. There is also the problem of site, wherein the heritage structure is located right next to the Lingayen Gulf, and the problems that can be caused by corrosion etc. due to sea air and salt.

Problems for solution/Prioritization/Cost: To reflect in Restoration Plans Based on Documentation Plans

a. Space/s: existing, for measurement - description of conditions:

The measurement of the existing renovations and partitions of the Capitolyo has revealed the modifications it has

undergone through the years. Because of the undocumented changes to the building, there is little record of the various additions and possible damage inflicted on the structure. The renovations through the Procurement Division of minor renovations become serious if we take into consideration the more than 50 years of continuous remodeling with every perceived requirement of each department and change of administration.

Of particular concern is the transformation of the once imposing high-ceilinged Ground Floor into internal office space with a mezzanine. This has significantly altered the integrity of the structure as a Capitol Building as envisioned to be large and imposing and a symbol of the province's status.

The original Session Hall at the center of the Second Floor has been relegated to space for the Secretariat, which services present Session Hall, now moved to the West Wing.

This can be especially damaging with respect to the following:

Additional Floor Space

The reinstallation of Mezzanine floors on the Ground Floor – many of these systems are not soundly anchored to the building's structural layout. The alteration of window and door openings to accommodate changes in floor levels aggravate the situation.

Utility lines: existing, for inspection

1. The addition of arbitrary toilet facilities and water lines – the original building's plan provided for toilets at each corner of the building's two floors. With every department head requesting a private toilet, water and waste pipelines are tripled, adding to the general deterioration of floors and ceilings due to leaks. Many times, the water lines pass through the windows! A separate water tank has been installed on the west wing roof deck to serve the vice-governor's office and the session hall. There is also a perceived need for more public toilets with the growing population of government constituents in the province.
2. The installation of air-conditioning units per room, each with separate lines, and split-type air conditioning at the session hall and other floors.
3. With projected loads, there is no single panel board or power room for the whole building complex, and existing spaghetti electrical lines dating at least to the 1960's.
4. Existing fire escape ladders consist of makeshift refitted aluminum utility ladders.
5. No provisions for the physically handicapped.

b. Space requirements:

All projected needs had to take into consideration the integrity of the heritage structure, as well as its original layout.

Each Department provided projected office layouts according to their perceived needs. Each plan was studied and evaluated as to efficiency, and the elimination of extraneous partitions.

Particular care was taken to check the projected need for common toilets over private ones, and their space concessions.

Additional stairs and corridors were also taken into consideration.

c. Projected Fenestration (doors and windows): existing, for measurement

Many of the wooden windows in the front, side and the rear façade east wing consist of material largely deteriorated due to continuous exposure to sea air. Much may have to be replaced and treated. The second floor windows were changed to Analok-type sliding windows probably in the early eighties. The windows at the side and rear façade of the west wing were replaced by steel windows over concrete window jambs. These may have to be returned to the original wooden windows and jambs.

d. Stucco/Plaster Moldings; Pre-Cast Concrete Works Condition Report

The use of pre-cast concrete elements in building parts and ornamentation followed the utilization of reinforced concrete and Portland cement as construction material. Many of the decorative elements formerly done in stucco and plaster now were done in cement. The existing condition of the Capitol ornamentation, if not missing, needed repair or replacement.

e. Roof deck Waterproofing

This is to prevent water seepage into the building and to ensure the interior of the building is protected from biological and chemical damage due to unwanted moisture.



Figure 3: Waterproofing of roofdeck

Structural Analysis

A consulting Structural Engineer, Engr. Ruel Ramirez, was thus enjoined to present a proposal for Structural Analysis, which was received on September 10, 2003. Further

consultation with the Governor revealed however the lack of necessary funds, so analysis would be done in the future. There was, however, no immediate concerns deduced from an Ocular Inspection of the building. It was also pointed out that the obvious “over design” of American Structural Engineers of the 1900’s, plus the high quality of American Concrete of the Period ensured minimum damage due to earthquake.

Materials Analysis [and Treatment]

The possible introduction of new materials may affect the performance of original materials, if not chemically, perhaps structurally. There is also the problem of sourcing old materials not readily available at present, such as cast-iron of the proper size for grilles etc., and wooden jambs, railings, doors and windows, where they are now scarce and now protected.

In the case of such modern materials, it is preferable to base investigations on the manual: ICOMOS, Recommendations for the Analysis, Conservation and Structural Restoration of Architectural Heritage, 2003; in most cases authenticity, heritage significance, projected future use, and general experience on material behavior will be necessary, as long as steps are taken to test and reevaluate results and procedures of conservation using the scientific method of inquiry.

Reinforced Concrete

Cement Floor Tiles, Roof Tiles

With the introduction of reinforced concrete and the use of Portland Cement as mortar and finishing, a new set of building materials was widely introduced for construction in the American Colonial Period. Consulting Architect William E. Parsons is credited with the initial contribution of the new materials for all civic and government construction, which was continued by Ralph Harrington Doane in 1918 when Parsons resigned.⁹

The use of a new building material in its construction in 1917-1918 poses new problems with respect to conservation. Reinforced concrete is composed of two elements – the reinforcing material and the concrete. Each must be dealt with separately but as a unit. Its reconstruction in 1949 bares witness to the general good condition of the Capitol building, in spite of the damage due to war, but 87 years of existence would require continued maintenance and a thorough structural analysis in the future.

“Reinforced and prestressed concrete are the basic materials of many modern buildings that are now recognized as being of historic importance. However, at the time of their construction a full understanding of the performance of these materials was still developing, so that they may present special problems of durability (poor cement

⁹ Francis S. Yu, *Phil Architecture from the 1900's to the 1960's* (unpublished thesis for M.A. Art History), 1996.

mixes, inadequate cover to the reinforcement, etc.)”¹⁰

The diagnosis and treatment of reinforced concrete as part of the heritage conservation process is vital and recent, as it deals with both the conservation of the concrete, and that of the reinforcing material, that is the reinforcing steel bars.

“...oxidation of metals...may be occurring to metal reinforcing placed inside another material and therefore only apparent through secondary effects, such as splitting and spalling of the other material. Chemical changes may occur spontaneously because of the inherent characteristics of the material or be produced as a result of external agents, such as the deposition of pollutants, or the migration of water or other agents through the material.”¹¹

Cast-Iron Grilles

Cast-iron grille work is limited to decorative grilles and partitions.

“Protection against corrosion of iron and steel requires first the elimination of rust from the surfaces (by sandblasting, etc.) and then painting the surface with an appropriate product. Heavily damaged and deformed iron or steel structures usually can't be repaired. Strengthening of weak structures can often be achieved adding new elements, paying particular attention when welding.”¹²

Wood

(Window-door jambs, doors, decorative moldings, carpentry/ mill work etc.)

Wood conservation in the structure is limited to the door and window jambs, as well as decorative millwork and built-in furniture.

“Fungal and insect attack are the main sources of damage. These are linked to a high moisture content and temperature...Poor maintenance of buildings or radical changes in the internal conditions are the most common causes of timber decay.”¹³

Photographic Documentation

For facilitation: Part of Documentation Phase

¹⁰ Recommendations for the Analysis, Conservation and Structural Restoration of Architectural Heritage, ICOMOS, 2003, p.32.

¹¹ Physical, Chemical & Biological Actions, p.18, ICOMOS, Recommendations for the Analysis, Conservation and Structural Restoration of Architectural Heritage, 2003

¹² Recommendations for the Analysis, Conservation and Structural Restoration of Architectural Heritage, (ICOMOS, 2003), p.30.

¹³Ibid.

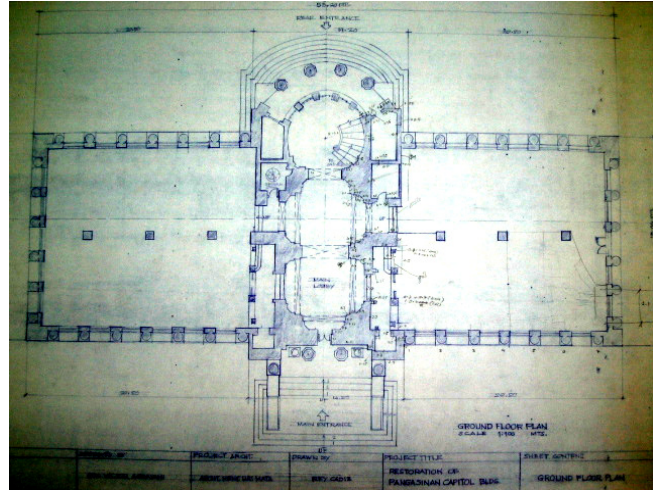


Figure 4: Ground Floor Plan

Legal Protection

Steps are being taken for the legal protection of the Capitol building:

1. The passing of an ordinance to protect the building, and the whole capitol area from alteration, destruction and/or unmonitored renovation, for ratification of the Sangguniang Bayan.

Conservation requires the maintenance of an appropriate setting: e.g., form, scale, color, texture and materials. No new construction, demolition or modification should be allowed. Environmental intrusions which adversely affect appreciation or enjoyment of the place should be excluded.

Even where aesthetic values are minor, the relationship of the place to its surroundings still needs to be considered, since the visible relationship often illuminates historical and other significance. This means that care of the place sometimes involves action outside the immediate legal boundaries of the place.¹⁴

Special Concern: Heritage Landscapes

Indicated also is the future conservation and rehabilitation of the government center in its entirety as a valuable heritage resource, including its gardens and street furniture, as well as the beach frontage. For it is not only the Capitol building but its immediate environs that will give value and point of reference to Pangasinan patrimony.

“Authenticity in setting is reflected in the relationship between the resource and its physical context. This includes landscape and townscape values, and also the relationship of man-made constructions to their environmental context.”¹⁵

2. Representations will be made for inscription in the National Historical Institute as a National Landmark: the

¹⁴Peter Marquis-Kyle and Meredith Walker, *The Illustrated Burra Charter*, (Australia, 1992), p. 38.

¹⁵B. Feilden & J. Jokilehto, *Management Guidelines for World Cultural heritage Sites*, ICCROM, (Rome, 1993), p73.

passing of the ordinance will be a great impetus in its declaration.

Financing

The project is financed by the Provincial Government of Pangasinan.

Restoration Work: Work Program/ Methodology

Additional Floor Space/Space Requirements

The reinstallation of Mezzanine floors on the Ground Floor – reinforcement of existing mezzanines were done by a different contractor. It was up to us to retrofit it to accommodate the needs of each government department.

It was decided that an open plan was to be adapted, although final concessions were made for the dept. heads to have a separate space and/or partition for their personal office. Readjustments had to be made to align the floor to existing windows to allow as much window area free to function. All cabinets to be free-standing except below the bench applied to protect users from the window area.

At the ground floor, the original grilled cash area was closed by a glass panel and installed with a one-way glass film. This was to function as a storage area.

Utility lines

All electrical lines were redesigned to handle added capacity for possible air conditioning. The former central toilet area was converted to the Power Room for the entire building.

Air conditioning of each floor was designed via split-type units for the whole floor or division to effectively lessen individual units cluttering the facades with their condensers to be hidden either at ground level or on the roof deck. The split-type air conditioning at the session hall was refurbished and their condensers located at ground level. Condensers were placed to be as unobtrusive to the eye from ground level. With the proposed open-planning office layout, it was possible to achieve cooling efficiency for the entire floor areas concerned.

A public toilet to serve the entire building was designed for the ground floor, thus eliminating all other extraneous toilets. Additional toilets for Ladies were provided below the second floor stairs leading to the third floor, while a larger Men's toilet was provided for the Session Hall. There are also toilets on the third floor. All plumbing lines and soil pipes are new.

Existing fire escape ladders were eliminated. Unobtrusive ladders located at the façade columns will be installed.

Provisions for the physically handicapped will be installed at the rear stairs for easy access.

Fenestration (doors and windows):

All original doors and windows were retained and treated as much as possible. Exposed jambs and windows were treated and painted to protect from damage by exposure to sea air.

Stucco/Plaster Moldings; Pre-Cast Concrete Works:

Cleaned and/or replaced following original parts.

Roof deck Waterproofing

Waterproofing was applied to roof deck for protection from water seepage.

References

- Alterations/Additions in the past 25 Years
Provincial Government Requirements
“American Historical Commission Collection, The.” Rizal Library. Ateneo de Manila University.
Araneta, Gemma Cruz, “Pangasinan Revisited. God's Little Barrio,” Graphic. Manila: 17 May 1967. Vol. 33.
Burns, John A. et al, ed. Recording Historic Structures. HABS/HAER, National Parks Service, U.S. Department of the Interior, Wash.D.C.: AIA Press, 1989.
“CCP Encyclopedia of Philippine Art”. Manila: CCP, 1994. Vol. 2, 3.
Fox, Adrian & Higson, Rick. “Project Report.” Sual Power Station: 1990--.
Henares, H.G. Pangasinan Folio '70, A: A Historical Document. Manila: 1970.
Marquis-Kyle, Peter and Walker, Meredith. The Illustrated Burra Charter. Australia: 1992.
NCCA Heritage Manual. 2005.
Philippine Regional Profiles 1997, North Luzon. Manila: 1997.
[pictorial] [s.l. :s.n.], [19—]
Rosario, Mendoza Cortes. Pangasinan, 1901-1986: a political, socioeconomic and cultural history. Quezon City: New Day, 1990.
Recommendations for the Analysis, Conservation and Structural Restoration of Architectural Heritage. ICOMOS, 2003
Yu, Francis S. “Philippine Architecture from the 1900's to the 1960's.” M.A. Art History Thesis. 1996.
1995 Census of Population: Socioeconomic and demographic characteristics; Pangasinan. Republic of the Philippines. National Statistics Office, Manila: 1995.
The Ayala Museum.
The Pangasinan Provincial Library
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