MASTER

Diseñando en heroica puebla de Zaragoza
contemporary architectural design in the World Heritage city of Puebla, Mexico

van der Ham, M.F.

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DISEÑANDO EN HEROICA PUEBLA DE ZARAGOZA
CONTEMPORARY ARCHITECTURAL DESIGN IN THE WORLD HERITAGE CITY OF PUEBLA, MEXICO
DISEÑANDO EN HEROICA PUEBLA DE ZARAGOZA

M.F. VAN DER HAM

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I have breakfast on the rooftop, because from there I can see Popocatépetl and the two other volcanos that surround the city. Below me lie the streets that run in straight lines until the eye can see. In a few moments I'll be on my way to a small architecture office just outside the historic centre. While walking through the buzzing streets I'm fascinated by the old facades and the promise of beautiful courtyards partly visible through large open gates. Evenly fascinating are the abandoned houses, the ruins and the gaps in the city fabric that tell stories of buildings that once stood there. I ask myself what happened to the inhabitants, what did the buildings look like and what new buildings could look like if I had the opportunity to design one in one of these places. This opportunity presented itself in January 2010 when I had the chance to define the topic of my final project for the master in architectural design in the technical university of Eindhoven. I decided to go back to Heroica Puebla de Zaragoza in Mexico and make a contemporary architectural design in its historical centre. I stayed in Puebla for two months conducting an investigation in order to provide input for the design. During the second week I met dr. Carlos Monterra Pantoja who runs an investigation unit of archeologists, ethnologists, architects and city planners, who are developing a revitalization strategy for the historic centre. He offered me information, a place to work in a XVII century building and the opportunity to cooperate in the development of the revitalization strategy. The architectural design will serve to further the thought process and as a realistic example on how to make a contemporary architectural design in the historical centre of Puebla. My work in the investigation unit also gave me the chance to learn new skills and practice my Spanish. Friends of mine, the Vergara Family, offered me a place to stay for the duration of the investigation, which made my stay in Puebla much more pleasant. Whilst living with them I took part in and got to experience family life. I did groceries, helped cooking, had conversations, brought the kids to school, helped in their shop and even helped them moving to a new house. These experiences, the experiences of working with dr. Carlos and his colleagues, the conversations with many people in the historic centre and walking hours through its streets, helped me enormously to gain insight and input for the new architectural design. Back in the Netherlands while starting the design process and finalizing the investigation, I found that the design process provided me with many new points of view from which to look at the investigation. Looking back, I can say that the project design process was an integral part of the investigation and the other way around. During the design process I stayed in touch with dr. Carlos and his colleagues, who provided me several times with feedback.
This booklet shows the process and the results of a for me very special project. I would like to thank Raul, Cristina, Marco, Samantha, Jesus and Luis for their hospitality and friendship, Dr. Carlos Montero Pantoja, dr. Horracio Gennemi, Adrian Velazques Luna, Llenise Chazari and Andrea for their support, conversations and friendship. From the Netherlands I would like to thank prof. dr. Colenbrandt, dr. Jacob Voorthuis and Sjef van Hoof for their feedback and for making this project possible.

Matthijs van der Ham

[1] The volcano Popocatépetl
[2] Avenida Don Juan de Palafox y Mendoza
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HEROICA PUEBLA DE ZARAGOZA

In 2006 I lived and worked for 5 months in the historic centre of Puebla. During this time I became fascinated by the long straight lines of the streets, the colorful facades and the promise of beautiful courtyards partly visible through large open gates. This inspired me, in the beginning of 2010, to the topic of the final project of the Master architectural design of the technical university of Eindhoven: the creation of a contemporary architectural design in the historic centre of Puebla, a design that meets the needs and wishes of Puebla’s inhabitants and takes in consideration the historical context.

FIELD RESEARCH

A two month field research, in the first half of 2010, provided input for the design process. It focused primarily on ‘Casa de las Cabecitas’, a representative historical house dating back to the period of the city’s foundation in the XVI century. An architectural analysis of the building provided insight in Puebla’s historical houses and their generic characteristics. Interviews with inhabitants of ‘Casa de las Cabecitas’ and others who inhabit or use the city centre, provided insight in their needs and wishes in relation to their build environment. Less elaborate investigations of other representative buildings in the historic centre were also conducted.

ROUTES AS A GENERIC CHARACTERISTIC

The main conclusion deriving from both the architectural analysis and the interviews is that the courtyards and transitional spaces of Puebla’s historical houses can be interpreted as routes connecting the public domain of the streets and the private domain of the home. The courtyards, each with its own specific characteristics and atmosphere, are the functional and social organizing elements of the historical house. More open and spacious than the rooms surrounding them and more closed and tranquil than the streets, the courtyards provide space for a wide variety of activities and social interactions for which the private quarters and public streets are less appropriate. The transitional spaces form the boundaries between the different spaces. They create curiosity and the preparation for proceeding along the route.

LAYERS AND TRANSITIONS

The routes in the historic centre of Puebla consist of many different layers. Their connections and interdependencies become apparent when experiencing the route. The transitions between the streets, the courtyards and private quarters are accompanied with transitions in temperature, light, sound, lines of sight, materialization and decoration, giving each step along the route its own atmosphere.
SPECIFICS AND GENERICS

Specifics of the site and the special beliefs and ideas of their owners give the houses specific characteristics, which enrich the generic characteristics. These specific characteristics give the historic houses a sense of uniqueness.

CONTINUOUS TRANSFORMATIONS

The many and different transformations visible in the historical houses indicate that these buildings adapted themselves to the needs and wishes of society and their owners throughout their history. Transforming is an integrated part in the life of the historical houses.

LOCATION FOR THE DESIGN

The many abandoned buildings on one hand and high potential of the neighborhood on the other hand were the main reasons for choosing the location for the design. Three interconnected parcels with on them a parking lot, ruins of a XVII century building and a non-historical building, make possible the combination of new construction, renovation and the creation of public space in one architectural design.

THE ARCHITECTURAL DESIGN

A route of courtyards and transitional spaces between the public and private domain has formed the bases for the design. The generic characteristics of Puebla’s historical houses are used to create unity in the design and relation to the historical context. The specific characteristics of the design are formed by the needs and wishes of Puebla’s contemporary society and the specifics of the site and existing buildings. The design incorporates houses and apartments for starting middle class families, an underground parking lot, shops, and a coffeehouse.

In the new design the courtyards and transitional spaces have transformed from semi private spaces inside a single building to semi-public spaces inside the city block. Houses and apartments surround the courtyards instead of individual rooms. The different steps of the transition from public to private translate themselves in the transition of proportions, openness, materialization and decoration. The steps closest to the public domain seek the relation with the historical context and the steps closer to the private domain seek to conform with the needs and wishes for a contemporary home. The route from the public to the private domain continues inside the houses and the apartments as the possibility for transition and direct connection between the houses and semi public courtyards are created. Transition
between the houses and the courtyards is created by semi private courtyards. These outside rooms are part of the houses and apartments and form an amplification for the inside rooms of the houses and apartments. The kitchen, as the room where most activities during the day take place, have a direct connection to the semi public courtyard. The design creates an image of how one can live a comfortable and contemporary life in the historical centre and how the generic characteristics of the historical houses of Puebla can be used in a contemporary design. In addition to the variety of public and private spaces the design incorporates bright, contemporary materials like galvanized steel, light colored wood and travertine. It gives attention to practical comforts which cannot be taken for granted in the historical centre, like the availability of running water, gas and parking places.

The design is focused on the preservation of the historic atmosphere by the transformation of the generic characteristics of Puebla’s historical houses according to the needs of contemporary society. It recognizes that the courtyards and the transitional spaces are an integral part of Puebla’s heritage. The transformation of the generic characteristics of the historical centre, together with the opportunity for people to live a contemporary life, contributes to the continuation and preservation of the cultural and historical heritage.

En el año 2006 viví y trabajé cinco meses en el centro histórico de Puebla. En ese momento quedé fascinado por las líneas largas y rectas de las calles, por las fachadas coloridas y por los patios escondidos. Me sentí intrigado por el contraste entre la belleza y las casas abandonadas, las ruinas y los ahujeros en el tejido de la ciudad. Esto fue lo que inspiró, al inicio del año 2010, el tema de mi proyecto final de la Maestría de diseño arquitectónico en la Universidad Técnica de Eindhoven: La creación de un diseño arquitectónico contemporáneo en el centro histórico de Puebla; un diseño que cumpla con las necesidades y deseos de los habitantes de Puebla y que tome en consideración el contexto histórico de la ciudad.

TRABAJO DE CAMPO
Un trabajo de campo de dos meses, en la primera mitad del año 2010, me dio la base para el proceso de diseño. Se centró principalmente en el inmueble 'Casa de las Cabecitas', una casa histórica representativa que data del siglo XVI; fecha en que se fundó la ciudad. Un análisis arquitectónico del inmueble me dio una mejor comprensión sobre las casas históricas de Puebla y sus características genéricas. Los resultados de las entrevistas que se hicieron a los habitantes de 'Casa de las Cabecitas' y a otras personas que habitan o usan el centro de la ciudad, informaron sobre sus deseos y necesidades en relación al ambiente donde habitan. También se condujeron investigaciones menos elaboradas sobre otros edificios representativos en el centro histórico de la ciudad.

CONCLUSIONES DEL TRABAJO DE CAMPO
La conclusión principal que surgió del análisis arquitectónico y de las entrevistas es que los patios y espacios de transición de las casas históricas de Puebla pueden interpretarse como caminos que conectan el espacio público de las calles con los espacios privados de las casas. Los patios, cada uno con sus propias características y con su propio ambiente, son los elementos que funcionalmente y socialmente organizan las casas históricas. Más abiertos y espaciosos que las habitaciones a su alrededor, y más tranquilos y cerrados que las calles, los patios brindan el espacio para una gran variedad de actividades y la interacción social, para lo cual las habitaciones y las calles son menos apropiadas. Los espacios transicionales de los caminos forman límites y son espacios que despierten curiosidad y nos preparan para seguir de un ambiente a otro.

Experiencia del camino
Los caminos en el centro histórico de Puebla tienen diferentes capas. Sus conexiones e interdependencias se hacen obvias cuando se pasa por el camino. Las transiciones entre la calle, los
patios y las habitaciones privadas están acompañadas también por una transición de temperatura, luz, sonido, líneas visuales, materialización y decoración, dando a cada paso del camino su propio ambiente.

Características específicas de las casas históricas
Las cualidades específicas de los sitios, junto a las propias creencias e ideas de los propietarios, le dan a las casas características específicas que enriquecen las características genéricas. Estas características específicas le dan a las casas históricas un sentido de individualidad.

Transformaciones continuas de las casas históricas
Las muchas y diferentes transformaciones visibles en las casas históricas indican que estos inmuebles se han adaptado a las posibilidades, necesidades y deseos de la sociedad y de sus propietarios a lo largo de la historia. La transformación es una parte integral de la vida del centro histórico y de las casas históricas.

El lugar para el diseño
Las razones principales para escoger el lugar del diseño fueron, por un lado, la cantidad de inmuebles abandonados y por el otro, el alto potencial del vecindario. Tres terrenos interconectados, uno con un estacionamiento, otro con ruinas del siglo XVII y otro con un edificio sin valor histórico, hacen posible la combinación de nuevas construcciones, renovaciones y la creación del espacio público en un diseño arquitectónico.

EL DISEÑO ARQUITECTÓNICO
Un camino de patios y espacios transicionales entre los espacios públicos y privados forma la base para el diseño. Las características genéricas de las casas históricas de Puebla se usan para crear unidad en el diseño y relación con el contexto histórico. Las características específicas del diseño están formadas por los deseos y necesidades de la sociedad contemporánea de Puebla, por las cualidades específicas del lugar y por los inmuebles existentes. El diseño incorpora casas de apartamentos para familias de clase media que están empezando, tiendas y un café. En el nuevo diseño, los patios y los espacios transicionales se han transformado de espacios semi-privados dentro de un edificio a espacios semi-públicos dentro de la manzana. Casas y deapartamentos rodean los patios, en vez de cuartos. Los diferentes pasos de la transición del ambiente público al privado se traducen en la transición de proporciones, amplitud, materialización y decoración. Los pasos más cercanos al espacio público buscan la relación con el contexto histórico y los pasos más cercanos al espacio privado, buscan fusionar con las necesidades de una casa contemporánea. El camino del espacio público al privado continúa dentro de las
casas y los departamentos porque se ha creado la posibilidad para
la transición y la conexión directa entre las casas y los patios semi-
públicos. La transición entre los patios y las casas está creada por
patios semi-privados. Estos cuartos exteriores son parte de las
casas y los departamentos y forman una ampliación de los cuartos
interiores de las casas y los departamentos. La cocina, el cuarto
donde sucede la mayoría de las actividades durante el día, tiene
un acceso directo al patio semi-público.
El diseño crea una imagen de cómo se puede vivir una vida cómoda
y contemporánea en el centro histórico y cómo las características
genéricas de las casas históricas de Puebla pueden usarse en un
diseño contemporáneo. Además de la variedad de espacios
públicos y privados, el diseño incorpora materiales brillantes
y contemporáneos como metal galvanizado, maderas claras y
travertino. El diseño pone atención a comodidades prácticas,
como la disponibilidad de agua potable, gas y estacionamientos.

El diseño se enfoca en la conservación del ambiente histórico
por la transformación de las características genéricas de las casas
históricas de Puebla de acuerdo con las necesidades de la sociedad
contemporánea. El diseño reconoce que los patios y los espacios
de transición forman una parte fundamental del patrimonio de
la humanidad de Puebla. La transformación de las características
genéricas del centro histórico, junto con la oportunidad para
las personas de vivir una vida contemporánea, contribuye a la
continuidad y conservación del patrimonio cultural e histórico de
Puebla.

[4] An abandoned historical building, Av. 7 Poniente no. 703
[5] La Virgen de Guadalupe, Barrio San Jose (page 19)
INTRODUCTION

'Diseñando en Puebla' is the title of my final project of the master architectural design of the Technical University of Eindhoven. The subject of the project, 'designing in Puebla', derives from the time that I lived and worked in this Mexican World Heritage city. Amazed by the beauty of its historical centre and intrigued by the many abandoned buildings and ruins, I wanted to experience the process of making a new architectural design in the city's historical context. The opportunity arose when I had the possibility to choose my own subject for the master's final project.

I arranged to go back to Puebla for a two month field research. During this period I got to understand the generic characteristics of Puebla's historical centre and it's houses, the needs and wishes of Puebla's inhabitants in relation to their build environment and the possibilities, difficulties and regulation when building in a world heritage city. The field research made it possible to decide what to design, where to design it and for whom. It provided insight in how I could approach the historical context of Puebla in a contemporary design.

Back in the Netherlands I started the design of a housing complex, incorporating new architectural design and the renovation of a XVII century building. The basis of the design has been the recognition of the fact that the historical houses are continuously transforming entities. By transforming the generic characteristics of Puebla's historical houses according to the current needs and wishes of Puebla's inhabitants, they get a new meaning in Puebla's contemporary society.

The results of the field research and the design process are described in this booklet. Several other booklets and drawings are included, containing the architectural analyses of 'Casa de las Cabecitas', interviews with several inhabitants of Puebla's historical centre and the architectural drawings of the design.

The first chapter of the booklet gives a short introduction of the city of Puebla. The second chapter describes the results and conclusions of the field research, containing a summary of the architectural analysis of 'Casa de las Cabecitas' and the several interviews held with its inhabitants and other people who live in the historic centre of Puebla. The second chapter also contains information about Puebla's world heritage status. The third chapter describes the chosen location for the design. The fourth chapter explains the choice to design housing for middle class people. The fifth chapter contains the architectural design, describing the design concept, the architectural design and several details of the design like the materialization, decoration and constructional details. The last chapter contains the conclusions and my own reflections on the project.
01. HEROICA PUEBLA DE ZARAGOZA

The city Heroica Puebla de Zaragoza and its historic centre were the main inspiration for the project. The first chapter gives a short introduction of the city which is called in short Puebla. It gives a short overview of the city, its historic centre and a description of its world heritage status.

The introduction should provide the reader with a context for the next chapters. A more elaborate description of Puebla was part of the architectural Analysis of `Casa de las Cabecitas' which can be found in a separate booklet.
01.0 INTRODUCTION OF THE CITY OF PUEBLA

Puebla was founded in 1531 in the valley which the Indian population called Cuetlaxcoapan, (where snakes change skin) at the foot of the hills Loreto and Guadalupe and close by the river San Francisco. The city was located nearby Tlaxcala and Cholula, two indigenous cities. Today, as the capital of the state of Puebla, the city is called Heroica Puebla de Zaragoza after a general who heroically defended the city against French troops in 1862. The city is located 125 kilometers south east of Mexico city and 302 km west for the port city of Veracruz and is one of Mexico’s four important metropolitan areas.

01.1 DEMOGRAPHICS
Puebla had 1,485,941 inhabitants in 2005, of which around 40,000 lived in the historic city center, according to the INEGI. From the area of 22.375 km², that the city occupies, 6.9 km² is occupied by the historic city centre. Although there is a lot of industrial activity, services are the most important part of the city’s economy. With more than 20 universities, like BUAP and UDLAP, education in Puebla’s universities plays an important role on a national level. In the historic centre main economic activities consist of tourism and government institutions.

01.2 CLIMATE AND ENVIRONMENT
The city is built on an elevated plane 2162m above sea level. at the base of three volcanoes: Popocatépetl, Ixtaccihuatl and la Malinche. Popocatépetl is an active volcano and the biggest of the three. The volcanic soil of the valley is very fertile, which make a wide range of agricultural practices possible. Multiple rivers run through the valley, providing water for irrigation and hydroelectric power. Seismic activities include earthquakes. The 15th of June 1999 an earthquake 6.7 on the Richter scale took a heavy toll on the colonial as well as modern buildings in the city. Throughout the year daytime temperatures range from 22 to 27 degrees celsius. During the night temperatures drop well below the 10 degrees Celsius. The air is dry. From April till October it rains heavily in the afternoons. Throughout the rest of the year there is little rainfall.

01.3 THE GRID AND COURTYARDS
According to the laws of the indies, the historical urban structure is comprised of a grid with axis running north to south and east to west from a central square now called the Zocalo. The axis of the grid do not run exactly north to south and east to west, but they are turned a few degrees eastwards. The orientation of the grid is in accordance with the main direction of the wind, allowing for the ventilation of the streets. The streets, 12 meters wide, form city blocks 167 by 83 meters, called manzanas. During the first expansions of the city the grid was continued or transformed, which can be seen in the suburbs directly surrounding the historic centre. During later expansion the grid was discontinued. Courtyards bring light and air inside the city block. The historical buildings are characterized by two or more central courtyards around which the rooms for the house are located. The main courtyards are the most representative which is reflected in the size, materialisation and decoration of the courtyard. The smaller courtyards are more functional.
[A] Mexico City
[B] Heroica Puebla de Zaragoza
[C] Veracruz

[6] The main square and town hall
[8] A food market, Bario El Alto
[9] Building without historical value (parcel C)
The morphology of Puebla's historic centre (source: Instituto de las Ciencias Sociales y Humanidades, BUAP, Puebla)
Puebla's historical buildings per century (source: Instituto de las Ciencias Sociales y Humanidades, BUAP, Puebla)
01.2 PUEBLA ON THE WORLD HERITAGE LIST

New laws, changing demographics, the construction of new suburbs and modernization was rapidly transforming the historic centre of Puebla in the second half of the XIX and the XX centuries. The importance of the city's heritage was recognized on a national level in 1977 when the historic centre was declared 'zona monumentos historicos'. In 1986 Puebla and Cholula jointly requested to be inscribed on the world heritage list. ICOMOS (international council on monuments and sites) recommended the World Heritage committee to inscribe only the centre of Puebla in the world heritage list on the basis of the criteria (II) and (IV).

(II) to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.

(IV) to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

ICOMOS gave the following justification:

'In an untouched urban network this historic centre comprises major religious buildings such as the cathedral, Santo Domingo, the Jesuit church, as well as superb palaces such as the old Archbishops Palace (Palafox Library) and the university and a host of houses whose walls are covered in gaily colored tiles (azulejos). Although the 19th century transformations resulting from the reform laws (1857) modified the urban landscape through the closing of many convents, they permitted Puebla's endowment with quality public and private architecture. Official buildings, town houses and residential ensembles of the 19th century represent 57.3% of the 2619 historic buildings listed in 391 blocks. The buildings from the 16th, 17th, and 18th centuries represent respectively 1.1%, 23.4%, and 18.2%.

'Because urban development has so seriously modified relations between the two cities in the Cuetaxcoapan valley, the project of a joint inscription of Puebla can no longer be justified' (ICOMOS 1987).

In 1987 the world heritage committee decided to inscribe the historic centre of Puebla in the world heritage list following the ICOMOS recommendations.

After the inscription of Puebla in the world heritage list the World Heritage committee has monitored the Paseo San Francisco project in 1993 and 1994, the damage to the heritage inflicted by an earthquake in 1999 and smaller project including underground parking in 2002 and 2004.

[10] The Cathedral of Puebla
[12] The La Compañía church
[13] Casa del Alfenique
A two month field research in the historic centre of Puebla consisted of an architectural analysis of 'Casa de las Cabecitas', interviews with the inhabitants of 'Casa de las Cabecitas' and other inhabitants and users of the historic centre. Many more informal conversations and interviews with experts and house owners, visits to a large number of historical houses and the experience of living and working in the historical centre were also part of the field research. The analyses and interviews are described in separate booklets included with the final report of the master project.

This chapter can be seen as a summary of the field research and its conclusions. The last paragraph of this chapter describes the 'Senda de Saber' project. This is a revitalisation project of a working group of the institute for humanistic and social sciences of the BUAP university. I worked together with this group during the two months of the field research. The field research is also a part of the process to give form to the revitalisation project.
02.1 FIELD RESEARCH - ARCHITECTURAL ANALYSIS, INTERVIEWS AND HERITAGE

'While walking in the streets in Puebla I realized that the city and its buildings can be read as a story. If I could find the continuous thread of the story, the common denominator, it would enable me to write a new chapter which allows the story to continue and fits in with the chapters already written.' (Own thoughts, 2010).

'The search for the continuous thread' has been translated in the field research into the search for the generic characteristics of Puebla’s historical houses in the form of an architectural analyses. The search for the generic characteristics of the built heritage has been combined with the search for the habits, needs and wishes of the inhabitants and users of the historic centre, in the form of interviews and conversations. The ‘new chapter’, the architectural design, follows from the merger of the two searches. Or, said in other words it should describe the combination of the preservation of built heritage and the habits, needs and wishes of the inhabitants and users of the historic centre. The two searches provided me with the basis for forming an attitude towards the built heritage in the historic centre, for choosing a location for the design, for formulating the requirements for the building, as well as for making decisions concerning the architectural design.

02.1.1 ARCHITECTURAL ANALYSIS

By making a detailed analysis of an individual but representative historical house and its context, I obtained a larger picture and understanding of the generic characteristics of Puebla’s historical houses and the historic centre as a whole can be obtained. This is the principle on which the Architectural Analyses is based. The Architectural Analyses is the name of the method, used for the investigation. The method is developed for investigating individual buildings and their context and focuses on the relation between the spatial characteristics of a building and the social and cultural values that shaped it. Or in other words; how the building can be understood as an architectonical representation of its society. The knowledge of the generic characteristics of Puebla’s historical houses, their transformations and the social-cultural context in Puebla which shaped them, can provide valuable insight into how Puebla’s current social cultural context can give shape to a new architectural design. I chose ‘Casa de las Cabecitas’, Av. 3 Poniente nr. 512, for the architectural analysis. It is one of the oldest representative houses, dating back to the city’s foundation.

02.1.2 INTERVIEWS

I conducted a series of interviews with the inhabitants ‘Casa de las Cabecitas’ and other inhabitants, users of the historic city centre, in order to reveal the habits, needs and wishes they have in relation to their built environment. The interviews focused on two parts, one about the private domain of the house or workplace, and one about the public domain in the historic centre. Both parts try to reveal how the inhabitants and users of the historical centre use the different spaces, how they would like to use them and how they would like these spaces to be.

02.1.3 HERITAGE IN PUEBLA

A part of the field research focused on interviewing experts and obtaining information to get insight in the current status of Puebla’s heritage, how the heritage is preserved and in regulation for building and renovation projects.
Architectural Analyses (AA) - Depth in the façade of 'Casa de las Cabecitas'

AA - Materialization of the façade of 'Casa de las Cabecitas', grey basalt
Architectural Analysis (AA) - Order and symmetry in the second courtyard, 'Casa de las Cabecitas'
DISEÑANDO EN PUEBLA FIELD RESEARCH AND CONCLUSIONS
02.2 CONCLUSIONS FROM THE ARCHITECTURAL ANALYSIS

02.2.1 ROUTES IN BETWEEN PUBLIC AND PRIVATE DOMAIN

In the historical centre of Puebla a large contrast exists between the long, straight and busy streets that form the grid and the relatively dark and quiet rooms of the historic houses. In between this public and private domains lies a semi-public/semi-private domain formed by courtyards and transitional spaces. This domain forms the connection and transition between public and private domains and plays an intricate part in the architecture and way of life in the historic centre.

The courtyards bring light and air into the city block, which makes a dense development of the city block possible. As centralized spaces the courtyards are the organizing elements in Puebla’s historical houses. In the middle of the contrasts that exist between the public streets and the private rooms of the historical house, the courtyards provide room for a wide variety of social cultural and functional activities for which the streets and rooms are less suited. The best example encountered during the field research are children playing, with enough space for all kinds of games and protected by walls. Most historical houses have two or more courtyards. The courtyards closest to the street usually have a semi-public and a more representative atmosphere, expressed in size, materialization, decoration and the presence of colonnades. The courtyards further away from the streets have a more private and functional atmosphere, often they are smaller, have a more sober materialization and are less decorated. Each courtyard has its own atmosphere.

The transitional spaces lie in between the streets and main courtyards and in between the courtyards in the historical houses of the historic centre. They form the transitions between the public, semi-public and semi-private domains. As relatively dark spaces they prepare the person for the space he/she is about to enter. The contrast of light and dark and the selected views of the courtyards and streets through the transitional spaces create, next to distance, curiosity and surprise when going from one domain to the other.

The semi-public/semi-private domains in the historical houses consisting of courtyards and transitional spaces can be interpreted as routes in between the public and private domains. The routes are the connection and transition between public and private and are as well a domain on their own. This domain provides the historic centre with spaces suited for a wide variety of activities and social interactions. The routes, going from the streets of the historic centre to the private quarters and vice versa, consist of many layers investigated separately in the architectural analysis. In reality the layers do not exist separately and it is their connection and interdependency that creates the atmosphere in the different spaces along the route. The transitions between the streets, the courtyards and private quarters are transitions between the (semi) public and (semi) private domains and are accompanied with transitions in temperature, light, sound, lines of sight, materialization, decoration, activities and use, providing every step of the route with its own characteristics and atmosphere.

DISEÑANDO EN PUEBLA FIELD RESEARCH AND CONCLUSIONS

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Route going from the street to the familia Vallez apartment

The route as a generic characteristic, consisting of courtyards and transitional spaces in 'Casa de las Cabecitas'
[24] Av. 7 Poniente no. 703, visible transformations in the walls
02.2.2 CONTINUOUS TRANSFORMATIONS
The many transformations visible in many historical buildings indicate that these buildings adapted themselves to the needs and wishes of society and their owners throughout their history. The densification of the historic centre instead of its growth in size played an important part in the process of transformation.
The transformations included the addition of extra floors, courtyards, doors, windows, changes in the façades, etc. It seems that the process of transformations is a continuous factor during the life of the historical houses in Puebla and could be an important factor in their survival. The preservation of Puebla's historic houses should not focus merely on their physical preservation, but on their transformation, to cope with the wishes and needs of contemporary society. The quality of the transformations determines the quality of preservation.

02.2.3 GENERIC AND SPECIFIC CHARACTERISTICS
Next to the generic characteristics, specific solutions and interventions in the architectural design can be found in Puebla's historic buildings. These specific characteristics reflect the specific characteristics of the site or the individual beliefs and ideas of their owners. Next to the uniformity created by the generic characteristics, the specific characteristics give a feel of uniqueness to the historical houses and the historic centre. The faces of Zeus and Hera in the façade of 'Casa de las Cebeñitas' probably reflect the revival of ideas and knowledge of ancient Rome and Greece and the importance of these ideas to the people who build the house. The floorplan of Casa Alguacil Mayor shows a house with three courtyards. The courtyard in the top right corner was probably part of another house and bought by the owner of Casa Alguacil Mayor to expand his house. When making an architectural design for a renovation or new project attention should be given to the specific characteristics of the site. This means there cannot be one strategy that defines a solution for the entire historic centre.

02.2.4 TANGIBLE AND INTANGIBLE ASPECTS
In the architectural analysis many layers of the architecture of historical buildings were analysed separately. In reality all layers function together to create one experience. When walking through the historic centre and entering its historic buildings the connections and interdependency of the elements that make up Puebla's heritage can be experienced. Next to tangible aspects that can be investigated rationally, experience reveals also the intangible aspects related to the building. Through experience it becomes possible to see the the historical building not only as the physical building, but also the way of life it makes possible and vice versa.

[16] Av. 16 de Septiembre no. 7, the façade
[17] Av. 16 de Septiembre no. 7, the entrance
[18] Av. 16 de Septiembre no. 7, the main courtyard
[19] Av. 16 de Septiembre no. 7, the second courtyard
[20] 'Casa de las Cebeñitas' Av. 3 Poniente no. 512, the entrance
[21] 'Casa de las Cebeñitas' Av. 3 Poniente no. 512, main courtyard
[22] 'Casa de las Cebeñitas' Av. 3 Poniente no. 512, second courtyard
[23] 'Casa de las Cebeñitas' Av. 3 Poniente no. 512, kitchen Fam. Vallez
The face of Zeus decorating 'Casa de las Cabecitas'
02.3 GENERIC CHARACTERISTICS OF PUEBLA'S HISTORICAL HOUSES

02.3.1 THE HISTORICAL HOUSE
- The size of the original parcels, the solares, influences the size and shape of the house and courtyards.
- The historical house in Puebla has one, two or three floors.
- The historical house has between one and three courtyards.
- The rooms of the house are not specifically designed for a specific use, but because of their size and height they are appropriate for many uses.
- The historical house is used for multiple functions and activities.
- The historical houses are continuously transforming entities. They adapt themselves to the needs and wishes of contemporary society.
- With the generic characteristics as a backdrop, specific characteristics given by the specifics of the site and / or ideas and beliefs of their owner give a feeling of uniqueness to the building.

02.3.2 COURTYARDS
- The courtyards surrounded by rooms are the functionally and socially organizing elements of the house.
- Located in between the public and private domain the courtyards provide space for a wide variety of activities and social interactions for which the private quarters and public streets are less appropriate.
- Colonnades, often only in the main courtyards, provide a wide passageways on both floors. The shadow it provides plays an important role in the climatization of the house and the range of activities that can take place in the courtyard.

02.3.3 THE FAÇADE
- The facades reflect the social status of their (former) owners.
- Openings in the façade are placed functionally, depending on the space that lies behind it.
- Shops are placed on ground floor level next to the street. They have a direct connection with the streets, but no connection with other parts of the house.
- Decorated iron fences are transparent elements used for balustrades, window protection and for closing off the Zaguan. The fences provide protection, but leave the openings visually open. The fences are also decorative elements of Puebla's historical houses.

02.3.4 THE ROUTE IN BETWEEN THE PUBLIC AND PRIVATE
The route in between the private and public domain consisting of courtyards and transitional spaces is the element which binds the many layers of the historical house together. The semi-private and semi-public spaces of the route provide the historic centre with an extra domain suitable for a wide variety of activities and social interactions.
DISEÑANDO EN PUEBLA
FIELD RESEARCH AND CONCLUSIONS

[26] 'Casa de las Cabecitas and its inhabitants'
02.4 CONCLUSION FROM THE INTERVIEWS

02.4.1 ACTIVITIES IN BETWEEN THE PUBLIC AND PRIVATE REALM
The courtyard and the transitional spaces provide room for a variety of activities and social interactions for which the long, straight and functional streets and the private quarters of the historical houses are less well suited. In comparison with the busy and noisy streets mostly used for movement and transportation, the courtyards provide an atmosphere of a relative quiet, secure and slower pace of life. In comparison with the relative dark rooms of the historical houses, the courtyards are light and open. The strongest example of the activities and social interaction are the children playing in the courtyard.

02.4.2 SEMI PUBLIC STREETS INSIDE THE CITY BLOCK
The courtyards and transitional spaces, before the transformation of the house into a vecindad, could be interpreted as the centralized, semi-public/semi-private room of the house. In the current situation they can be seen as a semi public street along which people live in apartments. The difference from a normal street, usually a long continuous space, is that this semi public realm is formed by a route of transitional spaces and courtyards, in which the courtyards, because of their form and proportions, can still be seen as rooms.

02.4.3 CONTEMPORARY WAY OF LIFE
There is a need and wish to live a modern/contemporary life, with all the comforts that contemporary society has to offer. Cars, internet, a spacious house, modern materials, spacious, well lit and well ventilated rooms are important. Safety and the feeling of security are important especially for the higher social classes.

02.4.4 QUALITY OF THE SPACES IN THE HISTORIC HOUSE
The height of the rooms adds to the spaciousness and quality of the rooms and is experienced as such by its users. The spaces of the historical houses are relatively dark and need to be ventilated more.

02.4.5 LIVING IN THE HISTORIC CENTRE
The advantages of living in the historic centre are, the proximity of services, shops, entertainment, public transport and the fact that these can all be reached easily on foot.
The disadvantages of living in the historic centre are the limited availability of running water, a lack of parking spaces, bad illumination of public spaces and questionable security. Upper and middle classes experience a lack of shops to their liking in the historic centre.

02.4.6 THE NEED FOR PUBLIC SPACE
There is a need for more green spaces in the historic centre, especially green spaces separated from the streets of the grid and their noise and pollution. There is also a wish to ban cars from the area around the Zocalo.
THE CURRENT STATUS OF PUEBLA'S HERITAGE

Today there are many renovated historical buildings in the centre of Puebla, especially in the area around the main square. They are used as hotels, restaurants, government institutions, offices, schools and universities. Churches are also very well maintained. There are also abandoned historical buildings and historical buildings that are used as 'vecindades', where many families form lower social classes occupy the rooms surrounding the courtyards and share the few sanitary facilities. Further away from the main square the abandoned buildings and 'vecindades' become more numerous as renovated buildings become less numerous. This degeneration is also visible in the functions that buildings have and the maintenance of the streets. The abandoned buildings are in various states of decay. In many cases only ruins consisting of walls remain, as the roofs and floors have collapsed. During the field research several threats and opportunities which the historic centre and its heritage are facing, were encountered.

IMBALANCE IN SOCIAL GROUPS
Most of the people working and living in the historic centre are from the lower social classes of Puebla's society. There are people from the middle and upper classes who go to the centre to work, for entertainment or for special occasions, but this group is relatively small. The lower social classes don't have the resources to maintain the buildings and the streets and often the owners don't make enough money out of the rent or are simply not interested in maintenance. Especially outside the area around the main square many shops and other establishments are directed towards meeting the needs of the lower classes, making these areas less attractive for the other social groups to live, work or spend time.

IMBALANCE IN FUNCTIONS
During most of its existence the historic centre was occupied by a mix of all functions found in a city. The historical houses themselves were also occupied with different functions like living quarters, shops, workshops, offices etc. Demographic information shows that nowadays most of the people who live in the historic centre live in the so called barrios, the former indigenous neighborhoods surrounding the 'Spanish area'. Very few people live in the area around the main square and in large parts of the historic centre the number of inhabitants is relatively low. This is noticeable when walking through the streets, especially at night when the people who only work in the historic centre have gone home. The balance in functions is shifting towards tourism, education, government and commerce. In many city blocks the function of living has diminished greatly or has completely disappeared and with it the functions and activities related to the function of living. Furthermore when people live in the historic centre, they contribute to the historic centre by maintaining their homes and its direct surroundings. They occupy themselves with the outlook of the neighborhood, security, garbage collection and future developments.

[27] A deteriorating historical building, Av. 2 Oriente no. 4
[28] Many modernistic buildings near the Cathedral, Av. 3 Poniente
[29] Only the façade remains, Av. 5 Poniente
[30] A remaining façade and new construction, Av. 2 Oriente

DISEÑANDO EN PUEBLA FIELD RESEARCH AND CONCLUSIONS
O2.5.3 The Perception of the Historic Centre
During many interviews and talks it became clear that many people are not aware of the historical and cultural value of the historic centre. Especially people from the middle and upper classes view the historic centre as an insecure area, where buildings and streets are badly maintained, where there is no running water and where it is difficult to park their car. The lower social classes who live and work in the historic centre are unaware of the value of the buildings they occupy and are often unfamiliar with the concept of world heritage. Their main concern is to make money to survive another day. Overall there is a need and wish for economic prosperity and modernization as Mexico is in many ways still a developing country. These wishes are sometimes difficult to combine with preservation.

O2.5.4 Quality of Interventions
In the XX century a large number of historic buildings were replaced by modernistic buildings with very different typologies and designs a process which has already changed the appearance of the historic centre drastically. Some recent projects encompass and influence large parts of the historic centre. An example is the Paseo San Francisco project which incorporates a conference centre, a mall, a cinema, hotels and offices. The quality of the second kind of projects is subject of discussion.

O2.5.5 Clarity of the Values of the Heritage
Some interventions raise the question if the designers, project initiators and regulators are aware of what the heritage consists of. Do they know what its values are? E.g. towers that are being build in the area surrounding the historic centre are visible from the streets and break the horizontality of the historic centre.

In many project the façades are preserved and everything what lies behind them is destroyed or changed beyond recognition. Another example is the construction of an extra floor in between two existing floors transforming spacious rooms with high ceilings in rooms with ceiling heights of around two meters. Often the economic aspects are way more important than the aspects of the preservation of heritage.

O2.5.6 Heritage and Its Current State
The biggest opportunity for preserving the historic centre lies in the abandoned buildings and ruins. In spite of changes and interventions, the grid, the historical buildings and churches still create the appearance and atmosphere of the historic centre. The abandoned buildings and ruins hold the promise that they, when revived, can contribute to the appearance and atmosphere. Especially in the ruins the opportunity exists for transformation so they can fulfill the needs and wishes of Puebla's contemporary society.

O2.5.7 Growing Awareness and Appreciation
The growing awareness and appreciation of the historic centre and its heritage is indicated by a growing number of people who are passionate about the historic centre and are working to preserve and revive it. They work in several institutes and universities and collaborate with the local government and architects to make plans and strategies. There are also people who recognize the values of the historic centre and the way of life it makes possible. They buy historical buildings and renovate them and take care of their environment.
02.6 REGULATION AND PRESERVATION IN PUEBLA

02.6.1 RULES FOR THE PRESERVATION OF PUEBLA’S HERITAGE
For restoration, renovation and new construction projects in the historic centre a permit from the INAH (Instituto Nacional de Antropología y Historia) has to be obtained, next to the regular permit of the local government. The local government checks if the project complies with the laws for construction and the INAH checks the quality of the projects according to the existing heritage and regulation concerning the preservation of the heritage. In order to become familiar with the regulation concerning the preservation of the heritage and the process needed to obtain a permit from the INAH, several visits to the INAH were made during the field research. These visits and talks with INAH employees could not provide me with a clear explanation nor with physical documents which describe the regulations and the process for obtaining a permit. It could not be revealed if a uniform list of regulations even exists. An idea about how the process works to obtain a permit did came to light. Each project is looked at individually by a employee of the INAH. It seems that this person also decides which interventions in the project are permitted and which are not. These decisions are based on the current state of the heritage, but if they are based on formal regulations is not known. It seems that the individual point of view of the decision maker can play a large role making subjectivity and irregularities in providing permits possible.

02.6.2 PRESERVATION OR ENDANGERMENT
Regulation in the form of formal rules, if they exist, decisions of INAH employees or both, help to preserve Puebla’s historical buildings. On the other hand they try to protect. During interviews and talks with people who had bought and renovated a historical houses it became clear that the rules for restoration and renovation are directed at the exact physical preservation of the heritage. Often the transformation of certain aspects of the buildings to meet the needs of their owners are not allowed. Examples are that it was not allowed to place new toilets and bathrooms or put electrical wiring in the walls. During an interview, the owner of a historical house said the following: “Because of the strict regulation, people can’t adapt the historical buildings in order to live and work in these buildings the way they want to. People will leave the historic centre to go to places where they can create an environment that suits their needs or they will renovate historical buildings without a permit, often destroying parts of its value. There are even cases in which owners let the historical buildings decay so they can build an entirely new buildings after the collapse of the old one”.

02.6.3 PRESERVATION AND TRANSFORMATION
During the field research I found transformations from different time periods in many historical buildings, indicating that at least several times during their existence, the buildings were transformed to meet the needs and wishes of their owners. So many transformations can be found, that transformation seems an intrinsic part of Puebla’s historical houses. Not allowing transformation, seen in this light, goes against the nature of the building and can very well play a part in the explanation of why many historical buildings are abandoned and in bad shape. Regulation as such should find the balance between preservation and transformation and should focus on the quality of both.
MODELO DE INTERVENCIÓN
DEL CENTRO HISTÓRICO
SENDAS PEATONALES Y ESPACIOS DE ENCUENTRO

EPOPEYAS HISTÓRICAS
1. - Ex - Convento del Carmen
2. - Ex - Convento de Santa Monica
3. - Señor de las Maravillas
4. - Plazuela del Carmen
5. - Plazuela de San Luis
6. - Plazuela Gutierre de Cetina
7. - Ex - Hospital de San Juan de Dios
8. - Mercado Guadalupe Victoria
9. - Ex - Convento de Santo Domingo

DEL SABER
10. - Ex - Colegio de San Luis
11. - Ex - Colegio del Espíritu Santo
12. - Ex - Colegio de San Pedro, San Pablo, San Juan y San Pantaleon
13. - Ex - Colegio de San Ildefonso
14. - Ex - Colegio de San Ignacio
15. - Ex - Colegio de San Javier

REVOLUCIÓN MEXICANA
16. - Santa Clara
17. - San Cristobal
18. - Barrio del Artista

INSURGENTES - REVOLUCIÓN
19. - Paseo Bravo
20. - Centro Gastronómico
21. - Centro Cultural
22. - Museo Nacional de los Ferrocarriles
23. - Centro Nacional de la Preservación Patrimonio Cultural de los Ferrocarriles

DE LA MUJER
24. - Jardín de la Pergola
25. - Plazuela del Bolíche
26. - Plazuela de las Garzas
27. - Ex - Hospital de San Roque

ANGELES
28. - Museo Amparo

ADUANA VIEJA
29. - Alhondiga
30. - Ex - Hospital de San Pedro
31. - Aduana Vieja
32. - Parian

SAN PABLO DE LOS FRAILES
33. - Ex - Convento de San Pablo
34. - Mercado 9 de Mayo
35. - Alameda / Jardín Francisco I. Madero
36. - Parroquia de San José
02.7 'LA SENDA DE SABER', REVITALISATION FOR THE HISTORIC CENTRE

02.7.1 THE REVITALIZATION PROJECT
A workgroup within the 'Instituto de las Ciencias Sociales y Humanidades connected to the BUAP university is developing a revitalization strategy for the historic centre of Puebla. Archeologists, anthropologists, historians, city planners and architects are working together to create an integral inventory and understanding of the historic centre and its heritage. This inventory is used as a bases for the revitalization strategy. The revitalization strategy focuses on the strongpoints of the historic centre, which are its universities and other educational institutions, the historic centre as an religious centre, tourism and commerce. The development of the historic centre aims to strengthen and interconnect the religious and educational centre's with axis along which the main interventions of the revitalization strategy will be focused.

The revitalization strategy consists of the creation of pentional areas, new functions for abandoned buildings, the renovation of historical buildings, the improvement of public spaces and also social projects and the improvement of the security in the historic centre. Parts of the axis (e.g. Av. Refoma and Av. 3 Poniente) in between the religious and educational centre's that will be transformed into peatonal areas. Along these axis the abandoned historical buildings will be transformed into e.g. university buildings, housing for employees of the universities and students and other functions related to academic and religious tourism. The streets will be refurbished with new pavement, drainage and improved illumination.

02.7.2 DISEÑANDO EN PUEBLA AND 'LA SENDA DE SABER'
In the second week of the field research I made contact with dr. Carlos Montero Pantoja the head of a the workgroup. He offered information and a place to work. It was decided that the final project ' Diseñando en Puebla' would contribute to the thought process concerning the revitalization project and that the architectural design would show how one could approach a new architectonical design in the context of the historic centre. During the field research I presented my work several times to the members of the workgroup. I also shared the contact I made in 'Casa de las Cabecitas' with the historians, who used the contact to start their own investigation. The project la Senda de Saber played also a role in choosing the location for the design, which is within the impact area of the project.

Map of the 'Senda de Saber' project (source: Instituto de las Ciencias Sociales y Humanidades, BUAP, Puebla)
03. THE LOCATION FOR THE DESIGN

This chapter describes the location and the reasons for choosing this specific location for the architectural design. The chapter starts with the reasons for choosing the location. The location itself is described on several scale levels, from the neighborhood down to the specific block and the individual parcels.

For readers who are not familiar with the city of Puebla, general information about Puebla and its history can be found in the booklet of the architectural analysis of 'Casa de las Cabecitas'.
03.1 CHOOSEING A LOCATION FOR THE DESIGN

03.1.1 THE SPANISH AREAS AND THE 'BARIOS'
The historic centre of Puebla has a Spanish area located around the Zocalo (main square). This is where the Spanish colonists and their offspring lived. The indigenous inhabitants lived in the so called 'barrios' surrounding the Spanish area. 'Casa de las Cabecitas', the house analysed during the field research is located in the Spanish area of the historic centre. To ensure continuation between research and design and because the typology of the houses in the Spanish area differs from the typology in the 'barrios', the search for possible locations was limited to the Spanish area.

03.1.2 THE 'LA SENDA DE SABER' PROJECT
The revitalisation project called 'La Senda de Saber' (see paragraph 2.7) played an important part in choosing the location. The architectural design made in this project should also serve to further the thought process of and serve as a realistic architectural proposal in the 'Senda de Saber' project. The chosen location should therefore be located within the impact zone of the 'Senda de Saber' project.

03.1.3 ABANDONED HISTORICAL BUILDINGS
In order to make a contemporary architectural design, locations with (largely) empty parcels or historical buildings in a far state of deterioration were looked for. Largely intact buildings would direct the design in the direction of a restauaration and many empty parcels or parcels containing ruins remain in the historic centre.

03.1.2 THE LOCATION FOR THE DESIGN
The location chosen for the design consists of three parcels located in the city block in between Avenidas 7 Poniente, 9 Poniente, 7 Sur and 9 Sur. Located in the Spanish area and closeby 'Casa de las Cabecitas', the location ensures the correlation between the research and the design. During the field research and previous visits to Puebla many opportunities have presented itself to observe not only the buildings from the outside and inside, but also the inhabitants and users of this part of the historic centre. These experiences all contributed to the knowledge of the location.
The neighborhood has a high potential, but also a very high percentage of abandoned and deteriorated buildings. A new architectural design could give a boost to the development and restauration of the neighborhood.
The chosen location consists of three parcels, all directed towards a different side of the city block, provide interesting possibilities for the architectural design when connection between the parcels is made. The parking lot, ruins of a building dating back to the XVII century and a building without historical value, that occupy the three parcels make it possible to combine new architectural design and renovation in one project.
The historic centre of Puebla

[A] The neighborhood in which the location is located
[B] The location for the architectural design
[C] 'Casa de las Cabecitas', Av. 3 Poniente no. 512
[D] The main square, the Zocalo
03.2 ANALYSIS OF THE NEIGHBORHOOD

03.2.1 THE NEIGHBORHOOD IN THE HISTORICAL CENTRE
The chosen location lies in a neighborhood on the westside of the historic centre, a ten minute walk from the Zocalo (main square) and the cathedral. Av. Reforma and Av. 3 Poniente, to main streets in the historic centre connect the neighborhood to the Zocalo. Av. 11 Sur/Norte located to the east of the neighborhood is one of the main transportation arteries that surround the historic centre. The park located on the east side of Av. 11 Sur is called Paseo Bravo. It is one of the bigger parks in the historic centre. From this busy park buses depart to all parts of the city.

03.2.3 HISTORICAL DEVELOPMENT OF THE NEIGHBORHOOD
The convent of San Agustin has played an important role in the development of this part of the historic centre. Like other religious and commercial hubs in the historic centre, development was concentrated around San Agustin. The San Agustin convent occupied two city blocks. Today only the church of the convent remains. Until the XIX the cityblock was located on the edge of the historic centre, after which the city blocks to the south west began to develop. These city blocks contain therefore less historical buildings. In the XIX century the university hospital was build. Before that this 3/4 of a normal city block was an empty square.

In the city blocks surrounding the location, buildings with historic value from the XVII, XVIII and XIX centuries remain. In the second half of the XX century quite a number of historical buildings were demolished to make room for parking lots and modernistic office and appartments buildings.

03.2.4 DEMOGRAPHICS
Today the neighborhood is one of the denser populated areas of the historic centre. With in between 200 and 300 inhabitants per city block this is in comparison with the amount of square meters of the city block still quite a low number. Many inhabitants are from lower social classes and live in vecindades, but there are people from the middle classes living and working in the neighborhood.

03.2.5 HIGH POTENTIAL THE NEED FOR DEVELOPMENT
The atmosphere and feel of the neighborhood are dominated by ruins and abandoned buildings. In contrast to its first onlook, the neighborhood has a high potential for development. A university hospital is a place with many visitors and workers with higher incomes. Avenida 11 Sur runs south only two blocks away and is one of the main transportation arteries surrounding the historic centre. A large supermarket is located 5 blocks to the south and a local foodmarket and several bakeries, pharmacies and small supermarkets are in walking distance. The context with the historical centre - with its schools, universities, shops, bars, restaurants, churches, government institutions, cinema's and other entertainment all in walking distance - contributes to the high potential. Development directed at middle class people is starting to change the neighborhood.
[31] The entrance of the San Agustin church
[32] The Parral market seen from Av. 7 Poniente
[33] El Paseo Bravo
[34] The university hospital
[35] Avenida 7 Poniente
DISEÑANDO EN PUEBLA THE LOCATION FOR THE DESIGN
03.3 ANALYSIS OF THE CITY BLOCK

03.3.1 THE STREETS SURROUNDING THE CITY BLOCK
The city block is defined by the streets 7 Sur, 9 Sur, 7 Poniente and 9 Poniente. The 12 m. wide streets are characterized by two lanes of one way traffic, one lane for parking and relatively small sidewalks of both sides. During the day there is always a lot of traffic especially on avenida 9 Sur because it is used by many city buses. The sidewalks are not busy but there are always people walking in the streets. Avenida 7 Poniente is busiest because it has the most shops.

03.3.2 DESCRIPTION OF THE CITY BLOCK
The city block, ‘la manzana’ in Spanish, is approximately 164 meters long and 82 meters wide and is divided in 22 parcels. The original eight parcels, called solares, have all been changed and subdivided. Traces of the original subdivision of the city block can be observed in the dividing line in the middle of the city block running along its long side. The historical buildings can be recognized by their rectangular courtyards as is visible in the morphology. Transformed buildings or contemporary buildings have amorf shaped courtyards or small rectangular vents for some light and air. Most buildings in the city block have two stories. Buildings on the northernside of the city block are all two stories high. On the south side they are mostly one story high. Overall the maintenance and outlook of the buildings is reasonable to poor. This influences the atmosphere in the streets.

03.3.3 FUNCTIONS AND ACTIVITIES
The city block is typified by a large variety of functions and that many buildings have more than one function. Often the rooms next to the street are in use as shops or workshops and the rooms inside the city block or on the upper floors are offices and apartments. Several buildings can be found that have just one function e.g. an apartment building or an empty plot in use as a parkinglot.

Most housing is for lower class people who live in several ‘vecindades’. There are some apartments for middle class people and there is no housing for people in the upper class. Commercial activities take place in workshops, a commercial parkinglot, a wide variety of small shops, e.g. a liquor stores, shops for building materials, food shops and bakeries and several offices of lawfirms, doctors and notaries.

03.3.4 HISTORICAL VALUE
Thirteen historical buildings remain, 5 from the XVII century, 4 from the XVIII century and 4 from the XIX century. The level of maintenance differs. One XVII century building, Avenida 703 is in ruins, several historical buildings are in need of maintenance and in use as vecindades. Avenida 7 Poniente 705 is empty and is up for sale. Avenida 7 Poniente 716 is renovated, well maintained and in use as a centre for social events. Most of the newer buildings from the XX century don’t have an outspoken style. Some of them have a modernistic design which is very different from that of the historical buildings. Half of the buildings in the city block date from the XX century and have no historical value.
DISEÑANDO EN PUEBLA THE LOCATION FOR THE DESIGN
03.4 ANALYSES OF AVENIDA 7 SUR 703

03.4.1 DESCRIPTION OF Av. 7 sur nr. 703 (parcel A)
The square formed parcel is 22 meters deep and 20.5 meters wide. The boundary between the parcel and the street is formed by a four meter deep, non historical building along the entire length of the building. The rest of the parcel is used as a parking lot for the neighboring building on the right of the parcel.

03.4.2 HISTORICAL DEVELOPMENT OF THE PARCEL
The design of the current building tries to relate to the colonial style of the historic centre, but contemporary materials like concrete indicate that it is a non historical building. More information on former buildings or the current building could not be found.

03.4.3 NEIGHBORING PARCELS
The neighboring parcel, Av. 7 poniente nr. 701, on the right of parcel A, is occupied by a modernistic building form the 1960’s or 1970’s. On the ground floor level there are shops selling lamps, liquor and office supplies. The spaces of the upper floors are used for offices, laboratories and apartments for people with a middle class income. The building is physically connected to parcel A so the tenants can reach their cars on the parking lot. Several windows of the building overlook parcel A.
The building on the left of parcel A is a historical building dating back to the XVIII century. The building has transformed changing its colonial appearance. The building is used as a shop for building materials and as an apartment building for people with a lower class income. Several windows in the building overlook parcel A.

03.4.4 POSSIBILITIES FOR DEVELOPMENT
The several windows that overlook parcel A and the physical connection influences what can/should be build on parcel A. A solution could be the introduction of a green area in the design that could benefit the building on parcel A as well as the neighboring buildings. If the parkingspaces on parcel A should be replaced in the new architectural design. The existing building has enough quality to be maintained and renovated.
DISEÑANDO EN PUEBLA THE LOCATION FOR THE DESIGN
03.5 ANALYSES OF AVENIDA 7 PONIENTE 703

03.5.1 DESCRIPTION, AV. 7 PONIENTE NR. 703 (PARCEL B)
The 46 meter deep and 12.8 meter wide parcel of Av. 7 Poniente nr. 703, is the only one of the three parcels that is almost completely occupied by a building. The building dates back to the XVII century. It is in a far state of deterioration. Almost all roofs and floors have collapsed, the stucco has fallen from the walls and most doors and windows are gone. In the design of the building the rooms are constructed in an U form around a small courtyard and around a long amorphous corridor. In both the courtyard and the corridor trees are growing.

03.5.2 HISTORICAL DEVELOPMENT OF THE PARCEL
The information from the INAH (instituto Nacional de Antropologia y Historia) indicates that the building dates back to the XVII century and underwent changes in the XIX and XX century. It is not known if a building existed on the parcel before the current building was constructed. The remaining 'naked' walls provide evidence of the time periods in which the different parts of the building were constructed or transformed.
The different thickness of the walls and construction materials divide the building in roughly three parts. The part closest to the street is the oldest part (XVII). It has the thickest walls constructed with smaller stones and bricks and a lot of chalk mortar. The part of the building in the middle of the parcel dates back to the XIX century. The walls are less thick and are constructed with larger bricks. The part in the back of the parcel is relatively new. Concrete, thin walls and metal water tanks indicate that this part of the building was constructed in the XX century. The walls in the oldest two parts of the building show traces of many transformation and repairs. E.g. traces of former windows filled in with bricks and newer much smaller doors and windows. The many transformations support the conclusion from the field research that historical buildings are continuously transforming entities; transformations is an inherent part of the historic buildings.

03.5.3 NEIGHBORING PARCELS
The parcel on the right of parcel B, Av. 7 Poniente no. 705, is occupied by a XIX building. The XIX century building has been transformed from a large house for an upper-class family into an apartment building. All the rooms can be rented separately. The building is currently empty and for sale.

03.5.4 POSSIBILITIES FOR DEVELOPMENT
The XVII century building, because of its historical value, defines the possibilities for new development. The two oldest parts of the building have historical value as the typology of the rooms and the materials used match that of other representative historical houses in Puebla. The newest part dating back to the XX century has no historical value since the typology of the rooms and the materials differ a lot than those of representative historical houses. It neither has contemporary value as the quality of the construction is poor and the rooms are very small and lack daylight.
The newest part of the building should best be demolished. The other two parts of the building have to be renovated to make them suitable for use. The current emphasis for the preservation for Puebla's heritage is the physical/literal preservation of the historical buildings. The inherent nature of transformation visible
The remaining walls on the ground floor and first floor level of the ruins occupying Av. 7 Poniente no. 703.
in the walls of the historical buildings defines a degree of freedom for incorporating transformation in the new design. E.g. a wall has one door probably made in the XIX century and traces of an older door filled in with brick. Both were constructed according to the current needs of the of the time period in which they were build. The new design should and could incorporate changes in the old construction should it be desirable according to the current needs of our time period. The fact that all roof, floors and parts of walls have collapsed provide even more freedom for the architectural design.

[40] The façade of 7 Poniente no. 703 as seen from the street
[41] The façade of 7 Poniente no. 703 as seen from inside the parcel
[42] The remaining walls in the middle part of the parcel
[43] A contemporary construction on the hindmost part of the parcel
DISEÑANDO EN PUEBLA THE LOCATION FOR THE DESIGN
03.6 ANALYSES AVENIDA 9 PONIENTE 703

03.6.1 DESCRIPTION, AV. 9 PONIENTE NR. 703 (PARCEL C)
The largest of the three parcels, parcel C, is currently in use as a commercial parking lot. Customers pay a hourly fee for parking their car. The only building on the premises is a small office for the employees guarding the cars. A blind wall approximately 4 meters high separates the parking lot from the street. The only two openings are big enough for a car to pass through.

03.6.2 HISTORICAL DEVELOPMENT OF THE PARCEL
The walls surrounding the parcel show evidence of the former building(s) occupying the parcel. Next to traces of contemporary materials like concrete, an historical doorway can be found, giving a hint to what kind of building could have occupied the parcel. Outside the photograph and traces on the walls no information could be found on the building formerly occupying the parcel.

03.6.3 NEIGHBORING PARCELS
The two neighboring parcels on the left, Av. 7 Sur nr 705/707 are occupied by one story buildings. One by a non historical building and one by a building dating back to the XVIII century. The historical building has transformed much during its existence, changing its colonial appearance. They are used for shops selling building materials and office supplies and apartments for people with lower incomes. The buildings are not very well maintained, visible in the deteriorating walls and graffiti, which influences the atmosphere in the streets. The neighboring building on the right of parcel C is a non historical apartment building for the lower social classes. As far as can be seen from the street the building is reasonably well maintained.

03.6.4 POSSIBILITIES FOR DEVELOPMENT
Because no buildings occupy the parcel the possibility exists to design an entirely new building. New developments in Puebla include underground parking lots, because of the lack of parking space in the historic centre. The new design should and could include an underground parking lot.
A part of the field research and the design process was dedicated to the question what to design in the historic centre and for whom. To answer this question there were conversations and interviews with experts and inhabitants of the historic centre. The experience of living with a middle-class family for two months has given a lot of insight in how people live and what they think is important. Information on this part of the field research can be found in the booklets of the interviews.
04.1 WHAT TO DESIGN AND FOR WHOM

04.1.1 LIVING IN THE HISTORIC CENTRE
Since its foundation the historic centre of Puebla has been characterized by a large variety of functions and activities. People lived and worked in the historic centre. Nowadays the balance in functions and activities is shifting towards tourism, education, government and commerce. In many city blocks the function of living has diminished greatly or has completely disappeared and with it the functions and activities related to the function of living. Furthermore when people live they contribute to the historic centre by maintaining their homes and its direct surroundings. They occupy themselves with the onlook of the neighborhood, security, garbage collection and future developments. The attention people give to their direct environment contributes to the atmosphere in the neighborhood and give it its specific, individual characteristics.

04.1.2 BALANCE IN SOCIAL CLASSES
In the first half of the XIX century the upper and middle classes started to leave the historic centre for the newly created suburbs. The historic houses, normally occupied by a wealthy family and their employees, were transformed in so called 'vecindades', apartment buildings for lower class families. The functions and activities in the historic centre focused and still focus mainly on the lower classes, the main group occupying the historic centre.

04.1.3 THE PERCEPTION OF THE HISTORIC CENTRE
The interests in the new and modern, the deterioration of the historical buildings and streets and the lack of facilities focused on the upper and middle classes have left these social classes with a negative perception of and a lack of interest in the historical centre. A negative perception that is still very vivid today. By many in the higher social classes the historic centre is perceived as a dangerous and deteriorated place, where they can't park their car and where there is no running water. During the field research it became apparent that there is a growing group of middle class people that appreciate the historic centre and the way of life it makes possible.

04.1.4 GROWING MIDDLE CLASS.
Puebla's contemporary society is characterized by a growing middle class. This group of people is asserting its influence on society and has the resources to do so. In the historic centre there is very little housing for middle class people. Students living in the historic centre have to leave the historic centre after having finished their study, because they can't find a suitable home.

04.1.5 HOUSING FOR MIDDLE CLASS FAMILIES
In interviews and conversations during the field research the points mentioned above surfaced and I used them to decide what to design and for whom. I decided to design a housing complex for middle class families. Such a project can recognize that living is an essential function in the historic centre. By making houses for middle class families, the imbalance in social classes can be addressed and the higher social classes can see that one can live a contemporary and comfortable life in the historic centre. I want to give the young people in Puebla, who have the resources to maintain and develop their build environment, a place in the historic centre.
The historic centre, the city blocks and number of inhabitants (source: Instituto de las Ciencias Sociales y Humanidades, BUAP, Puebla)
04.2 IMPORTANT ASPECTS FOR DESIGNING MIDDLE CLASS HOUSING

04.2.1 IMPORTANT ASPECT FOR MIDDLE CLASS HOUSING
During the field research I found several aspects that are important for middle class people in relation to their built environment. These points surfaced in interviews, conversations and my experiences of living with a middle class family for two months.

04.2.2 A CONTEMPORARY WAY OF LIFE
Mexico is a country with many faces and extremes. The divides between rich and poor, modern and old, innovative and conservative and so on are very large. The growing middle class is the part of Mexico that relates itself with moving forward to a new and modern Mexico. Today's middle class families have a more and more western lifestyle. Both the husband and wife work and because of this families become smaller. They consist of mom and dad and around two children. The middle class people in Puebla's society of today want above all to live a contemporary life with the comforts that come with it. They want homes that reflect their status, they want a car an park it near their home, they want wireless internet and sit on the couch with their laptop, they want to shop, go to movies, eat at a restaurant. Many middle class families live in suburbs and depend on their car to go almost everywhere. A life in the historic centre could enrich the way of life of middle class families. Schools, shops, supermarkets, restaurants, libraries, government institutions are not present in the suburbs and in the historic centre they are in walking distance. During the field research some middle class people living in the historic centre have indicated they can live a comfortable life there. But certain aspects that cannot be taken for granted like running water, gas for cooking and parking space need extra attention.

04.2.3 SECURITY
In Mexico there is more crime and violence than we are used to in the Netherlands. The perception that many people from higher social classes have of the historic centre, that it is a dangerous place, is not true. Security however is important. Both physical safety as the feeling of security are important and should be incorporated in the design. Physical safety e.g. can be translated in steel fences which have openness but do close off the spaces, or in social control. Social control is also important for the feeling of security. The introduction of transitional space in between the public domain and the private quarters can also enhance the feeling of security.

04.2.4 A CONTEMPORARY DESIGN
The architectural design should focus on middle class families that appreciate the historic centre and at the same time want to live a contemporary life. Their homes and direct surroundings should reflect what they deem important. During the field research points like openness and light, modern and high quality materials and a variety of spaces were indicated to be important.

04.2.5 PUBLIC SPACE INSIDE THE BUILDING BLOCK
In the interviews during the field research the need for more green public space was expressed. Especially for tranquil green spaces away from the streets filled with cars and their noise and stench. Spaces e.g. where one can for example read a book, or spaces where kids can safely play outside. The public space could also serve as an element that enhances the quality of the neighborhood.

Evidence of life inside the walls Av. 9 Poniente no. 102
A middle class cafe Av. 9 Oriente no. 210
Life in a vecindad Av. 16 de Septiembre no. 1305
Liveliness seen from the streets Av. 9 Oriente no. 210
Traces of live ‘Casa de las Cabecitas’ Av. 3 Poniente no. 512
DISEÑANDO EN PUEBLA HOUSING FOR MIDDLE CLASS FAMILIES
05 THE ARCHITECTURAL DESIGN

The architectural design has been an intricate part of the field research and vice versa. Many of the findings and experiences during the field research have played a part in the completion of the design.

Chapter five shows the design concept, a general description of the design and the specifics per parcel. The description parcels starts with parcel A and ends with parcel C.
05.1 THE DESIGN CONCEPT

The design concept derives from combining the results of the architectural analysis and interviews of the field research with the possibilities of the chosen site. It aims to combine the preservation of Puebla’s heritage and the needs and wishes of Puebla’s contemporary society.

05.1.1 TRANSFORMATION OF GENERIC CHARACTERISTICS

The routes consisting of courtyards and transitional spaces in between the public and private domain are the red treads running through the historic centre. Many aspects of the historical architecture and way of life are related to these routes. From materialization and decoration to social interaction and functionality. The routes provide space for a wide variety of activities and social interaction for which the streets and the spaces of the private domain are less suitable. In many contemporary buildings and new developments, the routes, with its courtyards and transitional spaces, are degraded to small corridors and stairways only suitable for movement in between the public and private domain. These developments deprive the historic centre of the essential semi-public and semi-private spaces, which give the historic centre its multi layeredness. The design concept recognizes the routes, consisting of courtyards and transitional spaces, as an essential part of Puebla’s tangible and intangible heritage and combines it with another intrinsic part of Puebla’s heritage: transformation. The design concept takes the route as the basis for the design and transforms it according to the needs and wishes of Puebla’s contemporary society.

05.1.2 THE ROUTE TRANSFORMED

The new route, consisting of courtyards and transitional spaces, connects the three parcels that make up the chosen location for the design. The three parcels have their own characteristics and measurements ensuring the courtyards have their own atmosphere. The new route, with multiple entrances and exits, is much more accessible than the existing routes in the historic centre. This way the world inside the city block can be used as public space and can be experienced more easily. The route has become a street inside the city block, instead of an alley inside one building.

05.1.3 COURTYARDS SURROUNDED BY HOUSES AND APARTMENTS

The semi-public courtyards inside the city block are surrounded by houses and apartments, instead of individual rooms that surround the courtyards in the historical houses like ‘Casa de las Cabecitas’.

05.1.4 TRANSITION AND DIRECT CONNECTION

Transition between the public domain of the streets, the semi-public domain of the courtyards and the private domain of the houses and apartments is an important aspect of the design. Transitional spaces form boundaries between the domains, enrich the courtyards, houses and apartments by creating dept and curiosity and are semi-private usable spaces of the houses and apartments. The houses also have a space directly connected to the semi-public courtyards. The physical and visual connection stimulates social interaction and control in the courtyards. It also provides the possibility for the inhabitants to make the courtyards a part of their home.
The route in 'Casa de las Cabecitas' Av. 3 Poniente no. 512

The connection of the three parcels
A route consisting of courtyards and transitional spaces

Courtyards surrounded by houses and apartments
The transformation of the route present in ‘Casa de las Cabecitas’ to a new route used in the design.
05.2 THE ARCHITECTURAL DESIGN

05.2.1 RENOVATION, NEW DESIGN AND PUBLIC SPACE
The architectural design of a housing project for middle class families, combines the three parcels that make up the location chosen for the design. It incorporates the renovation of a XVII century building currently occupying parcel B, a completely new construction on parcel C and a focus on public space on parcel A as it is the

 parcel with direct connections with neighboring parcels. The different sizes and characteristics of the parcels ensure diversity in the design.

05.2.2 THE ROUTE
Consisting of courtyards and transitional spaces, the route, a generic characteristic of Puebla's heritage, forms the basis for the design. The route combines the preservation of Puebla's heritage with the needs and wishes of Puebla's contemporary society. Close to the public domain the design relates to the historic centre and its atmosphere. Closer to the private domains of the houses and apartments the design relates more and more to the needs and wishes for a contemporary life. The route having entrances on Av. 7 Poniente, 9 Poniente and 7 Sur, is more accessible than the existing routes in the historic centre. It provides public space to the inhabitants of the project as well as to people living in the neighborhood. Located inside the city block the public space is more tranquil than most public spaces in historic centre, which often are located next to busy streets.

05.2.3 THE COURTYARDS
The design incorporates four courtyards surrounded by houses and apartments for middle class families. The different measurements of the parcels, the existing ruins of the XVII century house and the different focus on renovation, new design and public space provide the bases for four different courtyards with all their own atmosphere. The courtyards have trees, elements with water and benches that enrich the semi-public space. The trees provide the necessary shade and cooler temperatures and the benches provides places where people can sit and relax. The courtyards provide, next to the spaces of the home, space with its own specific possibilities and quality to the inhabitants of the project and the neighborhood. More open than the spaces of the houses and apartments but more closed and tranquil than the streets of the grid, they provide room for a wide variety of activities and social interactions. Especially for children, who get a place where they can play, a rarity in the historic centre.

05.2.4 HOUSES AND APARTMENTS
In total there are eight houses and four apartments incorporated in the design, which provide a home for around 35 people. The houses are designed for middle class families and apartments for middle class couples. One house and two apartments are located on parcel B, and seven houses and two apartments are located on parcel C.

05.2.5 MULTIPLE FUNCTIONS
Functions other than living are also incorporated in the design. Three shops, one office, an underground commercial parking lot and a café bring people to the project, making the public space more lively. On the other hand they provide extra functionality and comfort for the inhabitants of the project.
05.2.6 Generic Characteristics of the Historic Houses
Next to the route consisting of courtyards and transitional spaces, the design incorporates more generic characteristics of Puebla's historical houses. These are the multiple functions, shops located on ground floor level with connection to the street, the order in the façades, the ceiling heights, the thick walls, the wooden doors and windows and the steel decorated railings and fences. The use of generic characteristics forms the relation between the design and the historic buildings and atmosphere.

05.2.7 Construction and Materialization
Different construction methods are used for the renovation of the XVII century building and the new design. The main difference lies within the load baring constructions. On parcel B the thick masonry walls, dating back to the XVII and XVIII centuries, form the load baring construction for the renovation part of the project. Where necessary the walls are repaired using the same construction method with which they are made. This way the walls keep their historic appearance and by using chalk mortar the walls keep their ability to 'breathe'. Wooden beams form the construction for the floors and roof, which have a cement layer and a wooden or waterproof finish. In the new design on parcel C and the renovation on parcel A, the load baring construction is formed by reinforced concrete columns and floors, dimensioned to cope with heavy earthquakes. The stability is created by filling in the gaps between the columns with, 'bloque', large but relatively light concrete bricks. The concrete floors and roof have a cement layer and a water proof finish. This construction method is widely used for buildings of the same type and scale in Puebla.

The materialization of the design is what unites the different parts of the project. Materials, like a broken stucco, natural stone, wood and steel, often used in historical buildings, are used in a contemporary way. White stucco, light colored wood, galvanized steel and natural stone with a sandy/yellow color give lightness and a contemporary feel to the courtyards, houses and apartments.

05.2.8 Decoration
Next to the materialization, the decoration creates unity within the different parts of the design. The specific characteristics of Puebla's historical houses often display the beliefs and interests of their owners and designers. Like the faces of Zeus and Hera in the façade of 'Casa de las Cabecitas' tell a tale of the beliefs and interests of the renaissance, I chose to introduce decoration based on my own interests. The decoration is based on the flower of life, a symbol found throughout history on all continents. The symbol is created by starting with one circle and adding more circles, a process which can continue indefinitely. It contains all kinds of information like many mathematical rules, e.g. the golden section and many spiritual symbols, like the yin yang sign. The flower of life, the process how it is created and some of the information it contains is used to decorate the façades, walls, fences and railings in the design.
05.3 ARCHITECTURAL DESIGN PARCEL A, AV. 7 SUR 703

05.3.1 ORCHARDS AS PUBLIC SPACE IN THE HISTORIC CENTRE
The design of the public space on parcel A relates back to the times when there were orchards and vegetable gardens in the historic centre, providing food for its inhabitants. When Puebla was founded, the streets of the grid were laid out. The city blocks were filled in over time. The spaces in the city blocks that were still empty were used as orchards and vegetable gardens. Orchards could also be found inside the walls of convents. Away from the busy life on the streets, these inner gardens provided the historic centre with cool and tranquil spaces. Through time and as a result of a process of densification the orchards vanished from the city centre. Today, in certain parts of the historic centre, gaps appear in the fabric of the city blocks, where buildings are abandoned, demolished or just collapse. In these empty spaces the orchards can return.

In the design a variety of fruit trees, like orange, lemon and guava trees, form an orchard and occupy what is currently the parking lot. The trees provide shade for visitors and the flowers and fruit that grow on the trees give an extra dimension to the experience of the public space.

05.3.2 THE CAFÉ AS TRANSITION AND INVITATION
The building which currently forms the boundary between the street and the rest of the parcel is renovated and serves as a café. The typical and recognizable façade of the building and the outer walls are preserved. The inside is changed completely as toilets, a kitchen and storage are introduced to meet the needs of the café. Parts of the orchard are elevated and serve as a terrace for the café. The elevation and the difference in materialization between the terrace and the rest of the orchard make the terrace part of the café. The café forms the transition between the public street and the semi-public courtyard. The café functions as a boundary and as an invitation for the route, located inside the city block. The thick wall of the façade facing the street with relatively smaller openings functions as the boundary. The façade facing the courtyard is almost completely open. This openness and the trees are visible from the street, forming the invitation. Large folding doors in the façade facing the courtyard and sliding doors in the façade facing the street, minimize the boundary between inside and outside during opening hours.

[53] The new façade of Av. 7 Sur no 703
The orchard and design of the café and the terrace (page 91)
05.4 ARCHITECTURAL DESIGN OF PARCEL B, AV. 7 PONIENTE 703

05.4.1 RENOVATION AND TRANSFORMATION
The architectural design on parcel B is directed by the choice to design housing for middle class families and by the remaining walls of the XVII century house. As concluded in the architectural analysis and clearly visible in the remaining walls, transformation has been an intricate part of the history of the house. Several different types of bricks and bricklaying techniques and different sizes of openings in the walls indicate that the house can be divided in roughly three parts, dating back to the XVII, XVIII and XX centuries (page 66). Several smaller transformations can be seen in the form of e.g. former windows and doors, now filled in with bricks.

I found the direction for the renovation of the historical house, in the balance between preservation and transformation. I chose to preserve the parts of the building dating back to the XVII and XVIII centuries and use their structure and organization for the design. Like in many instances throughout the history of the house, I took the liberty to change parts of walls and add or remove windows and doors, in order to optimize the design. As it has no historical nor current value, I chose to demolish the part dating back to the XX century to make room for the connection with the other parcels.

05.4.2 VISIBLE TRANSFORMATION
The most intriguing part of the remaining walls is the story they tell. A variety of bricks, building techniques, former openings of doors and windows and many other modifications all visible because the stucco has disappeared. Because buildings are often perceived as static entities, as became clear during the field research, I decided to keep the transformations visible in the design, so that people can see that the historical houses are continuously transforming entities. Where needed the old walls are repaired and treated with a protective coating. The newly added parts are designed using the same materials as in the other parts of the design. In this way the old ‘naked’ walls tell the story of the continuous transformation of the historical house. The contrast between the old walls and the newly added contemporary materials reveals the latest transformation.

05.4.4 DESIGN PROGRAM
An optimum in both the use of the existing spaces as the definition of the program, has formed the basis for the organization of the design. Two shops are located on ground floor level connected to the streets as is the case in many historical buildings. The smallest of the two apartments is located on ground floor level next to the second courtyard.
Floorplans Level 0, 1 and 2
The largest apartment is located on the first floor above the two shops. It is accessible through a staircase located next to the first courtyard. The house is located on both the ground floor and first floor.

05.4.3 THE COURTYARDS
Two of the four larger and semi-public courtyards in the design are located on parcel B. One courtyard is the old courtyard of the historical house, the other forms the connection with the other parcels and is created by the demolition of a part of the existing construction dating back to the XX century. The two courtyards are smaller than the other two because of the measurements of the parcel. They also have their own atmosphere because of the historic walls with their at times irregular forms. The two trees currently growing on the parcel are incorporated in the design of the courtyards.

05.4.5 TRANSITIONAL SPACES
Both the largest apartment and the house have transitional spaces that are located in between the semi-public courtyard and the private rooms, following the design concept. These transitional spaces, visible in section D-D' on page 96, are smaller semi-private courtyards that are a part of the apartment and the house. They provide the owners with their own private outside space and the possibility for more light and ventilation inside their home. The openings in between the courtyards and the semi-private courtyards are closed off by decorated steel fences. They physically close of the semi-private courtyards, but leave them visibly open. In this way they provide an extra layer in the experience of the courtyard.
Section D-D'

Façade Av. 7 Poniente no 703
[56] Smallest Courtyard surrounded by the old walls
[57] The central courtyard of the route
[58] The route going through parcel B
05.5 ARCHITECTURAL DESIGN PARCEL C, AV. 9 PONIENTE 703

05.5.1 NEW CONSTRUCTION IN THE HISTORIC CENTRE
The currently empty parcel provides the opportunity to incorporate a completely new construction in the architectural design. Based on the architectural analysis, I decided to use generic characteristics of Puebla's heritage, like e.g. the ceiling height, the order in the façade and courtyards, the transitional spaces and iron fencing in the design, but in a contemporary way.
During the field research the INAH (Instituto Nacional de Antropologia y Historia) provided me with a short list of regulations for new construction in the historic centre. The rules discuss the parts of the building visible from the street, e.g. the height and horizontality of the façade. The larger part of the rules focuses on what is prohibited, instead of describing the desired quality. During the design I did not take the regulation as a strict guideline. But by incorporating generic characteristic of the historical houses, like the ceiling height and the order of the openings in the façade, the design stays within the boundaries set by the regulation.

05.5.2 DESIGN PROGRAM
An underground parking lot occupies the entire parcel. It provides 35 parking spaces for the inhabitants of the project and neighboring houses and offices. Cars enter the parking lot through an elevator system. A semi-automatic parking system is implemented to maximize the number of parking spaces. (... www.carparkers.nl) On the ground floor level next to the street there is the office and entrance of the parking lot and a small shop. The design of parcel C incorporates 7 houses for middle class families with two children. All houses have the same typology, creating order in the design of the courtyard. Two houses, one with a direct connection to Av. 9 Poniente and one with a direct connection to the courtyard on parcel B are bigger. They have extra rooms which form the connection and transition between the 'core' of the house and the street or courtyard. These houses provide a home for larger families, increasing the diversity of the project. Two apartments are located on the first floor next to the street, providing a home for a maximum of two people per apartment. Both apartments have their own balcony.
The design incorporates aspects that enhance the quality of living in the historic centre. There is a space where inhabitants can dispose of their garbage, a space for water and gas storage systems, which ensure running water and gas at all times. And on the roof there are two rooftop gardens that can be used by all inhabitants.

[59] The new façade of Av. 9 Poniente no. 703
Section F-F'

Section E-E'

Façade Av. 9 Poniente no 703
[60] Houses around the courtyard
[61] The courtyard seen from the first floor
[62] Looking back to the street
05.5.3 THE COURTYARD
The houses and apartments are located around one large courtyard. Two trees provide a human scale to the courtyard. Benches are located beneath the trees so people can sit in the shade. In the middle of the courtyard there is a fountain. Its design is based on the flower of life (page 87). The fountain enriches the courtyard because of its sound, the visual effects of the light reflected by the water, its ability to cool the air and because it is safe for children to play with. At the same time it functions as a drainage for rainwater.

05.5.4 TRANSITIONAL SPACES
Transitional spaces in the form of smaller semi-private courtyards and balconies are the transition between the semi-public courtyard and the private domains. They provide the owners of the houses and apartments with their own space outside. Galvanized steel fences physically close these transitional spaces, but leave them visually open, adding an extra layer to the experience of the courtyard and the route. The entrance of the parking lot also incorporates a transitional space in the form of a courtyard. People park their car in the courtyard located directly behind the façade, while waiting for the elevator. Instead of a gaping black hole in the façade, the entrance to the parking lot is light and open.

05.5.5 A CONTEMPORARY HOUSE
The houses are designed for middle class families. During the field research it became clear that these families above all want to live a contemporary life and a home that reflects this way of living. They want openness and light and social interaction as well as a feeling of safety. The route consisting of courtyards and transitional spaces continues inside the house. Where on the streets the design relates to the heritage of the historic centre, the route focuses more and more on the needs and wishes for a contemporary life when it approaches the houses. Wishes for light and air are reflected in the form of high ceilings, large openings in a façade leading to the private courtyard and in the white stucco covering the walls. The wish for openness is reflected in the continuity of space on the ground floor level. The continuity is underlined by the wooden ceilings and floors which run uninterrupted through all spaces on the ground floor.

As the largest room in the house, the kitchen is located on the ground floor and has a direct connection to the semi-public courtyard. Because it is the most used room in Mexican culture, its proximity to the semi-public courtyard can enhance social interaction and control. The semi-private courtyard forms the transition between the semi-public courtyard and the house. It functions as an outside room and it ensures that the other spaces of the house get sufficient amounts of daylight and are ventilated sufficiently. With the wooden sliding doors completely opened, the semi-private courtyard, the kitchen and the multifunctional corridor form one large space. The living room is the space on the ground floor locates furthest away from the public domain. The living room is given light and an extra dimension through a large opening in the ceiling.

On the first floor there are two bedrooms. They also have large sliding doors towards the semi-private courtyard. The largest bedroom also has a balcony towards the semi-public courtyard. A multifunctional corridor and bathroom complete the first floor. The second floor is almost completely in use as a large rooftop terrace from which one can see the volcanos surrounding Puebla. The terrace can be reached by a small space where there is room for washing machines.
Level 0, 1, and 2
The semi-private courtyard seen from the kitchen

The semi-private courtyard
Section H-H’ of the houses on parcel C

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05.6 CONSTRUCTION

The reinforced concrete construction of columns and floors gets its stabilization from filling in the gaps between the columns with cement bricks. Concrete lintels above the openings in the façades make larger openings possible. The 500mm thick walls between the houses and the courtyards have two layers of bricks with an air cavity between them. The thickness of the walls is emphasized by maximizing the day of the doors and windows.

The hinges of the wooden doors and steel fences are welded onto steel L sections, which are attached to the walls. In the façade a broken white and grove stucco covers the concrete and cement bricks. The steel L sections, which form the frames for the doors, are as well a casing beads for the stucco. The stucco of the inside walls is based on loam, giving it a natural color and positively influences the temperature and moisture of the environment inside the houses.

The wooden finish of the floors and ceilings is attached to a wooden framework, providing space for electrical and other forms of wiring. The floors of the toilets and bathrooms, roof terraces and semi-private courtyards are paved with a sand colored natural stone.
Detail 2
1] Reinforced concrete floor
2] Cement finish
3] Wooden floor
4] Frame, hard wood
5] Sliding door, hard wood
6] Railing, steel wires
7] Wooden ceiling
8] Sliding door, hard wood
9] White stucco
Detail 3
1] Concrete bricks
2] Concrete lintel
3] White stucco
4] Angel section
5] Fence, galvanized steel
Section I-I' of the houses on parcel C
Detail 4
1] Reinforced concrete floor
2] Cement finish
3] Pavement, natural stone
4] Threshold natural stone
5] Wooden door
6] Wooden floor
7] Cement finish
Detail 5
1) Concrete bricks
2) Concrete lintel
3) White stucco
4) Angel section
5) Wooden door
6) Wooden ceiling
Detail 6
1] U-section galvanized steel
2] Welded railing, galvanized steel
3] Reinforced concrete floor
4] Anchors attaching the balcony to the concrete floor
5] White stucco
6] Wooden boards
7] Wooden frame
8] Wooden door
9] Wooden floor
The ‘Diseñando en Puebla’ project combines, in one architectural design, the preservation of the heritage in the historical centre of Puebla with the wishes and needs of its inhabitants for a contemporary life. A thorough understanding of both aspects is paramount in order to be able to combine both aspects. One very important characteristic of both the built heritage and the needs and wishes of Puebla’s inhabitants is that they change. Both have shown that they transform constantly. The transformation of the generic characteristics of the built heritage according to the needs and wishes of Puebla’s inhabitants has proved to be the key factor in the architectural design.

Looking back, I can say that the field research was an intricate part of the design process. This became clear during the first phases of the design, when the first lines on paper provided me with new conclusions for the architectural analysis and put the answers from interviews in a new perspective. The field research lasted as long as the design process and the design process started when the field research started.

Experience was next to the rational interviews and analyses a very important factor in the field research. Living and working in the historic centre gave me a chance to see the historic centre ‘from the inside’ instead of through the eyes of a visitor. Through experience the routes that exist in the historic centre tell their secrets. It takes time before you start to discover the curiosity that is aroused by the contrast between light and dark when looking through a ‘Zaguan’. It takes time before Poblanos really tell you what they wish for and what they need.

The combination of architectural design with research and experience has led to the product described in this booklet. I hope it shows that living in a contemporary home in the city centre is possible and that it contributes to the process of revitalization that is taking place in Puebla.
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M.E VAN DER HAM