

Pilot Plan Proposal for Medellín by Wiener and Sert: CIAM's Theory of Urban Planning – Its Transfer to Practice

PATRICIA SCHNITTER
Universidad Pontificia Bolivariana

During the architectural revolt of '20s and '30s some of us architects became aware of the close ties of buildings to cities, and tried to formulate principles that we have had to wait two decades to see materialize and to evaluate for it is only when plans are carried out and lived with that many things became obvious. The clash between things and people is the final test of any design, and it is now that many theories then formulated are being tested.

— José Luis Sert¹

Between 1942 and 1959, José Luis Sert and Paul Lester Wiener elaborated numerous plans for Latin American cities. The growth process which cities were confronted with, or their creation ex novo, made the ordination and regulation of their growth necessary. The plans designed by Sert and Wiener for South America were based on the general principles formulated by the International Congresses for Modern Architecture, CIAM, proclaimed through the Athens Charter. Some of these plans were partially implemented, while others were not implemented at all.

Fifty years after the elaboration of the Pilot Plan for Medellín, Colombia, this article proposes a re-reading of the plan from two perspectives. The first from theory, from the setting in action of a series of principles formulated by the CIAM and interpreted according to Sert's city planning ideology. The second from practice, based on Sert's revision of the proposal applied to the city.

In 1977, José Luis Sert was invited to Medellín to participate in the revision of the development and planning of the city. This act demonstrated the validity of the principles formulated in the original Pilot Plan 30 years earlier.

INTRODUCTION

By 1947, Sert's and Wiener's expertise as city planning urbanists was internationally recognized. José Luis Sert had been chosen president of CIAM in the sixth congress held in September of that year in Bridgewater, England. The need to establish contact among its members and to determine the role of CIAM in the new period constituted the main objective of this congress.

By the end of 1947 Wiener and Sert had moved to Lima. They were asked to organize the Peruvian National Planning Bureau (Oficina Nacional de Planeamiento) and to take charge of the design of Chimbote, a new city on the Peruvian coast. This situation facilitated their contact with Colombia.

The first project initiated by Sert and Wiener in Colombia was the Pilot Plan for Tumaco, a port located in the southern part of the country, partially destroyed by a fire in October 1947 which led the Colombian government to hire them as consultants for the new city plan. In addition, Sert and Wiener were recruited to elaborate Pilot Plans for Medellín (1948), Cali (1949) and Bogotá (1951) with Le

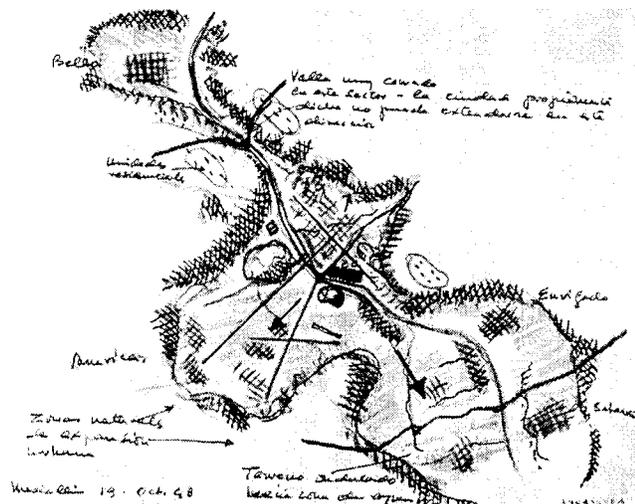


Fig. 1. Sert's sketch for Pilot Plan proposal for Medellín. October 1948. Sert Collection. GSD Harvard University.

Corbusier, in order to comply with the incipient urban planning legislation of that time, (law 88 of 1947)

PILOT PLAN FOR MEDELLÍN

In 1948, Medellín had a population of 250,000 inhabitants. The main promoters of its growth were the industrial development and the initiative and strength of its people. The existing industry consisted mainly of the production of consumption goods. The city was geographically isolated from the rest of the country, and its railroad system, highways and airport were not efficient. The only transport system which functioned properly was commercial aviation. The city could not have developed without it, according to Sert. This was the situation of the city, when Wiener and Sert assumed the elaboration of the Pilot Plan.

What is a pilot plan? A pilot plan must serve as a guide for the future development of a city, and give the general directives for the reorganization and growth of the city. Wiener and Sert pointed out that these general directives were naturally flexible especially with respect to details. Therefore, the function of a Master Plan is the application of specific directives in order to determine the final details for each specific sector of the city.

From the Functional City to the Heart of the City

My goal is to approach Wiener and Sert's Pilot Plan for Medellín, based on CIAM's urban proposals. Analyze it according to the

principles derived from the fourth CIAM congress, The Functional City, held in Athens in 1933, and the eighth CIAM congress, The Heart of the City, held in Hoddesdon, England in 1951.

I. The Functional City and the Pilot Plan.

CIAM considered that city and regional planning were indispensable in finding true solutions to architectural problems. Starting from the third International Congress held in Brussels in 1930, city and regional planning became a priority. As a consequence, the Functional City turned into the main topic for the fourth CIAM congress, in 1933. The conclusions formulated then, became the basis of modern urban planning and the principles and resolutions reached were published in *The Athens Charter* and in *Can Our Cities Survive?*

We will now try to identify the application of these principles in the proposal of the Pilot Plan², under the scheme of the Functional City. We will differentiate the four basic functions of the city in this proposal: Dwelling, Work, Recreation and Transportation.³

However, it must be kept in mind, as Sert said that,

When undertaking whatever analysis of the four urban functions, it is convenient to remember every city is part of a geographical, economical, social, cultural, and political unit on which its development depends.

— Planning Charter⁴

THE CITY AND ITS REGION

The fact that a city is only part of the economic, social and political structure of a region, constitutes the general consideration of the principles of the Athens Charter.

At the beginning of the Pilot Plan report, Wiener and Sert analyzed the city concept within the region. They pointed out that Medellín was not part of a "region" in the North American or European sense of the word, as was characteristic of most South American cities. In Europe and in North America, they noted there was a close link between cities and their regional economies, industrial and agricultural production and spheres of influence, which were, determined by excellent communication systems.

In contrast, most South American cities maintain direct and constant contact with distant areas in the country. The topography of the country had slowed the construction of highways and railroads, but on the other hand, aviation had extended its influence on the city creating a totally different concept of the region.

The lack of regions in the previous terms made it necessary to relate the area of the Medellín valley to the rest of the Colombian territory as a whole, which Wiener and Sert designated as its greater region and the immediate area limited to the river, Metropolitan Area. "This valley introduces special conditions due to its confinement within narrow limits, making the natural lines of communication to follow the borders of the river", they said. The specific conditions of the city concerning the valley gave way to the proposal of the conformation of a Metropolitan Area.

Therefore, the city's geographical and topographical aspects became the main factors in the proposal. Wiener and Sert pointed out in the report: "the climatic conditions of this valley are excellent and the plants of any latitude flourish in it. The valley is of great beauty, and despite the destructive activity of man, its natural beauty can be saved and improved." In addition, they gave a series of recommendations for control of eroded zones and protection of streams.

Now let's talk about the four basic functions of the city:

DWELLING

According to CIAM, housing was considered the main urban function. As Sert proposed in his book *Can our cities survive?*, residential districts are expected to have the best location.

Climatological and topographical conditions of locations destined for housing should be given attention to, as well as their vicinity to undeveloped lands that are adequate for recreational facilities. The possible location of industries and commerce and their proximity should also be foreseen. Housing in these districts should be assembled so that they would constitute neighborhood units.

— Planning Charter⁵

The concept of neighborhood unit, not mentioned in the *Athens Charter*, developed by Sert in *Can our cities survive?*, was considered the smaller scale of intervention. Said unit was to be conformed by a number of inhabitants that justified the existence of an elementary school. He defined it as the basic and first unit and "an organic and living body," within the concept of town planning.

The organic city will thus be composed, as its name implies, of different parts or organs. Each organ or unit having a specific function to perform, and being so composed that each can fulfill this function with the greater efficiency of the city as a whole. (...) The life of each one of these units should center around a social structure, where community life takes shape and spreads.⁶

With regard to the Pilot Plan, Wiener and Sert recommended, a favorable localization as far as climate, topography, orientation and lines of communication for residential areas of the city and its future expansion. They proposed that the area of the city dedicated to housing be divided in neighborhood units. "A new comparable measurement to the old block,⁷ the only unit of measure of the old plan, but with greater dimensions for the necessities of a new residential unit," said Wiener and Sert in their report.

A number between 5,500 and 6,000 inhabitants were proposed for the neighborhood unit model. It would develop between a direct traffic street, which would run parallel to commercial and business areas, and a park where social services would be located.

Neighborhood units were the innovative model introduced by the plan, concerning physical and social organization, which required legal instruments for its implementation.

WORKING

In the Pilot Plan, the areas dedicated to labor were divided into an industrial and a commercial sector.

Due to the growth of industrial activity in Medellín, the zone reserved for this purpose was large. According to the Plan, it would be located in the south, along the margins of the river and the railroad. The direction of winds from north to south determined the location of this sector so that smokes would not pollute residential areas. Another consideration for the location of this sector was the vicinity to highways and railroads. It was proposed that a green belt zone enclosed the industrial sector in order to isolate it from residential areas.

Its location next to the river and to the railroad system seemed to make it a perfect place. The smaller industrial zones already existing in the city would be preserved and reorganized.

Some of the commercial and business areas of the city would develop along main avenues and separated from housing areas while others would concentrate around the Civic Center.

RECREATION, CARE OF BODY AND SPIRIT

As a proposal, the plan set up a structure around green areas, keeping in mind the topography, the river and streams. This would allow an interconnection between green areas that would function as lineal parks.

Medellín's climate and vegetation were optimal for the implementation of this proposal. The social services proposed for those

zones, complemented the lineal character that extended across the valley. The Pilot Plan project is comparable in its structure to the 1939 MARS Plan for London, where green and residential areas were intermingled. In the case of Medellín the streams system made it possible in a more natural way.

CIRCULATION

The plan proposed a hierarchical road system ranging from heavy to light traffic. Rapid transit roads with few intersections. Connecting roads, which merged with neighborhood streets and reached dwellings. The geographical and physical structure of the city, as well as the degree of development of the existing city at that moment, allowed for the application of a road system along the valley (parallel to the river) complemented with a peripheral road. The main roads would be transversal to the valley and perpendicular to the river. In the neighborhoods, the tracing would follow a grid pattern, and in the hills, they would zigzag along the natural topography. This scheme would adapt well to the configuration of the valley.

2. The Heart of the City and the Pilot Plan

If the idea of implementing order to urban chaos, was the main concern of The Functional City, in the fourth CIAM of 1933, the situation changed in 1951. "The study of the Heart of the City is necessary and timely in our minds. As we understand that, its definition is necessary and this is why we have chosen The Heart of the City as the topic for the eighth CIAM congress," stated Sert, president of CIAM.⁸

The hearts of the city are places "for the congregation of masses, centers of collective life and at the same time, symbols of the same city; they are also centers for the meeting of arts, were the main monuments form a group around public squares and walks visited by the tourists. Citizen pride, gives character to a city that could not be conceived without them. They represent our culture with civic landscapes, where the man made and the artificial prevail over nature."⁹

These characteristics describe the meaning of the Heart of the City. According to Sert, "up until now, they have never been specified and it was therefore necessary to define them for the creation of new communal centers, of new hearts, which would substitute those hearts destroyed by uncontrolled growth, and which in turn were a consequence of decentralization. Therefore, we must reverse this trend putting an end to this unplanned process by establishing what we may call a process of recentralization."

It was in this process of creating new hearts then, that the proposal of the Civic Center in the Pilot Plan for Medellín found it's theoretical justification.

The Civic Center proposed for said Pilot Plan was introduced by Wiener and Sert as an example of a new heart of the city, within the frame of the eighth CIAM Congress held in 1951 in Hoddesdon, England.

The English imposed the designation of Core of the City, as the fundamental topic of the eighth CIAM, instead of Civic Center, as suggested by Sigfried Giedion¹⁰, which was frequently, used to designate government buildings. The interest in the Heart was part of the process of humanization, that is to say, of the return to a human dimension, to the exaltation of laws for the individual and opposite to the tyranny of the machine. Giedion mentioned the cases of Medellín and Chimbote in Peru also by Wiener and Sert and Chandigarh by Le Corbusier as examples of new nuclei with the possibility for the *restitutio in integrum* of a genuine communal life. However, Giedion affirmed, this was unlikely to occur in the super-mechanized cities of the United States.¹¹

THE CIVIC CENTER

The final part of the Pilot Plan report was dedicated to the Civic Center. Wiener and Sert assumed that it was necessary to create a

representative center for the city, a symbolic space that reflected the pride of its inhabitants. To them, the old center did not fulfill these characteristics, and therefore they proposed a new, well designed civic center, which would be an extension of the old center.

The planning aspect of the center of the city is of special importance because the first impression that visitors have is an aerial view, and if the center of the city turns into an excellent example of a place framed by natural beauty, it will give more credit to the city and its people.¹²

Medellín's proposed Civic Center would be located where the railroad station used to be, thus displacing transportation activities to the northern part of the city. This large area would be destined for museums, conference rooms, public libraries and exhibit centers, a main theater and a outdoor auditorium, as well as constructions for the administration and the municipality, a main square reserved for public meetings, a park, and a hotel. It would be necessary to connect all these buildings to civic life, since if they were built in a loose manner and unrelated to each other, they would not be representative of the new city.

This proposal responds more to the urban ideology that Sert began to assimilate when he arrived in the United States, and that he describes in *Can Our Cities Survive?* However, this urban ideology was not in the *Athens Charter* of Le Corbusier.

Large spaces may be an outstanding characteristic of a modern civic center,¹³ The topic of monumentality in relation to the civic center was studied by said Sert. Sert together with Giedion and Leger in *The Nine Points on Monumentality* in 1943, where they wrote:

Sites for monuments must be planned. This will be possible once replanning is undertaken on a large scale, which will create vast open spaces in the now decaying areas of our cities. In these open spaces, monumental architecture will find its appropriate setting, which now does not exist. Monumental buildings will then be able to stand in space, for, like trees or plants, monumental buildings cannot be crowded in upon any odd lot in any district. Only when this space is achieved can urban centers come to life.¹⁴

We may affirm that the Civic Center proposed in the Pilot Plan is not inscribed within the general principles of the Athens Charter of Le Corbusier. It is the materialization of Sert's ideology during the '40s and the North American influence as manifested in *Can our cities survive?* and *Nine points on Monumentality* which came to life in the proposal of the Civic Center for Medellín.

WIENER AND SERT'S PILOT PLAN FOR MEDELLÍN: AN ORDER NOT CARRIED OUT

In 1977 José Luis Sert was invited to Medellín to participate in the seventh Interamerican Housing Congress, "Interhabitat 77," as well as to review the planning and development of the city. This opportunity allowed the assessment not only of the setting in practice of the principles formulated by CIAM, thirty years after the proposal of the Pilot Plan, but also the evaluation of the difficulties found for its implementation.

Wiener and Sert handed the Pilot Plan to the municipality in 1950. Said plan constituted the basis for the realization of the Master Plan¹⁵ for the city. However, this Master Plan was not adopted until 1959. From then on, different municipal and urban planning administrations gradually lost perspective of the plan as a whole, and slowly deviated from the original guidelines. Some programs were carried out, but a global updating of the Pilot Plan was never implemented.¹⁶

In the general revision of the principal aspects of city plan, Sert expressed: "In a plan of such nature many aspects are flexible, but others are rigid and they should have been respected." One of the conditions for the implementation of plans is to offer a continuity of

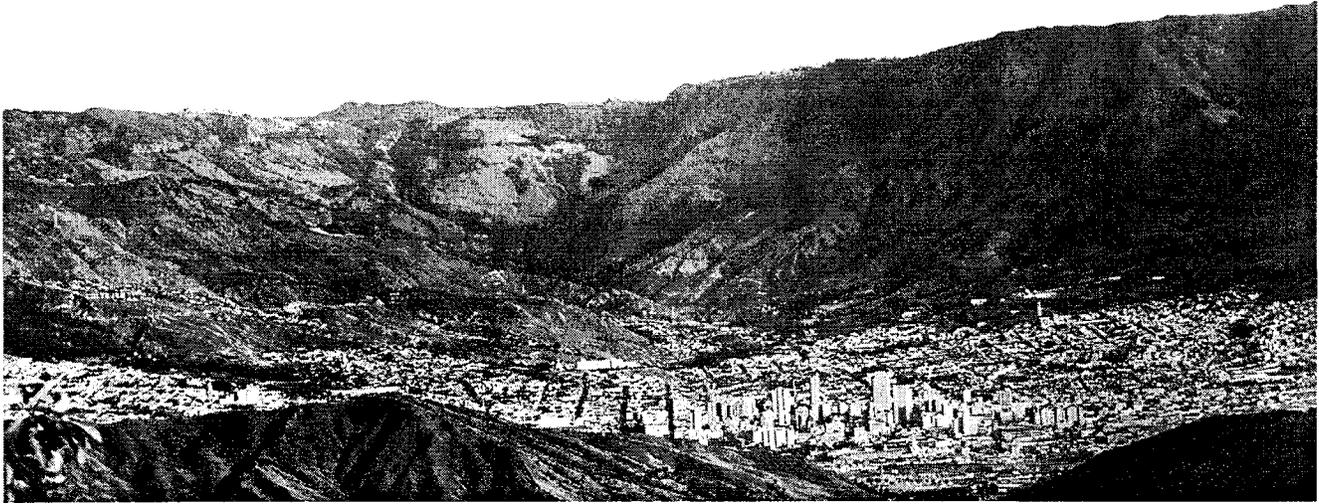


Fig. 2. Panoramic view of Medellín. 1970. Photo Carvajal.

the criteria of City Planning, "the continued work of the teams of technicians on the plan was indispensable. City Planning administrators and professionals should be isolated from political partisan processes in order to achieve a continuity without undue influences. It is not enough that plans and documents rest in the archives," Sert said.¹⁷

The politization of City Planning administrations in our city has been a determining factor of plan discontinuity. The Office for the Master Plan created in 1948 for the elaboration and application of the Plan did not have the necessary support of the Municipal Administration. By 1958, the city had experienced uncontrolled growth without the application of the directives of the Plan and a considerable population increase. The Master Plan adopted in 1959 became just an urban road system that introduced variations to the initial Pilot Plan proposal.

In 1977, Sert pointed out that the scheme and general structure of the road Plan that was being developed, departed fundamentally from the ones proposed in the Pilot Plan. The road plan along the valley, with the transversal road connections proposed by the Pilot Plan, was modified causing greater traffic congestion.

In residential neighborhoods, the road hierarchy had not been respected, and the street layout did not follow the land slopes. In higher gradient slopes, layouts had been traced forming a perpendicular angle, thus structuring inappropriate grids, instead of zigzagging roads that allowed a gentle traffic on the hillsides.

As for land zoning, Sert affirmed that the Pilot Plan established general guidelines in the distribution and the use of the land. By that time, under the influence of CIAM, Wiener and Sert proposed a total separation between the different uses of land as a way of reorganizing the great urban chaos that existed. However in a recent urban planning proposal, mixed land use is stimulated since it promotes urban life. Nevertheless, these uses should be compatible, Sert said. The global areas proposed by the Pilot Plan for each one of the sectors were preserved in general terms, however, when observing them in detail, important modifications were noticed commented Sert.

The industrial zone was modified and did not respect the visional plan, spreading into adjoining neighborhoods. Sert also added that the future location of the industry had not been foreseen.

Housing was not fully planned. In the lowlands, neighborhood units were not totally built the way there were planned. Housing was not separated from traffic road as was proposed and neither did it become independent of the industrial zone by means of strands of trees. Location of low-income housing in high parts of the mountain was not controlled, making it impossible to furnish them with appropriate services. Adequate areas were not properly used for densifying housing either.

This uncontrolled development of residential zones by 1977, was the result of a rapid population increase generated by migration of peasants due to political violence during the fifties, and the absence of social dwelling programs that gave way to land invasions and illegal neighborhoods in the high parts of the mountains.

As for parks and other recreation areas, the Pilot Plan proposed an intensive use of the rich vegetation characteristic of this climate. The lineal parks designed for both sides of the Medellín River and the streams had not been conformed. The hills should have been reforested and conserved as parks. For Sert, the city had not taken advantage of the privilege of having an exuberant nature and a benign climate to have large green areas. Medellín had wasted thirty years in tree planting since the formulation of the Pilot Plan, Sert stated.

In 1949, the downtown area was configured in a harmonic way, Sert pointed out. Its constructions and streets were designed on a human scale. The constructions were of neo-classic style and there were few modern buildings. The city had a defined configuration then. "Today, (1977), these values have been lost, they have been destroyed. High buildings that do not keep, neither qualitative nor quantitative proportion with the urban space that surrounds them broke the human scale and urban configuration. They are the product of the modern technical and economic power," he said.

After thirty years the progress of the city had broken the existing relationship between urban structure and human scale, due to the construction of high buildings in the downtown area. The human scale continued to be a basic concept for Sert in his urban ideology. In his article "The Human Scale in City Planning" published in 1944, Sert considered human factor as an element that must govern the planning of cities. According to this principle he stressed the importance of emphasizing human scale as a measure for future plans.

Out of the proposed Civic Center, only the Administrative Center was built by 1977. From then on, some scattered constructions for institutional and cultural uses have been built, but without a perspective of the civic center as a whole. This was partly due to the construction of new roads that did not keep in mind the unit of the proposal.

Another important aspect in the process of city planning for Sert, was the community participation. On this issue, Sert commented the following: "The plans and programs of City Planning have not been discussed with the public. It is necessary that people know and discuss programs before the Municipal Administration takes them into practice."¹⁸

Finally, Sert concluded that "the city is not saturated, and

although approximately 808 of its area is occupied, it is susceptible of densification, by means of a better use of the land. The urban infrastructure at the time was underused." However, Sert suggested that greater planning was indispensable and stricter controls for urban development were also required. The original Pilot Plan foresaw a population of 750,000 inhabitants in 50 years. Only thirty years had passed by 1977, and the population had already surpassed one million.

CONCLUSION

The Pilot Plan project for the city of Medellín by Wiener and Sert constitutes the setting in practice of some principles that summarize the urban statements of an era. These principles became a method for the analysis of housing and urban problems, and were carried out through CIAM congresses in an intent to respond to the chaos of cities.

José Luis Sert proclaimed in CIAM that city planning was a basic condition for better quality of life. The Pilot Plan tried to organize the development of the city, but it lost "the group vision and the original guidelines" Sert commented in his revision. Although it seemed that nothing of what was proposed was ever done, the guidelines of the Plan induced motives with enough strength to leave an imprint. The impact on the city was positive and although its application was not totally implemented, we can retrace its prints in the city today.

The urban reality of Medellín developed in a more complex and conflicting way than the one foreseen by urbanists Wiener and Sert in relation to its political, social and economic context. As in other cities, the city context did not allow the achievement of this goal. However, Medellín shows today, almost half a century later, the imprint of "a modern spirit" in its urban structure.

NOTES

¹José Luis Sert, "Changing Views on the Urban Environment" *RIBA Journal*, May (1963). Discourse given at the RIBA, London, February 1963.

² From the report and plans by Wiener and Sert.

³ Basic references: Wiener, Lester Paul and Sert, José Luis. *Pilot Plan for Medellín Report* Vol.II, (1950). Le Corbusier, *Principios*

de Urbanisme (La Carta de Atenas) (Barcelona: Editorial Ariel, 1989). Sert, José Luis, *Can Our Cities Survive?* (Cambridge: Harvard University Press, 1941). *Poden sobreviure les nostres ciutats?* (Barcelona: Generalitat de Catalunya, 1983).

⁴ José Luis Sert. *Poden sobreviure les nostres ciutats?* (Barcelona: Generalitat de Catalunya, 1993), p. 10.

⁵ *Ibid.*, p. 58.

⁶ José Luis Sert, "The human scale in City Planning," *New Architecture and City Planning* (New York: Edited by Paul Zucker 1944), p. 398.

⁷ Old block: 80*80meters. Square urban grid, derived from the "spanish laws" that structured the city.

⁸ José Luis Sert, "Centros para la vida de la comunidad" in: *El corazón de la ciudad*. E.N. Rogers, J.L. Sert and J. Tyrwhitt. (Barcelona: Hoepli, S.L. 1955).

⁹ José Luis Sert, In: *Prologue of The Heart of the City*, Spanish edition.

¹⁰ This is in reference to VIIIth congress CIAM topic: The Heart of the City. From: Sigfried Giedion, *Arquitectura y comunidad* (Buenos Aires: Editorial Nueva Visión, 1958). See: "La humanización de la ciudad y el nuevo regionalismo," p. 82-83.

¹¹ *Ibid.*, p. 83.

¹² Wiener, P.L. y Sert, J.L. In: *Medellín Pilot Plan Report*. Vol 11, (1950).

¹³ Sert, J.L. Podem sobreviure.... Op. Cit., p. 234.

¹⁴ Nueve puntos sobre monumentalidad - Necesidad humana. Compilation by: J.L. Sert, F. Leger y S. Giedion. (Nueva York, 1943). From: *Arquitectura y comunidad*. Sigfried Giedion. (Buenos Aires: Editorial Nueva Visión, 1957).

¹⁵ Wiener y Sert were contracted, between 1950-1952, as consultants for the Master Plan. It corresponds to the final details based on the specific application of guidelines to each sector of the city.

¹⁶ *Revisión de la Planeación y del desarrollo de Medellín y de su Area Metropolitana*. Report of the working sessions with consultant architect José Luis Sert. (Medellín: Departamento Administrativo de Planeación y Servicios Técnicos, November 23 to December 9, 1977).

¹⁷ *Ibid.*

¹⁸ *Ibid.*