

Since the beginning of the third millennium, the rapid changes that contemporary societies are facing are radically transforming the perception and the structures of our cities. New topics seem to dictate the political agenda, suggesting alternative options to manage the emerging urban mutations.

An increasingly "data driven society" is forcing the migration into an almost immaterial world, prompting Information and Communication Technology together with the Smart City.

The crisis of the traditional real estate industry, propelled by the global finance system, is contributing to re-evaluate the theme of Public Space as a "space of encounter, sharing, experience and inclusivity", mapping the everyday life to discover unexpected Urbanities, through the application of innovative strategies and tools.

As an immediate consequence, new "forms" of cities are strongly brought to our attention: the "city of sharing", the "city of temporariness", the "city of Life between buildings", giving an unexpected impulse to incremental Urbanism of evolving cities.

In such a way, the very idea of the city is radically under discussion. We are then required to answer these numerous questions in order to define the scientific coordinates for the City of the 21st century.

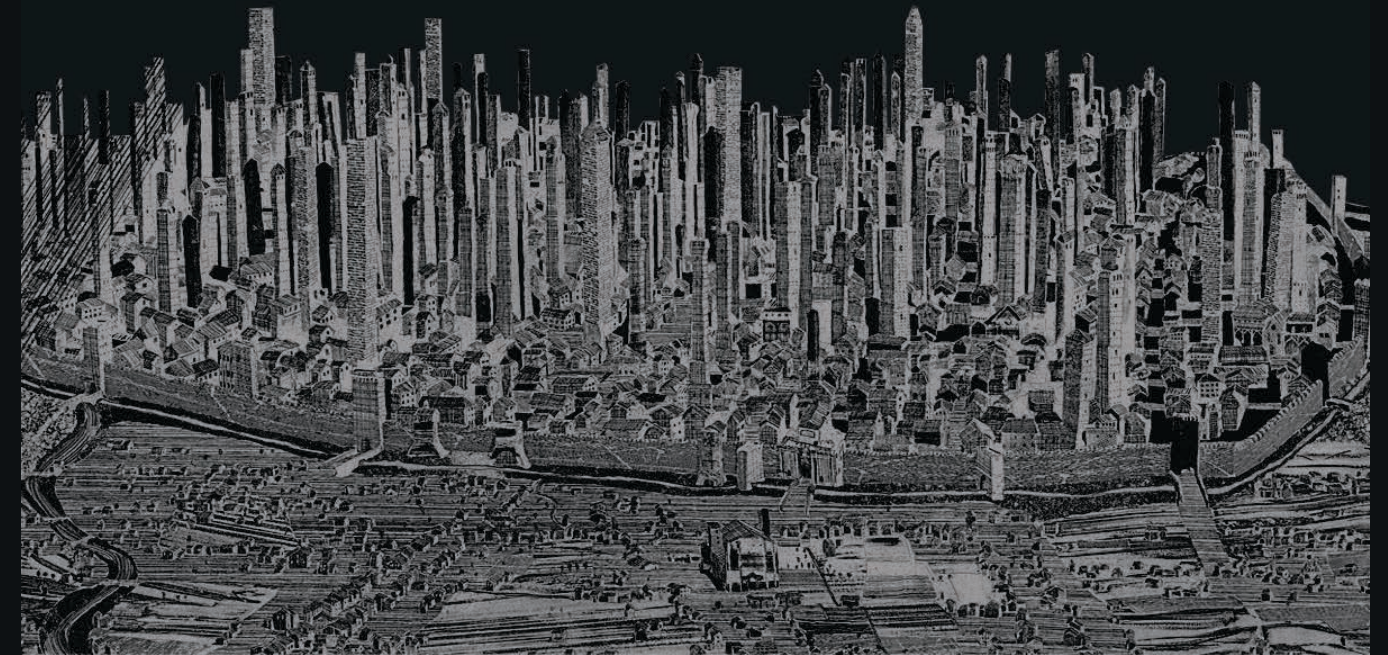
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Marco Maretto, Nicola Marzot, Annarita Ferrante



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**MORPHOLOGY AND URBAN DESIGN**  
new strategies for a changing society

*Marco Maretto, Nicola Marzot, Annarita Ferrante*

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6<sup>th</sup> ISUFitaly International Conference | Bologna, 8-10 June 2022

# **MORPHOLOGY AND URBAN DESIGN**

new strategies for a changing society

# PROCEEDINGS

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**N** | *New Methods & Technologies for the Urban Analysis*

**R** | *Reading the Changing Urban Form*

**D** | *Design a Sustainable Urban Form*

**UD** | *Reading U+D Prize*



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## Patterns of Intention

### Project hypothesis for San Siro district, Milan

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**Abstract.** *San Siro district, located west of Milan, was built between 1930 and 1947. Although the district appears unitary and compact, in formal contrast with the surrounding city, the events leading to its construction covered a period of about 15 years and involved numerous architects.*

*Today the district is an all-round "case": it presents an advanced state of decay that the administration finds difficult to cope with, and it has become sadly famous for social problems of various kinds since it hosts a very high population density and inhabitants of different ethnic groups.*

*Although numerous social reactivation projects have been promoted in the last years, a strict planning reflection is necessary. If on the one hand, in fact, some have put forward demolition and reconstruction projects, others would prefer to rely on minimal maintenance. The urban project, however, must critically recognize the significance of tradition and test its concrete possibilities through an act of experimentation and knowledge able to read the needs for change in the urban form and integrate them within the current technical, economic, and social constraints.*

*The present research project is made with the support of Alessandro Petroni and Alessandra Piccinini graduating students.*



### San Siro district as a case study

Commonly called Quartiere San Siro, the district consists of a large quadrangle converging on Piazza Selinunte and it is formed by the Quartiere Milite Ignoto, which corresponds to the west sector, and the Quartiere Baracca, corresponding to the eastern quadrant. Located west of Milan, it was built between 1930 and 1947 within a vast residential program. Although the district appears today mostly unitary and compact, in contrast with the surrounding city, the events leading to its construction covered a period of about 15 years and involved numerous architects, who had been working at various times without a unitarian masterplan.

A model of Milanese Rationalism, the district encompasses, declining it according to different settlement principles, the answer to the problem of public housing and shows the transition between the urban tradition of nineteenth-century heritage and the new instances of M.M.

Part of the Gabriele D'Annunzio district – now known as San Siro Milite Ignoto, which corresponds to the western sector of the large quadrilateral around Piazzale Selinunte – was designed by Franco Albini, Renato Camus, and Giancarlo Palanti (1938-1941), following the competition launched by IACPM (Istituto Autonomo Case Popolari di Milano) in 1932 for the Francesco Baracca district, which was meant to rise onto a nearby area northwards (Grandi, Pracchi, 1980).

The results of the public competition represent one of the starting points of this event and shed a light on the complementary cultural context. The IACP did not proclaim any winner, but Albini, Camus, and Palanti together with Kovacs were ranked second, ex aequo with Gaetano Angilella and the group composed by Alberto Morone and Fausto Natoli.

By analyzing the different projects presented, it is immediately clear how the new rationalist canons are openly in contrast with the nineteenth-century legacy, giving rise, on the field of the project, to proposals that attempt to mediate between the schematic application of rationalist principles and the traditional perimeter block development (Istituto per le Case Popolari di Milano, 1933). Among the many others, the most convincing proposal in this sense is certainly that by Enrico Griffini, Eugenio Faludi, Piero Bottoni, and Giovanni Manfredi: confirming the perimeter of the block, the insertion of low buildings helps in defining deep inner courtyards through which the architects solve the problem of the different orientations due to the trapezoidal shape of the block.

A clear endeavour to confirm the morphological structure of the Beruto Plan and the further urban plans, this project works anyway in a modernist direction, introducing elements derived from the experiments beyond the Alps, of which Griffini was aware, being at that time among the main Italian promoters of the Weissenhof housing models in Stuttgart and of the Existenzminimum (Griffini, 1932; Camponogara, Demartini, Ferrari and Poli, S. 2012).

Franco Albini, Renato Camus, Giancarlo Palanti, and Ladislao Kovacs work on a different level with a markedly rationalist proposal that presents in nuce the elements that will characterize the San Siro Milite Ignoto district, but also the well-known Fabio Filzi (1935-1938) and Ettore Ponti (1938-1941) districts. An embryonic formalization of rationalist ideas takes form, though in some ways mitigated by the introduction of a long building parallel to Via Harar, whose east-west orientation demands for the introduction of a balcony distribution, ideally anticipating the well-known building designed for the Harar district twenty years later by Figini and Pollini. Although the location and distribution principle are the same, the two buildings refer to different settlement ideas: the Harar district is built around a large open space, applying the German derivation principle of the Mischbebauung, while Albini, Camus, Palanti, and Kovacs work exclusively on the correct layout of the buildings inside a Berutian block. The introduction of the building along Via Harar is the last link with the settlement mode of the perimeter block

development that will be completely disregarded in the San Siro Milite Ignoto district, in favor of a construction freed from the relationship of dependence between streets and building curtain.

The project for the west sector of the quadrilateral of San Siro is in all comparable with that for the previous Fabio Filzi district, exemplary model of Milanese rationalism, with respect to which on the pages of Casabella-Costruzioni, Giuseppe Pagano will express himself in these terms: «open houses on all sides instead of the usual barracks with closed courtyard; houses made for the health of the inhabitants and not to act as a curtain to the street sidewalks; houses well aligned and rationally arranged instead of the well-known samples of the twentieth-century showiness» (Pagano, 1939). If the similarities between the two projects are obvious and relate to the policies for the workers' home implemented in those years in Germany, Austria or Holland, the authentic trait that distinguishes the two achievements is the kind of relationship between buildings and city and, of no secondary importance, the general dimension of the intervention. As regards the first point, the buildings are aligned and oriented according to the helio-thermal axis, thus complying with the development of the north-south axis of Viale Mar Jonio and Viale Aretusa, traced as perpendicular to Via Harar in the Pavia-Masera Plan in the early 1910s.

This axis introduces a rotation of the urban pattern with respect to the field's direction, oriented in parallel with Corso Sempione, and generates a gap of about 45 degrees that produces a sharp break with the rest of the urban structure. Although not considered in the general organization of the south and west sectors, such a caesura represents a design problem, as it is demonstrated by the planimetric articulation of the other quadrants, which presents hybrid solutions between the peremptory application of helio-thermal standards and the partial or total construction along the perimeter of the blocks. In this sense, the two trapezoidal blocks that make up the northern become particularly meaningful.

Added to all this, the considerable extension of the district on a total area of about 305,000 square meters makes it unique: the single intervention of the west sector (the one coordinated by Albini, Camus, and Palanti) occupies an area of 68,000 square meters, against about 14,000 square meters equal to the extension of the Fabio Filzi district. Further distinctive elements with respect to the Fabio Filzi district are the higher settlement density, obtained at the expense of open spaces, and the absolute lack of resources to carry out the intervention. On top of that, the morphology of the settlement and its specific relations with the surrounding city, has contributed over the years to the progressive marginalization of the neighborhood and its inhabitants from any form of urban dynamics, contributing to accentuate that «air of bureaucratic poverty» (Pagano, 1942) already evident immediately after its realization (Cognetti, 2015).

### The state of affairs

Today the district is an all-round "case". It presents an advanced state of decay that the administration finds difficult to cope with, and it has become sadly famous for social problems of various kinds since it hosts a very high population density and inhabitants of different ethnic groups – 6,110 dwellings accommodate about 12,000 people. «The 230,000 square meters of residential areas are divided into sixty fenced lots with 124 buildings (three to five floors high), 421 staircases and over 6,000 apartments. Some apartments have been sold, some are illegally squatted and others have been left vacant to be reconditioned» (Fianchini, 2011). Of the 6,133 total accommodations, 2,925 make up the Quartiere Milite Ignoto and 3,208 the Quartiere Baracca with more than 5,600 foreign inhabitants, 29.7% of elderly inhabitants and about 800 residents with mental disabilities (for updated data see the Mapping San Siro project online archive).

The acknowledgment of such obviously critical condition and its assumption as a state of affairs to work on, it is possible to identify three different approaches.

The first deals with the problem by implementing a kind of Realpolitik which would operate pragmatically, beyond any ideological presupposition. This is the strategy of ALER and Comune di Milano. The institutions rely on the allocation of resources to finance interventions, unfortunately always partial and sectorial, aimed at the «regeneration of San Siro and the improvement of the quality of life of the local community» through actions of «recovery of public residential buildings, social revitalization with social policies for inhabitants of the neighborhood and activities to combat lawlessness and spread a culture of legality» (see the Protocollo d'intesa per la Rigenerazione del Quartiere San Siro tra Prefettura di Milano, Regione Lombardia, Comune di Milano e Azienda Lombarda per l'Edilizia Residenziale Milano, 26th October 2021). A second strategy is then identifiable, closely linked to the first one due to its predominantly social nature. In recent years, in fact, many social reactivation projects have been promoted, which have proved capable of activating the neighborhood with interventions of 'urban surgery' and microubanism on the one hand, and participatory actions of cultural promotion on the other. These include the research-action project Mapping San Siro – promoted by the DASTU - Politecnico di Milano and coordinated by Francesca Cognetti, with the support of Lilliana Padovani and other parallel programs, such as Green Living Lab San Siro or Caravansaray Selinunte San Siro promoted by the associations Temporiuso and Outis respectively.

The third approach, recently considered as an alternative for the solution of the San Siro "case", corresponds to the initiative of Massimo Roj and Gianni Verga for the "Rigenerazione dei quartieri ERP a Milano nel contesto del Piano di Governo del Territorio" (Assolombarda, 2021). Compared to the previous ones, this type of intervention acts at a different level, suggesting a radical change in the general urban structure. Echoing modernist utopias, it proposes the utter though gradual demolition of the district and its subsequent reconstruction, to ensure greater settlement density, lower land consumption and a significant increase in green.

Starting from a study carried out on the entire city, this analysis identifies some possible sample areas (Vialba and Quarto Oggiaro, Giambellino, Stadera, Sant' Ambrogio, Comasina, Corvetto and San Siro) among which San Siro stands out as the privileged point of application thanks to its barycentric position with respect to some key areas of recent and imminent transformation, such as CityLife and the entire area around the San Siro Stadium. Roj and Verga emphasize that the one presented for San Siro is not a project, but a methodological proposal aimed at demonstrating that enhancing the social housing areas is feasible, especially on the economic and financial level. The issue of urban regeneration and its transformation process is therefore addressed by tackling the problem from the point of view of urban economy and the possible margins of interaction between the public and the private realms, in line with many of the recent "regeneration" operations implemented in Milan.

This proposal is certainly notable for its operational scope, but it does not seem convincing in terms of urban structure and architectural relationships. Even starting from the assumption of not considering this proposal as a project, it is immediately clear how its different formalizations highlight the potential of densification while not considering the status of the city and its morphological possibilities, and even more, renouncing to assume the even only partial conservation of the existing buildings, thereby completely erasing the material heritage of the settlement and consequently the spatial and social memory of places.

At this point, a consideration of a strictly design nature could be useful to enrich the picture. In similar contexts, the urban project should necessarily be accorded the ability to test its own concrete possibilities, as an act of experimentation and knowledge able to read the urban

form and its transformation requirements in order to integrate them with today's economic, social, and technical constraints.

It seems to be necessary to investigate on how to measure the sustainability of such an intervention in terms of urban spaces and how this can be referred to the San Siro case study.

First, the objectives of the work must be clear and can be summarized in three points:

1. to preserve the neighbourhood recognisability, keeping as many existing buildings as possible;
2. to maintain or increase the urban density;
3. to build recognizable urban spaces with more free soil.

Moreover, by reiterating that nowadays economic and financial sustainability, social strategies, cultural integration, and possibly environmental sustainability, though fundamental for the urban project, are associated to a variety of policy areas and are consequently difficult to evaluate on strictly spatial terms. However, these parameters need to be measured against a given spatial conformation to identify the long-term disadvantages and benefits of the project. This necessarily means referring to a specific idea of city, putting the problem clearly and seeking a coherent solution.

It would be possible to mention many useful references to explain the case in terms of the general structure of the city and the block construction: just to quote the best known, the question is very similar to what is summarized in the 'schematic description of the growth of the modern development plan' by Ernst May (May, 1930, 34) or with the well-known drawing *La ville classée - les villes pêle-mêle* by Le Corbusier.

As a way of constructing the reasoning on the project, it must be added the use of analytical tools inherited from the tradition of urban studies which, in this case, consist in overlapping the current situation with the historical maps in order to find in the existing urban structure some of the reasons for the project.

One of the biggest problems of the neighborhood could be identified in the absence of physical – and therefore social relations with the rest of the city; this is largely due to the relationship between streets, morphology, and settlement density, in particular for the west and south sectors, but also for the southern portion of the east sector. The indifferent layout of the buildings according to the helio-thermal axis has excluded the roadside construction of the blocks, consequently exacerbating a problem generated with the Pavia-Masera Plan and the tracing of the north-south axis. However, even the dense and uniform row construction in accordance with the prevailing orientation of the block, where it is used, produces a disorienting urban condition for the indifferent uniformity. It should also be pointed out that, particularly in the west quadrant, the main spatial problem is the excessively close detachment between buildings, which does not allow any other type of space than the functional one at the entrance to the individual stairwells. The general plan and especially the urban profiles clearly show the terms of the problem.

The central north-south axis has also proved to be one of the morphological elements of difficult management in the relationship of the buildings with the surrounding city. For this reason, the choice of Roj and Verga to propose the construction of a boulevard at this axis seems to play against the project, despite the clear reasons for the axis, related to the greater caliber of the central avenue and therefore the possibility of building in height.

To complete the picture, it should be noted that the eastern portions of the east and northeast quadrants differ morphologically and typologically; in particular, the portion of the eastern quadrant directly overlooking Via Carlo Dolci has courtyard buildings that confirm the perimeter of the block. They were designed by Giovanni Broglio and the IACP around 1930, following a first competition launched in 1920 for the areas facing Piazza Monte Falterona. Some rowhouses

with private gardens on the northern side of the square date back to the same years as well. All this testifies to the original research for a marked typological articulation and contrasts with the uniform development of the blocks built subsequently in the southern portion of the quadrant. The typological and morphological variations, where present, are certainly a positive factor to avoid the construction of a new urban enclave and use instead the existing architecture to build through the project a new relationship with the city.

### **Architectural montages as urban project tool**

Starting from these hypotheses it has been deemed possible to utilize the architectural montages as a tool to measure and define the spatial structure and places and to explore the possibilities offered by other proposals in order to understand, without any ideological nor formal preclusion, what kind of structure, what type of urban project, what idea of city are compatible with the existing constraints and the established objectives. All this is meant by working on the same cartographic base and without any distortion of scale related to the projects used in the comparison.

If the montage of the CityLife project shows a correspondence of measurements due to the repetition within the city of the dimension of the Berutian block and its sub-multiples, here as there, also reveals a lost relationship with the urban structure. The same consideration seems possible with regard to the proposals of Roj and Verga which, beyond any linguistic choice, show that the formal basis of the whole layout has a controversial nature compared to the city. However, it is precisely these first two montages that reveal the possible ways of thinking about settlement density, which is one of the conditions imposed by the sustainability of the intervention in economic terms.

The IACP Mac Mahon district – built in 1908-09 and designed by Giannino Ferrini – shows the possibility of overwriting the rationalist model with the perimeter blocks construction, typical of the nineteenth-century city, though referring to a character of enclosure with respect to the surrounding areas. Similar considerations can be made from the montage of *Aufteilung und Bebauung eines Baublocks... mit schweren, inneren Wohnstrassen nach Gemischter Bauweise*, 1910 by Bruno Möhring, Rudolph Eberstadt and Richard Petersen, who, like Mac Mahon, alludes to the possibility of a mixed-use settlement with different buildings heights. The montage of *An ideal diagram from Amsterdam Sud Plan* by Heindrik Petrus Berlage, on the other hand, indicates that, beyond a possible morphological affection for this type of urban configuration, is necessary does not reduce the complexity of the settlement and identify in the existing urban framework the substance of a possible construction.

The montage of Plan Voisin produces similar considerations as well as showing that, as in Le Corbusier's experiments, the high-rise buildings may represent an alternative to the way of building the block, highlighting once again the need to strengthen the relationship between buildings and streets. The Lafayette Park in Detroit and the *Résidence Le Parc* in Meudon-la-Forêt provide a convincing mode of operation. While deconstructing the typical block of nineteenth century, the one identifies in fact a precise organization of the settlement through the mutual disposition of low-rise houses in relation to high-rise buildings, while the other demonstrates how it is possible to identify spaces inside the blocks – courts and courtyards variously articulated, without using the courtyard type in its traditional configuration.

### **Conclusion**

Though apparently obvious, given the complexity of the problem, the so far developed considerations demonstrate and reveal that any study of urban morphology is only able to



offer an operational answer, and only through this kind of response a precise disciplinary status can be claimed. To investigate the complexity of contemporary urban phenomena, it is required not just the ability to cooperate between different disciplines, but above all a consideration of a spatial nature, able to reconnects to itself needs and constraints, solutions, and possibilities. The history of the city through the projects shows how it is necessary to bring all kinds of intervention, especially at the urban level, to their morphological basis. Although the risk of falling into an abstract dissertation is high, it is considered necessary to use such tools with the aim of operating an addition to a text already written. In this way the project is interpreted as a process of change within the city, starting from its tangible condition, wanting to recognize in the approach before than in the project itself a sort of settlement sustainability, both morphological and spatial. At this stage it could be considered as a thought in general terms in order to get finally to the architectural definition of the project, which will then be the real test bench of the entire research, both from the point of view of the specific case and in general as a mode of consideration and knowledge.

Back to the question about the possibility of measuring the sustainability of an intervention in urban terms, it is necessary to underline how the different trends in the contemporary cultural panorama are often read as alternatives and their complementarity with each other or with the existing city is hardly ever hypothesized. For example, the critical reconstruction of the block in the Berlin and North-European way, often implemented in the form of an explicit return to the nineteenth-century city, is read in total opposition to the most fashionable mainstream trends of CityLife or Porta Nuova. Both of these modes of intervention seem, however, to have produced, in different forms and beyond the linguistic connotations or the vitality of the places, separate islands within the urban structure. If we consider them applied to a social problem such as that of the regeneration of working-class and ultra-popular neighborhoods and if we read them from a long-term perspective, both alternatives appear to be at risk whenever compared to the city and the housing problem. The same could be said, albeit for other reasons, of a possible re-proposal of the rationalist model.

The afore mentioned reasons are behind the title of this essay, Patterns of Intention, which refers to a well-known book by Michael Baxandall and his general exhortation to critically analyze the process leading to the formulation of absolute judgments, reading them in relation to the past and to any form of contemporary conditioning.

As Baxandall suggests, it is in these cases – more than in others, that the urban project must critically recognize the meaning of tradition and explore its concrete possibilities, by abandoning monolithic visions in order to open up to settlements that are hybrids in some ways, able to combine differences, with the final objective of accepting the city in its whole complexity and fragmentation, interpreting it as resource and not as negative constraint. This would result in an act of experimentation and knowledge able to accept the instances of urban formal change and to interpret them in the light of technical, economical, and social constraints. The attempt is therefore to open the urban structure with the aim of defining spaces characterized by a greater articulation and definition than those currently existing; urban spaces able to return the complexity of a rich and articulated structure, that goes beyond the simple functional construction of the street/house relationship, characterized among other things, in this specific example, by an alienating monotony and harbinger of negative social implications. Existing buildings may however be a resource, in an attempt not to erase the physical consistency of the neighborhood, whereas their partial maintenance could help define courts, streets, squares, that is to articulate the typical complexity of heterogeneous urban forms, introducing all those elements of complexity which characterize of the traditional European city.

Bearing in mind Roland Barthes's teaching at the end of his inaugural lecture at the Collège de France in January 1977: «There is an age at which we teach what we know. Then comes another age at which we teach what we do not know; this is called research» (Barthes, 1981).

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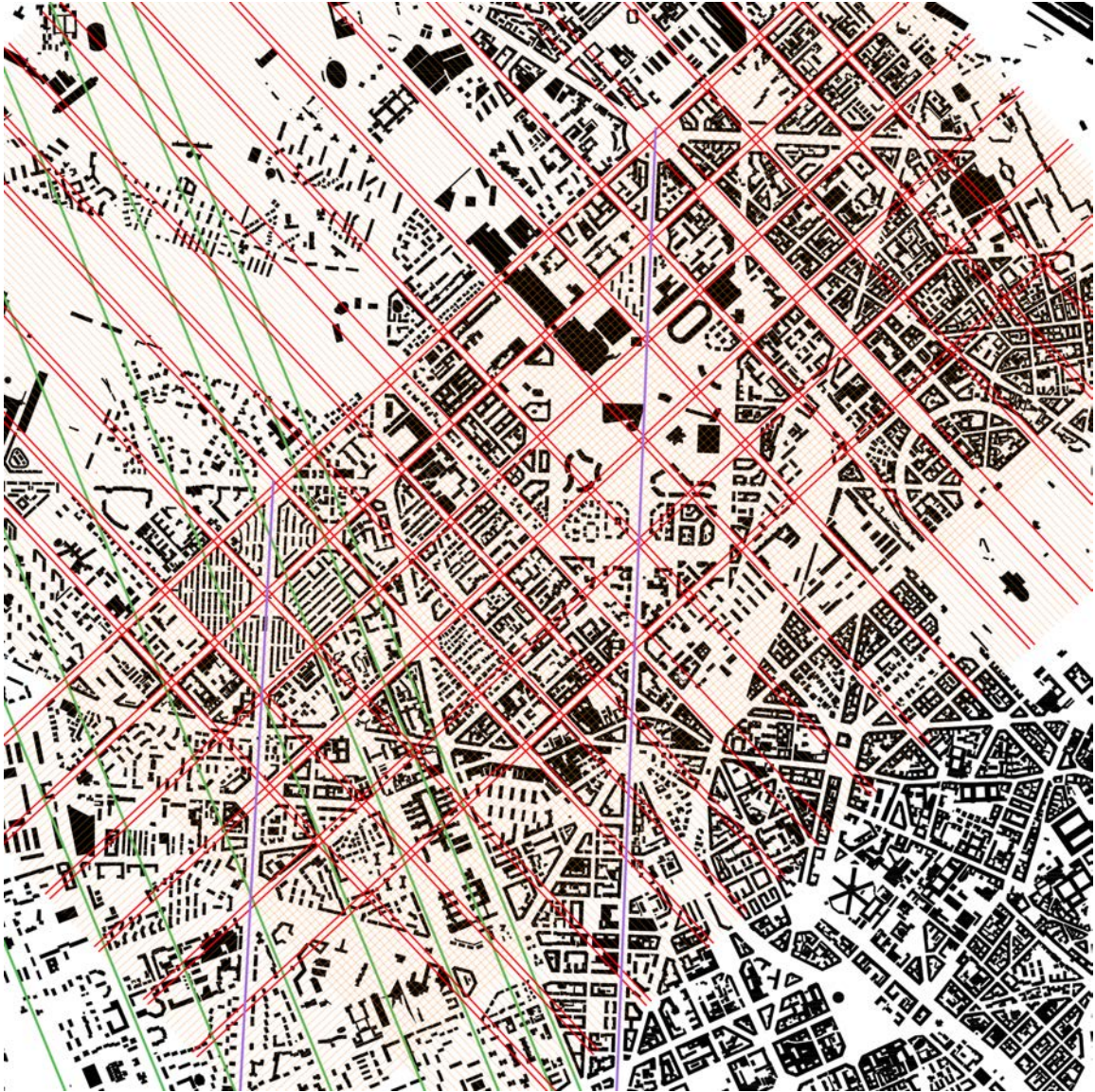
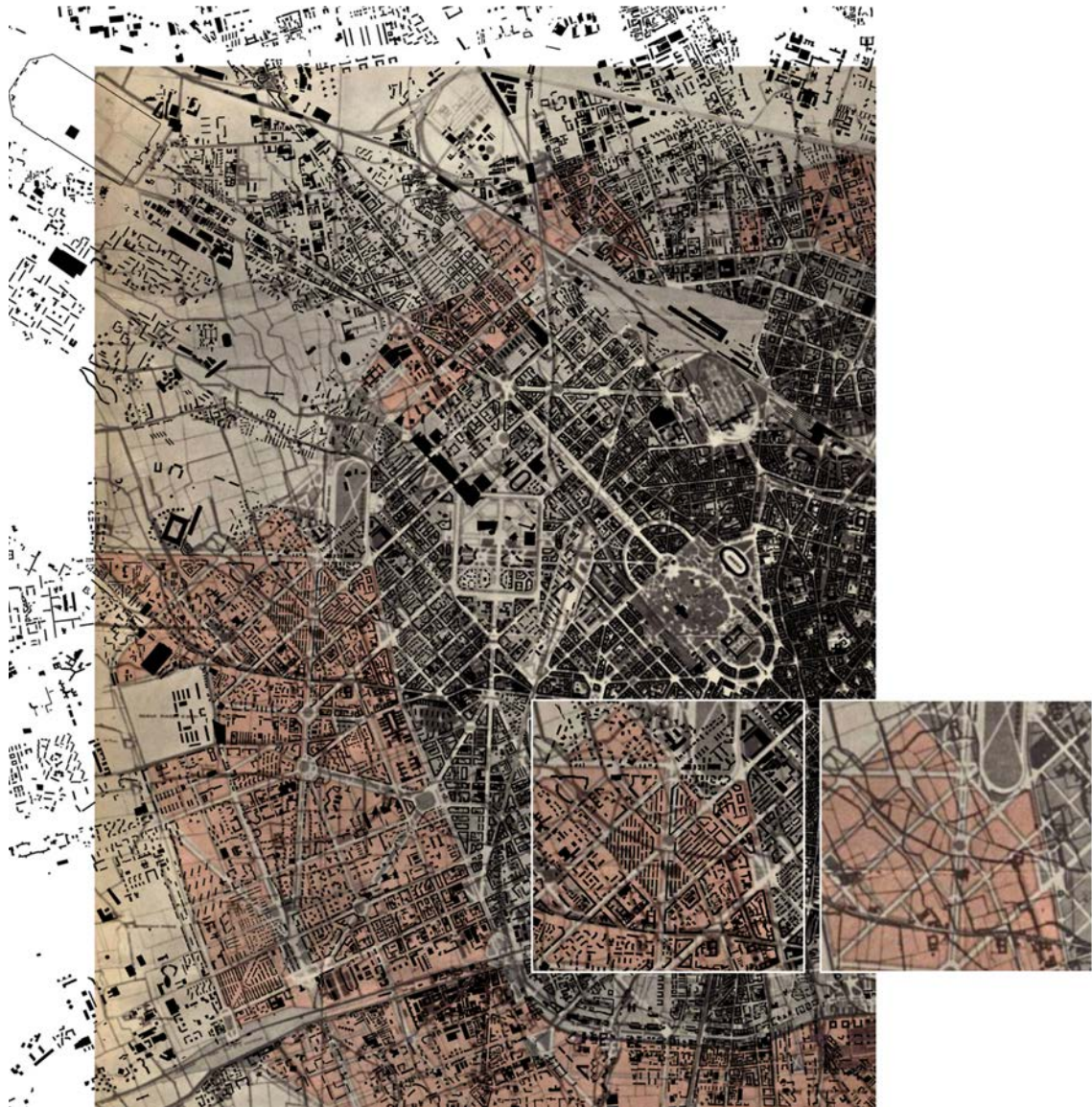


Figure 1. Scheme of some spatial elements existing within the urban structure: the layout of the Beruto Plan (in red), the north-south axes from the Pavia-Masera Plan (in purple), and the fields orientation (in green)





**Figure 2.** Overlay of the Pavia-Masera Plan (1910-12) on the current Schwarzplan of Milan: general plan and detail of the San Siro district



Figure 3. San Siro district: typological survey of the typical floor plan





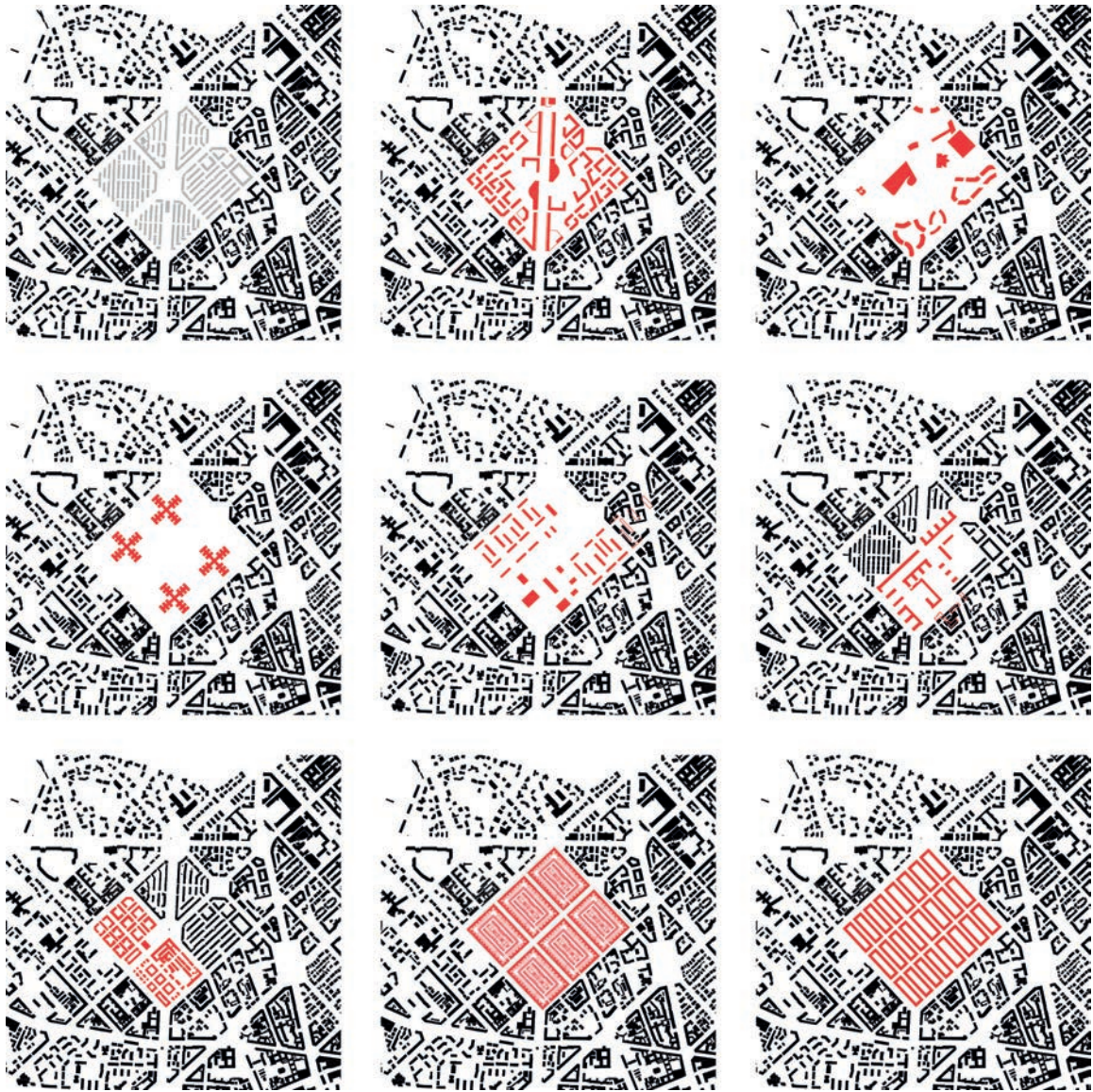


Figure 4. San Siro district: architectural montages as urban project tool



Figure 5. Project proposal for San Siro district