

Bogotá

An analysis of urban design, transportation, and accessibility in a developing, sustainable city



Alina Grace Prassas

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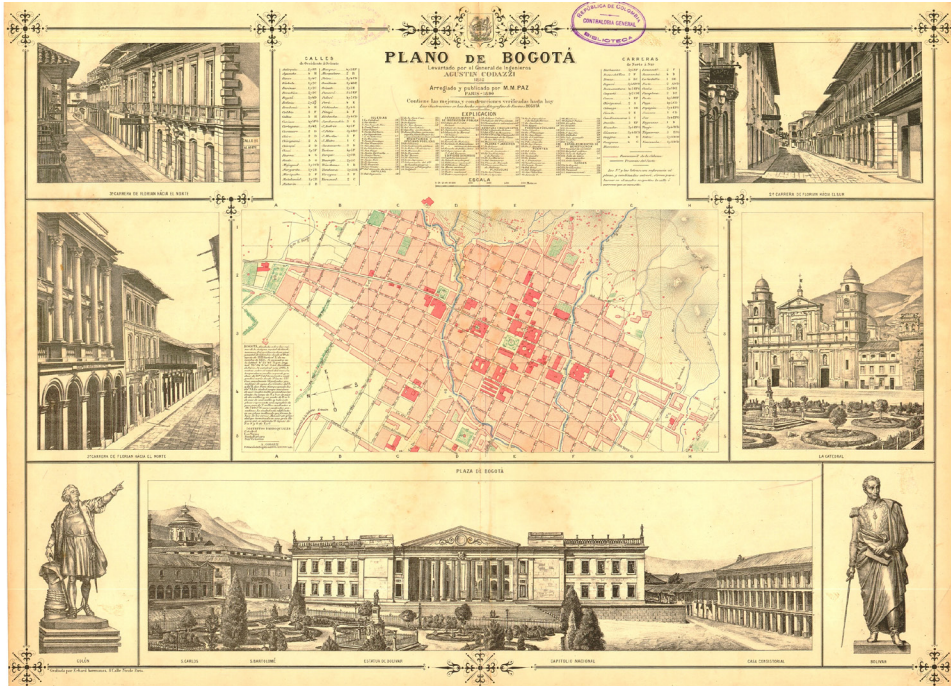
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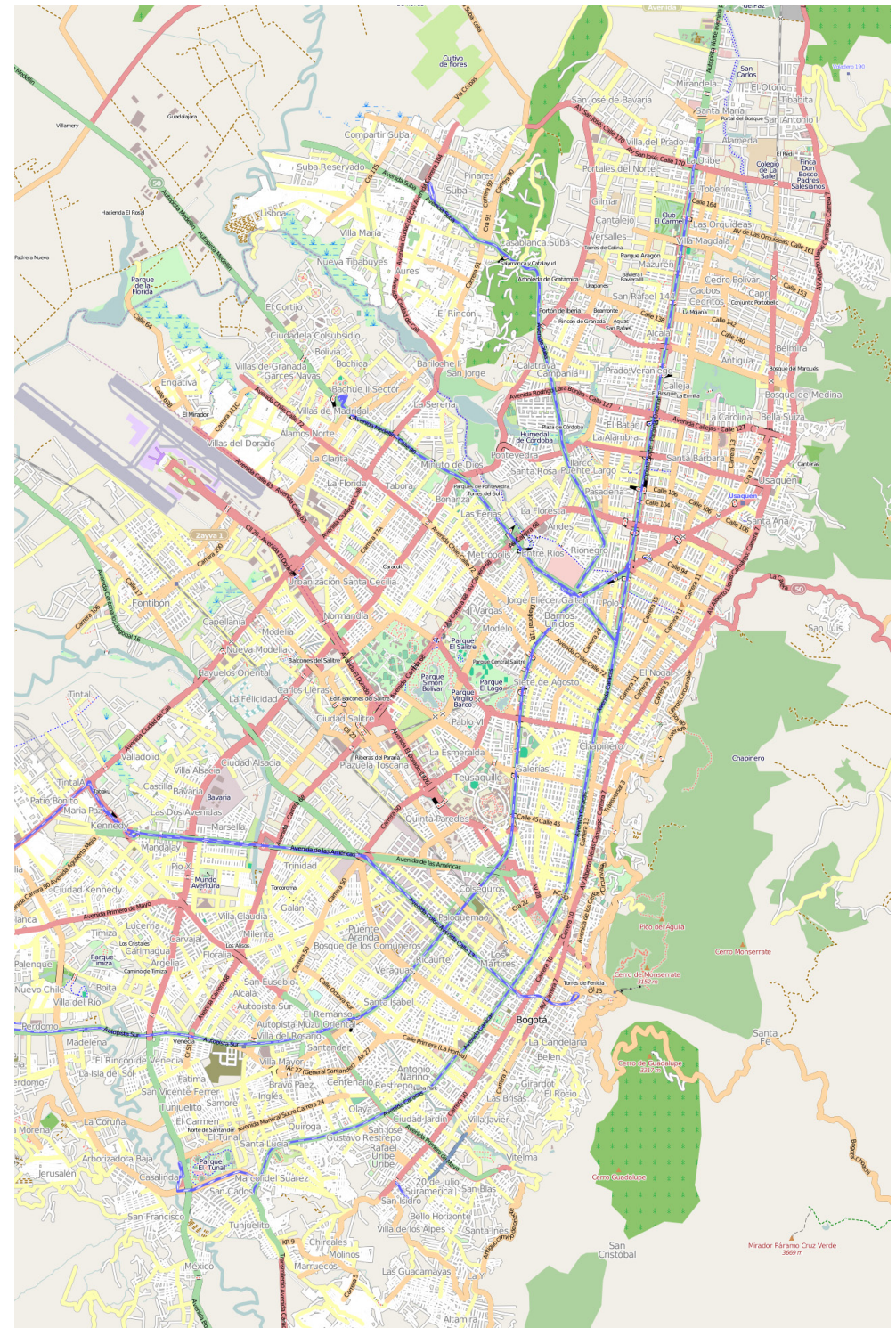
Abstract

Bogotá is a complex city, one that has evolved for hundreds of years, and has always been framed by the ebb and flow of large amounts of people. In this case study, I hope to evaluate modern urban design plans through the context of social equality. Enrique Peñalosa, a former mayor of Bogotá, frames the problem third world countries have eloquently “If we in the Third World measure our success or failure as a society in terms of income, we would have to classify ourselves as losers until the end of time,” declares Peñalosa. “So with our limited resources, we have to invent other ways to measure success. This might mean that all kids have access to sports facilities, libraries, parks, schools, nurseries.” For decades Colombia has been plagued by violence brought on by the drug trade and its gangs. Bogotá was perhaps the first city in Bogotá to try and curb the violence through urban upgrades, and was very influential throughout the entire country. Through examination of the history of Bogotá, its land use patterns, transit approaches, affordable housing projects, public parks, and libraries, a thorough picture of the city’s urban design will be painted.



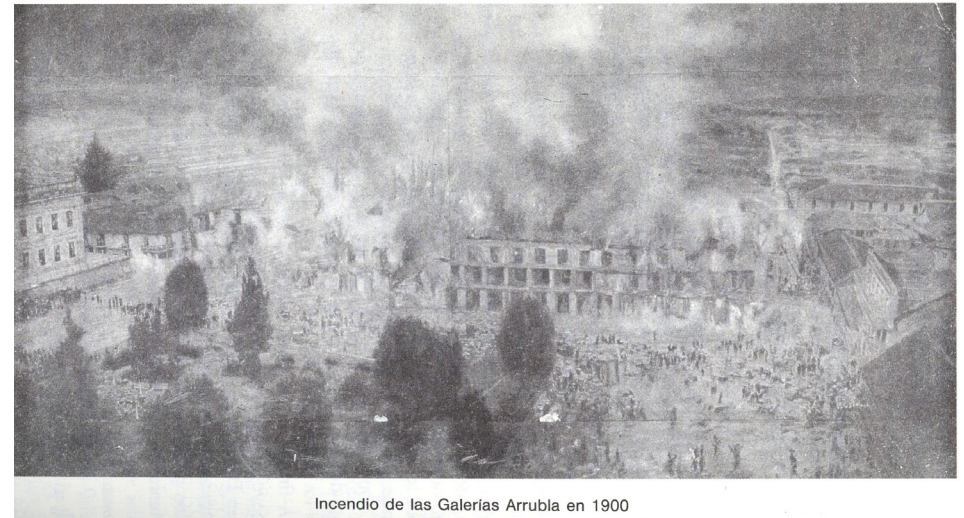
Contextual Maps



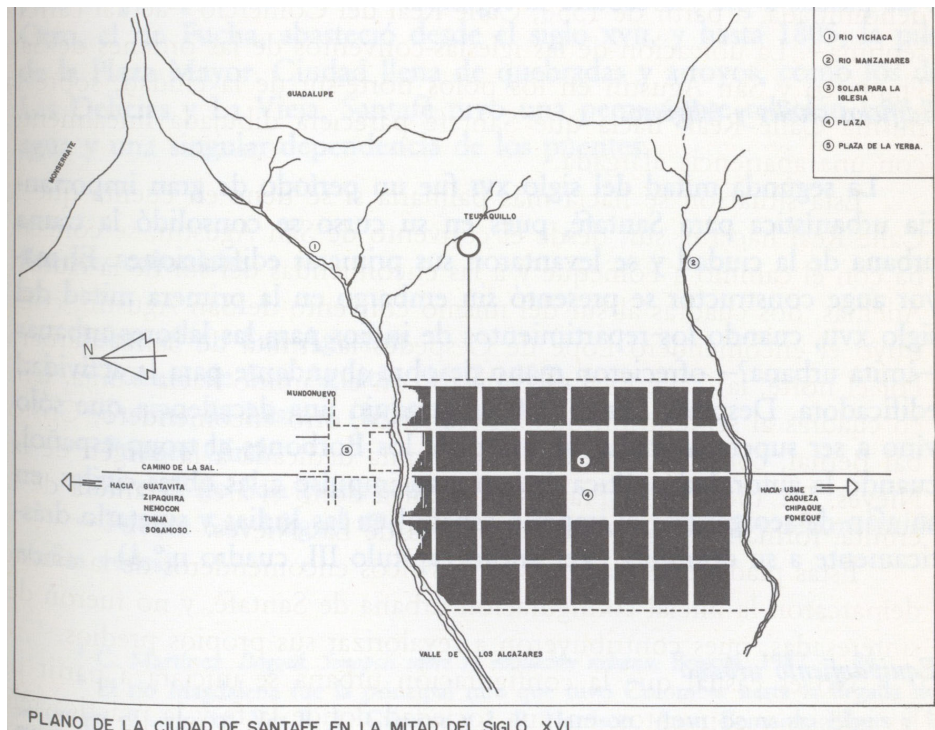


Background and Brief History

The region that Bogotá inhabits, near the Andean mountains to the East and roughly in the center of the country, has long been inhabited. Originally settled by native peoples, the tribe Muisca numbered around 500,000 by the time Spanish explorers set foot in South America. Founded in 1535 as a Spanish colony, Santa Fe, otherwise known as Bogotá, became the center of Colombian political life quickly. It was named 'Viceroyalty of New Grenada' in 1717, only to be taken away and reinstated by 1739. This title essentially made Bogotá the capital of the colonial region, which morphed into its current day title. Colombia achieved independence from Spain in 1830, then known as the Republic of New Granada. It changed its name to the current Republic of Colombia in 1863. y."¹⁷



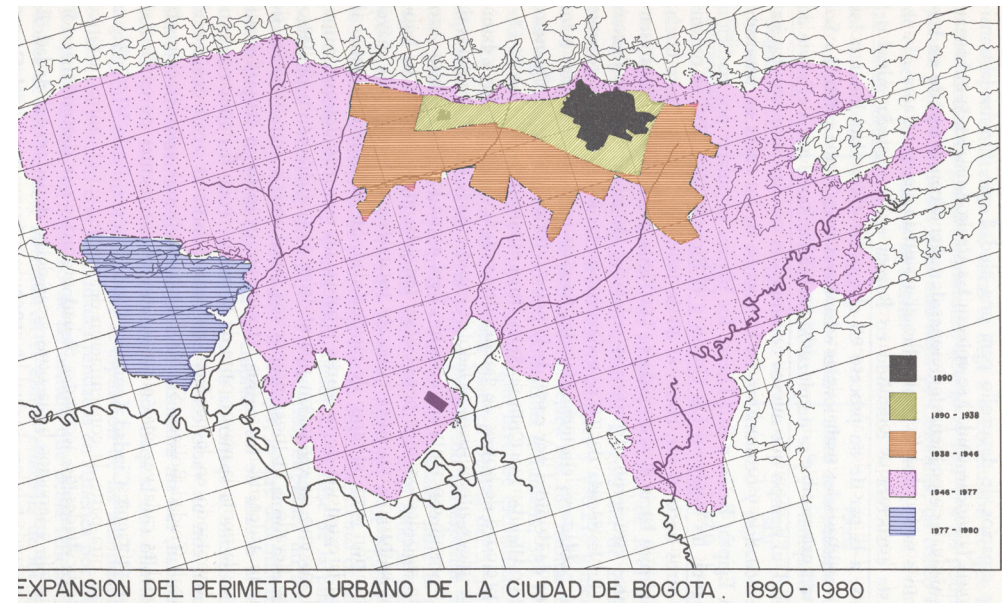
Bogotá has a long history of civil strife, and this paper will only touch briefly on this aspect of Colombian history in specific relation to Bogotá. The many conflicts that have occurred have shaped Bogotá and other large cities in Colombia by increasing the amount of people moving to the city substantially. 'Bogotázo' was first major conflict of the modern era, and occurred in 1948. It was a reaction to the assassination of an important political leader, Jorge Eliecer Gaitan, and started off a period of violence named La Violencia. During the rioting most of the center of town was burnt down. "The destruction pushed the commercial focus, and the wealthy population, to the north of the colonial center. The area became blighted and dangerous, effectively severing the city into a rich north and a poor south."¹⁸ Continuing into the 1950's, conflict raged on. La Violencia was a civil war between the Colombian Conservative Party and the Colombian Liberal Party (both groups would later influence such rebel groups as the FARC and M-19.)



During La Violencia, massive amounts of people from rural areas started to move to urban areas, including Bogotá. This influx of people has shaped the city, and people continue to move to the city in large waves. In 1957 the military junta seized power, due to President Gustavo Rojas Pinilla being forced into exile. The junta ruled for 1 year, and from there a joint government power sharing situation was formed, called the “National Front”. Conservative and Liberal administrations traded leadership roles until 1974, and later the National Front was officially ended in 1991 when a new constitution was drafted, which guaranteed fundamental rights and representation of minority populations. The new constitution greatly influenced Bogotá by transforming it from the Special District of Bogotá, to the Capital District. This restructuring allowed Bogotá’s mayors much more leeway and freedom to govern the city autonomously.



Associated Press Photographs



Concerning Bogotá specifically, the 1960s and 1970s were a time of great change for the city. Public policy of the 60’s and 70’s led to significant expenditures on social programs like public health and education in Bogotá, while investments in infrastructure for energy and transport were de-emphasized.² In the 1970s an economic boom led to increased income, and over 60% of the population became urbanized. 2 As of 2005, the population of Bogotá was 7.36 million, and the entire country is home to more than 45.7 million people.

List of Bogota's Mayors

Mayors of the Special District of Bogotá (1954-1991)

Roberto Salazar Gómez	1954-1955
Andrés Rodríguez Gómez	1955-1957
Fernando Mazuera Villegas	1957-1958
Juan Pablo Llinás	1958-1961
Jorge Gaitán Cortés	1961-1966
Virgilio Barco Vargas	1966-1969
Emilio Urrea Delgado	1969-1970
Carlos Albán Holguín	1970-1973
Aníbal Fernández de Soto	1973-1974
Alfonso Palacio Rudas	1974-1975
Luis Prieto Ocampo	1975-1976
Bernardo Gaitán Mahecha	1976-1978
Hernando Durán Dussán	1978-1982
Augusto Ramírez Ocampo	1982-1984
Hisnardo Ardila	1984-1985
Diego Pardo Koppel	1985-1986
Julio César Sánchez	1986-1988
Andrés Pastrana Arango	1988-1990
Juan Martín Caicedo Ferrer	1990-1991

Principal Mayors of the Capital District of Santa Fe de Bogotá (1991-1998)

Juan Martín Caicedo Ferrer	1991-1992
Sonia Durán de Infante (ad-hoc)	1992
Jaime Castro Castro	1992-1994
Antanas Mockus Sivickas	1995-1996
Paul Bromberg Silverstein	1996-1997

Principal Mayors of the Capital District of Bogotá (1998-present)

Enrique Peñalosa Londoño	1998-2000
Antanas Mockus Sivickas	2001-2003
Luis Eduardo Garzón	2004-2007
Samuel Moreno Rojas[1]	2008-3 May 2011
María Fernanda Campo (Acting Mayor)[2]	3 May 2011-10 June 2011
Clara López Obregón (Acting Mayor)[3]	10 June 2011-31 December 2011
Gustavo Petro Urrego	2012-2015

first land use plan, tax reform

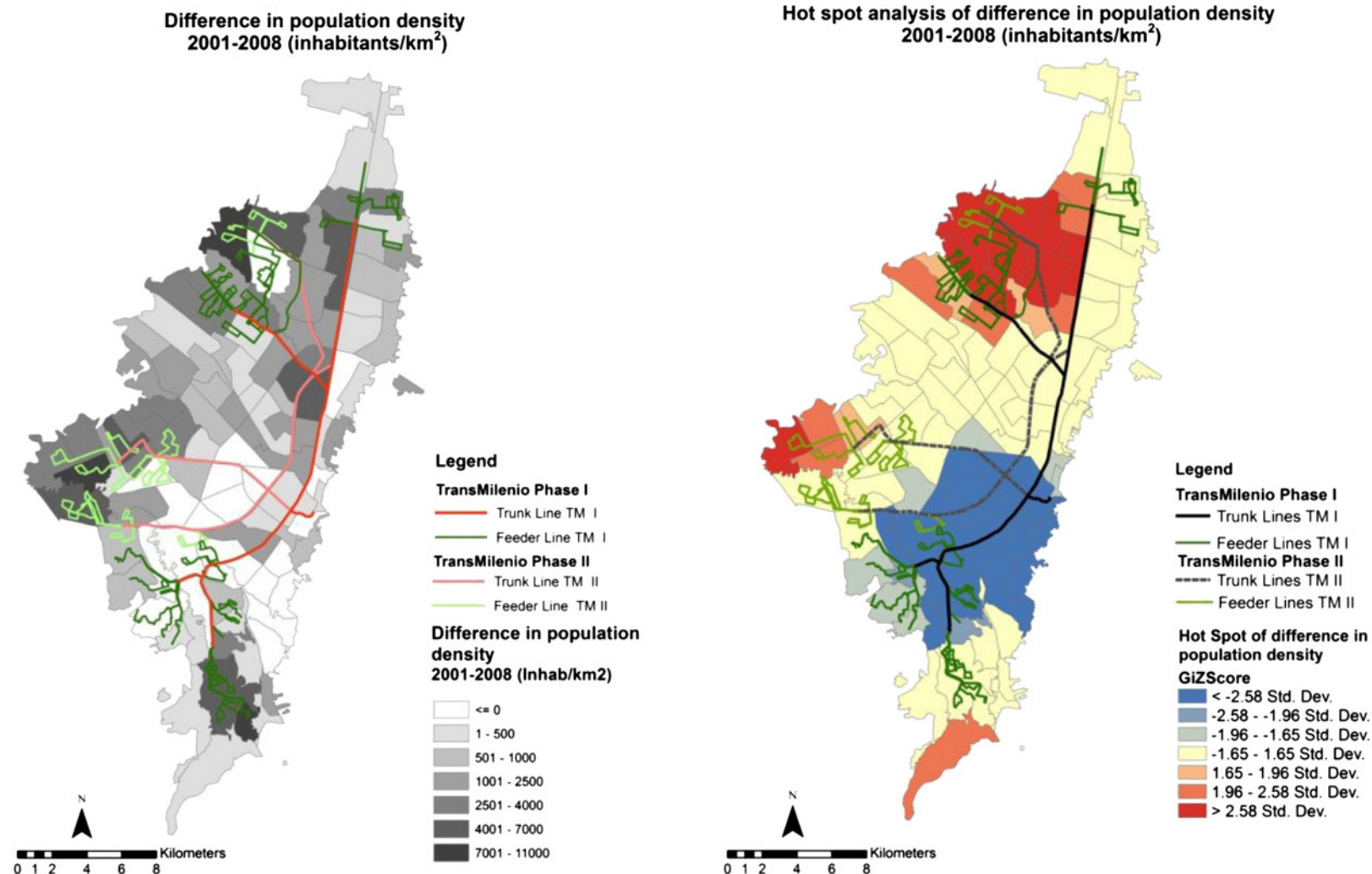
privatized city's public utilities, disbanded corrupt transit police, Cultura Ciudadana campaign- civility rules over cynicism and apathy, mime campaign, revived Cilovia

TransMilenio, heavy investment in bikepaths, car free day, major public park, library and school construction, banned cars from sidewalks, Territorial Ordering Plan of the Capital District (POT)



Land Use

Overall Bogotá's poorer populations are concentrated in the south and east, where a more informal settlement pattern is established. A lack of structured housing and an ever increasing influx of inhabitants has made it hard for the housing stock to keep up. However, it is in Bogotá's interest to provide as much public housing as possible due to the fact that it is four times more expensive to supply basic utilities after an area has been settled.¹⁵ Several key land use plans have been established over the years, and are a current response to the fast urban expansion that has been occurring. More informal economies exist on the peripheries, and the most structured jobs occur in the downtown area. Interestingly, some of the poorest neighborhoods are located directly adjacent to the downtown area, and street vendors have taken over many public plazas.

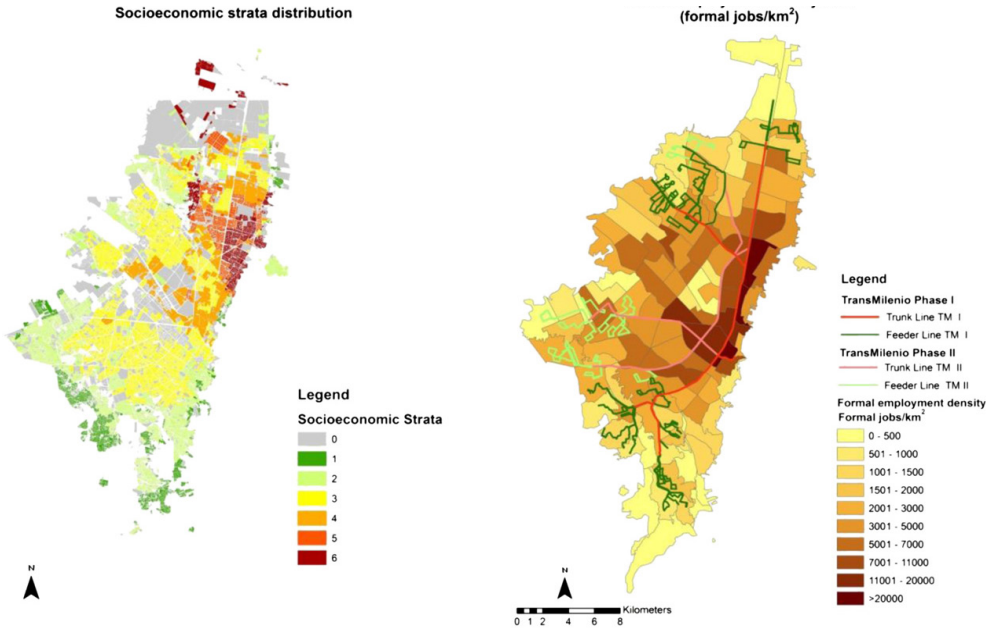


Based on population data from Bogotá planning department

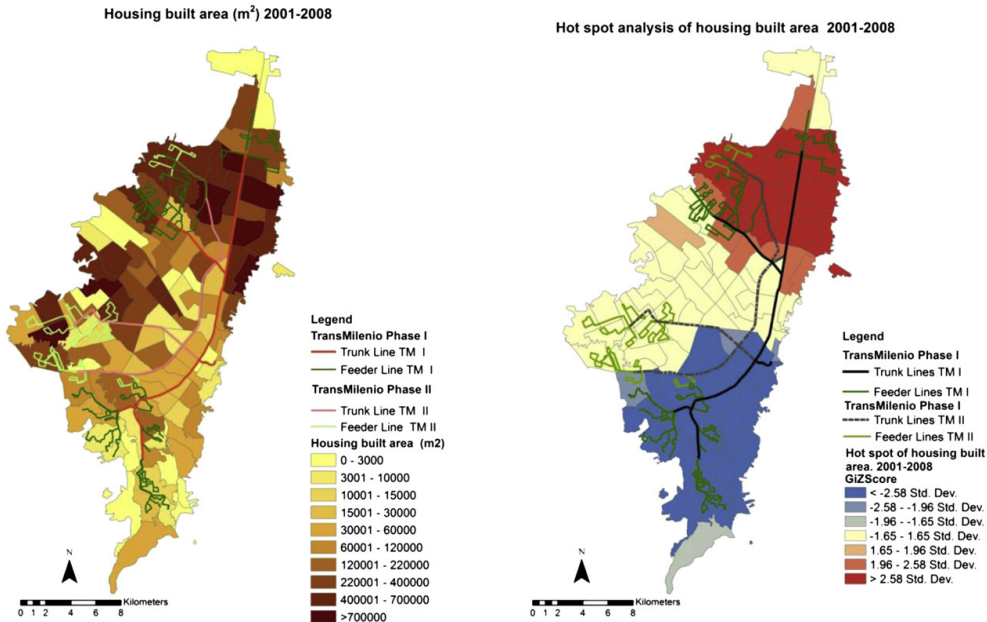
The Usme Zonal Plan was approved by the Zonal Management Plan, or POZ through Decree 252 on June 21, 2007. This plan regulates the development of the urban expansion area in the southern zone of Bogotá, and designates much of the land for low-cost housing. The Usme Zonal Plan covers 826 hectares.

Decree 436 was enacted on October 19, 2006. This decree regulates 2,300 undeveloped hectares within the urban perimeter where there is more than 10 undeveloped hectares. The land covered by this decree can only be developed following the approval of a Partial Plan involving land readjustment. Development is also conditional on the payment of regulatory charges and levies on incremental land value associated with approved building rights above the basic land utilization coefficients.

The Priority Development Declaration was originally introduced in Colombia by Law 388 of 1997 as a tool to avoid speculative retention of land and to facilitate urban development. This resolution mandates the development of vacant parcels located in the urban area that are designated for VIS or VIP housing. If not developed in due time, the local government can offer the parcels for sale in public auction.



Based on data from Secretaría Distrital de Planeación



Based on building census data from DANE

Transit

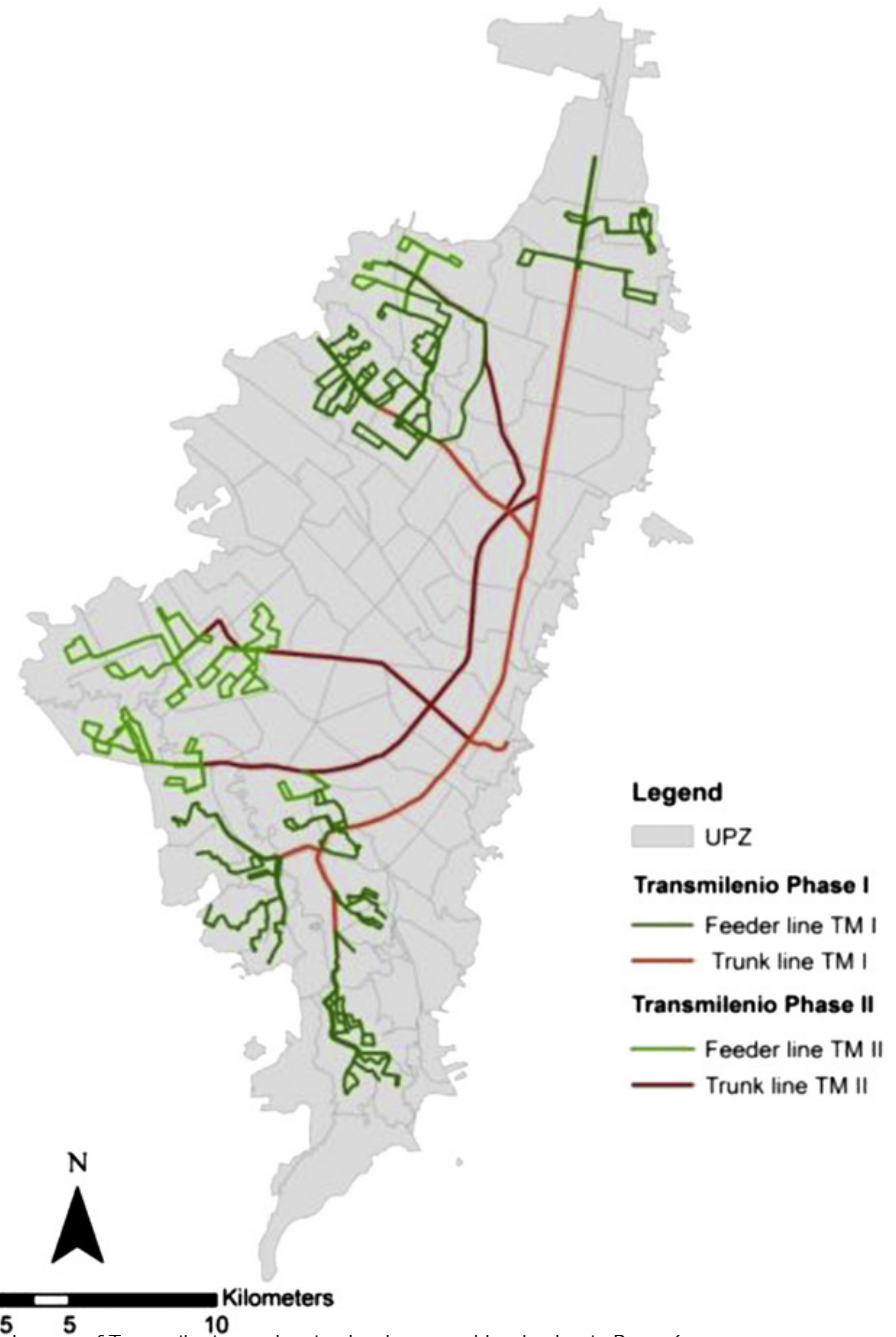
Public transportation has always been a part of Bogotá's public life. A trolley system was used before the 1950's, at which point a fully public bus system was instituted.¹⁴ In the past, bus drivers set service locations based on potential revenue from the passenger, leading to intense competition in some areas and under-service of other areas.¹⁸ This generally affected poorer parts of town most negatively, as bus drivers were operating exclusively for profit and incentives to provide equal service was limited. In recent years a major bike campaign has increased public participation, and Bogotá has been a leader in the 'Cicovia' movement for decades. Other efforts to improve congestion within the city include banning cars on certain days. Together these three strategies of efficient bus service, increased bike usage, and decreased car usage has helped to level the playing field for all of Bogotá's residents.



Progressive Transport and the Poor: Bogotá's Bold Steps Forward



Major reform occurred in the bus system when the TransMilenio structure was launched in 2001 by Mayor Enrique Peñalosa. According to a study on monetary impacts of the TransMilenio on land values, “Low-income households spend between 13% and 16% of their income on transportation (Universidad de los Andes and Cámara de Comercio de Bogotá, 2009), and since they settle in peripheral areas, far from the employment and activity centers, they travel longer distances (23 km on average for each trip).¹⁴ The Transmilenio system has helped to reduce the transit access equality gap, but has more work to be done. Generally the bus line functions like an above ground subway, where riders purchase tickets to enter the station (not by trip).¹⁴ Construction of the bus system had 3 phases, and as of 2005 supplied more than 20 percent of daily trips. By 2015, the complete TransMilenio system is expected to transport 80 percent of the city’s population at an average speed of 25 kilometers per hour with a service quality similar to an underground metro system.¹⁴ The TransMilenio system was opted for instead of an elevated highway system, which would further stratify Bogotá society. Another added benefit was that the bus system cost much less; 300\$ million as opposed to 600\$ million. Today the Transmilenio is very popular and successful, but has not adjusted well to increased ridership. Its downfall may be that it is too well used, and has not kept up with demands.



Bicycles play a very important role in the transportation system of Bogotá. Ciclovías celebrate community and family by closing the streets every Sunday from 7am to 2pm and major holidays. People are invited to walk, run, bike, and explore the city at a slower and friendlier pace. They began in 1974, stopped for a few years, and revived again in 1982 by Mayor Antanas Mockus Sivickas. To this day they are a cherished part of Bogotá life, and the practice has spread to other parts of Colombia. For every day usage a bike path network was created. Known as ciclorutas, 184 miles of these paths were built during Enrique Peñalosa's term at a cost of US\$180 million dollars (from 1999 – 2002).¹ "Since the mid-1990s, the share of daily trips by cycling has grown from 0.9 percent to 4 percent."¹

Another major problem Bogotá struggles with is the huge amounts of traffic congestion and overall car centric culture. To promote positive change and retake the sidewalks for pedestrian use, Peñalosa began placing bollards along the sidewalks in order to keep them free of parked cars. Car Free Day is also 'celebrated', and is held on September 22nd. Major restrictions are placed on car use within the city to cut back on congestion and pollution. During rush hour, license plate restrictions based on one's numbers are enforced: from 6:00 A.M. to 8:30 A.M. and 3:00 P.M. to 7:30 P.M. On Saturdays, Sundays and holidays the rush hour license plate restrictions do not apply. Overall drivers are only allowed 70 hours per month in their cars- within the city of Bogotá. However, a buying spree of used cars has occurred in order to get around the restrictions. Overall these car restriction methods have worked for the most part, but due to the ever increasing amount of people flowing into the city, and adequate size of the Transmilenio system, Bogotá has much further to go to achieve great public transit.



Associated Press Photographs

Affordable Housing

Housing is one of the driving factors behind Bogotá's sprawl and mobile inequality. Many efforts have been undertaken recently to address the vast gaps in safe, affordable housing options. Most government sponsored affordable housing is located in the southern districts, and along the periphery, though some effort has been placed downtown as well. It is key to improve undeveloped land before people arrive, as retrofitting informal settlements with sewer, water, and electricity is 4 times more expensive than doing it from the beginning.¹⁷ MetroVivenda also works with TransMilenio to plan public housing near future sites of bus portals.

MetroVivienda is the City of Bogotá's main mechanism for the development of affordable housing. The self-defined mission of the five-year old government agency is land-banking; where cheap plots of land are bought up on the periphery before there is a demand, and then infrastructure improvements made before settlement occurs. Through negotiated purchase or use of eminent domain, privately-owned open space at the urban periphery, MetroVivienda creates large assemblages to be improved upon with infrastructure, planned and parceled, and sold to developers who construct housing at market rate that is affordable to area families. The agency operates one program, which is designed to be an economically viable, self-sustaining operation. The initial public investment is to be recycled into the production of future mega-projects, each creating 5,000 to 10,000 units in new residential districts at the edge of the expanding city.¹⁷ The sale of parcels makes funds more readily available for investment in subsequent rounds of acquisition and development.¹⁸

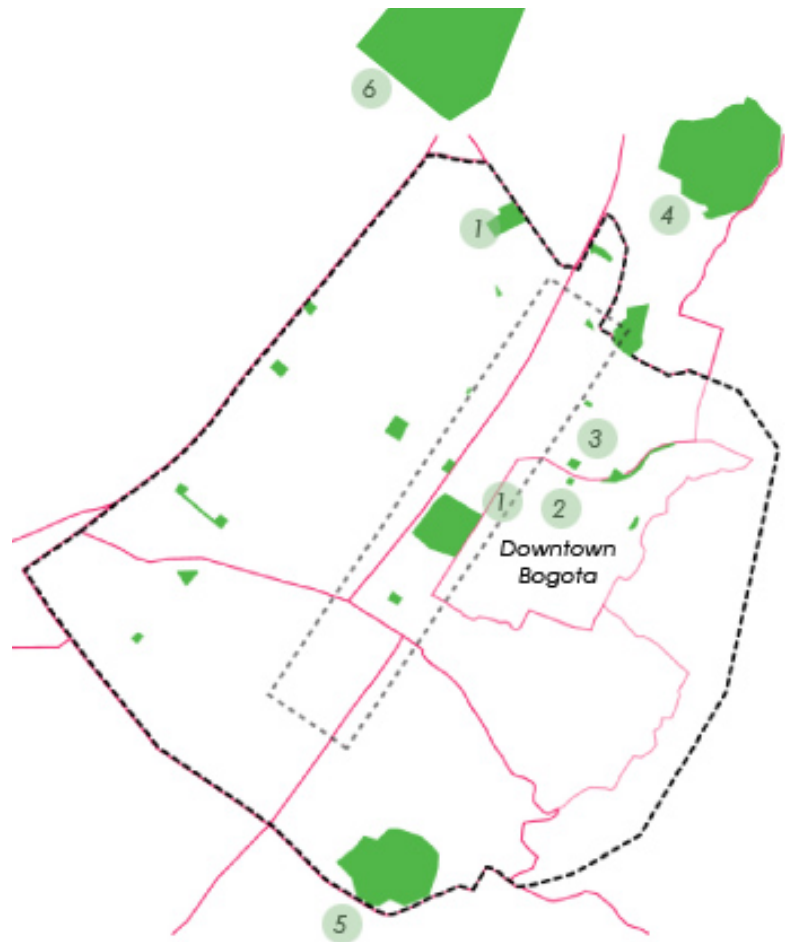




<http://www.metrovivienda.gov.co>

Public Parks

A major campaign that Enrique Peñalosa undertook during his term was to create hundreds of new parks, plazas, libraries, and schools. According to Peñalosa, “The importance of pedestrian public spaces cannot be measured, but most other important things in life cannot be measured either: Friendship, beauty, love and loyalty are examples. Parks and other pedestrian places are essential to a city’s happiness.” The park this case study will focus on is located in the downtown area of Bogotá, and is called Parque Tercer Milenio, or Millennium Park.⁵



- 1 Tercer Milenio Park
160,000 SQ.M
- 2 Santander Park
6,240 SQ.M
- 3 Park Journalists
6,000 SQ.M
- 4 National Park
1,145,000 SQ.M
- 5 Park San Cristobal
231,000 SQ.M
- 6 Simon Bolivar Metropolitan Park
1,000,000 SQ.M

Third Millennium Park is located next to the arterial street Caracas Avenue, and is in the heart of the downtown district. The Parque Tercer Milenio project, which entailed the removal of the nefarious Cartucho market and 600 informal buildings in downtown Bogotá, was justified on the grounds that it would prevent 150 violent deaths a year by retaking public land for public use and to drive out the violent gangs who had overrun the area.¹⁰ The tight spaces and limited sightlines that occurred in tightly packed informal markets where the Cartucho market was once located contributed to the overall dangerous vibe that downtown was perceived as having.¹⁵ Today the park has been all but revitalized and much less crime occurs. Its detractors claim that the park is much too open, and not in scale with the surrounding neighborhoods. The public housing and retail areas of the project to the North and South have not been completed yet, and the park lacks a good framework without them. However, when looking to Bogotá's future, the park will be a great amenity in the downtown area, and an "opportunity for future growth". While not overly programmed with activities, the parts of the park that are defined are well used.¹⁰



LOCALIZACIÓN



SAN VICTORINO

Area de intervención: 14.5 HA

SANTA INÉS

Area de intervención: 20 HA

SAN BERNARDO

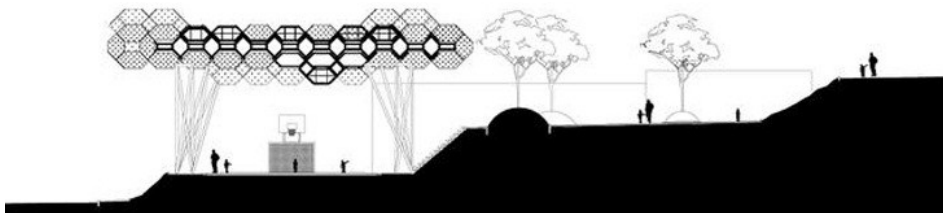
Area de intervención: 36.2 HA



Public Plazas

Another aspect to the continued restoration and urban design of Bogotá is the reclamation of public plazas for everyone's use. Before the campaign started in the late 90's, many plazas had been overrun with either cars or street vendors, and most were very unsafe. In many poor barrios of town, no public squares or parks exist, but a movement is now occurring to promote these civic spaces in all neighborhoods. This case study will examine the El Bosque de la Esperanza, or Hope Forest, designed by Giancarlo Mazzanti.

Cazuca is perhaps the poorest and most violent slum in or around Bogotá. The metal canopy that Mazzanti designed sits on a hillside not far from Bosa, and is located in close proximity to a school. It was an ordeal to even begin the project, as local gangs had to be convinced of the projects' merit, and enlisted in its upkeep. It cost \$614,000 to construct, and was paid for mostly by Pies Descalzos, a private organization established by the singer Shakira. The metal structure suggests "a thicket of trees, like umbrella pines, where there's not a real tree in sight, a spectacle meant to be visible from far away".¹⁶ Today the plaza is used as a meeting point, and a playground for the school nearby. Children and community members are invested in its appearance, and help to maintain it.



<http://www.archisearch.gr/article/723/bosque-de-la-esperanza-%28-forest-of-hope-%29-:-giancarlo-mazzanti---bogota-colombia.htm>

http://www.designboom.com/weblog/images/images_2/erica/465/mazzanti01.jpg



Overall Significance

Bogotá is a great example of a developing country that has really tried to improve the lives of its citizens through urban design and public transit access. Though not close to being done with public improvement projects, the progress made thus far has been impressive. Future administrations need to keep up support for urban infrastructure and transit expansion, as dwindling financial support for previous high profile and high cost projects has led to a decrease in their quality. Other Colombian cities, such as Medellín are surpassing Bogotá in their urban renewal ideas and projects. The TransMilenio continues to be very popular; however expansion of system routes has not kept up with demand, and is much too overcrowded. Ciclovias and Ciclorutas are continually popular, and have been slowly increasing ridership, but not to the level desired yet. There is a great chance to reduce pollution and increase healthy activities while fostering community with bicycle riding, and Bogotá needs to continue to promote its benefits. MetroVivienda is a lower cost option to provide good quality formal public housing, but has not kept up with demand, and the city's most destitute are still without good housing options. Overall, Bogotá is still working on civic improvements, but has clearly implemented many major undertakings, and needs to continue funding for these projects. The urban design of happiness is a unique viewpoint to analyze the quality of life that citizens of Bogotá have.



Urban Design Charrette

Project Site:

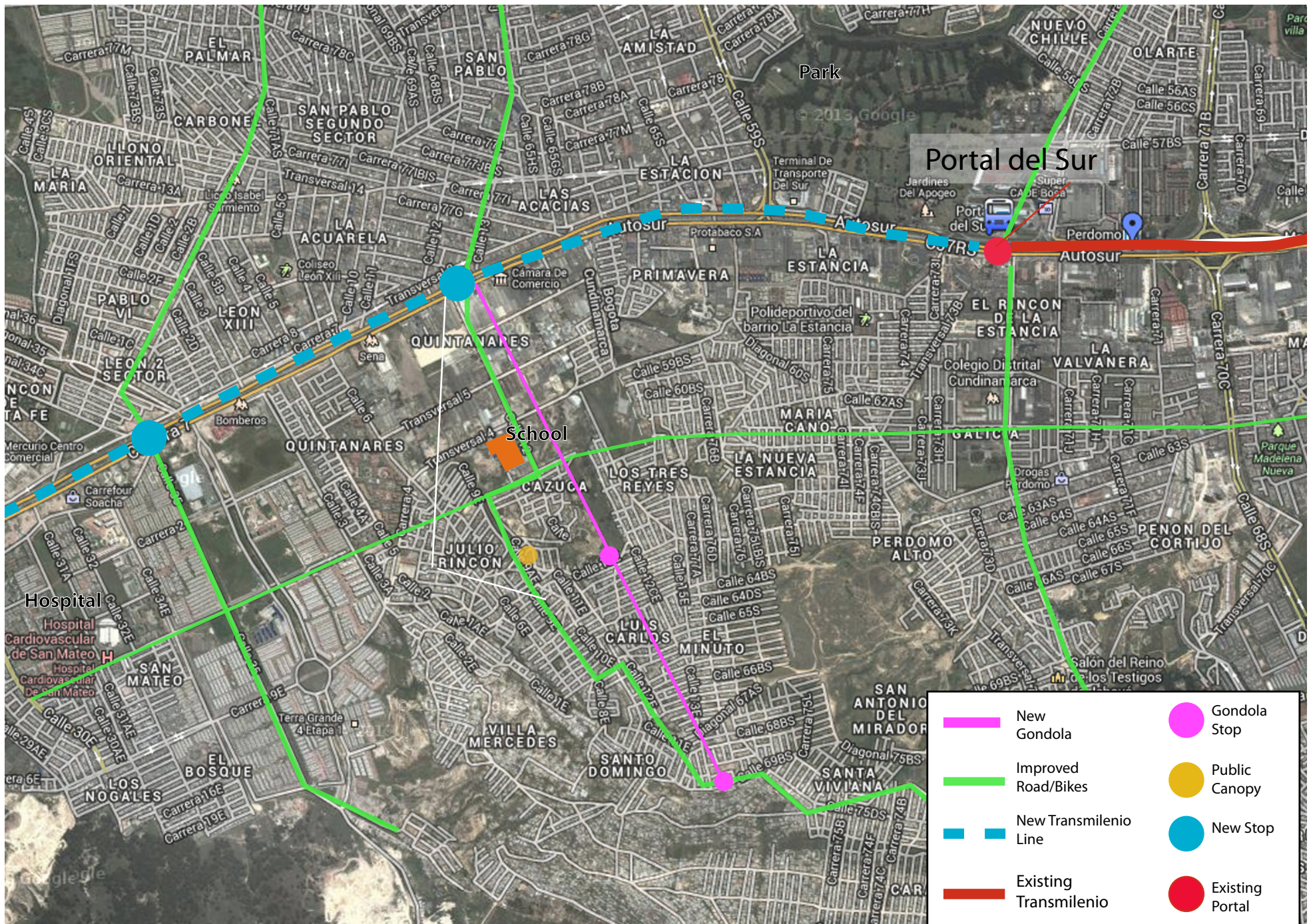
-Adjacent to the Hope Forest public plaza in the Altos de Cazucá neighborhood. The new Transmilenio station would be located along the road Transversal 7, to the north of the public school.

Goals:

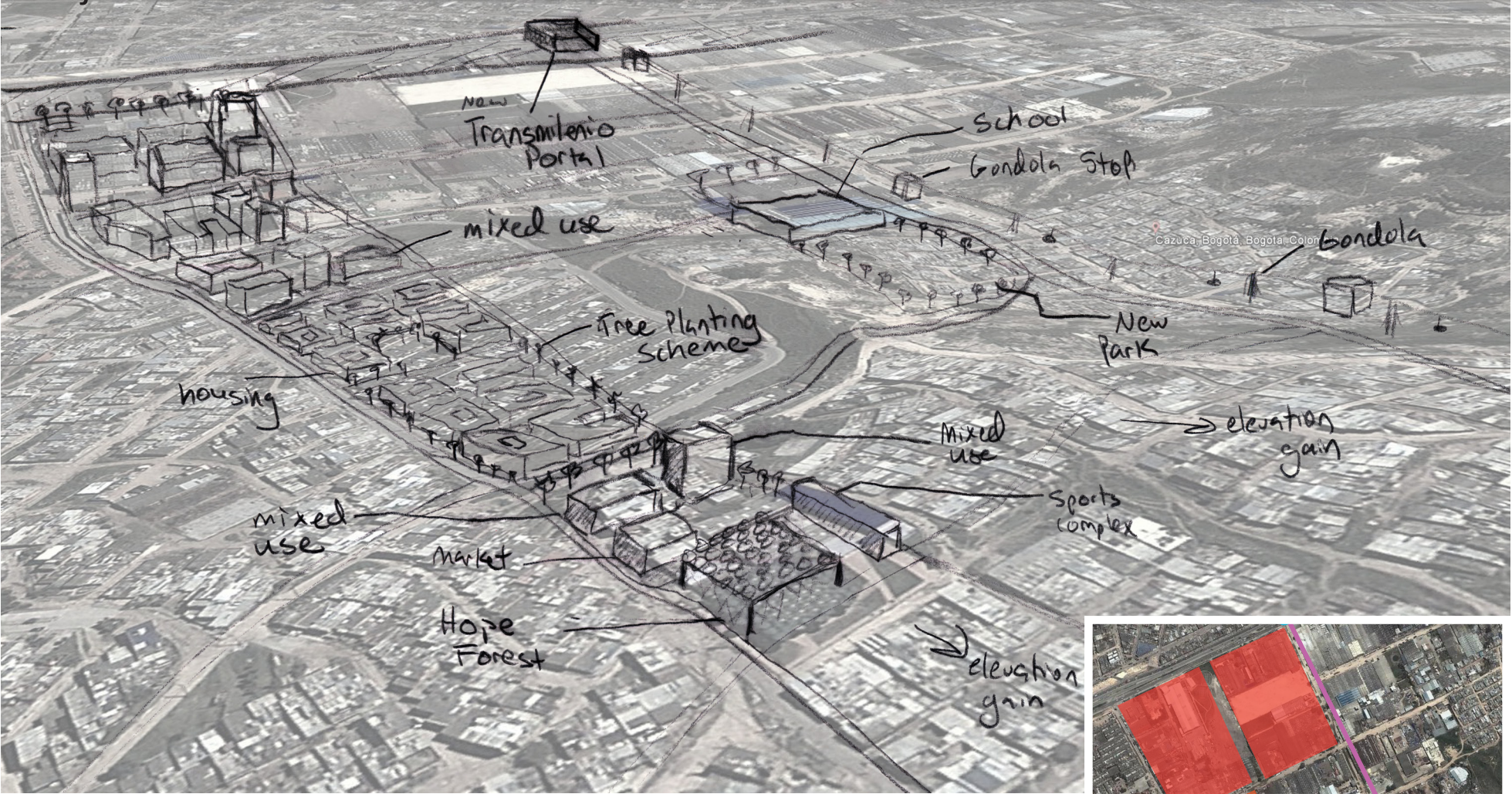
1. Encourage economic development in poor neighborhood of town
2. Build upon public space that has already been invested in
3. Promote equal access to main Transmilenio lines
4. Promote more bike riding with better bike lanes
5. Connect important places through public transit
6. Utilize gondolas to overcome steep terrain









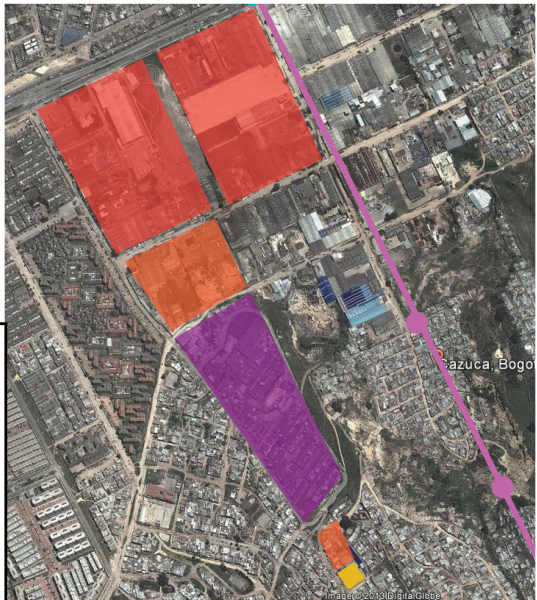
Project Context



Project Details



	Improved Road/Bikes		Mixed Use 3-4 stories
	New Transmilenio Line		Housing-multifamily
	Commercial-3-5 stories		Public Plaza



References

1. Progressive Transport and the Poor: Bogota's Bold Steps Forward
Year: 2005

2. From strategy to action case studies on physical activity and the built environment
Publisher: Provincial Health Services Authority
Year: 2007

3. Population Growth in Late-Nineteenth-Century Bogota: Insights on a Demographic Dilemma
By: David Sowell
Year: 2012
Published in: Journal of Urban History Jul 2012, Vol. 38 Issue 4, p720-730 11p 00961442

4. Bogota
Year: 2013
Published in: Columbia Electronic Encyclopedia, 6th Edition Feb 2013, p1-1 1p

5. Enrique Peñalosa, Urban Transport and Urban Development: A Different Model
(UC Berkeley, The Center for Latin American Studies, 2002).
<http://www.clas.berkeley.edu:7001/Events/spring2002/04-08-02-penalosa/> Database: Academic Search Premier

6. Alameda El Porvenir, Bogota, Colombia
Year: 2004
Published in: Escala 2004, v.40, n.199, p.[26]-31

7. 2005 Official Census
Format: Official Government Document
Published: 2005

8. Informal Cities and the Contestation of Public Space: The Case of Bogota's Street Vendors, 1988—2003 By: Michael G Donovan
Year: 2008
Published in: Urban Studies vol. 45, no. 1 (Jan 2008), p. 29-51

9. Colombia's Perpetual Quest for Peace
By: Gary Hoskin ; Gabriel Murillo-Castaño
Year: 2001 Published in: Journal of Democracy Volume 12, Number 2, April 2001 32-45

10. McCallum, J. Douglas. "Land Values In Bogota, Colombia." 50.3 (1974): 312. EconLit with Full Text. Web. 11 May 2013.

11. Impact of Transmilenio on density, land use, and land value in Bogotá
By: Juan Pablo

12. Journal: Research in Transportation Economics; A Model of Latin American City Structure

13. Space Wars in Bogotá: The Recovery of Public Space and its Impact on Street Vendors

14. Public Spaces in Bogotá: An Introduction
Author(s): Nancy Rhinehart Source: The University of Miami Inter-American Law Review, Vol. 40, No. 2 (Winter, 2009), pp. 197-211

15. Ruiz, Alexander Niño. "Formal And Informal Housing Practices In Bogotá, Colombia: The Experience Of Metrovivienda And Juan XXIII." Revista De Derecho Privado 36 (2006): 177-200. Fuente Académica. Web. 14 May 2013.

16. Kimmelman, Michael. "Past Its Golden Moment, Bogota Clings to Hope." New York Times 8 July 2012: 1(L). Academic OneFile. Web. 14 May 2013.
<http://go.galegroup.com/ps/i.do?id=GALE%7CA295589034&v=2.1&u=s8492775&it=r&p=AONE&sw=w>

17. Puyo Vasco, Fabio, Bogotá, Editorial MAPFRE 1992

Other Sources:

A. <http://www.shareable.net/blog/can-we-design-cities-for-happiness>

B. <http://www.bbc.co.uk/news/world-latin-america-19390026>

C. <http://postcarboncities.net/node/276>

D. <http://www.colombiainfo.org/en-us/cities/bogota.aspx>

E. <http://www.psfk.com/2013/04/parque-tercer-milenio-proposal.html>

F. <http://www.metrovivienda.gov.co/portel2012/libreria/php/decide.php?patron=01.01>

G. <http://www.designboom.com/architecture/giancarlo-mazzanti-bosque-de-la-esperanza/>