

# PROJECT DESCRIPTION

## The Mazahua Project

### THE HOUSING CRISIS

The present day housing crisis in the ZMVM has its roots in industrialization processes beginning in the 1930s and the subsequent influx of migrant workers to the city. (Romero, 11) The volatile population growth in Mexico City did not cease until the 1970s. Within the last 60 years the city grew from a population of 1.7 million to a population today of over 20 million inhabitants. (Meffert, 324.) The urban housing problem grew from the core city's inability to absorb the masses of migrants streaming into Mexico City.

As early as colonial times, the densely populated backyards in the historic centre of Mexico City provided housing for the poor, known as "vecindades." The intensive modernization programs that followed in the post-revolutionary years combined with increasing demand for rental housing led to the development of often government-funded "conjuntos habitacionales." (Ribbeck, 56-62.) These public housing projects aimed at combatting housing shortages would fail to meet increasing demand, as would the private supply of multi-family rental housing due to the implementation of rent control and foreign building regulations. (Meffert, 326.)

### INFORMAL HOUSING

These prevailing forces led to the rapid and somewhat unavoidable development of self-built "colonias populares," illegal irregularly founded, self-help settlements. Today, over 9 million people or half of the metropolitan population live in the colonias populares (one million in newer, 6 million in older and 2 million in very old low-income areas.) Barrios populares form a broad ring around the city core extending over 650 sq. km (an estimated 65 percent of the urban area.)(Ribbeck, 62.)

Historically unplanned settlements have been met with highly negative criticism. Early urban intervention focused on the demolition and replacement of these Third World 'slums.' Explosive growth in the 1970s led to more flexible attitudes towards the informal housing market, including a more tolerant 'progressive' approach that saw comprehension and participative co-operation as an integral part in the improvement of these communities. (Ribbeck, 66.)

### THE MAZAHUA COMMUNITY PROJECT

This report is focused on a co-operative housing project assisted by an independent non-profit social organization called FOSOVÍ (Fomento Solidario de la Vivienda). The organization that wishes to build the project is a community group of Mazahua people, funded by an indigenous organization, the National Indigenous Institute. The Mazahua people come originally from a northeastern area of the State of Mexico. Some brief notes to follow describe their current economic situation and reason for migrating to the ZMVM. This closely knit group is looking for a site to locate a 30-unit low-income housing project.

Our aim is to provide design process that keeps in mind the knowledge of the living-style, preferences and needs of the group. This process of options must be linked to a highly participative analysis. This process will remain a speculative educational proposal as we lack means to engage in personal interview with the group. Nevertheless, the process will follow the steps of a participative design project applying option-generating techniques that may derive informed decisions.

### PROGRESSIVE HOUSING

An important methodology that will be considered within the process of this project is that of Evolutionary Progressive Housing, as defined in the article "Reconsiderando el Concepto de Hábitat Popular Progressivo," (Peylobet and Martínez) in the publication Hábitat Social Progresivo, Vivienda y Urbanización. The economic and social circumstances of the project, in particular severe financial constrictions and the prevailing popular housing solutions, lead us towards unconventional housing strategies. Paired with a collective vision derived from exhaustive participative analysis, the inclusion of evolutionary options might best generate more appropriate final proposals.

Martínez, Monica and Peylobet, Paula. "Reconsiderando el Concepto de Hábitat Popular Progresivo." Hábitat Social Progresivo: vivienda y urbanización. Ed. Tapia Zarricueta and Rosenda Mesías González. Santiago: Programa Iberoamericana de Ciencia y Tecnología para el Desarrollo CYTED, 2002.

Meffert, Karin. Co-operative Self-Help Housing: The Case of El Molino in Mexico City. Beyond Self-Help Housing. ed. Kosta Mathéy. Profil Verlag GmbH: München, 1992.

Romero, Gustavo. "Housing in Mexico Today: The Situation and the Challenge." Habitat in Perspectives. Leieboerforeningen, 2004.

Ribbeck, Eckhart. Spontaneous Building in Mexico-City. HVA-Grafische Betriebe GmbH, Heidelberg, 2002.

# MAZAHUA SETTLEMENTS

## Population Demographics



### LOCATION

Since the 1700s the Mazahua people have traditionally lived in the northwestern areas of the Estado de México and along the border of one municipality in eastern Michoacan. This is a high, mountainous area with cool weather and heavy rains.

### POPULATION

According to the INEGI XII Censo de Población y Vivienda 2000 Mazahua today make up approximately 133,000 people.

### ECONOMIC ACTIVITY

#### AGRICULTURE

Most Mazahua people are involved in the agriculture industry, producing mainly corn, beans, grains, vegetables, maguey, fruit, flowers, and some livestock and poultry. Landownership may be cooperative or ejidal, communal, or private. Production is mainly for self-consumption or for the local market. While some farm work in the plateaus and valleys is done by machine, much of the agricultural activity is accomplished using traditional tools like mules and oxen.

#### CRAFTS

The municipalities of San Felipe del Progreso, Temascalcingo, Ixtlahuaca and Atlacomulco have high artisan activity. Mazahua artisans produce textiles, weaved-goods, pottery, stoneware and jewelry.

#### MIGRATION

Lack of work in their villages and insufficient incomes push the Mazahua people to migrate to the main urban centers of Mexico and Toluca. Some of the equally male and female migrant population move permanently, while others migrate only temporarily. Many of the Mazahua towns work as 'bedroom communi-

ties' as the inhabitants work daily in nearby cities and states. Mazahua men who work in the city are employed as labourers or vendors. Women, on the other hand, will do domestic work or sell fruit. Mazahua workers generally earn low pay but make more than then they might in their homelands. Many of these workers maintain strong ties to family members who stayed in their hometowns and send money to them from the city.

### INFRASTRUCTURE

Due to their proximity to the Estado de Mexico capital, Toluca, the Mazahua are accustomed to good roads, public transport and communication services.

### HEALTH

The Mazahuas consider each person as having both a material and a spiritual being. They believe there are "good" and "bad" diseases: those sent by God, such as diarrhea and bronchitis, and those caused by the evil of a person or the supernatural, as in eye problems and fear. Health problems are first treated at home with herbal infusions and massages. A patient who remains ill will be taken to see a professional doctor.

### HOUSING

Traditional Mazahua houses were constructed using adobe and roofing tile. Today houses are built in a highly modernist-style using concrete and thin partitions. 93% of Mazahua housing is owned by the inhabitants proper.

### SOCIAL ORGANIZATION

The nuclear family acts as the base of the Mazahua group structure. Each member has well-defined roles based on sex, age and place in the family. Mothers are in charge of preparing food, washing clothes, cleaning the home, carrying firewood and water, and some animal care. Fathers, who hold primary authority over the family, are responsible for agricultural labour, while their sons help with some farm activities like collecting firewood and taking animals to pasture. Daughters help their mothers with the domestic tasks. Marriages predominantly take place between members of the same group or tribe.

# MAZAHUA SETTLEMENTS

## Population Demographics

The Mazahua community members can be involved in cooperative work called "faena" towards the realization of projects of collective benefit as in schools, markets and roads. While the municipal regime is established by the Mexican and State Constitution, the local authorities are designated by members of the community.

The Consejo Supremo Mazahua was created in December 1976 as a traditional indigenous organization to promote the expression of Mazahua culture in all its forms.

### RELIGION

A combination of Catholic and pre-Hispanic elements make up the present Mazahua religion. Pre-hispanic conceptions such as the culto de los muertos, the belief in certain diseases, and the importance of dreams prevail in the Mazahua life. Community-based religious organizations are responsible for the preparation and financing of local festivities and pilgrimages. Some families keep nitsimi or altars in worship of their familial saint. Traditional religious practices are losing popularity, especially among the younger population.

### FIESTAS

The Mazahua celebrate fiestas according to the catholic calendar. In each community, the fiesta patronal is carried out on the day of the patron saint. On these days, people decorate their land tracts with branches of flowers and adorn their livestock with flower necklaces. Festivals common to all the region are el Día de Muertos and the festival of Santa Cruz. Traditional religious practices are losing popularity, especially among the younger population.

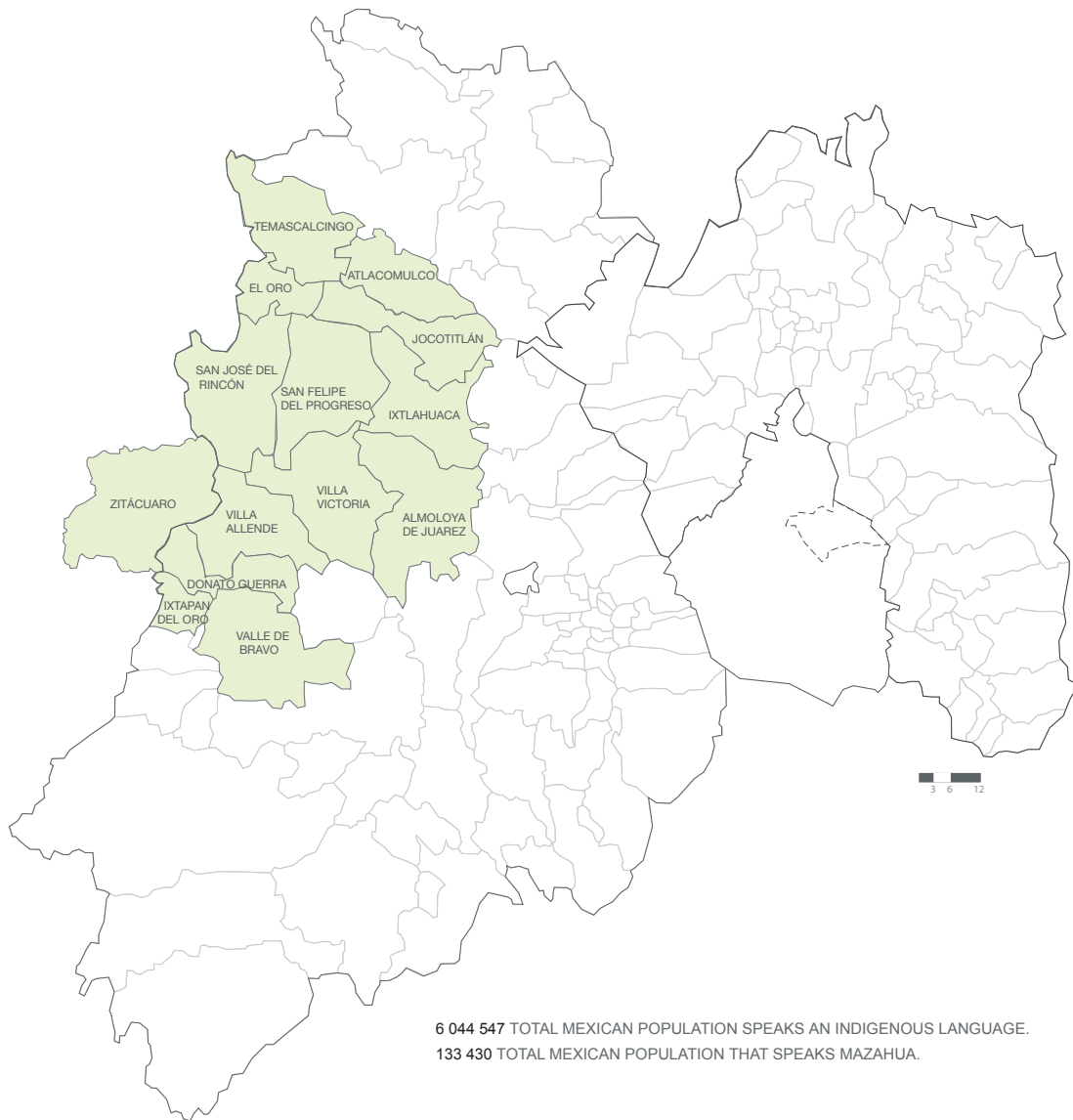


PHOTO SOURCE (congregationalist.org/archivesold/) Larry Sommers, Misión Mazahua.



## MAZAHUA SETTLEMENTS

### Population Demographics



# HOUSING OPTIONS

## The Mazahua Project

TYPOLOGY OPTIONS:	SINGLE-FAMILY DETACHED HOUSE	SINGLE-FAMILY DUPLEX: GROUND	SINGLE-FAMILY ROW HOUSE	2-STORY WALK-UP	3-5 STORY WALK-UP	3-6 STORY APARTMENT
MORPHOLOGY						
ACCESS	GROUND LEVEL	SEPERATE GROUND LEVEL	SEPERATE GROUND LEVEL	-1 GROUND -1 GROUND -1 EXTERIOR PRIVATE STAIR -1 INTERIOR PRIVATE STAIR	-1 GROUND LEVEL -2 SHARE EXTERIOR STAIR	-1 GROUND LEVEL -SHARED ENTRANCE + INTERIOR STAIR
OPPORTUNITY FOR GROWTH	 VERY GOOD	 WITH NEIGHBOURS CONSENT	 WITH NEIGHBOURS CONSENT	 LIMITED-BASED ON CONFIGURATION AND NEIGHBOURS CONSENT	 VERY LIMITED BASED ON CONFIGURATION AND NEIGHBOURS CONSENT	 ALMOST IMPOSSIBLE

### DISTRITO FEDERAL URBAN DESIGN GUIDELINES

GUIA CONAFOVI, 2005

#### SINGLE FAMILY LOT MINIMUMS (PUBLIC STREET ACCESS)

FRONT	6.0 m
DEPTH	15.0 m
AREA	90.0 m. sq.

#### DUPLEX LOT MINIMUMS (PUBLIC STREET ACCESS)

FRONT	6.45 m
DEPTH	9.75 m
AREA	62.57 m. sq.

### FOSOVI LOTIFICATION PROPOSAL EXAMPLE

JULY 2005

#### SINGLE FAMILY LOT (PRIVATE STREET ACCESS)

FRONT	8 m
DEPTH	10.5 m
AREA	84 m. sq.

#### DUPLEX LOT (PRIVATE STREET ACCESS)

FRONT	4 m
DEPTH	10.5 m
AREA	42 m. sq.

### DISTRITO FEDERAL URBAN DESIGN GUIDELINES

GUIA CONAFOVI, 2005

#### LIVING/SERVICE AREA MINIMUMS

##### PRINCIPAL BEDROOM

AREA	7.0 m. sq.
DEPTH	2.4 m
HEIGHT	2.3 m

##### DINING

AREA	6.3 m. sq.
DEPTH	2.4 m
HEIGHT	2.3 m

##### INTEGRATED KITCHEN/DINING

AREA	6.3 m. sq.
DEPTH	2.4 m
HEIGHT	2.3 m

##### CIRCULATION

HEIGHT	2.3 m
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##### ADDITIONAL BEDROOMS

AREA	6.0 m. sq.
DEPTH	2.2 m
HEIGHT	2.3 m

##### INTEGRATED LIVING/DINING

AREA	13.0 m. sq.
DEPTH	2.6 m
HEIGHT	2.3 m

##### LAUNDRY/WASHING

AREA	1.6 m. sq.
DEPTH	1.4 m
HEIGHT	2.3 m

##### INTERIOR HALLWAY

WIDTH	0.75 m
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##### LIVING

AREA	7.3 m. sq.
DEPTH	2.6 m
HEIGHT	2.3 m

##### KITCHEN

AREA	3.0 m. sq.
DEPTH	1.5 m
HEIGHT	2.3 m

##### WASHROOM

AREA	2.4 m. sq.
DEPTH	1.05 m
HEIGHT	2.1 m

##### INTERIOR STAIR

WIDTH	0.90 m
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##### EXTERIOR STAIR

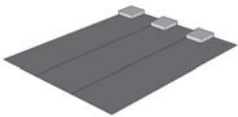
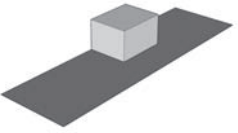
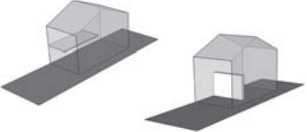
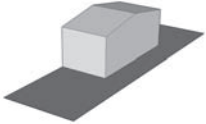
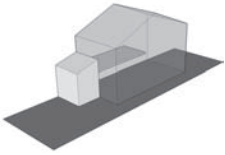

WIDTH	1.2 m
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##### PANTRY

HEIGHT	2.1 m
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# MATRIX

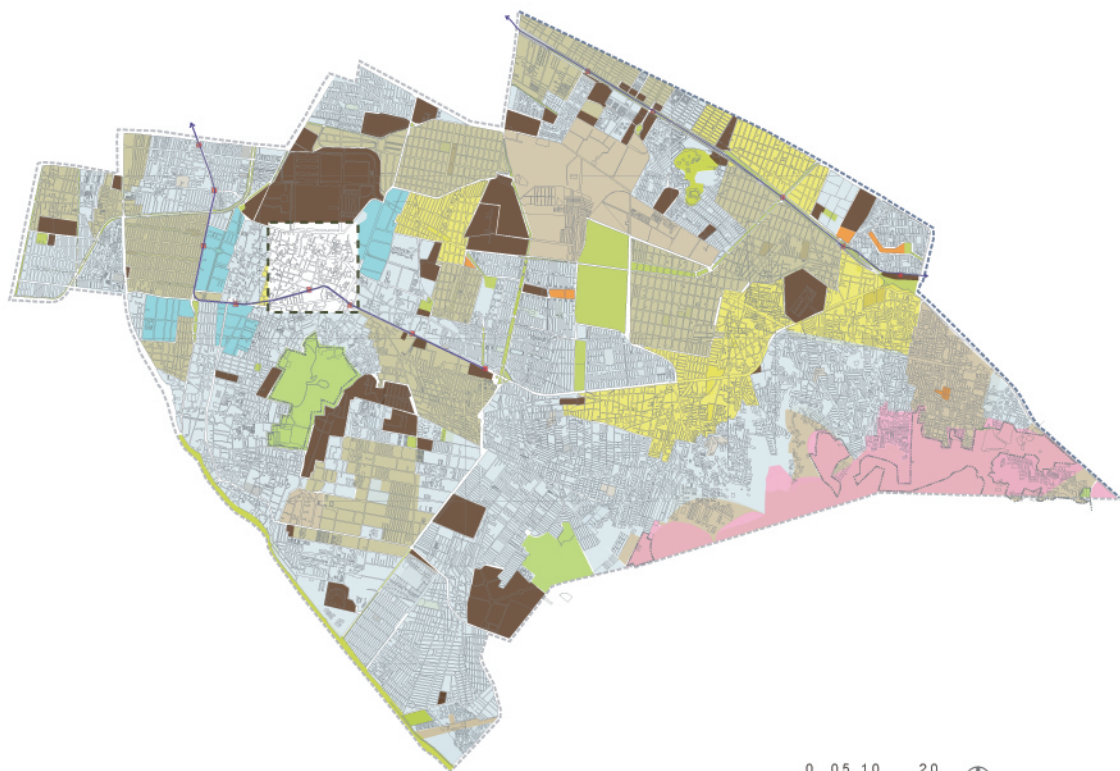
## Progressive and Evolutionary Housing Typologies

MODEL	CHARACTERISTICS	LIMITATIONS AND POSSIBILITIES FOR THE MAZAHUA PROJECT APPLICATION	SCHEME
<b>LOTS AND SERVICES</b>	LOT SERVICED WITH INFRASTRUCTURAL POINT OF DELIVERY (WATER, SANITATION) ONLY	DOES NOT MEET HOUSING NEEDS OF CLIENT GROUP.	
<b>BASIC EVOLUTIONARY NUCLEUS</b>	INITIAL MODULE WITH MULTI-USE SPACE AND BATHROOM. ALLOWS FOR EXTERIOR EXPANSION	MAY NOT CORRESPOND TO MINIMUM LIVING STANDARDS. MAY BE VIABLE OPTION	
<b>"SHELL" HOUSE</b>	NUCLEUS THAT DEVELOPS INTERIORALLY CONSERVING ITS INITIAL APPEARANCE.	EXPENSIVE OPTION. MAY BE VIABLE OPTION AS ALLOWS FOR PROGRESSIVE GROWTH. SOMEWHAT LIMITED SPATIAL OPTIONS.	
<b>EVOLUTIONARY IMPROVEMENT</b>	HOUSING FINISHED IN ROUGH WORK THAT WILL IMPROVE IN TIME	POOR TECHNICAL RESULTS. DOES NOT ALLOW FOR CHANGING SPATIAL NEEDS.	
<b>NUCLEUS IN EVOLUTIONARY GROWTH</b>	COMBINES THE 'SHELL' HOUSE WITH EXTERIOR EXPANSION	COMMON IN INFORMAL SETTLEMENTS. VIABLE OPTION AS LESS EXPENSIVE INITIALLY THAN SOLE "SHELL" HOUSE	
<b>STRUCTURAL SUPPORTS</b>	STRUCTURAL MODULES PROVIDED WITH SANITARY NUCLEUS. TO BE COMPLETED WITH EXTERIOR ENCLOSURE/ INTERIOR DIVISIONS	EXPLORED PRIMARILY THEORETICALLY. NOT COMMON. EXPENSIVE STRUCTURALLY. ALLOWS FOR DIVERSE SPATIAL NEEDS AND ALTERATIONS.	

SOURCE: Derived from "Tabla 1: Modalidades De Viviendas Progressivas Y Evolutivas." from Perez A., Mayda and Ochoa A., Alina. "La Vivienda <<Llave en Mano-Evolutiva>>: Un Viaje a la Semilla." Hábitat Social Progressivo: vivienda y urbanización. Ed. Tapia Zarricueta and Rosenda Mesías González. Santiago: Programa Iberoamericana de Ciencia y Tecnología para el Desarrollo CYTED, 2002.

# IZTAPALAPA SITE PLAN

## The Mazahua Project



### URBAN LAND USE

- RESIDENTIAL
- RESIDENTIAL AND COMMERCIAL
- RESIDENTIAL AND OFFICES
- MIXED RESIDENTIAL, COMMERCIAL AND OFFICES
- TOWN CENTER (COMMERCIAL, SERVICES, SCHOOLS, HEALTH AND MARKETS)
- INFRASTRUCTURE (PUBLIC AND PRIVATE SERVICES, HEALTH, SCHOOLS, CULTURAL, SPORTS, CEMETERIES)
- INDUSTRIAL
- PUBLIC SPACE (PARKS, PLAZAS, GARDENS, SPORTS FIELDS)
- GREEN SPACE (FOREST, HILLSIDE)

### CONSERVATION LAND USE

- ECOLOGICAL RESERVE (HAVE LOST SOME ORIGINAL CHARACTERISTICS BUT ARE BEING RECOVERED)
- PROTECTED AGRICULTURAL
- ECOLOGICAL PRESERVE



SITE LOCATION MAP  
The Mazahua Project



URBAN LAND USE

- RESIDENTIAL
- RESIDENTIAL AND COMMERCIAL
- INFRASTRUCTURE
- INDUSTRIAL
- PARKS AND PLAZAS

PUBLIC BUILDINGS

- POLICE STATION
- CHURCH
- MARKET
- PRIMARY SCHOOL
- SECONDARY SCHOOL
- METRO STATION
- UNIDAD HABITACIONAL



SITE COMPARISON  
The Mazahua Project



SITE 1 <b>SAN IGNACIO</b>	
AREA	2340 m. sq.
ZONING	RESIDENTIAL
ACCESS TO SCHOOLS	500m
ACCESS TO METRO	1500m



 ENTRANCE POSSIBILITIES



SITE 2 <b>TECORRALES</b>	
AREA	3050 m. sq.
ZONING	INDUSTRIAL
ACCESS TO SCHOOLS	500m
ACCESS TO METRO	1000m



SITE PHOTOS  
The Mazahua Project



SITE 1 SAN IGNACIO



SITE 2 TECORRALES