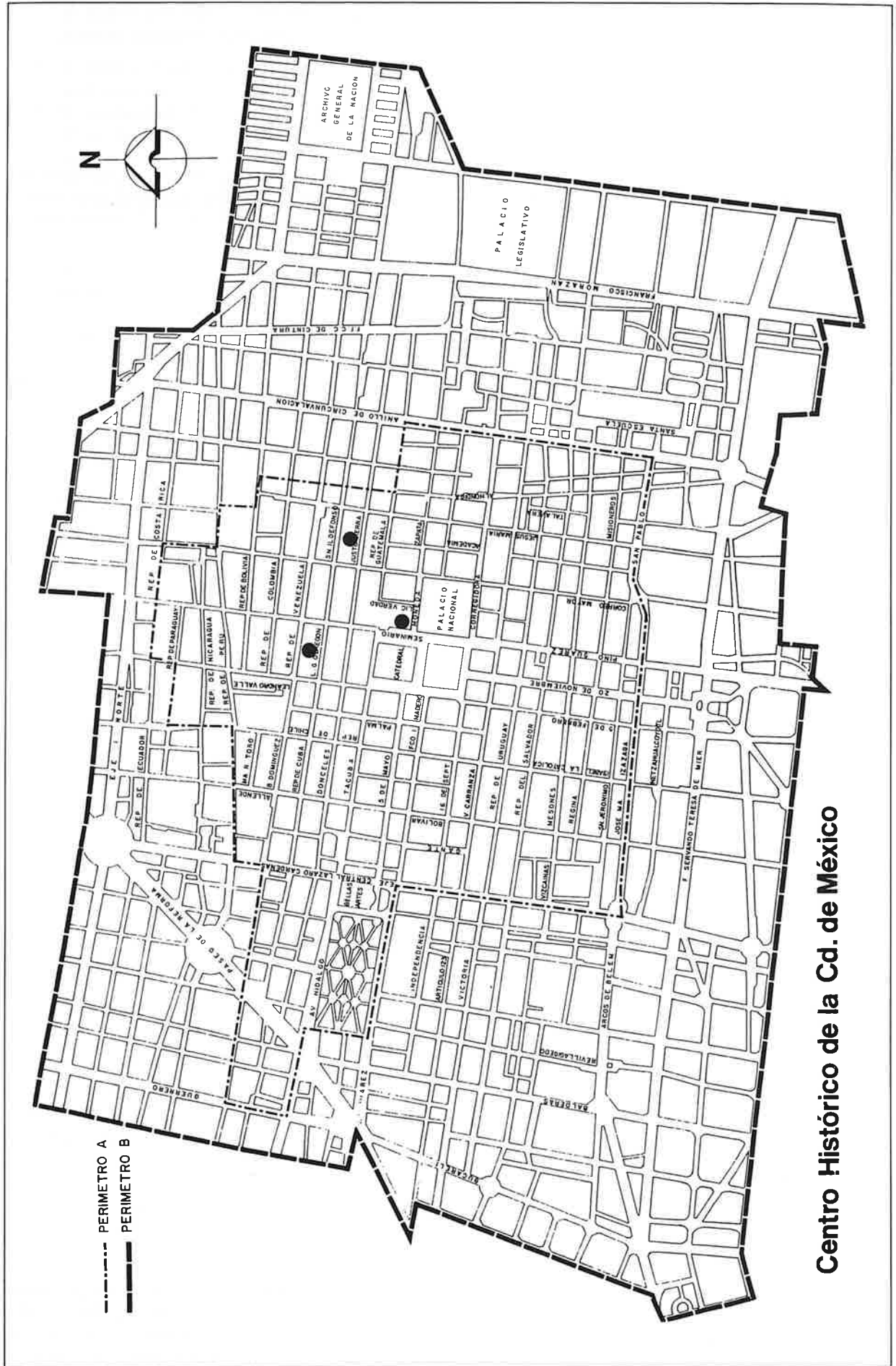


The Historic Centre of Mexico City





Centro Histórico de la Cd. de México

Fig. 1. Plan of the Historic Centre of Mexico City

The Historic Centre of Mexico City

Introduction

Jorge Gamboa de Buen

The Historic Centre of Mexico City is one of the most important in the world. Its size and magnificent buildings, streets and squares endow it with significant historic value.

The first perimeter of the Historic Centre, Perimeter "A," encloses the 3.2 square kilometres occupied by the pre-Hispanic city and its viceregal extensions until the War of Independence. The second perimeter, Perimeter "B," encloses 5.9 square kilometres that correspond to the city's expansion up to the end of the nineteenth century.

Approximately 1,500 buildings have been classified within perimeter "A" by the National Anthropology and History Institute and the National Institute of Fine Arts. Both perimeters encircle the "Zone of Historic Monuments" declared by Presidential Decree on April 11, 1980, and the "World Heritage Site" declared by UNESCO on December 18, 1987.

In spite of all these institutional protection measures, the Historic Centre of Mexico City deteriorated rapidly throughout the 1980s. There were many causes for this, some dating back to the turn of the century.

As Mexico City expanded, higher income families and the area's most lucrative and productive stores and business offices slowly left the downtown area and moved to the new neighbourhoods and suburbs that offered superior infrastructure, better living conditions and in general a more "modern" environment. Lower income families and businesses of lesser quality took over the premises that were left behind. This accelerated the area's deterioration. The stately old houses, many of them as large as palaces, had to be subdivided into small apartments or even rooms to accommodate new tenants, and this destroyed the original spaces. Dining rooms, porticos and even courtyards were occupied and lived in. The structures were overloaded with new walls.

The commercial establishments that replaced the city's finest shops earn most of their profits from high volume retail sales of inexpensive products. They cater to an ever-expanding clientele from fast-growing popular neighbourhoods who do not have their own commercial facilities and come downtown to shop. Under these particular conditions the most attractive commercial locations are those on the ground floor, on streets with heavy pedestrian traffic. Spaces at the back of buildings and on higher floors are used for storage purposes because they are not profitable. As a rule, owners try to make the most out of their high-value store-front space. They open large windows, destroying the lower sections of colonial façades, and they also remove walls, replacing them with columns on the ground floors to increase available floor space. Upper floors are routinely overloaded with merchandise. Both these factors reduce a building's load-bearing capacity and, in case of an earthquake, guarantee severe structural damage.

The deterioration resulting from these conditions was encouraged by rent freezes that eliminated investment in building maintenance, as tenants and owners had no incentive to invest.

The site's natural characteristics of an ancient lakebed, combined with the effect of intense earthquakes and rains, further exacerbated deterioration. The depression of central areas, where the ground has sunk over eight metres so far this century, has damaged structure, and earthquakes and heavy rains sometimes cause the total collapse of buildings.

During the past thirty years public spaces have been taken over by street peddlers. On the one hand they satisfied a real market demand because the existing commercial infrastructure was insufficient for the city's expansion; and on the other they alleviated social problems caused by the sharp rise in unemployment that occurred throughout the 1980s crisis.

The 1985 earthquakes completed this cycle, destroying housing, office buildings and hotels in the Historic Centre and in neighbouring districts of great economic vitality such as the Alameda.

Throughout the years isolated efforts have been made to regenerate the downtown area. These range from restoration of specific buildings, like the Palacio de Iturbide, to renovation of entire areas, like the urban renewal operations undertaken after the construction of the Legislative Palace and the excavations of the Templo Mayor were completed.

The National Anthropology and History Institute had established a strict procedure to control construction and restoration of buildings. Unfortunately it does not award incentives, nor does it stimulate the renewal of particular buildings or areas.

It was not easy to reverse such a trend. The disintegration of the Historic Centre was so extensive that salvage seemed impossible. The existing mechanisms were not functioning adequately, and the deteriorating economic situation, along with neglect, congestion, pollution and the invasion of public spaces by street peddlers, seemed unending.

A huge undertaking was necessary, an integrated and well orchestrated effort that would lead to a clearly defined long term policy, as problems that have taken a century to develop cannot be solved in three or four years.

Fortunately, during President Salinas' term certain favourable conditions were present, allowing the rehabilitation of the downtown area. These favourable conditions were:

- The international experience of rescuing historic towns in Europe and North America. Many Spanish and American cities have witnessed in recent years the renovation of their central areas, with an increase

in middle and high income housing as well as in modern commercial activities.

- A stable national economy with decreasing inflation and economic growth. This combination favoured an unprecedented increase of real estate investment. Even though investments are not made in the downtown area but in the suburbs, good management of urban policy has allowed the channelling of resources to central areas.
- Decisive refusal by the Government and society in general to countenance the Centre's further degradation, and public support for any measure or policy aimed at its rescue.

An integral urban renewal programme was designed based on these premises. It was launched in 1989 and included financial and fiscal incentives, social mobilisation, management and direct support, public works, and promotion of private investment.

For the first time in Mexico, a fiscal incentive program was designed and implemented to condone normal real estate transfer and property taxes when buildings are bought to be restored. Through this system incentives amounting to U.S \$ 609,463,000 were granted to different buildings between 1991 and 1993.

A package was designed with *Nacional Financiera* for financing the renovation of commercial and service infrastructure. An Air Rights Transfer System was also established, and it has so far collected U.S \$ 14,338,412¹. These funds, provided by developers building in high-value areas of the city, have been channelled to 27 buildings in the Historic Centre among them the José Luis Cuevas Museum, *Santa Teresa la Antigua*, the former Girls' College, the Choir of *Santo Domingo*, the *Casa de las Ajaracas*, and the houses at *Leandro Valle 20 and Guatemala 18*.

The *Echame una Manita* (Lend us a Hand) programme was launched to achieve wide diffusion and active social support. It includes an information centre and gives orientation, support and management help to those who wish to restore a building. There one can get help to process licences, credits and free restoration projects, and technical counselling. Social mobilisations are also organised to wash monuments, paint façades, and to become better acquainted with the Centre. The programme's main instrument is the *Fideicomiso del Centro Histórico* (Historic Centre Trust Fund), an independent institution that manages the funds and directs them to the particular recipients through projects or construction work.

Public investments have been made in great national monuments like the Cathedral and the National Palace that are being restored by the Ministry for Social Development; the improvement of public transportation with the subway's new Line 8 that will relieve Line 2 and will allow restricted automobile use within Perimeter "A"; the construction of 32 markets that will accommodate street peddlers; and the repair of squares, sidewalks and urban furniture.

Finally, no efforts have been spared to attract private investment to restore buildings and provide them with new functions, as in the Banker's Club in the Girls' College; to

create needed infrastructure, like the underground parking garage in front of the Palace of Fine Arts; and to construct new apartment buildings, as in *Leandro Valle 6-8*.

Results are encouraging though still insufficient. Between 1989 and 1993, 558 buildings were completed or being restored with a total investment of U.S. \$ 609,463,000.

This article presents three of these buildings.* They were selected for their importance but also for the interest and efforts they embodied for the promoters of their restoration. It is a selection of private and public works, of institutional and individual endeavours, of orthodox restorations and new proposals, of projects by well-known architects and by young professionals that are just beginning to be recognized.

The restoration of each involved a huge effort to solve legal, social, political, financial and technical problems. Acquiring and restoring a historic building is not easy or automatic.

Generally their legal situation is complicated by intestate and pending lawsuits or family problems. Buildings also are frequently occupied by low-income families or commercial establishments that have to be carefully relocated with due respect for their rights, and the participation of any one of the political groups active in the city, particularly in central areas, very often increases the dimension of social problems.

Fiscal and financial matters must be taken care of. When buildings are not profitable, their owners tend to neglect paying taxes, and debts accumulate. These must be attended to in order to legalise the building's situation.

In today's lucrative real estate market the rescue of historic buildings produces no benefits from an economic and financial point of view. This is due to a combination of factors. The cost of restoration tends to exceed that of new construction, execution periods are very long and the resulting spaces that can be leased are small and offer limited flexibility, as the buildings' original structures must be preserved.

From a technical point of view, each building presents different problems that must be analysed before a solution is designed. The subsoil is composed of two parts water and only one part solid matter, which combined with the sinking of the entire area and the existence of pyramid remains causes buildings to be permanently unstable. Sinking earthquakes and heavy rains cause important deterioration of the walls and floors of buildings. Restoration must take these circumstances into consideration.

Additional problems arise when buildings must be adapted to new uses: when transformed from convent to museum for example, or from town house to restaurant, or when contemporary buildings are constructed in vacant lots. Next come the specific problems of the reconstruction and restoration. To which period must one restore a building that has been transformed throughout the centuries? Is it valid to reconstruct a courtyard that was demolished a hundred years ago? Is it necessary to eliminate an entire floor that was added in the nineteenth century to an eighteenth century structure? Is it convenient to use a prefabricated floor slab instead of restoring the traditional

system of wooden beams with earthen fillings? So many variable and unknown factors affect the process that it becomes extremely complex.

Solutions may vary, depending on who makes decisions. This fuels debate and uncertainty, which bewilders owners and restoration promoters alike and even results sometimes in projects being abandoned. As there is no single set of rules for monument restoration, the process of authorising licences becomes a debate among individuals that tends, by its very nature, to be slow and conflicting.

Then comes the construction and restoration process itself. It implies careful and costly labour, and involves highly qualified craftsmen — who fortunately still abound in Mexico — to carve stone or work stucco or wood. And the administration and maintenance of restored buildings call for management practices different to those used in

conventional buildings.

Although the above description is rather general, it presents an overall view of the difficulties faced in restoring buildings. Nevertheless, there is no alternative method. Regeneration must proceed building by building, from the inside out. It must offer integral solutions to a variety of aspects, and not only to physical problems. It must be directed by a long-term master plan. The plan itself is insufficient, however, if it does not involve all actors in the process. It must also do away with inertia and many passive attitudes that may seem insignificant when considered separately but when added to one another have resulted in large scale deterioration. Once under way, the process must continue for several decades. What is important is to reverse the process of decay, and the available evidence seems to indicate that this has been achieved.

* *The article and the buildings were first published in Centro Historico de la Ciudad de Mexico - restauración de edificios 1988 - 1994. Mexico D.F., 1993.*

† *Amounts in dollars are based on the September 1993 Mexican peso exchange rate.*

Mexico City
San Ildefonso Museum

Jorge Gamboa de Buen



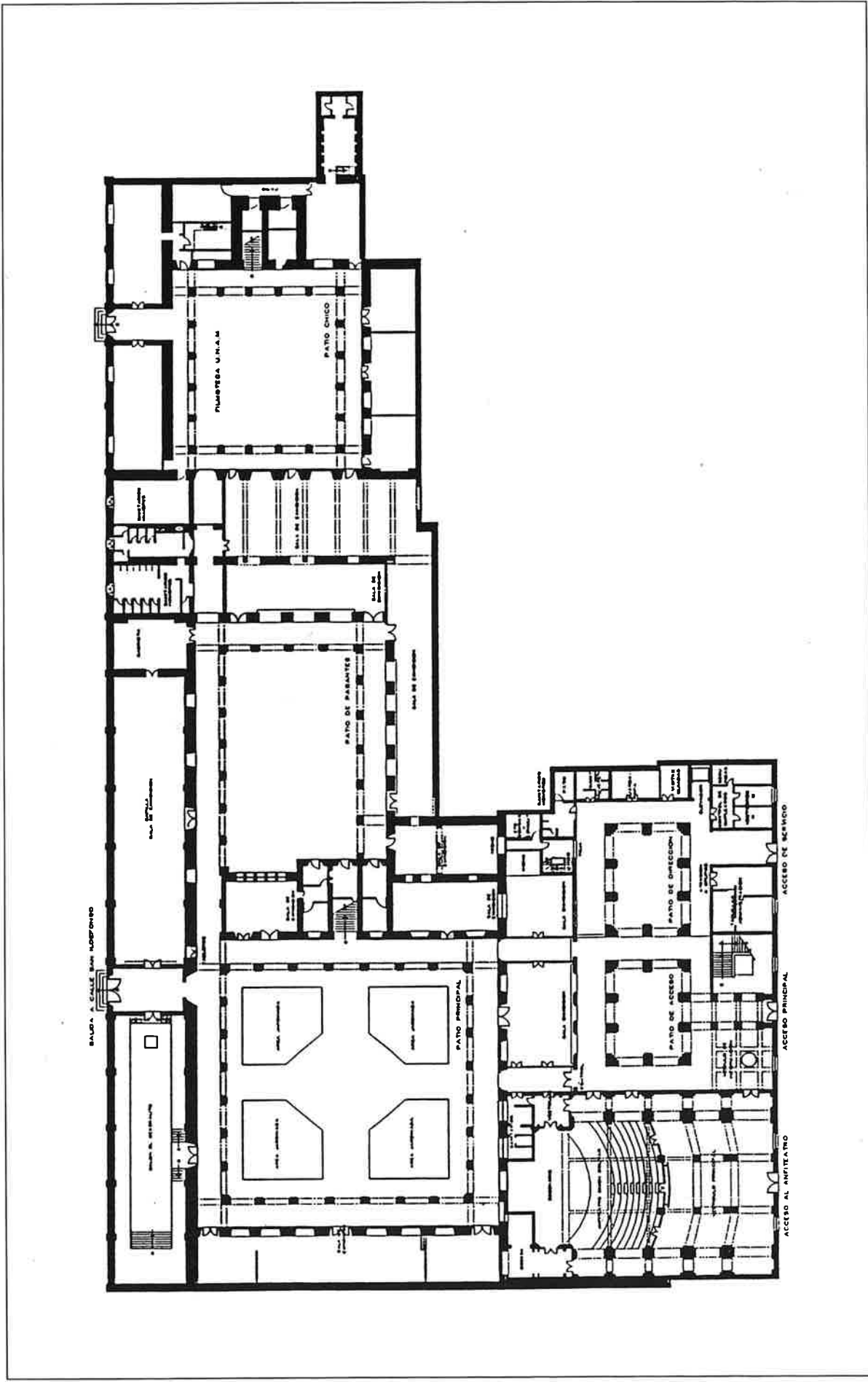


Fig. 1. Detail of the main entrance on Justo Sierra. Photograph by Gabriel Figueroa Flores

Fig. 2. Ground Floor Plan



The Royal College of San Ildefonso was built in the sixteenth century and shortly thereafter it was established as an annex or complement to the Jesuit College of San Pedro and San Pablo in the northeastern corner of the present site. As the seminary grew it expanded westward and incorporated the original 'Small', 'Undergraduate' and 'Main' courtyards. In 1867 it became the National Preparatory School. From 1907 to 1911 the College extended to the south (on the street of Justo Sierra) and the *Bolívar* Amphitheatre was built. The director's and administrative offices were lodged in the wings around the southwestern courtyard. An indoor gymnasium and a swimming pool that was originally meant to be covered were built to the east of this same courtyard.

During the reconstruction (1907-1911) large sections of the wooden beam roofs were replaced with steel beams and grooved laminated steel vaults.

Between 1925 and 1930 the building underwent further renovations to adapt it to administrative requirements. The pool and the gymnasium were replaced by a courtyard similar to the existing one.

After the 1957 earthquake practically all roofs over porticoes and aisles had to be replaced again, and the roofs on most buildings were replaced by concrete slabs and beams.

This made the building strong and solid, but the resulting baroque aspect was not harmonious, especially on the outside.

From the time it was founded the College suffered numerous interventions due to its growing needs. The ones that most affected its colonial features (which did not necessarily date from the original construction) were the ones carried out under the tenure of Porfirio Díaz. Dormitories and kitchens gave way to more classrooms, laboratories and workshops that were no doubt demanded by Positivist theories or the new teaching methods.

The fifties and sixties brought a series of lesser adaptations, of a more improvised nature, that ignored the historic and artistic importance and dignity of the College.

The present intervention intends to restore the building's splendour and have it represent with dignity one of the most important institutions in Mexico, the National University of Mexico (UNAM).

The purpose of the restoration was to eliminate all those elements and modifications that harmed the building, and to repair what could be repaired, as it is impossible to return the building to its original state. In other words, the intention is to show a master work of architecture in the

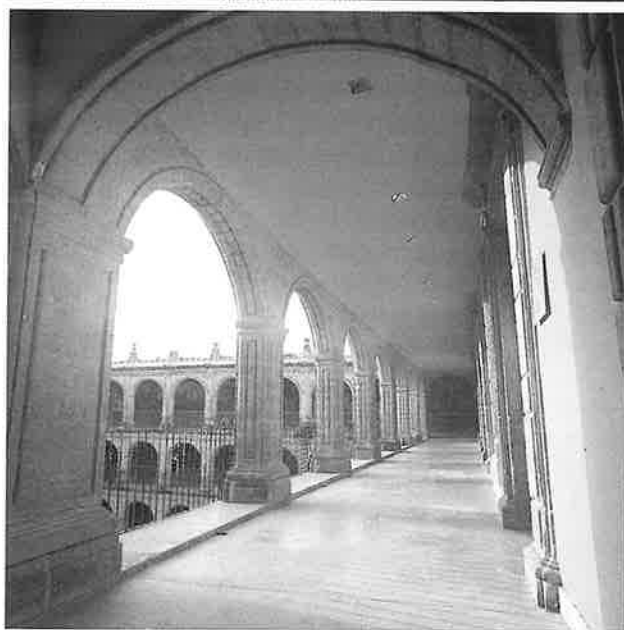


Fig. 3. Main courtyard

Photograph by Gabriel Figueroa Flores

Fig. 4. Gallery around the main courtyard at second floor level

Photograph by Gabriel Figueroa Flores



Fig. 5. Detail of arches in the two small adjacent courtyards serving the main entrance and the directorate.

Photograph by Gabriel Figueroa Flores



Fig. 6. Detail of the choir stalls in the 'Generalito' hall. Photograph by Gabriel Figueroa Flores

best possible way but without erasing the scars left by time and history. New elements did not pretend to impose new design criteria. They were treated discreetly, in a toned-down way that would adapt to the existing features and allow the UNAM to recover the dignified building it deserves.

As for the architectural project, structural reinforcements were hidden behind false ceilings, installations were modernised and the overall image tried to reproduce as



Fig. 7. Stair leading up to the second floor gallery, with a mural by Jean Charlot. Photograph by Gabriel Figueroa Flores

much as possible what might have been the building's original aspect. The purpose of the tempered glass partitions was to let the arches and stone frames stand free, to divide exhibition areas from corridors, and to replace the imitation-wood tubular window casings with a transparent casing system that would enhance and dignify the carved stone surfaces. The wooden panelled doors were made out of red cedar to recall the type of doors the building once had.

Mexico City
Town House on Seminario XII

Jorge Gamboa de Buem



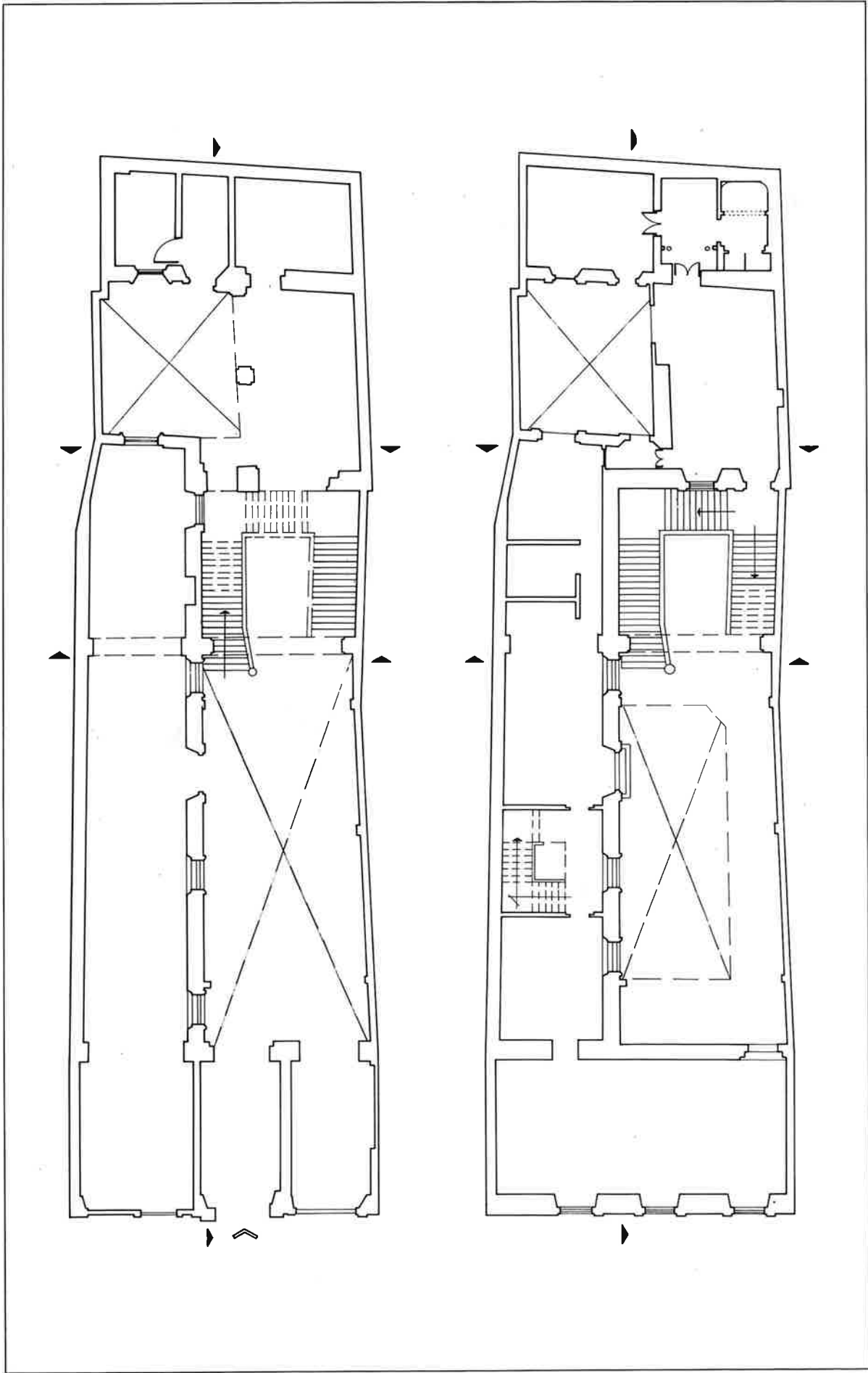


Fig. 1. Façade of house on Seminario XII. Photograph by Gabriel Figuerroa Flores

Fig. 2. Ground and first floor plans

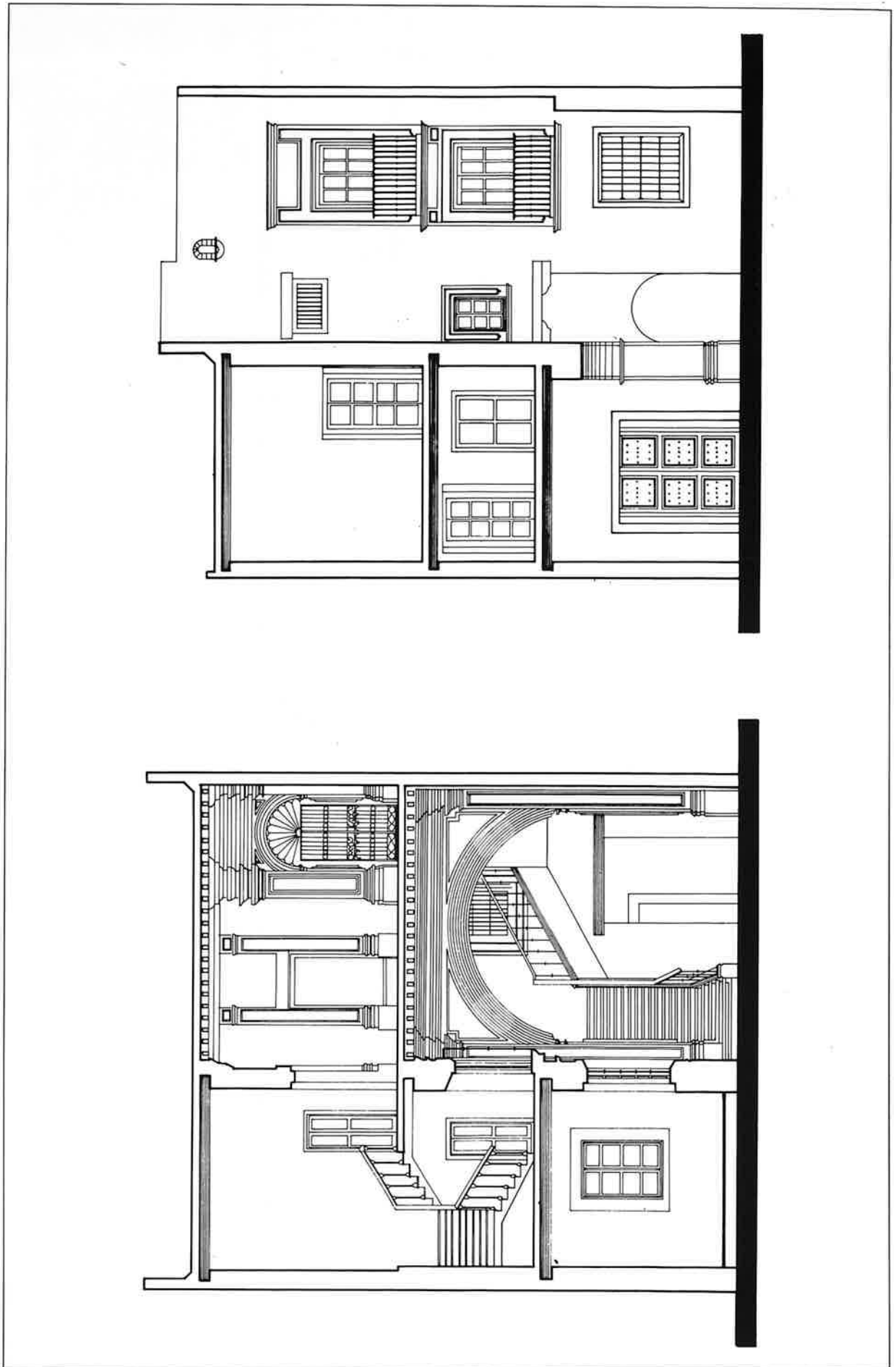


Fig. 3. Cross-sections

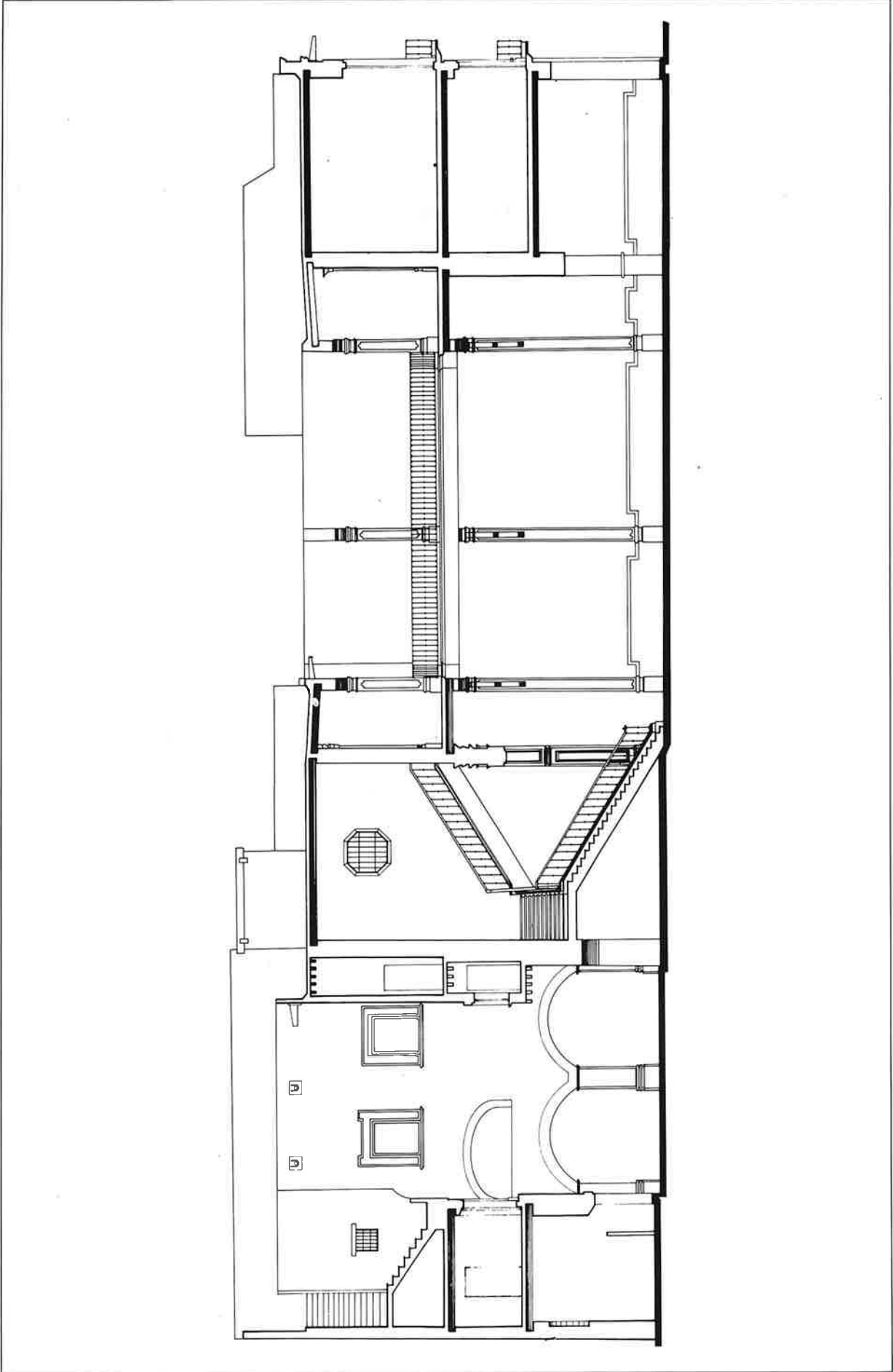


Fig. 4. Longitudinal section



This large town house was built at the beginning of the seventeenth century in the style of that time. It was modified in the early nineteenth century and the first half of the twentieth century. The house's foundations rest on the slope of the pyramid of Tezcatlipoca. Surrounded by the National Palace, the Templo Mayor and the Metropolitan Cathedral, the house offered its inhabitants, before and after its restoration, not only the beauty of the site but the pleasure of admiring its architecture, materials and finishes.

It is located in the area that was part of the Templo Mayor compound in pre-Hispanic times, so we know it lies on foundations from that period.

In spite of the above, it can be stated that about 95 percent of the original architectural layout and construction systems can be recovered : the nineteenth century interventions only modified the use of the spaces and their finishes, and during the last renovations only the bays on the façade were changed and a few constructions added. The latter may be removed without affecting the building's stability.

The building was bought by its present owners in 1988 when they had not yet decided how they would use it. Throughout the four years of restoration they got to appreciate its spaces in detail and decided the best thing was to turn it into a house again.

The sober 'tezontle' façade was adorned with carved stone framed doors and windows. Its ample interior spaces shelter a magnificent stone staircase with wrought iron railings and a flagstoned courtyard where carriages passed to reach the stables. From the balconies one has a superb view of the Cathedral, especially the Sagrario Metropolitano.

On the ground floor is a large warehouse, the door of which still bears a metallic shield that has protected it from the weather for centuries.



Fig. 6. Main courtyard seen from the staircase above.
Photograph by Gabriel Figueroa Flores

Fig. 5. The stone staircase from the main courtyard
Photograph by Gabriel Figueroa Flores

The building's floors and roof were severely damaged, and were missing in most of the western wing. The walls suffered less, showing cracks, fissures and sagging.

To protect the building and avoid its collapse during the works undertaken in its immediate vicinity, it was braced with baulks on a grid of 80 x 80 cm that ran from the ground level through the floors and up to the roof.

Given past experience with this kind of restoration, reconstruction of the structure as close as possible to its original state was the most convenient thing to do. Original construction procedures and specifications were followed during the consolidation phase, and compatible modern systems that would respond in a similar structural manner were used for the new fill-in areas.

Given the historic and artistic value of the building extreme precautions had to be taken during restoration work. Horizontal and vertical levels were periodically checked against reference marks, as was the structural behaviour of the house.

The roof was removed, and the levels at which the beams were embedded in each particular room were marked in the walls, to replace them without altering the original architectural proportions. Work proceeded in parts, the intention being to leave the areas uncovered for as short a period of time as possible. The construction system consisted of a wooden board surface laid over wooden beams, followed by a joist and vault structural slab topped with a brick compression layer.

Walls were consolidated, missing and damaged masonry was replaced with materials as similar as possible in texture and grain to the existing ones, and mortars and additives were injected. Above all, each and every wall was checked for structural soundness.

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Original walls that no longer existed were reconstructed where possible, and walls that had been added later were removed whenever results of the structural studies permitted doing so.

Floors were replaced in some areas according to the structural specifications verified during the restoration process.

In the final stage, plastering was redone on the walls, following the original procedures and specifications.

All decisions regarding construction procedures and detailed specifications were taken as work proceeded, and solutions were adopted depending on the conditions found on site.

Fig. 7. Main room, with a view of the Sagrario Metropolitano and the bell-tower of the Cathedral.

Photograph by Gabriel Figueroa Flores



Mexico City
Ministry of Public Education

Jorge Gamboa de Buen





Fig. 2. Main courtyard or cloister of the former Convent of the Incarnation, looking towards the smaller entrance courtyard on Republica de Argentina. Photograph by Gabriel Figueroa Flores



Fig. 3. View from the entrance courtyard of the former Convent of the Incarnation through into the main courtyard or cloister. Photograph by Gabriel Figueroa Flores

The headquarters of the Ministry of Public Education in Mexico City's Historic Centre is bounded by the streets of *Venezuela* to the north, *Luis González Obregón* to the south, *República de Argentina* to the east, and *República de Brasil* to the west.

During the colonial period different institutions stood on this site: the Temple and Convent of *Santa María de la Encarnación del Divino Verbo*, the *Real Aduana de México* (Royal Customs of Mexico), and a number of ordinary houses.

The Convento de la Encarnación, founded in 1594, was one of the first sixteenth century convents in Mexico. It deteriorated rapidly, however, and construction of a new church in sober baroque style was undertaken from 1639 to 1648. The convent's main cloister, still preserved, was built in neoclassic style between 1779 and 1792.

In 1863, after the last nuns had left the premises, the building was remodelled to accommodate private housing and different public institutions (the Ministry of the Interior in 1863 and the Council of State in 1886).

In 1869, following the lead of the Public Instruction Ministry, the building housed the Law School, the Teacher's Training School and the Arts and Crafts School.

Around 1921 the building was given to the Public Education Ministry, and it was rebuilt between 1921 and 1922.

In 1937 the former church which had been used as a warehouse became the Ibero-American Library and different areas were renovated.

The Customs House of Santo Domingo was established at the beginning of the colonial administration;

it stood on the fifth and sixth blocks of the *Cinco de Febrero* street. The Customs House was later transferred to the house of the *Marqués de Villamayor*, on the corner of today's *República de Brasil* and *República de Venezuela*. The house was in poor condition at the time, but even so its location overlooking the *Plaza Santo Domingo* was a far better choice than the previous one.

Once the land it occupied was bought, the Customs House was rebuilt in baroque style in 1730 and inaugurated in 1731. It was later enlarged with some houses belonging to the *Convento de la Encarnación*. A renovation project was submitted by Miguel Constanzó, an engineer, in 1792, and was completed by 1795. At the end of 1888 General Porfirio Díaz had all Interior Customs barriers removed. The Customs House disappeared and after that different institutions occupied the building until a Presidential Decree assigned it to the Ministry of Public Education.

On *Venezuela* street, in the central part of the compound, stand two private houses dating from the eighteenth and nineteenth centuries; they are valuable elements of the area's urban fabric and together with the Temple and Convent of *La Encarnación* and the former Customs House they constitute the headquarters of the Public Education Ministry.

The National Anthropology and History Institute conducted probes and excavations based on archaeological techniques simultaneously with the preliminary studies for restructuring the buildings. These allowed researchers to rescue, identify and classify scores of pre-Hispanic and colonial archaeological remains for later study.

The National Institute of Fine Arts and the Centre for Conservation of Works of Art did their best to preserve the mural paintings by removing, consolidating and restoring the necessary sections.

The compound has been altered and built upon; the extra weight of subsequent additions, combined with poor

Fig. 1. Main courtyard of the former Customs House. Photograph by Gabriel Figueroa Flores

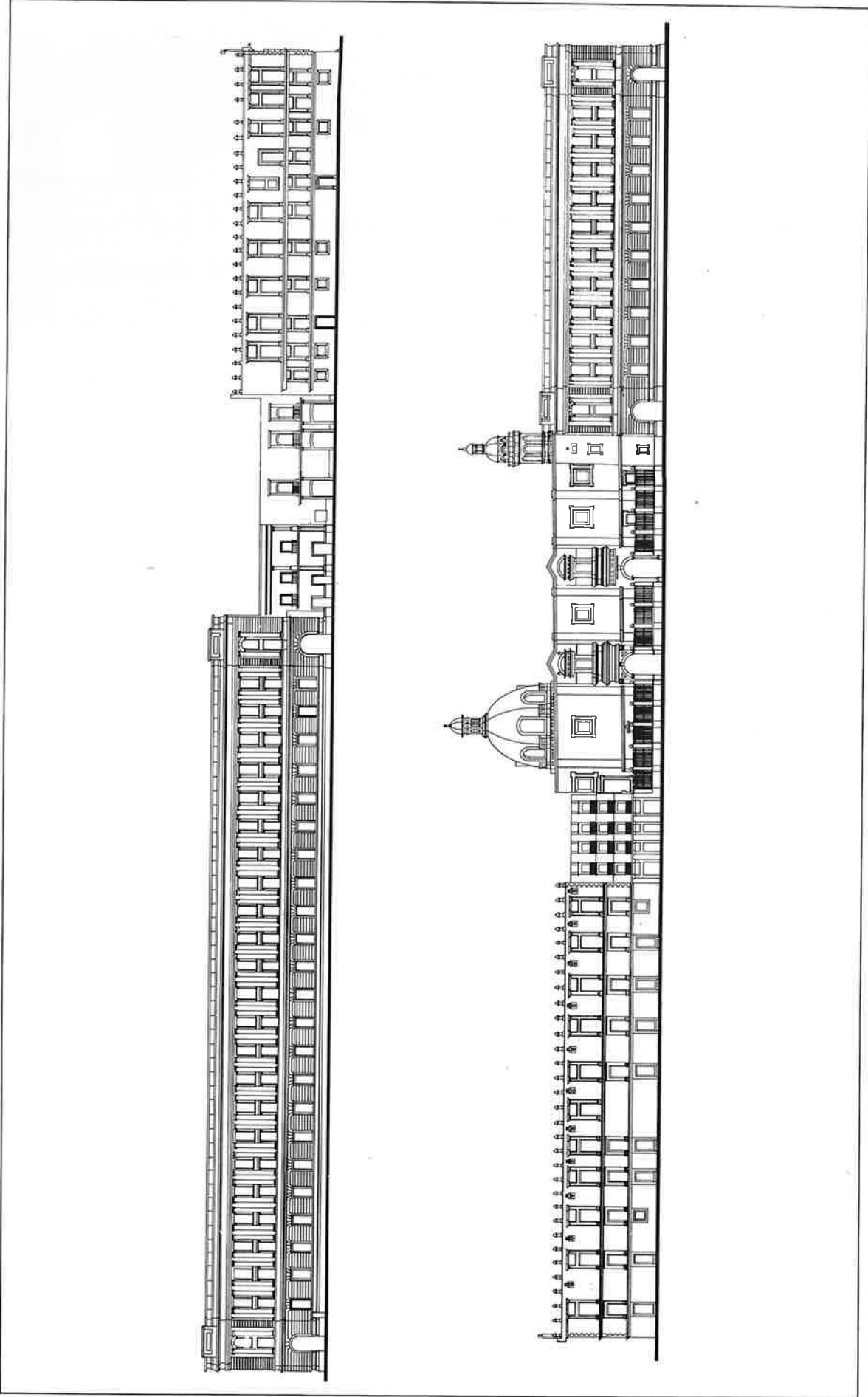


Fig. 4. North elevation on Venezuela, showing the former Convent of the Incarnation on the left; two private houses, dating from the eighteenth and nineteenth century, in the middle; and the former Customs House on the right

Fig. 5. South elevation on Luis Gonzalez Obregon, showing the former Customs House on the left; a modern insertion, and the baroque church and former Convent of the Incarnation in the middle and right

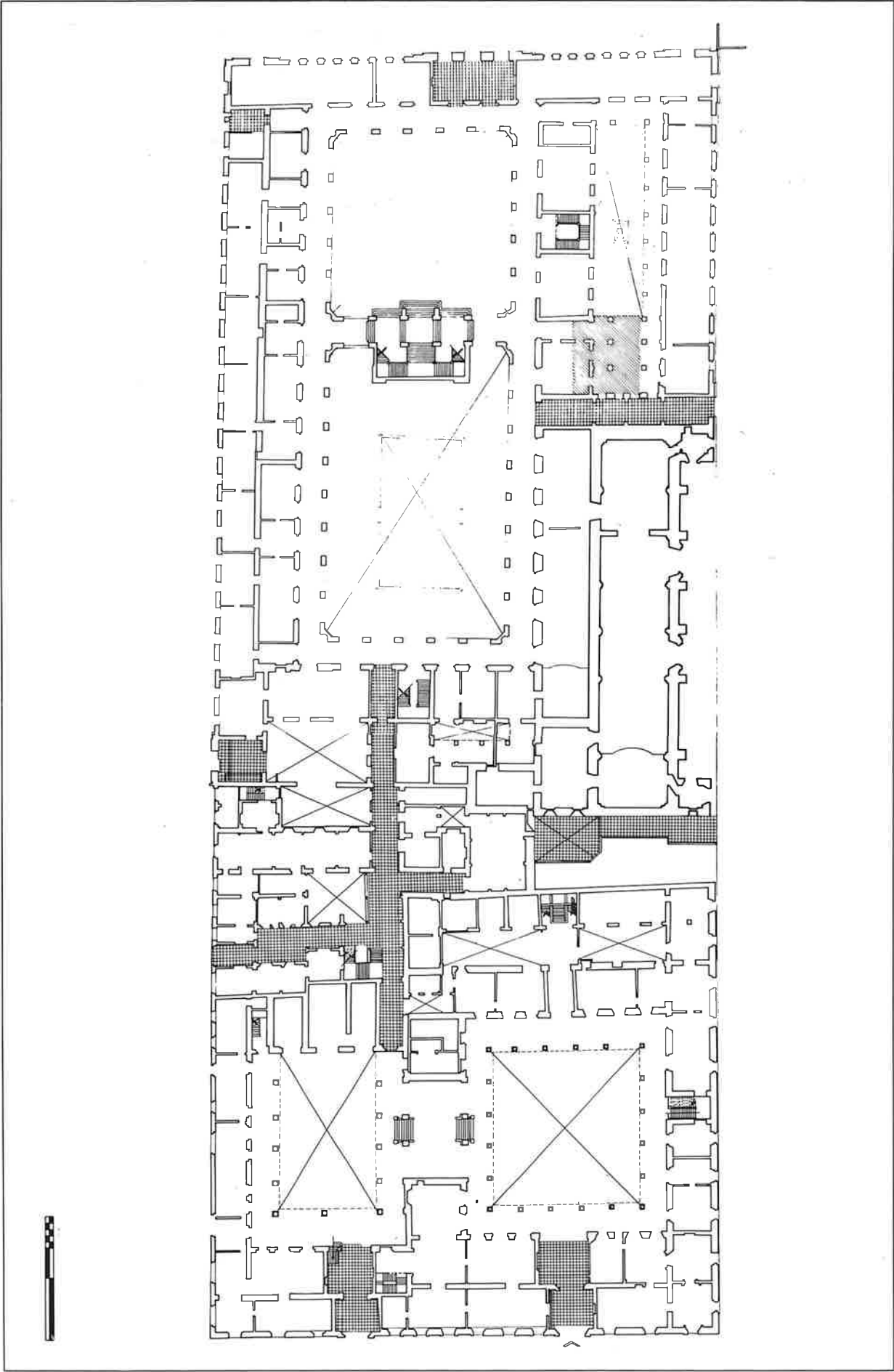


Fig. 6. Ground floor plan with the former Customs House on the left, and the church and Convent of the Incarnation in the middle and right



*Fig. 7. The grand staircase between the two courtyards of the former Convent of the Incarnation.
Photograph by Gabriel Figueroa Flores*



*Fig. 8. An upper floor gallery to one of the courtyards of the former Convent of the Incarnation.
Photograph by Gabriel Figueroa Flores*

ground conditions, materials and construction procedures, earthquakes, floods and vandalism seriously damaged its structure.

These problems were aggravated by the 1985 earthquakes, and the building's structure was damaged severely. It was obvious the complex suffered from general decay apart from the normal deterioration due to environmental exposure, and to the ground's low bearing capacity in this area, worsened by excessive pumping of underground water (resulting in a lowering of the water level). The restoration process did not modify internal spaces or architectural and ornamental elements; lofts were removed, freeing spaces and courtyards.

The adaptation of the complex was carried out according to specific requirements; necessary installations were made

taking the architectural aspects of the building into consideration.

Among the factors that contributed to the loss of the compound's monumental value throughout the years were structural failure, inadequate interventions, general decay, loss of architectural elements, and structures added upon the original construction. Methodical restoration was undertaken to ensure the rescue of the building's architectural, spatial and formal features.

Given the magnitude, characteristics and importance of the interventions to be done in this complex, the National Anthropology and History Institute designated a permanent specialised technical staff to be on the site to assist during general and specific restoration procedures.