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Habitat as a driver of **Change:**

Rethinking Informal Urban Growth in 23 de Enero, Barquisimeto, Venezuela

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HABITAT AS A DRIVER OF CHANGE

Rethinking Informal Urban Growth in 23 de Enero, Barquisimeto, Venezuela.

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Acknowledgement

Writing this thesis has been much more than an academic exercise; it has been a deeply personal journey.

Choosing to study the 23 de Enero barrio in Barquisimeto was not only an intellectual decision but also an emotional one. Venezuela is our home, the place that shaped who we are, and carrying out this research became a way to remain close to it despite the distance.

At times, this work felt like a form of catharsis, an opportunity to process the many difficulties our country has faced and to transform that distress into a hopeful contribution for the future.

This thesis is born out of love for Venezuela, from a desire to understand its challenges and to imagine new possibilities. Through the lens of architecture and urban design, we aimed to engage with the struggles and resilience of its people, and in doing so, we found a way to reconnect with our roots and reaffirm our belief in the power of inclusive and sustainable cities.

We could not have arrived to this point without the support, encouragement, and trust of many people who have walked alongside us in this journey.

First and foremost, we thank God and La Divina Pastora, for granting us strength and perseverance throughout this process. To our parents, Edgar Enrique (Isa), Dorysay, Edgar Enrique (Vicky), and Blanca, whose unconditional love, sacrifices, and values have always been the foundation of our paths. Thanks to them we have been able to have this opportunity and life experience, therefore we will forever be in owe and that's why this achievement is also theirs. To our siblings Alejandra, Luis Enrique, and César, and to our extended family members and friends Luis, Dioni, Yudith, Manina, Dilia, Maru, Isaias, María Andreina, Alibeth, Adriana, Andrea, Olivia, Camila and Simona, whose encouragement, affection, and presence have been constant sources of support and motivation. We also want to thank our friends in Venezuela, Spain, and Italy, who shared their time, words, and solidarity during the most demanding moments of this work.Their presence, near or far, made this path lighter and reminded us of the strength of true companionship.

Our gratitude goes to the Universidad Central de Venezuela, our alma mater, the pilar of our education in this career, for teaching us to always be proud of belonging to "la casa que vence a la sombra." We are especially thankful to Professor María del Socorro Escalona and to all the professors of the Unidad Docente Extramuros, whose teachings and guidelines have been a fundamental part of our academic formation.

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We are also grateful to the professors of the Politecnico di Torino, whose perspectives and knowledge enriched our research and broadened our understanding of the social role of architecture since the moment we arrived. This thesis is not only the culmination of years of study, but also a testimony of personal growth, resilience, and hope.

It represents our belief that, even in the face of hardship, knowledge and design can contribute to imagining better futures. With this work, we wish to offer a small contribution to the conversations about informal settlements and to keep alive our connection with our home, **Venezuela.**

Abstract

This thesis presents a study on the integration of informal settlements within the urban fabric of Venezuela. In a nation shaped by political problems, economic complications, and inadequate urban planning, these conditions have contributed to the rapid expansion of informal neighborhoods, particularly in cities like Barquisimeto. Using the barrio 23 de Enero, situated on the city's edge, as a case study, the research investigates processes of marginalization, spatial and social fragmentation, and their implications for quality of life of the inhabitants of these communities.

The work analyzes the historical, political, and socioeconomic factors that define the barrio, while also assessing its dynamics, physical form, infrastructure, social networks, and local practices. Through qualitative research methods such as semi-structured interviews, it investigates residents' needs, opinions, and perspectives. In addition, the study examines cases of successful interventions in informal settlements across Latin America and other regions, drawing lessons and transferable strategies relevant to the specific context of Barquisimeto.

Building on these analyses, the thesis proposes sustainable architectural and urban design strategies to enhance service access, improve public spaces, and strengthen community well-being and urban cohesion, where rather than proposing a predetermined or fully realizable plan, the thesis proposes a speculative yet contextually grounded scenario of how informal settlements might evolve into active, interconnected components of the city. By engaging with informality as an urban condition to be understood rather than eradicated, the project positions design as a powerful tool for inclusion, continuity, and transformation.

Image 01. Light at the end of tunnel.
Source: Apomares. (2008, febrary). Light at the end of tunnel.

INDEX

INTRODUCTION

0.1. PROBLEM STATEMENT

Informal settlements represent a critical global challenge, particularly in the Global South, where over one billion people live in vulnerable conditions (UN-Habitat, 2020). These settlements arise due to rapid urbanization, socioeconomic inequality, and inadequate housing policies, creating complex social, economic, and environmental challenges that hinder sustainable urban development. In Venezuela, years of political instability, economic crisis, and deficient urban planning have exacerbated this issue, leading to the proliferation of informal settlements in cities like Barquisimeto.

The 23 de Enero barrio, located on the periphery of Barquisimeto—a key urban center in Venezuela's central-western region—exemplifies the marginalization dynamics characteristic of informal settlements across Latin America. Positioned as one of the city's gateways, this barrio remains physically and socially disconnected from Barquisimeto's formal urban fabric, limiting resident's access to essential infrastructure and services, thereby severely impacting their quality of life. This disconnection perpetuates social exclusion and poses a significant barrier to the integrated and sustainable growth of Barquisimeto. Despite their scale and impact, such settlements are often overlooked in urban planning efforts, reinforcing cycles of inequality.

Architecture, as a discipline, holds the potential to transform these spaces through inclusive and sustainable design solutions that address residents' needs and foster urban cohesion. However, interventions must account for Venezuela's socioeconomic constraints to ensure feasibility. This thesis focuses on the marginalization of informal settlements, the challenges and consequences that this brings to its communities, and explores how the dynamics developed in these sectors might affect the quality of life of its residents, taking the 23 de Enero barrio as a case study.

Although it is based on real urban situations and community needs, the project operates within a space that combines both concept and reality. It is not a fully executable urban plan, but rather a speculative design mode, grounded in spatial, legal, and social feasibility, that imagines what could be possible within the complex dynamics of informal settlements.

This issue leads us to pose a series of questions, including:

1. What historical, socio economic, and political factors have contributed to the formation and persistence of the 23 de Enero barrio in Barquisimeto?

2. What are the spatial, social, and economic characteristics of the 23 de Enero barrio, and how do they reflect broader challenges of informal settlements?

3. What are the needs, aspirations, and lived experiences of 23 de Enero residents regarding housing, access to services, and community well-being?

4. What lessons can be drawn from successful interventions in informal settlements in Latin America and other regions to apply to Barquisimeto's context?

5. What sustainable architectural and urban design interventions can be proposed to effectively integrate the 23 de Enero informal settlement into Barquisimeto's formal urban fabric?

0.2. AIMS AND OBJECTIVES

To analyze the challenges of informal settlements in Barquisimeto, Venezuela and propose sustainable and feasible architectural and urban design strategies to integrate the 23 de Enero barrio into the formal urban fabric, enhancing residents' quality of life through solutions tailored to identified needs and local socioeconomic constraints.

OBJECTIVES

1. To analyze the historical, socioeconomic, and political context of Venezuela and Barquisimeto to understand the factors shaping the 23 de Enero barrio.

2. To evaluate the physical (urban morphology, infrastructure), social (community dynamics), and economic (productive activities) characteristics of the 23 de Enero barrio.

3. To identify the needs and aspirations of 23 de Enero residents regarding housing, public services, and community spaces through qualitative analysis of semi structured interviews.

4. To study successful interventions in informal settlements in Latin America, extracting strategies applicable to the 23 de Enero barrio.

5. To develop sustainable architectural and urban design strategies to integrate the 23 de Enero barrio into Barquisimeto's urban fabric, considering local constraints and residents' needs.

0.3. JUSTIFICATION

Uncontrolled urbanization in the Global South, characterized by rapid population growth, is primarily driven by the proliferation of informal settlements, which pose significant challenges to sustainable urban development (UN-Habitat, 2003). These settlements, housing millions of inhabitants, are frequently viewed as problematic spaces that should be eradicated rather than recognized for their potential to contribute to community resilience and urban vitality (Davis, 2006). This research is justified by the urgent need to generate knowledge that deepens understanding of the social and spatial dynamics of informal settlements, particularly in cities like Barquisimeto, Venezuela, where the disconnection between formal and informal urban sectors exacerbates inequalities.

The 23 de Enero barrio in Barquisimeto serves as a pertinent case study due to its representativeness as an informal settlement branching off from the structured urban fabric to the east of this mid-sized Venezuelan city. Venezuela's context—marked by political conflict, economic crises, and migration—has intensified the growth of such settlements, making them critical sites for study (Fernandes, 2011). Analyzing 23 de Enero not only sheds light on local particularities, such as its physical geography, precarious infrastructure, and development patterns, but also provides insights applicable to similar contexts across the Global South. Furthermore, this research aligns with contemporary architecture's commitment to sustainability, emphasizing inclusive urban strategies that enhance residents' quality of life without displacing communities (Roy & AlSayyad, 2004).

By addressing these dynamics, this study contributes to urban management and sustainable design, offering valuable perspectives for architects, urban planners, and policymakers working to foster more equitable and resilient urban environments.

· *UN-Habitat. (2020). World Cities Report 2020: The Value of Sustainable Urbanization. United Nations Human Settlements Programme*

· *UN-Habitat. (2003). The Challenge of Slums: Global Report on Human Settlements.*

· *Davis, M. (2006). Planet of Slums. Verso.*

· *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*

· *Roy, A., & AlSayyad, N. (2004). Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia. Lexington Books.*

1.4. METHODOLOGY

This thesis uses a qualitative case study approach to study the 23 de Enero barrio in Barquisimeto and propose sustainable architectural and urban design strategies, following Yin (2018).

The methodology has two phases. First, data collection answers the research questions through: archival research and documents (e.g., Angotti, 2013; IMF, 2020) to understand historical and socioeconomic factors; site analysis (mapping, photos) and secondary data to evaluate the barrio's physical, social, and economic characteristics; semi-structured interviews with 18 residents (purposive sample ~1.5% of ~1200 residents), using 31 questions analyzed thematically (Braun & Clarke, 2019) to identify needs like housing or community spaces; and comparative analysis of 4 successful interventions to extract strategies (Gilbert, 2018).

Second, design development synthesizes data to propose interventions addressing resident's needs and local constraints (Schön, 1983). Interviews require informed consent, ensuring anonymity. Data are analyzed descriptively for archival and site data, thematically for interviews, and comparatively for case studies. This approach ensures rigorous, context-driven design strategies for integrating 23 de Enero into Barquisimeto's formal urban fabric.

The thesis is organized in the following chapters:

PART I: RESEARCH FOR DESIGN

1. **STATE OF THE ART** — Investigate the theoretical framework regarding informal settlements globally.
2. **BETWEEN CRISIS AND URBAN RESILIENCE** — Contextualize informal settlements in Venezuela and their relationship with the economic crisis that the country has been facing for several years. And explain the general characteristics of the city of Barquisimeto, its urban plans, and dynamics.
3. **BEYOND THE GRID** — Conduct a site analysis of the 23 de Enero neighborhood, considering physical and social characteristics.
4. **CASE STUDIES** — Analyze case studies in Venezuela and other Latin American countries.

PART II: DESIGN FOR RESEARCH

5. **FROM ANALYSIS TO ACTION** — Evaluate the results obtained from the analyses conducted and create strategies in response to the problem.
6. **REIMAGINING 23 DE ENERO** — Develop the strategies proposed.

· *Yin, R. K. (2018). Case Study Research and Applications (6th ed.). SAGE.*

· *Angotti, T. (2013). The New Century of the Metropolis. Routledge.*

· *International Monetary Fund (IMF). (2020). Venezuela: 2020 Article IV Consultation. IMF.*

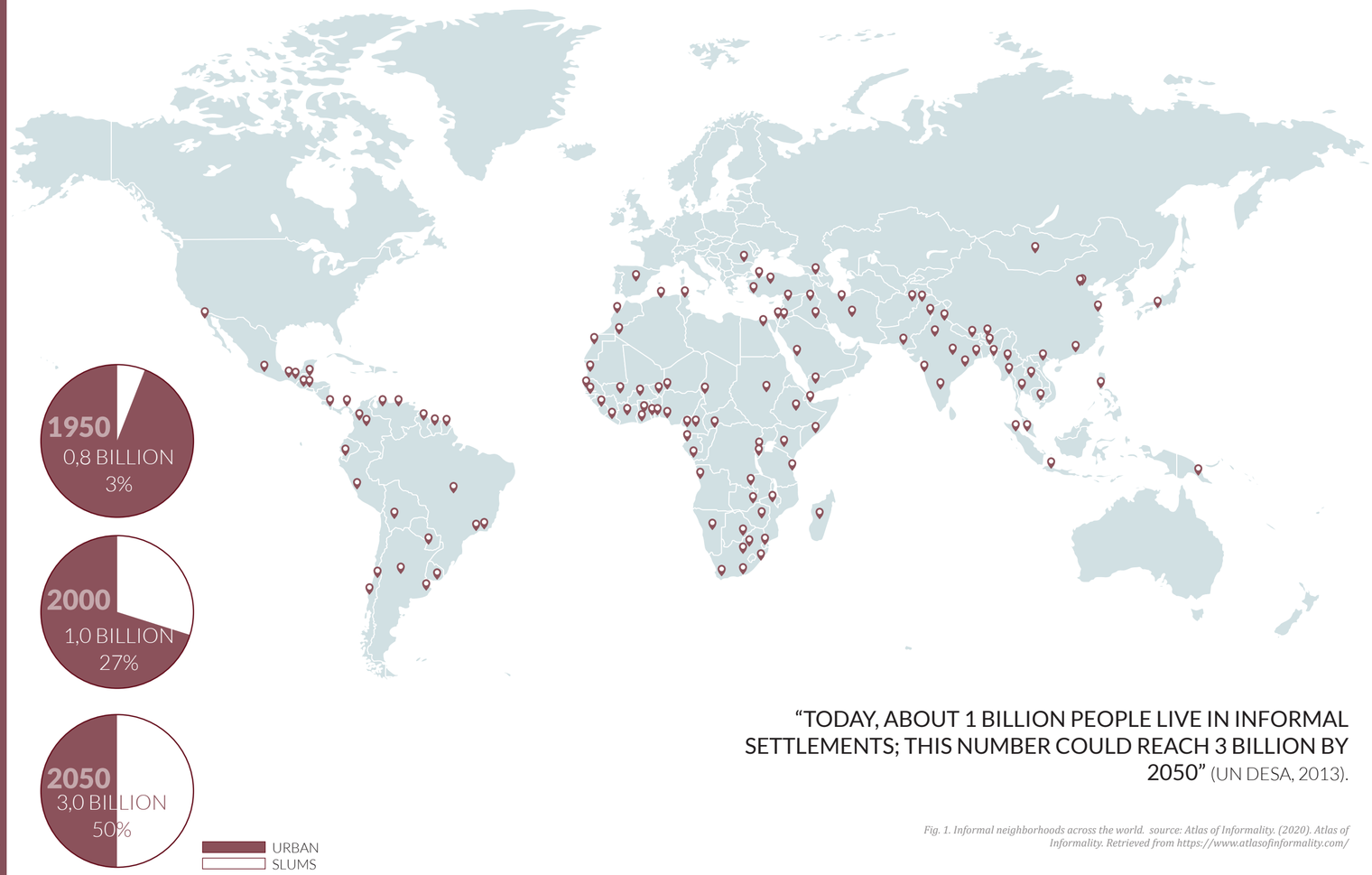
· *Braun, V., & Clarke, V. (2019). Thematic analysis: A practical guide. Qualitative Research in Psychology, 16(3), 147–149.*

· *Gilbert, A. (2018). Housing the Urban Poor in Latin America. Routledge.*

· *Schön, D. A. (1983). The Reflective Practitioner. Basic Books.*

STATE OF THE ART

Informal settlements across the world



"TODAY, ABOUT 1 BILLION PEOPLE LIVE IN INFORMAL SETTLEMENTS; THIS NUMBER COULD REACH 3 BILLION BY 2050" (UN DESA, 2013).

Fig. 1. Informal neighborhoods across the world. source: Atlas of Informality. (2020). Atlas of Informality. Retrieved from https://www.atlasofinformality.com/

1.1. The growing issue of informality

Informal settlements are the most common type of urbanization on the planet, accounting for one-third of the overall urban form. Currently, more than one billion people live under these conditions, representing one in eight people worldwide (UN-Habitat, 2020). Many of these settlements lack access to essential infrastructure such as running water, sewage systems, and adequate housing, leading to severe social and health problems (World Health Organization, 2013).

This issue primarily affects developing countries, where over 80% of the population in marginalized neighborhoods is concentrated in regions such as Eastern and Southeastern Asia, Sub-Saharan Africa, and Latin America. In some countries within these regions, more than 50% of the urban population resides in informal settlements, reflecting the scale and persistence of this phenomenon (UN-Habitat, 2003). The rapid and often unplanned urbanization of recent decades has been a major driving force behind the proliferation of informal settlements. In 1950, 30% of the world's population lived in cities; by 2018, this figure had risen to 55%, and United Nations forecasts indicate that 68% of the global population will live in urban areas by 2050. Developing countries will lead this growth, with 95% of urban expansion expected to occur in these regions (United Nations, 2015). However, this accelerated urbanization, accompanied by population growth and climate-induced migration, has placed tremendous pressure on land availability and affordable housing, forcing millions to live in informal conditions (Davis, 2006).

By 2050, it is estimated that 3 billion people will be living in informal settlements, a figure that could rise further due to economic instability and the lingering effects of the COVID-19 pandemic (UN-Habitat, 2020).

Moreover, informal settlements do not follow a uniform pattern. In cities and regions, more consolidated slum areas coexist with newly formed ones. The emergence of new informal housing is often linked to economic crises or mass migration. For instance, in Argentina, 55% of all recorded informal settlements existed before 2000, while 26% were formed between 2001 and 2010, coinciding with a severe financial collapse (CEPAL, 2020).

The combination of age, consolidation, and local context means that development strategies cannot be uniform; they must be tailored to the specific conditions of each settlement. Understanding informal settlements as complex and evolving habitats—rather than static problems—is essential for sustainable solutions. Traditional approaches focused on eradication or displacement often fail, perpetuating inequality and cycles of exclusion (Fernandes, 2011). On the other hand, there is an urgent need for inclusive urban strategies that integrate informal communities into the broader city, recognizing their resilience and potential as drivers of transformation (Roy & AlSayyad, 2004).

- *CEPAL. (2020). América Latina y el Caribe: Desarrollo sostenible en la agenda 2030. Comisión Económica para América Latina y el Caribe.*
- *Davis, M. (2006). Planet of Slums. Verso.*
- *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*
- *Roy, A., & AlSayyad, N. (2004). Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia. Lexington Books.*
- *UN General Assembly. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. United Nations.*
- *UN-Habitat. (2020). World Cities Report 2020: The Value of Sustainable Urbanization. United Nations Human Settlements Programme.*
- *World Health Organization. (2013). Household food and nutrition security in informal urban settlements in Johannesburg. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3851006/*

1.2 Understanding the concept informality

Informal settlements, often referred to as slums or by regional names such as favelas (Brazil), baraccopoli (Italy), villas (Argentina), aashwa'i (Egypt), or barrios (Venezuela), are generally characterized by the absence of essential services. Consequently, residents in these areas typically lack formal access to infrastructure, face unstable employment conditions, and have limited access to education and healthcare. Additionally, many endure exposure to polluted air and unsafe drinking water, despite housing and basic services being recognized as fundamental human rights in most national laws and international agreements.

According to UN-HABITAT (2022), a slum household consists of people living under one roof in an urban area who lack at least one of the following: stable, weather-resistant housing; sufficient living space (defined as a maximum of three people per room); reliable, affordable access to safe water; proper sanitation, whether private or reasonably shared; and secure tenure to prevent forced evictions. Therefore, the absence of these essential conditions further accentuates the marginalization experienced by these communities.

Moreover, the living conditions in informal settlements stand in stark contrast to those in formal urban areas. Research across 73 developing countries, based on more than 190 demographic and health surveys, indicates that infants and children in slums suffer significantly higher rates of communicable diseases and mortality compared to their urban counterparts. Furthermore, poor air quality, inadequate flooring, and unsafe water sources contribute to a higher prevalence of respiratory infections and other health risks. The vulnerability of these communities is further exacerbated by climate change and natural disasters, as they often occupy areas prone to flooding, drought, or other environmental hazards.

It is important to note that informal settlements are frequently described as "unplanned," "informal," or even "illegal." While "illegal" generally refers to violations of the law, such as occupying government land, the term "informal" is more subjective, shaped by prevailing ideas of what a city "should" look like. As a result, these areas are often perceived as incomplete or inferior versions of the idealized "formal city."

Nevertheless, the concept of informality is complex and multifaceted. On the one hand, informal settlements may emerge entirely outside municipal regulations. On the other hand, they may arise as a response to extreme poverty, rapid population growth, or weak zoning enforcement. Yet, the classification of these areas as "informal" is often influenced by political and cultural biases rather than objective assessments. Ultimately, this distinction plays a crucial role in how these communities are treated in urban policy, determining whether they are ignored, demolished, or integrated into the formal city fabric.

1.3. An integral part of contemporary urbanization - Importance

Informal settlements, far from being mere anomalies in the urban landscape, constitute an intrinsic manifestation of contemporary urbanization processes, particularly in the Global South. Rather than being residual or temporary areas, these settlements play an active role in shaping urban dynamics, housing populations that sustain informal economies and essential social networks crucial for the survival of metropolises (Davis, 2006).

· *UN-Habitat. (2022). World Cities Report 2022.*

· *World Health Organization. (2013). Household food and nutrition security in informal urban settlements in Johannesburg.*

· *World Health Organization. (2009). A comparison of social and spatial determinants of health between formal and informal settlements in a large metropolitan setting in Brazil.*

Image 02. Barrio de Petare, Caracas Venezuela Source: Re Territorio [@re_territorio]. (2024, may). Barrio de Petare / Urbanización La Urbina Zona Metropolitana de Caracas, Miranda, Venezuela Caracas, Venezuela.

In this regard, Turner (1976) argues that informal settlements do not merely arise due to the lack of formal planning but represent a form of urban agency, where residents build their own habitats in response to the limitations imposed by exclusion from the official system. This capacity for self-construction and community organization makes them spaces of innovation that challenge traditional notions of urban development. For example, in cities like Barquisimeto, the informality not only absorbs demographic growth driven by internal migrations but also generates local economic dynamics that nourish trade and services within the formal city (Cartaya & D'Elía, 1998).

Moreover, their urban significance lies in their potential as catalysts for change. Roy and AlSayyad (2004) emphasize that urban informality transcends marginality by influencing the social and spatial structure of cities, prompting a reconsideration of planning strategies. In the Venezuelan context, where the socioeconomic crisis has exacerbated the proliferation of these settlements, their study offers an opportunity to understand how intermediate cities, such as Barquisimeto, transform under specific pressures of inequality and lack of infrastructure (Lovera, 2009). Thus, informal settlements not only reflect the challenges of uncontrolled urban growth but also open the door to alternative models of sustainable development that prioritize integration over exclusion.

1.4. Factors of formation of informal settlements.

Informal settlements emerge as a complex response to uncontrolled urbanization in the Global South, driven by an interplay of socioeconomic causes, political dimensions, and environmental factors that reflect the limitations of urban systems in including the entire population. From a socioeconomic perspective, extreme poverty and structural inequality are key driving forces. Davis (2006) argues that rapid urbanization, coupled with the inability of formal markets to provide affordable housing, pushes millions into informality, as seen in Mumbai, where millions of people live in neighborhoods like Dharavi due to the scarcity of accessible housing options.

Migration, both rural-to-urban and between cities, intensifies this dynamic. Gilbert and Gugler (1992) explain that cities face massive influxes of people seeking employment, as seen in Nairobi, where settlements like Kibera have grown exponentially due to the arrival of migrants without access to formal housing. The exclusion from property systems worsens the problem: De Soto (2000) highlights that the costs and bureaucratic barriers to obtaining legal titles, evident in Bogotá's peripheral neighborhoods, force communities to resort to self-construction. Moreover, precarious employment, with low-income informal jobs, limits the ability to invest in regulated housing solutions, perpetuating a cycle of marginalization (Bolay & Rabinovich, 2004).

The political dimensions complement these causes by revealing the impact of governance on urban informality. The absence of effective social housing policies and planning, as seen in Mumbai with its historical neglect of slums, leaves poor communities relegated to undesirable land (Gilbert & Gugler, 1992). Davis (2006) adds that corruption and lack of political will, common in many developing cities, prioritize formal projects over inclusive solutions. In Nairobi, for example, the slow pace of land regularization has kept Kibera outside the formal system, while eradication policies, such as those attempted in Bogotá, displace residents without addressing the root causes of the problem (Fernandes, 2011). These political failures not only facilitate the formation of informal settlements but also restrict their sustainable integration.

· *Davis, M. (2006). Planet of Slums. Verso.*

· *Turner, J. F. C. (1976). Housing by People: Towards Autonomy in Building Environments. Marion Boyars.*

· *Cartaya, V., & D'Elía, Y. (1998). Pobreza y desigualdad en Venezuela: Una perspectiva regional. Instituto Latinoamericano de Investigaciones Sociales.*

· *Roy, A., & AlSayyad, N. (2004). Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia. Lexington Books.*

· *Lovera, A. (2009). Ciudades intermedias en Venezuela: Dinámicas y desafíos. Fundación Konrad Adenauer.*

Image 03. Favelas - Rio de Janeiro, Brazil. Source: Lindrik. (s.f.). Colorful painted buildings of Favela in Rio de Janeiro Brazil.

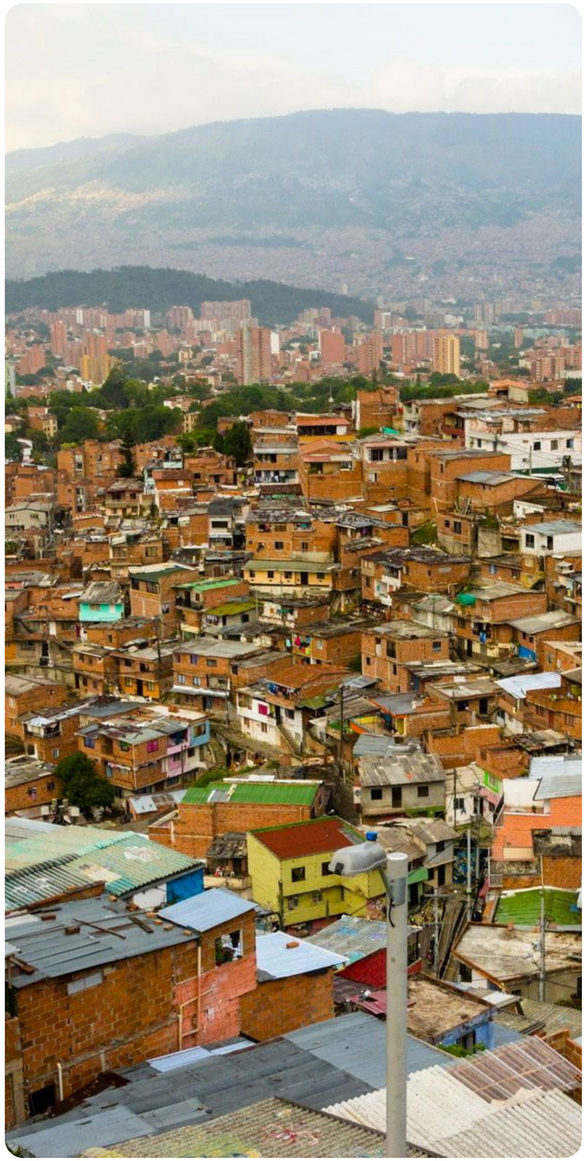
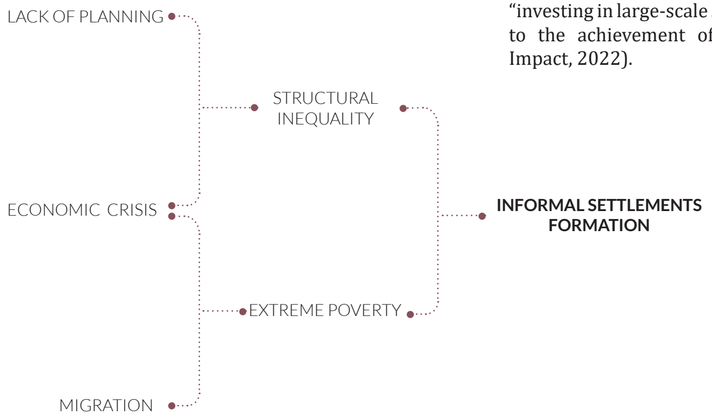


Image 04. Comuna 13 - Medellín, Colombia.Source: Chica, J. (2022, 22 august) Shutterstock

Environmental factors, in turn, determine the location and vulnerability of these settlements. Satterthwaite (2007) highlights that communities often settle in high-risk areas—hillsides, floodplains, or contaminated zones—avoided by formal development, such as the hills of Bogotá or riverbanks in Mumbai. UN-Habitat (2003) warns that climate change exacerbates these risks, with floods disproportionately affecting settlements like those in Nairobi, where a lack of infrastructure worsens the consequences. Environmental degradation, such as water pollution or deforestation, also pushes populations toward more precarious sites (Huchzermeyer, 2011).

Taken together, these socioeconomic, political, and environmental causes illustrate that informal settlements are not an isolated phenomenon but rather the result of systems that exclude large sectors of the population. From the slums of Mumbai to the barrios of Bogotá, they challenge cities to rethink urban development in a more equitable and sustainable manner.



1.5. Linkages with the Sustainable Development Goals (SDGs)

As articulated throughout this chapter, informal settlements represent both an urgent challenge and a strategic opportunity within the framework of the United Nations' Sustainable Development Goals (SDGs), adopted in 2015. These spaces should not be marginalized, as they are fundamental for achieving socioeconomic development and environmental sustainability. This section explores their links to key SDGs, drawing on empirical evidence and theoretical insights to highlight how inclusive urban strategies, such as those exemplified by Favela-Bairro, can simultaneously advance multiple goals, offering a roadmap for reimagining habitats that drive change.

· **SDG 11:** Sustainable Cities and Communities. Target 11.1 sets the mandate to "ensure access for all to adequate, safe, and affordable housing and basic services" and to upgrade slums by 2030. Informal settlements are the primary focus of this goal, as "investing in large-scale slum upgrading can contribute to the achievement of many SDGs" (Driving Real Impact, 2022).

· *Davis, M. (2006). Planet of Slums. Verso.*

· *Gilbert, A., & Gugler, J. (1992). Cities, Poverty and Development: Urbanization in the Third World. Oxford University Press.*

· *De Soto, H. (2000). The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. Basic Books.*

· *Bolay, J. C., & Rabinovich, A. (2004). Intermediate Cities in Latin America. Cities.*

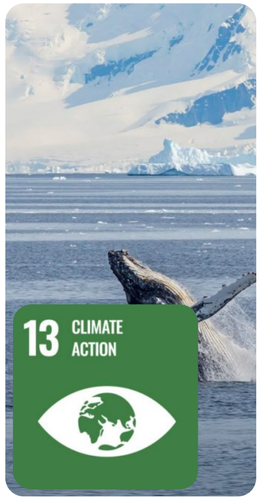
· *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*

· *Satterthwaite, D. (2007). The Transition to a Predominantly Urban World and Its Underpinnings. International Institute for Environment and Development.*

· *UN-Habitat. (2003). The Challenge of Slums: Global Report on Human Settlements.*

· *Huchzermeyer, M. (2011). Cities with 'Slums'. Juta Academic.*

"THE SUSTAINABLE DEVELOPMENT GOALS ARE NOT JUST A BLUEPRINT FOR GOVERNMENTS AND POLICYMAKERS; THEY ARE A UNIVERSAL CALL TO ACTION FOR BUSINESSES, COMMUNITIES, AND INDIVIDUALS TO WORK TOGETHER IN SHAPING A FUTURE WHERE ECONOMIC GROWTH, SOCIAL INCLUSION, AND ENVIRONMENTAL SUSTAINABILITY GO HAND IN HAND." (BAN KI-MOON, 2015)



Images 05 - 14. Sustainable development goals. United Nations. (2015). Sustainable Development Goals. United Nations.

· **SDG 1: No Poverty | SDG 2: Zero Hunger.** These goals are deeply intertwined with the socioeconomic reality of informal settlements. The lack of formal addresses often prevents residents from accessing formal employment, reducing their income (SDG 1) and limiting their access to "safe, nutritious, and sufficient food year-round" (SDG 2) (Driving Real Impact, 2022). A study in Johannesburg found that 68.1% of informal settlement residents consumed low-diversity diets, compared to 15.4% in formal areas (Driving Real Impact, 2022), a disparity likely mirrored in Venezuelan neighborhoods affected by the crisis (Section 3.8).

· **SDG 3: Good Health and Well-being.** This goal is strongly linked to informality, where maternal mortality rates are alarming, and waterborne diseases proliferate due to a lack of sanitation (Targets 3.1, 3.3). Additionally, residents have limited access to reproductive health services (Target 3.7) and universal health coverage (Target 3.8), exacerbating their vulnerability (Driving Real Impact, 2022). In Latin America, where more than 40% of the urban poor lack basic services (Bolay & Rabinovich, 2004), Favela-Bairro's sanitation networks have reduced health risks.

· **SDG 4: Quality Education.** Children in informal settlements face restricted access to equitable education (Targets 4.1-4.3). Skills development and literacy levels are also low (Targets 4.4, 4.6), worsened by a lack of educational infrastructure (Target 4.A).

· **SDG 6: Clean Water and Sanitation.** This is a core challenge in informal settlements, with Targets 6.1 and 6.2 still unmet due to inadequate access to water and sanitation. In Langas slum, Kenya, fecal contaminationof wells from pit latrines contrasted with clean water being accessible only to a few (Driving Real Impact, 2022). Vulnerable settlements in Latin America reflect this issue, though Favela-Bairro's sanitation improvements demonstrate how SDG 6 can enhance health and dignity.

· **SDG 7: Affordable and Clean Energy.** In these settlements, access to "modern, affordable, and reliable energy services" (Target 7.1) is scarce, with inefficient and non-renewable sources prevailing (Targets 7.2, 7.3). One study reports high electricity costs, power outages, and 16% of illegal connections (Driving Real Impact, 2022), problems likely present in Venezuelan neighborhoods amid economic collapse.

· **SDG 8: Decent Work and Economic Growth.** There is a lack of job opportunities (Target 8.5) and unsafe working conditions (Target 8.8) in informal settlements, as labor informality correlates with urban informality (Driving Real Impact, 2022).

· **SDG 10: Reduced Inequalities.** Residents of informal settlements face marginalization (Target 10.2), a legacy of unequal structures in Latin America (Gilbert & Gugler, 1992).

· **SDG 13: Climate Action.** The locations of these settlements make them particularly vulnerable to disasters (Target 13.1), with flood-prone areas amplifying risks (Driving Real Impact, 2022).

· *Bolay, J. C., & Rabinovich, A. (2004). Intermediate Cities in Latin America. Cities.*

· *World Bank. (2005). Favela-Barrio: Scaled-up urban development in Brazil.*

· *Driving Real Impact. (2022). Slum Upgrading and the SDGs. UN-Habitat.*

Images 15. Lima, Perú. Source: Revista Economía. (2024, 18 gennaio). Lima: 95% del crecimiento ha sido informal durante los últimos 20 años.

1.6. Latin America - *Habitats as drivers of change*

Latin America stands as one of the most urbanized regions globally, yet it is also a continent where informal settlements constitute a defining feature of its cities, reflecting deep-rooted social, economic, and political challenges. According to ONU-Hábitat (2003), over 20% of the urban population in Latin America and the Caribbean—approximately 111 million people—lived in informal settlements at the turn of the millennium, a figure that has likely grown amidst ongoing economic instability and migration pressures. This prevalence underscores the region's position as a critical case study for understanding urban informality, with countries like Brazil, Mexico, and Colombia hosting some of the world's largest and most emblematic informal communities. As Gilbert and Gugler (1992) note, "Latin America exemplifies the paradox of rapid urban growth accompanied by persistent inequality," a dynamic that has fueled the expansion of slums, shantytowns, and squatter settlements across the continent.

The socioeconomic roots of informality in Latin America are intricately tied to historical patterns of unequal land distribution and economic exclusion. Davis (2006) argues that the region's colonial legacy and subsequent neoliberal policies have concentrated wealth and urban resources in the hands of a few, leaving millions without access to formal housing markets. In cities like Lima, Bogotá, and São Paulo, the influx of rural migrants during the 20th century—driven by agrarian crises and industrial booms—outpaced urban planning capacities, resulting in sprawling peripheral settlements. Bolay and Rabinovich (2004) emphasize that "poverty and informality are two sides of the same coin in Latin America," with over 40% of the region's urban poor residing in substandard conditions lacking water, sanitation, or legal tenure.

Politically, the region's informal settlements have been shaped by inconsistent governance and a legacy of populist yet ineffective housing policies. Fernandes (2011) highlights that while some governments have pursued regularization efforts—such as Mexico's programs to title informal properties—others have oscillated between neglect and forced evictions, perpetuating cycles of displacement. In Bogotá, for instance, the city's barrios de invasión grew amid weak zoning enforcement and corruption, a pattern echoed across the continent. Journalist Simon Romero of The New York Times observed, "Latin America's slums are not just a failure of planning—they're a political choice, a refusal to prioritize the invisible" (Romero, 2012). This political inertia contrasts with the resilience of informal communities, which often self-organize to address gaps in infrastructure and services, from community-built water systems in Lima to cooperative markets in Buenos Aires.

"THE HILLSIDES OF LATIN AMERICAN CITIES ARE A TESTAMENT TO HUMAN RESILIENCE AND GOVERNMENTAL NEGLECT, WHERE FAMILIES BUILD HOMES FROM SCRAPS WHILE THE STATE LOOKS THE OTHER WAY" (GUILLERMO PRIETO, 2001).

Environmental factors further complicate the landscape of informality in Latin America, as many settlements occupy hazard-prone areas due to the scarcity of affordable land. Satterthwaite (2007) notes that steep slopes, floodplains, and riverbanks—common sites for informal growth in cities like Rio de Janeiro and Caracas—are inherently vulnerable to landslides and flooding, risks exacerbated by climate change. Huchzermeyer (2011) points out that "the environmental precarity of these settlements is both a cause and a consequence of their marginalization," a reality starkly illustrated by the 2010 mudslides in Rio's favelas, which claimed hundreds of lives. Journalist

· *UN-Habitat. (2003). The Challenge of Slums: Global Report on Human Settlements.*

· *Gilbert, A., & Gugler, J. (1992). Cities, Poverty and Development: Urbanization in the Third World. Oxford University Press.*

· *Davis, M. (2006). Planet of Slums. Verso.*

· *Bolay, J. C., & Rabinovich, A. (2004). Intermediate Cities in Latin America. Cities.*

· *Guillermoprieto, A. (2001, October 4). A new Bolivia?. The New York Review of Books.*

· *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*

· *Satterthwaite, D. (2007). The Transition to a Predominantly Urban World and Its Underpinnings. International Institute for Environment and Development.*

· *Huchzermeyer, M. (2011). Cities with 'Slums'. Juta Academic.*

· *Forero, J. (2010, April 14). In Venezuela, a revolution in shantytowns. The Washington Post.*

· *Roy, A., & AlSayyad, N. (2004). Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia. Lexington Books.*

· *CEPAL. (2020). América Latina y el Caribe: Desarrollo sostenible en la agenda 2030. Comisión Económica para América Latina y el Caribe.*

Juan Forero, reporting for The Washington Post, wrote, “In Latin America, the poor don’t just inherit poverty—they inherit disaster, building their lives on the edge of cliffs and rivers that the wealthy would never touch” (Forero, 2010).

Despite these challenges, Latin America’s informal settlements are increasingly recognized as more than mere problems to be solved. Roy and AlSayyad (2004) argue that they embody a form of “urban citizenship,” where residents assert their right to the city through occupation and adaptation. From the villas miseria of Argentina to the ranchos of Venezuela, these communities demonstrate remarkable ingenuity, often transforming precarious conditions into vibrant hubs of economic and cultural activity. The CEPAL (2020) report on sustainable urban development in Latin America asserts that “integrating informal settlements into the urban fabric is not only a moral imperative but a practical necessity for the region’s future.” This shift in perspective—from eradication to inclusion—sets the stage for examining specific cases, such as the favelas of Rio de Janeiro, where innovative approaches to urban informality have begun to redefine sustainable development in the region.

1.7. Typologies of informality in latin america

In Latin America, informal settlements —also called slums, squatter settlements, favelas, barrios populares, among others— can be categorized based on their origin, mode of occupation, and level of consolidation (UN-Habitat, 2020; ECLAC, 2018).

The main types are:

1. Land invasions or land squatting:
Groups of people illegally occupy vacant land or abandoned buildings (public or private). Examples include the “invasiones” in Venezuela or the “tomas” in Colombia and Chile (Gilbert, 1996).

2. Irregular subdivisions (loteos irregulares):
Land is divided and sold without complying with urban planning regulations or providing basic services.
This phenomenon is very common in cities of Mexico, Brazil, and Argentina (Fernandes, 2011).

3. Progressive self-construction:
Families build their homes gradually, initially using precarious materials and upgrading them over time.
This process occurs in both invasions and irregular subdivisions (UN-Habitat, 2003).

4. Favelas and spontaneous settlements:
These settlements grow organically with high density and chaotic layouts, often located on unsuitable land like hillsides or floodplains (Perlman, 2010; World Bank, 2017).

5. Vertical occupations:
Squatting in abandoned or unfinished buildings and adapting them into housing.
A notable example is the Torre de David in Caracas, Venezuela (Brillembourg & Klumpner, 2005).

Informal settlements can be classified in different ways:

A. By level of formality:

- **Purely informal:** No legal land tenure, no basic services.
- **Semi-formal:** Some services exist, but no legal property titles.
- **Formalized:** After a government-led regularization process (Fernandes, 2011).

Image 16. Land invasions or land squatting. Source: Kruger, H./ African News Agency(ANA). (2020, august). South Africa - Cape Town.

Image 17. Irregular subdivisions (loteos irregulares). Source: © Google Earth. High resolution optical satellite

Image 18. Progressive self-construction. Source: Harya, A. (2017). La ciudad antes de la pintura . En P. Lynch (Ed.), Intervención transforma pueblo en Indonesia con los colores y el trabajo colectivo. ArchDaily.

Image 19. Favelas and spontaneous settlements. Source: Phaliso, S. (2023, december). First families moved off Central Line railway tracks [Fotografía]. En Metrorail shack dwellers moved, but to a place without toilets or water. GroundUp.

Image 20. Vertical occupations Source: Tillim, G. (2008). Guy Tillim. Courtesy of Stevenson, Cape Town and Johannesburg (Diptych). M. Maganga, Abandoned Modernism in Liberia and Mozambique: The Afterlives of Luxury Hotels. Barbican Art Gallery.

Image 21. Semi-formal settlement – Mozambique. Source: Mottelson, J. (2022). Street Expansion in an Informal Settlement. urbanNext.

B. By origin:

· **Organized invasions** (supported by social movements or political groups).
· **Spontaneous occupations** (without centralized organization).
· **Irregular private sales** (sometimes orchestrated by informal land markets or criminal networks) (Gilbert, 1996).

C. By location:

· **Peri-urban areas:** Outskirts of major cities.
· Interstitial areas: Vacant or unused land within the consolidated city.
· Hazard-prone areas: Slopes, riverbanks, contaminated or flood-prone zones (UN-Habitat, 2003).

D. By degree of consolidation:

· **Precarious settlements:** Built with temporary materials, highly vulnerable to environmental risks.
· **Consolidated informal settlements:** Homes made of brick or concrete, sometimes with partial access to urban services through informal networks (ECLAC, 2018; World Bank, 2017).

· *UN-Habitat. (2020). World Cities Report 2020: The Value of Sustainable Urbanization.*

· *ECLAC (Economic Commission for Latin America and the Caribbean). (2018). Urbanization and Urban Development in Latin America and the Caribbean: Challenges and Opportunities.*

· *Gilbert, A. (1996). The Latin American City. Latin America Bureau.*

· *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*

· *UN-Habitat. (2003). The Challenge of Slums: Global Report on Human Settlements.*

· *Perlman, J. (2010). Favela: Four Decades of Living on the Edge in Rio de Janeiro. Oxford University Press.*

· *World Bank. (2017). Leveraging Urbanization in Latin America and the Caribbean.*

Image 22. Irregular occupations, sierra leone. Source: Simpson, P. (2022).

Image 23. Outskirts settlements. Source: Chatterjee, I. (2019, 17 septiembre).

Image 24. Consolidated settlement. Source: Jáuregui Sarmiento, D. (2025, 9 de abril).


02

BETWEEN CRISIS AND URBAN RESILIENCE

2.1. A COUNTRY IN PERMANENT STATE OF CRISIS - Venezuela

Venezuela, once heralded as one of Latin America's wealthiest nations due to its vast oil reserves, has descended into a prolonged state of crisis over the past several decades, marked by economic collapse, political instability, and a deepening humanitarian emergency. This crisis has profoundly shaped the country's urban landscape, particularly through the proliferation and persistence of informal settlements—locally known as barrios or ranchos. These precarious neighborhoods, often constructed on the peripheries of cities with makeshift materials, are both a symptom and a consequence of Venezuela's economic turmoil. To contextualize informal settlements within this crisis, it is essential to trace their historical roots, examine their current conditions, and analyze how economic factors—exacerbated by inequality, poverty, political upheaval, and failing public policies—have entrenched their existence.

2.1.1. Historical Roots: From Rural Migration to Urban Explosion

The emergence of informal settlements in Venezuela is deeply tied to the country's rapid urbanization, a process that began in the early 20th century and accelerated during the oil boom. As Marcano (2021) notes, the transformation of Venezuela from a rural to an urban society was a "territorial revolution in the built environment" that unfolded during the regime of Juan Vicente Gómez (1908–1935) and the onset of oil exploitation. This period saw vast green fields give way to sprawling urban centers as rural populations migrated in masses to cities in search of better opportunities. Marcano describes this shift as an "explosion of cities," where traditional colonial morphologies—centered around a core and its edges—evolved into complex urban zones, including the ranchos that would become the foundation of informal settlements (Marcano, 2021). Almandoz (2012) adds that the oil prosperity of the 1970s and 1980s, often dubbed the "Saudi" period, fueled this urban boom, drawing migrants with promises of wealth that rarely materialized for the poor.

These early settlers, driven by the aspiration to **"change sandals for shoes",** as Marcano (2021) quotes from a migrant, built rudimentary homes using industrial waste materials like cardboard, tarpaulins, and zinc sheets. Unlike the wattle-and-daub edge dwellings of the 19th century, these 20th-century ranchos symbolized both possession of land and hope for a better life. However, this hope was quickly tempered by the realities of urban exclusion. The rapid influx of migrants overwhelmed city planning efforts, and the lack of affordable housing pushed low-income populations to occupy peripheral lands, often through invasions, setting the stage for the informal settlements that dominate Venezuela's urban fabric today. Hawkins (2003) notes that this period laid the groundwork for later populist policies under Chavismo, which would attempt—but largely fail—to address these structural inequalities.

2.1.2. The 1980s: From Oil Boom to Bust

The 1980s marked the unraveling of Venezuela's "Saudi" prosperity, a term coined for the oil-fueled wealth of the 1970s when per capita income rivaled Europe's (Almandoz, 2012). Oil accounted for 90% of exports by 1980, but a global price drop from $35 per barrel in 1981 to $13 by 1986 exposed the economy's fragility. President Carlos Andrés Pérez, re-elected in 1988, inherited a $33 billion foreign debt from lavish projects like overseas refineries and urban megastructures

· *Marcano, L. (2021). Migración y urbanización en Venezuela: Una perspectiva histórica. Editorial Académica Española.*

· *Almandoz, A. (2012). Urbanización y modernización en Venezuela. Eure.*

· *Hawkins, K. A. (2003). Populism in Venezuela: The rise of Chavismo. Third World Quarterly.*

· Almandoz, A. (2012). Urbanización y modernización en Venezuela. Eure.

· Dikdan Jaua, J. (2005). Políticas de vivienda y desarrollo urbano en el estado Lara. Universidad Centroccidental Lisandro Alvarado.

Image 25. Caracas, 1930.
Source: marisol_gilaber. (n.d.). Caracas años 30s Pinterest.

Image 26. Caracas, años 30s
Source: marisol_gilaber. (n.d.). Caracas años 30s Pinterest.

Image 27. Caracas in the 70s
Source: VENEZUELA. (2021, April 11). In the 1970s, Caracas was considered the most developed city in the world, after New York [Photograph]. Facebook.

Image 28. Caracazo. Source: The Caracazo riots, 1989.

(e.g., Caracas's Parque Central). His 1989 IMF austerity package—cutting fuel subsidies, raising transport costs by 30%, and devaluing the bolívar—sparked the Caracazo riots on February 27, 1989. Starting in Guarenas, the unrest spread to Caracas's barrios, with looting and clashes leaving 276 dead per official counts, though media estimates soared to 3,000. This violence accelerated rural-to-urban migration as agricultural collapse pushed families into cities, swelling informal settlements with makeshift homes of zinc and cardboard (Dikdan Jaua, 2005). Homicide rates, stable at 8–10 per 100,000 through the 1970s, ticked upward to 13 by 1989, signaling rising insecurity.

Venezuela's economic crisis has not only fueled the expansion of informal settlements but also exposed the inadequacy of state responses. The Housing Policy Law (LPH) of 1989, later revised as the Housing Policy Subsystem Law (LSVPH) in 1999, aimed to address the housing deficit through six programs targeting both new construction and the upgrading of existing informal settlements (Dikdan Jaua, 2005). Programs II and III, for instance, focused on improving living conditions and replacing precarious housing in barrios, while Program V sought to curb uncontrolled expansion through progressive housing solutions. However, these initiatives faltered amid economic instability and a focus on quantity over quality. During the oil boom of the 1970s and early 1980s, state-subsidized housing projects prioritized mass construction, often using low-cost materials and foreign technologies without rigorous oversight. The result was a proliferation of fragile, substandard homes that quickly deteriorated. Post-1983, after currency devaluation, housing policy devolved into a credit distribution system, neglecting quality control and failing to meet residents' needs. Even the LPH's ambitious goals—addressing the needs of three million families between 1990 and 2005—fell short, as annual construction rates lagged behind the growing deficit (Dikdan Jaua, 2005).

2.1.3. The 1990s: Deepening Instability and Urban Precarity

The 1990s entrenched this decline. Pérez's impeachment in 1993 for corruption, followed by Rafael Caldera's presidency, saw oil production falter and inflation climb to 70% by 1994. A 1994 banking crisis wiped out half the financial sector, costing $11 billion in bailouts, while a 1996 devaluation slashed purchasing power. State-led housing initiatives, already weakened post-1983, collapsed entirely, leaving a deficit of 1.5 million units by decade's end (Dikdan Jaua, 2005). Informal settlements became the default for the urban poor, with land invasions doubling in Caracas and Maracaibo as speculative real estate priced out low-income families (Camacho, 1999). Two coup attempts in 1992, led by Hugo Chávez, failed but galvanized the disenfranchised, many from barrios, foreshadowing his rise. Crime escalated—homicides hit 20 per 100,000 by 1998—reflecting a fraying social fabric amid economic despair.

2.1.4. Transition to Chávez - A Populist Promise

Elected in 1998 with 56% of the vote, Hugo Chávez rode a wave of anti-elite sentiment, promising a "Bolivarian Revolution" to redistribute oil wealth (Hawkins, 2003). His 1999 Constitution enshrined housing as a right (Article 82), raising hopes among barrio dwellers. Rising oil prices—from $10 per barrel in 1998 to $50 by 2005—funded social "missions," cutting extreme poverty from 25% in 1998 to 10% by 2006. Yet, this oil windfall masked structural flaws. In 2003, following a crippling strike at the state oil company PDVSA, Chávez dismissed around 18,000 workers and reasserted tight government control over the company, which led to a decline in output from 3.5 million barrels daily in 1998 to 2.5 million by 2012 (Aleem, 2017).

· *Dikdan Jaua, J. (2005). Políticas de vivienda y desarrollo urbano en el estado Lara. Universidad Centroccidental Lisandro Alvarado.*

· *Camacho, A. (1999). La urbanización en Venezuela: Procesos y problemas. Universidad Central de Venezuela.*

· Hawkins, K. A. (2003). Populism in Venezuela: The rise of Chavismo. Third World Quarterly.

· Aleem, Z. (2017). The decline of PDVSA and Venezuela's economic crisis. Vox.

Corruption ballooned—Transparency International ranked Venezuela 130th of 180 nations by 2005—diverting funds from housing to loyalists. Informal settlements grew as urban migration outpaced state capacity, with ranchos sprawling across Caracas's hillsides and beyond.

2.1.5. Chavismo: The Curse That Poisoned Venezuela

Chavismo reshaped Venezuela with a mix of social gains and deepening crisis. Missions like Barrio Adentro brought healthcare to barrios, but economic mismanagement—price controls, expropriations of 1,200+ firms—stifled production, sparking shortages by 2007. Politically, Chávez dismantled checks: a 1999 Constituent Assembly rewrote the Constitution, a 2009 referendum ended term limits, and media crackdowns silenced dissent (Hawkins, 2003). This hyper-presidency fueled class tensions, with Chávez's rhetoric pitting "the people" against "oligarchs," a divide mirrored in the stark contrast between dollarized elites and barrio misery (Freitez, 2018).

Accordingly, crime exploded under Chavismo. Homicides rose from 13 per 100,000 in 1999 to 45 by 2013, peaking at 79 in 2013 per Gallup—over 23,000 murders annually. Caracas became the world's deadliest city, with a 2023 murder rate of 111 per 100,000 (Statista, 2023). Colectivos, armed groups loyal to Chávez, policed barrios but also extorted residents, while prison gangs like Tren de Aragua expanded into kidnapping and trafficking (Anderson, 2013). Insecurity drove middle-class flight, leaving barrios as refuges for the poorest, most vulnerable.

Just three years into Chávez's presidency, on April 11, 2002, a coup briefly ousted him from power, exposing the deep fissures within Venezuelan society.

Triggered by opposition to his radical policies—such as land reforms and PDVSA restructuring—the coup saw military leaders, backed by business elites and media, detain Chávez for 47 hours. Mass protests, largely from barrio residents loyal to his redistributive vision, clashed with opposition marches in Caracas, culminating in violence that left 19 dead and over 150 injured, per official counts (Neuman, 2013). Chávez was restored on April 13, but the event polarized the nation, with barrios emerging as strongholds of Chavista support. The coup's fallout eroded trust in institutions, boosting informal governance by colectivos—armed pro-government groups—in these settlements, a trend that fueled later insecurity (Anderson, 2013).

Later that year, from December 2002 to February 2003, a general strike led by PDVSA managers and opposition groups aimed to force Chávez's resignation. This "oil lockout" crippled the economy, slashing oil production by 40%—from 3.5 million barrels daily to 1.5 million—and triggering a 24% GDP contraction in 2003, one of the sharpest in Venezuela's history. Exports, 90% oil-dependent, plummeted, costing $7.5 billion in revenue. Food and fuel shortages hit barrios hardest, where residents, unable to afford imports, resorted to scavenging or informal markets. Chávez responded by firing 18,000 PDVSA workers, replacing them with loyalists, but output never fully recovered, dropping to 2.5 million barrels by 2012 (Aleem, 2017). This economic blow accelerated barrio growth as rural migrants, displaced by agricultural neglect, flooded cities, erecting ranchos on unstable land.

Chávez's landslide reelection in December 2006, with 63% of the vote against Manuel Rosales's 37%, cemented his grip on power. Buoyed by oil prices averaging $60 per barrel—peaking at $103 by 2008—he expanded social missions, building clinics and schools in barrios through Barrio Adentro and Misión Vivienda precursors (Hawkins, 2003). Yet, beneath this

Image 29. Venezuelan Migration
Source: "Me voy": temor a nueva ola migratoria en Venezuela enciende alertas. (2024, august). SWI swissinfo.ch.

triumph, cracks emerged. Inflation hit 31% in 2006, driven by unchecked spending, while expropriations of over 1,200 businesses deterred investment, shrinking the private sector by 20% from 1999 levels. Homicide rates climbed to 37 per 100,000—11,000 murders—reflecting rising gang activity in barrios, where colectivos and criminal factions vied for control. The reelection masked a growing dependence on oil, leaving informal settlements vulnerable to future shocks.

By late 2009, the global financial crisis exposed Venezuela's fragility. Oil prices dipped to $40 per barrel, and GDP contracted by 5.8% in Q4 2009—the first recession since 2003. Chávez devalued the bolívar by 50% in January 2010, from 2.15 to 4.3 per dollar, aiming to boost revenue but doubling import costs. Shortages of basics—milk, sugar, cement—worsened, with barrio residents queuing for hours or bartering in informal economies. Crime surged as economic despair fueled lawlessness; homicides reached 45 per 100,000 in 2009, with 13,080 deaths, per the Venezuelan Violence Observatory. In Caracas's Petare barrio, gang turf wars killed dozens monthly, a microcosm of national chaos (Anderson, 2013). Housing initiatives stalled, with the 1999 LSVPH upgrades abandoned, pushing more families into precarious ranchos.

The year 2010 marked a grim milestone in Venezuela's descent into violence. The murder rate soared to 67 per 100,000—19,336 deaths—making it one of the world's deadliest nations, surpassing Colombia and Mexico, per the Venezuelan Violence Observatory. Caracas topped global charts with a rate of 111 per 100,000 (Statista, 2023). Chávez's policies—underfunding police (80% of officers earned under $20 monthly) while arming colectivos—created a security vacuum. In barrios, kidnappings spiked—16,917 reported cases nationwide—while extortion by groups like Tren de Aragua became routine. Residents fortified homes with scrap metal, but the qualitative housing deficit worsened, with 42% of barrio dwellings featuring light roofs prone to collapse (Freitez, 2018).

· *Hawkins, K. A. (2003). Populism in Venezuela: The rise of Chavismo. Third World Quarterly.*

· *Freitez, A. (2018). Encuesta nacional de condiciones de vida (ENCOVI) 2018: Informe de resultados. UCAB.*

· *Anderson, J. L. (2013). Slumlord: The New Yorker.*

· *Neuman, J. (2013, March 6). Hugo Chávez, Venezuelan leader, dies at 58. The New York Times.*

Image 30. Chavez, 1998
Source: @PsuvMirandaVE. (2018, December 6). Un #06Dic de 1998, Chávez gana sus primeras elecciones y se inicia la refundación de la República con la participación del poder popular. [Tweet]. X.

2.1.6. Gran Misión Vivienda Venezuela - Quantity over quality

Launched in April 2011, Gran Misión Vivienda Venezuela (GMVV) was Chávez's flagship response to a housing crisis exacerbated by natural disasters and political pressure. Torrential rains in 2010 had displaced 130,000 families, many from barrios built on flood-prone hillsides, spotlighting the qualitative deficit (Anderson, 2013). Promising to build 2 million homes by 2017—later revised to 3 million—GMVV leveraged oil revenues ($103 per barrel in 2012) and foreign partnerships, notably with China, Belarus, and Iran, to erect high-rise complexes and single-family units.

However, the reality was far grimmer. Quality was abysmal, with units plagued by structural flaws—cracked foundations, leaking roofs, and walls of substandard concrete that crumbled in heavy rains. A 2016 investigation by The New Yorker found that 30% of GMVV homes in Lara state collapsed or were uninhabitable within two years, a pattern echoed nationwide (Anderson, 2013). Basic services lagged: 40% of units lacked reliable plumbing, and 25% had no electricity hookup, per a 2018 Universidad Católica Andrés Bello study. In Barquisimeto's GMVV projects, residents reported elevators breaking within months, forcing elderly tenants to climb 15 floors, while water arrived via truck—if at all. These deficiencies mirrored the broader housing crisis, where 42% of barrio homes still had light roofs and 18% unplastered walls by 2017 (Freitez, 2018).

Political allocation further undermined GMVV's impact. Units were disproportionately awarded to PSUV (United Socialist Party of Venezuela) supporters, with loyalty lists—verified via carnet de la patria ID cards—dictating access. A 2015 El Mundo report documented opposition families in Maracaibo waiting years for promised homes, while PSUV activists received keys within months (Lozano, 2020). In Caracas, entire complexes sat empty, reserved for future political campaigns, while barrio residents—70% of whom voted Chavista in 2012—received token upgrades like paint cans or zinc sheets rather than new housing (Anderson, 2013). By 2019, the Venezuelan Observatory of Social Conflict estimated that only 10% of GMVV units reached existing barrio dwellers, leaving the qualitative deficit—overcrowding, unsafe materials, and service gaps—largely intact.

In barrios, the disconnect was stark. Residents of San Agustín, Caracas, told The New Yorker in 2013 of receiving zinc sheets that rusted in a year, while GMVV towers nearby housed middle-class loyalists (Anderson, 2013). In Lara's Iribarren Municipality, where informal settlements ballooned from 4,936 hectares in 1971 to 35,000 by 2000, GMVV units dotted the skyline, but 60% of barrio homes lacked sanitation by 2020 (Dikdan Jaua, 2005). The program's focus on new builds over upgrades ignored the 10% of Venezuelans in precarious ranchos, per ENCOVI 2017, perpetuating overcrowding (4% of households without sleeping rooms) and environmental risks on flood-prone land (Freitez, 2018).

GMVV's scale was unprecedented, yet its failures echoed earlier policies: a fixation on numbers—4.3 million claimed units—over quality or equity. By 2023, economic collapse and U.S. sanctions (post-2014) slashed funding, halting 40% of projects mid-construction, per BBC News (2019). For barrio residents, the promise of "dignified housing" under Article 82 of the 1999 Constitution remained a mirage, with upgrades lagging and new units out of reach. This policy inertia not only sustained informal settlements but deepened their isolation, as speculative land markets and dollarization priced out the poor, forcing

· *Anderson, J. L. (2013). Slumlord: The New Yorker.*

· *Freitez, A. (2018). ENCOVI 2018. UCAB.*

· *Dikdan Jaua, J. (2005). Políticas de vivienda y desarrollo urbano.*

· *Camacho, A. (1999). La urbanización en Venezuela.*

Image 31. Misión vivienda
Source: (2025, April 30). In Misión Vivienda Venezuela: 14 years of commitment to the dignity of the people. Extra News Mundo.

Image 32. Venezuela libre
Source: In The Pattern of Great Corruption in Venezuela. Transparencia Venezuela.

them to self-build amid scarcity (Camacho, 1999). The result is a housing crisis where resilience, not resolution, defines life in Venezuela's barrios.

2.1.7. Chávez's Death and transition to Maduro: A Legacy of Neglect

Hugo Chávez's death on March 5, 2013, after a two-year struggle with an undisclosed form of cancer, marked the end of a transformative yet polarizing 14-year presidency that reshaped Venezuela's social, political, and economic landscape (Neuman, 2013). Elected in 1998 as a champion of the poor, Chávez wielded oil wealth to slash extreme poverty from 25% in 1998 to 7% by 2012, according to World Bank estimates, through social "missions" like Misión Barrio Adentro, which brought healthcare to barrio clinics, and Misión Vivienda precursors that constructed 350,000 homes by 2012. His Bolivarian Revolution promised to dismantle the elite-driven "Fourth Republic" and uplift the marginalized, a vision that resonated deeply in informal settlements, where residents saw him as a defender against decades of exclusion.

Yet, this legacy came at a steep cost. Chávez's rule saddled Venezuela with a staggering $120 billion foreign debt—tripled from 1998 levels—after borrowing heavily from allies like China to fund social programs and nationalizations (Aleem, 2017). His 2003 takeover of PDVSA, the state oil company, firing 18,000 skilled workers after a strike, halved oil production from 3.5 million barrels daily in 1998 to 1.7 million by 2013, crippling the economy's backbone. Politically, he centralized power to an unprecedented degree: by 2012, 97% of the national budget flowed through his office, bypassing regional governments and legislative oversight, a move that entrenched patronage networks but eroded institutional resilience (Hawkins, 2003). Economically, inflation surged to 27% by 2013, driven by price controls and money printing, while shortages of basics—60% of goods unavailable—hit barrios hardest, forcing residents to barter or scavenge.

The social toll was equally severe. Chávez's tenure saw Venezuela's murder rate soar to 79 per 100,000 in 2013—eight times the global average of 6.2—totaling over 23,000 homicides annually, per Gallup. His policies, underfunding police while arming colectivos to secure barrios, fostered a lawless environment where gangs like Tren de Aragua thrived on extortion and kidnappings (Anderson, 2013). For informal settlements, this duality defined his legacy: tangible gains—clinics, literacy programs, and some housing—were overshadowed by violence, neglect, and economic fragility. ENCOVI 2017 data revealed that 10% of Venezuelan homes remained precarious—rustic ranchos with earth floors and zinc roofs—despite his efforts, a stark reminder that barrio upgrades lagged behind populist rhetoric (Freitez, 2018). In Petare, Caracas's largest barrio, residents hailed Chávez for subsidized food but mourned sons lost to gang wars, a bittersweet paradox.

Chávez's death handed Nicolás Maduro a nation on the brink. Oil prices, peaking at $103 per barrel in 2012, masked structural rot—PDVSA's decay, a bloated bureaucracy, and a polarized society split between Chavista loyalists and a resentful opposition (Neuman, 2013). For barrios, his passing left a fractured legacy: a leader who spoke their language but left them vulnerable to a deepening crisis, with social gains eroding under the weight of mismanagement and insecurity.

Maduro's narrow election on April 14, 2013—50.6% to Henrique Capriles's 49.1%—ushered in a period of unrelenting decline, as oil prices crashed from $103 per barrel in 2012 to $36 by 2016, slashing state revenue by 60%. A former bus driver and Chávez loyalist, Maduro lacked his predecessor's charisma and

faced an economy already buckling under debt and inefficiency. His response—massive money printing to cover deficits—ignited hyperinflation: 254% in 2016, soaring to an astronomical 1,000,000% in 2018, rendering the bolívar worthless (BBC News, 2019). The IMF estimates GDP shrank 66% from 2013 to 2020, one of the worst peacetime contractions globally, while PDVSA output plummeted to 0.5 million barrels daily by 2020, a fifth of its 1998 peak, due to corruption and lack of maintenance.

Crime, though slightly tempered, remained a scourge. Homicides dipped to 60 per 100,000 in 2016—still ten times the global average—as gang consolidation and emigration reduced raw numbers, but kidnappings (16,000+ annually) and extortion persisted, with barrios as epicenters. In Catia, Caracas, residents reported paying "vacunas" (protection fees) to colectivos, while Barquisimeto's ranchos faced nightly raids by Tren de Aragua offshoots. This insecurity compounded the housing crisis, as families fortified flimsy homes rather than rebuilding, leaving 42% with light roofs by 2017 (Freitez, 2018).

Accordingly, public unrest erupted in February 2014 over shortages—80% of goods, from flour to medicine, unavailable—and inflation, with barrio youth, dubbed "guarimberos," erecting barricades of burning tires. Protests killed 43, injured 3,000, and saw 3,351 arrests, per Foro Penal, as security forces fired tear gas and live rounds. U.S. sanctions, starting in 2014 against officials and escalating in 2017 to oil exports, cut imports by 50%, exacerbating scarcity, though Maduro blamed "economic war" rather than mismanagement, which predated sanctions (Hassa, 2022). The 2017 crisis peaked when Maduro dissolved the opposition-led National Assembly in March, replacing it with a loyalist Constituent Assembly. The "Mother of All Protests" followed on April 19, drawing 2.5–6 million nationwide—Caracas's streets choked with marchers—killing 29 in a single day and 163 over months. The July 2017 Constituent election, rigged by 1 million votes per Smartmatic's audit, entrenched repression, with 5,000+ detained that year (BBC News, 2017).

Sanctions and currency collapse fueled informal dollarization—70% of transactions by 2019—creating **"two Venezuelas"**: a dollarized elite in eastern Caracas and a bolívar-bound majority in barrios (Freitez, 2018). In Petare, a kilo of rice cost $2 in 2021, while barrio wages averaged $1 monthly, forcing reliance on remittances or CLAP food boxes, often delayed or pilfered. This exclusion deepened barrio isolation, as speculative land markets—rents tripled in dollar zones—pushed the poor onto marginal hillsides, perpetuating the cycle of precarity Chávez once "vowed" to break.

As a consequence of the crisis, over 7 million Venezuelans to flee by 2023—80% to Latin America—braving the Darién Gap's jungles, where 266,000 crossed in 2022 alone, per UNHCR. Barrios lost their youth—20% of Caracas's population under 30 emigrated by 2020—leaving behind elderly and the poorest, unable to afford escape. In La Vega, abandoned homes crumbled, while remaining families, 60% earning under $10 monthly in 2021, scavenged landfills. Internal migration swelled cities like Barquisimeto, where 70% of Lara's 2020 newcomers settled in ranchos, fleeing rural collapse—agriculture shrank 60% since 2013. Caracas's population dropped 20%, easing urban pressure, but barrio density rose as new arrivals crowded into existing shacks.

· *Neuman, J. (2013, March 6). Hugo Chávez, Venezuelan leader, dies at 58. The New York Times.*

· *Aleem, Z. (2017). The decline of PDVSA and Venezuela's economic crisis. Vox.*

· *Hawkins, K. A. (2003). Populism in Venezuela: The rise of Chavismo. Third World Quarterly.*

· *Anderson, J. L. (2013). Slumlord: The New Yorker.*

· *Freitez, A. (2018). ENCOVI 2018. UCAB.*

Image 33. Protests 2017.
Source: AFP/Getty Images. (2017, July). 80 días de protestas en Venezuela. CNN en Español.

2.1.8. Current Conditions: A Fragile Stasis

By 2022, ENCOVI reported poverty falling to 50% from 65% in 2021, with GDP growth of 8% in 2022 and 4% in 2023, driven by oil price rebounds and relaxed controls. Yet, 94.5% lived in income poverty in 2021, 76.6% in extreme poverty. Housing data from ENCOVI 2017 shows 10% of homes as precarious—42% with light roofs, 18% unplastered walls, 30% earth floors—unchanged by 2022 (Freitez, 2018). Overcrowding affects 4% of households (8% in smaller cities), with Barquisimeto's barrios facing 60% water shortages and 50% power cuts in 2023. Crime eased—violent deaths fell to 33 per 100,000 in 2022 per the Venezuelan Violence Observatory—as gangs migrated, but extortion and food scarcity persist, locking informal settlements in a cycle of resilience and ruin.

The Encuesta Nacional de Condiciones de Vida (ENCOVI) 2022, conducted by the Universidad Católica Andrés Bello (2022), provides a stark snapshot of this reality. While poverty fell for the first time in seven years in 2022, dropping due to slight improvements in income and employment, the report highlights a shift in its nature. Economic factors, which accounted for 69% of poverty in 2019, declined to 58% by 2022, while social and infrastructure-related poverty—tied to housing, education, and services—rose from 31% to 42% (Universidad Católica Andrés Bello, 2022).

This shift underscores how the economic crisis has deepened structural inequalities, making access to adequate housing a central battleground. Freitez (2018) further illustrates this duality in her analysis of the 2017 ENCOVI data, describing Venezuela as "the most unequal country in the continent." She paints a vivid picture of two Venezuelas: one where a minority enjoys dollarized luxuries—culinary delicacies, natural paradises, and accessible prices—while the majority grapples with misery, eating from garbage, and lacking basic services. This inequality, Freitez argues, is a direct outcome of the economic crisis, where the collapse of the bolívar has bifurcated society into those who can access foreign currency and those who cannot. Informal settlements, home to the latter group, embody this divide, as their residents survive in precarious conditions while the crisis benefits a privileged few.

The political landscape in 2024 further exacerbated this fragile stasis, with the presidential election on July 28 thrusting Venezuela into renewed turmoil. Opposition leader María Corina Machado, a prominent figure advocating for democratic reform and economic recovery, was barred from running by the Maduro-controlled Supreme Tribunal of Justice in January 2024, citing alleged corruption—a charge widely dismissed as politically motivated. Her disqualification galvanized the opposition, leading to the candidacy of Edmundo González Urrutia, a lesser-known diplomat backed by Machado and the Unitary Platform coalition. Exit polls and independent vote counts, showed González winning decisively with over 67% of the vote against Nicolás Maduro's 30%, reflecting widespread discontent with Chavismo's legacy of economic ruin and repression. However, the National Electoral Council (CNE), loyal to Maduro, declared him the victor with 51% on July 29, 2024, sparking accusations of fraud.

Protests erupted in barrios and cities nationwide, with residents chanting "Fraud!" and "We won!"—a rare unified outcry from informal settlements long seen as Chavista strongholds. Machado went into hiding, and González faced arrest threats, leaving the opposition fractured yet defiant. As of 2025, Maduro remains in power, inaugurated on January 10, 2025, amid a deepening legitimacy crisis. The stolen election has intensified barrio despair, with residents, already battered by poverty and insecurity, losing faith in change. Emigration surged again, with UNHCR reporting 7.7 million Venezuelans displaced by late 2024, many from informal settlements abandoning hope of reform. This political theft, layered atop decades of neglect, has cemented Venezuela's status as a nation trapped in perpetual crisis, its barrios bearing the heaviest burden.

· *Freitez, A. (2018). ENCOVI 2018. UCAB.*

· *Universidad Católica Andrés Bello. (2022). Encuesta nacional de condiciones de vida (ENCOVI) 2022. UCAB.*

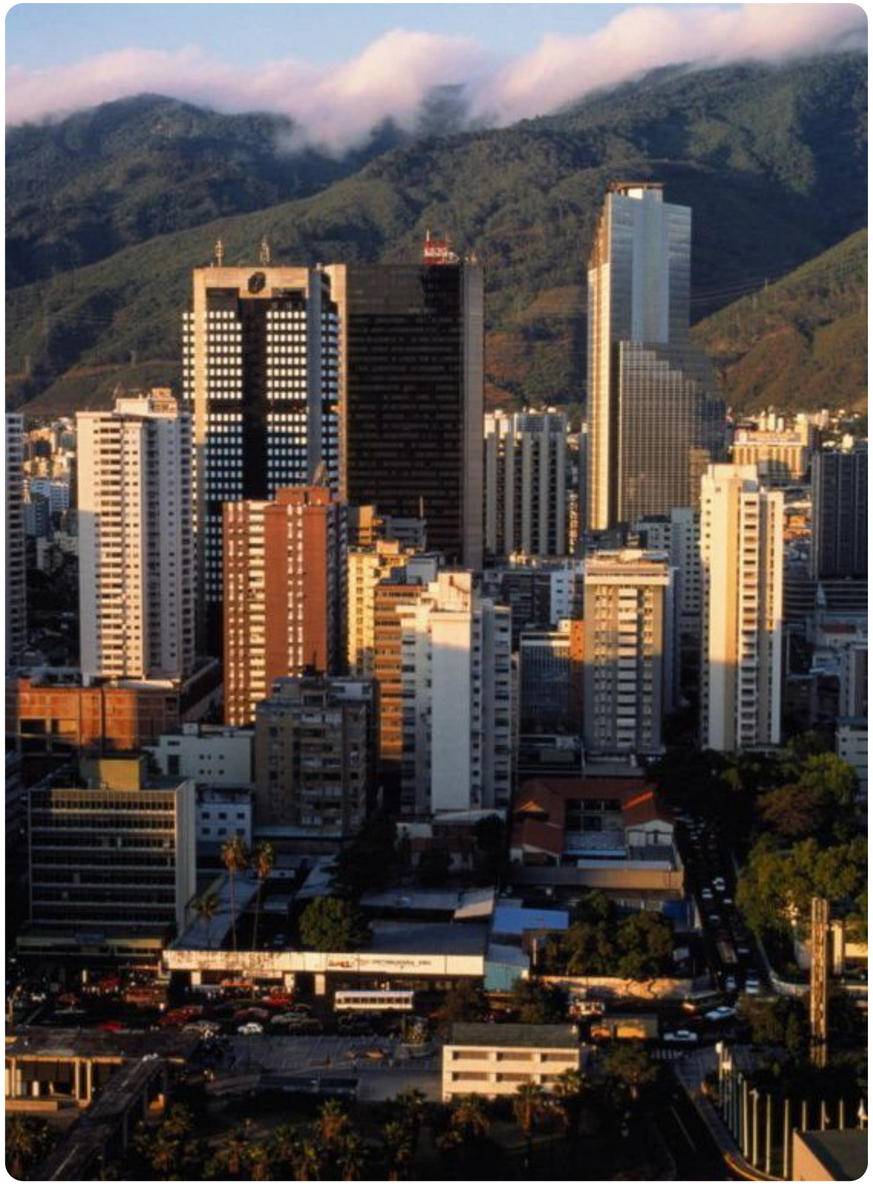


Image 34. Caracas
Source: patiigmz. (n.d.). [Photograph]. Pinterest.

2.2. THE COMPLETE CITY: Barquisimeto

Barquisimeto, also known as "La Ciudad Crepuscular" for its mesmerizing sunsets that paint the sky over the Turbio Valley, is more than just a dot on Venezuela's map. As the capital of Lara State in the Central-Western Region, it stands as a vibrant hub of culture, economy, and history. Barquisimeto is a city that pulses with the rhythm of its musical heritage and the resilience of its people. For someone born and raised here, Barquisimeto is not just a place; it's a living story etched into its streets, from the colonial grid to the sprawling outskirts where the city's past and present collide.

2.2.1. A Journey Through Time: The Origins of the Urban Fabric

The urban development of Barquisimeto cannot be understood without revisiting its foundations. Since its definitive founding in 1563 on the plateau north of the Turbio River, the city was organized around an almost perfect orthogonal grid—one of the most ambitious in colonial Latin America. This layout, designed to facilitate administration and territorial control, achieved a rare symmetry in the South America context. With streets such as Santiago, Mar, and El Tocuyo, and a central plaza as the civic and religious core, the foundational grid served as a master plan for centuries of urban growth.

The geometric logic of this grid was not only about order and efficiency; it also projected a vision of a city controlled from the center outward. However, this logic was quickly strained by local geography, internal migrations, and later by the contradictions of a modern city without continuous planning. (Puleo Fernández, 2019).

· Puleo Fernández, G. N. O. (2019). *Aportes para la formulación del Plan de Desarrollo Urbano Local de Barquisimeto.* Revista Gaceta Técnica.

Image 35. Obelisco de Barquisimto. Source: In Barquisimeto en tres monumentos. Cinco8.

Image 36. Barquisimeto, 1813. Source: In L. A. Perozo Padua, How Barquisimeto looked when it was established as the provincial capital. El Impulso.

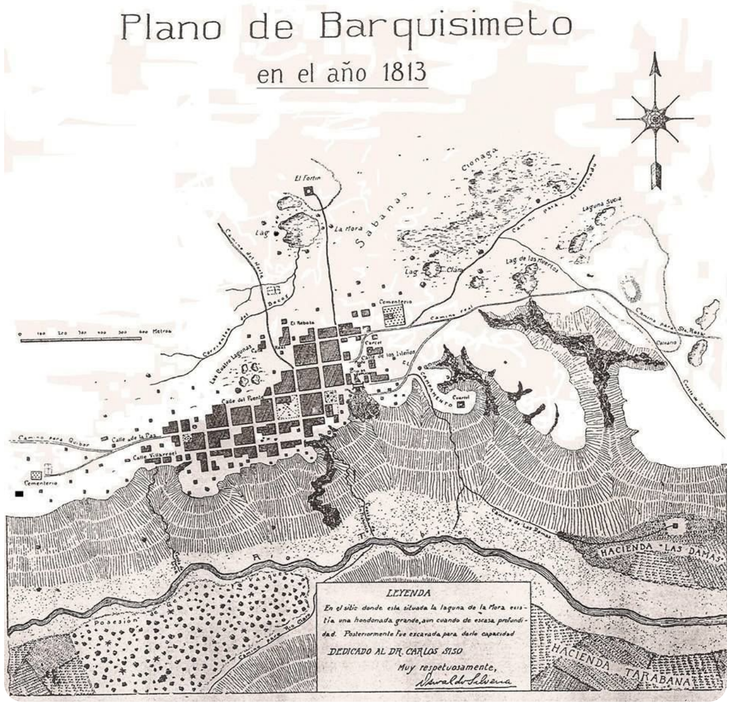
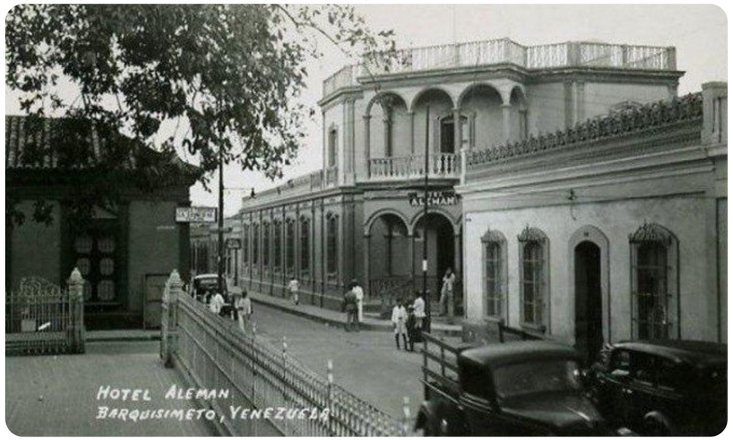


Image 37. Barquisimeto, 1944. Source: Machado, J. (2014, November 17). 10—Done. Flickr.



Evolution of the south border of the city

2004

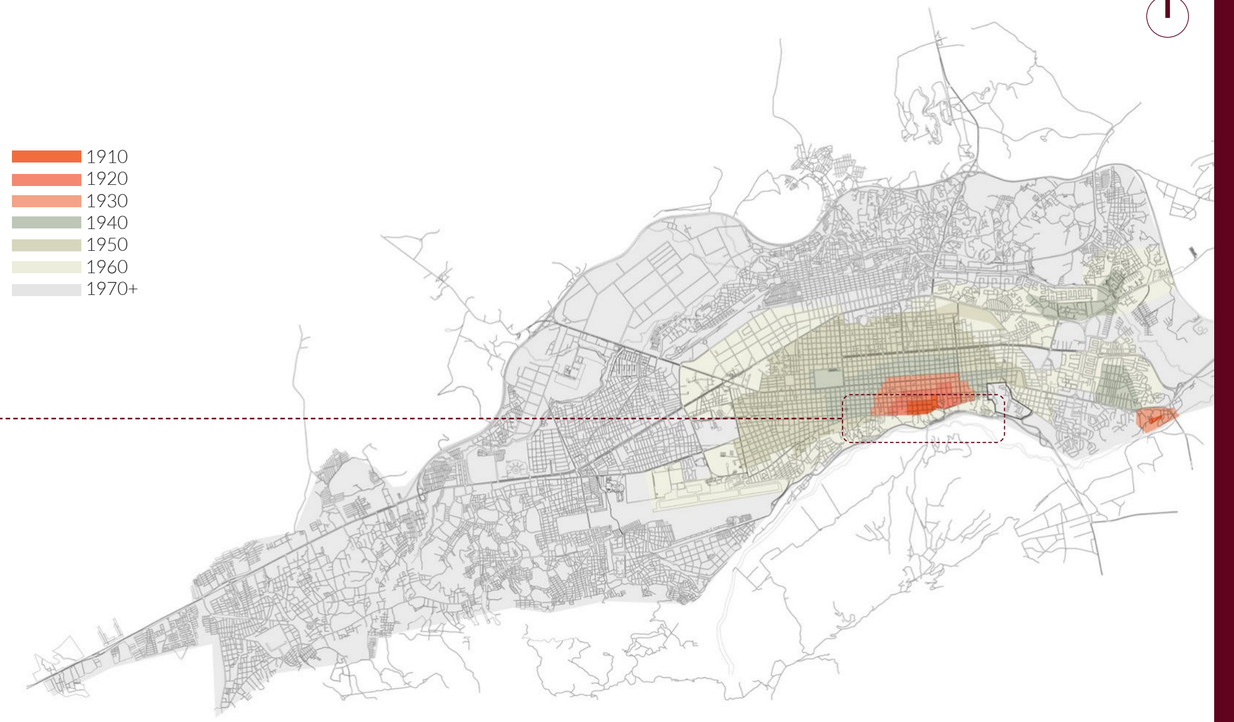
Image 38.Barquisiemeto un 2004. Source: Google earth.

2014

Image 39.Barquisiemeto un 2014. Source: Google earth.

2024

Image 40.Barquisiemeto un 2024. Source: Google earth.



2.2.2. The Grid That Shaped the City

Throughout the 20th century, Barquisimeto's growth exceeded the limits of its original grid. Driven by industrialization, rural migration, and the centralization of services, the city's urban footprint tripled between 1964 and 1990 (Alcaldía del Municipio Iribarren, 2004). But this expansion did not replicate the logic of the center. While the historic core maintained its orthogonal structure, the outskirts began to grow according to irregular, fragmented occupation patterns, often in contradiction with official urban planning regulations.

This rupture in the spatial pattern is essential to understanding how informal settlements became consolidated. Unlike planned expansion, where the grid can be extended in a modular and orderly fashion, the new settlements, especially in the west, south, and north of the city, emerged without direct connection to the founding logic. Topography, existing roads, and housing demand shaped new improvised urban patterns: winding, discontinuous, and often in tension with existing infrastructure.

The emerging patterns in these sectors do not follow the original urban order but rather a logic of survival. The lack of updated planning, restricted access to formal land, and delays in public policy facilitated the informal occupation of vulnerable areas: hillsides, Turbio riverbanks, ravines, or interstitial lots that escaped institutional oversight.

· *Alcaldía del Municipio Iribarren. (2004). PRODEBAR: Programa para el Desarrollo Estratégico de Barquisimeto.*

2.2.3. Reading the City Through Patterns

Today, Barquisimeto can be read as a city of overlapping patterns. The colonial grid is still visible in the center, anchoring an urban identity that combines history and institutional presence (Puleo Fernández, 2019). Around it, barrios like El Obelisco or Santa Isabel preserve a certain degree of planned structure. But toward the edges, geometry dissolves: the patterns become organic, fragmented, guided more by the immediacy of the terrain than by an urban vision (Almandoz, 2012).

Expansion into areas like El Cují, Tamaca, or the southern side of the Turbio occurred under informal dynamics, creating urban fabrics that are difficult to access, poorly equipped with infrastructure, but deeply integrated into the city's everyday life. There, the city wasn't built from a blueprint but from necessity: spontaneous land division, self-construction, and neighbor networks (Camacho, 1999; Bolay & Rabinovich, 2004).

It is precisely in this tension, between the planned and the improvised, that key questions arise for this research: What spatial, historical, and political structures enabled the emergence of informal settlements in Barquisimeto? How influential was the foundational grid in allowing or obstructing organized growth?

To answer these questions, one must consider that the emergence of informal settlements in Venezuela has always been enabled by exclusionary spatial structures, a historical legacy of centralized planning, and inefficient urban policies (Lovera, 2009). The accelerated growth of cities, driven by rural migration, overwhelmed the state's ability to provide formal housing, while the lack of access to urban land and weak institutions allowed informal expansion to become the only option for large sectors of the population (Camacho, 1999). In this context, the foundational grid played a critical role: the rigidity of the colonial model and its hierarchical focus hindered organized expansion, relegating informality to poorly integrated and underserved peripheries. Where long-term territorial vision was lacking, urban growth became fragmented, unequal, and disjointed (Puleo Fernández, 2019).

- *Almandoz, A. (2012). Urbanización y modernización en Venezuela: La Caracas de Guzmán Blanco y el desarrollo desigual del país. Eure, 38(115), 25–47.*
- *Bolay, J. C., & Rabinovich, A. (2004). Intermediate cities in Latin America: Risk and opportunities of coherent urban development. Cities, 21(5), 407–421.*
- *Camacho, A. (1999). La urbanización en Venezuela: Procesos y problemas. Universidad Central de Venezuela.*
- *Lovera, A. (2009). Ciudades intermedias en Venezuela: Dinámicas y desafíos. Fundación Konrad Adenauer.*
- *Puleo Fernández, G. N. O. (2019). Aportes para la formulación del Plan de Desarrollo Urbano Local de Barquisimeto. Revista Gaceta Técnica, 20(1), 95–109.*

Image 41. Aerial view of Barquisimeto. Source: @foto.juice. @somosbqto (2024, december). Nuestra hermosa ciudad desde las alturas.

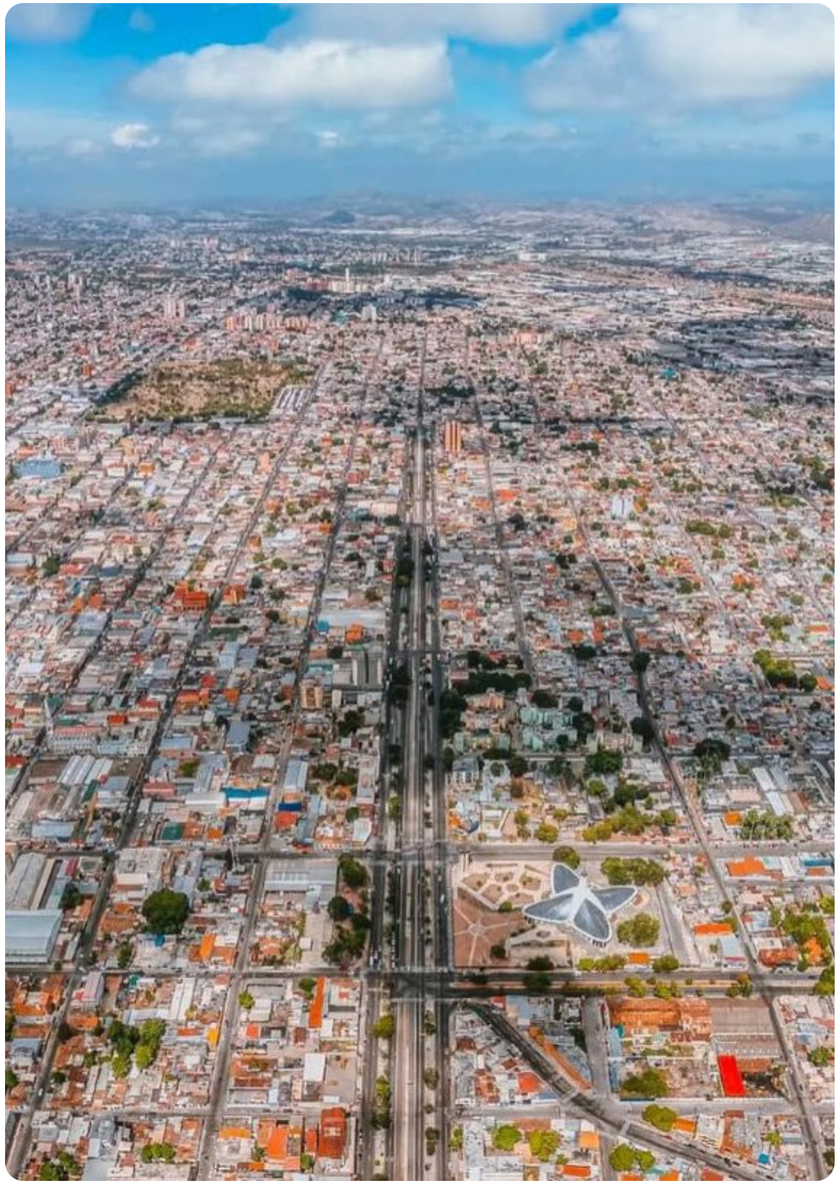


Image 42. Barquisimeto west side. Source: (2024, June 27). In Cámara Inmobiliaria de Lara registra 35 % de estancamiento en las ventas de inmuebles. Banca y Negocios.

2.2.4. PDUL: A Plan Expired, A Future Uncharted

In the same line of thought, no discussion of Barquisimeto is complete without addressing the Plan de Desarrollo Urbano Local (PDUL)—the city's former guiding document. Enacted in 2003 by the Iribarren Municipality, the PDUL was a comprehensive blueprint: it zoned residential, commercial, and industrial areas; set building codes; and prioritized infrastructure like water, sanitation, and roads. It envisioned a polycentric metropolis with interconnected hubs and protected green spaces. Major projects such as the Barquisimeto-Duaca Intercommunal Road, the Southern Bypass, and the Transbarca transit system emerged from its framework (Municipio Iribarren, 2003).

However, the PDUL defined its urban policies within three zones (Polygons A, B, and C) covering about 27,146.80 hectares (Musguito, 2003). Despite its intentions, the city has experienced rapid, unregulated expansion, with informal settlements encroaching upon areas designated for infrastructure and public services.

The problem? The PDUL has expired and no new plan has replaced it. For a city of Barquisimeto's size, this is a crisis. Without an updated framework, expansion has veered into chaos. Roads are congested, and environmental safeguards are breaking down as development spills into parks and riverbanks.

The PDUL's aspirations—sustainability, equity, connectivity—now lie dormant, and citizens are left wondering when, or if, the city will reclaim a vision for its future (Puleo Fernández, 2019). Urban specialists like Manuel Cols Briceño stress the urgent need for a revised PDUL to tackle uncontrolled growth and increasing strain on public services (El Impulso, 2025).

Some urban improvement initiatives have attempted to meet these challenges. One notable case is "Plan 20," a revitalization project for Barquisimeto's Avenida 20. The plan aimed to transform the avenue into a commercial boulevard by formalizing street vendors, improving safety, and enhancing the urban landscape (Puleo Fernández, 2013). Despite its ambitions, the plan struggled with implementation, mirroring broader challenges in urban governance.

At the national level, Venezuela's urban policy has shifted from eradicating informal settlements to supporting physical upgrades and community integration through participatory strategies (ResearchGate, 2019). Yet in Barquisimeto, the absence of a current PDUL undermines these efforts, leaving informal areas in a state of uncertainty.
Until a new plan is implemented, Barquisimeto's future remains suspended, caught between its rich past and an uncertain tomorrow (Municipio Iribarren, 2003).

· *Municipio Iribarren. (2003). Ordenanza de Desarrollo Urbano de Barquisimeto (PDUL). Alcaldía del Municipio Iribarren.*

· *Puleo Fernández, G. N. O. (2019). Aportes para la formulación del Plan de Desarrollo Urbano Local de Barquisimeto. Revista Gaceta Técnica.*

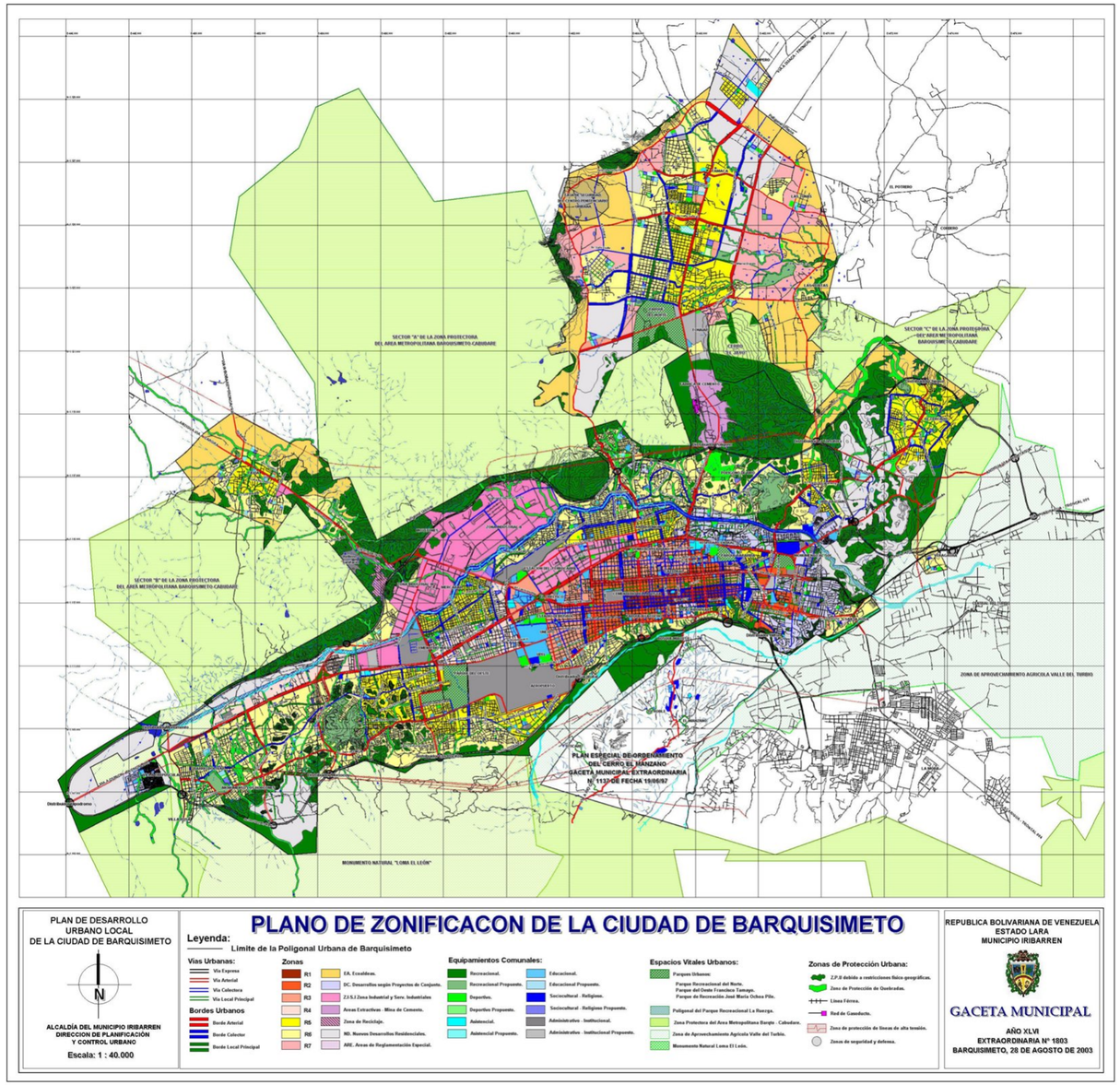


Image 43 Aerial view of Barquisimeto and Turbios' Valley
Source: @foto.juice. @laraenredes (2025, july). La urbe hecha ciudad, Barquisimeto. Threads.

2.2.5. The City at the Edge: Toward Barrio 23 de Enero

The 23 de Enero barrio, located in the southeast of Barquisimeto, stands as a paradigmatic case for understanding the tensions between urban planning, forced migration, and the prolonged absence of the state (Marcano, 2021). Emerging in the context of rapid and uncoordinated urban growth, the barrio's origins stem from a convergence of factors: displacement of rural populations, uncontrolled expansion at the city's edges, and institutional inability to provide dignified housing responses (Camacho, 1999; Dikdan Jaua, 2005). Despite its apparent informality, the barrio develops its own territorial logic, where the street layout, land occupation strategies, and infrastructure networks reveal an alternative way of producing the city (Roy & AlSayyad, 2004; Fernandes, 2011).

Barquisimeto's urban history is not only that of a well-drawn grid. It is also the story of its fissures. And it is in those fissures, such as 23 de Enero, that this thesis finds its most urgent questions.

- *Camacho, A. (1999). La urbanización en Venezuela: Procesos y problemas. Universidad Central de Venezuela.*
- *Dikdan Jaua, J. (2005). Políticas de vivienda y desarrollo urbano en el estado Lara. Universidad Centroccidental Lisandro Alvarado.*
- *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*
- *Lovera, A. (2009). Ciudades intermedias en Venezuela: Dinámicas y desafíos. Fundación Konrad Adenauer.*
- *Marcano, L. (2021). Migración y urbanización en Venezuela: Una perspectiva histórica. Editorial Académica Española.*
- *Roy, A., & AlSayyad, N. (2004). Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia. Lexington Books.*

2.2.6. Legal Framework for Urban Interventions in Barquisimeto's Informal Settlements

In order to contextualize the proposed interventions within the 23 de Enero barrio of Barquisimeto, it is essential to review the Venezuelan legal framework that regulates urban transformations in informal settlements. These regulations provide the base for actions such as the creation of new streets, the development and generation of public spaces, the relocation of communities located in high-risk areas, and the replacement of deteriorated or decaying housing,

The Ley de Tierras Urbanas (Urban Land Law) represents a key piece of legislation. It aims to establish rules for regulating urban land, promote the right to housing, and facilitate the regularization of popular settlements. While its primary focus is on formalizing land tenure and improving living conditions, it also includes provisions allowing the State to intervene in cases where public interest, safety, and urban planning objectives are at stake:

· **Acquisition of Deteriorated or Uninhabitable Structures:** Article 16 states that urban lands occupied by structures "in ruins, with construction flaws, deteriorated, not inhabited or declared uninhabitable, may be acquired by the State through any of the procedures provided by law." This enables the legal acquisition and potential demolition of unsafe or inadequate structures, making space for new housing or infrastructure.

· **Relocation from High-Risk Zones:** Article 12 of the Ley Especial de Regularización Integral de la Tenencia de la Tierra de los Asentamientos Urbanos Populares establishes that when settlements occupy high-risk zones, defined as lands prone to flooding, unstable slopes, or other hazards, the State must relocate them to safer areas. This provision is directly relevant when proposing interventions in parts of the 23 de Enero barrio that may fall under such conditions, for example those at the very periphery of the area.

· **Promotion of Social Interest Housing and Urban Development:** Article 1 of the Ley de Tierras Urbanas reaffirms the State's obligation to guarantee the right to housing and habitat, and to regulate the regularization of popular urban settlements. This supports the construction of new residential units and public amenities in reconfigured areas.

Additionally, the Ley Orgánica de Ordenación Urbanística (Organic Law of Urban Planning, 1987) provides general principles for planned development, including authority over construction and demolition when required for public good. Article 87, for example, empowers urban authorities to order the partial or total demolition of constructions that violate urban norms or compromise the public interest.

Overall, these legal instruments provide a solid framework for intervening in informal settlements like the 23 de Enero neighborhood. They not only permit but also require the replacement of unsafe or substandard buildings with secure, planned housing and public spaces, ensuring that urban transformation projects are firmly grounded in law. Building on this foundation, the next section examines the site in detail.

· *Ley de Tierras Urbanas (2002). Venezuela.*

· *Ley Especial de Regularización Integral de la Tenencia de la Tierra de los Asentamientos Urbanos Populares (2006). Venezuela.*

· *Ley Orgánica de Ordenación Urbanística (1987). Venezuela.*

BEYOND THE GRID

Site Analysis

WHY 23 DE ENERO?

Given its specific location at one of the main entrances to the city, adjacent to the Jirahara distributor and close to one of Barquisimeto's most prestigious hotels, Hotel Jirahara, the 23 de Enero barrio in Barquisimeto was chosen as the focal point of this study. Its proximity to more prosperous areas highlights the sharp social and economic inequalities faced by the barrio, emphasizing the physical and social disconnection between 23 de Enero and the more developed areas of the city. Despite its closeness to these more prosperous areas, the barrio remains marginalized, with limited access to essential infrastructure, basic services, and development opportunities.

Situated on the edge of the city, 23 de Enero offers stunning views of the valley, which remain overlooked. The barrio, however, turns its back on these valuable views, reinforcing its disconnection from both the natural environment and the broader urban context. This lack of engagement with its surroundings further isolates 23 de Enero, preventing it from benefiting from one of the city's most attractive features and obstructing the potential for urban and environmental integration.

23 de Enero stands as a clear example of how, despite its strategic location and visibility from key points in the city, it remains an invisible space within Barquisimeto's urban fabric. The barrio's lack of integration into the formal urban infrastructure reinforces its isolation, leaving its inhabitants excluded from the benefits of urban development that neighboring areas enjoy. This inequality in access to resources and services reflects the urban segregation that characterizes many Latin American cities, where marginalized barrios like 23 de Enero continue to be viewed as peripheral and of minor value.

Choosing 23 de Enero as the site of this research highlights the urgent need to address urban marginalization, particularly in areas close to more prosperous and affluent zones that, paradoxically, remain disconnected from these dynamics. The barrio, situated at a crucial transit hub, poses a major challenge for incorporating informal settlements into the formal city structure and at the same time, it highlights how the marginalization of these areas reinforces urban inequality.

Image 44. 23 de Enero 2024. Source: Google maps.

EVOLUTION OF THE SITE

The development of the barrio 23 de Enero over the past two decades reflects the rapid and unplanned urban expansion of Barquisimeto's periphery. A chronological analysis using Google Maps images from 2004, 2011, 2014, and 2024 reveals the progressive growth of informal settlements in the area, shaped by infrastructural developments and natural boundaries.

In 2004, the Jirahara Distributor did not yet exist, and the edge of the city appeared largely undeveloped, with very few informal settlements present. The area remained open, with no significant urban expansion towards the natural boundary.

By 2011, the construction of the Jirahara Distributor marked a turning point in the area's development and dynamic. Next to this new infrastructure, the first informal settlements began to emerge along the city's edge, indicating the initial phases of urban occupation in response to growing housing demands.

In 2014, the expansion of informal settlements became even more evident. The rise in population density was reflected in the continued spread of informal housing, demonstrating how the lack of affordable housing and economic opportunities within the formal city led more people to settle in the periphery.

By **2024,** the area has undergone significant transformation, with informal settlements now dominating the urban edge. In addition to this, the city lacks an updated urban plan, resulting in uncontrolled growth that is now physically constrained by two key barriers:

The Natural Border, which prevents further expansion into the valley.

La Ribereña Avenue, which acts as an artificial limit, restricting outward urban growth.

This expansion is largely driven by rural-to-urban migration and internal displacement, as people move to the city in search of better living conditions and job opportunities. However, the lack of adequate infrastructure and integration strategies has resulted in the marginalization of these communities, reinforcing the divide between formal and informal urban sectors.

PICTURE EVOLUTION OF THE BARRIO

2004

Image 45. 23 de enero 2004. Source: Google maps.

2011

Image 46. 23 de enero 2011. Source: Google maps.

2014

Image 47. 23 de enero 2014. Source: Google maps.

2024

Image 48. 23 de enero 2024. Source: Google maps.

TYPOLOGY READING OF THE BARRIO

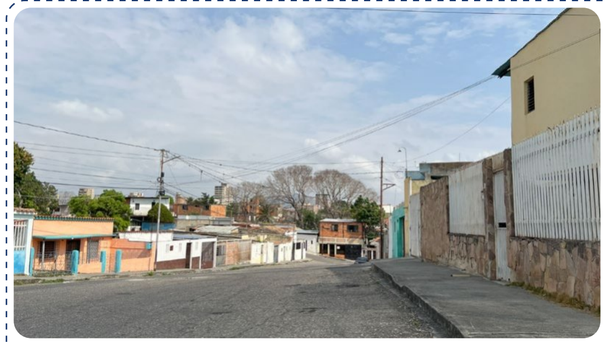
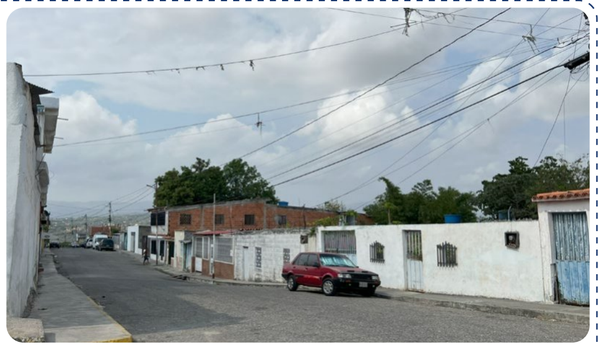
Based on direct observation and cross-referencing with established typologies of informal settlements in Latin America, the urban fabric observed in Barrio 23 de Enero, Barquisimeto, Venezuela, corresponds to what is categorized as a **semi-formal progressive self-construction settlement**, originating mainly from irregular land subdivisions and unorganized land occupations. These types of settlements are characterized by incremental building processes, where housing units are initially constructed with basic materials and then gradually expanded or improved as household resources permit (UN-Habitat, 2003; ECLAC, 2018).

In the specific case of **Barrio 23 de Enero**, the physical characteristics of the dwellings, such as the use of **concrete blocks, visible deterioration, irregular finishing, improvised security measures on windows, and varying stages of facade maintenance,** reveal a historical process of self-production of housing under conditions of urban informality. Despite the evident physical degradation, the settlement displays elements of urban consolidation, such as paved streets and defined urban blocks, suggesting a certain degree of integration into the broader urban network.

Additionally, the typology aligns with what Fernandes (2011) defines as **consolidated informal settlements**, where, over time, communities have incrementally gained access to basic services (such as water, electricity, and road paving) but continue to struggle with precarious infrastructure and lack of formal land tenure. Therefore, the Barrio 23 de Enero case reflects the broader trends of informal urbanization in Venezuela and Latin America, where **self-built settlements progressively merge over time but continue to manifest structural vulnerabilities inherited from their informal origins** (UN-Habitat, 2020; ECLAC, 2018).

STREETS OVERVIEW

On a sunday morning, 1 p.m.



On a monday, 1 p.m.





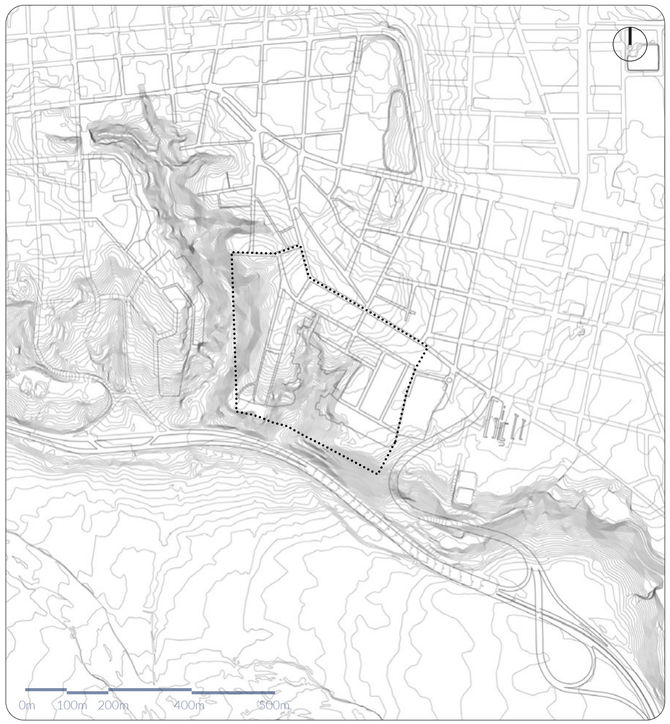

Images 49-60. 23 de enero 2025. Source: Taken by Alejandra Santoro.

TOPOGRAPHY

The topography of the area counts with a significant elevation difference, with a vertical drop of approximately 60 meters between the highest point of the sector and the level of the Ribereña Avenue on its southern edge. This difference in height plays a crucial and key role in shaping the urban landscape, influencing both the development patterns and the integration of the natural environment with the built environment.

The slope, which spans between 20 and 70 degrees along the entire edge of the plateau, forms a defining boundary of the city. The sharp incline along the plateau's edge effectively limits the extent of urban expansion in that direction, forcing the city to adapt to the topographical constraints rather than spreading uniformly across the landscape.

The sloping terrain extends into the city, giving rise to dense vegetation that gradually integrates with the urban grid. These green masses establish a striking contrast between the natural landscape and the built environment, delivering both visual appeal and ecological advantages. The rich presence of greenery and mature plant life along the slopes supports urban biodiversity, creating ecological corridors for wildlife and reinforcing the city's overall environmental sustainability.

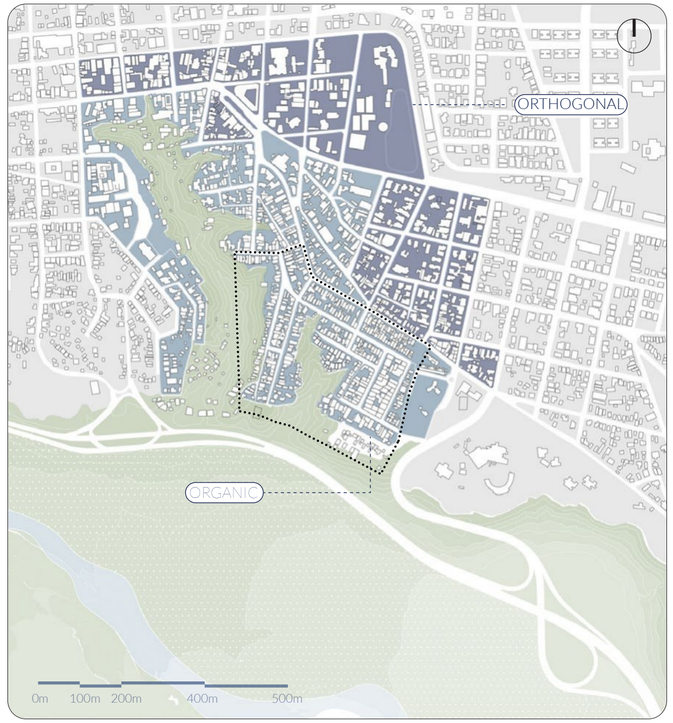


BLOCKS MORPHOLOGY

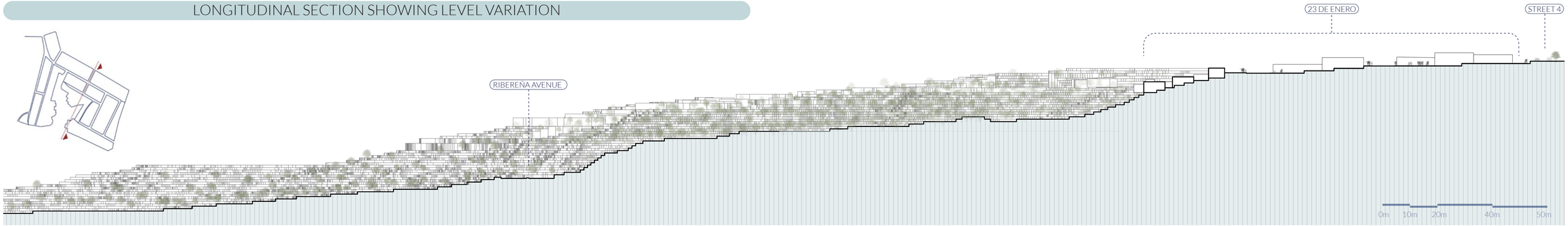
Inside the study area, two distinct urban block typologies can be identified, each shaped by different planning approaches and topographical conditions. The organic typology emerges as a direct response to the natural terrain, following the undulating edges of the plateau. This layout develops in an irregular way, adapting smoothly to the site's varying elevations, resulting in a network of winding streets and asymmetrical plots that reflect the historical and geographical restrictions of the landscape. This pattern is often associated with older, spontaneously developed areas where urban growth occurred in consonance with the existing environment rather than imposing an orthogonal grid structure upon it.

In contrast, the rigid typology follows a more systematic and planned approach, characterized by a rectilinear grid that imposes order and regularity upon the urban fabric. Streets intersect at right angles, creating a uniform pattern of blocks that facilitates organization and land use distribution.

The presence of these two typologies within a single urban setting underscores the interaction between historical evolution, topographic conditions, and contemporary planning approaches.



LONGITUDINAL SECTION SHOWING LEVEL VARIATION

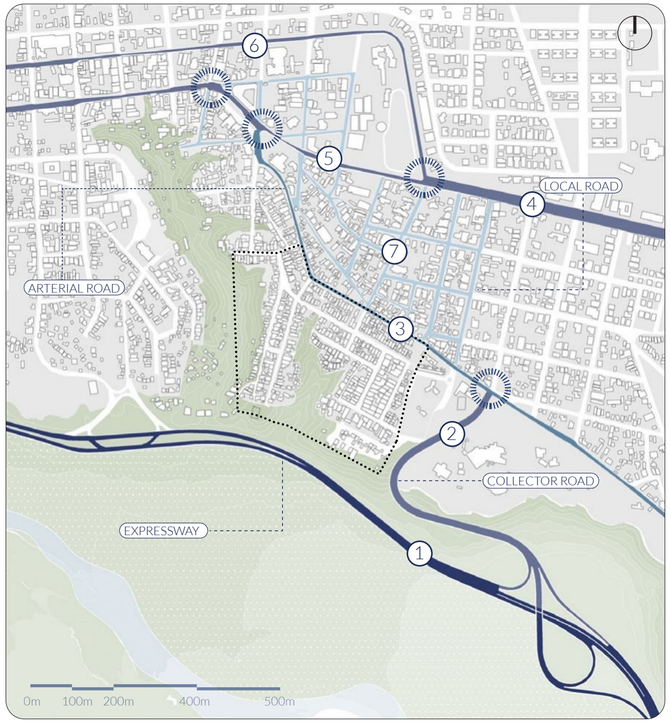


STRUCTURING AXES | ROAD HIERARCHY

The north via Avenida Lara and a portion of Carrera 19 are the primarily accessibility to the sector, serving as the main entry points to the area. These roads provide vital connections to the surrounding neighborhoods and facilitate the flow of traffic into and out of the region, ensuring efficient movement for both local residents and visitors.

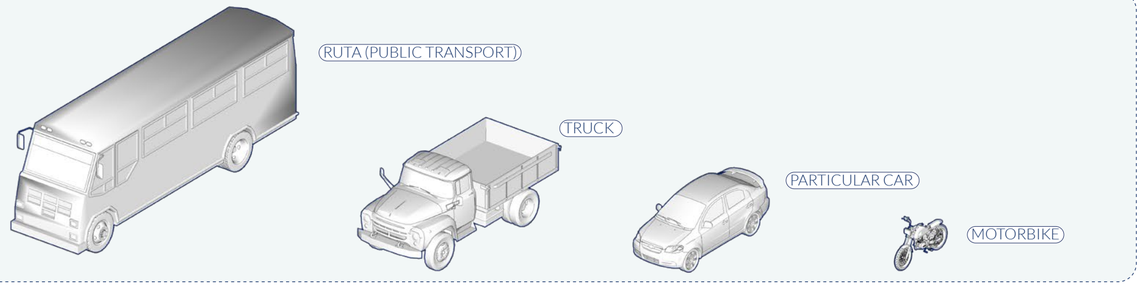
On the southern side, access is provided through the Jirahara Distributor, a key traffic junction that serves as the primary connection for vehicles entering the area from the south. This distributor is an important infrastructural element, as it not only facilitates the flow of traffic within the sector but also connects it to other major roads and neighborhoods in the city.

In addition to these primary access points, the sector is also served by major collector roads that play a vital role in facilitating the movement of people and goods.



1. RIBEREÑA AVENUE
2. JIRAHARA DISTRIBUTOR
3. STREET 4
4. LARA AVENUE
5. CARRERA 19
6. 20TH AVENUE
7. STREET 2

TYPES OF TRANSPORTATION



VEHICULAR AND PEDESTRIAN FLOWS | TRANSPORT STOPS

VIEW OF THE VALLEY FROM THE BARRIO

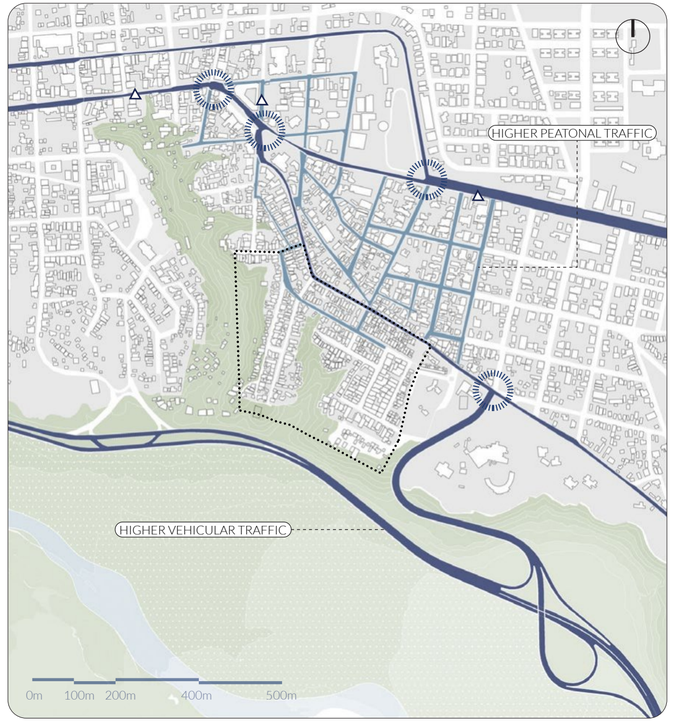
Image 61. 23 de enero 2025. Source: Taken by Alejandra Santoro.

A comparison between pedestrian and vehicular flows reveals a clear prioritization of cars, with few spaces intentionally designed for walking. This imbalance reduces pedestrian accessibility and comfort, as infrastructure largely caters to vehicles rather than foot traffic. Nonetheless, a number of urban nodes, such as prominent buildings and open spaces, have emerged as natural gathering points, helping to structure the area and serving both drivers and pedestrians.

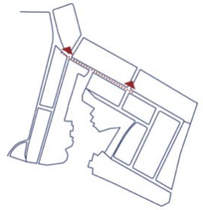
Yet, even within these nodes, pedestrian facilities remain inadequate. The dominance of vehicular circulation restricts their potential to fully serve as pedestrian-friendly spaces.

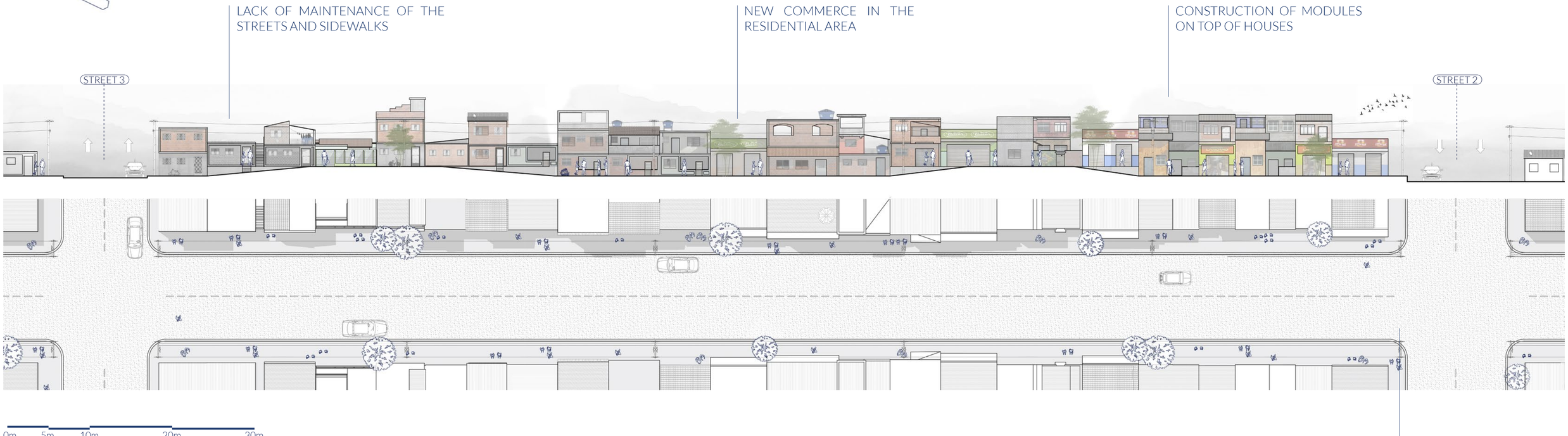
NODES (HIGH CONCENTRATION OF PEOPLE)

BUS STOPS

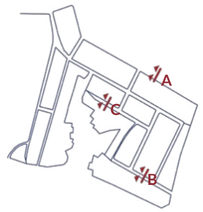


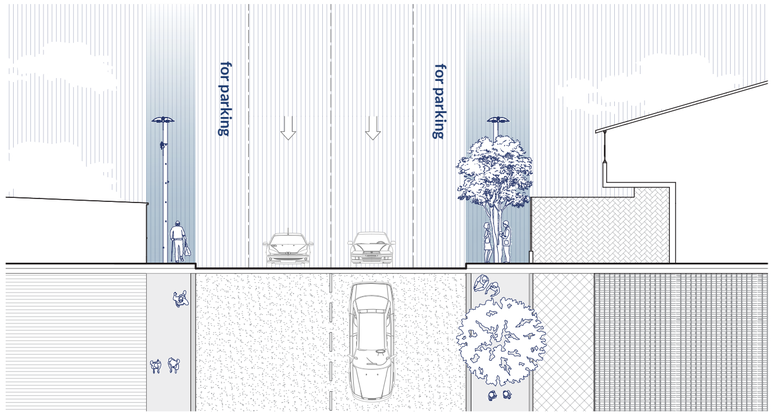
PROFILE OF THE STREET



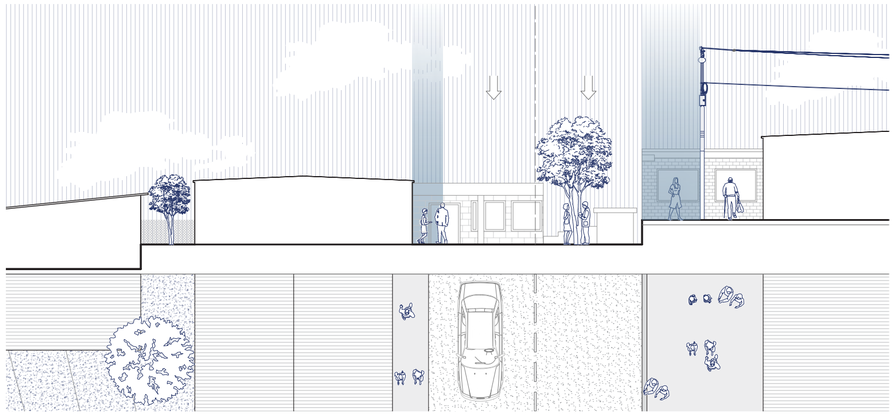


STREET SECTIONS

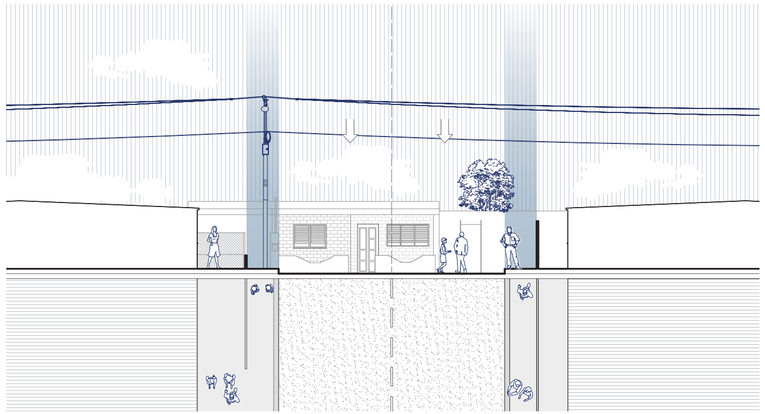




SECTION A - STREET 4



SECTION B - WITH NO STREET NUMBER



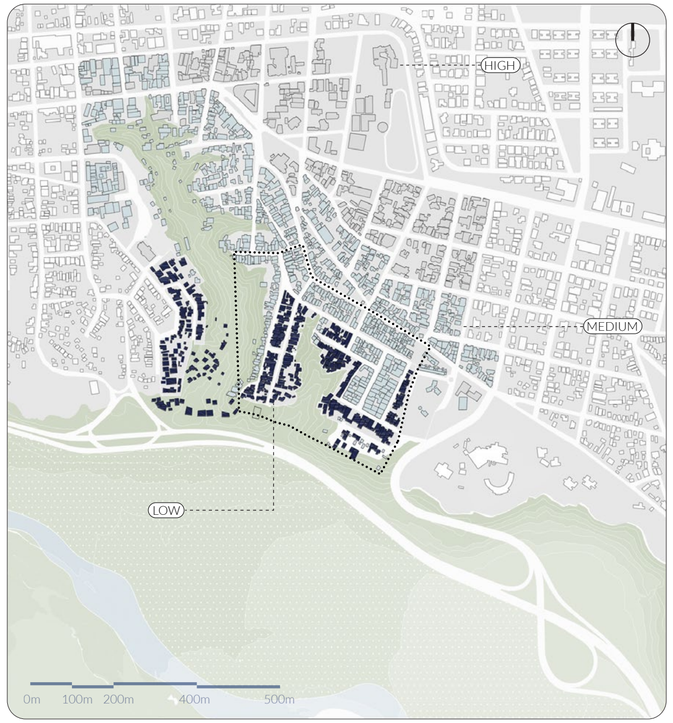
SECTION C - CARRERA 2

QUALITY OF BUILDINGS

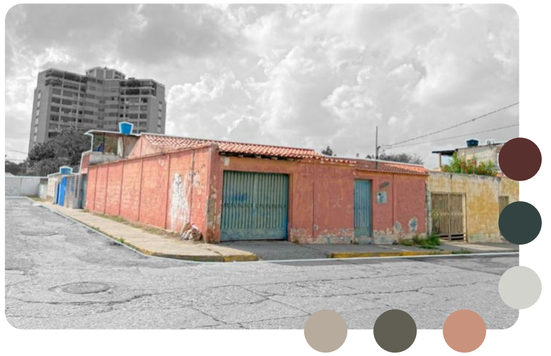
Within the sector, building quality shows a clear gradient from north to south. In the northern portion, most structures are of high quality, built with durable, premium materials such as reinforced concrete, steel, and stone. These are often commercial or institutional buildings, reflecting a more consolidated and urbanized setting.

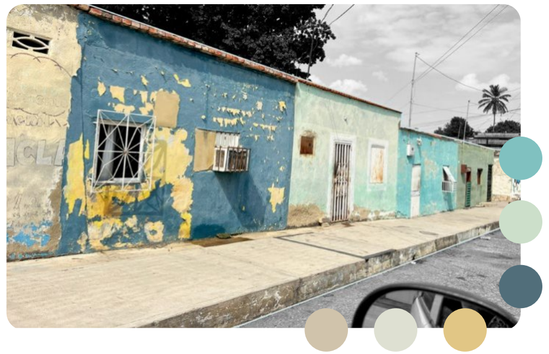
Moving southward, the terrain becomes steeper and more irregular, and construction shifts to moderate-quality residential buildings, typically made of brick, wood, or concrete block. Further south, the built fabric consists largely of lower-quality structures, often assembled from inexpensive materials such as corrugated metal or plywood.

These constructions adapt more easily to the terrain but lack the durability and stability of the higher-grade buildings. This spatial transition in building quality underscores the socio-economic divide between the north with its commercial and institutional emphasis and the south, characterized by residential uses and varying levels of investment.



COLORS AND TEXTURES



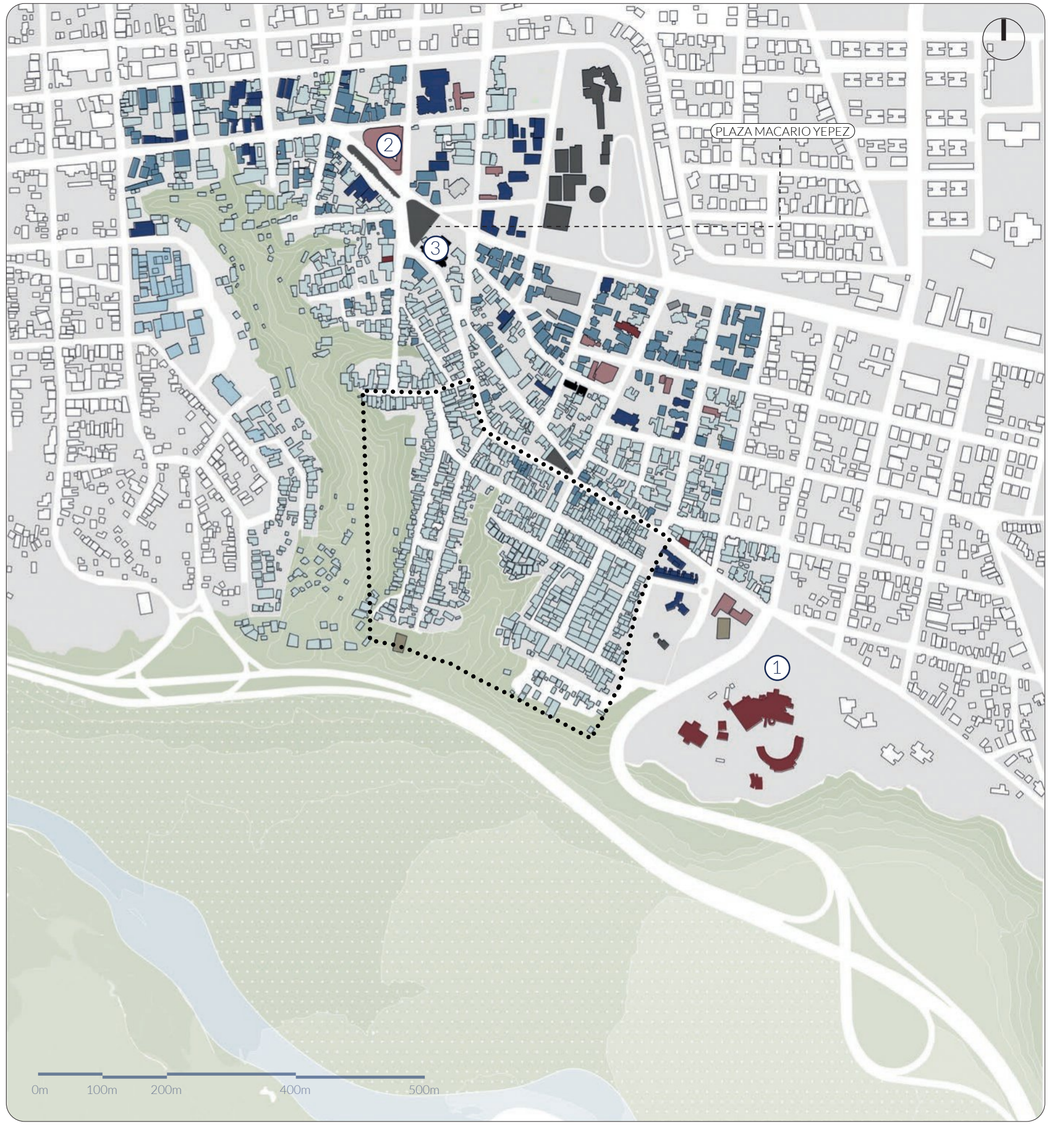


Images 62-67. 23 de enero 2025. Source: Taken by Alejandra Santoro.

ZONING

In this sector, most of the housing consists of small single-family homes, giving the area a low-density, neighborhood feel and reinforcing a strong sense of community. Among its most important landmarks is Plaza Macario Yépez, a central public space where residents and visitors gather. The Claret Church also stands out, both for its architecture and for its role as a hub of cultural and religious life. Another key site is Hotel Jirahara, which not only attracts visitors but also supports the local economy through hospitality services.

In recent years, commercial activity has started to expand, especially around Nueva Segovia, as mentioned before, the more prosperous area just north of the 23 de Enero neighborhood. This growth is bringing new opportunities for investment and urban revitalization, while also drawing more people into the area. The combination of long-established community spaces and emerging businesses is gradually increasing the sector's visibility and strategic role within the city.



IMPORTANT BUILDINGS OF THE AREA

1. JIRAHARA HOTEL

2. LISANDRO ALVARADO UNIVERSITY

3. CLARET CHURCH

PUBLIC SYSTEM AND BORDER PROBLEM

The existing public spaces in the area are fragmented and isolated, lacking a cohesive network that encourages pedestrian flow and connectivity. Key public areas such as Plaza Macario Yepez, Plaza 23 de Enero, and other nearby spaces remain disconnected from one another, limiting their accessibility and the overall urban experience. This disjointed layout prevents the formation of an integrated public space system where movement, interaction, and community engagement can naturally occur.

In addition to this, the site faces a significant border problem due to its location adjacent to a natural plateau. There is an evident absence of a well-defined edge or a recognizable façade that interacts with the natural void. This lack of spatial continuity creates a sense of incompleteness within the urban fabric, where the built environment fails to integrate visually and functionally with its surroundings. Without a clear boundary or visual identity, the relationship between the city and the natural landscape remains weak, further contributing to the disconnection of public spaces.

PUBLIC SPACES AXIS MEETING SPACES BORDER PROBLEM

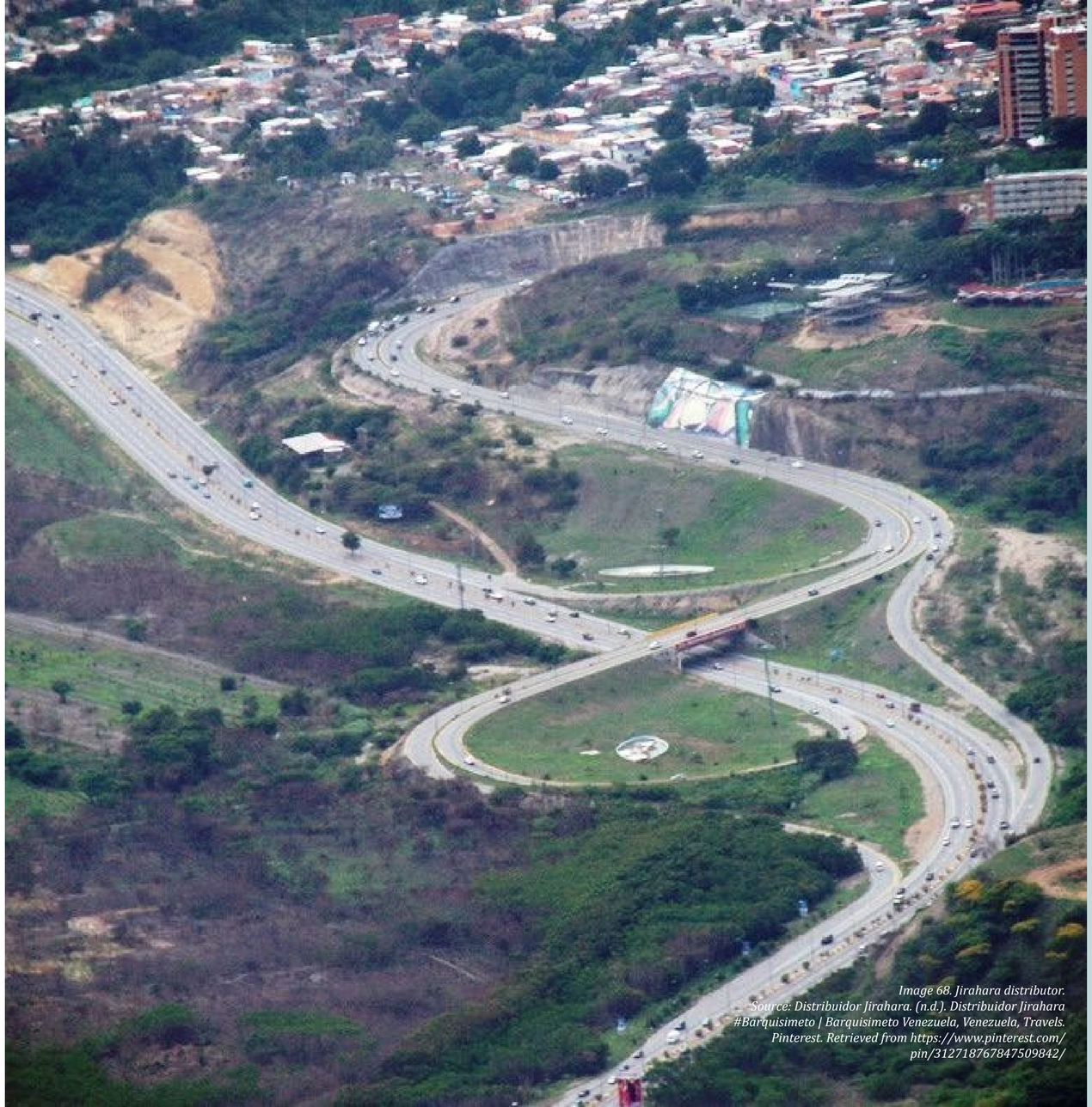


Image 68. Jirahara distributor. Source: Distribuidor Jirahara. (n.d.). Distribuidor Jirahara #Barquisimeto | Barquisimeto Venezuela, Venezuela, Travels. Pinterest. Retrieved from https://www.pinterest.com/pin/312718767847509842/

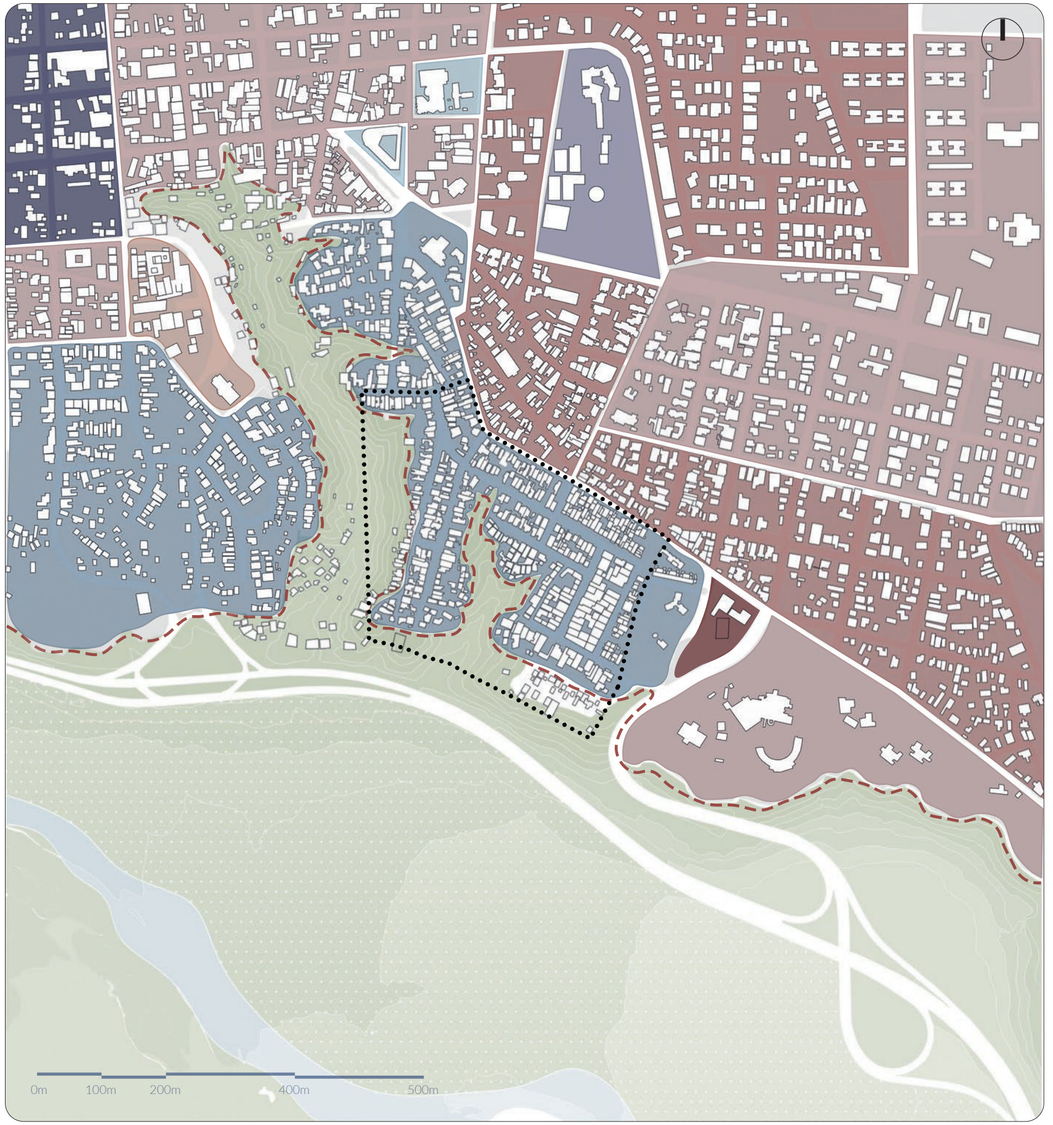
PDUL IN THE BARRIO

According to the Local Urban Development Plan (PDUL) of Barquisimeto, which expired in 2016, the 23 de Enero neighborhood is located within **Zone R5**.

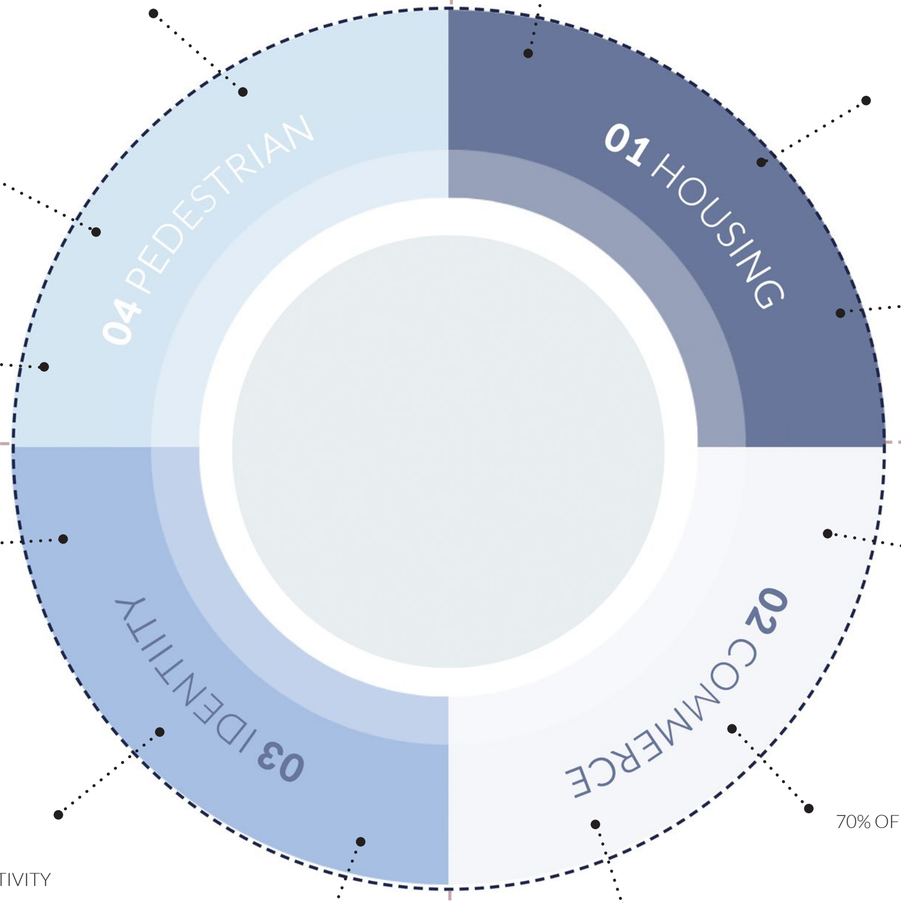
As stated in Article 133, the permissible land uses and construction requirements for zones and urban edges located in the **MACROSECTOR EAST** of the city, specifically in Zone R5, are detailed in the following table:

ZONE R5									
PLOT				BUILDING					
PERMITTED USES	NET DENSITY (inhab/ha)	MINIMUM AREA (m2)	MINIMUM FRONTAGE (m)	% NET CONSTRUCTION	SETBACKS (m)				
					FRONT		LATERALS		BACK
					G.F. / 1st F	other floors	G.F. / 1st F	other floors	
SINGLE - FAMILY HOUSING	100	600	18	70	6	-	3	-	3
SINGLE - AND TWO - FAMILY HOUSING	120	800	20	90	6	-	3	-	3

Additionally, certain green areas within the barrio are classified as **Urban Protection Zones**, due to physical and geographical restrictions. These areas are designated as non-buildable and must be preserved as green spaces. However, some informal housing has been established in these zones, in violation of the regulations currently in place.



SOCIAL CONFLICTS AND DYNAMICS



~300 FAMILIES

4 PEOPLE PER FAMILY

POPULATION: ~ 1200

AVERAGE STAY FROM 10 TO 60 YEARS

MIGRATION / ADAPTABILITY

ILEGAL SETTLEMENTS

LOW QUALITY MATERIALS

WHAT IS NEEDED?

CONDITIONING PUBLIC SPACES

CONDITIONING SIDEWALKS

PUBLIC TRANSPORATION

70% PEDESTRIAN

30% VEHICLES

60%

RESIDENTS OF THE AREA

40%

FROM NEARBY TOWNS

INSECURITY

POOR CONDITION OF SIDEWALKS

NEED FOR PUBLIC SPACES / FACILITIES

FOR STUDENTS AND RESIDENTS

ABSENCE OF SERVICES AND EQUIPMENT
FOR RESIDENTIAL AREAS

FORMAL / INFORMAL CITY

LITTLE NIGHT TIME ACTIVITY

VIEW TO THE VALLEY

NOT PERMANENCE PLACES

GROWING

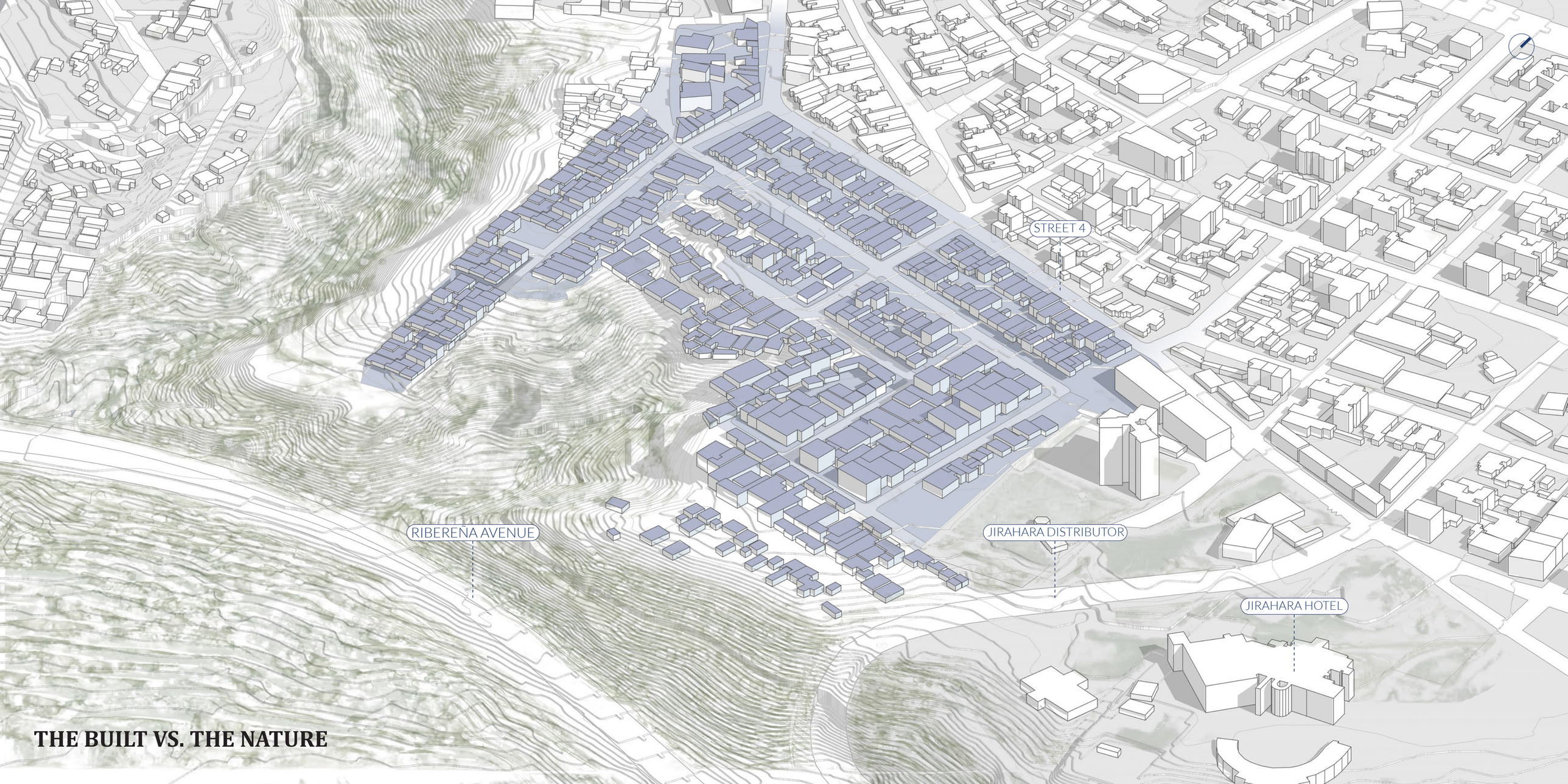
OPPORTUNITIES

100% OF REINVESTMENT

70% OF PARTICIPATION

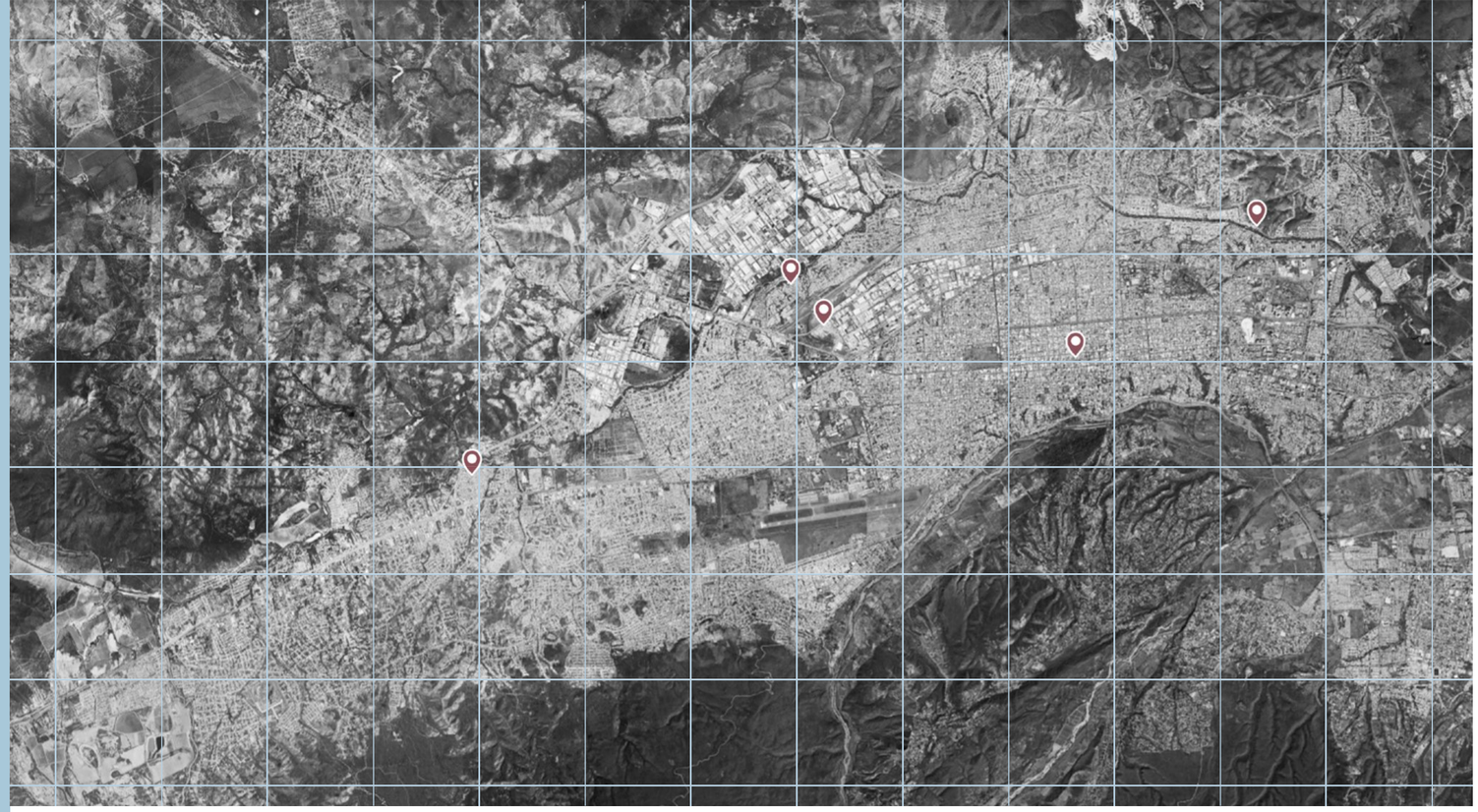
GROWTH
COMMERCE
CHANGE

INFORMALITY



THE BUILT VS. THE NATURE

CASE STUDIES



PROJECTS OF THE GRAN MISIÓN VIVIENDA VENEZUELA IN THE CITY OF BARQUISIMETO

Image 69. Barquisimeto 2024. Source: Google earth.

This chapter presents four case studies of different natures, in which their characteristics, challengers, advantages, and disadvantages will be evaluated, taking into account the context in which they were designed. Additionally, their strategies for adapting to the environment and addressing user needs will be analyzed.

Considering to propose and develop strategies that facilitate the integration of informal settlements into Barquisimeto's formal urban fabric as the main objective, ensuring access to better living conditions and promoting the sustainable development of the 23 de Enero neighborhood, design concepts and strategies aimed at improving the quality of life for marginalized residents will be examined, with the goal of integrating them into the formal city and making them visible within the urban context.

These cases were carefully chosen to serve as a guide and a valuable source of information for the design process, as they will allow the identification of practical tools and strategies that can be specifically applied to the 23 de Enero barrio.

The case studies to be evaluated are the following: two social housing prototypes developed by Gran Misión Vivienda Venezuela; and Ciudad Socialista Alí Primera, also developed by Gran Misión Vivienda Venezuela in Barquisimeto, showcasing how the social housing is executed and carried out in Venezuela; the Favela-Bairro program in Rio de Janeiro, Brazil, and the housing units Quinta Monroy in Iquique, Chile. These examples were strategically chosen given that they provide an extremely useful comparison for understanding how local conditions, community dynamics and the specific needs of users can directly influence the design of architectural and urban interventions. In the case of the two cases developed by the Gran Misión Vivienda Venezuela, the initiative does not focus on consolidating pre-existing informal settlements but instead aim to remove them by constructing housing on new sites, attempting to relocate low-income families to new residences far from their original context.

On the other hand, the Favela-Bairro program in Rio de Janeiro, represents an innovative project aimed at upgrading the infrastructure of existing informal settlements, integrating communal spaces that foster a sense of belonging and community, while also seeking to better connect these areas with the rest of the city. As well as the housing units in Chile, instead of relocating a community that was living in this area for more than 30 years, focused on improving the neighborhood with innovative strategies.

Through a comparative analysis of these cases this chapter seeks to extract key, critical lessons to inform the design of urban interventions in the 23 de Enero neighborhood. By analyzing their strategies for integration, sustainability, and sensibility and understanding for user needs, principles and practices will be identified to develop contextually relevant solutions, promoting the inclusion of informal settlements into Barquisimeto's urban fabric and moving toward a more equitable and sustainable urban development.

BB12 AND C12 PROTOTYPES

WHAT: Social housing prototype

WHERE: Caracas, Distrito Federal, Venezuela

WHEN: 2011

WHO: Gran Misión Vivienda Venezuela

SUSTAINABLE ACTIONS: Even though their scale and political relevance, the prototypes lack a comprehensive approach to sustainability. While some passive strategies may be deduced, such as natural cross ventilation through the linear layout of units, and compact vertical stacking that could reduce heat loss per unit, these features are not applied consistently. Issues like poor orientation, lack of solar protection (no shading devices or overhangs), and limited dayligh, especially in lower floors or internal rooms, significantly reduce their environmental performance (Calzadilla, 2017, pp. 25–26).

Additionally, the absence a flexible design, inadequate thermal comfort, and the lack of use of local or sustainable materials further distance these buildings from sustainable architectural concepts (Calzadilla, 2017, pp. 26–27). The centralized planning model, limited community participation, and taking no notice in socio-cultural contexts also compromise social sustainability. As Calzadilla (2017) points out, these models follow a top-down approach disconnected from the lived dynamics and aspirations of the habitants. (pp. 26–28).

CHALLENGE: Providing large-scale, rapid, and low-cost housing solutions for families living in precarious conditions,including those displaced by natural disasters, living in informal settlements (barrios), or lacking access to formal housing markets.

VENEZUELA

DISTRITO FEDERAL

CARACAS

· Calzadilla, C. M. (2017). De la producción de vivienda social al proceso de transformación social de la vivienda: Los prototipos de la Gran Misión Vivienda Venezuela [Master's thesis]. Universitat Politècnica de Catalunya, Barcelona.

· UN-Habitat. (2003). The Challenge of Slums: Global Report on Human Settlements 2003. United Nations Human Settlements Programme.

· UN-Habitat. (2016). World Cities Report 2016: Urbanization and Development. Nairobi: UN-Habitat.

· PROVEA. (2012). Informe: 365 días de la Misión Gran Vivienda Venezuela (GMVV). Caracas, Venezuela.

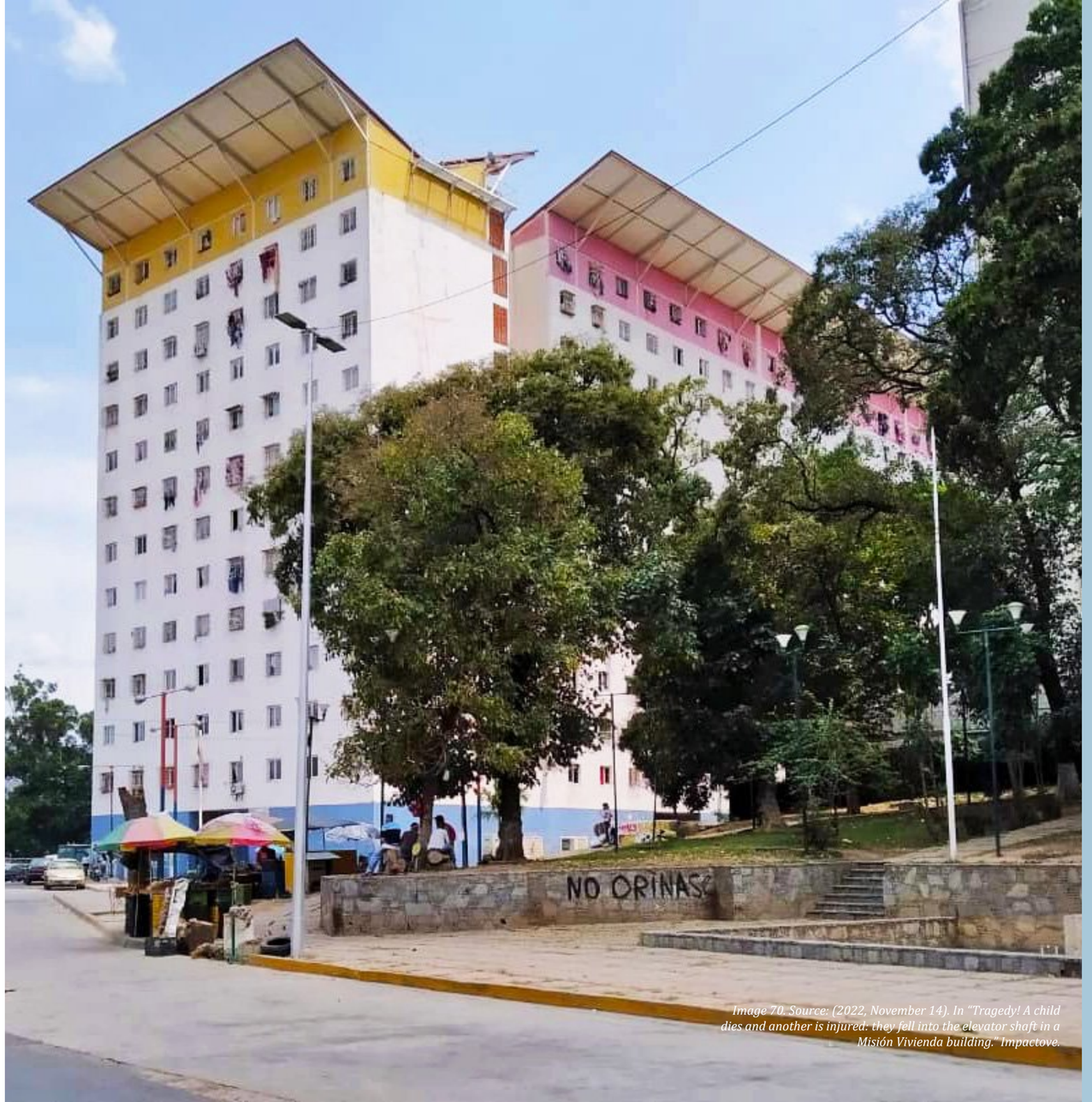
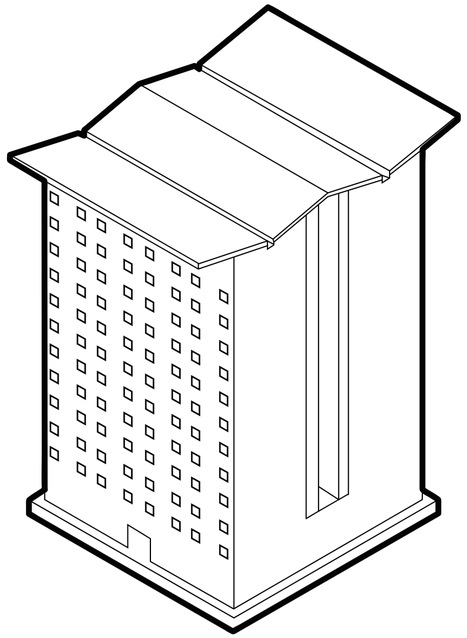
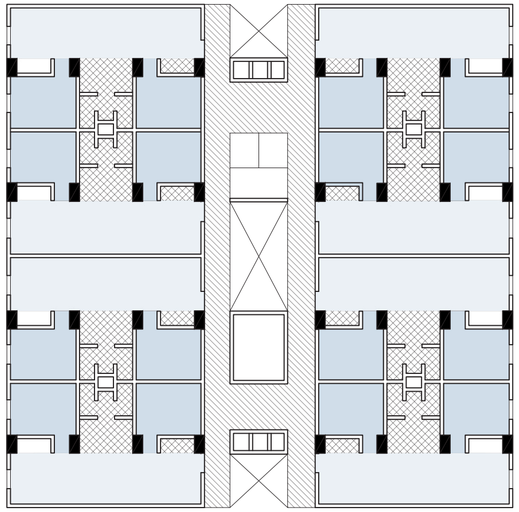


Image 70. Source: (2022, November 14). In "Tragedy! A child dies and another is injured: they fell into the elevator shaft in a Misión Vivienda building." Impactove.

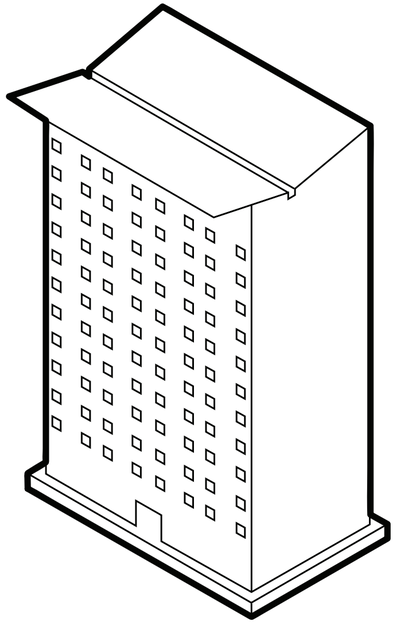
BB12 PROTOTYPE



TYPE FLOORPLAN



C12 PROTOTYPE



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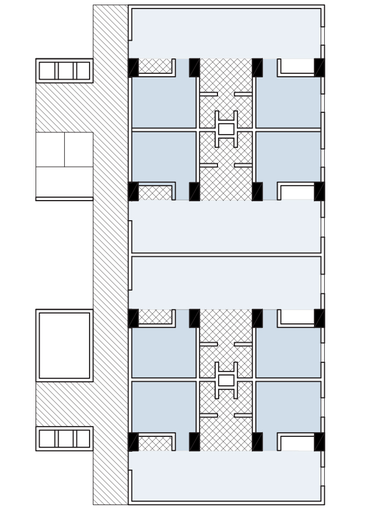


Based on the research by Calzadilla (2017) on the BB12 and C12 prototypes of the Gran Misión Vivienda Venezuela, the following conclusions were drawn:

· **The monumental scale of the housing** developments sets the preliminaries for the emergence of problems that affected large rationalist housing blocks: loss of spatial and urban quality, difficulties in community organization, insecurity, and high maintenance costs.

· **The limited role assigned to the social participation** of organized communities is evident in the fact that residents were not able to participate in decisions about the housing they would later inhabit.

· A total disregard for climatic conditions and physical elements that help maintain thermal comfort and ventilation, as seen in the small size of the windows and lack of shading devices.

· The design does not attempt to translate into architectural terms **"the undeniable social and cultural values associated with the way of life of barrio residents"** (Mariño, 2016), which impedes families' appropriation of the space and encourages residents to make risky modifications to the housing in order to adapt it to their lifestyle (B. Hernández, 2011; Mariño, 2016).

· The right to the city is significantly enhanced in cases where the prototypes are located on urban plots with good accessibility and proximity to facilities and transportation, unlike the cases where the developments are **located in large peripheral zones** outside the cities, where segregation tends to increase.

· *Calzadilla, C. M. (2017). De la producción de vivienda social al proceso de transformación social de la vivienda: Los prototipos de la Gran Misión Vivienda Venezuela [Master's thesis]. Universitat Politècnica de Catalunya, Barcelona.*

· *Hernández, B. (2008). La producción cultural del espacio habitable. Universidad Central de Venezuela.*

· *Mariño, A. (2016). Fortuna y miseria de la Gran Misión Vivienda Venezuela. Rebelión. http://www.rebelion.org/docs/214119.pdf*

Many of these families were used to living in homes that not only sheltered them but also supported their livelihoods, whether through a garden or conuco, a small workshop, or a neighborhood shop. Their houses often sat on land that could grow with them, allowing space to build extra floors for children and grandchildren. Life there meant close ties to both family and community. Now, they find themselves in apartments with no room to expand, no place to cultivate or rent out, and no shared spaces where neighbors can meet. In this shift, they have lost a way of life and the ability to fully practice their culture.

Of course, it's true that these new homes provide families with a solid roof, greater security, and easier participation in the rhythms of urban life, yet this raises an essential question: while we defend the right to the city and to housing, what kind of city, and what kind of housing, are we really defending? (Calzadilla, 2017).

WHY IT WORKED?

Their standardized, repetitive design allowed for **mass production, cost efficiency, and speed of construction**, which aligned with the GMVV's goal of delivering large quantities of housing in a short time (Calzadilla, 2017, p. 21). They also offered structural stability, a basic level of sanitation, and improved access to urban infrastructure for many who previously lived in informal or unsafe conditions (p. 9).

WHY IT DIDN´T WORK?

The rigid layouts, lack of design flexibility, poor ventilation and lighting, and absence of community participation reflected a top-down, one-size-fits-all approach (Calzadilla, 2017, pp. 25–27). As a result, the buildings quickly showed signs of **social and physical deterioration**, limiting their long-term sustainability and appropriateness for the diverse needs of Venezuelan families (pp. 26–28).

CIUDAD SOCIALISTA ALI PRIMERA

WHAT: Social housing complex

WHERE: Tamaca, Lara, Venezuela

WHEN: 2015

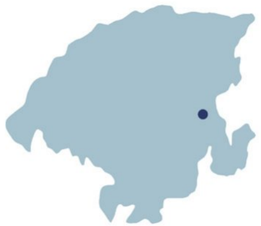
WHO: Gran Misión Vivienda Venezuela

SUSTAINABLE ACTIONS: This model not only cut residents off from their original social and economic networks, but also overlooked the opportunity to implement more inclusive and sustainable urban planning practices. The absence of green areas, public parks, and efficient transport systems has made it difficult for residents to reach key services and opportunities in the city center, reinforcing both spatial and social segregation.

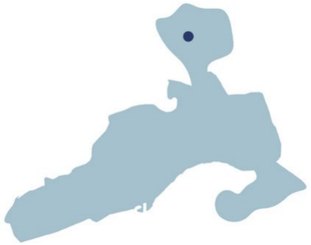
From an environmental point of view, the project neglected long-term sustainability altogether. Simple passive design strategies like orienting buildings properly, ensuring natural cross-ventilation, or using climate-responsive materials were ignored. As a result, the housing is environmentally inefficient and often uncomfortable to live in, particularly under Venezuela's tropical climate. These shortcomings directly affect residents' quality of life, ultimately undermining the project's central goal of providing dignified and resilient housing.

CHALLENGE: To relocate communities living in poor conditions in informal settlements while creating integrated, secure, and livable urban environments.

VENEZUELA



LARA STATE



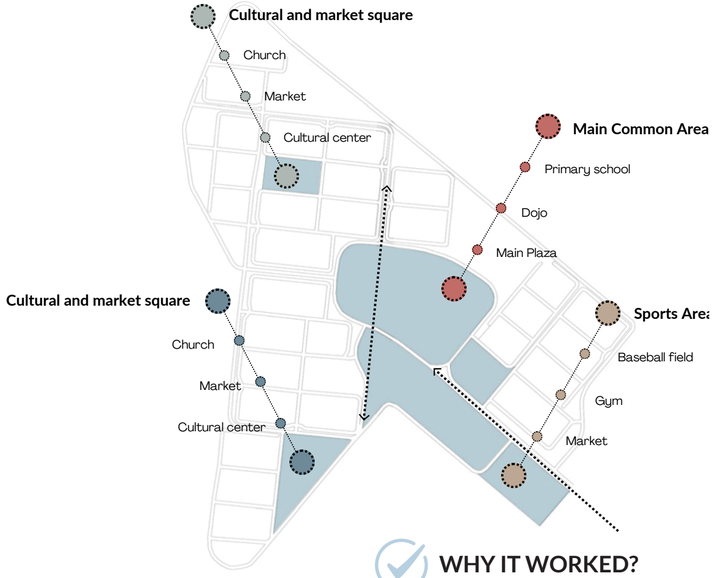
TAMACA

Image 71. Ali primera.
Source: @josev36. (n.d.). X. https://x.com/josev36

GENERAL PLAN

Rather than focusing solely on the number of homes built, this analysis aims to critically examine the real impact of the Gran Misión Vivienda Venezuela(GMVV) on the urban environment and the everyday lives of its residents. This complex clearly illustrates the structural limitations of the GMVV, being an example of how the Venezuelan government addresses social housing. Particularly, the GMVV disregards existing informal settlements, opting to build on new land, whereas this thesis seeks to consolidate and improve informal settlements to address the housing crisis sustainably.

It was conceived as a **satellite city,** designed with a zoning scheme that prioritized residential functionality, incorporating a cultural and market square, a church, and multiple cultural centers, elements intended to foster community cohesion and provide spaces for social interaction. The distribution of cultural centers, plazas, gym, and schools within the complex suggests an intent to create a culturally vibrant environment, potentially supporting local identity and social activities.



The project, however, ran into significant obstacles in execution. Reports describe poor construction quality, with residents experiencing leaks, cracked walls, and incomplete utility connections for water, electricity, and sewage (El Impulso, 2018; El Informador, 2020). Engineers like Enzo Betancourt have criticized the lack of transparency in structural calculations, noting they remain a “state secret,” leaving families vulnerable to potential collapse and the constant threat of desalojo (eviction) due to bureaucratic or political decisions.

Another major challenge was urban integration, due to the complex’s peripheral location on the outskirts of the city isolating residents from other essential services like healthcare facilities, and recreational spaces, as well as from economic opportunities in the city center (El Impulso, 2012; América Economía, 2020).

WHY IT WORKED?

It succeeded in translating a social-housing agenda into visible infrastructure: it provided thousands of families with formal dwellings and laid out a clear zoning framework to **encourage communal life**. The inclusion of cultural centers, plazas and basic services demonstrated an understanding that **housing is more than roofs and walls**, it is the scaffolding for social cohesion, local identity and a sense of belonging.

WHY IT DIDN´T WORK?

However, the project faltered in execution and context. Structural and utility deficiencies betrayed inadequate oversight and quality control. **Peripheral siting** disconnected residents from urban services and livelihoods, while the design **ignored existing informal settlements**, displacing focus (and populations) rather than integrating them.

· *El Impulso. (2018, March 15). Denuncian fallas estructurales en viviendas de la GMVV en Barquisimeto.*

· *El Informador. (2020). (noticia sobre deficiencias en la GMVV y críticas técnicas)*

· *América Economía. (2020). Venezuela: El problema de la vivienda y los intentos fallidos del gobierno.*

THE FAVELA-BAIRRO PROJECT

WHAT: An urban program sought to improve the living conditions of favela residents by promoting their inclusion within the larger urban framework through urban development initiatives.

WHERE: Rio de Janeiro, Brasil

WHEN: 1995 - 2008.

WHO:
Project Leads:
- Jorge Mario JáureguiJorge
- Mario Jáuregui | Atelier Metropolitano

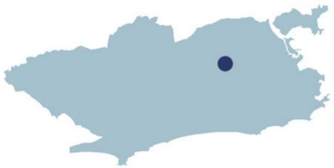
Organizations:
- SMH (Municipal Secretariat for Housing)
- Jorge Mario Jáuregui / Atelier MetropolitanoInter-American Development Bank (IDB)
- GEAP (Executive Group of Popular Settlements)

SUSTAINABLE ACTIONS: On the environmental front, the project introduced sanitation and drainage systems, established waste collection, and developed green public spaces. Social sustainability was encouraged through community participation, educational initiatives, and the creation of cultural centers. From an urban perspective, efforts focused on upgrading housing, improving infrastructure and accessibility, and linking favelas to the formal city. Together, these actions helped turn informal settlements into safer, more inclusive, and resilient neighborhoods.

CHALLENGE: The main challenge lies in balancing infrastructure upgrades with respect for local cultures, tackling deep-rooted social inequalities through participatory design, and building trust between communities and public institutions to ensure a long-term, inclusive urban transformation.

BRASIL

STATE OF RIO DE JANEIRO



RIO DE JANEIRO

Image 72. Aerial View - Favela Fuba Campinho
Source: Jáuregui, J. M. (n.d.). Aerial view – Favela Fuba Campinho. Harvard University Graduate School of Design.

Aerial View - Favela Fuba Campinho

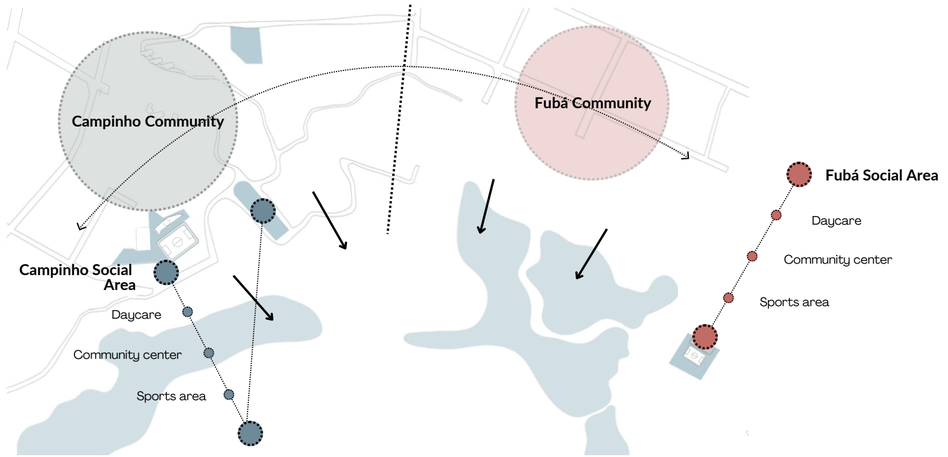
GENERAL PLAN - FAVELA FUBÁ CAMPINHO

This initiative moved away from the region's traditional approaches of eradication and displacement, opting instead to **enhance favelas** through the provision of essential infrastructure, public spaces, and services. Its core ambition was to integrate these informal settlements into Rio's formal city, reflecting a broader recognition that, as Fernandes (2011) asserts, "informal communities are not peripheral anomalies but vital components of the city deserving innovative urban solutions."

Under the leadership of architect Jorge Mario Jáuregui, the project employed an interdisciplinary methodology, blending on-site analysis, urban mapping, and participatory engagement with community leaders. This ensured that interventions were finely tuned to the distinct social, spatial, and cultural needs of each favela, impacting over 450,000 residents across 105 settlements, including **Fernão Cardim, Fuba-Campinho, Salgueiro, Vidigal, Rio das Pedras, and Macacos.** Specific enhancements varied by location: Fuba-Campinho gained recreational and educational facilities fostering intergenerational community ties; Salgueiro received a stadium and rehearsal hall, amplifying its cultural vibrancy through samba and football; Vidigal, navigating its mountainous terrain, benefited from a new road improving mobility; and Fernão Cardim was linked to the city via riverfront upgrades and sanitation networks (Jáuregui, 2001). These tailored interventions significantly elevated living standards, providing access to basic services and strengthening community identity.

· *Fernandes, E. (2011). Regularization of Informal Settlements in Latin America. Lincoln Institute of Land Policy.*

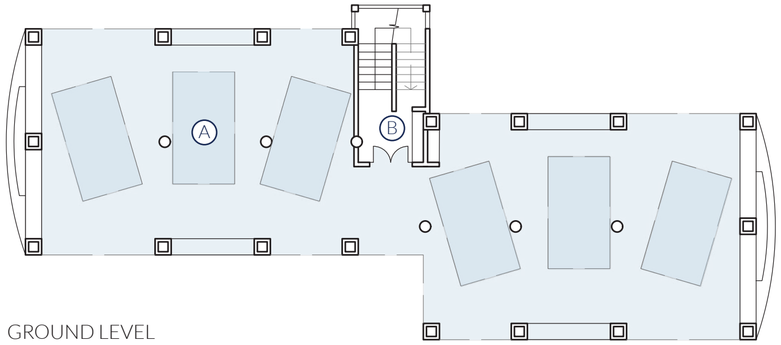
· *Jáuregui, J. M. (2001). Urban upgrading in Rio de Janeiro: The Favela-Bairro Project. Inter-American Development Bank.*



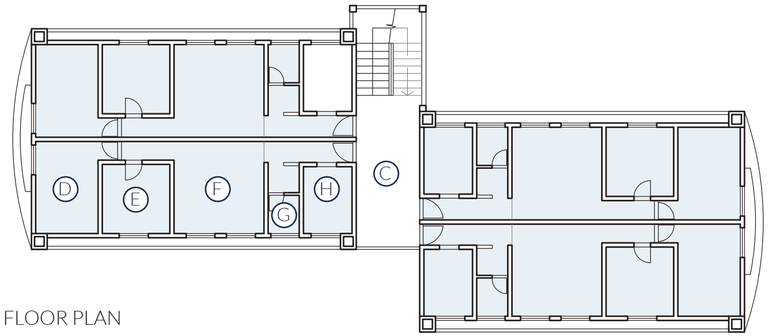
THEY HAD 2 MAIN STRATEGIES

1. Improving internal connectivity within favelas—through the creation of navigable streets and the delivery of essential services like water and electricity—enhanced residents' quality of life and fostered a sense of spatial coherence.

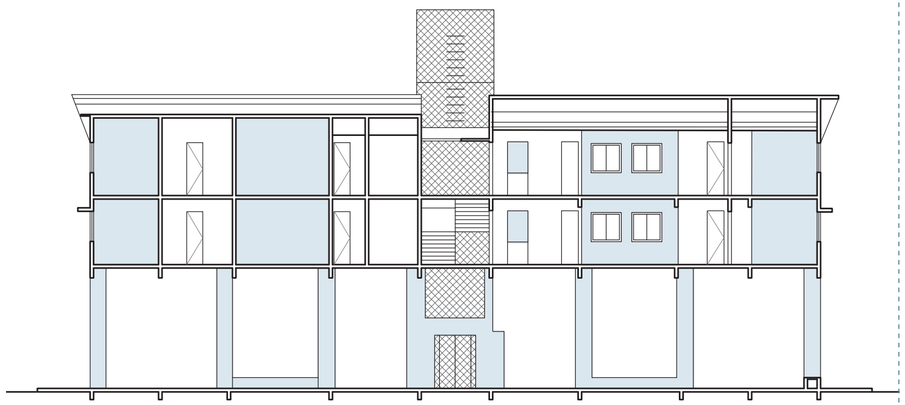
2. Dissolving barriers between favelas and the formal city—via shared community facilities such as plazas and cultural centers—promoted social interaction and reduced the stigma of informality.



GROUND LEVEL



FLOOR PLAN



LONGITUDINAL SECTION

HOUSING UNITS - FAVELA RIO DAS PEDRAS

Image 73. Housing units - favela rio das pedras
Source: Jáuregui, J. M. (n.d.). Aerial view – Favela Fuba Campinho. Harvard University Graduate School of Design.

A. COMMON USE SPACE
B. VERTICAL CIRCULATION
C. INNER HALL
D. BEDROOM 01
E. BEDROO M 2
F. LIVING ROOM
G. BATHROOM
H. KITCHEN / LAUNDRY

Image 74. Favela barrio sport court
Source: Jáuregui, J. M. (n.d.). Aerial view – Favela Fuba Campinho. Harvard University Graduate School of Design.

WHY IT WORKED?

It prioritized community-driven solutions, leveraging local knowledge to design infrastructure that met specific needs, thus enhancing residents' quality of life and fostering pride in their neighborhoods. Its focus on integrating favelas into the city's fabric through shared spaces promoted inclusivity and challenged negative perceptions, creating a sense of belonging for marginalized communities.

WHY IT DIDN´T WORK?

The program faced challenges in scaling its context-specific designs across diverse favelas, resulting in inconsistent quality and incomplete interventions. The lack of adaptive maintenance plans for new infrastructure led to deterioration in some areas, while designs often failed to account for long-term urban pressures like gentrification, which altered spatial dynamics and threatened the program's inclusive vision.

HOUSING UNITS QUINTA MONROY

WHAT: Social housing

WHERE: Iquique, Chile

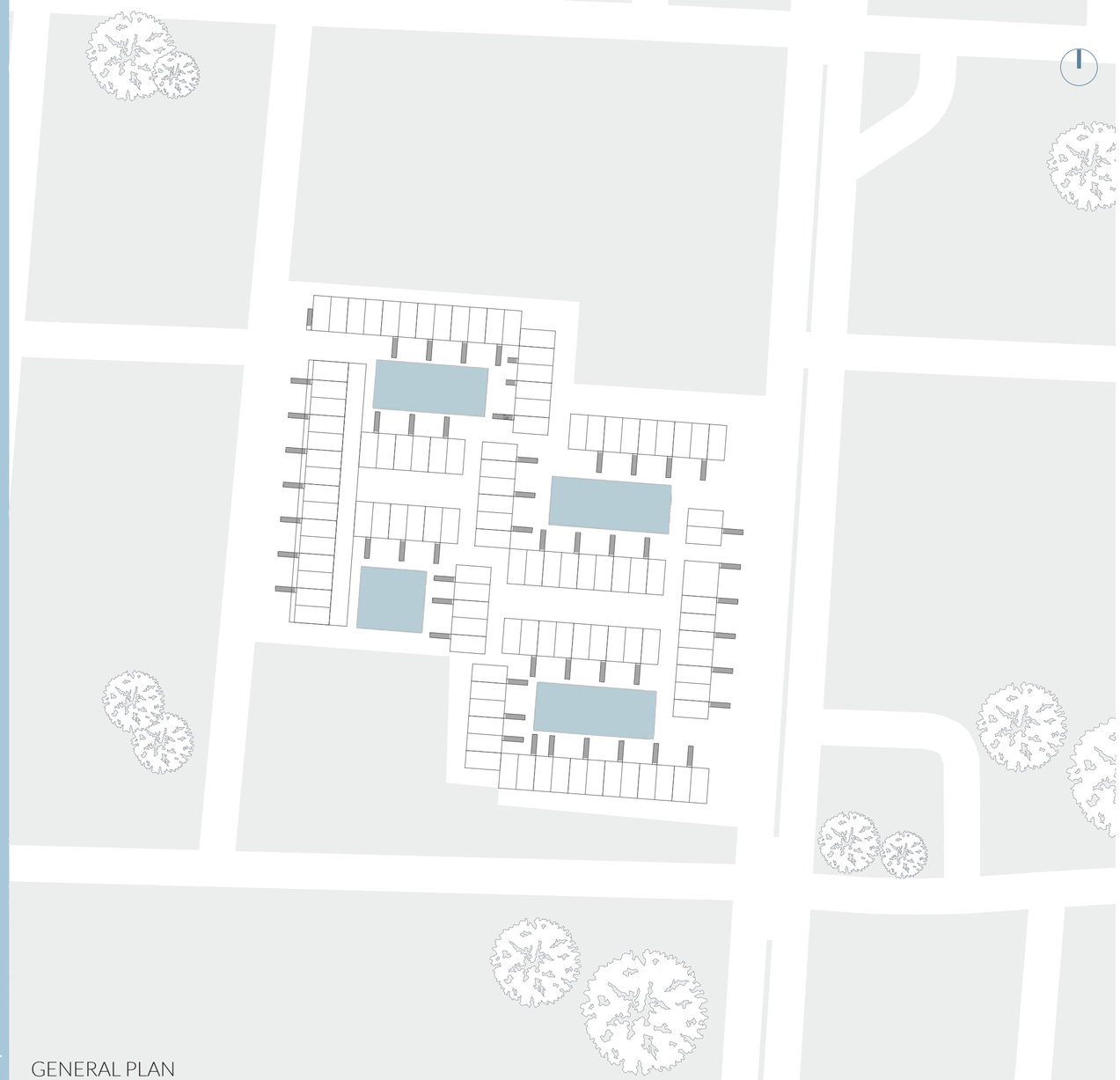
WHEN: 2001 - 2004

WHO: Arq. Alejandro Aravena / ELEMENTAL

SUSTAINABLE ACTIONS: Quinta Monroy kept the central urban location of an informal settlement, despite high land costs, to prevent sprawl, reduce emissions, and maintain residents' access to jobs, healthcare, education, and transport. Its innovative two-story, expandable design housed 100 families on 0.5 hectares, achieving high density without overcrowding, optimizing land use compared to traditional single-lot or high-rise models. Also, shared courtyards and passages, managed by groups of 20 families, fostered social cohesion and resilience, while organizing 100 families into four smaller groups balanced intimacy and connectivity, supporting community governance and maintaining social ties.

CHALLENGE: Avoid relocating families to the periphery, where cheaper land fosters marginalization, while working within the limited budget that typically funds only 30–36 m^2 homes, half the size of a standard middle-class house.

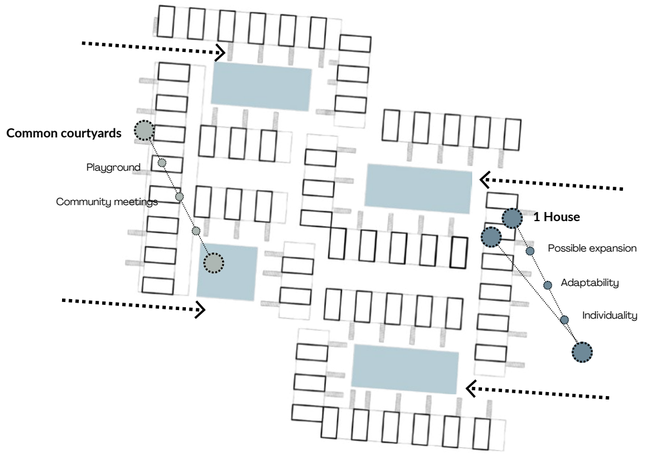
Image 75. Quinta Monroy Housing project.
Source: Arquitectura Viva (n.d.). In Convivial Architecture: Bolstering Urban Resurgence. Rethinking The Future.



GENERAL PLAN

Originally an informal settlement in central Iquique, Quinta Monroy was home to 100 families in poor conditions. The Chilean government's "Vivienda Social Dinámica sin Deuda" program aimed to replace the settlement with 93 dignified homes, urbanization, and architecture. The project's challenge was to avoid relocating families to the periphery, where cheaper land fosters marginalization, while working within the limited budget that typically funds only 30–36 m^2 homes—half the size of a standard middle-class house. (Arquitectura Viva, 2008). Rather than designing small, isolated units, the team led by Elemental reimagined the problem: how to build a $750,000 project for 100 families that could also grow over time.

Their solution was a two-story housing typology in which ground-floor units could expand horizontally and upper-floor units vertically. This avoided the rigidity of high-rise blocks or the overcrowding of dense single-lot designs. Each family received a 36 m^2 "half-house" equipped with essential, high-quality elements like bathroom, kitchen, stairs, and structural walls, while leaving space for future growth into a 70+ m^2 home. Technical support was also provided to guide self-built expansions. In this way, the project maximized the value of expensive central land, preserved residents' access to jobs, healthcare, education, and transport, and introduced collective spaces to strengthen community ties (ArchDaily, 2008).



Despite its innovative approach, challenges remained. The subsidy limited what could be built initially, meaning families had to finance and construct their own expansions, something not all households could easily afford. Reliance on self-construction also carried risks of uneven quality or deterioration, though technical assistance helped reduce this. Moreover, the land cost, which was three times higher than the national average for social housing, raised questions about whether the model could be replicated elsewhere.

Quinta Monroy ultimately reframed social housing not as a sunk cost, but as an investment capable of appreciating over time. By prioritizing location, scalability, and community, it offers a powerful model for upgrading informal settlements. Still, its long-term success depends on families' capacity to complete their homes. As the architects themselves put it: "When the money covers only half a house, the question is which half to build", underscoring the importance of providing the critical components that families cannot achieve on their own.

· *Arquitectura Viva. (n.d.). Viviendas Quinta Monroy / Elemental. Arquitectura Viva. https://arquitecturaviva.com/obras/viviendas-quinta-monroy*

· *ArchDaily. (2008, julio 1). Quinta Monroy / ELEMENTAL. https://www.archdaily.cl/cl/02-2794/quinta-monroy-elemental*

WHY IT WORKED?

Quinta Monroy succeeded by retaining the central location, avoiding peripheral marginalization, and ensuring access to urban opportunities. Its innovative typology allowed homes to double in size through regulated self-construction, supported by technical assistance. High-quality initial structures and collective spaces fostered community cohesion and long-term property value appreciation.

WHY IT DIDN´T WORK?

The project faced limitations due to the subsidy, which restricted initial construction to 36 m^2, requiring families to finance and build expansions, potentially causing financial strain or inconsistent quality. The high land cost limited scalability, and reliance on self-construction risked urban deterioration if expansions were not properly executed, despite mitigation efforts.

Image 76. Quinta Monroy
Source: Palma, C. / Estudio Palma. (2003). Quinta Monroy Housing project [Photograph]. In Alejandro Aravena sobre las filosofías fundamentales de una práctica socialmente responsable. ArchDaily México.

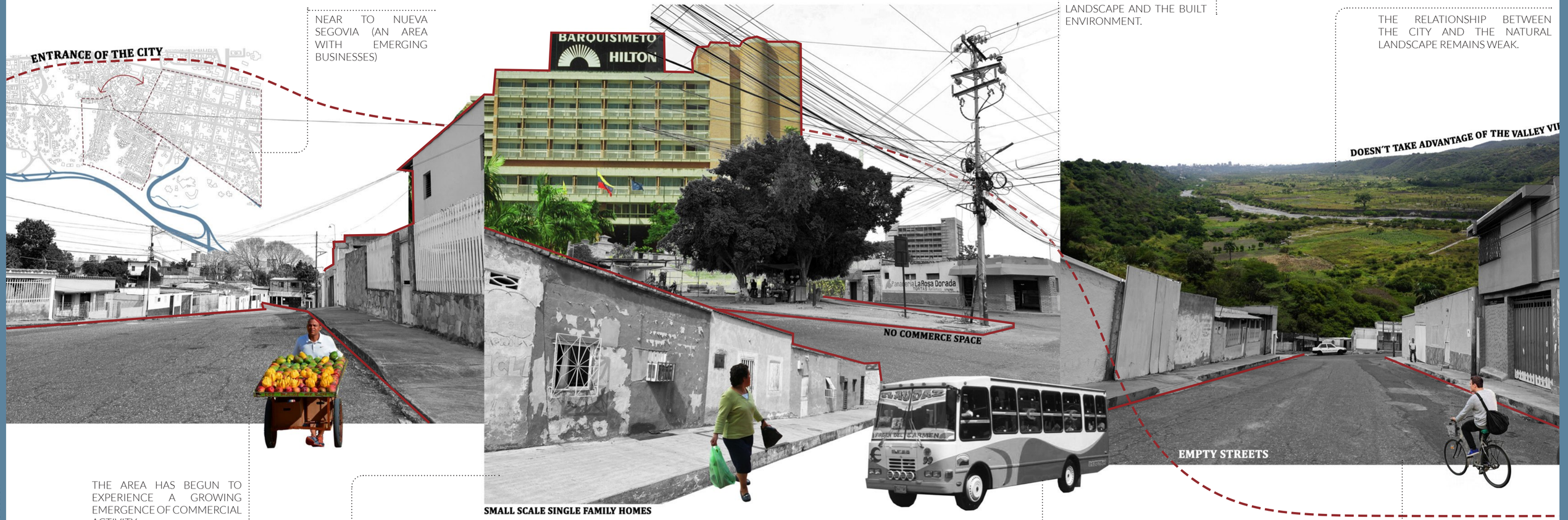
FROM ANALYSIS TO ACTION

The aim of this chapter is to put together and examine the findings from the analysis and surveys, and then, alongside with the conclusions from the case studies, support the design decisions to be made in a critical and calculated approach, generating design strategies that are coherent with the environment and sensitive to the local context.

Through a critical reading of the area and with its everyday dynamics, it was possible to identify not only the physical and functional conditions of the environment, but also the social, cultural, and perceptual aspects that influence the way the space is lived in. In addition, the selected case studies provide design insights and strategies that enhance the perspective on the issue, offering precedents that engage with the project's demands. These elements create the foundation of the project and allow for a deeper understanding of the physical, social, and functional context of the site that is going to be intervened.

Image 77. Painting of the valley. Made by Villalón.

FINDINGS OF THE SITE ANALYSIS



FINDINGS OF THE SURVEYS

This survey aims to assess the demographic and socio-economic profile of residents of 23 de Enero barrio; evaluate access to basic services like water, electricity, sewage, garbage collection; analyze transportation and street conditions; identify housing vulnerabilities and weaknesses; take into account community perceptions, needs and understand vendors' economic activities and working conditions in order to get an insight into the socio-economic and infrastructural conditions of habitants of this community.

METHODOLOGY

Two different type of surveys were developed: one for residents and one for street vendors. The resident survey included 16 questions with five categories: demographics (e.g., household size, age), basic services, transportation, housing and infrastructure, and perceptions/needs. The vendor survey comprised 15 questions covering general information (e.g., products sold), working conditions, mobility, community interaction, and infrastructural needs. Both surveys used a mix of closed-ended (multiple-choice) and open-ended questions to capture quantitative and qualitative data.

Due to logistical constraints, a sample of 10 residents and 8 vendors was targeted, with responses collected via paper-based forms in the 23 de Enero community. The data presented here combines verified responses from the subjects, reflecting typical conditions in Venezuelan informal settlements.

STUDY FOR **RESIDENTS** OF THE 23 DE ENERO COMMUNITY

DEMOGRAPHIC INFORMATION

How many people live in your household?	1-2	3-5	6-8	+8
	30%	70%	-	-
What is the age range of the majority of the inhabitants in your household?	0-18	19-35	36-50	+50
	20%	5%	55%	20%
How long have you been living in the 23 de Enero community?	- 1 year	1-5 years	6-15 years	+ 15 years
	-	-	15%	20%
Where did your family come from before living here?	Another area of Barquisimeto		Another city in Venezuela	
	70%		30%	
What is your main source of income?	Formal employment	Informal work	Family/government assistance	No stable income
	-	40%	-	60%

ACCESS TO BASIC SERVICES

Do you have regular access to potable water?	Yes, through pipes every day	Yes, but only some days	No, I rely on cisterns
	-	100%	-
How would you rate the electricity service in your home?	Good (no interruptions)	Regular (occasional outages)	Poor (constant outages)
	-	100%	-
Do you have access to a sewage or wastewater system?	Yes, formal (connected to the network)	Yes, informal (septic tank, improvised)	No
	35%	55%	10%
Is there garbage collection in your area?	Yes, regularly	Yes, but irregularly	No
	-	100%	-

HOUSING AND INFRASTRUCTURE CONDITIONS

Have you had problems in your home due to rain or flooding?	Yes, frequently	Yes, occasionally	No
	45%	55%	-
Do you have nearby public spaces (squares, parks)?	Yes, in good condition	Yes, but deteriorated	No
	-	20%	80%

PERCEPTIONS AND NEEDS

What do you like most about living in the 23 de Enero community?	Views	Proximity to Nueva Segovia
	45%	55%
What would you change or improve in the community if you could?	Quality of houses, streets, sidewalks...	Public spaces
	60%	40%

ACCESS TO TRANSPORTATION

How do you usually travel outside the community?	Public transportation	Personal vehicle	On foot
	30%	5%	65%
How long does it take you to reach downtown Barquisimeto or your workplace?	Less than 30 minutes	30-60 minutes	More than 60 minutes
	-	100%	-
How would you rate the condition of the streets within the community?	Good (paved, passable)	Regular (damaged but usable)	Poor
	-	75%	25%

FINDINGS OF THE SURVEYS

STUDY FOR **VENDORS** OF THE 23 DE ENERO COMMUNITY

GENERAL INFORMATION

What type of products or services do you sell?	Food	Clothing/personal item	Household products (cleaning, utensils)	Services (repairs, hairdressing, etc.
	70%	5%	5%	20%
Where do you primarily conduct your commercial activity?	At a fixed stall	On the street (mobile vendor)	At my home	
	70%	10%	20%	
How long have you been selling in the 23 de Enero community?	- 1 year	1-5 years	6-15 years	+ 15 years
	-	40%	60%	-
Do you live in the 23 de Enero community?	Yes	No		
	100%	-		

MOBILITY AND TRANSPORTATION

How do you transport your products to the place of sale?	Public transportation	Personal vehicle	On foot
	-	-	100%
How long does it take you to get from your home to the place where you sell?	Less than 30 minutes	30-60 minutes	More than 60 minutes
	-	-	100%
Do the street conditions make it difficult to transport your products?	Yes, a lot	Yes, sometimes	No
	-	100%	-

INTERACTION WITH THE COMMUNITY

Who are your main customers?	Residents of the community	People from other areas	Both
	-	-	100%
How would you rate the flow of customers in the community?	High(many daily customers)	Medium (regular customers)	Low (few customers)
	-	100%	-
Have you noticed changes in sales in recent years?	Yes, they have increased	Yes, they have decreased	No, they remain the same
	-	100%	-

INFRASTRUCTURE AND NEEDS

What problems do you face at your place of sale?	Lack of shade or protection from rain	Poor street conditions	Garbage accumulation nearby	Insecurity
	100%	100%	100%	100%
What would you improve in the community to make your work easier?	Better streets or access	Fixed spaces for selling	More security	Access to services (water, electricity)
	100%	100%	100%	100%

WORKING CONDITIONS

Do you have an adequate space to sell?	Yes, I have a stable and protected stall	Regular, I have an improvised space	No, I sell on the street without protection
	10%	70%	20%
Do you have access to potable water at your workplace?	Yes, regularly	Yes, but irregularly	No
	-	-	100%
How do you store your products?	At my stall or home	In a nearby storage facility	I have nowhere to store
	100%	-	-

FINDINGS OF THE SURVEYS

RESIDENTS

Demographics
· 70% of households have 3–5 members, with a significant proportion (5%) aged 36–50, indicating an adult, family-oriented population. This suggests a need for modular housing designs that accommodate medium-sized families with flexible, energy-efficient spaces.

Basic Services
· All population has problems with water access, only having it irregularly. Electricity is regular for 100%. Sewage systems are formal (35%), informal (55%) or absent (10%), and garbage collection is irregular (100%). These gaps highlight the need for sustainable infrastructure, such as rainwater harvesting and decentralized waste management.

Transportation
· The majorityZrelies on walking (65%), reflecting limited public transport access. 75% report streets as “regular” (damaged but usable), and 35% as “poor,” underscoring the need for durable, pedestrian-friendly pavements.

Housing and Infrastructure
· 55% of households experience occasional flooding, indicating vulnerabilities in housing materials and drainage systems. Flood-resistant designs and improved urban drainage are critical.

Perceptions and Needs
· Residents value community closeness (55% of responses), but prioritize improvements in services, streets and security. This supports proposals for community plazas and enhanced infrastructure to strengthen social cohesion.

VENDORS

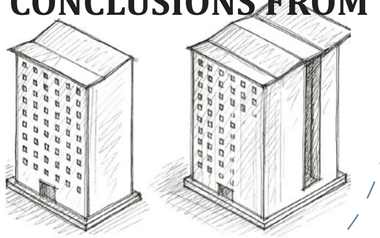
General Information
· 70% of vendors sell food, reflecting a local economy centered on basic needs. This informs of market modules with adequate storage for perishable goods and shaded structures.

Working Conditions
· 70% use improvised selling spaces, and the totality of them lack access to water, highlighting precarious working conditions.

Infrastructure and Needs
· All of them cite poor street conditions, insecurity and lack of shade as major issues. These findings advocate for secure, covered market spaces integrated with community infrastructure.

The survey results reveal critical challenges in the 23 de Enero community, mirroring wider issues in Venezuelan informal settlements that provide a comprehensive view of the barrio´s needs and strengths, guiding the development of sustainable architectural solutions. By addressing infrastructural gaps, housing vulnerabilities, and vendor challenges, the proposed interventions will aim to increase quality of life while respecting the community’s social dynamics. The visualizations offer a clear foundation for these proposals, contributing to the broader discourse on sustainable urbanism in informal surroundings.

CONCLUSIONS FROM THE CASE STUDIES



WHAT COULD BE THE DRIVERS OF CHANGE?

ADAPTIVE SPACES

PROVIDING JUST A ROOF IS NOT ENOUGH TO MAKE A HOME

To not think about eradication or displacement, but more about enhancement, apropiation and consolidation.

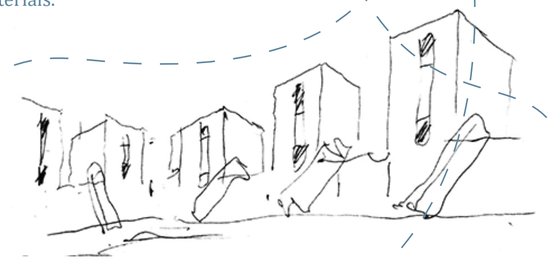
The need for taking into account the design flexibility, ventilation, lightning, orientation, solar radiation, location, climate conditions and materials.

SOCIAL PARTICIPATION

Allow the design to be adaptable to make it a replicable model, capable of adjusting to different contexts, without compromising its efectiveness or sustainable principles.

COMMUNITY IDENTITY

A shift from viewing social housing as a cost to an investment that appreciates over time.

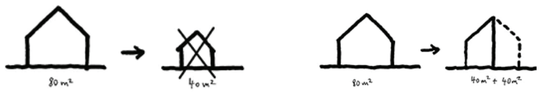


REIMAGINE THE PROBLEM

To recognize and analyze the problem and try to work with it instead of eradicate it.

COOPERATIVITY

By formalizing informal settlements it brings the community into visibillity within the formal city ensuring that is no loger marginalized or overlooked.



To allow the project to be design for incremental development, meaning that the residents can improve their homes gradually.

Creating spaces that feel expansive despite their small size.

TO CONNECT AND NOT ISOLATE

Providing spaces for social interaction fosters community cohesion.

Well-connected neighbourhoods encourage workability, and reduce traffic congestion, noise and stress, fostering healthier, more liveable communities.

Good public transport connections ensure that all residents can acces to essential services, jobs, education, and cultural opportunities, and health integrate neighbourhoods into the wider urban fabric preventing social and spatial isolation.

IMPROVE CONNECTIVITY

Dissolve barriers between the formal and informal city.

REDUCE THE STIGMA OF INFORMALITY

Enhance the quality of the urban space.

BARRIO´S CORES

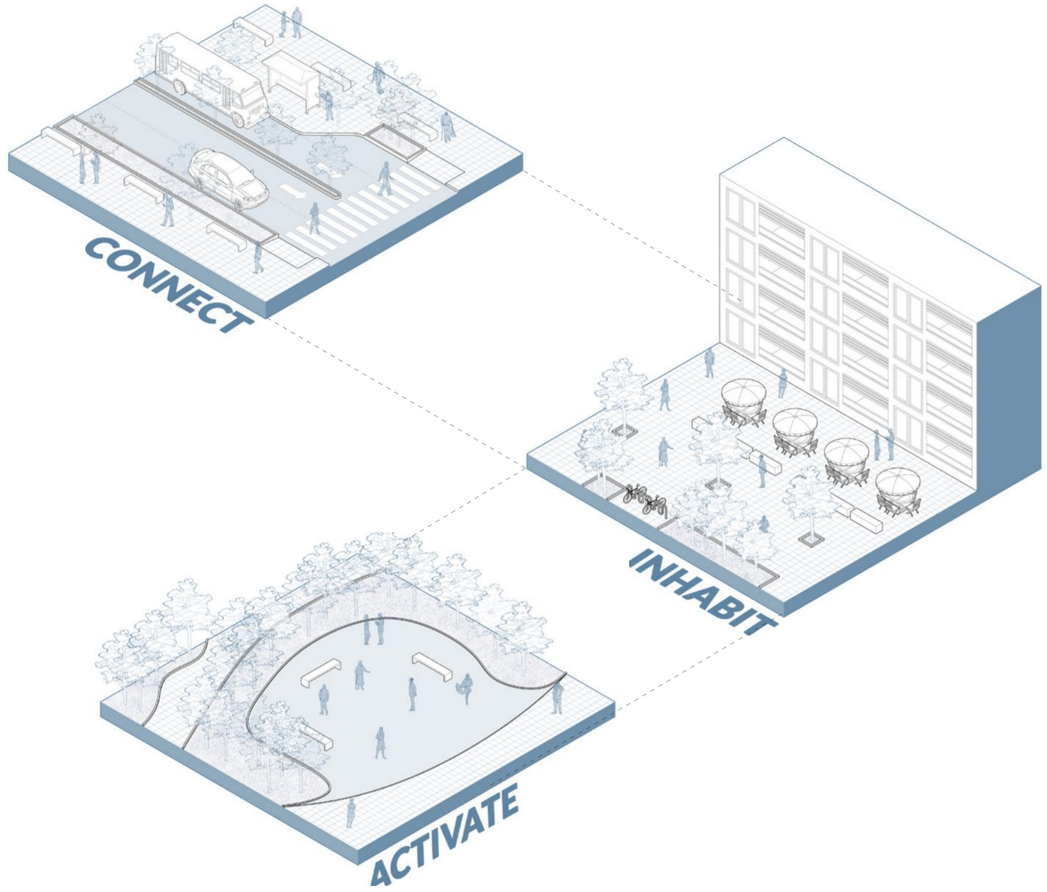
The inclusion of public spaces and safe areas are essential for enhancing the well-being of residents.

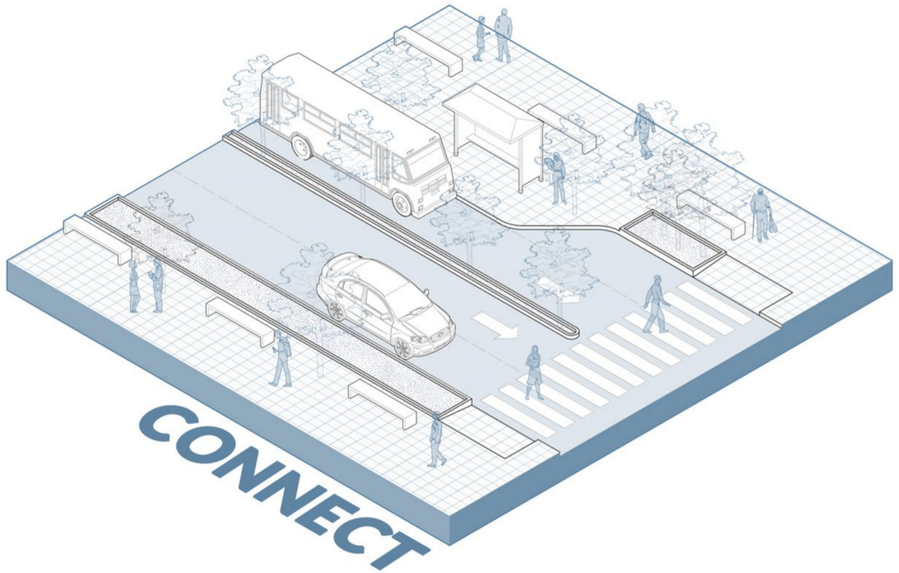
DESIGN STRATEGIES

Building upon the critical insights derived from the findings—synthesized through meticulous site analysis, field surveys, and comparative case studies—this section outlines the strategic framework that will guide the design phase. The findings have illuminated key opportunities and challenges within the project context, providing a robust foundation for translating analytical outcomes into actionable design strategies. These strategies are crafted to respond directly to the identified needs, leveraging the spatial, social, and environmental dynamics uncovered in the analysis.

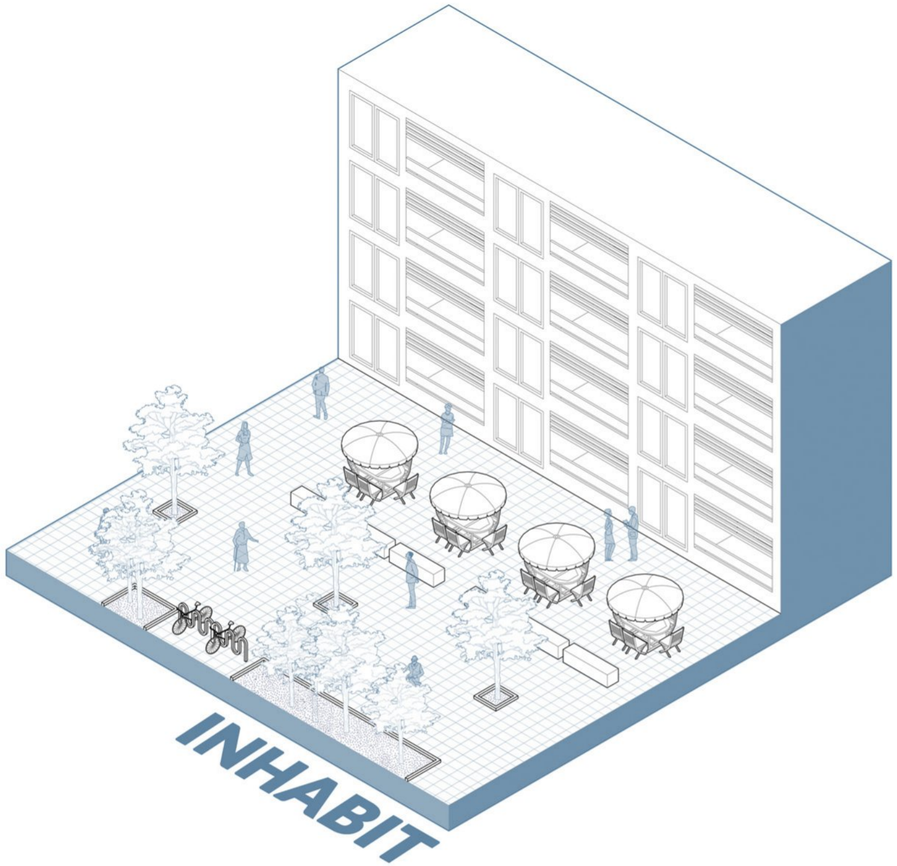
The design approach will seek to transform the site into a dynamic, inclusive, and sustainable environment that fosters meaningful connections between its users and the surrounding context. The decision to structure the design response around three core strategies stems from the findings' clear indication of three distinct yet interrelated needs: the need for enhanced connectivity to mend fragmented spatial and social networks, the need for interaction between the community and its surroundings, and the need for consolidation to create welcoming, human-centered spaces that encourage sustained engagement. Importantly, these three strategies are not conceived in isolation but will be articulated through a unifying element that weaves them together, ensuring coherence and amplifying their collective impact.

Therefore, the project will rise to meet the imperative **TO CONNECT, TO INHABIT AND TO ACTIVATE**





As previously established, well-connected neighborhoods promote walkability, contributing to healthier and more livable communities. This strategy, therefore, aims to strengthen the connections between these communities and their immediate surroundings, fostering more integrated and resilient urban environments.



One of the most common struggles in housing in informal settlements is the inadequate infrastructure and limited opportunities for improvement, which makes it difficult for inhabitants to have a better quality of life. The Inhabit strategy imagines living environments that are resilient and adaptable, enabling residents to shape their homes in harmony with their social and environmental contexts.

APPROACH

Incremental Development Frameworks: Promote housing systems that support gradual improvements led by residents, allowing communities to adapt and expand their homes over time. This way, this approach prioritizes flexibility, enabling residents to personalize their living spaces while maintaining structural integrity and environmental responsiveness.

Sustainable Design Integration: Embed principles of environmental stewardship, such as passive thermal regulation and resource-efficient construction, to create homes that are comfortable and cost-effective. The case studies highlight the importance of climate-sensitive design, advocating for solutions that respond to local conditions like solar exposure and rainfall patterns, ensuring long-term habitability.

Community Empowerment: Foster a sense of ownership by centering designs around the expressed needs and aspirations of residents, as gathered through community surveys. This aligns with the case studies' focus on consolidation, where homes evolve as extensions of the community's identity, strengthening social cohesion and resilience.

Informal settlements often lack accessible, well-designed public spaces, leading to social isolation and economic inaction. The Activate strategy focuses on creating dynamic, multifunctional public spaces that stimulate social engagement, economic activity, and cultural expression, countering the marginalization observed in areas like 23 de Enero.

APPROACH

· **Multifunctional Community Plazas:** Design flexible public plazas that serve as venues for markets, cultural events, sport courts and social gatherings. The survey findings highlight that 70% of vendors sell food, indicating a local economy reliant on small scale commerce. Plazas should include modular market stalls with storage, shaded canopies to address vendors' concerns about lack of shade, and durable flooring.

· **Green Infrastructure Integration:** Incorporate urban greenery, such as native trees and vertical gardens, to enhance environmental quality and provide cooling in response to the case studies' emphasis on climate-responsible design. These green spaces can serve also as recreational areas, addressing residents' prioritization of community closeness and the need for spaces that foster interaction.

· **Cultural and Economic Anchors:** Insert cultural elements, such as murals or performance stages, to enhance local identity. The precarious working conditions noted by 70% of vendors using improvised spaces underscore the need for secure, formalized market areas that support livelihoods while improving public life.

EXISTING CONDITION

Barrio 23 de enero

The existing condition of Barrio 23 de Enero, as established through the site analysis, resident surveys, and investigations, delineates an urban fabric shaped by informal growth and pronounced socio-economic stratification. Findings reveal a spatial division: the northern sector, proximate to the Nueva Segovia business district, exhibits growing commercial activity, while the southern sector is characterized by modest single-family dwellings. Critical deficiencies include lack of pedestrian oriented infrastructure, with streets predominantly designed for automobiles, resulting in fragmented connectivity and isolated public spaces. Furthermore, the interface between the built environment and the natural landscape is inadequately leveraged, as evidenced by the underutilization of views of the valley and the scarcity of trees. These observations underscore significant challenges in accessibility, livability, and urban integration, providing a foundation for strategic interventions.

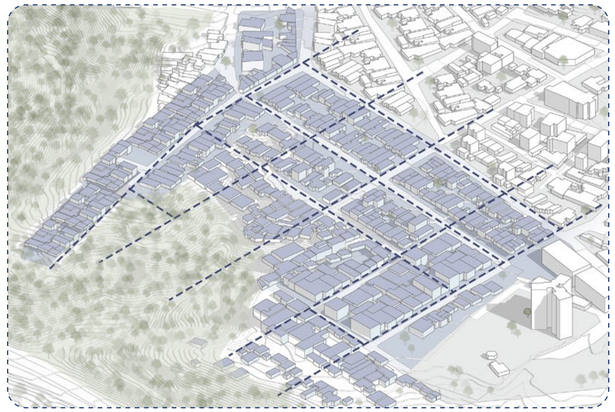
LEGEND AND SYMBOL

- 23 DE ENERO HOUSING
- OTHER BUILDINGS
- GREEN AREA
- CAR ROAD PROJECT AREA
- CAR ROAD
- CAR ROAD DIRECTION
- X EXISTING TREES

CONCEPT SCHEME

1 Reading the existing grid

Identification of the existing urban grid in the 23 de Enero neighborhood, defined by the layout of its main streets. This initial mapping reveals a somewhat organic and irregular urban grid, shaped over time by informal growth and topographical conditions. While there are traces of an orthogonal logic, the layout adapts fluidly to the terrain and the natural edge of the city plateau.

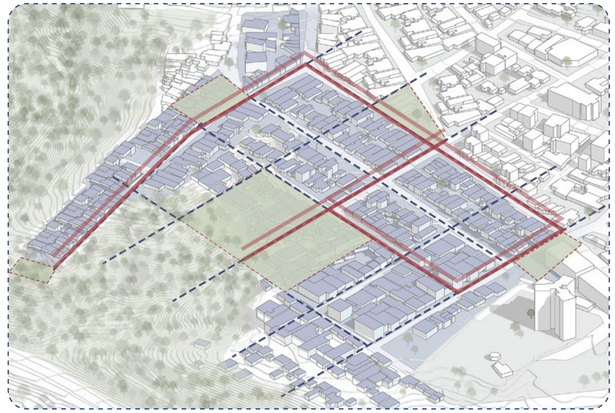


2. Generating a new conceptual grid

Based on the existing layout, a more structured and orthogonal conceptual grid is developed. This system serves as a tool to reorganize the urban fabric and reconsider the distribution of open spaces. By superimposing the natural system onto this grid, it becomes evident how the surrounding greenery seeks to infiltrate the built environment. This interaction highlights the potential to introduce green corridors and public spaces as regenerative elements, integrating nature into the grid and enhancing both environmental quality and spatial cohesion.

3. Merging grid and nat

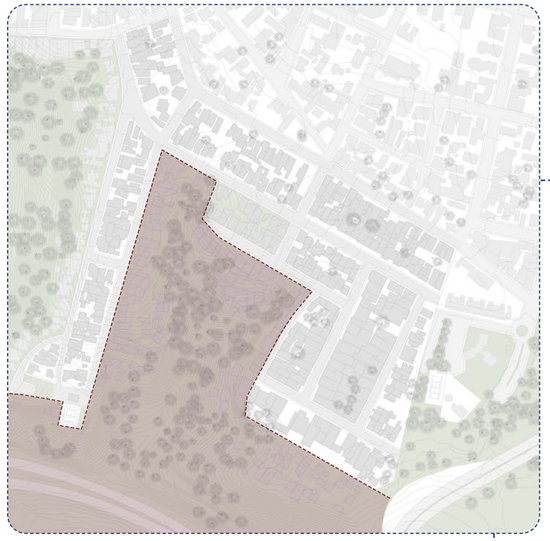
Conceptual proposal of the reimagined grid where built and green modules alternate. Certain segments of the grid are opened to allow nature to flow in, generating plazas, gardens, and shared green spaces that serve as social and ecological connectors for the neighborhood.



4. Connecting through a continuous walkway

A linear element is introduced to link the new public spaces and green modules across the reimagined grid. This connective spine acts as both a physical and visual thread, weaving together plazas, gardens, and communal nodes into a cohesive urban sequence.

DESIGN PROCESS



A. Urban protection zone

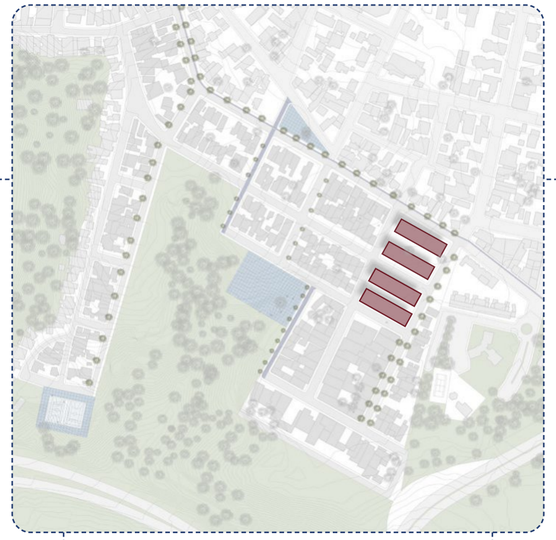
Initial design focuses on areas identified in the Barquisimeto PDUL as protected green zones, unsuitable for construction. This step involves conceptualizing their re-designation and re-naturalization, prioritizing safety and environmental resilience.

B. Establishing fundamental connectivity (Connect strategy)

Following site preparation, the process prioritizes enhancing the barrio's connectivity. This stage involves the design of a new urban grid that extends and aligns with the existing formal grid of Barquisimeto. Through this expansion, new streets are opened to facilitate critical connections between the 23 de Enero barrio and the formal city, while also proposing new pedestrian-oriented paths that enhance internal circulation and accessibility.

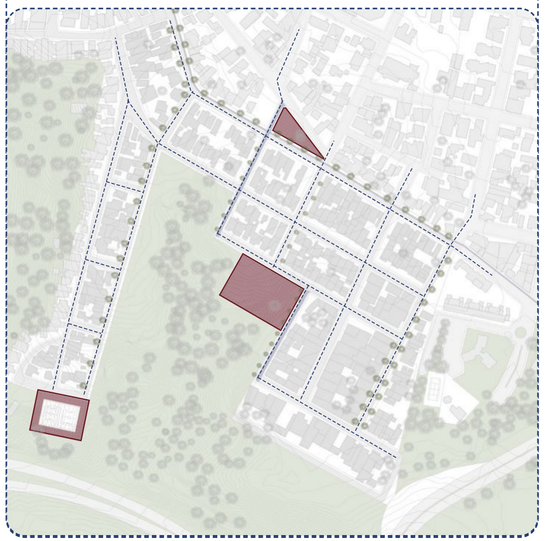
C. Integrating Residential Fabric (Inhabit Strategy)

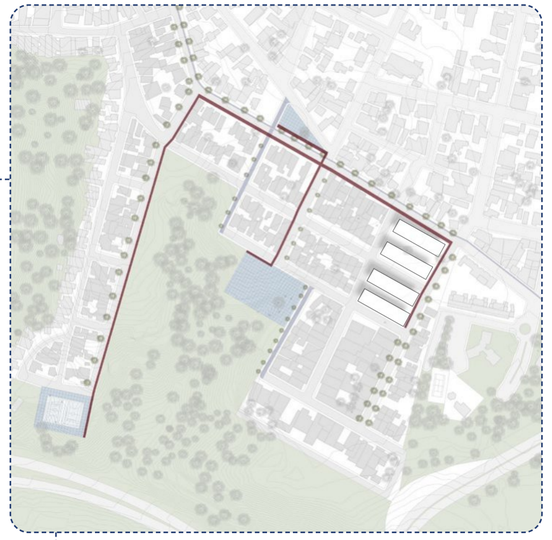
The subsequent stage involves the thoughtful integration of new residential elements within the redesigned urban structure. This includes the conceptual design of modular housing typologies specifically developed to re-accommodate populations displaced from the protected green zones and from areas cleared for the new streets and public spaces. The aim is to create dignified, integrated living environments that enhance residents' quality of life.



D. Activating Public Life (Activate Strategy)

Concurrent with the development of the connective framework, this stage focuses on the activation of public life. This involves the strategic selection and design of specific public spaces within the newly improved urban grid. These areas are conceived as focal points for social interaction, community gathering, and daily activities, attracting residents and visitors to foster a vibrant public realm.





E. Unifying through an overarching walkway

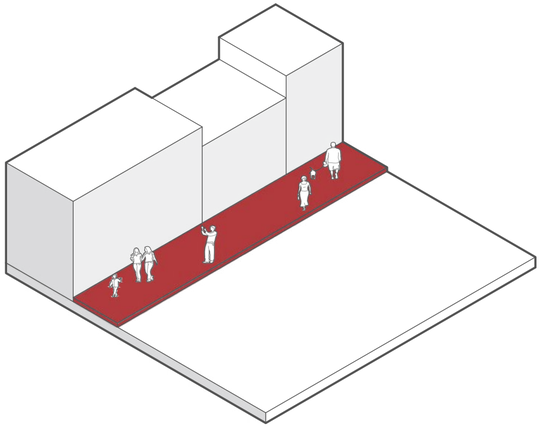
The process culminates with the overarching walkway, serving as the project's unifying element. This conceptual, elevated pathway weaves through all preceding design layers, physically and conceptually connecting new street networks, activated public spaces, and redesigned residential areas. It functions as a singular design gesture, enhancing accessibility and reinforcing overall barrio integration.

WALKWAY TYPOLOGIES

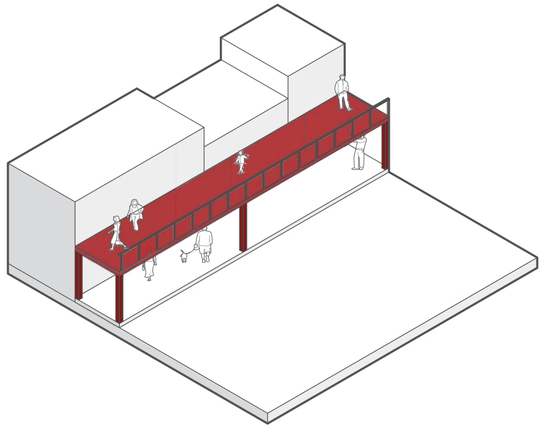
A connective and transformative element

The walkway is conceived as a conceptual and physical thread that weaves through the entire intervention, interlacing and braiding strategic points, connecting key urban moments and stitching together the barrio with the formal city.

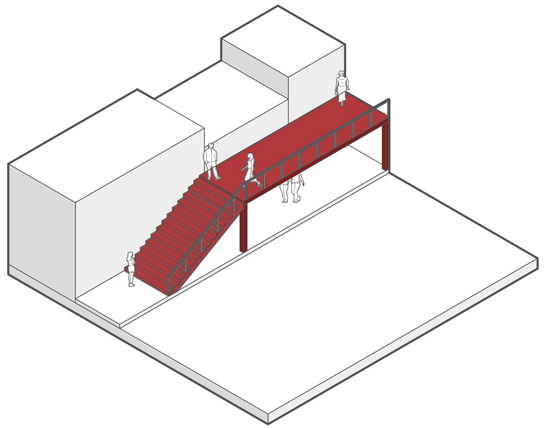
Rather than functioning as a singular, elevated element, the walkway transforms along its path, adapting to topography, program, and social needs. It acts as ground-level pavement in some areas, while rising as an elevated pasarela in others. Along its length, it morphs into stairs, ramps, platforms, playgrounds areas, commercial stalls, and gathering spaces, depending on where it is and what surrounds it. Each typology shown here represents a possible shape and expression of the walkway, turning it into more than just a circulation path. It becomes a social, economic, and architectural instrument that supports integration, accessibility, and daily life in the barrio.



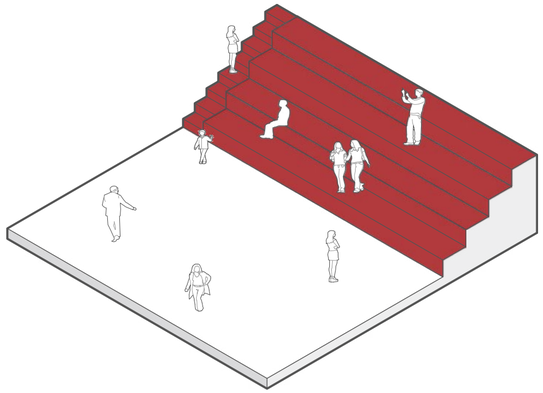
STREET LEVEL WALKWAY



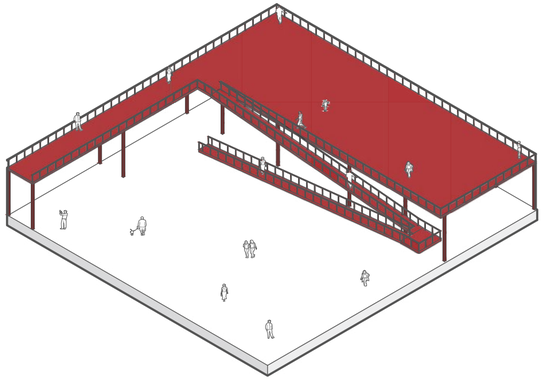
FIRST LEVEL WALKWAY



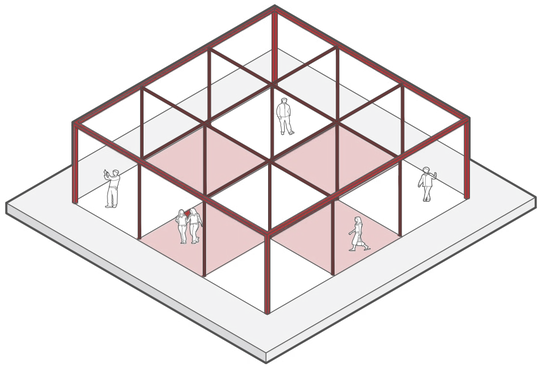
STAIRS



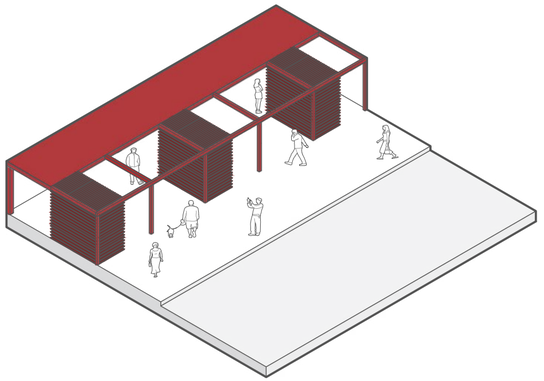
STEPS



RAMP



PLAYGROUND



COMMERCIAL STALLS

IMPLEMENTATION TIMELINE & RELOCATION PROTOCOL

Sequencing the transformation of Barrio 23 de Enero to ensure social equity and feasibility

This timeline proposes a realistic process for implementing the project in phases, minimizing displacement and ensuring that each intervention is grounded in both spatial logic and legal viability.

The relocation, demolition, construction, and public space strategies are supported by Venezuelan legal instruments, specifically the Ley de Tierras Urbanas and the Ley Especial de Regularización Integral, which authorize interventions in deteriorated structures and high-risk zones to guarantee the right to housing, safety, and urban integration.

This staged approach ensures a fair, participatory process where no resident is left behind.

RELOCATION 1

Temporary Resettlement Process

Before any demolition or construction begins, a temporary relocation strategy must be implemented for residents currently occupying key areas, such as the future housing plots (Inhabit) and new circulation corridors (Connect).

This process starts with a community census to identify families affected, understand their needs, and determine how many temporary housing units are required.

A participatory approach is essential:
Residents are informed about the project, invited to discussions, and must give informed consent to relocate. They are also guaranteed a place in the new permanent housing.

Temporary housing can be provided through modular units, public buildings, or safe, nearby plots, always ensuring access to services and maintaining proximity to their current lives.

This phase ensures that urban transformation happens without eviction or exclusion, setting the foundation for a just and inclusive process.

CONNECT STRATEGY

Opening New Circulation Paths

Once critical areas are cleared, the **Connect strategy** is deployed to open new streets and walkways. This step improves physical integration with the formal grid and creates space for future infrastructure.

INHABIT STRATEGY

Housing construction

New housing units are built on the cleared sites. These structures are designed to host a mix of relocated families and existing residents from at-risk zones, following inclusive and participatory design criteria.

RELOCATION 2

Permanent Resettlement

Families temporarily relocated in Phase 1, including those from the Urban Protection Zone and those who gave up their homes for the Connect and Inhabit strategies, move into the newly built housing.

ACTIVATE STRATEGY

Building Public Life

New and existing public spaces are designed or revitalized to create collective, accessible, and inclusive environments for recreation, commerce, and social life.

WALKWAY

Final Integration

Final unifying gesture through a continuous pedestrian system that adapts in section—elevated in some areas, ground-level in others—acting as a spatial connector and material trace across the barrio.

TEMPORARY HOUSING

This phase addresses the temporary relocation of approximately 70 families whose homes are set for demolition to facilitate the construction of new residential buildings. To ensure the safety and well-being of these families during the redevelopment phase, the plan includes relocating them to available vacant lots where simple temporary housing units can be constructed, or to unused buildings that meet the minimum habitable conditions, following thorough technical assessments and necessary adaptations.

The relocation strategy aims not only to provide access to dignified and secure living spaces but also to minimize the disturbance of the daily lives of the families during the construction period. The new buildings planned to replace the demolished structures are designed to accommodate 76 families, ensuring that all relocated families can return to their homes when the project is completed, with an improvement in living quality and the provision of safer and more functional residential spaces.

This approach complements urban development with social protection, integrating temporary housing solutions that address the need for residential continuity without neglecting the safety, dignity, and well-being of the community.

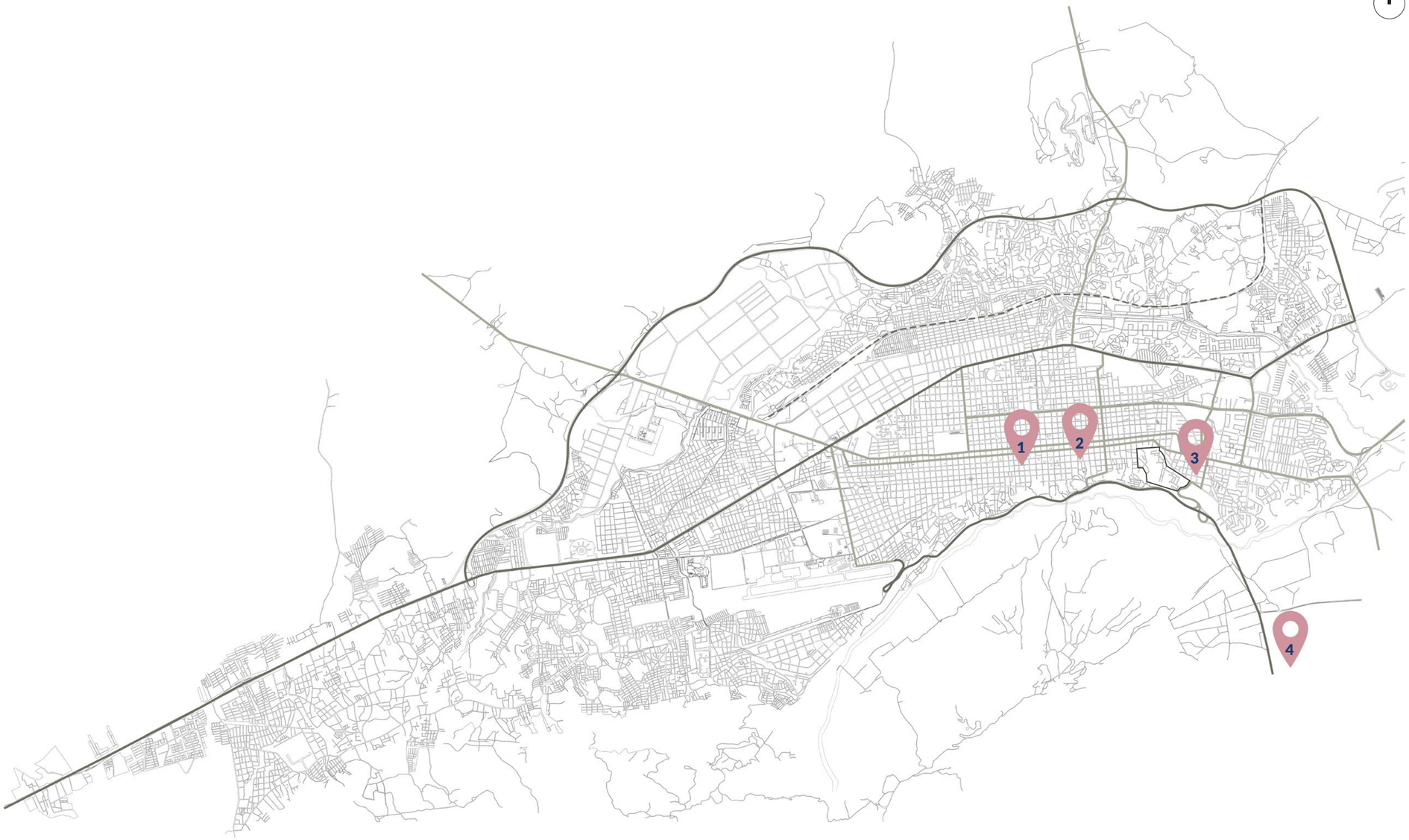
Potential Sites for Temporary Relocation

1 • Casa de la Orquesta Mavare: Located at Carrera 16 with the corner of Calle 29, previously intended as a museum by UCLA, currently unused. (El Impulso, 2024).

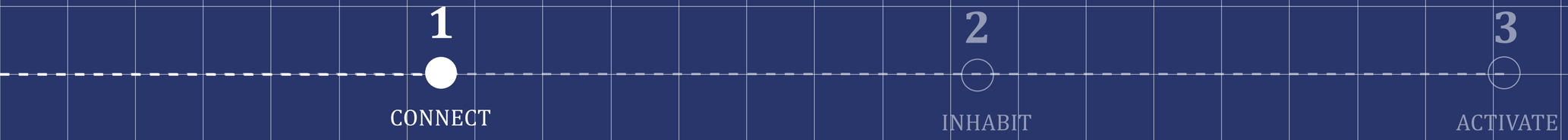
2 • Ateneo de Barquisimeto: Situated at Carrera 17 with the corner of Calle 23, historically significant and currently unoccupied (El Impulso, 2024).

• Vacant lot in Urbanización Nueva Segovia: Fenced land with basic infrastructure suitable for temporary housing.

• Vacant lot in Sector La Piedad Norte: Located 800 m from Avenida Intercomunal Barquisimeto-Cabudare, fenced with access to services.



DESGIN STRATEGIES

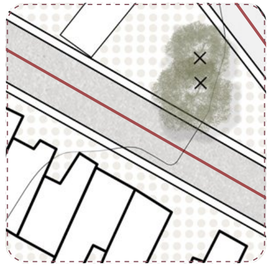


1 CONNECT

Critical diagnosis of the area: **critical nodes on the streets of the existing barrio.**

This section outlines the critical diagnosis of specific street segments within the 23 de Enero barrio, which have been identified as key points hindering connectivity, accessibility, and livability. The detailed analysis of these locations informs the proposed design interventions aimed at transforming them into integral components of the urban fabric. The proposed design interventions are conceived to be applicable to the entire length of the respective streets.

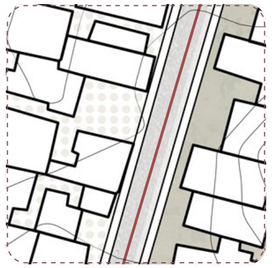
Street C.4



Street C.4, near "Plaza 23 de Enero", identifies a major connectivity barrier.

This single-lane street prioritizes vehicular traffic, limiting integration with the formal city and isolating the barrio's main plaza, which is overshadowed by informal commerce. The absence of shade and minimal pedestrian space neglects foot traffic, reinforcing street C.4 as a blind entry point that hinders access and interaction with the urban surroundings.

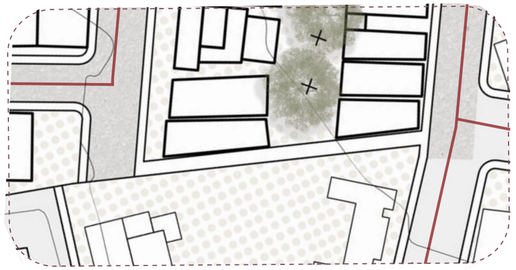
Street C.3



Street C.3, highlights a neglected area within the barrio characterized by a lack of shade and difficult pedestrian accessibility.

Despite the community's reliance on walking, the space prioritizes vehicular movement, creating an inhospitable environment. This forgotten zone underscores a missed opportunity for enhancing livability, as its poor design and isolation contribute to a fragmented perception of the neighborhood.

Street C.1



Street C.1 centers on a blind alley within the barrio that represents a missed opportunity for connectivity.

This internal street, disconnected from both the barrio's core and the formal city, is underutilized and inaccessible, failing to serve any significant purpose. Its location on Calle 4, a vehicular-priority boundary, further isolates it, while an existing small pedestrian street in this area is notably unsafe due to inadequate lighting and narrow pathways. This condition offers potential for transformation into a communal space like a plaza to enhance integration and livability.

TOOLS

The next section outlines a set of targeted interventions, guided by the Global Street Design Guide (2016), to be implemented at the previously identified strategic locations (Points A, B, and C). These measures respond to the pressing challenges of connectivity, accessibility, and livability in Barrio 23 de Enero, aiming to foster sustainable integration with the broader urban fabric. Grounded in evidence-based design principles, the proposed actions are designed to transform these critical areas by strengthening pedestrian priority, improving environmental resilience, and enhancing community life.

CHANGING GEOMETRY OF THE SIDEWALKS

Redesigning the geometry of sidewalks, as recommended by the Guide, is essential to put pedestrians first. Currently, vehicular dominance restricts access; this intervention proposes wider sidewalks and improved crossings to reduce isolation and enable smoother interaction with the formal city.

ADDING GREEN INFRASTRUCTURE

Incorporating green elements—such as shade trees and permeable pavements—addresses the lack of vegetation and environmental stress. Consistent with global sustainability practices, this step improves microclimate regulation, reduces heat, and raises overall quality of life, building a more resilient urban ecosystem.

ADD LIGHTNING THAT IS ENERGY EFFICIENT

Installing energy-efficient lighting, a core recommendation of the Guide, enhances both safety and visibility. Better lighting extends the use of public space after dark, discourages crime, and supports equitable access, thereby strengthening social and economic activity in the barrio.

PROVIDE URBAN FURNITURE

The installation of urban furniture—benches, seating areas, and signage—enriches both functionality and aesthetics. This intervention, aligned with the Guide, encourages social interaction, provides comfort for pedestrians, and reinforces the neighborhood's identity in the wider city.

IMPROVE MATERIALS

The use of durable, sustainable materials is key to ensuring long-term safety and resilience. Following the Guide, surfaces with low thermal mass and reflective properties will be introduced to minimize heat absorption and improve thermal comfort while extending infrastructure lifespan.

CREATE CYCLE INFRASTRUCTURE

Developing cycle infrastructure, in line with the guide's recommendations, is vital to promote sustainable mobility and reduce carbon emissions. This intervention will establish dedicated bike lanes, encouraging cycling as a viable transport option and enhancing connectivity with the formal city.

ORGANIZE PUBLIC TRANSPORTATION

The creation of dedicated cycling facilities supports sustainable mobility and reduces reliance on motor vehicles. This measure establishes bike lanes that encourage cycling as a practical transport choice and enhance connections with the rest of the city.

GIVE PRIORITY TO PEDESTRIANS

Optimizing public transport routes and stops improves overall mobility and accessibility. By reducing dependence on private cars, this action expands access to economic centers and strengthens the barrio's integration with the formal transport network.

GENERAL OVERVIEW - CONNECT

Streets - bike line - peatonal streets - greenery

INTERVENTIONS

NEW CONNECTING STREETS

NEW PEDESTRIAN STREETS

· NEW GREEN INFRASTRUCTURE

· ADJUSTING THE WIDTH OF THE SIDEWALKS

· ADJUSTING THE WIDTH OF THE STREETS

· DEVELOP CYCLE INFRASTRUCTURE

· UNIFYING WITH THE WALKWAY

LEGEND AND SYMBOL

23 DE ENERO HOUSING

OTHER BUILDINGS

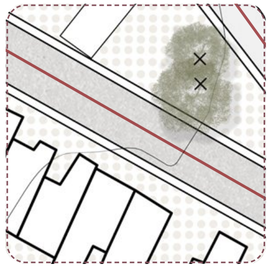
GREEN AREA

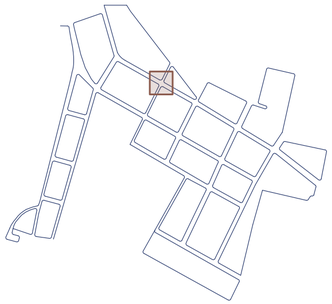
X EXISTING TREES

STREET C.4

Existing condition

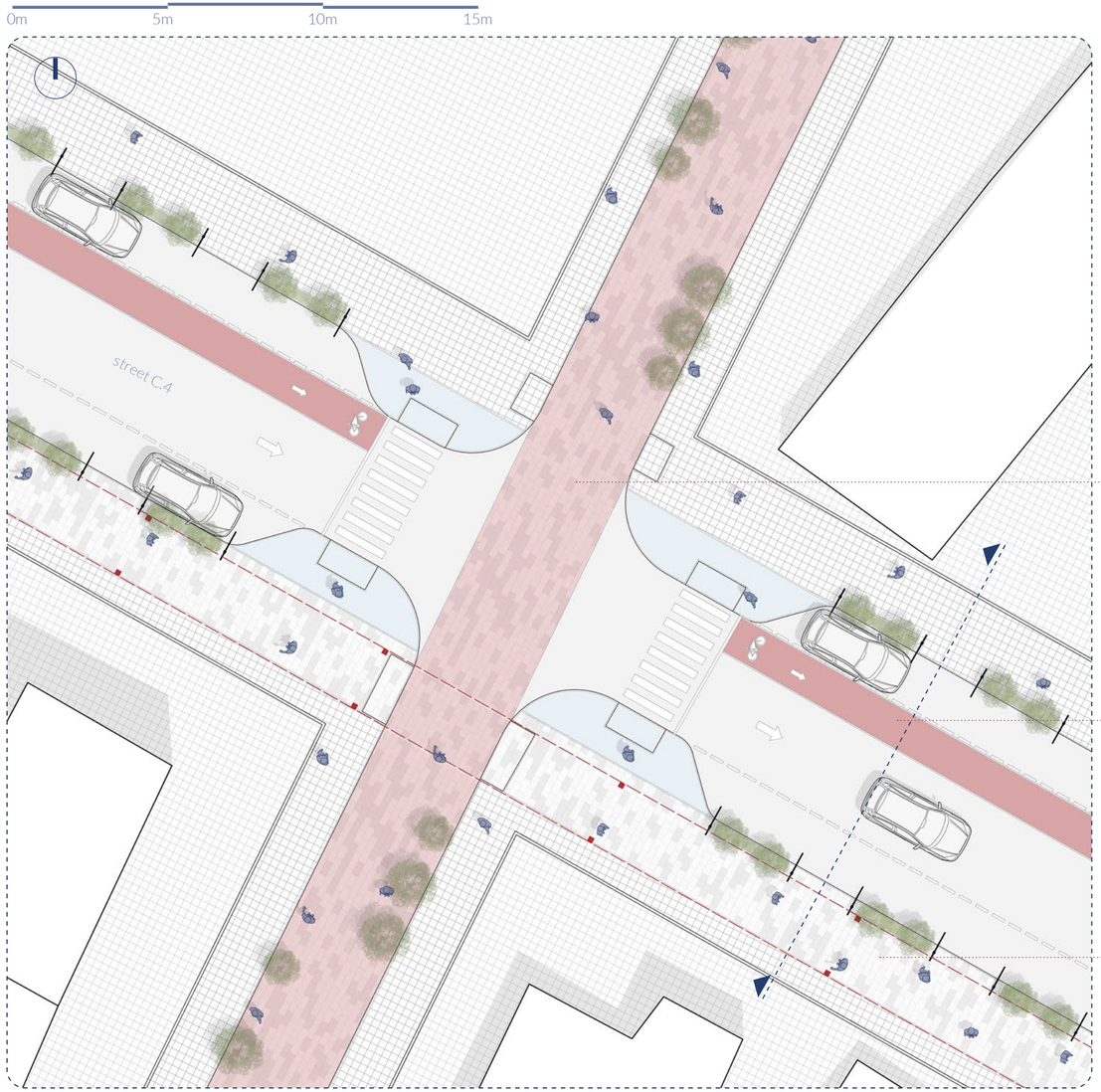
Image 78-81. 23 de enero. Taken by Alejandra Santoro



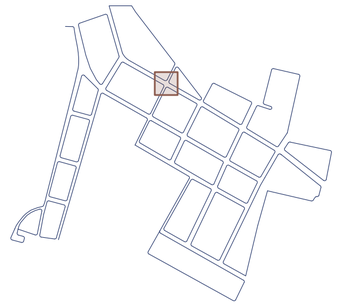


STREET C.4

Floor plan - Proposed condition



This proposal strategically transforms this street into an integrated and vibrant pedestrian gateway, explicitly addressing historical disconnections and enhancing multi-modal accessibility. The design includes essential upgrades such as universal access ramps for inclusive mobility, expanded sidewalks to enhance pedestrian comfort, and energy-efficient lighting to foster a safer and more welcoming environment for residents and visitors. Additionally, the strategic integration of trees aims to mitigate heat effects and improve the overall livability of this key interface. The core of this design, however, lies in the creation of a new open pedestrian street, with distinct paving, and the integration of a bike lane, significantly improving connectivity to Plaza 23 de Enero and the broader formal urban fabric.



Reconfiguration of the new street

A significant aspect of this intervention is the establishment of an entirely new pedestrian street. This strategic re-prioritization of space opens a crucial corridor at the barrio's edge from dominant vehicular traffic, ensuring pedestrian safety and comfort. This new axis directly links the 23 de Enero barrio with Plaza 23 de Enero and the adjacent formal city, thereby serving as a primary integrating gateway and fostering urban interaction.

Integration of a Dedicated Bike Lane

A key distinguishing feature of this intervention is the implementation of a dedicated bike lane along Street C.4. This infrastructure promotes sustainable and alternative transportation modes, enhancing connectivity between the barrio and the wider urban cycling network. Its inclusion is vital for attracting a broader range of users to this revitalized interface and supporting multimodal urban mobility.

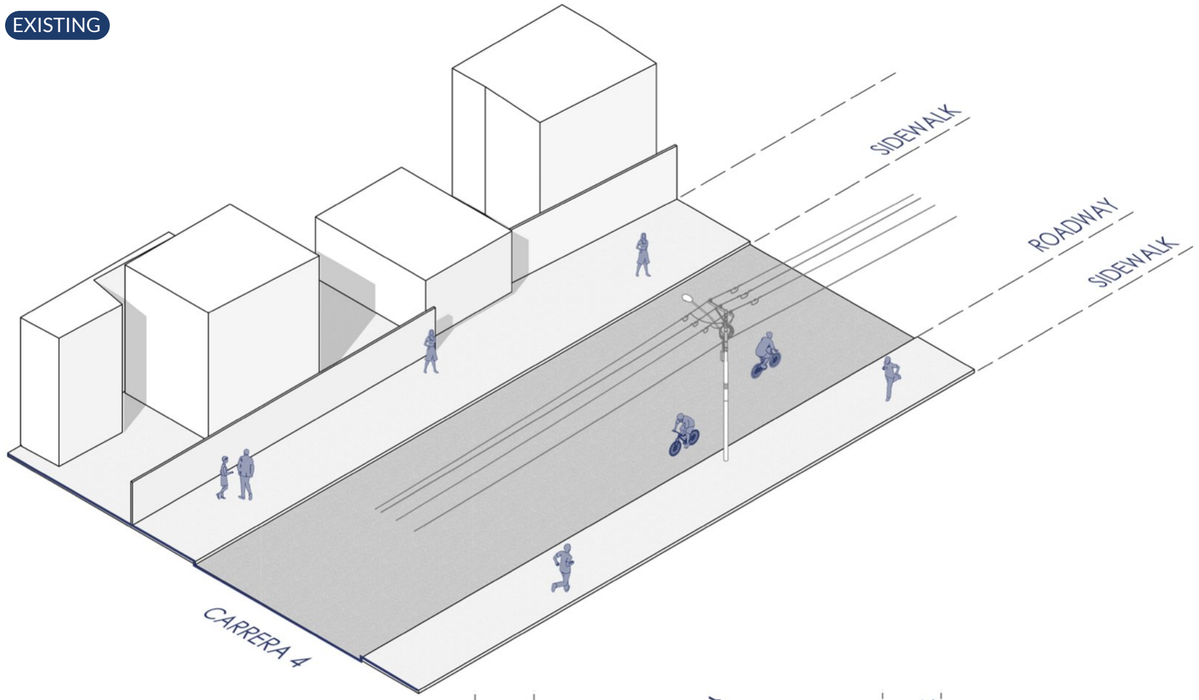
Marking the Pedestrian Axis and Encouraging Approach

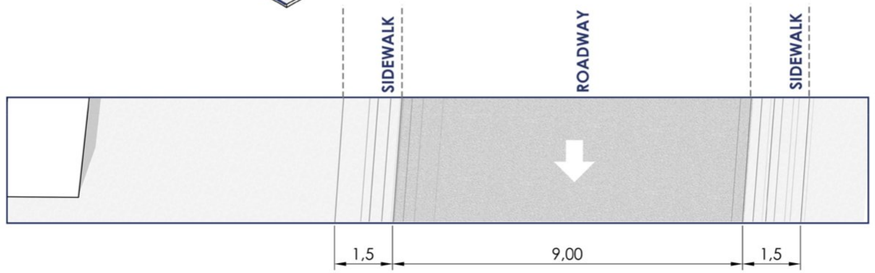
The application of a different pavement texture on the sidewalk specifically on the side directly facing the barrio, clearly defines and emphasizes this new pedestrian spine. This design aims to intuitively guide pedestrians, foster appropriation of the space, and enhance urban legibility at this critical entry point and interface between the formal and informal urban structures.

STREET C.4

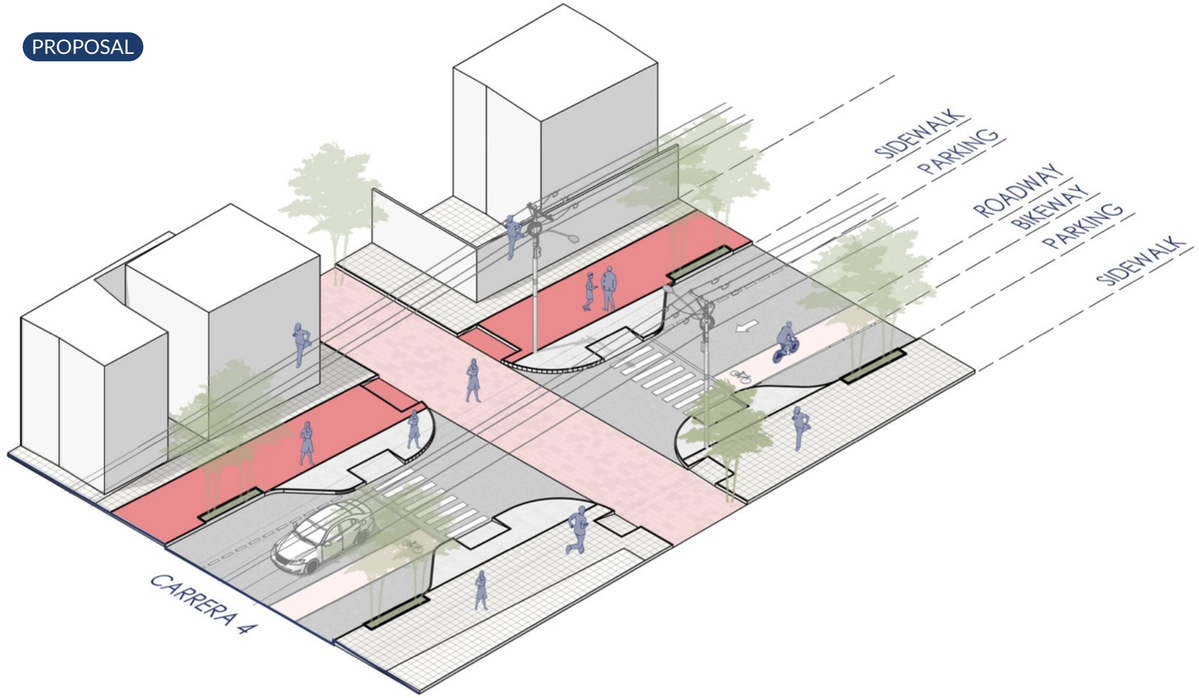
Sections

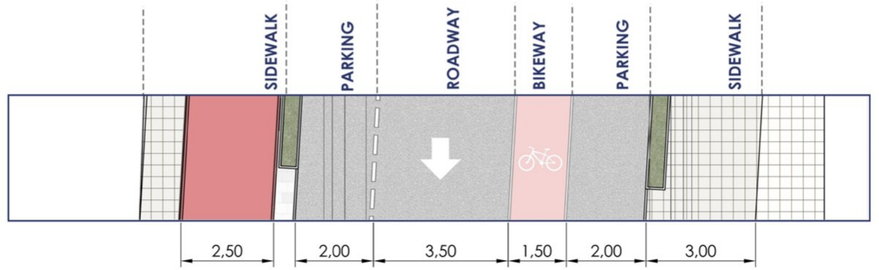
EXISTING





PROPOSAL

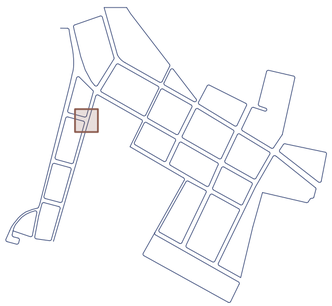




STREET C.3

Existing condition

Image 82-85. 23 de enero. Taken by Alejandra Santoro

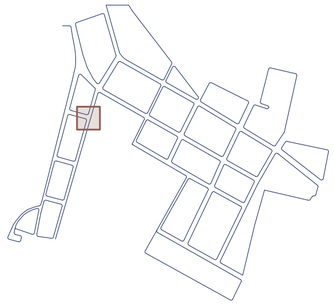


STREET C.3

Floor plan - Proposed condition

0m 5m 10m 15m

Street C.3, located deeper within the barrio, has long been overlooked, marked by limited shade and poor pedestrian walkways. In contrast to the more active Street C.4, Street C.3 counts with lower vehicular traffic, presenting a unique opportunity to prioritize a human scale transformation. This design aims to create a more inviting, accessible and integrated urban space that directly serves the community's daily life and fosters a stronger sense of place. This comprehensive proposal includes essential upgrades such as the provision of universal access ramps for inclusive movement, expanded sidewalks for enhanced pedestrian comfort, and lighting to ensure improved safety and usability for residents during all hours. The defining feature of this design, however, is the introduction of a continuous linear arrangement of trees, which will significantly enhance the pedestrian experience and integrate vital green infrastructure into the heart of the barrio.



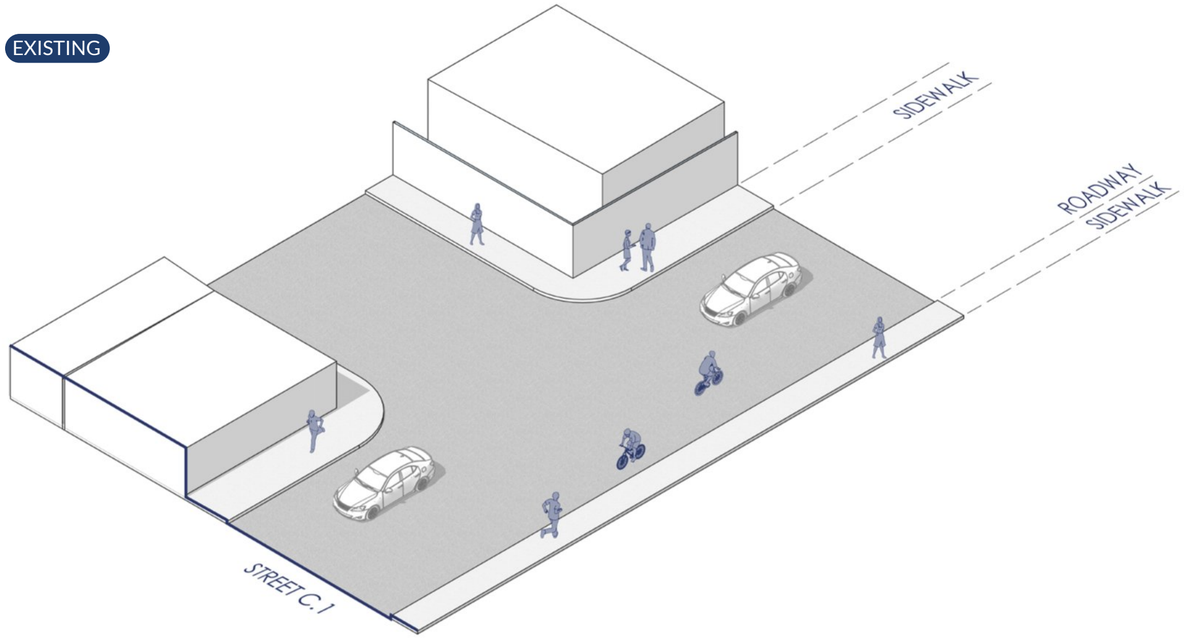
Implementation of a Continuous Linear Tree Row

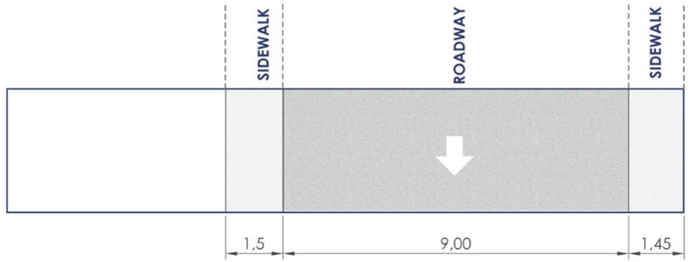
The most defining element of this intervention is the installation of a one-meter-wide linear planting strip along the pedestrian routes of Street C.3. This green corridor provides generous shade, improves microclimatic comfort, and establishes a visually cohesive streetscape. By leveraging the street's naturally low vehicular flow, the intervention transforms it into a preferred pedestrian axis while embedding natural elements into the very core of the barrio's urban fabric.

STREET C.3

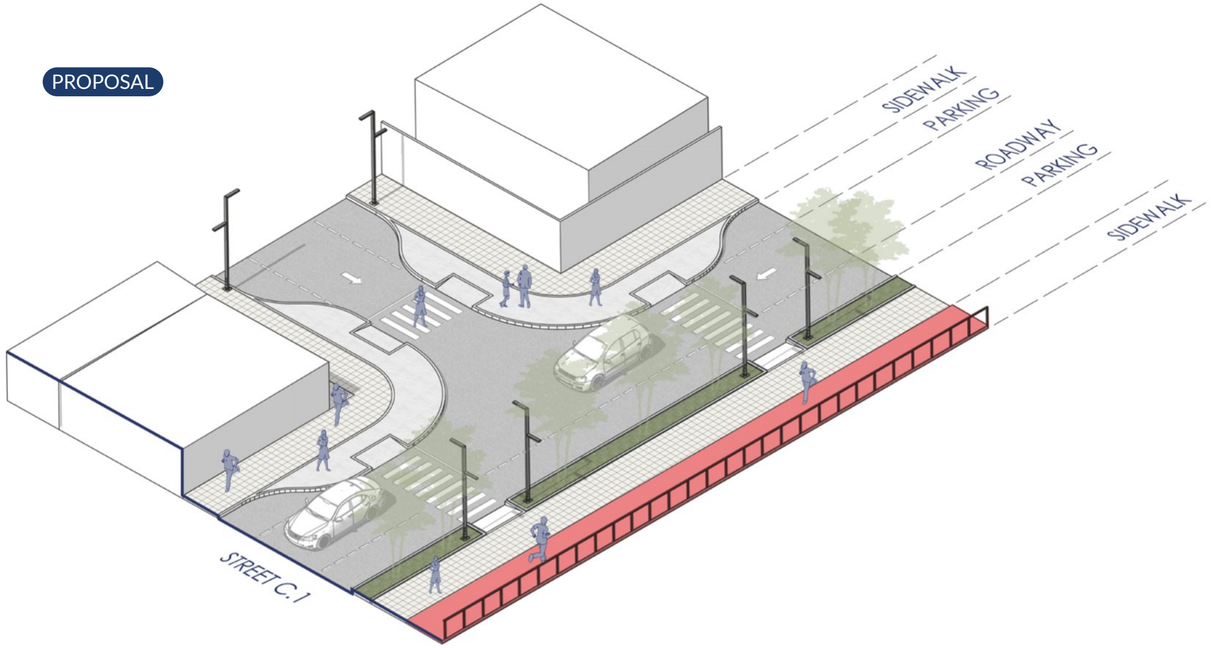
Street section

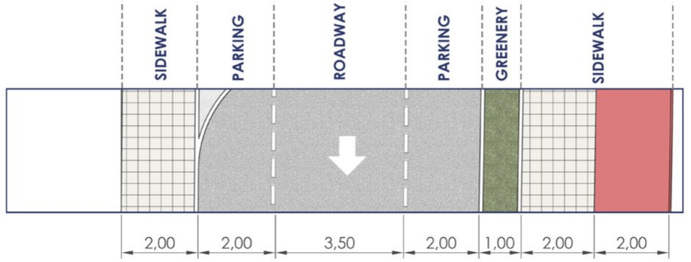
EXISTING





PROPOSAL

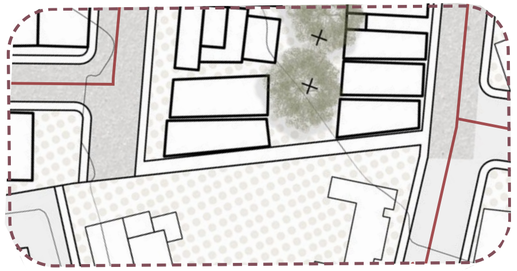


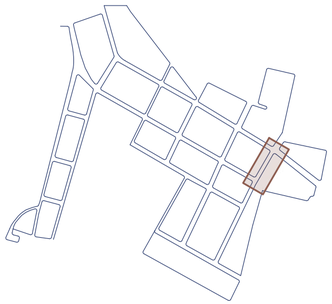


STREET C.1

Existing condition

Image 86-89. 23 de enero. Taken by Alejandra Santoro



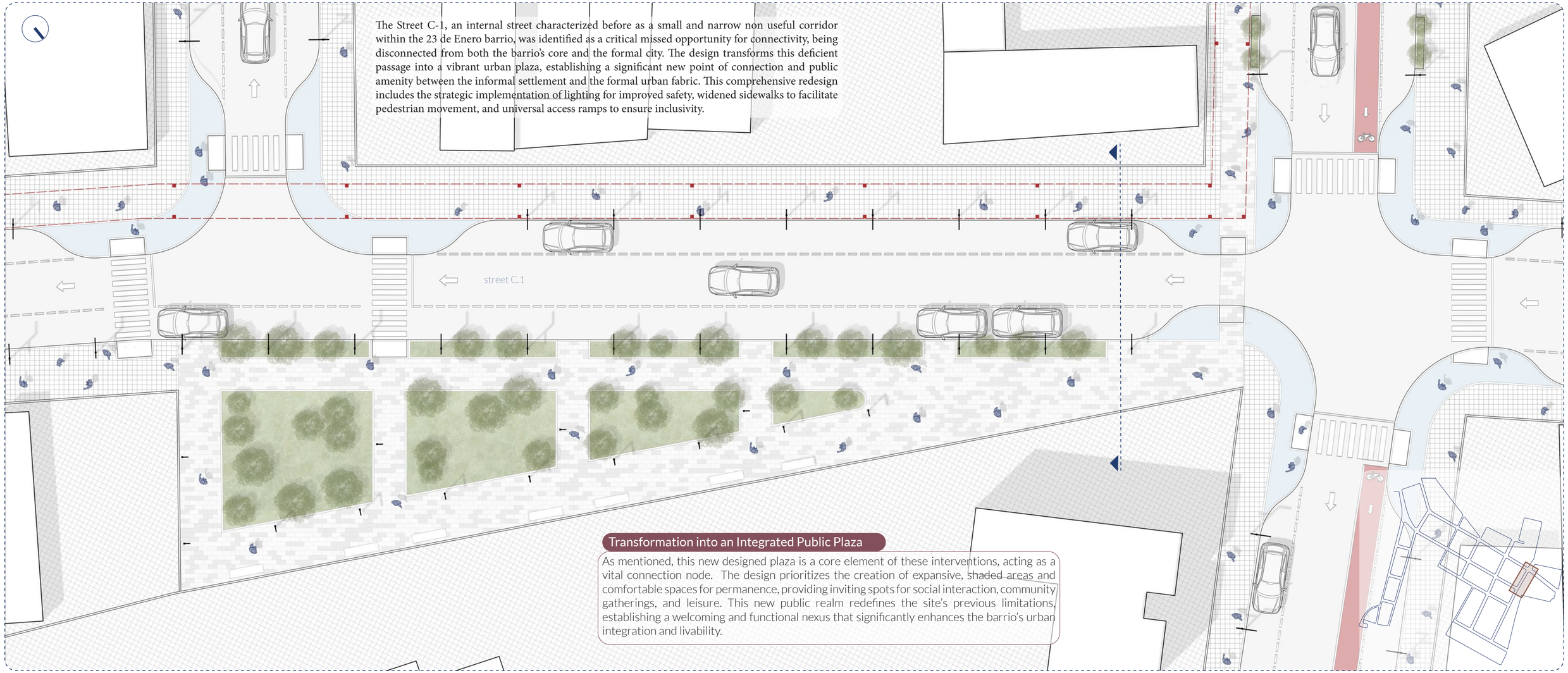


STREET C.1

Floor plan - Proposed condition

0m 5m 10m 15m

The Street C-1, an internal street characterized before as a small and narrow non useful corridor within the 23 de Enero barrio, was identified as a critical missed opportunity for connectivity, being disconnected from both the barrio's core and the formal city. The design transforms this deficient passage into a vibrant urban plaza, establishing a significant new point of connection and public amenity between the informal settlement and the formal urban fabric. This comprehensive redesign includes the strategic implementation of lighting for improved safety, widened sidewalks to facilitate pedestrian movement, and universal access ramps to ensure inclusivity.



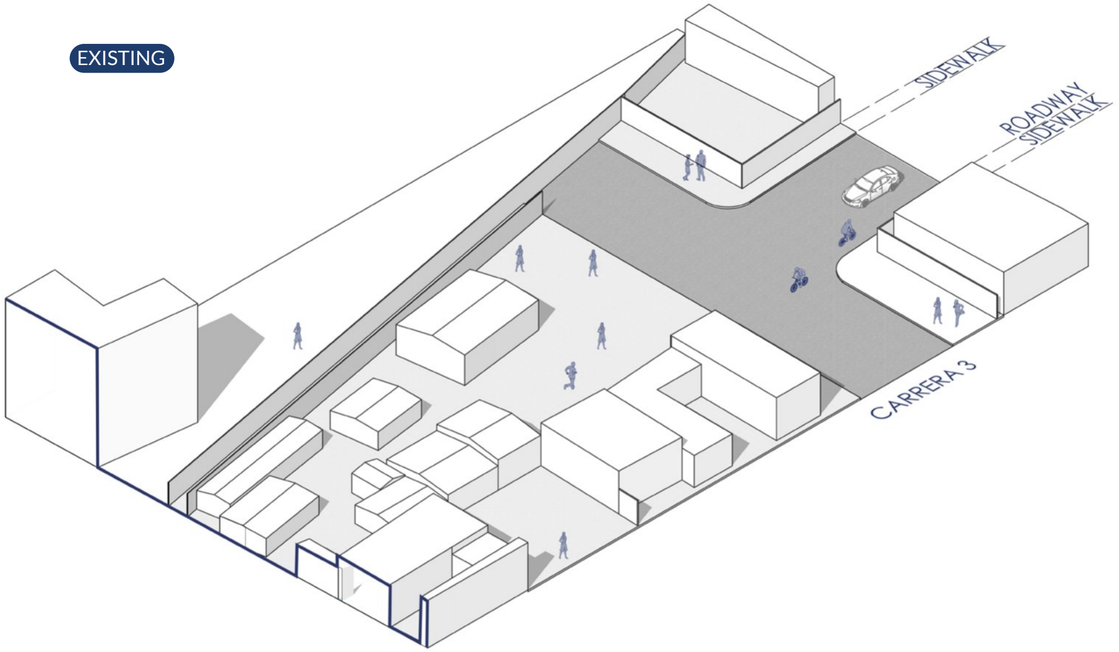
Transformation into an Integrated Public Plaza

As mentioned, this new designed plaza is a core element of these interventions, acting as a vital connection node. The design prioritizes the creation of expansive, shaded areas and comfortable spaces for permanence, providing inviting spots for social interaction, community gatherings, and leisure. This new public realm redefines the site's previous limitations, establishing a welcoming and functional nexus that significantly enhances the barrio's urban integration and livability.

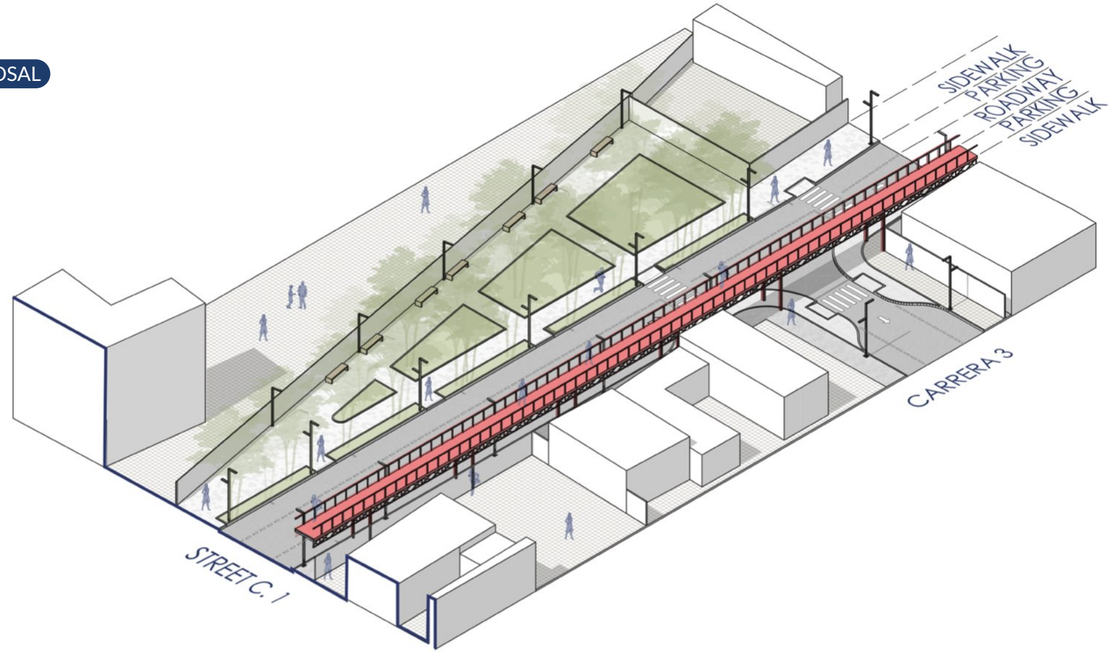
STREET C.1

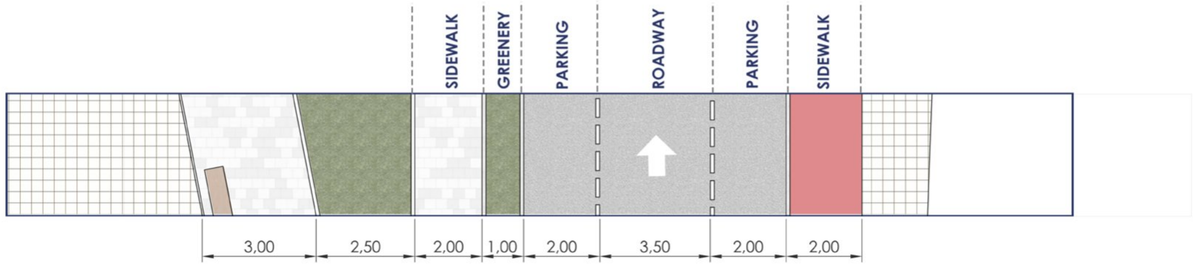
Street section

EXISTING



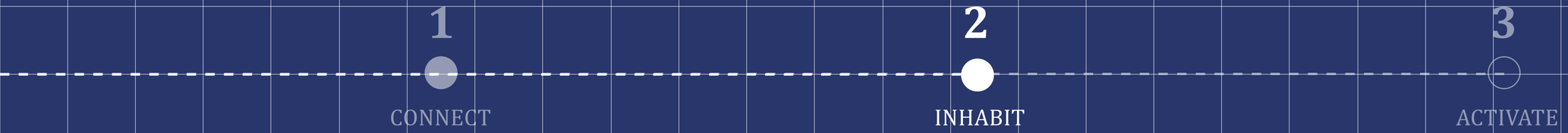
PROPOSAL





VIEW OF THE PROPOSED SCTREET C.1

DESGIN STRATEGIES



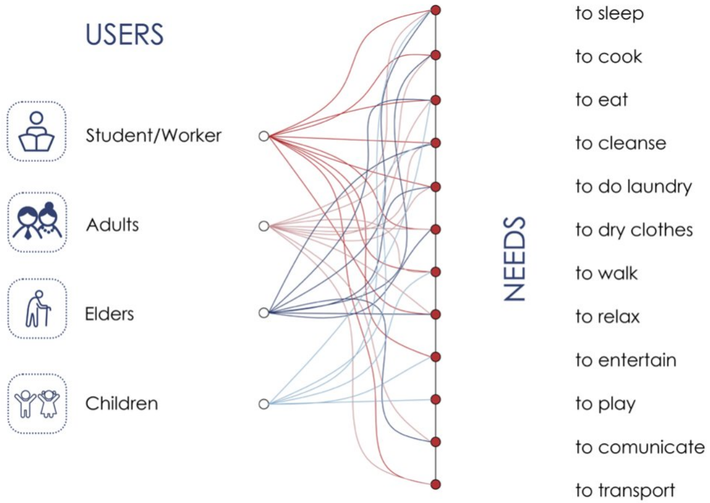
2 INHABIT

Critical diagnosis of the area.

This intervention targets two blocks situated at the edge of the barrio. Chosen for their strategic position, these blocks do not function as a boundary or limit but as potential connectors between the barrio and the wider urban fabric. Their location allows for new housing to be introduced without fragmenting the barrio, but instead strengthening its integration into the wider urban context. The project proposes the construction of new residential buildings that will host families relocated from the Urban Protection Zone and from areas restructured for public space and street openings.

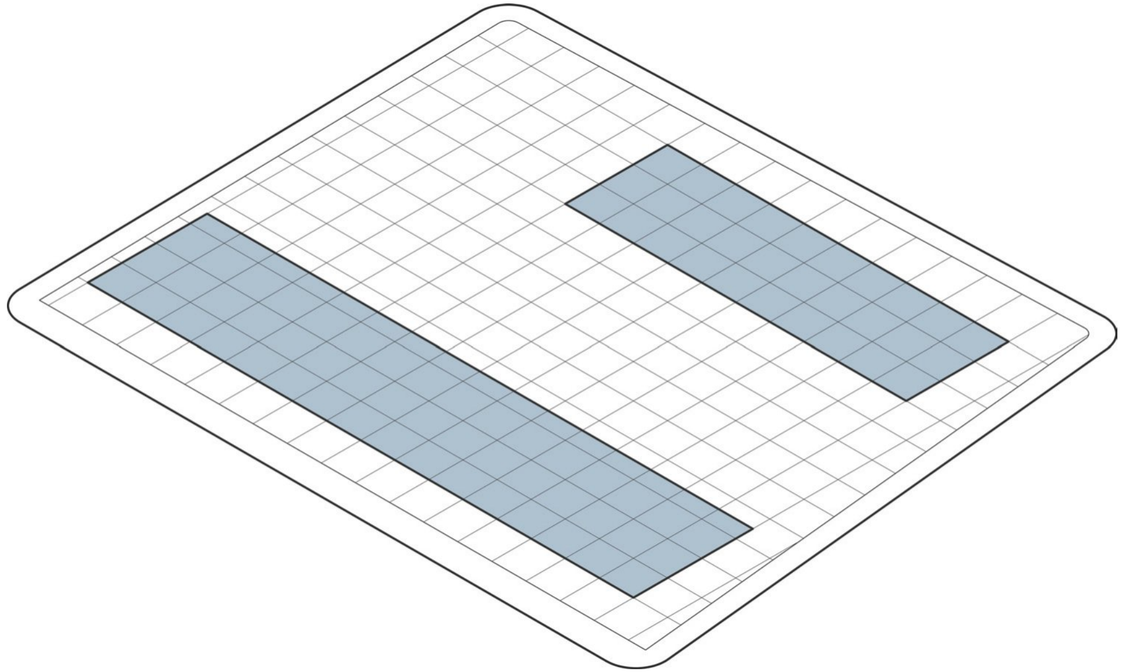
This design is not a fixed solution, but rather an example of one possible way to inhabit this area. The proposal is presented as a flexible, replicable model developed in response to the site's specific conditions such as orientation, spatial capacity, urban connections, and community needs. A modular architectural design will be applied in one block and replicated in the second. This approach ensures coherence, efficiency, and adaptability, and opens the possibility of expanding the model to other parts of the barrio in the future. The design prioritizes spatial integration, collective use, and continuity with both the existing urban landscape and the new interventions proposed throughout the project.

USERS AND NEEDS



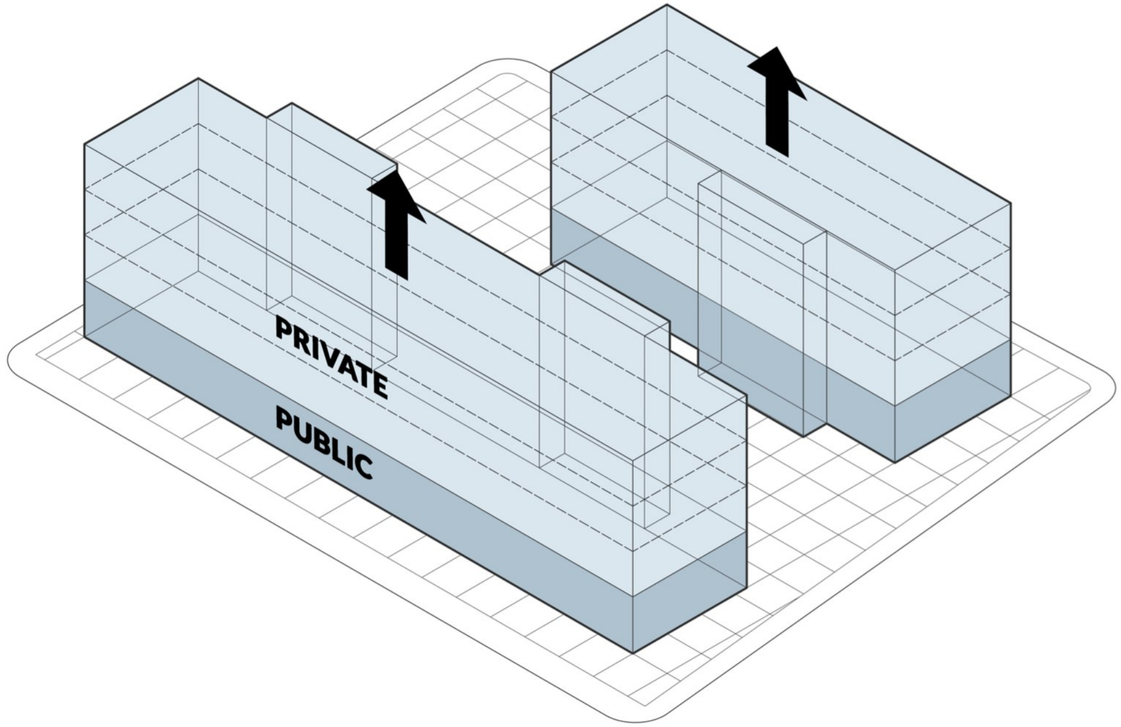
CONCEPT SCHEME

Design process



MODULE

A modular grid is introduced to structure the block and define the placement of future building volumes. This organizing system allows spatial clarity and flexibility in the arrangement of uses and circulation.

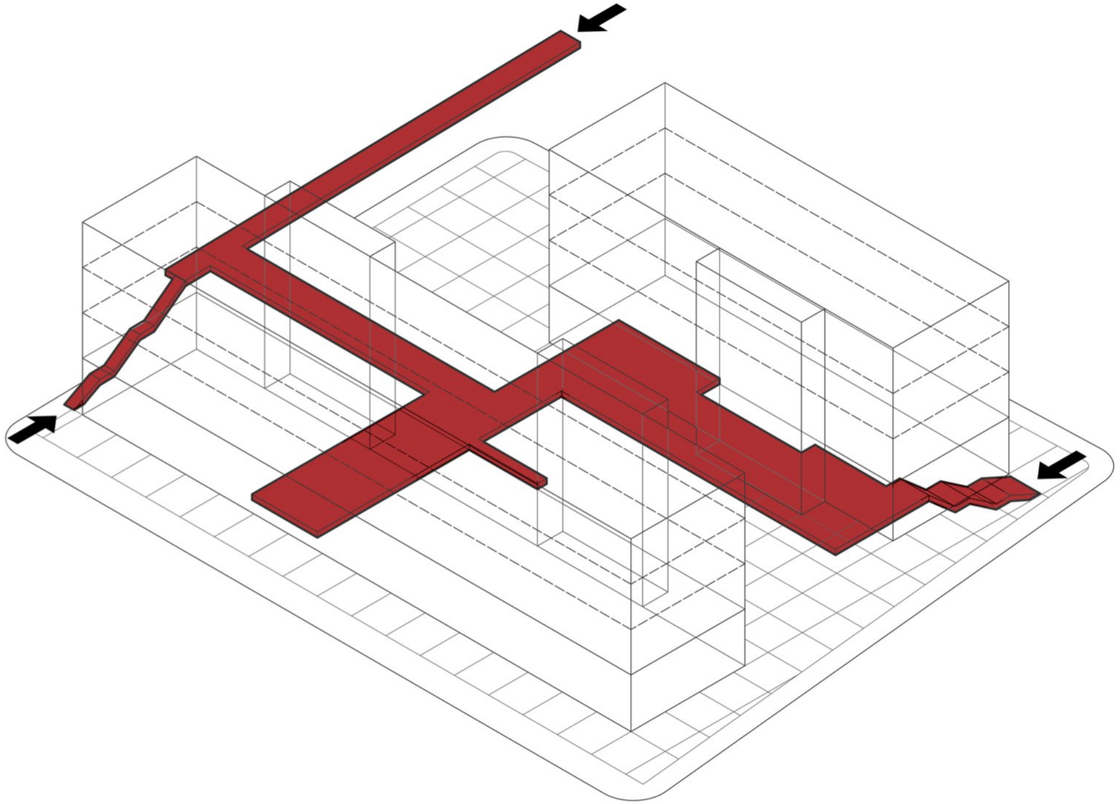


NEW VOLUMES

Three-story volumes are placed within the organizing module. The program is divided by level: commercial and public uses on the ground floor, and residential units on the upper floors, ensuring both accessibility and privacy.

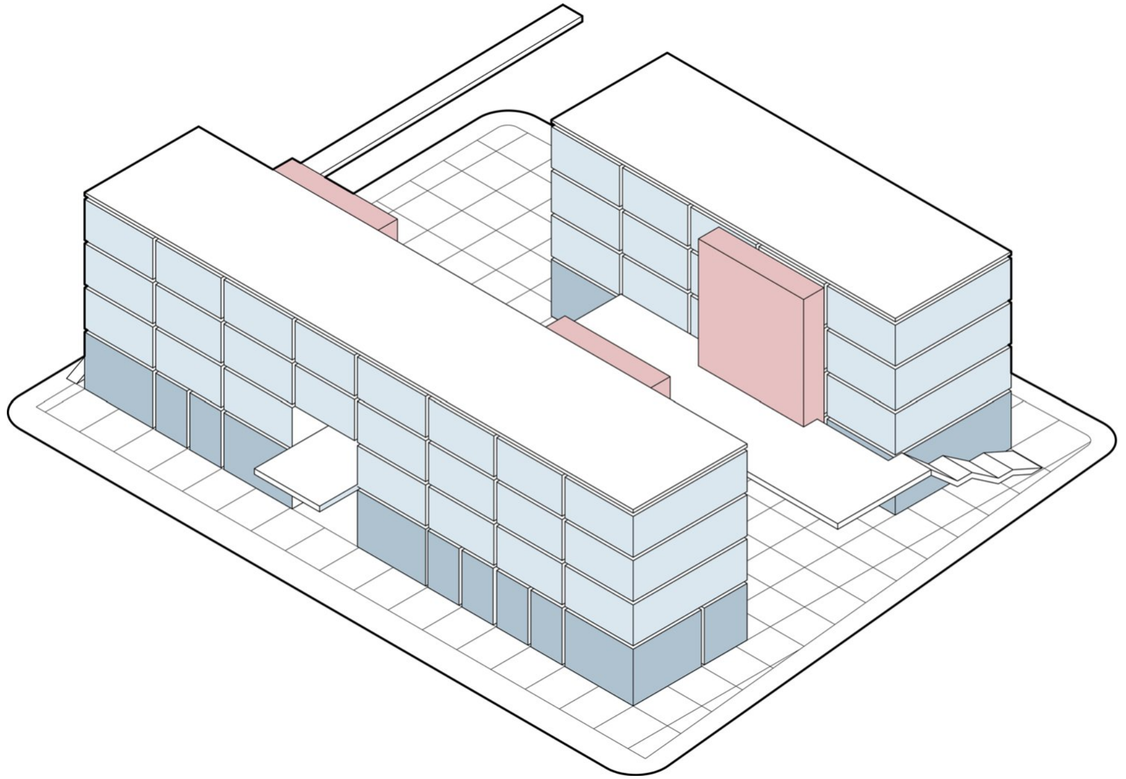
CONCEPT SCHEME

Design process



INTEGRATING THE WALKWAY

The walkway is incorporated into the first level of the building, creating elevated public terraces. This addition encourages outdoor activity beyond street level and enhances connectivity throughout the project.

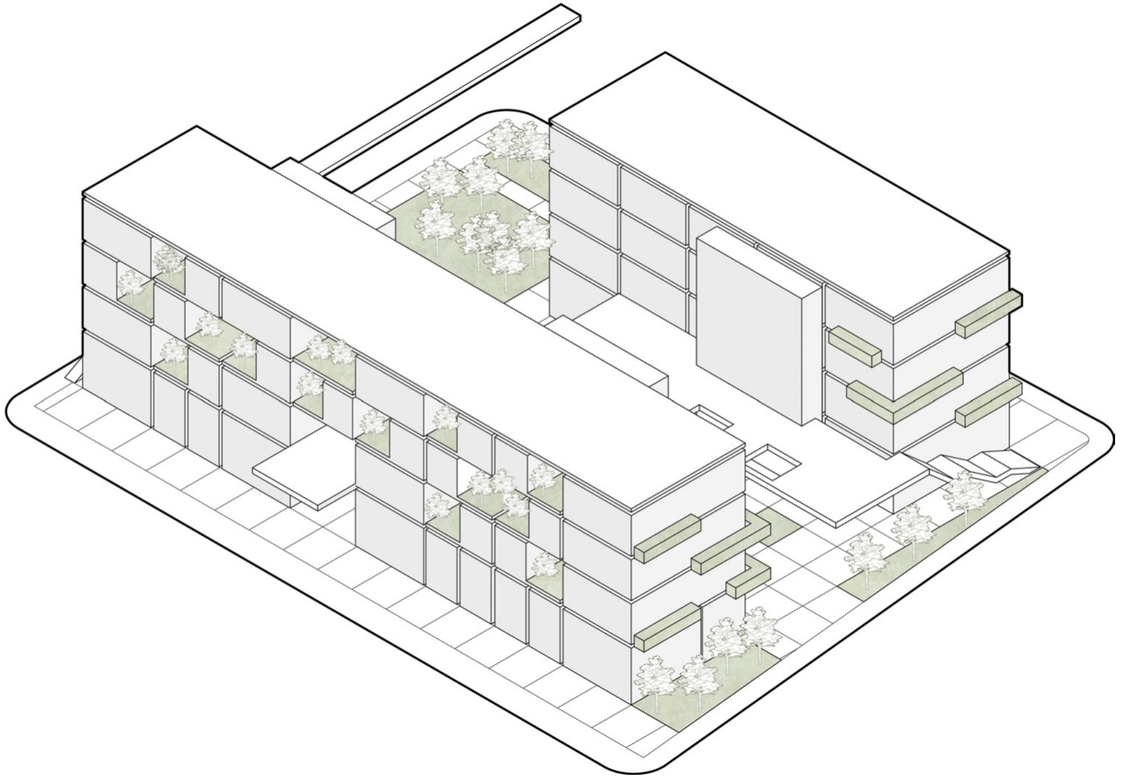


CREATING A MODULE ON THE VOLUMES

New sub-modules are carved within the volumes to define individual units and guide the building's structural and spatial rhythm. These subdivisions improve internal organization and architectural coherence.

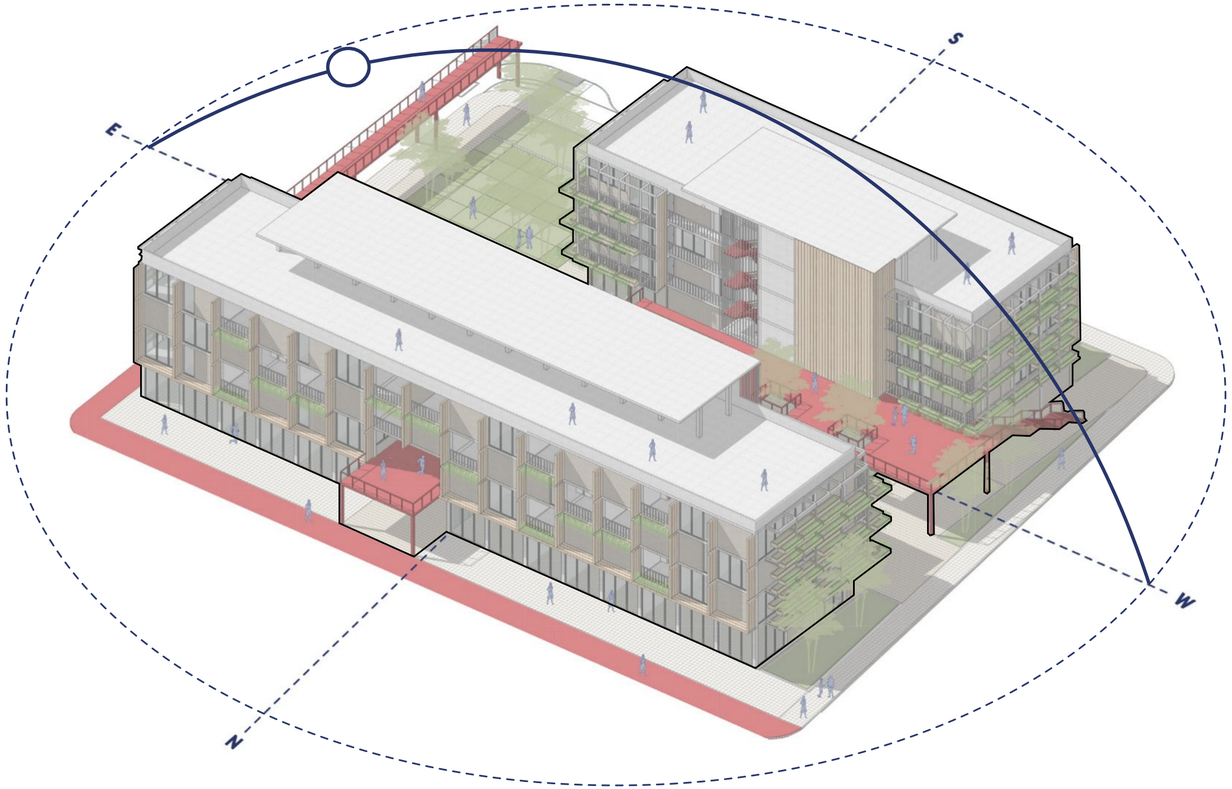
CONCEPT SCHEME

Design process



VERTICAL TREE

Some volumes are partially emptied to create open-air terraces, transforming the massing into a vertical and horizontal “tree”. This improves user comfort and contributes to environmental quality by increasing natural light, ventilation, and green integration.



ADAPTIVE FACADE

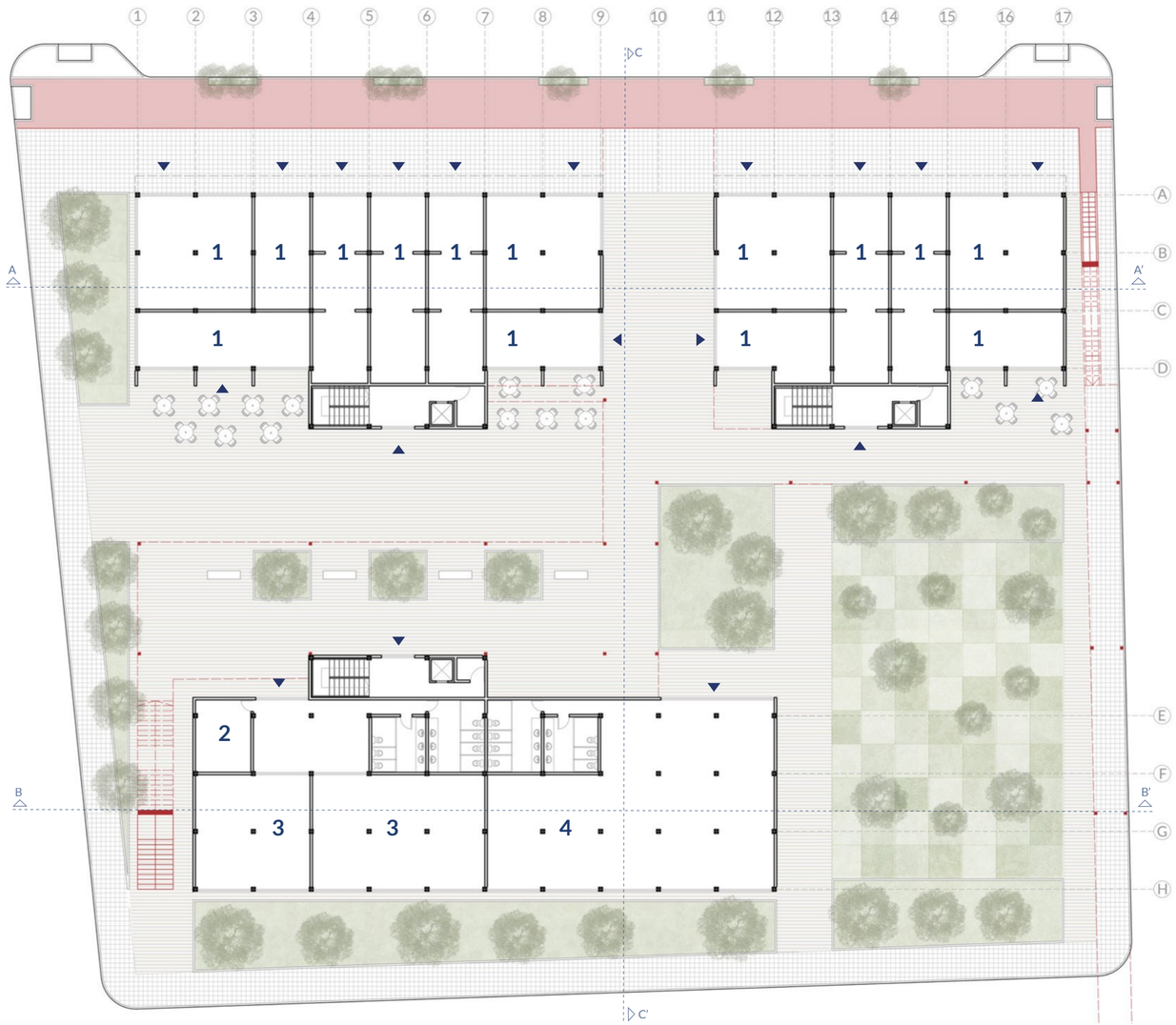
Each building face is designed with a façade that responds to orientation and function. The strategy maximizes natural light, cross ventilation, and user comfort. Every façade type is adapted to specific interior activities, ensuring spatial efficiency and well-being.

AXONOMETRY

FLOOR PLAN

Street level floor plan

0m 5m 10m 20m



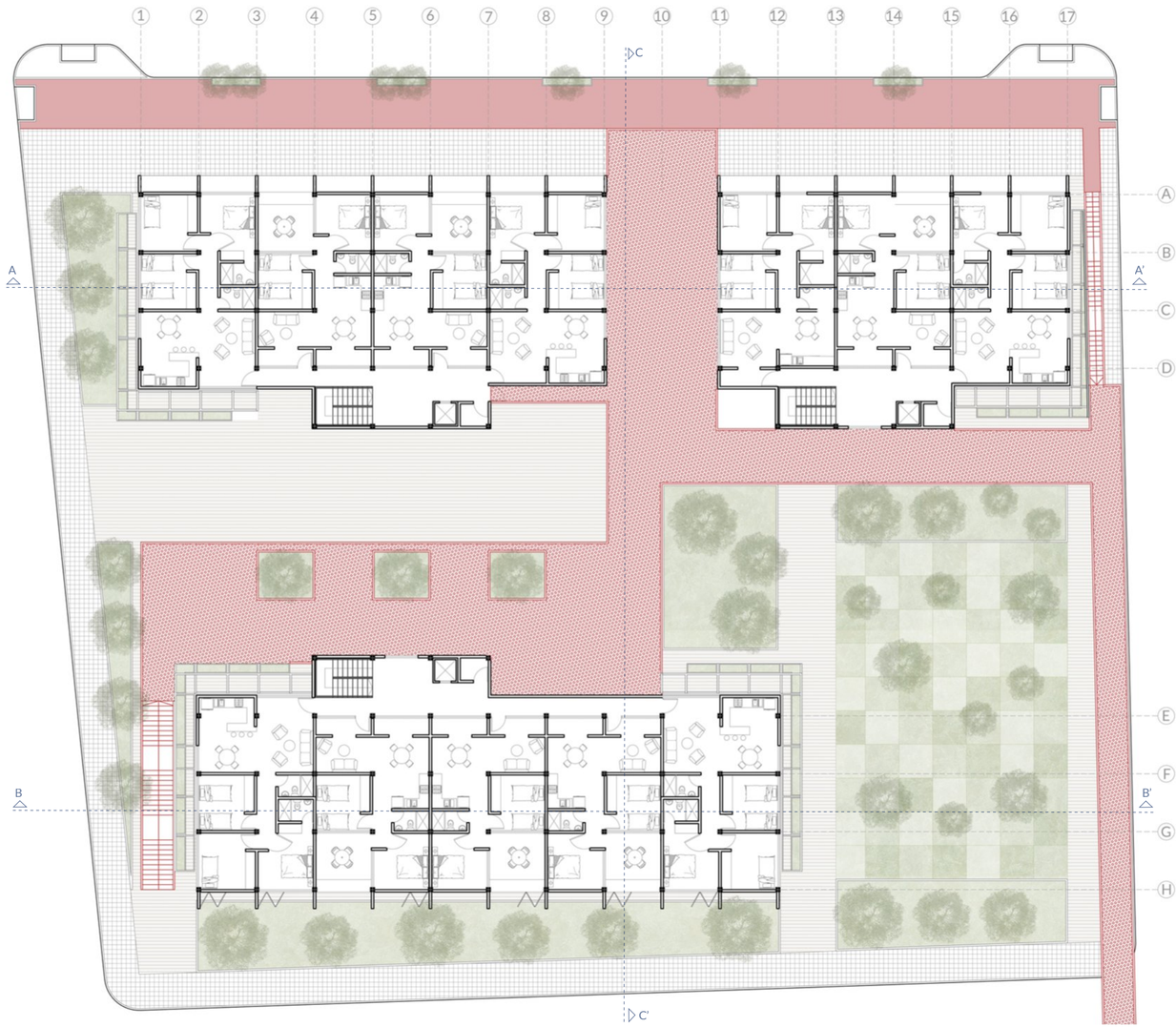
PROGRAM

1 - Commercial stalls
2- Deposit
3- Multipurpose room
4- Gym

FLOOR PLAN

First floor

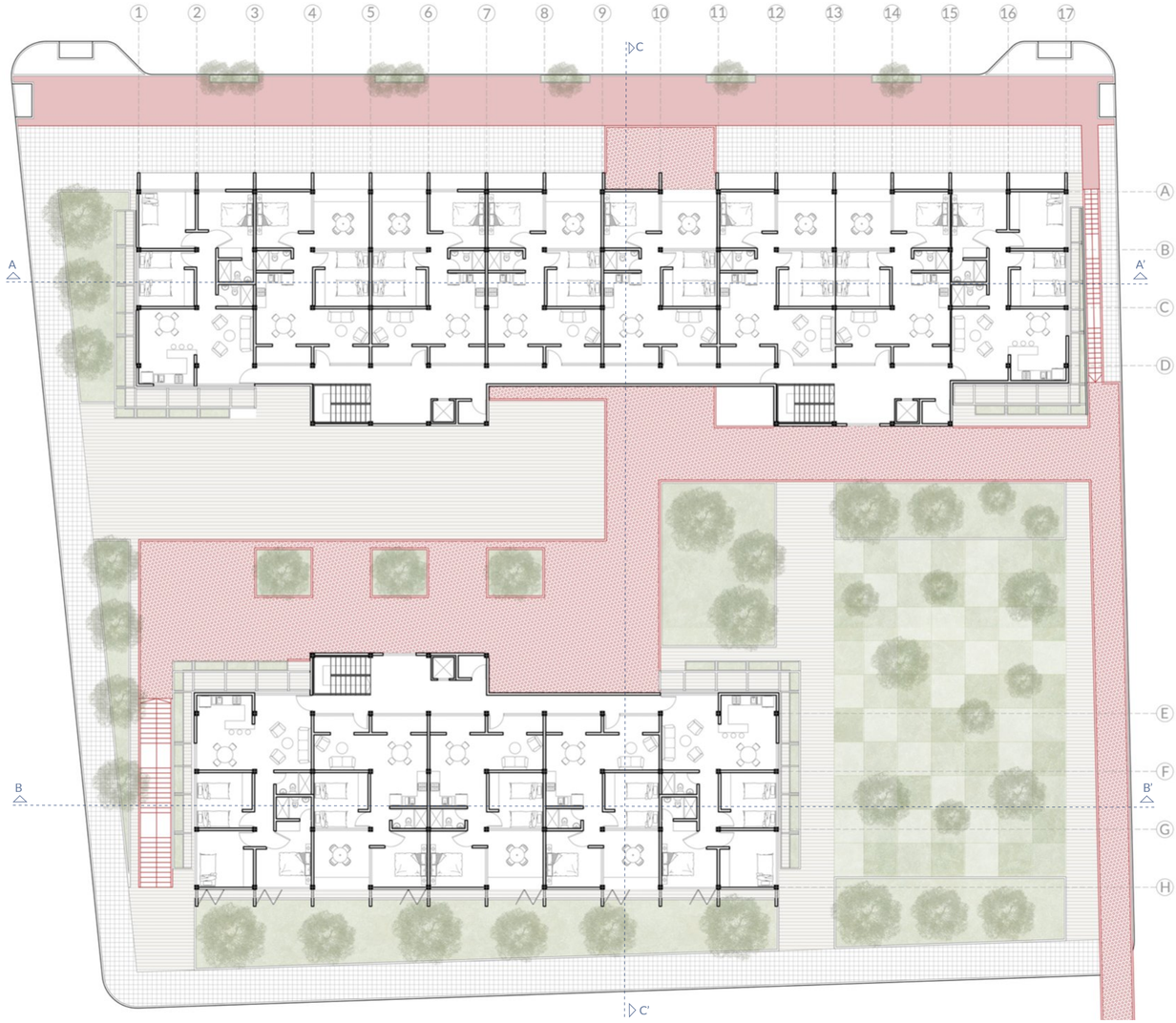
0m 5m 10m 20m



FLOOR PLAN

Second floor

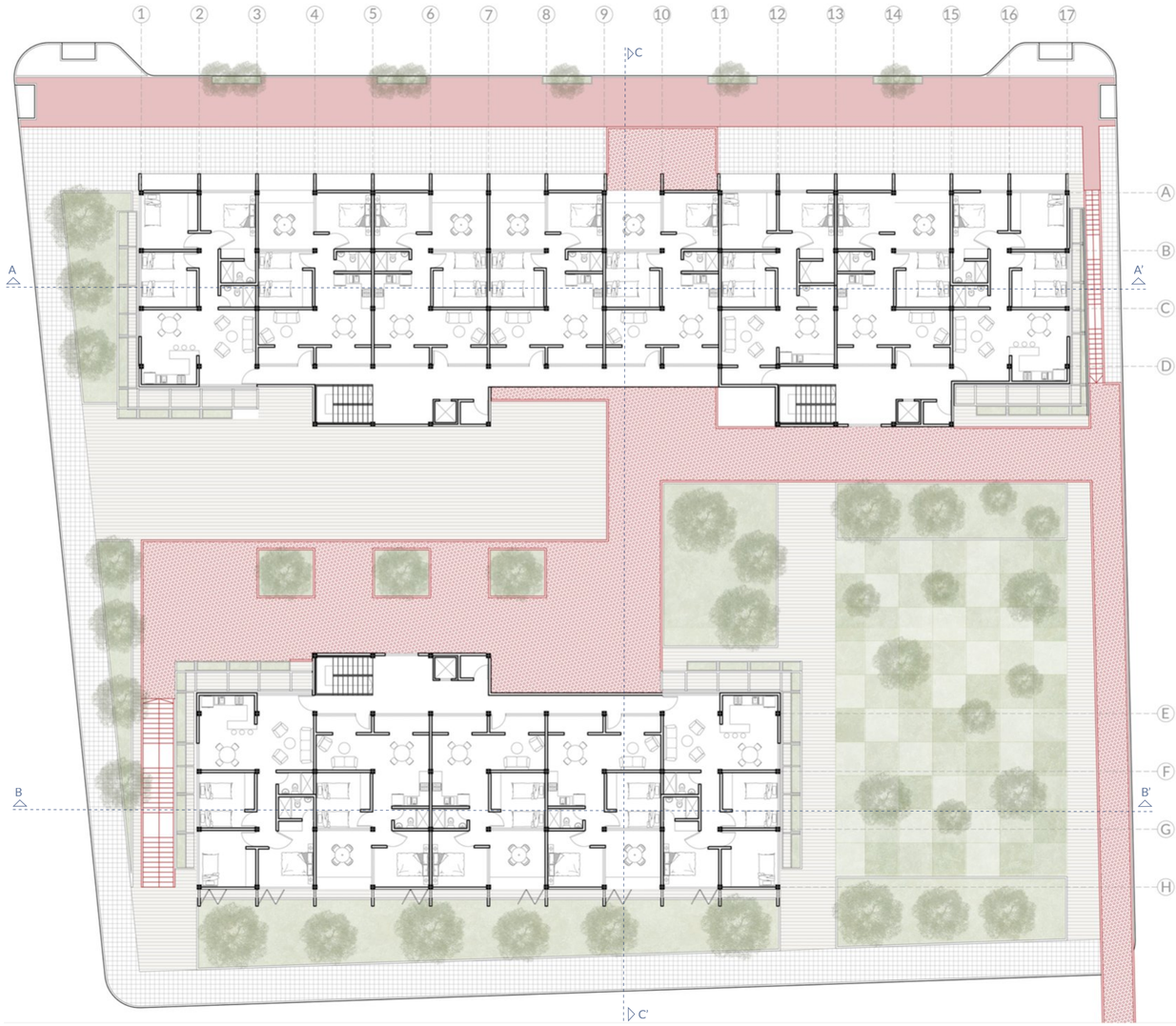
0m 5m 10m 20m



FLOOR PLAN

Third floor

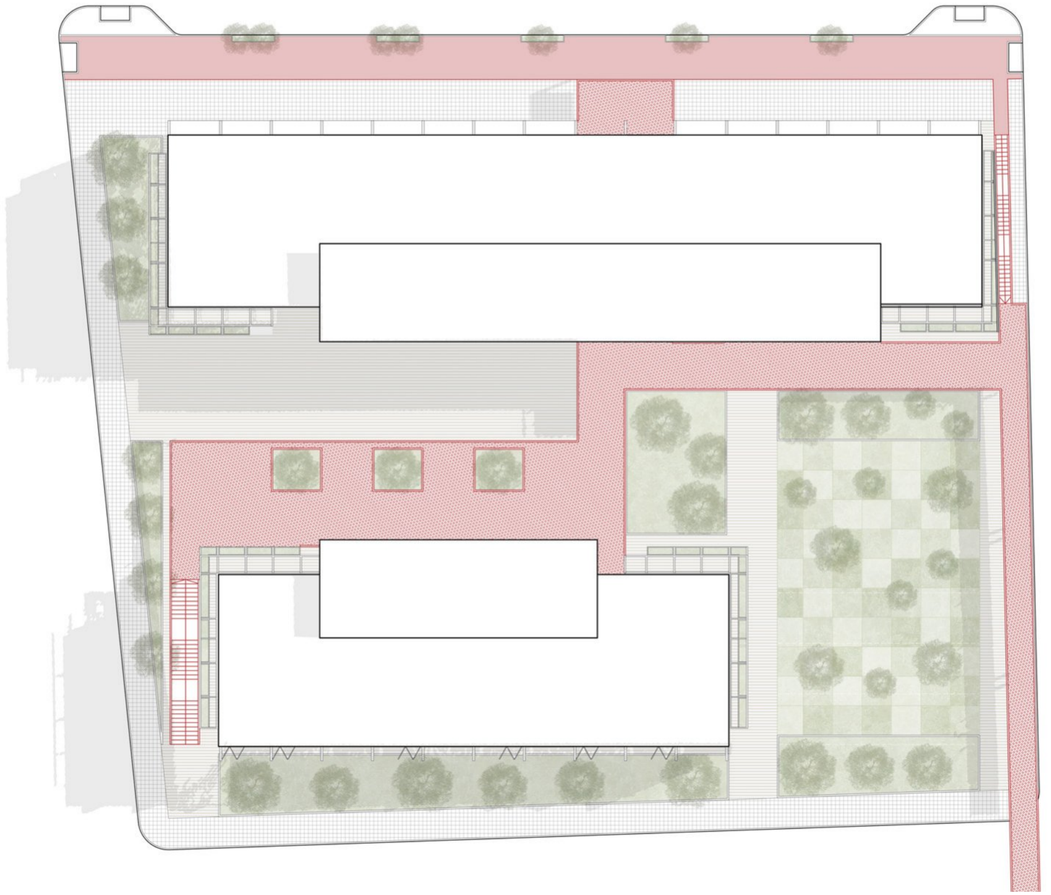
0m 5m 10m 20m



FLOOR PLAN

Roof floor plan

0m 5m 10m 20m



APARTMENT TYPOLOGIES

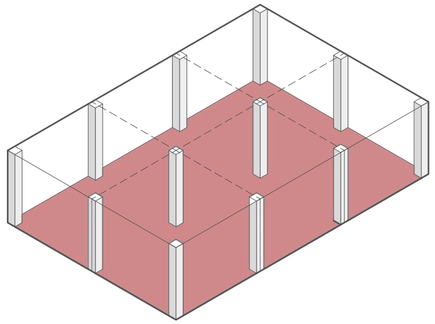
Concept scheme

The proposed apartment units are designed taking into account the real needs and living conditions of the families that will inhabit them.

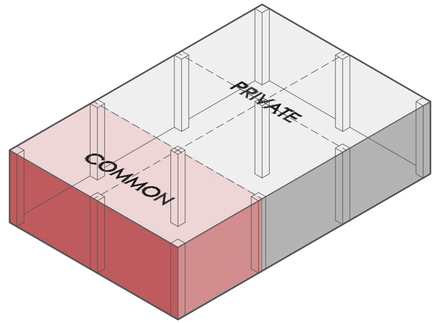
The design process begins with a base volume and is developed through a series of spatial operations that respond to structural clarity, flexibility of use, and contextual integration. The modular grid (3.5m x 3.5m) organizes internal divisions and structural rhythm, while also allowing adaptability to future needs.

Each unit defines a clear threshold between common and private areas, while maintaining spatial continuity. The inclusion of porches or balconies reinforces the connection between the interior and the shared exterior space, encouraging interaction and ventilation.

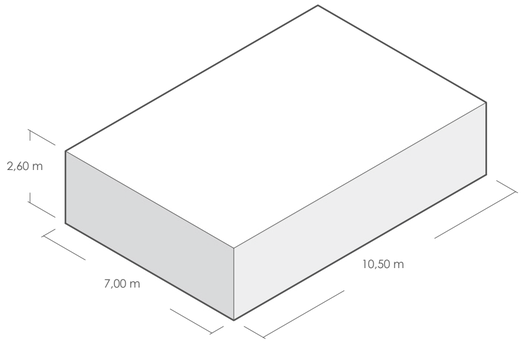
The final spatial layout prioritizes functionality, ventilation, natural light, and the development of dignified, adaptable and flexible living spaces that reflect both the context and the community's lifestyle.



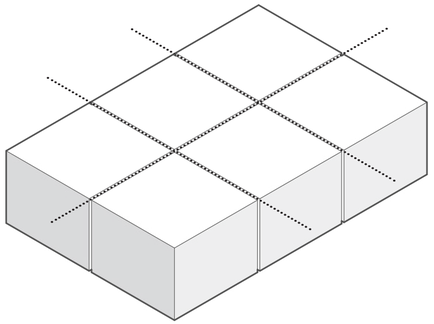
STRUCTURE



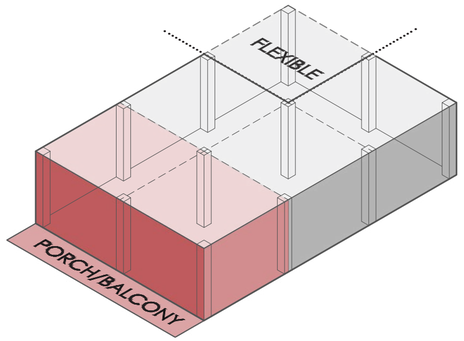
PRIVATE - COMMON THRESHOLD



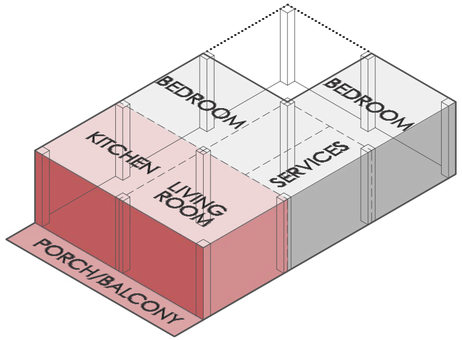
BASE VOLUME



MODULE 3.5M X 3.5M



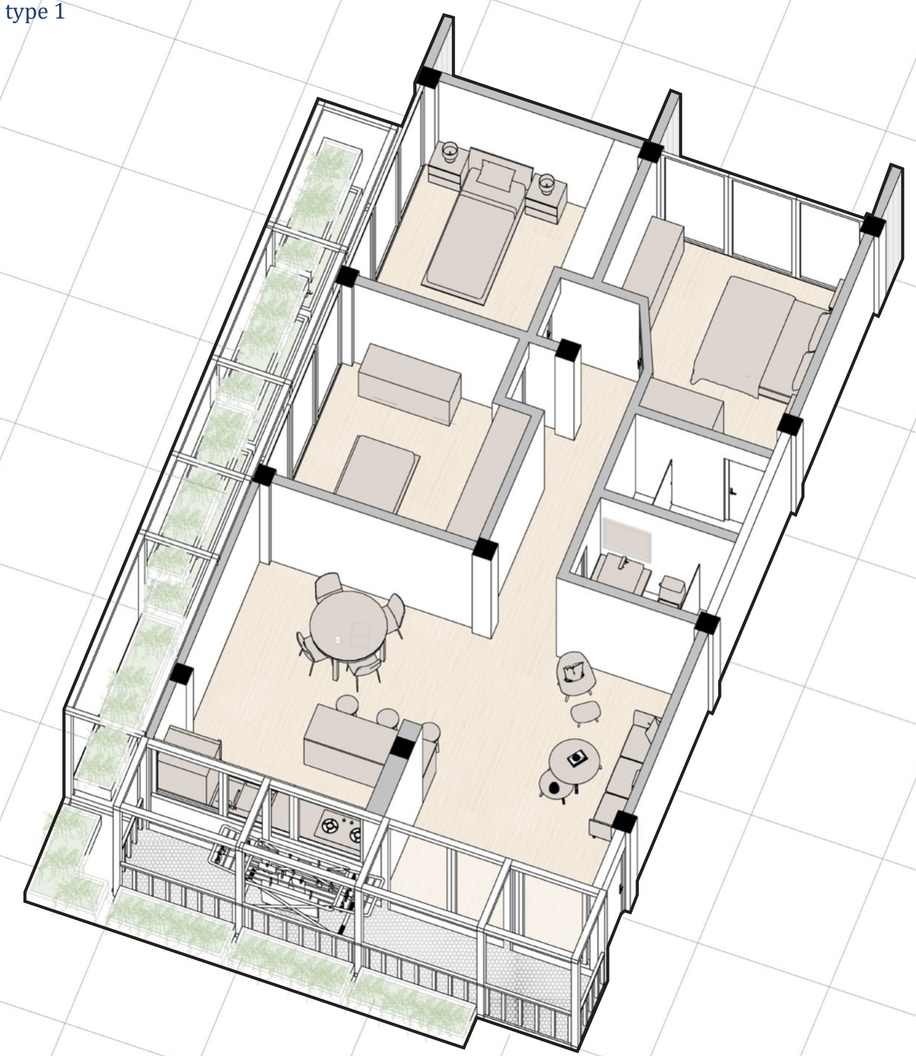
PROCH / BALCONY ADITTION



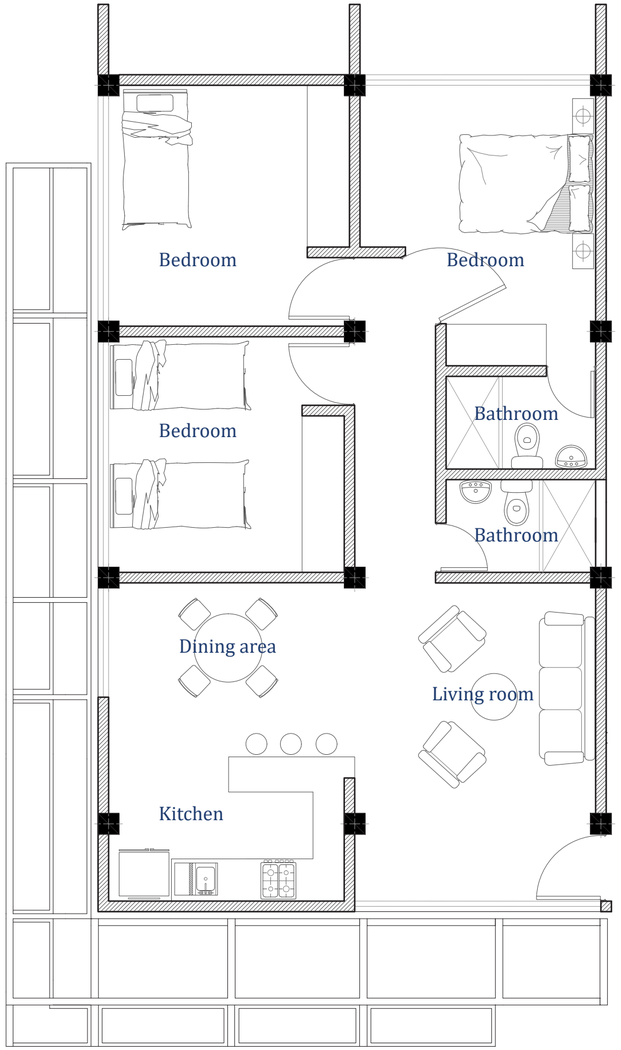
SPATIAL ZONING

APARTMENT TYPOLOGIES

Apartment type 1

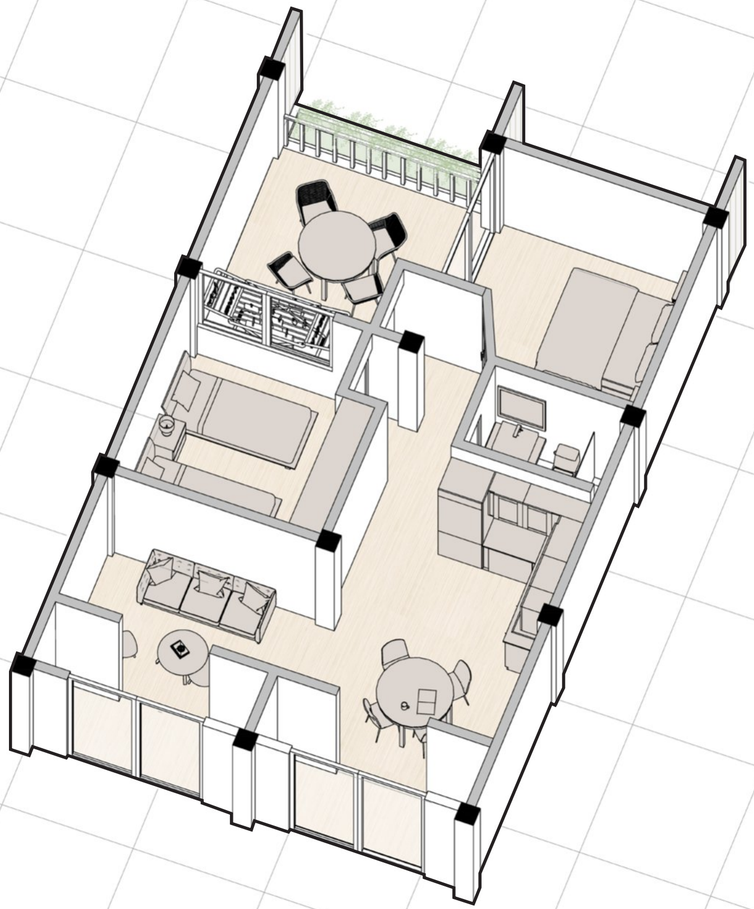


Floor plan

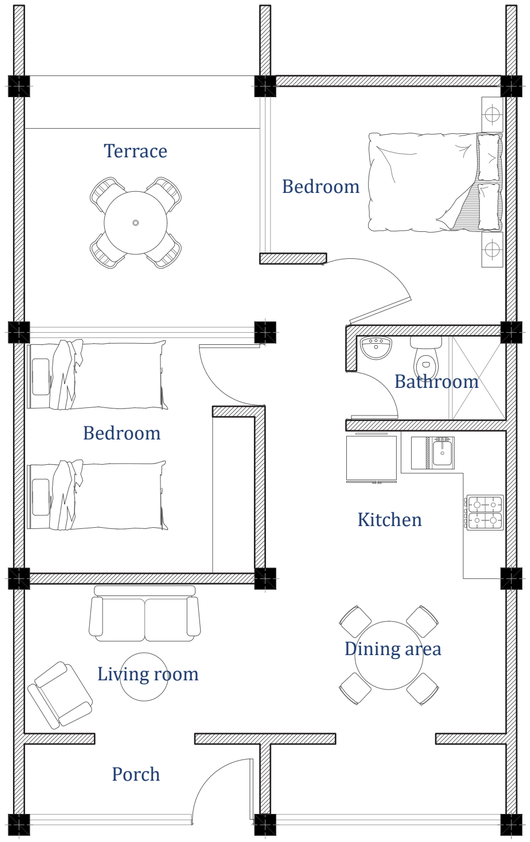


APARTMENT TYPOLOGIES

Apartment type 2



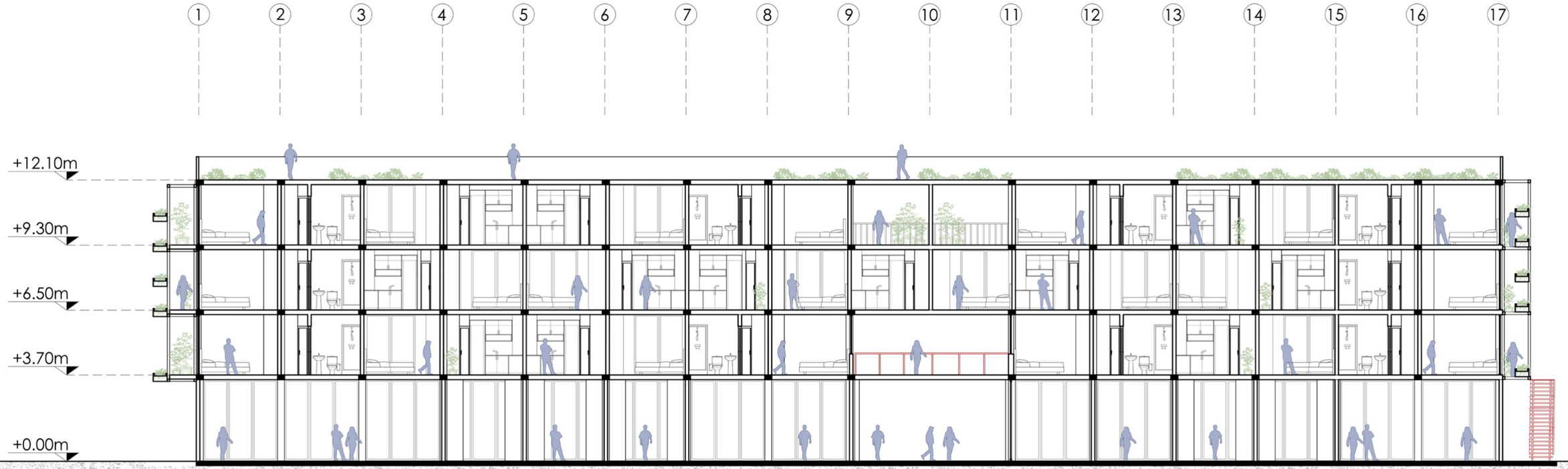
Floor plan



SECTIONS

Section A-A'

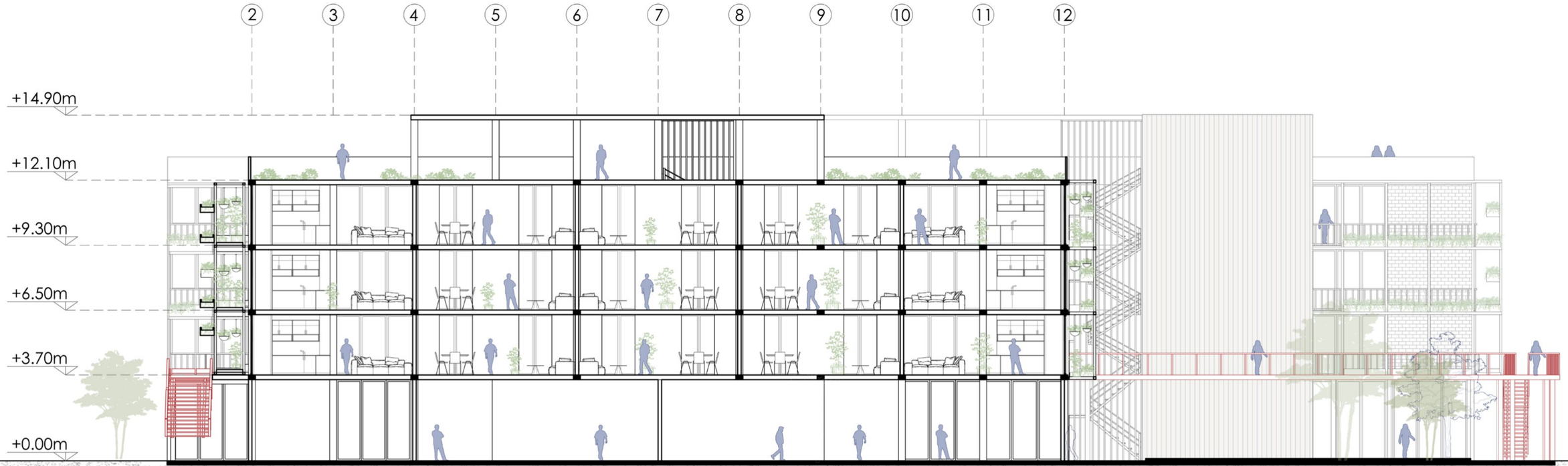
0m 5m 10m 20m



SECTIONS

Section B-B'

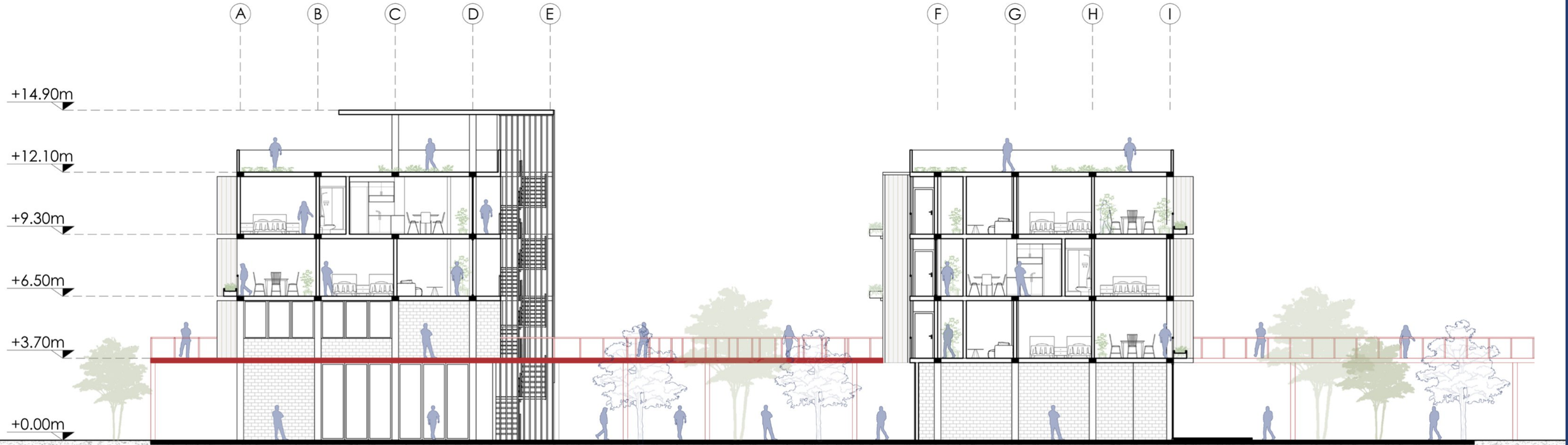
0m 5m 10m 20m



SECTIONS

Section C-C'

0m 5m 10m 20m



ELEVATIONS

North

0m 5m 10m 20m

ELEVATIONS

South

0m 5m 10m 20m

ELEVATIONS

West

0m 5m 10m 20m

MATERIALS

1. Green Concrete
Concrete designed for high performance and sustainability, either through a life cycle that minimizes environmental impact or through production processes that are eco-friendly, or both.

2. Timber Wood
Processed wood in plank form, commonly used for flooring, wall panels, and window or door frames. Timber is a traditional, locally familiar material that combines structural functionality with natural aesthetic appeal.

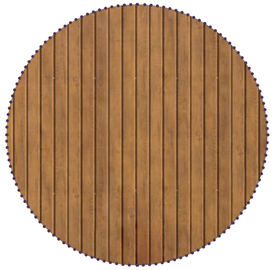
3. Low-E Glass
Glass coated with a low-emissivity layer to enhance energy efficiency in windows and doors. Low-e glass reduces heat transfer, helping maintain indoor comfort while lowering energy consumption.

4. Metal
A mesh material used in balconies and shading devices to limit solar heat gain, improve natural ventilation, and create shaded areas without blocking views or daylight.

5. Brick
A standard construction material widely used in Barquisimeto, known for its thermal performance, strength, and adaptability. Bricks are locally produced and form a familiar element of the city's built environment.

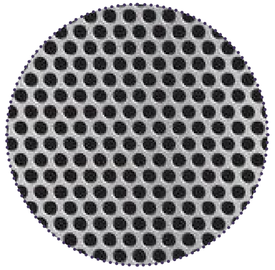
6. Planting
Vegetation incorporated into building façades or outdoor spaces to provide shade, enhance natural ventilation, reduce noise, and absorb CO_2. Planting integrates local flora, contributing to environmental comfort and a connection with the natural context.

1. Green Concrete



2. Timber Wood

3. Low-E Glass



4. Metal

5. Brick

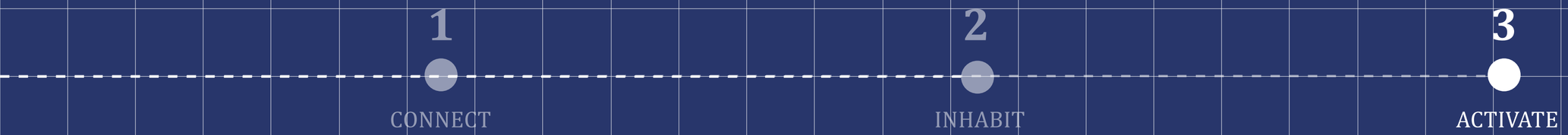
6. Planting

VIEW 1


VIEW 2

VIEW 3

DESGIN STRATEGIES



3 ACTIVATE

Critical diagnosis of the area: **potential anchors for public life.**

This section presents a critical assessment of three key public spaces within the 23 de Enero barrio, two existing and one newly proposed, identified for their strategic potential to gather urban life. These areas were selected based on their location, current use, and their potential to become active social nodes. Each diagnosis highlights the challenges currently undermining their function and proposes opportunities for transformation through design.

Plaza 23 de Enero – A high-traffic node with no public identity

Regardless of its central location and abundant pedestrian flow, Plaza 23 de Enero remains invisible within the barrio. Informal vendors operate daily, yet the space lacks basic infrastructure with its lack of shade, lighting, seating, or defined edges, making it uncomfortable and underutilized. Its current state misses the opportunity to serve as a meaningful public space that supports both social life and informal economies.

Plaza Mirador 23 de Enero – A new heart for the barrio

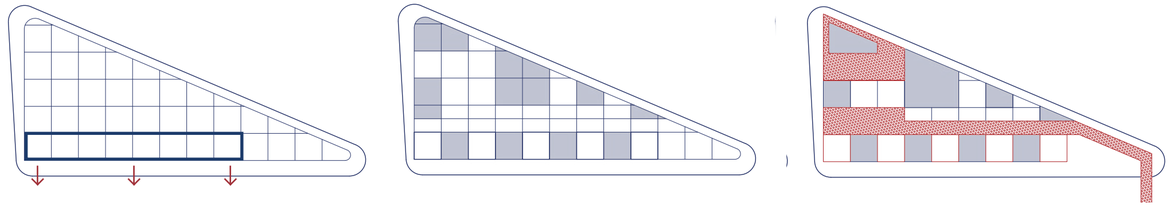
This centrally positioned site, though designated as an urban protection zone, is presently occupied by informal housing. Located on elevated ground with expansive views of the city and surrounding landscape, it holds significant spatial and visual potential. Its current state illustrates both land-use conflict and the loss of opportunities for collective benefit. Converting this area into public space would restore its intended environmental and urban role while providing the barrio with a central plaza that reconnects fragmented sectors and reinforces local identity.

Plaza Deportiva 23 de Enero – A highly used space in poor condition

Located in the south of the barrio, this sports court is a key social space, especially for youth. However, it lacks basic infrastructure (damaged pavement, no lighting, no seating) limiting its potential. Despite its active use, the area feels neglected. Upgrading it offers a chance to strengthen its role as a safe, inclusive, and multifunctional public space.

PLAZA 23 DE ENERO

Design Process



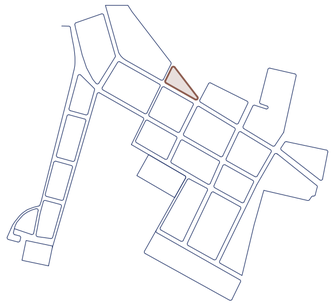
1. Creation of a 5m grid taking into account the main street and relation with pedestrians

2. Formation of greenery and volumes from the grid

3. Integration of the walkway

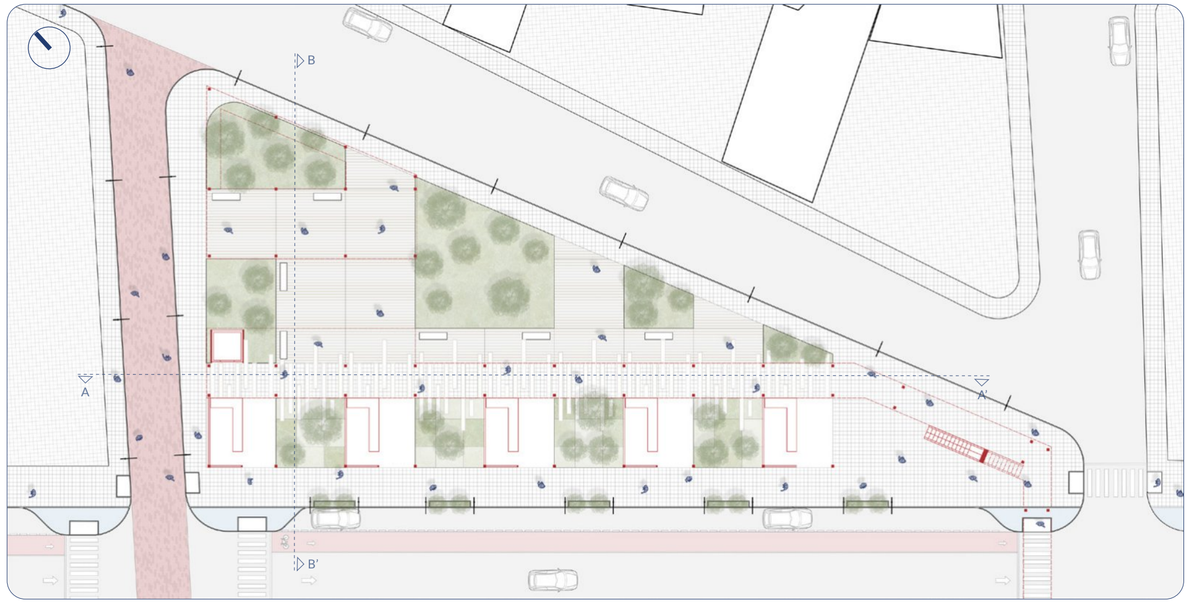
The intervention restructures Plaza 23 de Enero to recover its role as a public and commercial hub within the barrio. A new elevated platform creates shaded areas for informal vendors and organizes a linear mini-market at street level. The design incorporates vegetation, seating, and clear pedestrian routes, promoting comfort and interaction. The two levels work together to activate the space both vertically and horizontally, enhancing connectivity with the surrounding streets and encouraging a new social dynamic.

Keyplan



Street level floor plan

0m 5m 10m 20m



Roof floor plan

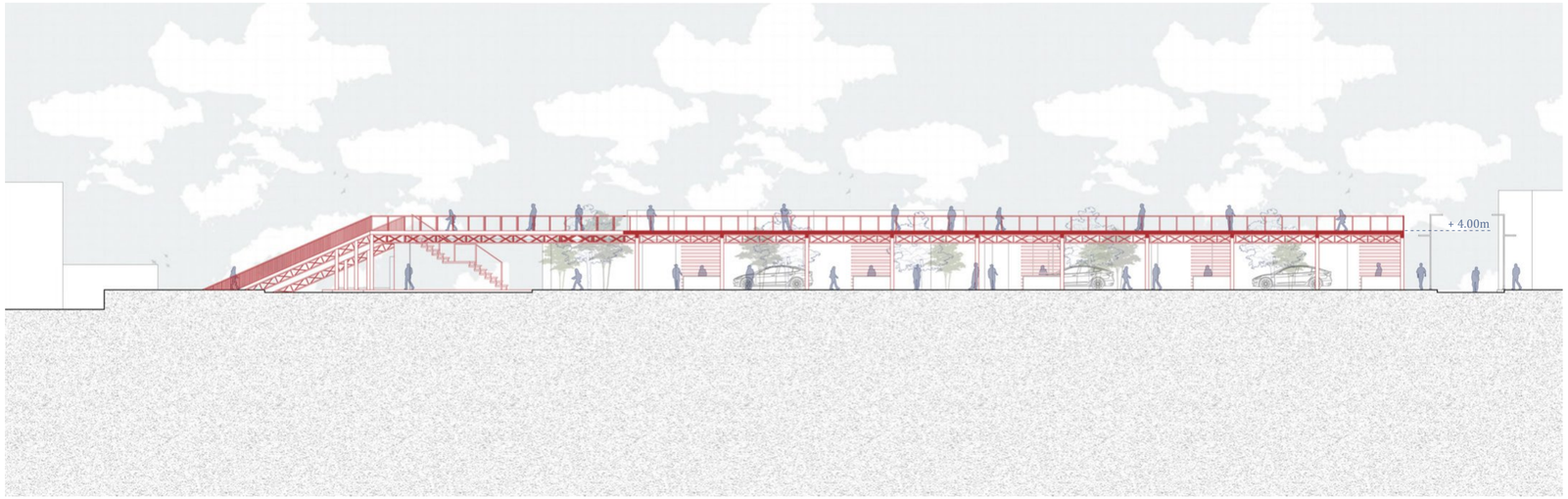
0m 5m 10m 20m

PLAZA 23 DE ENERO

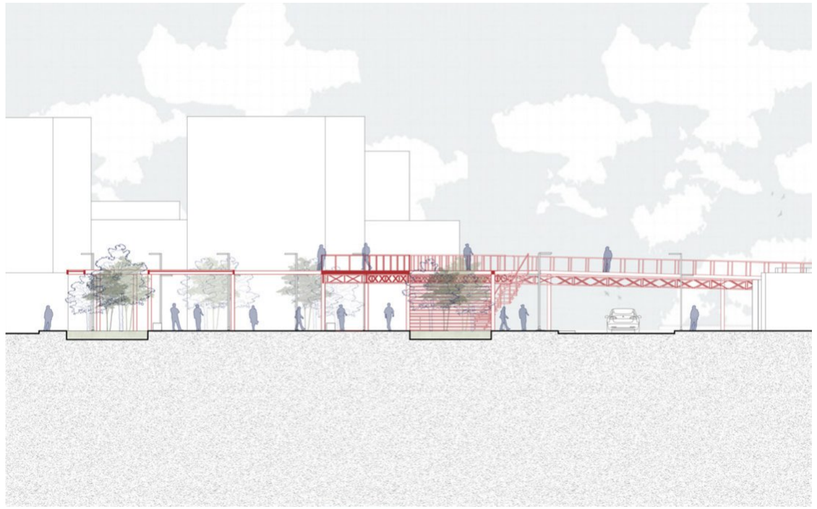
Sections

0m 5m 10m 20m

Section A-A’

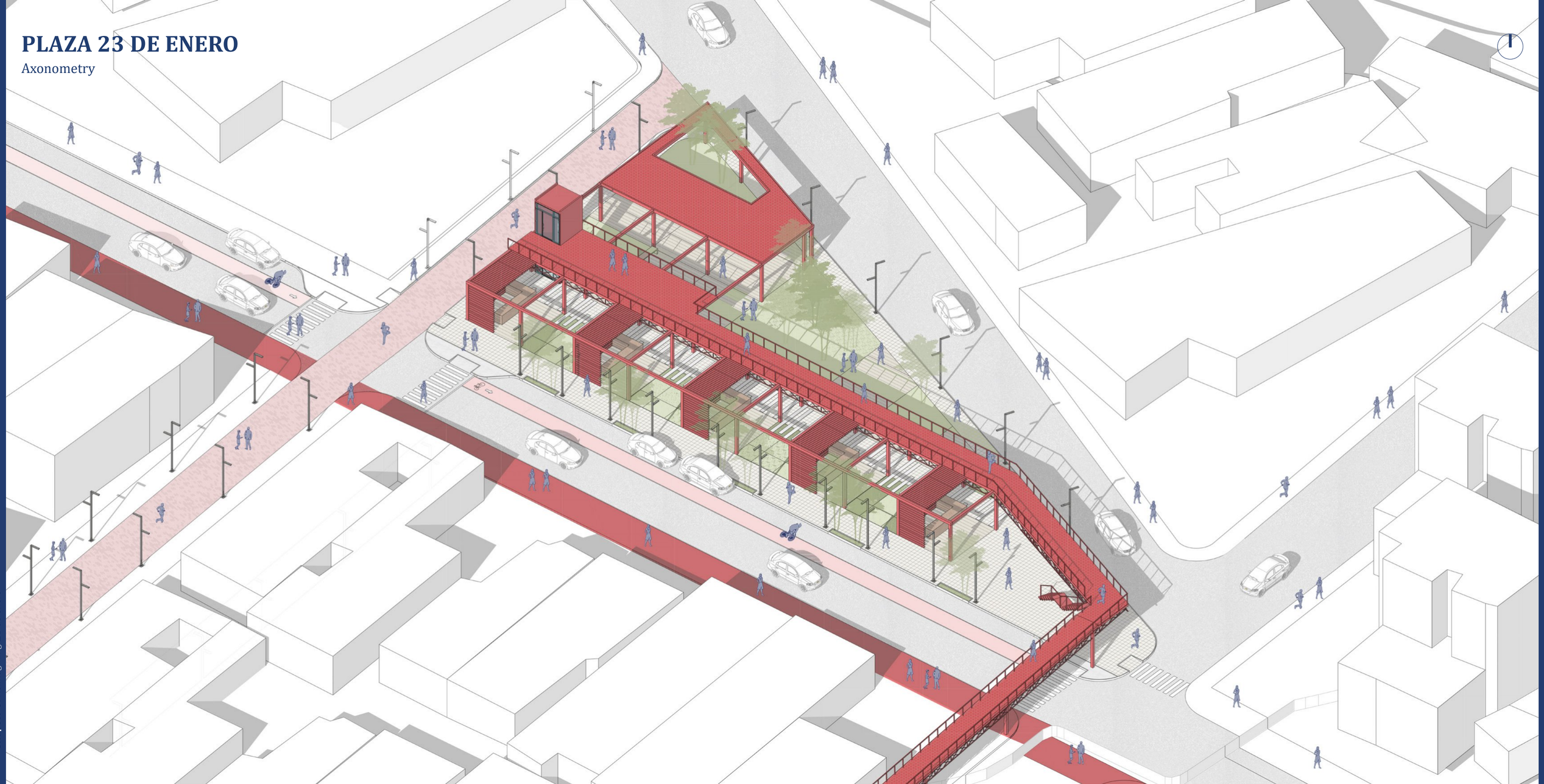


Section B-B’



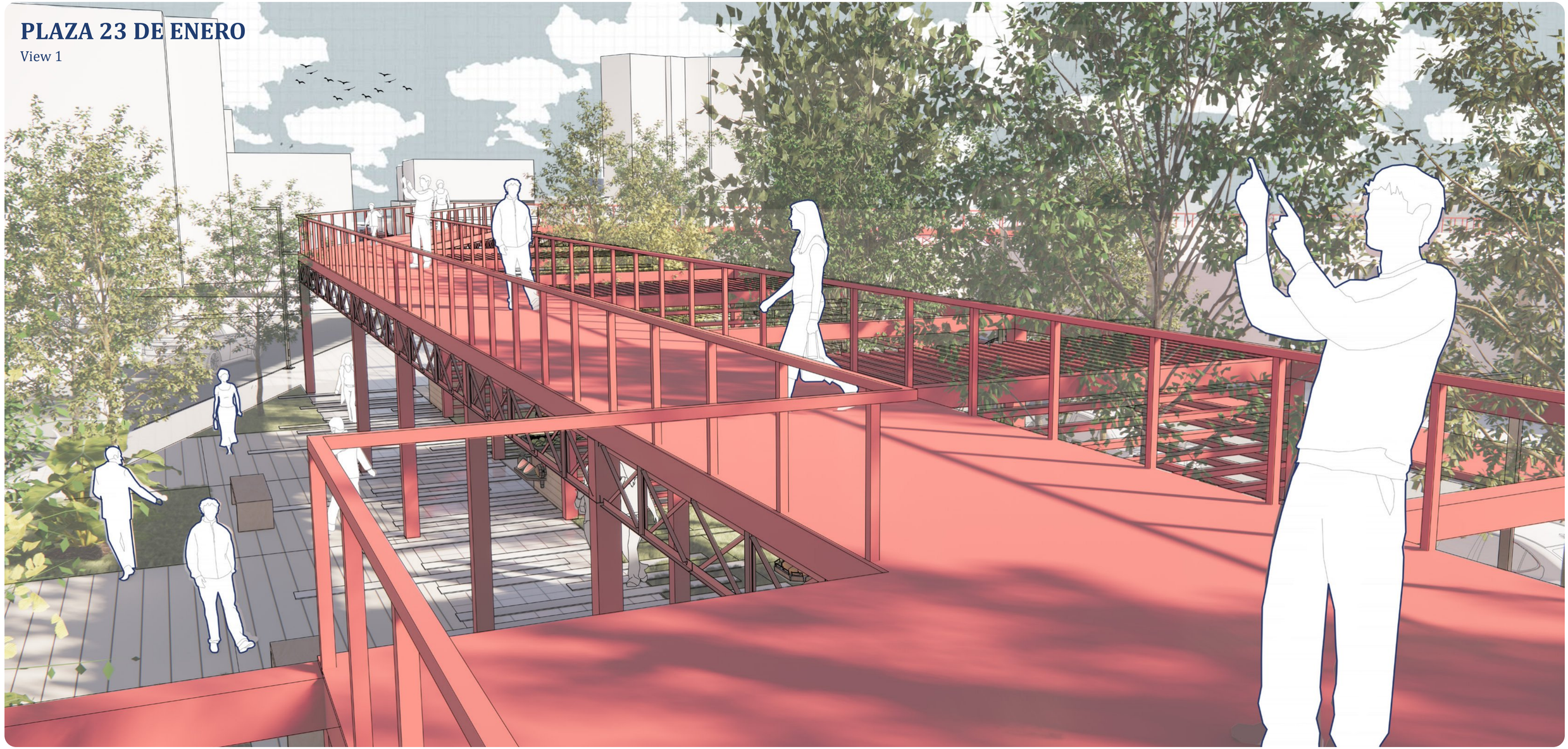
PLAZA 23 DE ENERO

Axonometry



PLAZA 23 DE ENERO

View 1



PLAZA 23 DE ENERO

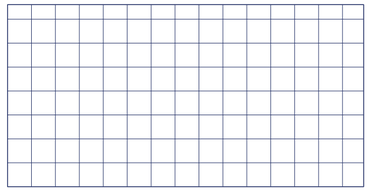
View 2

PLAZA 23 DE ENERO

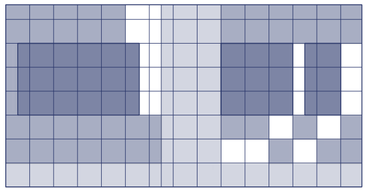
View 3

PLAZA MIRADOR 23 DE ENERO

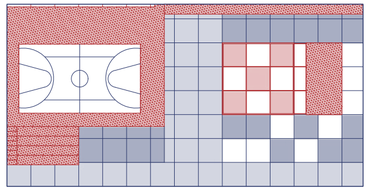
Design Process



1. Creation of a 5m grid



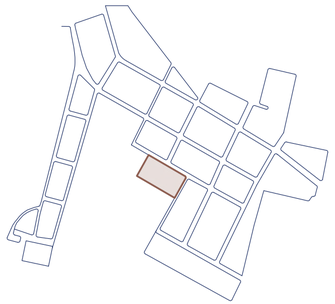
2. Formation of greenery and volumes from the grid



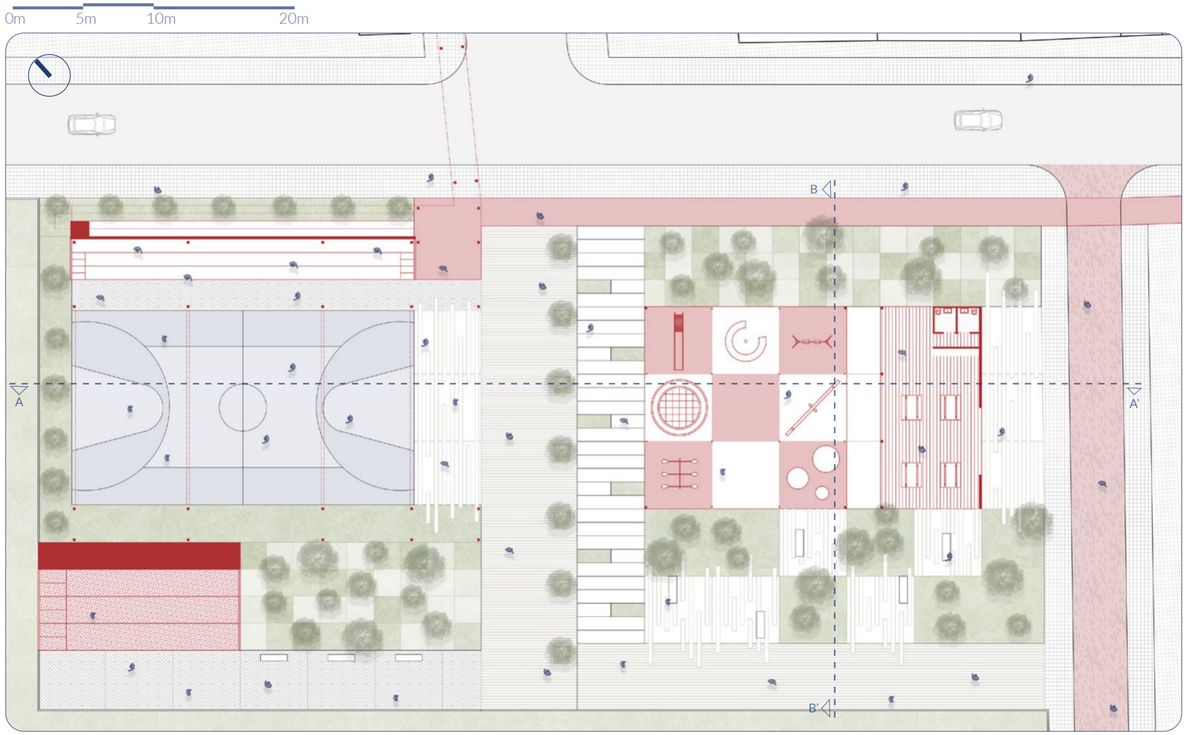
3. Integration of the walkway

Conceived as the heart of the barrio, this central plaza integrates the site's panoramic valley views with a diverse program of public uses. It includes a multi-purpose court, a children's play area, a shaded gathering space with seating, tables, and restrooms (inspired by the traditional ***caney***), and a dedicated viewpoint terrace. An elevated walkway crosses above the court, doubling as both roof and circulation path, weaving the plaza into the larger urban fabric and reinforcing its role as a vibrant civic center.

Keyplan



Street level floor plan



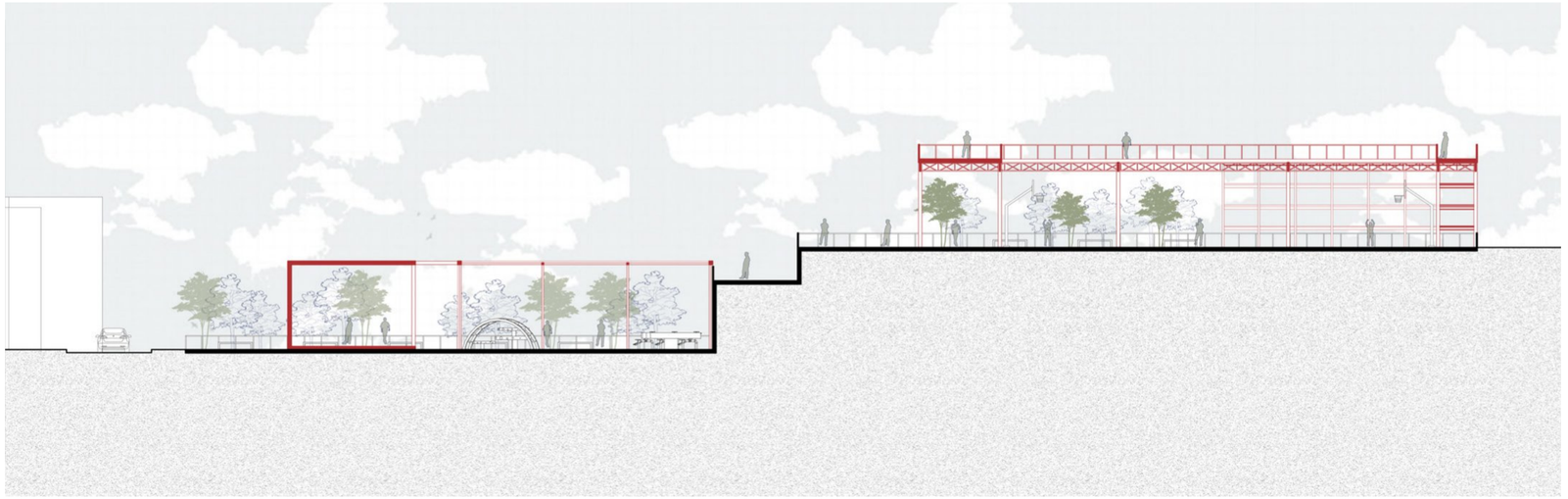
Roof floor plan

PLAZA MIRADOR 23 DE ENERO

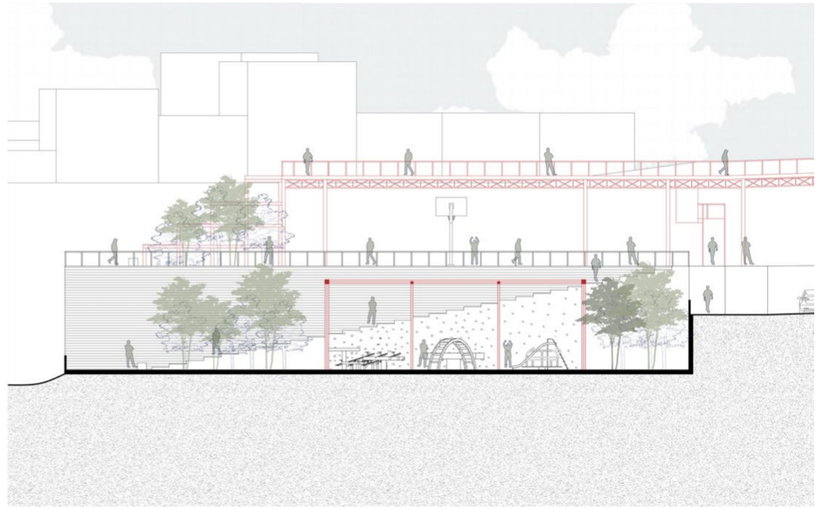
Sections

0m 5m 10m 20m

Section A-A’

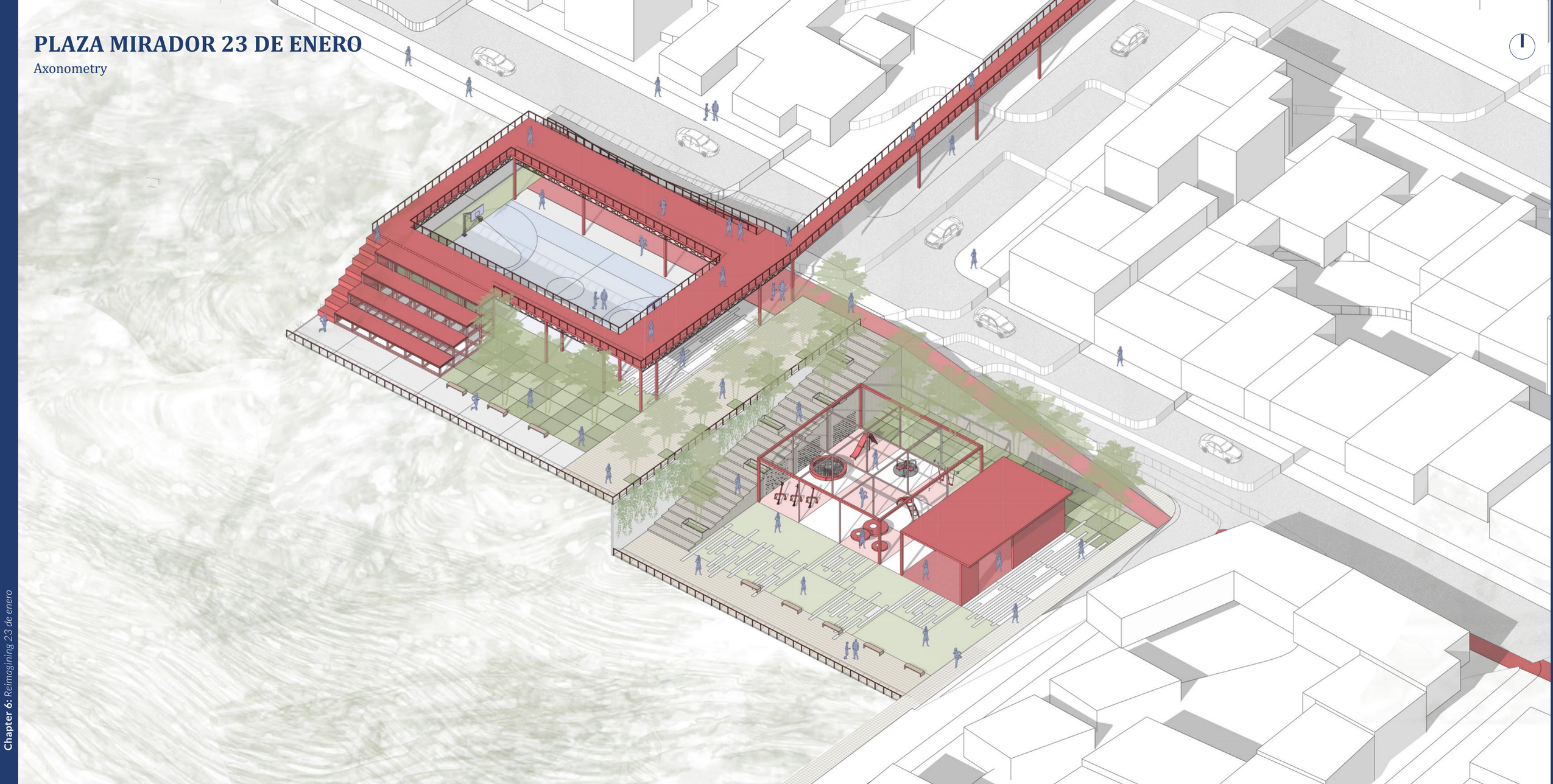


Section B-B’



PLAZA MIRADOR 23 DE ENERO

Axonometry



PLAZA MIRADOR 23 DE ENERO

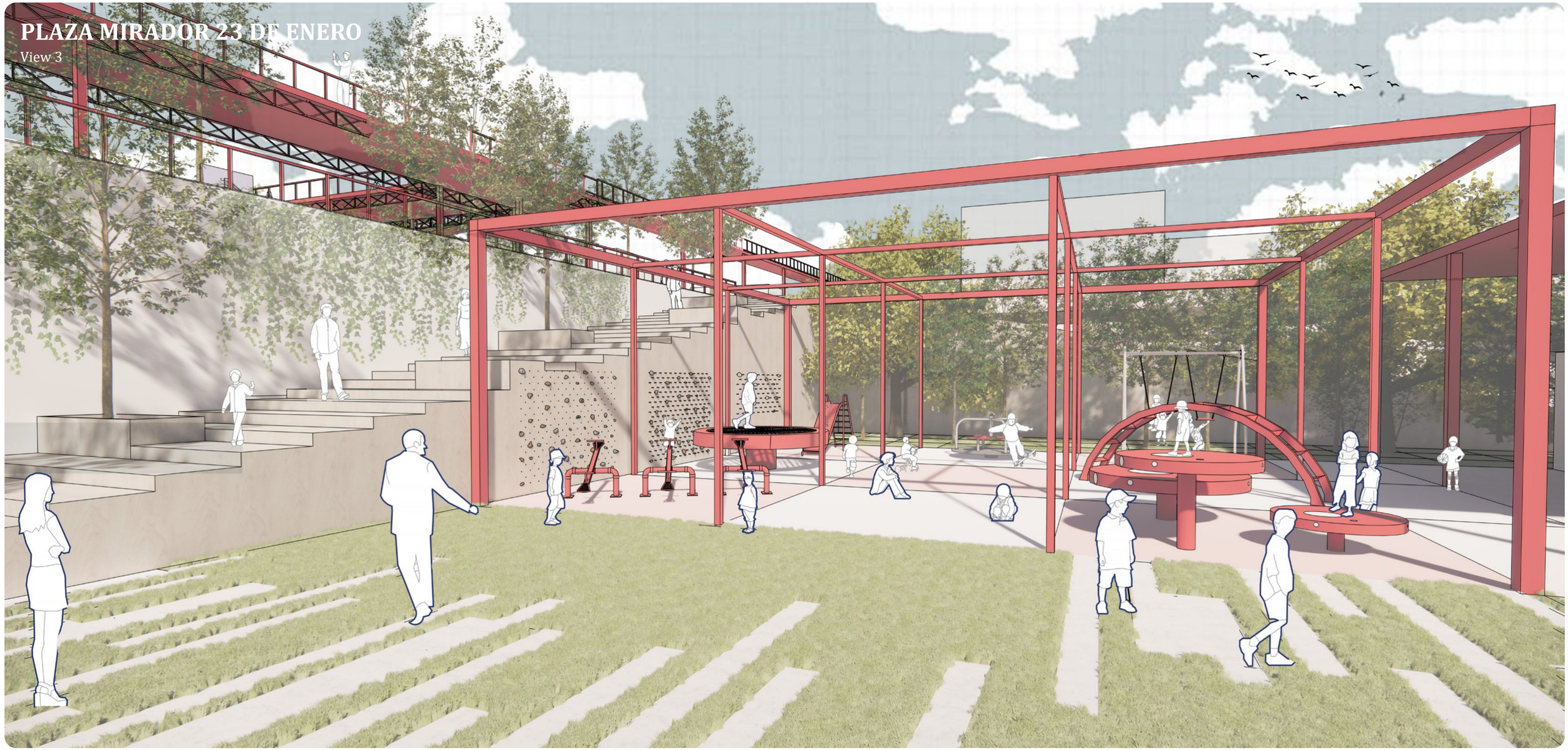
View 1

PLAZA MIRADOR 23 DE ENE

View 2

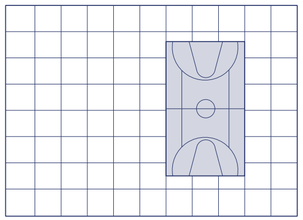
PLAZA MIRADOR 23 DE ENERO

View 3

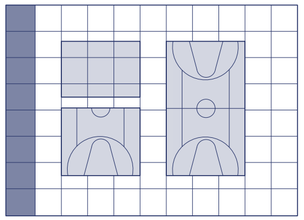


PLAZA DEPORTIVA 23 DE ENERO

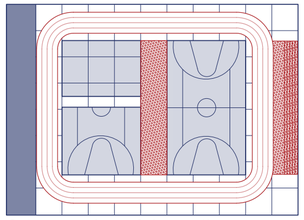
Design Process



1. Creation of a 5m grid



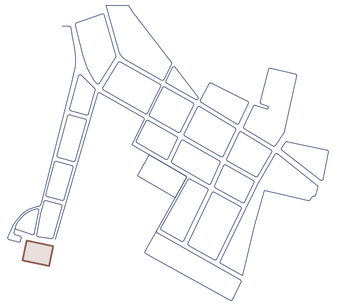
2. Formation of greenery and volumes from the grid



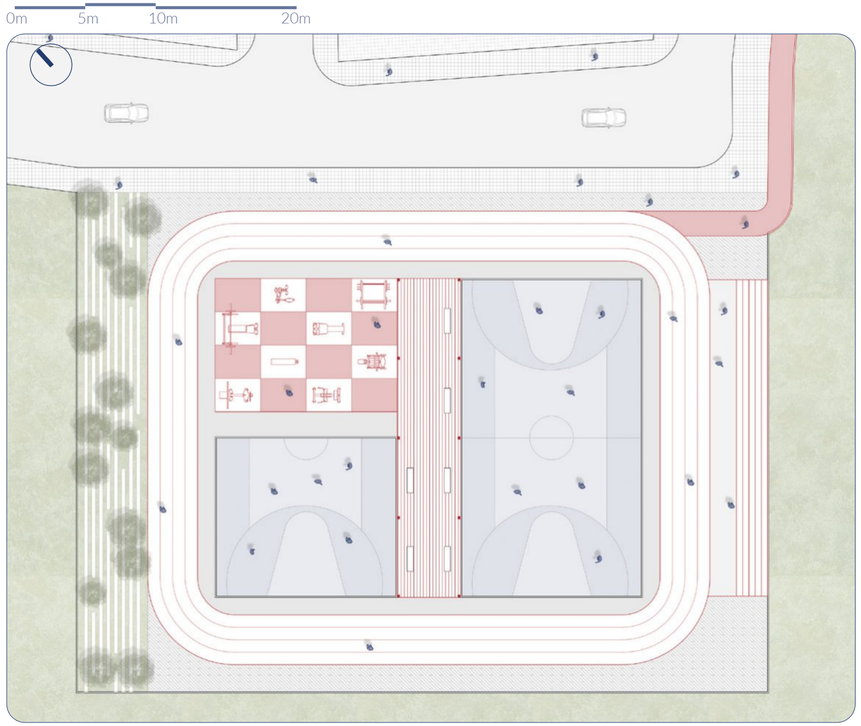
3. Integration of the walkway

This intervention transforms a deteriorated single court into a small-scale sports center for the barrio. The new design includes one and a half multi-purpose courts, outdoor gym equipment, and a surrounding running track. These additions aim to foster healthy routines, active recreation, and collective use, reinforcing the plaza's role as a dynamic social and athletic hub.

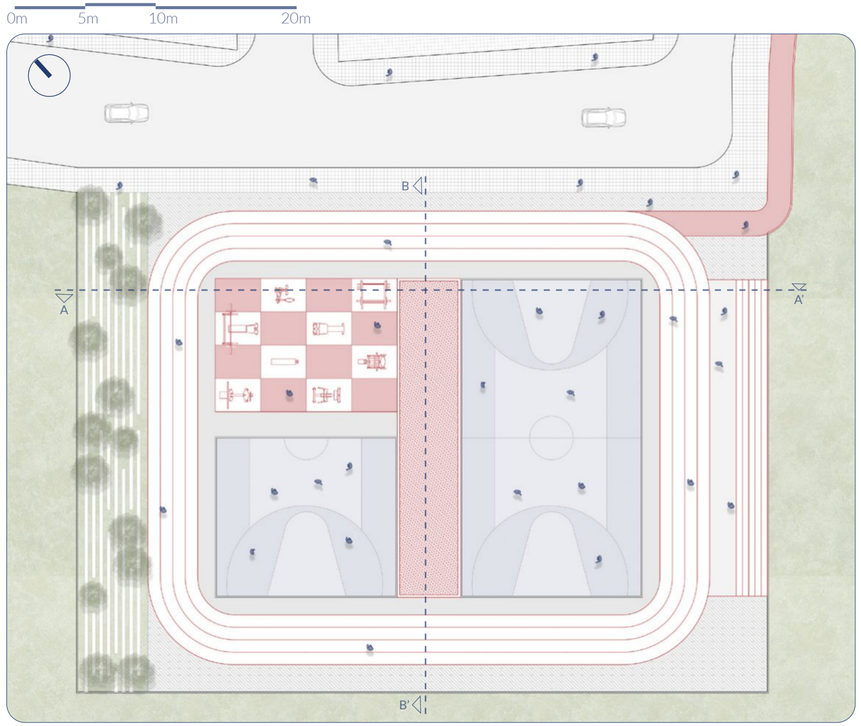
Keyplan



Street level floor plan



Roof floor plan

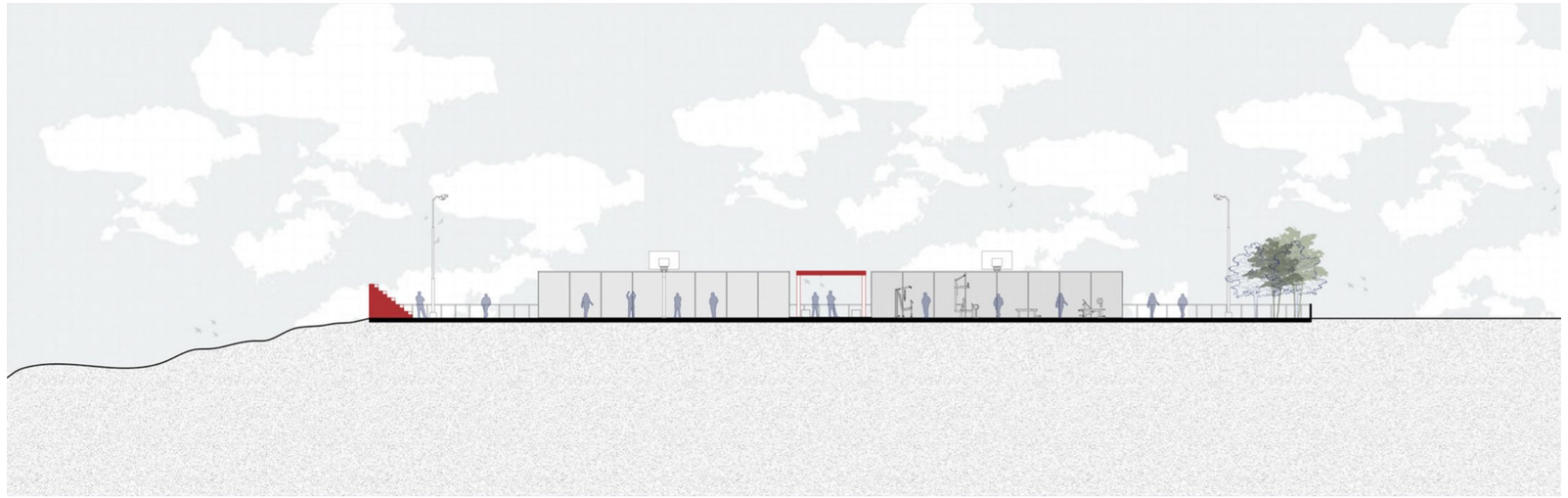


PLAZA DEPORTIVA 23 DE ENERO

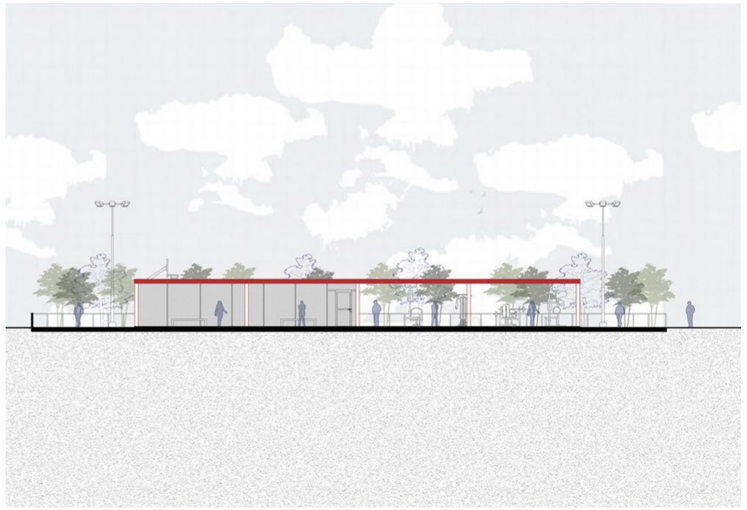
Sections

0m 5m 10m 20m

Section A-A’



Section B-B’

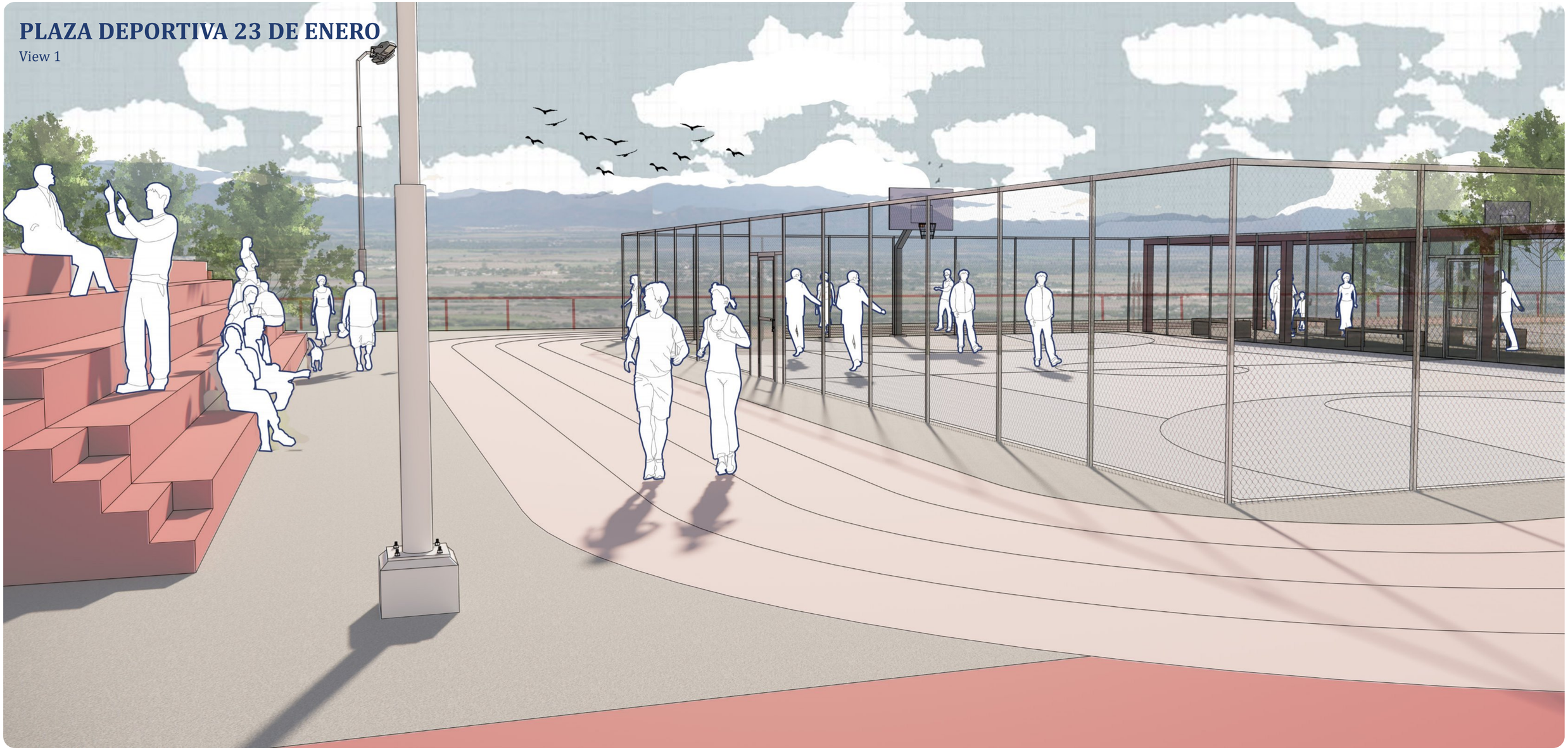


PLAZA DEPORTIVA 23 DE ENERO

Axonometry

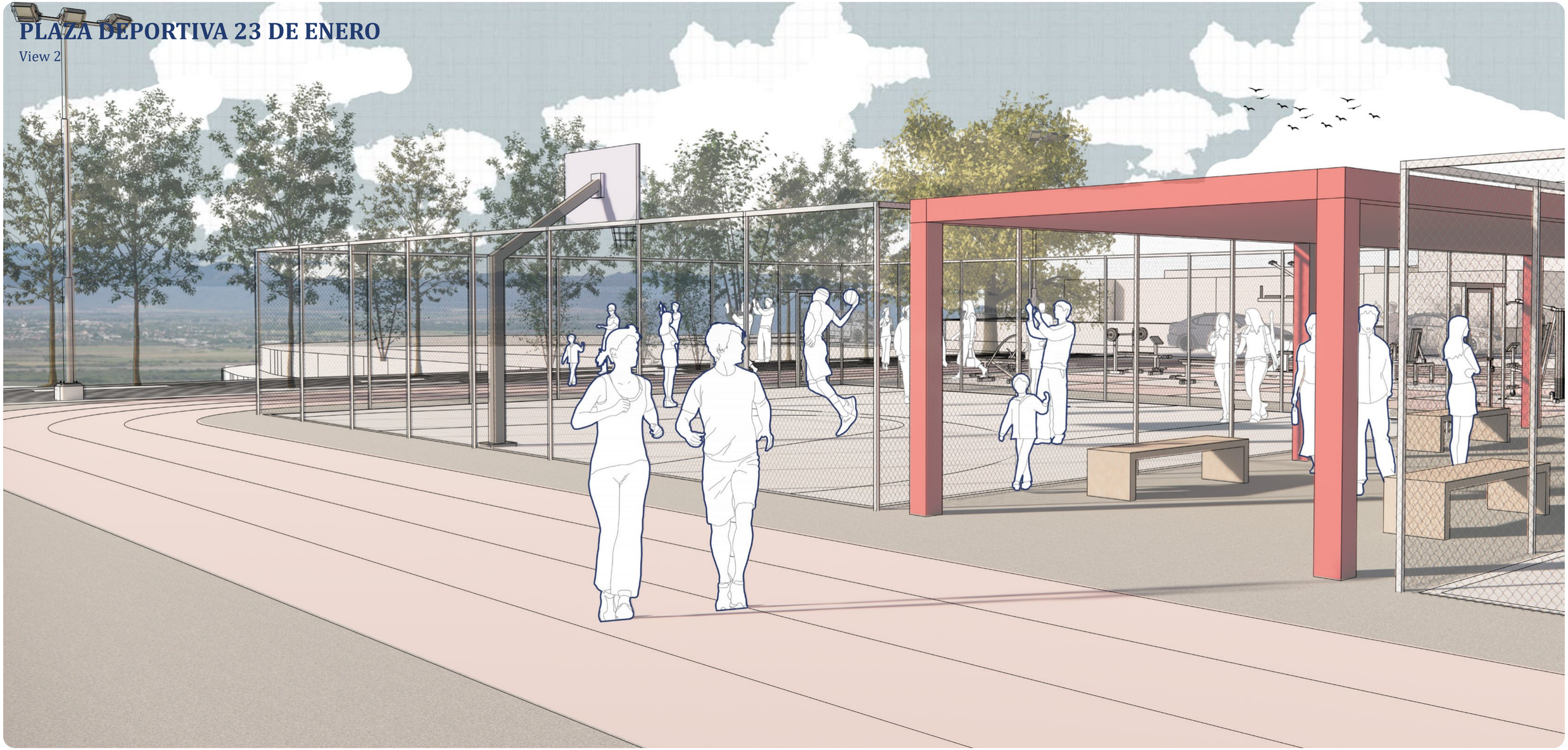
PLAZA DEPORTIVA 23 DE ENERO

View 1



PLAZA DEPORTIVA 23 DE ENERO

View 2



PLAZA DEPORTIVA 23 DE ENERO

View 3

CONCLUSION

The project **Habitat as a Driver of Change** arises from the urgent need to reassess the way informal settlements are seen, understood, and integrated into the city. Rather than viewing informality as a disruption of urban order, this proposal identifies it as a dynamic and essential mode of urban development; particularly in Latin America, where a significant portion of the population lives in informal settlements.

Using the **23 de Enero barrio in Barquisimeto** as a case study, the project explores how spatial approaches grounded in reality, human needs, and careful design can lead toward a more inclusive and connected urban future.

The intervention is carried out through three interrelated strategies: **Connect, Inhabit, and Activate.** First, Connect proposes a new street network that strengthens the relationship between the barrio and the formal city, improving circulation and access while redefining the edge condition. This new urban grid becomes the foundation for the entire proposal.

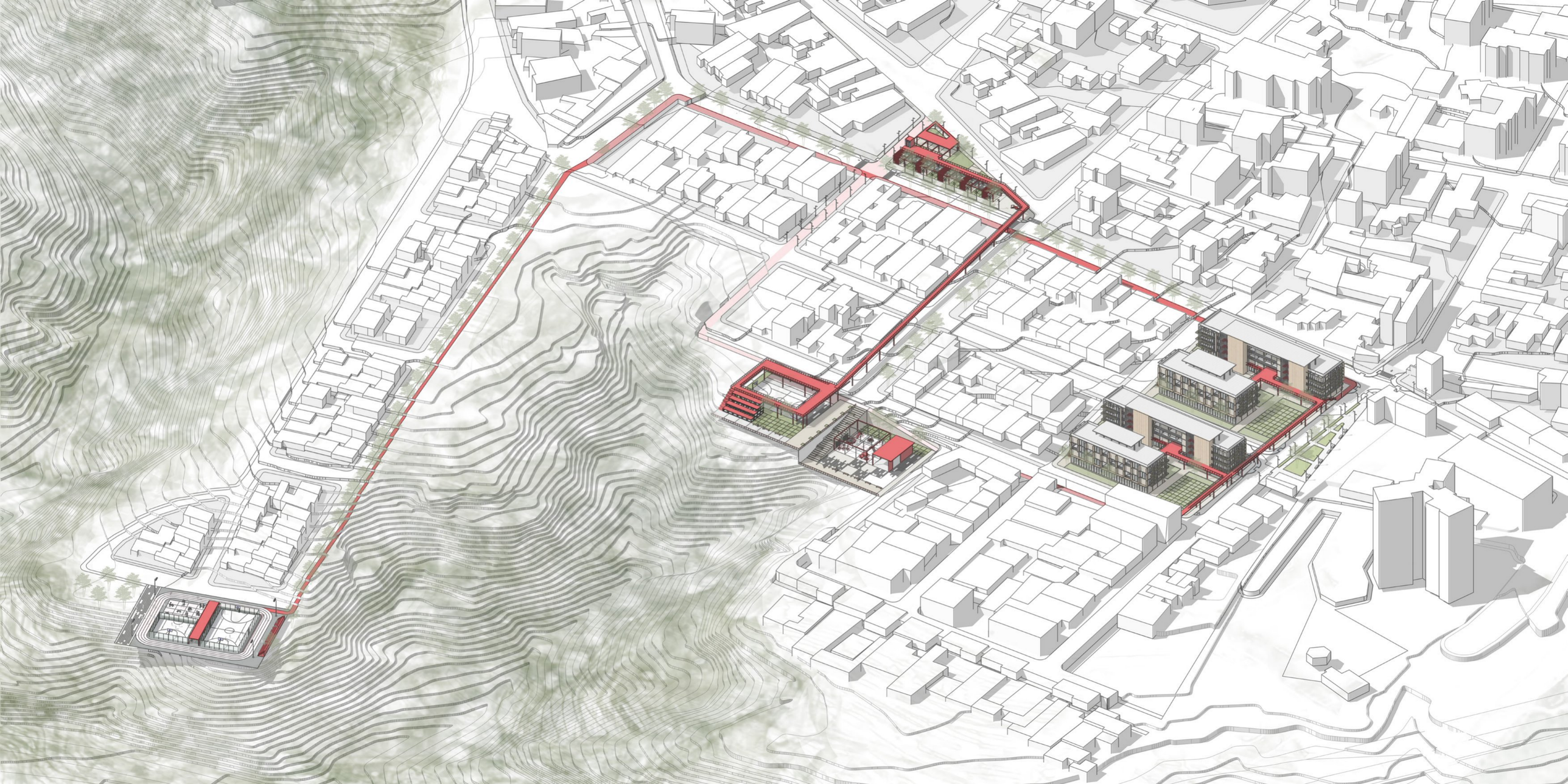
Second, Inhabit presents a replicable housing model, conceived not as a rigid solution but as a flexible option that allows families to be relocated as a result of the transformations. The residential buildings respond to orientation, urban scale, and neighborhood integration. Ground-floor commercial spaces and shared terraces on the upper floors ensure active and livable areas that support community life and adaptability.

Finally, Activate focuses on the creation and improvement of public spaces—plazas, sports areas, and collective gathering points—strategically placed to become anchors of daily life and social interaction. These initiatives foster the barrio's vitality and support its reintegration into the broader urban context.

A central element across all strategies is the walkway, a conceptual and physical connector that changes in shape and function along its route—sometimes elevated, other times at street level. This walkway acts as an architectural gesture of continuity and care, linking housing, infrastructure, and public space.

This project was not designed to erase what exists, but to build upon it. It recognizes the richness, complexity, and resilience of informal settlements, and offers tools to enhance their value with dignity and precision.

Habitat as a Driver of Change is, ultimately, a statement: that design, when rooted in place, in people, and in possibility, can transform fragmented territories into neighborhoods of **opportunity, inclusion, and belonging.**



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IMAGES

Image 01. Caracas
Source: Apomares. (2008, febrary). Light at the end of tunnel. https://www.gettyimages.it/detail/foto/light-at-the-end-of-tunnel-immagine-royalty-free/108195369?adppopup=true

Image 02. Barrio de Petare, Caracas Venezuela
Source: Re Territorio [@re_territorio]. (2024, may). Barrio de Petare / Urbanización La Urbina
Zona Metropolitana de Caracas, Miranda, Venezuela Caracas, Venezuela. https://www.instagram.com/p/C7KNxVbuG4H/

Image 03. Favelas - Rio de Janeiro, Brazil.
Source: Lindrik. (s.f.). Colorful painted buildings of Favela in Rio de Janeiro Brazil. Getty Images/iStockphoto. https://www.istockphoto.com/xxxxx

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Image 47. 23 de Enero 2014.
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Images 49-60. 23 de enero 2025.
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IMAGES

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GLOSSARY

Barrio: A term commonly used in Latin America, particularly in Venezuela, to refer to informal settlements or neighborhoods, often characterized by self-built housing, limited access to infrastructure, and socioeconomic marginalization.

Bolívar (currency): The official currency of Venezuela, named after independence leader Simón Bolívar. It has undergone multiple redenominations due to chronic hyperinflation, significantly impacting the purchasing power of Venezuelans and shaping everyday survival strategies in both formal and informal economies.

Chavismo: A political ideology and movement associated with Hugo Chávez, emphasizing populist policies, social redistribution, and anti-elite rhetoric.

Colectivos: Armed pro-government groups in Venezuela, often operating in barrios, initially tasked with maintaining political loyalty but later associated with extortion and violence. They contribute to the insecurity and social dynamics within informal settlements.

Favelas: A Brazilian term for informal settlements, similar to barrios in Venezuela, characterized by self-built housing, high density, and limited access to services.
Formal Urban Fabric: The planned, regulated, and legally recognized urban areas of a city, characterized by adherence to municipal zoning, infrastructure provision, and property titles.

Gran Misión Vivienda Venezuela (GMVV): A Venezuelan government housing program launched in 2011 to address the housing deficit through mass construction. Despite its scale, it prioritized quantity over quality, often failing to improve conditions in barrios due to poor construction and political allocation.

Informal Settlements: Urban areas developed outside formal planning and legal frameworks, often lacking basic services like water, sanitation, and secure tenure. Known as barrios in Venezuela, favelas in Brazil, or villas in Argentina, they house significant populations.

Land Invasion: A type of informal settlement formation where groups illegally occupy vacant public or private land.

PDUL (Plan de Desarrollo Urbano Local): Barquisimeto's Local Urban Development Plan, enacted in 2003, aimed to guide urban growth through zoning and infrastructure planning. Its expiration in 2016 without replacement has exacerbated unregulated expansion.

Plateau: A flat, elevated landform with a relatively level surface, often surrounded by steeper slopes or valleys. In urban contexts, plateaus can influence settlement patterns due to their stability for construction.

Rancho: A term used in Venezuela for precarious, self-built homes in informal settlements, typically constructed with materials like zinc, cardboard, or concrete.

Sustainable Development Goals (SDGs): A set of 17 global goals adopted by the United Nations in 2015 to address poverty, inequality, and environmental challenges by 2030.

Urban Informality: The phenomenon of urban development occurring outside formal regulations, encompassing informal settlements, economies, and governance structures.