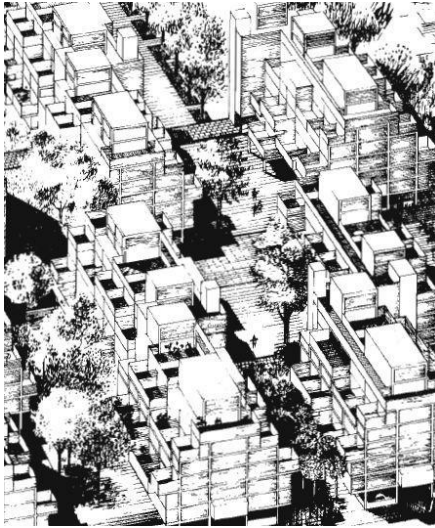


Columbia University
Graduate School of Architecture, Planning and Preservation
A4003: Core Studio 3, Fall 2020
Studios: Monday and Thursdays 1:30-6:30pm and Lecture: Wednesday 1:30-3:15 pm Zoom

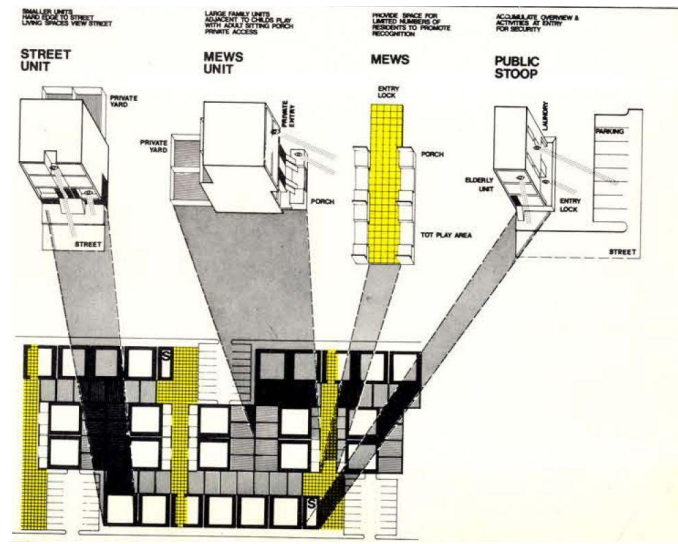
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STATES OF HOUSING



East Harlem Housing Competition Entry, 1963.



Another Chance for Housing, Museum of Modern Art, 1973.

Studio Description

Housing is the third and final semester of the required architecture core sequence. This studio is structured through four assignments, beginning with documenting a lived experience; to researching policy; undertaking an urban and typological analysis of a residential building; and finally designing housing for a select site in New York City. This year's studio will focus on the many different states of housing that we, as architects, typically encounter in practice. The studio is organized through two principal means research/analysis and an architectural proposition and will operate as a laboratory in which to explore new possibilities for city living within the South Bronx's Melrose neighborhood. Throughout the term, each student will examine the significance of collective housing and approach design through four lenses: health, race, social and environmental justice. This work will recognize systemic injustices and their intersection with design practices in housing and associated public spaces, and propose new futures. Embedded within the studio and developed through team projects, creatively *challenge* the status quo and accepted assumptions about housing. Final studio projects should be relentlessly empathetic and imaginative in creating artistic, healthy housing.

Columbia University
Graduate School of Architecture, Planning and Preservation
A4003: Core Studio 3, Fall 2020
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The studio aims to establish a space to discuss the evolution of housing design as it evolves through contemporary concerns. Necessary dialogue between teacher and student, and between students, and between teachers, students and invited guests will occur as an ongoing conversation throughout the term. Housing, by its very nature, is seemingly considered to be a generic, yet fixed building type. A universal type, and yet, when we embark on its study we uncover that the variables are many, and solutions approach a limit only by given constraints such as zoning, environment, national or local policies, materials, and economics. Some may argue that working within a particular typology produces boring buildings. However, it is precisely through the understanding of a type and its multiple points of influence that an architect understands the motivations behind a particular building's peculiarities. Where and how does design shape a type? At what scales are most relevant in the design of housing? The specificities of a particular context in the city produce weird and unexpected moments that alter the original type's form. In the complexity of the contemporary city, housing offers up an exemplary form to be explored, rethought, altered, added to, and preserving units, subtracted from, and so on. . . . The first weeks of the studio are structured around developing a body of research and understanding about housing, by comparison of learning and unlearning housing practices found throughout cities, introducing students to housing typologies through three short assignments: documenting as found conditions through making videos; researching policies; and exploring existing housing projects. Followed by the housing design assignment. All of the assignments will focus on the subjects of health, race, social and environmental justice as they intersect with collective housing. The purpose of these assignments is to introduce a variety of housing types that can be considered for New York City. Compare and contrast density; socioeconomic structures; climate; materiality; development models; cultural relationships; single-occupant, multiple households, and family dwellings; and the relationship between informal and luxury in creating healthy housing.

Transitioning from design research into a design process, students will examine the architecture of housing, living, and public spaces with an emphasis on units and unpacking their design through subjects of: climate and environment; program; systems, culture; and social justice, environmental justice, health, and race. To accompany this part of the studio, there is a seminar component to introduce themes associated with housing to the studio. Past invited architects have visited the school as part of the entitled Transcripts on Housing lecture series and books, by Los Angeles based Michael Maltzan, and Mexico City based Tatiana Bilbao presented a history of urban housing, as well as examples of their design work on housing. In 2018, the studio hosted *Acts of Design: New Paradigms for Housing in North America*, a follow up to the *Housing the Majority Conference* from 2015, and this year New York City architects will present on their housing work. From 2014-2019, an experimental limited five year studio wide field trip supported the overall mission of the studio to better understand how global concerns for housing affects New York City's housing. As part of this initiative, the studio engaged local agencies and groups to

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tour buildings in New York City. The studio visited several projects in New York City: Westbeth, an affordable residential building with tenants in the arts; met with the founder and director of The Sugar Hill Project; and engaged with the NYC Housing, Preservation and Development (HPD) to tour and learn about as well as Harlem Dowling and Essex Crossings housing developments. HPD's fellows program included several members as part of the tours. This year HPD has committed to support and engage the studio in a semester long commitment through a lecture, workshop where students can sign up for select topics and engage in a longer session of review, in addition HPD shall attend mid-term and final reviews. At the conclusion of the term, HPD will host a zoom session where students can present their work to a larger panel of HPD staff for conversation and feedback on their work. The Wednesday sessions will again feature designers and experts in housing and focus on issues of health, race, social and environmental justice.

The final project will challenge the status quo about designing for density, mixed-use housing, a range of public spaces and community amenities. Each assignment builds upon the previous, starting with the urban scale and gradually zooming into the scale of the unit to, finally, integrate environmental and climatic systems into a design project. Students will examine distinct typologies of housing both public and private at a variety of scales. Beginning this phase of the studio, by drawing large and long sections through the block and adjacent streets to discover the many different types of built NYC housing. In addition, students will design units, aggregate these units, and explore the subjects of health, live/work, and the arts in relation to housing including the four broader themes of the studio: health, race, social and environmental justice. In general, housing studios will use their precedents as a means to gain knowledge about what constitutes contemporary housing. Although the brief puts forth the perimeter-block housing type for the given site, no housing type is off-limits to explore. This year's site will question perimeter block as a tapestry.

The studio emphasizes understanding the history and evolution of New York City's multiple housing types. How is type in turn impacted by a multiplicity of forces, from the literal (gravity) to the more social and cosmopolitan? Through research and drawings, the studio will investigate neighborhoods surrounding Melrose in the South Bronx, a neighborhood that has been a testing bed for new housing models, but remains evolving. Developed over the past 50 years in the face of complex social and shifting socio-economic histories, this site has its own significant history. It is possible to reflect on its history by comparing neighborhoods that are also evolving and working to maintain their identities, resisting gentrification. For instance, Harlem's "Main Street" along 125th Street reflects a changing landscape of ownership, occupation, and public vs. private space.¹ As recent developments from Columbia's Manhattanville campus, which has no housing, to towers emerging along West 125-

¹ Sharon Zukin, *The Naked City: The Death and Life of Authentic Urban Places* (New York: Oxford University Press, 2010).

Columbia University
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A4003: Core Studio 3, Fall 2020
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Street, further east along the street East Harlem Triangle remains undeveloped. The housing studio in large part originates because of this history and the work undertaken by J. Max Bond Jr., an architect, and original faculty member at GSAPP in the housing studio, who had founded Architects' Renewal Committee in Harlem (ARCH), to rethink development in Harlem and East Harlem.

There are many lessons to be learned by studying select neighborhoods especially in the context of the current housing crisis that New York City is confronting. Pivoting from Harlem and East Harlem's history, the studio will leap the Harlem River to the South Bronx. Starting with the urban connector: The Grand Concourse is significant for its grandeur as a boulevard lined with residential buildings, and is like no other street in New York City. Located in proximity to it, is the Melrose neighborhood that has seen developments over the past 50 years, parts of the neighborhood remain underdeveloped developed- and working in this neighborhood raises new possibilities for development and housing types. In the spirit of George Perec's line of questioning in "Approached to What" in *L'infra Ordinaire* (1989): "What we need to question is bricks, concrete, glass, our table manners, our utensils, our tools, the way we spend our time, our rhythms. To question that which seems to have ceased forever to astonish us. We live, true, we breathe, true; we walk, we open doors, we go down staircases, we sit at a table in order to eat, we lie down on a bed in order to sleep. How? Where? When? Why? Describe your street. Describe another street. Compare." Similarly, the studio can ask Describe your housing. The studio will ask many questions; such as what kind of housing is needed or could exist here? What is dense enough? How do and what kinds of neighborhoods that are culturally, socially, and economically beneficial develop? Rather than readily accepting the rules, the studio provides the setting for a re-examination of the performance of housing. How does architecture play a central role? Does it?

Previous studios examined sites in East Harlem and the South Bronx, focusing on the prominence of the housing in relation to development in Upper Manhattan and the Bronx. In part because of the physical proximity to these neighborhoods and the Columbia campus, it is available and easily accessible. With an ethos that architects should be able to visit their studio sites. Limited from visiting the site due to the Covid pandemic in lieu of the trip, Zoom meetings and presentations will present a critical collection of voices discussing the site and it's history, its residences, and the spirit of the Melrose and South Bronx neighborhoods. The studio emphasizes understanding the history of New York City's housing, its varied typologies, and the development of the city grid, but also questioned zoning and code. Prior studio sites included City-owned property and sites designated for development under former Mayor Michael Bloomberg's New Housing Marketplace Plan, a public/private planning initiative that aimed to create and/or preserve 165,000 affordable housing units in NYC by 2014. The New York City Department of Housing Preservation and Development (HPD) is the largest municipal developer of affordable

Columbia University
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housing in the nation and will be a valuable resource for the studio.² In May 2015, Mayor Bill de Blasio announced his plan for affordable housing in New York City, building upon the previous administration's goals of increasing affordable housing units to provide a more equitable and healthy city. He set the goal of providing 200,000 affordable housing units, preventing 120,000 from becoming unaffordable and building 80,000 new affordable units. 17,400 affordable housing units were financed in 2014. Mayor De Blasio is also in the process of changing the 421-a low-income tax subsidy, typically known for its 80-20 model, to a 65-35 model, virtually cutting in half the rate of affordable unit production.

The form of the modern and contemporary city, especially as exemplified through urban housing models, has had the greatest impact on general public health. Health remains one of the most important issues confronting collective housing in the American city. In New York City, where recent developments have had a profound impact on citizens' health and, reciprocally, citizens' health has had a profound impact on the form of the city. And, yet, the urban population continues to struggle with chronic health problems, from an obesity epidemic and childhood asthma in the South Bronx, to unemployment, and isolation epidemic. Widely published statistics illustrate the significant impact to Latino, Black, and people of color communities due to the virus. The studio must be respectful and considerate while working on the project.

The studio will study local and national policies—including New York City's Active Design Guidelines, PlaNYC, and the Affordable Health Care for America Act—in order to understand how shifting policies relate to urbanism.³ Designing housing requires a critical rethinking of the relationship between individual and public health, the environment, development, and architectural and urban form. HPD will support the studio by offering up their guidelines and discuss working post-pandemic guidelines.

Health, as a subject of study within in this studio, can take on multiple meanings, the first being literal, physical and mental health. It can be attributed to other conditions related to housing such as economics, policy, ideas of sustainability, climate change, and social. This year's studio builds upon and expands previous research by shifting its site to a historically significant location of the Bronx. The relationship between the previous years' sites and this year's will test architectural and urban conditions, searching for new forms of housing with relationships to its neighbors and the immediate block. This studio will challenge each student to think about the aspect of public health within all assignments, and health will be a primary theme of the final housing project.

Over the course of the term the studio will examine a one block site within the Melrose neighborhood. Acknowledging the land originally belonged to the Lenape Indians, these site boundaries create physical and

²See: <http://www.nyc.gov/html/hpd/html/about/message.shtml>

³ Policies developed in NYC are proving to be groundbreaking and have been adopted by other cities around the country. See: <http://mayorchallenge.bloomberg.org/>

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historical edges. Today's site offers a place to explore, study, research and question a variety of histories and scales. Each student team will be challenged to design a housing proposal that takes a position with respect to the "street," infrastructure, specific architectural typologies at play, and the shape and elevation of the site. Among the greatest challenges for this specific site are the location of its "front door," the question of the project's image and impact on the skyline, and the project as part in relation to a whole. Even if the architecture can perform sustainably and healthfully, what is its impact upon its context? Working within block and keeping several buildings on the it, question designing maximizing light and air to thereby maximize health and comfort, as well as expansive window-wall and envelope, to open air requirements, reduction of noise and creation of a soundscape, and inner block space/yard, as well as connections to adjacent blocks at the mid-point present design opportunities. The projects should be a tapestry of form that support concerns of health, race, social and environmental justice.

Columbia University
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A4003: Core Studio 3, Fall 2020
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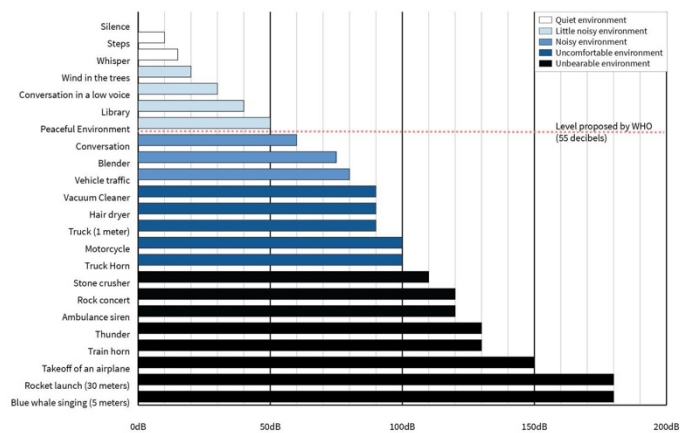
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Assignment #1

From Ritual to Regulation

Due: September 21, 2020 at 1:30pm



2.0

1.0 Pulitzer Prize winning poet Gwendolyn Brooks plays piano in her Chicago apartment as a street car passes by. Note the single glass pane double hung windows - not sufficient acoustical separation from outside noise pollution.

2.0 World Health Organization, Decibel Chart

The Core III studio will begin the term by recording and documenting spaces directly or indirectly associated with rituals performed and regulations enacted as part of living and working within housing. At this moment, people are more intimate than ever. Spaces once dedicated to singular purpose are now multi-purpose due to the Covid-19 pandemic. What are daily rituals that are performed within housing? These rituals are defined by each student and can be mundane to specific and special. Where do these rituals occur? What spaces do they occur in? Observe what space or spaces are needed. Observe other qualities about the spaces, materials, temperature, sound, and light. What things are needed to support these rituals? What rituals have changed due to the pandemic? Conversely, explore one regulation that is in place within the housing and associated public space. A regulation for the purpose of this assignment is a law, policy, or act that proposes to establish or has established a physical constraint upon the built environment. Observe the physical space and form that results from a regulation. How does ritual impact health? How does regulation impact health? How does ritual versus regulation

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intersect with systemic racism? Does either a ritual or regulation support social or environmental justice? How has architectural form been instrumental in enabling a ritual?

Requirements:

To start this two part assignment work with your partner to create a short video and set of drawings. Create a (i) one minute digital video and one large landscape format site section drawing measuring 11 x 17"; make a contact sheet of the film to fit on a series of 8-½" x 11" portrait format pages. Select two viewpoints, the first from one interior space ideally it looks outwards to towards a street, public space, or exterior space, and the second view from an exterior or space outside of a living area looking back at it. Represent day to night. Document site conditions, existing materials, climate and environment. Record daily rituals versus experiences that emerge from a regulation. In addition to video, draw one plan and one section. Through a precisely measured drawing, document an existing space in plan and section. This drawing will be used later in the term as a comparison to the precedent. Record as many details as possible in an oversized detailed plan and site section, small parallel projected drawings are permitted in the margins. Think about notations and writing dimensions. Notate materials, architectural detailing and building sections.

Reading:

Keeanga-Yamahtta Taylor, *In Race for Profit: How Banks and the Real Estate Industry Undermined Black Homeownership*, University of North Carolina Press; Illustrated Edition (October 21, 2019).

Gwendolyn Brooks, "Kitchenette Building" in *Selected Works*, Harper & Row, 1963.

<https://www.poetryfoundation.org/poems/43308/kitchenette-building>

Richard Plunz, *A History of Housing in New York City* (New York: Columbia University Press, 1990).

Eric W. Sanderson. "The Lenape," in *Mannahatta: A Natural History of New York City* (New York: Abrams, 2009).

Denise Scott Brown, "On Houses and Housing" *On Houses and Housing* (Academy Editions, St Martin's Press, 1992).

Pier Vittorio Aureli and Martino Tattara, Soft Cell the Minimum Dwelling in *Architectural Review*, July 2018.

<https://www.architectural-review.com/essays/soft-cell-the-minimum-dwelling>

Mark Jarzombek, "Corridor Spaces," *Critical Theory* 36 04 (Summer 2010): 728 70.

Columbia University
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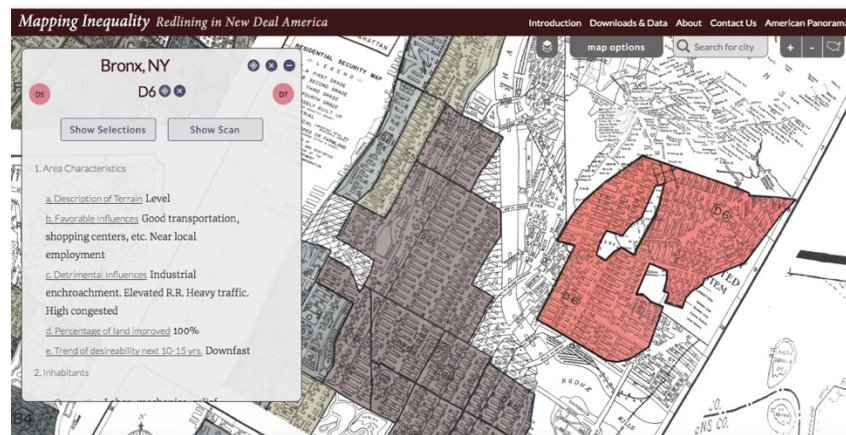
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Assignment #2

Reading and Writing: Policy

Due: September 9 - December 9 + 10



Redlining map of the South Bronx

As practicing architects, we are more often the inheritors of policy than the makers. For this second and semester long assignment, select a policy related to housing, (preferably affordable housing) that includes any of the following: environment, health, disability, race, gender, LGBTQ, building, code, zoning, and research it. Review the policy for its affect upon public health, race, environmental and social justice. The aim is to become familiar with the written language as it applies and is interpreted into built form. In part this assignment, acknowledges that the written word has come to triumph over other forms of design. While policy is established to produce safety, equity, fairness, protection from overbuilding, it has simultaneously produces negative effects in a variety of forms including causing or contributing to systemic racism. Reflect on the chosen policy. Does it contribute to systemic racism, inequity or poverty, or poor health? How so? Or does it insure against malevolent practices? Please define it, explain it, and if you find something to be unjust rewrite it to be fair and equitable, and just. If you are unsure where to begin, start with the Fair Housing Act; HPD Design Guidelines; NYC Housing Maintenance Code; American Disabilities Act; Architectural Barriers Act; NYC Multiple Dwelling Law; . This assignment is meant to provoke a thinking, debate and discussion for the duration of the semester. How does it

⁴ https://www.hud.gov/program_offices/fair_housing_equal_opp/fair_housing_and_related_law

⁵ <https://www1.nyc.gov/assets/buildings/pdf/MultipleDwellingLaw.pdf>

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inform your design project? How does policy impact design? Critique the policy. What do you understand. Is the policy fair? Is there bias? What will you design as a result?

Reading:

Richard Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America*, Liveright, 2017.

Laurent Stalder, "Air, Light, and Air-Conditioning," trans. Jill Denton, *Grey Room* 40 (Summer 2010): 84-99.

William W. Braham, "Household conditioning (if you are cold, put a sweater on)," in *Building Systems, Design, Technology, and Society*, eds. Kiel Moe and Ryan E. Smith (London: Routledge, 2012), 185-92.

Gwendolyn Wright, *Building the Dream, A Social History of Housing in America*, The MIT Press, 1983.

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Assignment #3

Inventory of Elements

Due: September 28, 2019 at 01:30 p.m.



Damian Ortega, *Cosmic Thing*, 2002.

As the third assignment, student will take apart a housing project similar to Damian Ortega's *Cosmic Thing* dissected parts placed in proximity to the original so that it is still possible to understand the whole. Gaining insight into how things are formed and parts relying on the other, our reason and purpose for studying multifamily housing or multiple households is a rational one -- there is an explicit need for it and more of it is needed. There is a universal need for thoughtfully designed housing. Housing as a type may seem repetitive to have difference, yet it is among the most varied of types. Embark upon studying, documenting, and taking stock of households through a variety of housing types located in New York City, or where you are currently living or have recently been living

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and through a given precedent. Each student will examine a housing precedent and compare and contrast it by themes such as density and climate. Each studio section will examine one precedent selected by their critic and then select one of your choosing to compare and contrast; study and analyze in detail and present as a collective project alongside issues of housing in NYC such as density, and climate change, and health, race, and social and environmental justice concerns. Each studio will undertake an analytical investigation into the architectural issues associated with urban morphology and infrastructural development, as well as examine design features key to the architectural idea of the building. In both examples, each student will select one building type associated with housing and study its form in an overall massing model that includes structure and circulation, a drawing and model of a facade; a compare details preferably a window wall section related to climate at 1:25; and a detail related to the idea of health through an analytical drawing that fits on an 11"x17". This work will be presented as part of GSAPP's Open House and potentially later in the term as part of a pop-up show.



O. M. Ungers Roosevelt Housing Competition, 1974-75.

The pedagogical goal of this work is to investigate relationships between specific housing types, fixed building systems, variable programs, and multiple forms that are both descriptive and representative of housing. Common housing types within New York City include but are not limited to the following: single corridor; double-loaded corridor; skip-stop; tower; courtyard; railroad; row house; transverse core; and single-room occupancy. With the

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knowledge gained about NYC housing types and their urban setting in the first assignment, investigate how this knowledge relates to the many other types of housing that exist throughout global housing projects, see the “cutsheets”. For the purpose of the studio, and given the short time frame for this assignment, each critic has preselected a precedent related to larger studio themes. Precedents range in type and in location. While the studio is based in the South Bronx, each student should undertake the problem of housing with a broad view.

Each housing type has a very specific ideology regarding the relationship between collective and domestic living, as well as specific implications for overall form and urban morphology. By its very nature housing produces new subjectivities within itself. Arguably no housing project is the same, despite largely repetitive programming of units, corridors, parking, laundromats, lobbies, elevators, stairwells, and other building systems. The precedent assignment is meant to introduce not only numerous formal types but also organizations and issues critical to housing and architecture like materials, environment, economics, value, and social and cultural influences. Further, the intent is to comprehend the systems that simultaneously inhabit the relatively small space of a dwelling, from circulation to plumbing, structure, and electrical. Precedent analysis is critical to conceptualizing work done later in the term. Where the distinction between house and home emerges is of critical importance in a housing project. To that end, divisions between public and private shape both the physical form of the building and are also embedded within the public policy and governance structuring the intent of all urban housing. Students are encouraged to research subjects that could be explored all term.

Each team is charged with the task of examining and taking apart their single precedent for its form and performance/systems. (Please see the below list.) Begin by gathering all relevant information, such as plans, sections, and images. From this information each team will begin to record and assess through the acts of making and drawing, producing an analytical study of each precedent. This evaluation should be approached from two scales: from the unit and from the overall form in urban context. For the purpose of this studio the unit is as equally important as the project’s overall form. When examining precedents, analyze the models for health and wellbeing through the appropriate, related systems. Additional components and systems to investigate include: urban infrastructure; urban morphology; post-occupancy; materials; structure; life safety; accessibility; zoning; policy; etc.

Pedagogically, precedent analysis is a twofold exercise. First and foremost, it is a way into the housing studio through well-known architectural, formal, spatial, material, and structural examples. The systems found in each precedent and their relationship to one another will be defined by each team. Second, as a collective of eight studios, comparing and contrasting housing projects through specific lenses will require a particular analytical method of work. Through drawings and models, each team will reveal specific connections between the architectural form and related systems. These connections could range from the project’s organizational logic to its

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structural diagram and material assemblage, to its relationship to site, to its cultural underpinnings. These two ambitions serve to establish a fundamental way of thinking about architecture in relation of the subject of housing.

At the completion of the assignment each studio will present a full, comprehensive overview of their housing precedent alongside of the inventory. It will be necessary to undertake research and documentation as well as apply methods of analysis that will then be reviewed in a group pin-up. The representation of the assignment shall be comparatively evaluated between these projects in a collective studio assignment.

In the way artist Damian Ortega deconstructs the popular VW Bug, each student team is to examine and represent both their research and ideas about the site through a conceptual taking apart of the city. Students are to first examine the South Bronx and then begin to understand the specific site. (It is intended that the focus of the urban site study is the larger urban context of the South Bronx and may include comparative areas of the greater NYC area.) Students will continue to work on site issues throughout the remainder of the term and should ask questions about the site in a methodological manner that serves to both influence their designs and create architecture as much about buildings as it is about urban morphology and infrastructures.

Individual Studio Assignment*

Students will work in pairs within their studio. Each studio will work collectively on the following precedents. Each critic will confirm their precedent selection upon the beginning of this assignment.

<u>Barrett Studio:</u>	Diagoon Experimental Housing, Herman Hertzberger, Delft, 1969-1972; 8 prototype
<u>Bunge Studio:</u>	Kanchanjunga Apartments, Charles Correa, Mumbai, 1983, 32 luxury apartments
<u>Cadena Studio:</u>	Matteotti Village, Terni, Giancarlo De Carlo, 1969-74; 240 of 840 apartments built public housing
<u>Frampton Studio:</u>	(PREVI), 24 teams of architects, Lima, Peru, 1969-74; 500 social housing units
<u>Goetz Studio:</u>	Walden 7, Ricardo Bofill, Barcelona, 1975; 446 public housing apartments
<u>Gooden Studio:</u>	Weissenhofsiedlung, Stuttgart, 1928 / Torre de David, Caracas, 1994-2018
<u>Sample Studio:</u>	Gifu Kitagata, Kazuyo Sejima, Kitagata, Japan 1996-2000, 107 public housing units
<u>Solomonoff Studio:</u>	520 West 28 th Street, New York, Zaha Hadid, 2018, 39 luxury apartments

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Requirements and Representation

Each team will work toward a comprehensive understanding of their precedent and will document these findings through a range of scales and material output. While this research will serve as a basis to themes explored throughout the rest of the term, documentation and presentation should be treated as autonomous design exercises. All work should be clear, legible, and (very) well represented. Prepare the following materials, to be discussed in a Joint Studio pin-up:

1. A model of the whole building at 1:100, optional
2. One [1] model structure in a 1:50 model; optional
3. One drawing of a detail preferably a window or element related to climate at 1:25;
4. One drawing of a significant detail of the building (either a unique component or a segment of a performative system) that you consider essential to the understanding of health (at a minimum scale of 1- $\frac{1}{2}$ " = 1' 0"). through a colorful drawing that fits on an 11"x17".
5. All drawings shall be presented on sheets that are 11" x 17" and no more than four [4] sheets per team as a small booklet.
6. Identify what type of housing project you are working with, and write one paragraph about that both summarizes and conceptualizes the system.
7. Photograph models.
8. Present work as a .pdf, to be projected.
9. All work is to be submitted as a PDF to the teaching assistant by September 28. Photos of models are to be submitted as 300 dpi .jpgs, and all drawings are to be submitted as .eps files.

Review

Assignment is introduced on September 16th and all work will be presented as part of a joint studio with the entire Housing studio and faculty on September 28 starting at 01:30 p.m. The review will start promptly at 01:30 p.m. The review will take the form of a round-robin with faculty and all students reviewing the projects at once. Students are asked to keep their responses concise and should primarily speak through the documents produced for the review. The final assignment shall be presented at 5:30 p.m.

Readings

See studio critic for readings.

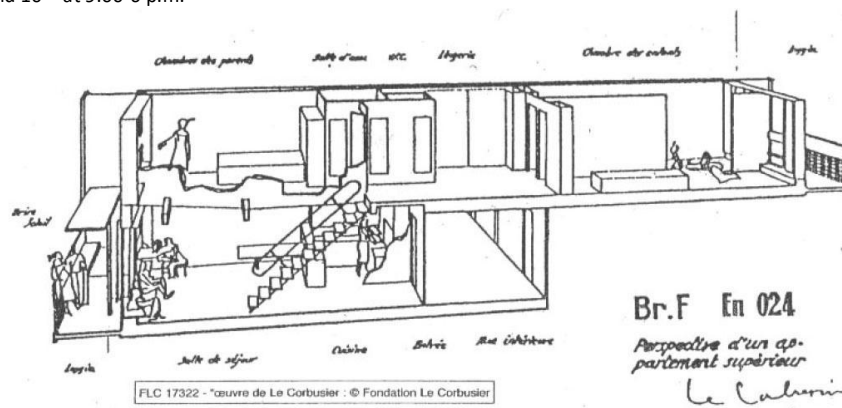
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Assignment #4 Housing & Community: Units, Structures, and Environments

Due: December 9 and 10th at 9:00-6 p.m.



Le Corbusier, Unité.

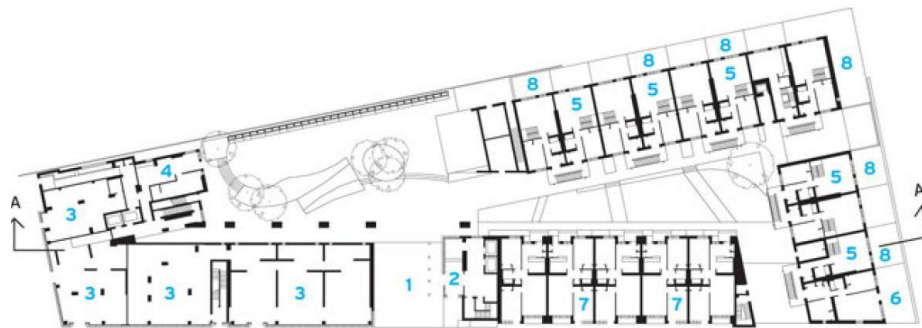
Units

Having already been introduced to lessons from site and precedent studies, students will be introduced to the problem of designing housing by creating units, addressing the aggregation not as an autonomous practice but instead through systems of structure, program, accessibility, and environment. Modern architects approached housing as a purely functional problem, often working from the inside out. An example of this approach can be seen in Czech avant-gardist Karel Teige's research for the 1932 book *The Minimum Dwelling*. For Teige, the housing question is essentially one of "a problem of statistics and technology," to the point that housing ultimately comes down to "a question of the general plan." While these ideas were formulated to address housing crises in the aftermath of World War I, today the idea of the minimal dwelling is being reformulated. Each team will design a prototypical unit that explores the minimal. In a city often already at the minimum—minimum area, minimum light, minimum budgets, minimum amenities, and minimum proximity to fresh air—what is a minimal unit today? How is the minimal addressed in systems? Each team should speculate on the limits of this prototype. Inclusion of the model of the OMA/Rem Koolhaas's Lemoine House as model introduces structures, physics, and accessibility as a means to both understand and produce the design of a house and its basic forms. These same criteria are essential to urban public housing, and should begin the design of the unit.

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FIRST FLOOR PLAN

- | | | |
|----------------|---------------------|----------------------------|
| 1 ENTRY PORTAL | 7 LIVE-WORK SIMPLEX | 13 COMMUNITY GARDEN |
| 2 LOBBY | 8 BACKYARD | 14 ACCESSIBLE GREEN ROOF |
| 3 RETAIL | 9 PLAY AREA | 15 INACCESSIBLE GREEN ROOF |
| 4 LAUNDRY | 10 AMPHITHEATER | 16 COMMUNITY TERRACE |
| 5 DUPLEX | 11 CONIFER GARDEN | |
| 6 SIMPLEX | 12 ORCHARD | |

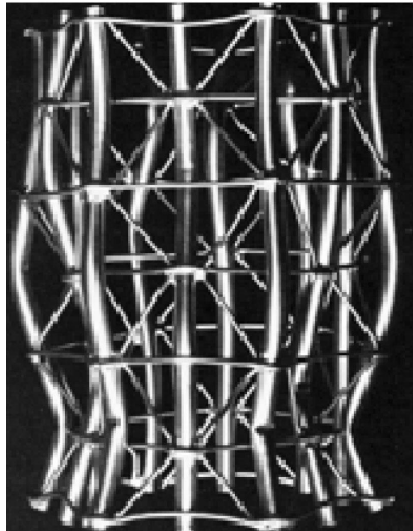
Via Verde, Bronx.

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From Structures to Environments



G. Robert Le Ricolais,
The Beauty of Failure.



Herman Hertzberger, Complex for the Elderly, Amsterdam, 1964-74.

Formal exercises of unit repetition will begin the next series of studies, on structures and aggregation. Here students are to propose complex structures of repeated units, learning lessons related to scale, structure, and systems, as well as engage in the dialectic between form and function. Today, aggregation is understood through different processes of production than those previously practiced. (Compare Moshe Safdie's Habitat [1967] in Montréal to Steven Holl's Linked Hybrid Housing [2009] in Beijing.) For the purposes of this studio, the focus will be on high-density models. Returning, perhaps nostalgically, to the beginning of the Columbia Housing Studio that is, to its emergence in reaction to 1960s urban renewal projects and in the context of the Museum of Modern Art's exhibition *New City: Architecture and Urban Renewal* (1967) and *Another Chance for Housing: Low-Rise Alternatives* (1973) the studio will hold history up as a valuable lens and reference for reading the city. (Both exhibitions presented housing projects for East Harlem.) This longstanding interest in high-density housing should form the ground of each aggregation study, and also serve to rethink the same for contemporary conditions.

The studio will examine high-density housing that serves a specific audience, such as aging populations or artists with a special regard for human comfort. Students will design a series of climate effects and comfort zones within their projects. Similarly, to test and model climatic envelopes, structural studies should be completed in the form of digital stress tests. Roving experts on housing from New York City's Housing Preservation and Development agency will join the studio for two lectures, join reviews, and convene a final presentation with a team on Dec. 16, 2020. Roving engineers to provide students with access to structural engineering principles and concepts at the beginning of the design process. Each studio will have an engineer will visit. Students should be prepared in advance of meeting with their assigned structural engineer. Structural and aggregation studies will interweave with site studies.

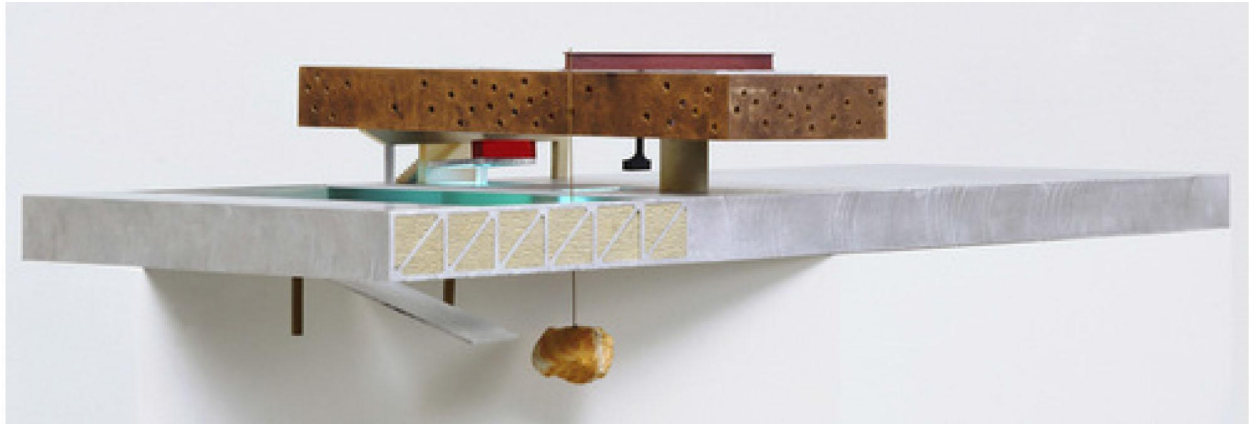
G. Robert Le Ricolais (1894-1977) examined the beauty of failures. The elements of stress upon built form include gravity, physics, wind loads, shear, lateral forces, and other strains placed on its structure. What type of structure can be made in response to such stresses? Imagining a stress diagram, will a particular type of stress produce a formal response? Is this stress examined from the inside out? Or from the outside in? Structural concepts will be explored primarily through model making. The structural stress should promote a fundamental concept for the project that equally reflects a particular position on the domestic.

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Program



Lemoine House (Maison a Bordeaux), Floriac, Bordeaux, France, 1994.

Before beginning design work the program given as part of the housing project is to be analyzed, in consultation with your critic, through a series of modeling studies. The primary program for this studio includes housing, a community center for the aging, and a commercial space with public space. This city-owned property is to be developed under the Department of Housing Preservation and Development's (HPD) Low Income Rental Program. For the purpose of the studio it is also allowable to work with the guidelines of the 80-20 program: "At least 20% of the units in the project must be affordable to tenants earning no more than 50% of the Area Median Income (AMI), or 40% of the units must be affordable to tenants earning no more than 60% of the Area Median Income, or, in New York City only, 25% of the units to be affordable to tenants earning no more than 60% of the Area Median Income."

The zoning change permits a change in residential units and the inclusion of a community center to be located anywhere in the building(s) where residences are allowed. Each team should carefully examine both the program and the relationships between given programmatic parts. The program may be changed, but only following consideration with your critic. Any changes should be considered against the given zoning and codes.

While it is possible to approach housing through these systems of value and economies, it is also important to work towards artistic and creative, contemporary ideas of living and habitation. The Lemoine House by OMA/Rem Koolhaas commingles issues from domesticity, privacy, intimacy, and physical limitations to structural, environmental, and material novelty in creating a new form of living. If housing at a larger scale with repetitive units undertakes all of these elements, what types of design studies and concepts can each team explore?

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New York development tends to follow artists, a movement currently synonymous with gentrification. This trend started in a deindustrialized SoHo, when artists renovated large industrial factories into live/work lofts. In 1971, the City rezoned the area to allow for commercial activity. SoHo has since been used as a precedent for Brooklyn, Queens, and now the Bronx. According to the current NYC zoning regulation, Chapter 2, Article 1, “home occupation” enables residents to use 10% of their homes for specific types of work: artist studios, professional offices, and teaching up to four pupils at a time. Also available is the MX-13 Special District Overlay, “home occupation” is redefined as 49% and allows greater variation in work. Live/work units can offer the neighborhood a variety of commercial types that directly relate to street life. The Bronx Documentary Center an anchor on the block directly integrates creative arts by mixing living and working spaces, where proximity to the street increases value and accessibility. Although signage and advertisement in live/work units in NYC are addressed in the zoning code, are there opportunities to link the impact of live/work units with the design of the street?

As part of the “home occupation” code and in relation to the NYC Housing Maintenance Code, the site’s immediate context, of the schools and continuing education centers, the housing project should consider new models for working and education as part of its program. A community is growing in this neighborhood, and within the Bronx, that open up opportunities for live/work unit types and affordable or below-market-rate housing for artists. Consider the expanded programs of the nearby Bronx Museum, as well as the programs of Crotona Park and exercise and sports, as well as the demographics of the area and the need for support of women and children.

As NYC has had a long tradition of mixing residential types and populations, the studio will also include programming for the aging. “Crystal ball in hand, I see a future that retires the retirement community and fully integrates older adults into every facet of American life,” writes Dean Linda Fried of the Mailman School of Public Health in her book *Unafraid of Aging*.

There is evidence that, by the year 2030, certain global populations will count more elderly than child citizens. What it means to grow old in American society holds different meaning than in the past. (“Aging” and retirement were understood to take place at a particular age: 65.) What does this mean for society and for (urban) housing? Statistics show that Bronx’s aging population is growing. Part of this studio’s program is to design and develop a community center for the aging, and an intergenerational mix.

⁶ <http://www.wsj.com/articles/linda-fried-on-the-future-of-retirement-1404762925>

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SITE Courtlandt Ave at 151st and 152nd Streets

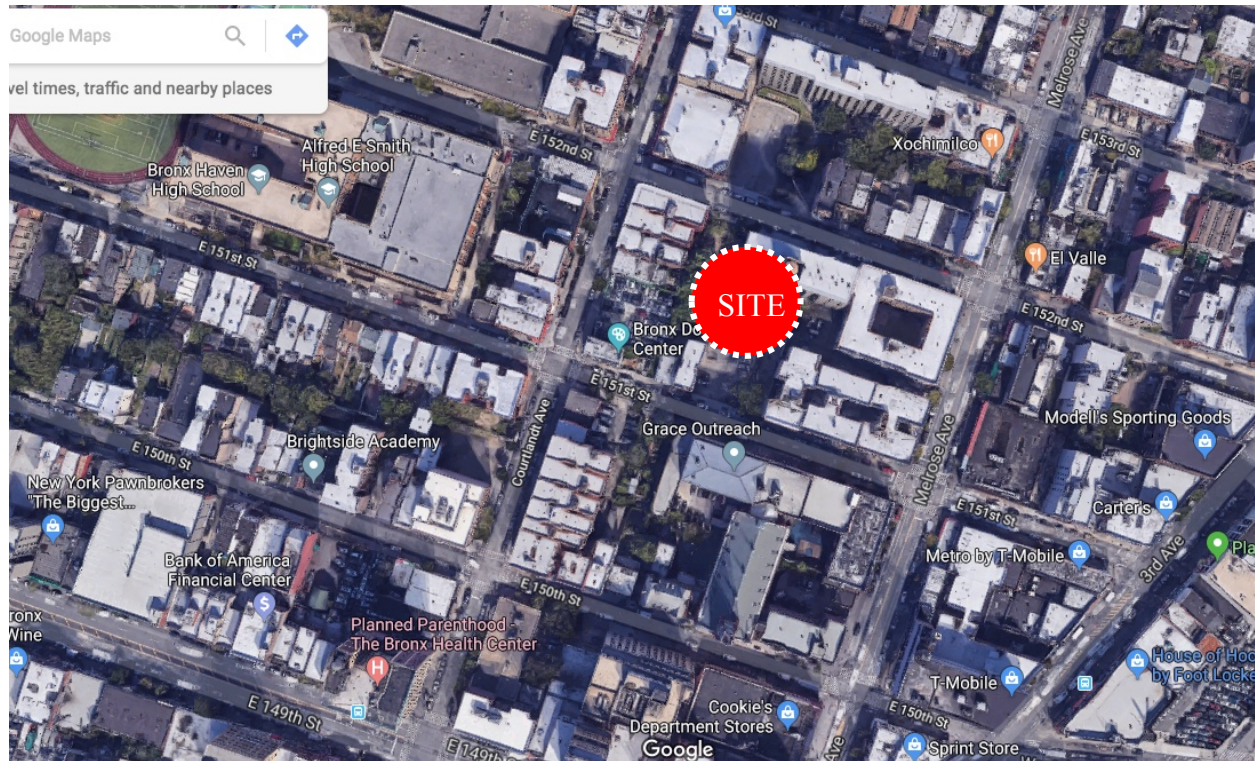
For the purpose of the studio, we will work with a site that is imaginary but in the context of real and diverse residential projects representative of NYCHA, private and non-profit developments, as well as educational institutions. The studio will focus on the neighborhood of the Melrose neighborhood in the South Bronx and compare to another neighborhood such as: Crotona Park; Hunts Point; Co-Op City Port Morris; Randall's Island; and the Grand Concourse of the Bronx, as well as the adjacent neighborhoods. In addition, each studio produces cross section drawings as the introductory exercise of the design assignment. From this exercise, each student will have the opportunity to reverse the working methodology to the studio, looking at housing from the outside in. Each student will learn new lessons and gain new insight into the larger area of the housing site. Where the precedent study allows an understanding of housing at the scale of the building as a beginning to the studio, the actual studio assignment shall begin with the city.

In addition to the subject of health, the studio encourages each student to think about the intersection between architecture and urbanism, including subjects of economics, structure, materials, etc. as well as formal and spatial qualities. How does culture play into housing? Has the city done enough to integrate the Bronx's significant cultural heritage into its development of Melrose? How has the Bronx changed in response? Larger questions for the studio to consider include issues of homeownership: What is possible today? Is homeownership of interest? What makes a community? Emerging out of the Great Recession, nearly ten years ago and building up from the downturn in the national economy, a result of the recent housing crisis where properties in the Bronx on average experienced a 40% reduction in housing prices, how has the foreclosure crisis affected the neighborhoods the studio is working within? The South Bronx like much of Manhattan and other Boroughs also faces issues around gentrification. Today, the Bronx's close proximity to midtown Manhattan and its ease of access to public transit – only 25 mins by express train to Penn Station – are fueling gentrification and, at the same time, new developments like Silvercup Studios North (a film studio adaptive reuse in Port Morris [de-industrialization]), the Special Harlem River Waterfront District, and a greater connection to parks like Randall's Island. The pedagogical goal of this studio is to understand the broader physical and historical context of the South Bronx, as well as to undertake an analysis of its urban infrastructure from its organization (think: the NYC grid) to the site section with its shifting geological terrain from the Harlem River to peak at Franz Sigel Park (think: soil types), to forms of urban connections (think: transit and accessibility), to the social fabric.

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Studio Site Assignment #2: Block 2912, R7-1

SITE ZONING

The studio's block as its site is presently zoned for R7-1 and C2-4. In past year's studios, students reimagined a denser neighborhood. The following descriptions offer current zoning that supports greater density. However, this year the studio is open to considering less density. Explore with your critic what zoning is less dense or alternatives to R7-1 or C2-4 should these designations be biased and discriminatory. Please see the following link to review zoning related to the site: <https://www1.nyc.gov/site/planning/zoning/districts-tools/r7.page>

Residential District R7-1

R7 districts are medium-density apartment house districts mapped in much of the Bronx as well as the Upper West Side in Manhattan and Brighton Beach in Brooklyn. The height factor regulations for R7 districts encourage lower apartment buildings on smaller zoning lots and, on larger lots, taller buildings with less lot coverage. As an alternative, developers may choose the optional Quality Housing regulations to build lower buildings with greater lot coverage.

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Regulations for residential development in R7-1 and R7-2 districts are essentially the same except that R7-2 districts, which are mapped primarily in upper Manhattan, have lower parking requirements. Height factor buildings are often set back from the street and surrounded by open space and on-site parking. The floor area ratio (FAR) in R7 districts ranges from 0.87 to a high of 3.44; the open space ratio (OSR) ranges from 15.5 to 25.5. As in other non-contextual districts, a taller building may be obtained by providing more open space. For example, 76% of the zoning lot with a 14-story building must be open space ($3.44 \text{ FAR} \times 22.0 \text{ OSR}$). The maximum FAR is achievable only where the zoning lot is large enough to accommodate a practical building footprint as well as the required amount of open space. The building must be set within a sky exposure plane which, in R7 districts, begins at a height of 60 feet above the street line and then slopes inward over the zoning lot.

Off-street parking is generally required for 60 percent of a building's dwelling units in an R7-1 district and 50 percent in an R7-2 district, but requirements are lower for *income-restricted housing units* (IRHU) and are further modified in certain areas, such as within the *Transit Zone* and the *Manhattan Core*, or for lots less than 15,000 square feet in R7-1 districts. Off-street parking requirements can be waived if 5 or fewer parking spaces are required in R7-1 districts, or if 15 or fewer parking spaces are required or if the zoning lot is 10,000 square feet or less in R7-2 districts.

Alternative zoning

Special Purpose District MX-1⁷

The Special Mixed Use District (MX) was established in 1997 to encourage investment in, and enhance the vitality of existing neighborhoods with mixed residential and industrial uses in close proximity, as well as to create expanded opportunities for new mixed-use communities. New residential and non-residential uses—commercial, community facility, and light industrial—can be developed as-of-right and can be located side-by-side or within the same building.

Special Purpose District M1-4

A manufacturing district, designated by the letter M—M1-1, M2-2—is a zoning district in which manufacturing uses, most commercial uses, and some community facility uses are permitted. Industrial uses are subject to a range of performance standards. Residential development is not allowed, except in Special Mixed Use Districts.

Public Housing

1974, Section 8 Housing, encourages the private development of affordable homes.

1992, HOPE VI, funds the demolition of poor-quality public housing projects and their replacement with mixed-income, lower-density housing.

The Bronx has 100 NYCHA developments, counting 44,500 apartments.

Affordable Housing

421-a Tax Abatement: 80% market rate / 20% affordable.

421-a Tax Abatement under Mayor Bill de Blasio: 25–35% affordable.

“Affordable” is determined by a percentage of the local medium income.

Rent-Regulated Housing

Includes “rent-controlled” and “rent-stabilized” apartments, received through J-51 or 421-a tax-incentive programs. Rent-control only viable if tenant has been living in apartment since before July 1, 1971.

Rent-stabilized apartments comprise approximately 59% of Bronx, 43% of Brooklyn, 45% of Manhattan, and 42% of Queens housing.

⁷ <http://www.nyc.gov/html/dcp/pdf/zone/map6a.pdf>

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Market-rate Housing

An apartment with no rent restrictions, allowing the landlord to raise rent to the local market rate.
Less legal protection regarding the right to a lease renewal and evictions.
Different neighborhood market rates (feed back into new 421-a).

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PROGRAM

This program serves as a guide from which to start, and the studio project is open to change and being amended within reason. All housing should be accessible, please review ADA for physical, as well as visual and hearing accessibility.

ROOM	SQUARE FOOTAGE (SF)	NOTES
Entry	500 - 2000SF	Serves as entrance
Lobby		
Reception / Security Desk	1,000 SF	
Fire Command Station		
Mailboxes	1,000 SF	
Storage Room	1,000 SF	
Manager's Office	250 SF	
ATM	1,000 SF	
Core		
Stairwell	per code	Accessible/Wayfinding
Elevators	per code	Accessible/Wayfinding
Service		
Mechanical Room	per code	Accessible
Trash Collection Room	250 SF min.	
SUBTOTAL	5,000 SF	
<u>RESIDENT SHARED AMENITIES</u>		
Storage		15 SF per unit
Laundry		
Dryers		1 dryer per 40 units
Washers		10 washers
Waiting & Folding Area		
Exercise Room	2,250 SF	cardio machines, stretching area
Accessible Green Roof	8,000 SF	
Bicycle Storage		50% of units; 15 SF / bike
Parking	30,000 SF	required for all buildings above noth street
SUBTOTAL	48,250 SF	
ROOM	SQUARE FOOTAGE (SF)	NOTES

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COMMERCIAL

Retail (Café, Market)	500 SF
Class A Office Space	2,000 SF

SUBTOTAL	2,500 SF
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COMMUNITY PROGRAMS

Public Pool with a slide	10,000 SF	
Community Garden / Terrace	10,000 SF	
Equipment Storage		
Community Center for the Aging	10,000 SF	
Exercise Room		
Lecture Hall / Auditorium		Stackable seating, piano
Country Kitchen		
Manager's Office		
Storage		
Accessible Restrooms		
Dining Room		
Arts and Crafts		
Beauty Salon		
Right to Assemble / Maintenance Office		
Desk	1,000 SF	Two computer stations, fax machine

SUBTOTAL	29,000 SF
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ROOM	SQUARE FOOTAGE (SF)	NOTES
UNITS and Apartments 50- 300 (each pair decides)		
Micro Unit	300 SF	100% (50%)
Studio	500 SF	75%
One Bedroom	750 SF	75%
Two Bedroom	1,000 SF	50%, one superintendent
SUBTOTAL	173,750 SF	
<hr/>		
TOTAL NET	258,500 SF+	

Net Service areas include common spaces and mechanical at 20%.
 Envelope enclosure to be determined in gross calculation.

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BIBLIOGRAPHY

In addition to the summer housing reading list please see the following for reference:

CODE / ZONING REFERENCES

Designing New York: Quality Affordable Housing.
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Columbia University
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URBAN/SITE STUDY

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<http://www.guardian.co.uk/world/2012/jul/10/new-york-micro-apartments?newsfeed=true>

AGING

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HEALTH

Beatriz Colomina, "Unbreathed Air 1956," *Grey Room* 15 (2004): 28–59.
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Emily Thompson, "Noise and Noise Abatement in the Modern City," in *Sense of the City: An Alternate Approach to Urbanism* (Montréal: Canadian Centre for Architecture/Lars Müller Publishers, 2005).
Hilary Sample, *Maintenance Architecture* (Cambridge: MIT Press, 2016).

ACCESSIBILITY

ADA Guidelines: <http://www.ada.gov/>

CONTEMPORARY HOUSING

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<https://www.archdaily.com/871099/ilot-19-la-defense-nanterre-farshid-moussavi-architecture>

DOCUMENTARIES / FILMS

Urbanized

The Pruitt-Igoe Myth: An Urban History

I Remember Harlem, The Studio Museum in Harlem:

<http://www.studiomuseum.org/event-calendar/event/film-series-i-remember-harlem-2012-09-22>

Sarah Morris, Video Clips: <http://sarah-morris.info/?FilmClips/Midtown-/> and <http://vimeo.com/user4010809>

The Bronx in The 1980's: <https://www.youtube.com/watch?v=xgUsEVwXcho>

The South Bronx: Where Hip-Hop Was Born: <http://www.wnyc.org/story/89709-south-bronx-hip-hop-year-zero/>

Short, South Bronx Rising <http://www.nytimes.com/video/arts/100000001089498/south-bronx-rising.html>

Marty (1955), Delbert Mann

The Warriors (1979), Walter Hill

Fort Apache to the Bronx (1981), Daniel Petrie

Paris Is Burning (1990), Jennie Livingston

Jungle Fever (1991), Spike Lee

Summer of Sam (1999), Spike Lee

Finding Forrester (2000), Gus Van Zandt

My Brooklyn (2014), Kelly Anderson

MID-REVIEW REQUIREMENTS

October 26th and 29th, 2020 1:30pm-5:30pm

These requirements represent the minimum documentation required.

Drawings

At a scale of 1/32"=1'-0": Site Plan with context.

At a scale of 1/16"=1'-0" and 1/8"=1'-0": Plans with Ground Plan.

At a scale of 1/16"=1'-0": Sections and Elevations.

At a scale of 1/4"=1'-0": Full Building Section with detail.

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Models

At a minimum scale of $1/64"=1'-0"$: Massing Model within urban context. Optional

At a scale of $1/16"=1'-0"$: Building Model with immediate site. Optional

At a scale of $1/2"=1'-0"$: Detail Model of your selection.

Perspectives

Minimum of two [2] views of a day in the life of the building, illustrating both interior and exterior. One [1] perspective should be of a unit.

Conceptual Structural Diagrams

Produce one [1] key structural diagram that reflects your structural concept and system. In addition, produce a series of diagrams that illustrate the structural strategy and its relationship to other qualities of the design, from materials to light and form.

Conceptual Daylighting Studies

Produce one [1] unit that is presented through either digital or physical modeling to illustrate daylighting effects on June 21 and Dec. 21st at sunrise, noon, and sunset.

Additional Work

Other work is also acceptable, and should further elaborate on your design concept. Wherever possible, do not repeat information. Please discuss with your individual critic.

Presentation and Time

Part of studio culture includes balancing your studio work with other classes, both inside and outside of the School. Since this term is dedicated to work as part of a team, please be considerate of your teammate's time in addition to your own. Reviews are meant to be productive, useful, and critical of your work, providing insight and thus helping you move your project forward. Reviews are limited in time and therefore require that each student arrives on time and presents in a concise manner. All digital work should present a visually clear description of your project. Pin-ups are an opportunity for students to test their project with varying audiences. Mock up your presentation before any review and discuss with your critic.

Pencils down. All work shall be collected the night before the mid-review at 11:00 p.m. Each student is to finish printing and pin up or submit their work. Students are advised to stop all work and get some rest. It is recommended that students attend studio reviews as well as the introduction presentation.

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FINAL REVIEW REQUIREMENTS

December 9th and 10th, 2020 1:30-5:30pm

These requirements represent the minimum documentation required.

Drawings

At a scale of 1/16"=1'-0": Site Plan with context.

At a scale of 1/8"=1'-0": Plans, Sections, Elevations. All drawings with context

At a scale of 1/4"=1'-0": Full Building Section with detail.

Models

At a minimum scale of 1/64"=1'-0": Massing Model within urban context. Optional

At a scale of 1/8"=1'-0": Partial Building Model with immediate site. Optional

At a scale of 1/2"=1'-0": Detail Model of your selection. Optional

Perspectives

Minimum of three [3] views of a day in the life of the building, illustrating both interior and exterior. One perspective should be of a unit. Additionally, views should consider the qualification of experiential differences in public vs. private, shared vs. communal spaces, etc.

Structural Diagrams

A diagram that reflects your structural concept. In addition, produce a series of diagrams that illustrates the structural strategy and its relationship to other qualities of the design from materials to light to form.

Daylighting Studies

Produce at a minimum one space, preferably the unit that is presented through digital modeling to illustrate daylighting effects on June 21 and Dec. 21st at noon.

Additional Work

Other work is also acceptable, and should further elaborate on your design concept. Wherever possible, do not repeat information. Please discuss with your individual critic.

Presentation and Time

Part of studio culture includes balancing your studio work with other classes, both inside and outside of the School. Since this term is dedicated to work as part of a team, please be considerate of your teammate's time in addition to your own. Reviews are meant to be productive, useful, and critical of your work, providing insight and thus helping you move your project forward. Reviews are limited in time and therefore require that each student arrives on time and presents in a concise manner. All digital work should present a visually clear description of your project. Pin-ups are an opportunity for students to test their project with varying audiences. Mock up your presentation before any review and discuss with your critic.

Pencils down. All drawings, digital presentations, .pdfs, PowerPoints, etc. shall be collected on December 3 at 8:00 p.m. Each team is to submit their work to their critic for review. Model making is acceptable until

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December 3 at 11:00 p.m. These deadlines are recommended for the purpose of ensuring that students present with clarity on review days.

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Final Documentation

All models, drawings, and other materials must be documented and collected for the School's archive and for *Abstract*. Please provide a CD to your critic of all drawings, model photos, and other forms of representation. No grade will be given until your work has been collected and archived. No exceptions.

Schedule

The studio is structured around a profound set of critical issues that will build upon one another. Students will work in pairs for the entire term. Studio pedagogy will focus on a working methodology of building up the scale of each project throughout the term. Domestic projects should take the approach of building from the inside out, while urban projects will look from the outside in. The studio will begin with a one-week precedent study of one housing type. Following this short introductory exercise, the studio will shift scales and examine the site in the broadest of terms. At week four, students will begin design work by developing unit and aggregation schemes, proposing a structural concept, and analyzing the given program. Each team will produce several conceptual schemes for the housing block up to the mid-term review. Each studio will be assigned a structural engineer to work with throughout the term. In addition, presentations and roundtable discussions by experts and professionals will be a critical component of the studio.

Studio Team Spirit

The housing studio aims to touch on many subjects and skill sets throughout the course of the semester. One challenge of the studio is working collaboratively. The ability to work and coordinate with others is a crucial skill for students to cultivate. If you find yourself frustrated, do not worry! Critics and teaching assistants have been through the same thing and are there to help. Students will learn as much, and perhaps more, from their classmates as from their studio critic. With that in mind, please be present in studio during studio class time and engage in pin-ups and class discussions. Students absolutely must be present at all pin-ups and reviews for the entire duration (unless for medical or other urgent reasons). It is more important that students are present for one another's presentations than gluing last-minute additions to models. Roundtable discussions are intended for students to ask questions, inspire dialogue and challenge one another (and their critics!). Please attend and be on time. During Hybrid Learning please do not hesitate to seek out help if you feel that the work is unexpectedly challenging. Complete the work to the best of your abilities.

End-of-year Show

In preparation for the End-of-year Show in May, all students must submit three [3] high-resolution images of their projects. Additionally, please remember to save your models for inclusion in the show.