

**Making Sustainability Accessible:
Green Affordable Housing Development in the South Bronx**

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Figure 1. The Via Verde residential development in the South Bronx

Abstract

This paper addresses green affordable housing initiatives in the South Bronx and the contemporary policy and development practices that support its rise. Additionally, it argues that this type of infrastructure is an effective measure in bridging the gap between affordability and sustainability in low-income neighborhoods, making sustainable and livable lifestyles more accessible to people who have been unable to access them up to this point. Correlating housing and income data with patterns of personal sustainability practices, this paper examines the South Bronx and the rise of the development of affordable housing projects that champions sustainability there. In the first two chapters, I explore rates of sustainability in low-income neighborhoods and historic conditions of housing in the Bronx, respectively. In the third chapter, I discuss the contemporary New York City housing and planning policies and developer's benefits that motivate affordable sustainability. In the fourth chapter, I discuss green architectural and developmental practices that make sustainable living tangible and examine a contemporary South Bronx green housing project, Via Verde in Melrose. The concluding chapter argues that there must be more outside action in fostering the development of green affordable housing in South Bronx, a historically neglected and disadvantaged community that could become a mecca of sustainable living options in the future.

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Bibliography

Editor's Note

The following is an excerpt from the 49-page thesis paper, *Making Sustainability Accessible: Green Affordable Housing Development in the South Bronx* (2019).

For the purpose of brevity, this 16-page excerpt exclusively includes chapters 2, 4, 5, and Appendix B, some of which have been edited from the original publication for clarity.

Chapter 2. Historic South Bronx Living Conditions and Practices

The ability to practice a sustainable lifestyle is intrinsically connected to the living conditions available to the practitioner; a person's living condition is one of the most significant factors in establishing a certain quality of life and creating opportunities for choice. However, many people in the South Bronx have not been continually afforded this opportunity due to the degradation of the borough over the past one hundred years. A string of economic and social crises have decimated the South Bronx and greatly diminished the living and environmental conditions of its residents, a great injustice. This chapter examines the history of the South Bronx, the living conditions that have existed within it, and the environmental sentiments that developed concurrently.

To understand the history of the area, one must understand exactly where and what the "South Bronx" is. The South Bronx is an informal district that emerged in the 1960s as a one-square-mile neighborhood characterized by crime and arson. This district quickly grew to include the adjacent neighborhoods of Mott Haven, Melrose, and Port Morris as each became stricken by cycles of poverty, drugs, and crime.¹ By 1980, the term "South Bronx" was used to designate everything in the Bronx south of Fordham Road and west of the Bronx River.²³

The South Bronx's history is defined by continual societal change, population movement, and urban development, which has created cycles of social and environmental decay and

¹ Jonnes, Jill, *South Bronx Rising: The Rise, Fall, and Resurrection of an American City* (New York: Fordham University Press, 2002), 8.

² Gonzalez, Evelyn, *The Bronx* (New York: Columbia University Press, 2002), 109.

³ Some Bronxites argue against this broad neighborhood designation, believing the South Bronx, at least in name, should be centered around only the few original neighborhoods. However, most city officials and development groups employ the more modern and larger understanding of the South Bronx as will this paper. Every community that was greatly affected by wide degradation and disorder in the twentieth century is important to consider.

resurgence. What began as a borough of middle-class New Yorkers looking to achieve their American dreams was ultimately done in by unjust economic control by the rich, damaging political decisions and an always-changing demographic composure of the borough.⁴

In the late 1800s, New Yorkers began to widely settle the Bronx, a bucolic area dominated by farming estates and dotted with small village settlements. By the turn of the century, rapid development began on the southern tip of the borough, affected by developments like public transit infrastructure and the much-admired Grand Concourse. Many who settled between 1890 and 1920 considered the South Bronx to be a luxury community. During this period, the Bronx was known as the “Wonder Borough,” filled with homes, parks, and universities. The South Bronx was dominated by five- and six-story tenement buildings. Many were along the Grand Concourse where buildings are defined by crown moldings, marble flooring, and grand lobbies. For many, the homes here were considered better than those in Manhattan and Brooklyn and symbolized modern urban living.⁵

An influx of immigrants began flooding the area in the 1920s, more than in any other borough. At first, the immigrant population were mostly Eastern Europeans and Russians but over the following two decades the largest immigrant groups became Italians and Irish Catholics.⁶ By 1930, the borough had more than a million residents, nearly ninety percent contained in the South Bronx.⁷

⁴ Gonzalez, 1-2.

⁵ Gonzalez, 3-6.

⁶ Gonzalez, 98.

⁷ Gonzalez, 4-5.

It was during this time that the Bronx began a social and economic decline. Signs of slum living made a rapid appearance and this dereliction was exacerbated by the Great Depression. A study from 1939 found that the area's housing did not meet "the minimum standards for decent safe and sanitary housing which [were] a legal requirement."⁸ By 1940, the conditions of homes were inadequate for middle-class residents.⁹ At the same time, the Bronx saw a steep rise in Black American and Puerto Rican families in the community, establishing its multi-ethnic reputation. By the mid-1970s, more than seventy-five percent of residents of the South Bronx were Black, Puerto Rican, or Hispanic.¹⁰

However, it was the practice of redlining which doomed residents. Beginning in the 1930s, bankers outlined areas of the city considered too risky for mortgages because of a neighborhood's ethnic and racial mix. Almost all of the South Bronx was redlined, quite literally in red pen on maps. Some state loans and city tax incentives were available to residents but they were few and far between. Thus, South Bronx landlords typically saw no advantage in improving their structure in low-income, rent-controlled neighborhoods. In response, public housing was developed by New York 'master builder' Robert Moses as private companies did not want to develop lower-middle-income properties. In the 1950s, Moses oversaw the development of five housing projects in the South Bronx, often tearing down existing neighborhoods in the process as "slum clearing." Despite the large number of housing units it created, public housing was not always accepted by the community, especially in denser neighborhoods. These projects did little to remedy many of the problems the borough faced and, "by the late seventies, this newly

⁸ Gonzalez, 101.

⁹ Gonzalez, 6.

¹⁰ Gonzalez, 118.

defined South Bronx had become the most extensively abandoned piece of urban geography in the United State.”¹¹

Ultimately, the decline in home and community conditions was the result of the discrimination through redlining, the subsequent decline and aging of tenement buildings, a rapidly growing immigrant population, mostly poor, and the flight of more well-off residents to the suburbs, many prompted by the subsidies provided to veterans and their families to move out to the suburbs post-World War Two.¹²

This launched a period known later in the century as when ‘the Bronx was Burning;’ the community became one of the poorest and most dangerous districts in the country, dominated by gangs and drug use and marked by property destruction. Tenements sustained significant damage from arson perpetrated by landlords and homeowners trying to receive insurance claims for their property that otherwise had very little value. A *New York Times* report from 1969 reported that residents of Hunts Point were “literally living in a state of siege.” The devastation was especially severe throughout the 1970s. It came to a head during the July 1977 New York power blackout where some neighborhoods were decimated by desperate community members.¹³

A surprise visit in 1977 by then-President Jimmy Carter to the South Bronx put the nation’s focus on the urban and environmental collapse of the area, with more outside effort put into resurrecting it. By 1981, there was a lessening of crime and arson in large part due to small Bronx grassroots organizations, many of which were led by local clergy members.

¹¹ Gonzalez, 109-112.

¹² Gonzalez, 101-102.

¹³ Gonzalez, 115-122.

While diminishing crime and gang activity helped usher in an era during which adolescents spent more time partaking in street culture activities like breakdancing, rapping, and graffiti, the South Bronx was not without problems.¹⁴ The following decades were heavily impacted by the crack cocaine epidemic in which drug overdoses killed more than 5,000 Bronxites. An additional 12,500 deaths are attributed to AIDS contracted via drug use from 1985 to 2000.¹⁵ However, the borough has maintained an upswing and has slowly recuperated since the 1970s. Building cranes began to dot the skyline, rebuilding many of the homes that were previously destroyed, and campaigns by the city and local organizations worked to change the public's perception of the Bronx.¹⁶

The housing conditions here are the product of the environment in which they exist. That is, the Bronx's living and social conditions are innately linked with the particularly degraded environment there. In response to the decline of the community, more focus has been placed on intervening environmentalist work.

The environmentalism movement began in the 1970s in America and, while it made waves in central New York City, the efforts led by large city organizations did not ripple out to the city's forgotten borough. Much like the movement which helped revitalize the Bronx after it burned, small, hyper-local grassroots organizations have been a significant resource to the Bronx community in improving the conditions of its urban environment. The particular efforts in the Bronx explicitly correlate to the environmental degradation and needs found within it; it is often

¹⁴ Jonnes, 8-9.

¹⁵ Jonnes, 390-398.

¹⁶ Williams, Timothy, "Celebrities now Give Thonx for the Bronx," *New York Times* (New York, NY), published 2006.

subjected to hosting New York City's most undesirable infrastructure. This is in part due to "antiquated zoning and land use regulations still used to justify putting polluting facilities in [a] politically vulnerable community."¹⁷ Robert Moses paved a path of destruction through the heart of the South Bronx when he built the Cross-Bronx Expressway to improve shipping and transportation between New Jersey, Upstate New York, and Long Island. Additionally, four power plants and numerous solid waste facilities, including a sewage sludge pelletizing plant are located in the Bronx.¹⁸ The world's largest food distribution center, as well as other industrial plants, are located in the borough and bring more than 55,000 diesel trucks into the area, severely deteriorating public health. At the same time, the South Bronx has one of the lowest ratios of parks to people in the city.¹⁹

However, the people who live in the Bronx do not have the power needed to prevent degradation from occurring nor the development of environmentally-detrimental industrialization. There is a general lack of environmentalist sentiment within the Bronx community because its residents have more pressing issues to address, like paying their monthly rent. Thus, there is an ever-growing need for 'environmental solutions that will not compromise the lives of low-income communities of color in the short-term and will not destroy their lives in the long-term.' This is being addressed by grassroots organizations that have answered the persistent need for environmental advocates. Organizations like The Bronx is Blooming, Green Bronx Machine, and the Bronx Green Up program at the New York Botanical Garden run

¹⁷ Carter, Majora, "Sustainable Solutions," *Economic Development Journal*, Spring (2006), 26.

¹⁸ Carter, Majora, "Greening the Ghetto" (lecture presented at the 39th Trinity Institute National Theological Conference, New York, NY, 2010).

¹⁹ Carter, Majora, "Sustainable Solutions," 24.

outreach and education programs on the environment, while the Bronx River Alliance head up area restoration efforts. One innovative organization, Sustainable South Bronx, has been providing green job training for over a decade, among other efforts. Founded by Bronxite Majora Carter, the organization earned Carter a MacArthur Fellowship and ‘Genius Grant’ in 2005.²⁰ The degradation of the living environment has not historically been addressed by the city nor by private developers and Bronx natives have needed to take control of the community atrophy engendered by outsiders.

Since the period of arson, housing stock has rebounded and, in the past few decades, redevelopment has boomed in large part due to the demand as well as government incentive, especially where affordable housing is concerned. A 1995 *New York Times* editorial declared that the South Bronx had “clawed its way back and is rapidly becoming a borough of middle-class homeowners... While small patches of desolation remain, the vast empty stretches have all been renewed... The signs of promise are abundant.”²² Contemporarily, various development projects are underway by private developers who are developed homes more responsibly than a century before. While waiting time for city-sponsored affordable housing placement generally averages more than a ten-years, there is more housing stock that provides higher living conditions for lower prices to community members. The Bronx is even experiencing some of its first luxury residential building developments at this time. Now, one of the biggest fears in the South Bronx is not crime but gentrification and the borough is trying to avoid the fate of Brooklyn, protecting

²⁰ Carter, Majora, “Sustainable Solutions,” 25-27.

²¹ Carter, Majora, “Greening the Ghetto.”

²² Raines, Howell, “A Bronx Miracle,” *New York Times* (New York, NY), 1995.

its residents from another cycle of housing insecurity.²³ Developers have already tried to rebrand the Bronx as SoBro, a name dripping with the sentiment of gentrification.²⁴

The Bronx is providing the best ever conditions to residents but this is not enough for creating opportunity for choice. Affordable and safe housing continues to remain mostly unavailable, and this prevents Bronxites from truly being able to live a life they want. This is especially true for those concerned with practicing sustainability, a concept that is not common when money is tight. The historic patterns of development, and underdevelopment, in the South Bronx must be overturned so that the place that is the South Bronx no longer defines the lives of its people. Ultimately, the poor housing stock in which most South Bronxites reside, in combination with urban decay and the lack of economic and social resources, has created unhealthy environmental and living conditions.

Chapter 4. Design and Development in Action

Since 2010, 100 distinct building projects in the Bronx have registered with the U.S Green Building Council, the body which grants LEED certifications.²⁵ Thirty-seven of these buildings are new affordable housing developments, nineteen of which have been granted some level of LEED certification, whether Platinum, Gold, Silver, or Certified. The remaining eighteen projects are currently working towards their certifications.²⁶

²³ Chen, Stefanos, "The Bronx is Great, Thonx," *New York Times* (New York, NY), published Sept. 14, 2018.

²⁴ Bukszpan, Daniel and Javier E. David, "The Bronx sheds image of urban blight, becomes latest target of New York City's relentless gentrification," *CNBC* (New York, NY), published on May 12 2018.

²⁵ This is a public listing where individual projects must register their own developments and are not automatically listed when seeking to achieve a LEED Certification. Thus, it is safe to assume that there is a sizable population of buildings that are LEED Certified but not listed i.e. all LEED Certified buildings on Fordham University's campus. The following data exclusively reflects projects that are publically listed.

²⁶ "Projects," *U.S. Green Building Council*, accessed April 29, 2019.

To adequately understand rates of green affordable housing development, the number of publicly registered LEED buildings rated under the LEED Building Design + Construction (BD+C) Multifamily Midrise rating system was compared with the total number of affordable housing developments completed. This is because the Multifamily Midrise rating system is most commonly used for affordable housing projects in the outer boroughs of New York and the sake of simplicity.

807 of New York's affordable housing buildings have been constructed in the Bronx since 2014, with a new building created for every 1800 people.²⁷ Of these new buildings, twelve have achieved a LEED Multifamily Midrise Certification, or 1.49 percent.²⁸ This is a higher percentage than that of Brooklyn and Queens which are urbanized in similar ways to the Bronx. These boroughs have respectively developed 1.41 percent and 0.24 percent of all new buildings to meet these LEED standards (see Figure 3). These figures do not reflect the actual rate nor number of LEED Certified building developments in the city but rather reflect the likelihood of green housing development for each borough.

²⁷ "Affordable Housing." *NYC Open Data*. Last modified April 29, 2019.

²⁸ "Projects."

Figure 3. Rates of affordable housing and LEED BD+C Multifamily Midrise development

	Population	Number of new affordable housing developments*	Developments per person	Total number of new units	Units per person	Number of LEED certified mid-rises	Percent of affordable developments that are LEED mid-rises
New York City	8,622,698	3638	1 to 2381.2	123,746	1 to 69.9	n/a	n/a
Bronx	1,471,160	807	1 to 1823.0	36857	1 to 40.0	12	1.49%
Brooklyn	2,648,771	1555	1 to 1701.5	37911	1 to 69.9	22	1.41%
Queens	2,358,582	424	1 to 5562.7	11486	1 to 205.3	1	0.24%

*Since 2014

Thus, the development of green affordable housing in the South Bronx is relatively high when compared to the rest of the city. Additionally, affordable housing projects that champion sustainability are slightly more available in this area than in most other communities in New York City. This is important because the residents of the South Bronx are some of the least environmentally-conscious New Yorkers; they are now provided infrastructure to address this issue.^{29,30}

Case Study: Via Verde / The Green Way

To best understand how a green affordable housing development comes to be, this paper looks to the Via Verde project, likely the most publicized green affordable housing project in the

²⁹ To understand this statement, indicators of sustainability that are dependent on personal action and not infrastructure were compared e.g. waste diversion rates. For example, the people of the South Bronx recycle much less than those in any other borough. The diversion of recycling from traditional waste streams is telling as waste disposal is a very common action that depends on more personal action. The diversion rate of the Bronx as of April 2019 is 63.2 percent, many points lower than a similar borough like Queens which diverts 74.5 percent of its waste. In fact, of the 59 community districts in New York City, the six districts that make up the South Bronx are in the bottom eleven for waste diversion rates, with Bronx Community District 1, which comprises parts of Morrisania, Melrose, and Mott Haven, having the lowest diversion rate in the city at 45.8 percent.

³⁰ Recycling Diversion and Capture Rates.” *NYC Open Data*. Last modified May 8, 2019.

South Bronx. Via Verde is a highly praised and awarded development that opened in 2012 to much fanfare. Known officially as Via Verde / The Green Way, this visually distinctive, 60,000 square foot, mixed-use building has 222 units, 151 of which are reserved for low-income households. 7,500 square feet of the building are dedicated to retail and community space and there are an additional 40,000 square feet of open space, including green roofs.³¹

As a LEED Gold-certified housing development, Via Verde champions sustainability and human health and makes taking part in a green lifestyle second-nature. The building is stepped and a green rooftop connects low-rise townhomes to a 20-story tower, integrating nature with the city. The green roof provides open space for residents and also harvests rainwater is used to grow food; the rooftop garden is substantial and almost 1000 pounds of fruits and vegetable were harvested in its first operating year.³² While Via Verde is easily visually identified as a sustainable building by technologies like this, its more passive and inconspicuous innovations are what make it such an environmentally-friendly space. The building cools itself with technologies like solar shadings and cross-ventilation, heavily uses efficient and sustainable building materials, and had highly efficient mechanical systems and energy-saving appliances.³³ High-tech temperature sensors are located throughout the building and provide feedback to a responsive heating system; systems like this are not often found in large housing projects. For a relatively small roof surface area, Via Verde has an abundance of photovoltaic panels that supply

³¹ “Via Verde / The Green Way – Bronx, New York,” *Rose Development*, 2013.

³² “Silver Medal Winner Via Verde–The Green Way,” in *Inspiring Change: The 2013 Rudy Bruner Award for Urban Excellence*, (Cambridge, MA: The Bruner Foundation), 2014, 180-219, 7.

³³ “Via Verde / The Green Way – Bronx, New York.”

15 to 20 percent of all common power needs; in total, the panels save the building more than \$12,000 annually in electricity cost.³⁴

One of the most powerful aspects of Via Verde is that it has built-in educational programming. Much of it addresses human health and general wellness as well as community concerns. For example, initial programming for the rooftop was provided on-site by the New York-based sustainability organization Grow NYC.³⁵

The Via Verde project was developed by the Jonathon Rose Companies with non-profit co-developer Phipps House in response to the New Housing New York Legacy Competition, an architect-developer design competition for affordable housing and sustainable development in the city. Designed by Grimshaw Architects and Dattner Architects, Via Verde was constructed on a city-provided site in Melrose.³⁶ The four organizations worked with the local community board and with community members at local workshops to create a building that was both needed and wanted.³⁷ Development and construction costs amounted to \$98.8 million and were subsidized by special tax bond and affordable development subsidies to make the project conceivable.³⁸

Via Verde was highly praised after its completion and accrued a litany of design and urban development accolades, including those from the American Institutes of Architects (AIA) Multifamily Award, the AIA New York, Andrew J. Thomas Housing Award, the AIA/U.S.

³⁴ “Silver Medal Winner Via Verde—The Green Way,” 204-206.

³⁵ “Silver Medal Winner Via Verde—The Green Way,” 180-185.

³⁶ “Silver Medal Winner Via Verde—The Green Way,” 7.

³⁷ Kimmelman, Michael, “In a Bronx Complex, Doing Good Mixes With Looking Good,” *New York Times* (New York, NY), Sept. 26, 2011.

³⁸ “Silver Medal Winner Via Verde—The Green Way,” 180-185.

Department of Housing and Urban Development, Secretary’s Housing and Community Design Award for Excellence in Affordable Housing Design as well as an Urban Land Institute Global Award for Excellence and the Sustainability in Design Award from the Society of American Registered Architects of New York.³⁹

Altogether, it is reported that city officials see the sustainable development aspects as “spectacular” and believe that Via Verde is an excellent and welcome affordable housing site, especially since it addresses two distinctive aspects of green design, environmental benefits and lower energy costs, as well as general health.⁴⁰ Residents have continued to enjoy living there, and vocalize the benefits that the building has provided to them personally and in their homes.⁴¹ The project has also provided numerous socio-economic benefits to the Melrose neighborhood . *New York Times* architecture critic Michael Kimmelman expressed that Via Verde “makes as good an argument as any new building in the city for the cultural and civic value of architecture.”⁴²

Despite the general lack of publicity and pomp, green housing projects are being developed in and around the Bronx. New projects in the South Bronx open every few months now and will continue to open for years to come. Slowly, the Bronx will be populated by green housing options like Via Verde as it is a physically attainable practice and one becoming more popular to developers looking to build in the South Bronx.

³⁹ “Via Verde / The Green Way – Bronx, New York.”

⁴⁰ “Silver Medal Winner Via Verde–The Green Way,” 180-185.

⁴¹ Velsey, Kim, “A Sustainable Home in the South Bronx,” *New York Times* (New York, NY), Feb. 19, 2018.

⁴² Kimmelman.

Chapter 5. The Future of the South Bronx

The South Bronx has experienced decades of deterioration and is an excellent venue for green urbanization efforts. The conditions set up by city policy and the eagerness of private developers to build within the South Bronx may create a perfect storm of interest in the forgotten borough. A large-scale environmental rejuvenation of the community may be in its grasp, especially if Bronxites take control of the development and environmental narrative.

The earlier chapters of this paper examined the rapid growth and urbanization of New York City. The demand for housing is at its highest and in the South Bronx, which is growing faster than any other community in New York, housing stock is deteriorating and new developments are not always affordable. Unfortunately, poor housing conditions are nothing new here. The Bronx had a rough past century and its homes reflect this. Grassroots organizations are protesting the conditions of the environment and housing and challenging the city to be better to its people. The City of New York is working to address this but policymakers, while big on ideas, have a more difficult time enacting their policy; improvements on infrastructure and the natural environment are far and few between, especially in the South Bronx. Despite this, the city has been more supportive of low-income people in the past decade and is creating the policies needed to promote private companies to build and improve housing. Developers are finding more and more reasons to build subsidized housing or to build sustainably, and the processes to do so have become more affordable and thus more attractive to them each year. There is reason to believe that now, more than ever before, New York City will see housing developments that provide attractive and safe places for low-income people to live that do not further degrade the community and promote sustainable personal practices.

However, this is not the case. Despite the conditions which exist in the South Bronx, relatively few sustainable affordable housing projects have been developed in the past decade, even if it may be proportionally more development than elsewhere in the city. More sustainable projects are in the works but it is clear that the small amount of high-quality affordable housing is disproportionate to the needs of the Bronx. Why is the city failing its people in this way?

First and foremost, there must be more official recognition of the degraded urban environment in poor communities of New York. The City of New York must publicly and explicitly recognize the continuing blight in the South Bronx and the degraded environment and living conditions that exist there; they must identify that this issue is in large part the fault of city politics and predatory infrastructure placement. Furthermore, the city must promise to do its best in preventing both public and private enterprises from taking advantage of the borough because it does not yet have the power to prevent damaging industrialization itself.

Secondly, the city of New York must create an addendum to its city plan which explicitly marries the concepts of affordability and sustainability; the two must work together if city planners and politicians want to make sure its environmental improvements are equitable throughout the city. In short, a policy must come out in support of fostering the private development of green affordable housing and additionally put aside funding for projects like these throughout the five boroughs.

Finally, city planners must consider the opportunity to redevelop the South Bronx as a future, informal eco-community. With the rate of development experienced by the Bronx, in combination with existing open land parcels and new efficient technologies, the South Bronx would make a suitable setting for an urbanization project that champions urban

environmentalism in a low-income community. Eco-communities, idealistic communities that are built around strict environmental goals and efficiency standards, exist around the world. Some of these are areas that were developed long before environmentalism and are retrofitted over time to meet new standards. This is an opportune time to informally begin this process in the Bronx, strengthening the community and subverting traditional patterns of environmental behavior.

In conclusion, the South Bronx is an underserved community of people who have little choice in where or how they live. It does not have to be this way. The South Bronx community does not deserve to continue to live in a substandard state. One of the first steps in amending this is by providing the option for Bronxites to live affordably in green homes.

Appendix B. Sustainable Housing Developments in the Souths Bronx

The following is a list of notable green housing developments completed through 2018. These projects are deemed notable by achieving sustainable building certifications, significantly a LEED certification, or by setting important sustainability milestones in the borough. For example, Taino Plaza was the first housing development in the Bronx to implement solar energy technology, and MLK Apartments and Intervale Green, respectively, are the first and largest Energy Star-rated high-rise housing developments in the country; technology-wise, The Eltona has mounted wind turbines installed on its roof, Arbor House has a very large greenhouse, and the Morris Avenue Apartments have Passive Housing certification.

Additionally, the following projects may have achieved a combination of standards set by Energy Star, Enterprise Green Communities, and NYSERDA's Multifamily Performance Program, as well as the National Green Building Standard and the American Cancer Society Healthy High Rise Building Standard.

South Bronx Green Affordable Housing

Listed by year constructed/opened

Listed as: Housing development (specialty, if any), neighborhood (region if not in the South Bronx), year. *LEED-certification*, if any.

- Taino Plaza, Morrisania, 2004.
- 1212 MLK Apartments, Highbridge, 2005.
- Bedford Green House, University Heights, 2005.
- Intervale Green – Urban Horizons II, Crotona Park, 2008.
- Cedar House/Fox Hall (Senior and Supportive Housing), Morrisania, 2009. *LEED-Gold*.
- El Jardin de Selene, Melrose, 2009. *LEED-Gold*.
- Fox Point (Supportive Housing), Morrisania, 2009. *LEED-Gold*.
- The Eltona, Melrose, 2009. *LEED-Certified*.

- Brook Avenue Residence, Melrose, 2010. *LEED-Silver*.
- Gen. Colin Powell Apartments, Morrisania, 2010. *LEED-Gold*.
- Lenninger I & II (Supportive Housing), Tremont, 2011. *LEED-Gold*.
- The Melody, Morrisania, 2011. *LEED-Platinum*.
- Arbor House, Morrisania, 2012. *LEED-Platinum*.
- Via Verde – The Green Way, Melrose, 2012. *LEED-Gold*.
- Lindenguild Hall (Supportive Housing), Crotona Park, 2013. *LEED-Platinum*.
- 3361 Third Avenue (Supportive Housing), Morrisania, 2015. *LEED-Gold*.
- Arthur Avenue Residence (Supportive Housing), Belmont, 2015. *LEED-Silver*.
- Mother Arnetta Crawford Apartments, Crotona Park, 2015. *LEED-Silver*.
- Promesa West Tremont Residence (Senior Housing), Morris Heights, 2015. *LEED-Silver*.
- Morris Avenue Apartments, Melrose, 2016. *LEED-Gold*.
- 3365 Third Ave – Passive House, Morrisania, 2017. *LEED-Platinum*.
- Lynn’s Place (Supportive Housing), Morrisania, 2018. *LEED-Gold*.

Other Projects of Note

Green Public Housing (NYCHA) in the Bronx Borough

- Bronx River House, Soundview (Southeast Bronx), 1951, renovation 2011–Present.
- La Preciosa, Morrisania, 2015. *LEED-Gold*

Green Affordable Housing Elsewhere in the Bronx

- Mosholu Gardens (Supportive Housing), Norwood (Northwest Bronx), 2013. *LEED-Silver*.
- Van Cortlandt Green (Senior Housing), Riverdale (Northwest Bronx), 2016. *LEED-Gold*.
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Chapter 4. Design and Development in Action

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Appendix B. Sustainable Affordable Housing Projects in the Bronx

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