

(RE)CODING NYC'S HOUSING

GSAPP HOUSING LAB  
SPRING 2020 PRODUCTS

# CODE CHANGES AND BUILDING PROPOSALS

TRANSFORMING EXISTING LOW-RISE, HIGH-DENSITY  
NEW LAW TENEMENT BUILDINGS INTO ACCESSIBLE AND RESILIENT HOUSING

**AUGUST 20, 2020  
DRAFT**

**1**

New York City has a tradition of ambitious zoning laws and building codes passed in response to cultural shifts and changes in construction techniques. Yet, over the years,

**regulatory changes have sidelined one of the most common building typologies in the city: the early 20th century New Law tenements.**

**These buildings house more than half of New York City's units, yet have had remarkably few improvements.**

**Five key interventions could transform this housing stock and modest changes in regulations could make them possible.**

Together, these interventions represent an incremental strategy to rethink the New Law tenement. With limited amendments to buildings and land use laws, these buildings could be adapted to the 21st century, unlocking density and enhancing the quality of New York City's housing stock.

Small changes in codes - the zoning resolution, multi-family dwelling law, and building code of New York City - can enable big changes to improve and expand affordable and resilient housing. We focus on the changes to code that can make improvements and expansions to existing walkup building possible.

This document emerged from a conversation amongst an interdisciplinary team of urban planning, real estate, and architecture graduate students at the Columbia University GSAPP Housing Lab. We are grateful to the input of senior practitioners and scholars throughout the process, and look forward to future editions. In probing the potential in New York City's 'generic' building typologies, we developed the proposed interventions through an iterative approach, navigating between context, code, policy, and design.

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## INTRODUCTION: NEW YORK CITY TENEMENTS



Image 2 | A street in the Tenement District, Lower Manhattan, 1900.

For over 150 years, the “tenement” has been New York’s defining, workaday housing type. Tenement is an umbrella-term encompassing multi-unit buildings of three to seven stories, often built of brick or masonry, and typically marketed to working-class or immigrant New Yorkers. The first tenements appeared in the mid-1800s and were built to the full extent of a standard 25 x 100 feet lot.

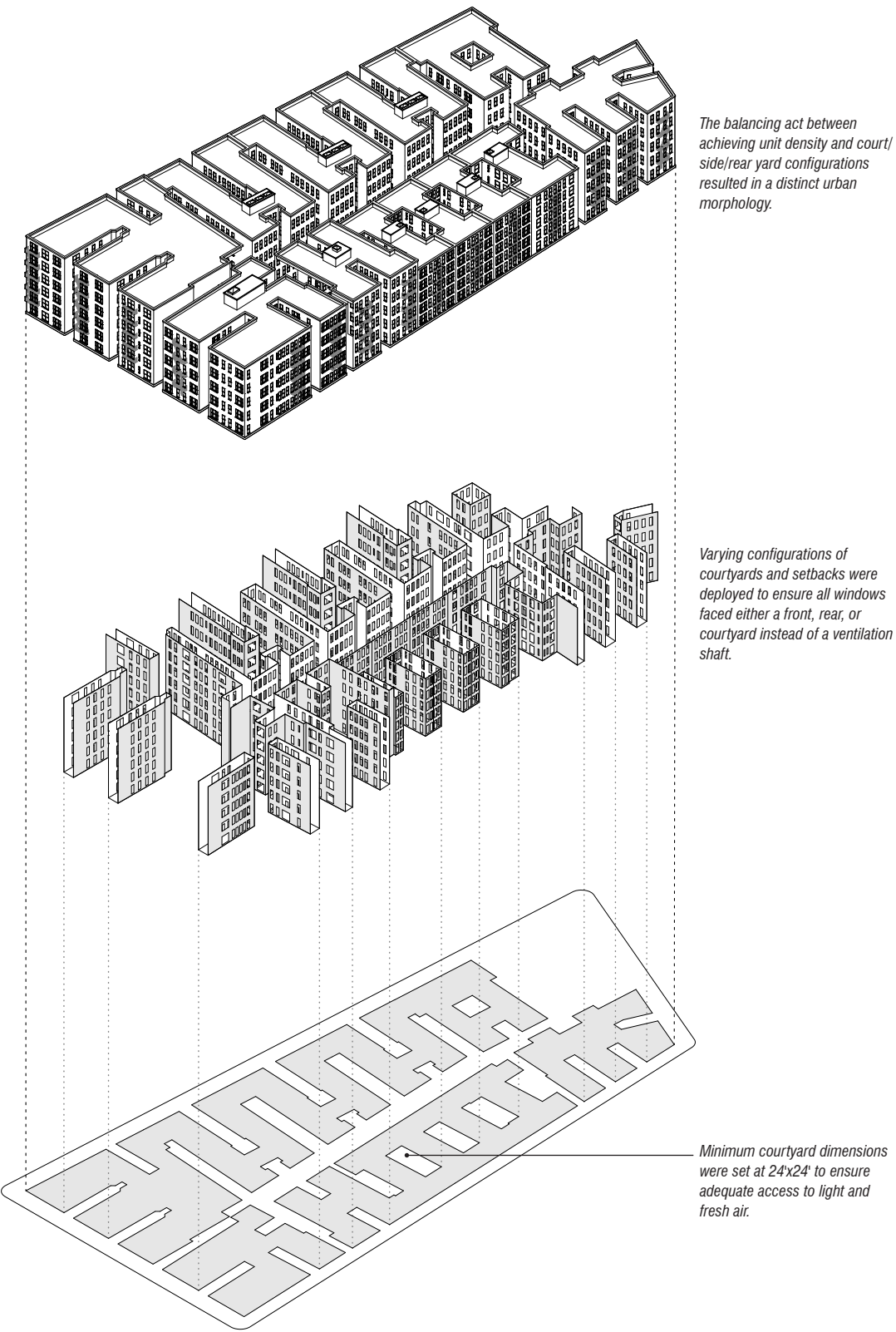
Early tenement units had severely restricted access to light and air—often units only had street-facing windows—and were frequently overcrowded. The poverty and misery of life in tenement buildings became a target of Progressive-Era reformers, who worked to combat the unsanitary living conditions of the so-called “other half.”



# THE NEW LAW TENEMENT

At the turn of the last century, a coalition of progressive-era reformers successfully transformed the way housing for poor and middle income New Yorkers was designed and built. The 1901 *New York State Tenement House Act*, often called the "New Law" set ambitious new standards right before a period of massive construction.

The law mandated that all rooms in tenement buildings have outward facing windows, proper ventilation, and fire safeguards. New Law tenements were often built on 50 by 100 foot lots, double that of the then-typical 25 foot by 100 foot lots, and were differentiated from Old Law tenements by large courtyards and rear yard setbacks.



A block of New Law Tenement buildings in Washington Heights, Manhattan. Built between 1909 to 1920.



An explosion of tenement buildings followed in the wake of the New Law, especially in the rapidly-developing areas of Upper Manhattan, the West Bronx, and Central Brooklyn.

By 1930, New Law tenements were supplanted by “fireproof” buildings and new typologies like the high-rise. Yet, despite the relatively short reign of the New Law tenement, their impact on the city was profound. **New Law tenements are still a substantial portion of New York City’s housing stock and stands as a generic backdrop in the urban fabric.** The map on the right depicts all New York City buildings in 2019. Of those buildings, the ones highlighted in black are New Law Tenement buildings still in use. Over 600,000 housing units in the city are currently estimated to be in New Law Tenement buildings.<sup>a</sup>

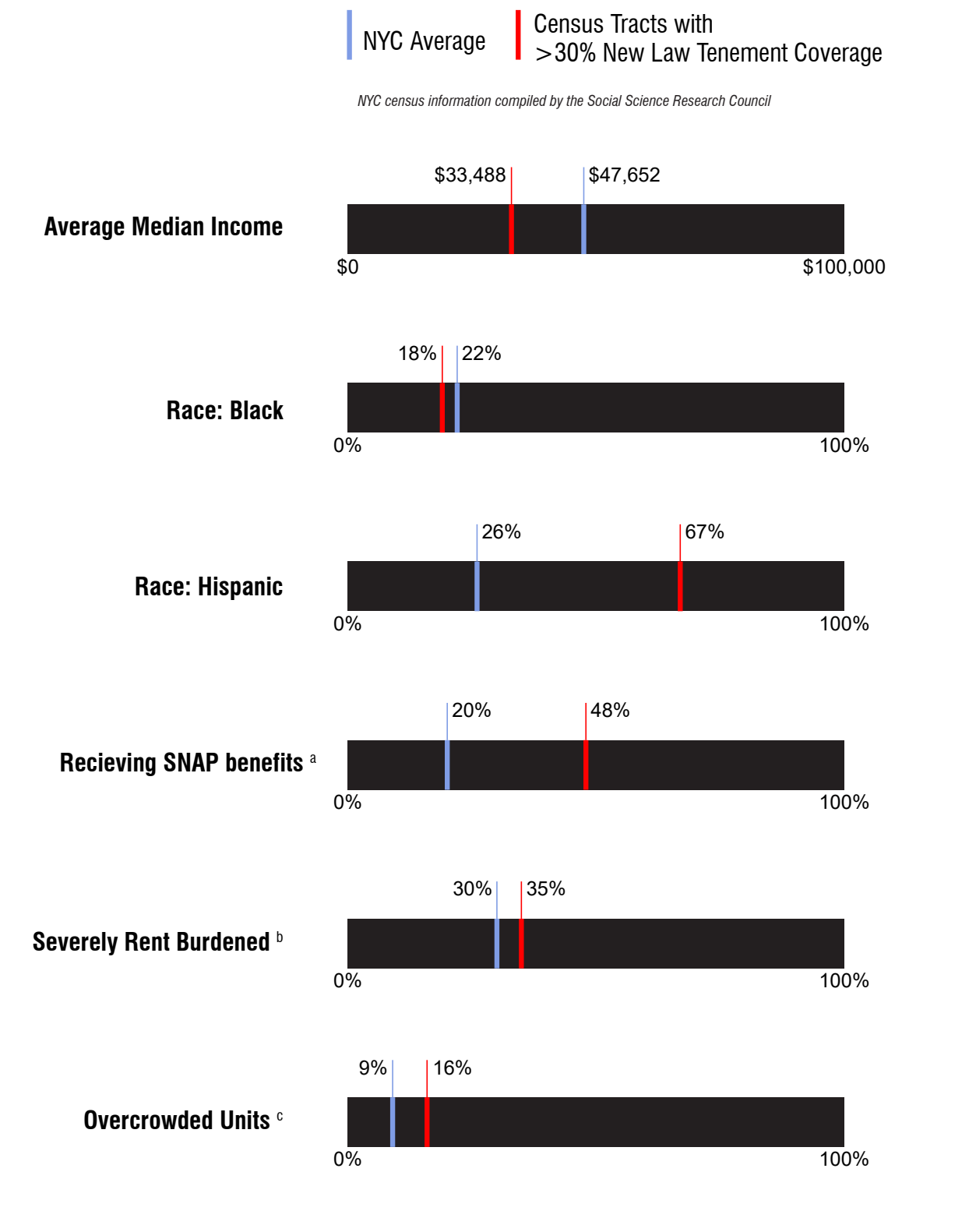
Defining Criteria  
 Height: 2.75 to 6 floors  
 Lot Frontage: 50 feet  
 Unit Count: 3 to 250  
 Constructed: 1901 to 1930



<sup>a</sup> NYC Department of City Planning. (2019) MapPLUTO 19v2. NYC DoITT. (2019) Building Footprints. [shapefile]<https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh>

Currently, areas with high concentrations of New Law tenements in the city are disproportionately home to low- and middle-income, and predominately POC communities.

The fundamental aim of targeting New Law tenements is to **invest in improving the quality, accessibility, and resiliency of housing already servicing these low- and middle-income households**. It is a step towards equitable access to *quality* dwellings and counteracting the legacy of exclusion in housing.



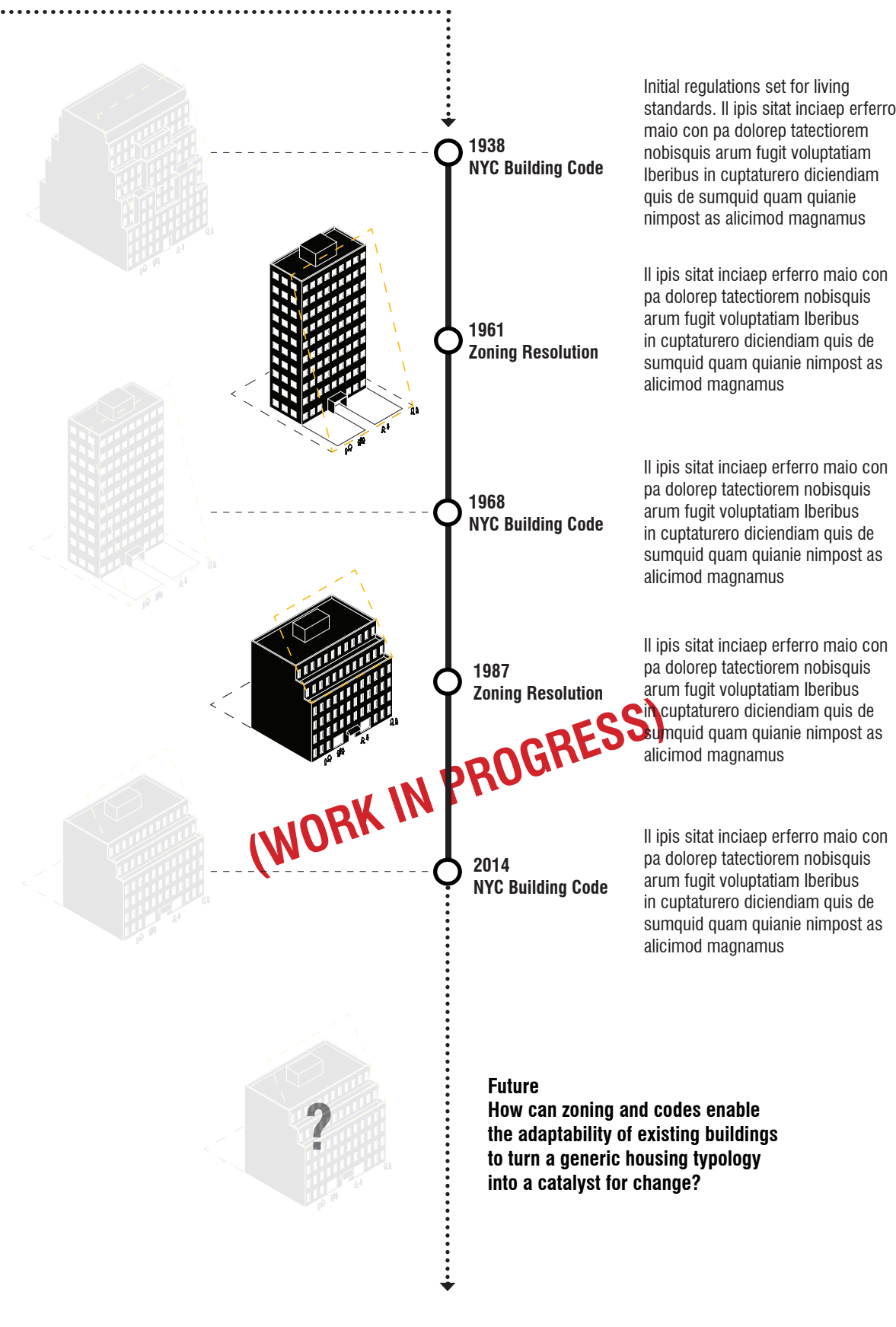
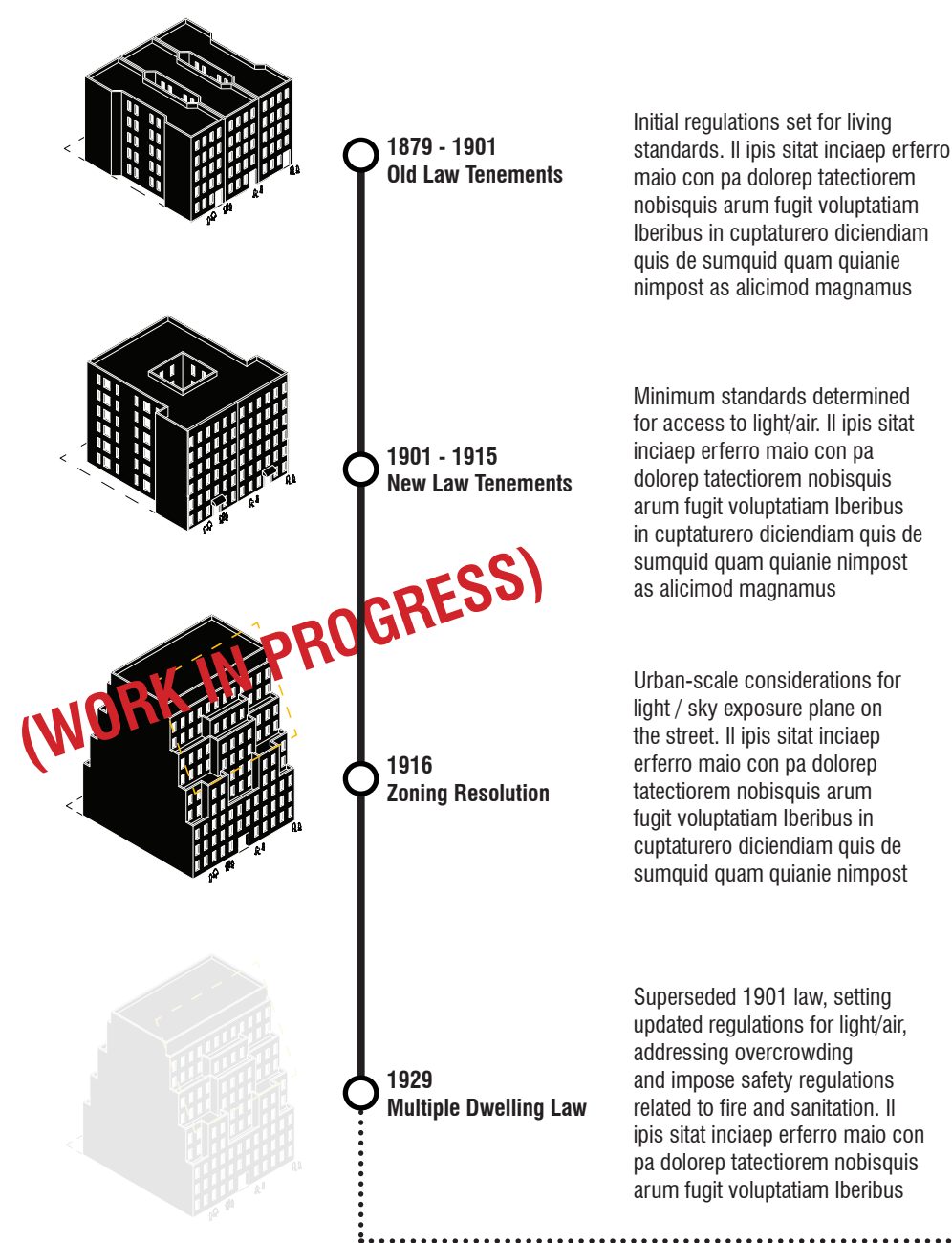
<sup>a</sup> Eligibility for SNAP (Supplemental Nutrition Assistance Program) varies for household size. For a family of 3, it is set at an annual gross income of \$27,732.  
<sup>b</sup> The household dedicates more than 50% of their income on rent.  
<sup>c</sup> Defined as more than 1.5 persons per room.



# FUTURE-ORIENTED ZONING & CODES

New projects alone cannot fulfill the current needs of housing to be resilient, accessible, and healthy.

It is important to also rework code to better meet the needs of the majority of New Yorkers who reside in New Law tenements and other existing building stock.



# RELEVANT CODES

The following are the regulations and codes that have been referenced for this document. While this is not an exhaustive list of all regulatory factors affecting building and construction work in New York City, it is a cross-section of the major guidelines and its respective enforcement agencies. Ultimately, amendments to these regulations will have the greatest impact for change.

## [BC] NEW YORK CITY BUILDING CODE

ENFORCED BY: NEW YORK CITY DEPARTMENT OF BUILDINGS (DOB)

The New York City Building Code governs the construction, alteration, movement, addition, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures. New York City passed its first building code in 1938. The code has been modified over the years to evolve into what is today’s New York City Construction Code. The code governs new construction, building rehabilitation, fire safety, and housing maintenance in the City of New York and is uniquely independent of New York State’s Uniform Fire Prevention and Building Code.

## [FC] NEW YORK CITY FIRE CODE

ENFORCED BY: CITY OF NEW YORK FIRE COMMISSIONER

The Fire Code establishes fire safety requirements for buildings and businesses in New York City. Fire safety laws in the region are older than the city itself, with the first fire ordinance adopted in the Dutch settlement of New Amsterdam in 1648. The most recent version of the code was adopted in March 2014 and governs matters ranging from the transport and storage of hazardous materials to the conduct of various businesses that pose fire hazards. In matters of building design and construction, the fire commissioner works with the Department of Buildings to ensure structures are in compliance with code.

## [HMC] HOUSING MAINTENANCE CODE

ENFORCED BY: NYC HOUSING PRESERVATION & DEVELOPMENT (HPD)

The Housing Maintenance Code is a section of the New York City administrative code dealing with housing law. It establishes the maintenance requirements of residential buildings and overlaps in some parts with the New York State Multiple Dwelling Law.

## [MDL] MULTIPLE DWELLING LAW

ENFORCED BY: NEW YORK CITY DEPARTMENT OF BUILDINGS (DOB)  
DEPARTMENT OF HOUSING PRESERVATION & DEVELOPMENT (HPD)

The New York State Multiple Dwelling Law is intended to set sufficient standards in light, air, and sanitation, while preventing overcrowding and providing protection from fire hazards in the occupation of multiple dwelling sites. It was passed in 1929 to expand provisions of New York City’s 1916 Zoning Resolution and preceding tenement laws to cities across New York State with a population that exceeded 350,000. The law aimed to intervene where there was overcrowding, inadequate light and air, and insufficient protection against fires, and improper sanitation. For the most part, the Multiple Dwelling Law defers to local governments in cities with populations over one million to pass local laws, ordinances, or regulations to build in more stringent provisions.

## [RCNY] RULES OF THE CITY OF NEW YORK

A full text compilation of the rules and regulations of New York City, enacted by over 50 government agencies, divided into 71 Titles. Value-added information such as case notes, historical notes, rule change dates, and "Statements of Basis and Purpose" are included. The online publication is updated in real-time, with rules posted within 48 hours of the effective date.

## [ZR] ZONING RESOLUTION

ENFORCED BY: NEW YORK CITY DEPARTMENT OF BUILDINGS (DOB)  
NEW YORK CITY DEPARTMENT OF CITY PLANNING (DCP)

The New York City Zoning Resolution grants New York City the “power to regulate use, bulk, density of buildings, to promote affordable housing, and to protect places of historical significance through zoning.” The first zoning resolution for the city, adopted in 1916, is considered to be the earliest comprehensive zoning code in the United States. In 1961, the current version of the resolution was introduced. However, the document has continued to evolve - altered to reflect new ideas about urban form and to address new issues like climate change and housing affordability.



# RELEVANT ZONING

(WORK IN PROGRESS)

The New Law Tenements are primarily located in the following zoning districts:

R5  
R5-B

R6  
R6-A  
R6-B

R7-A  
R7-B  
R7-1  
R7-2

R8-A  
R8-B

(Note: Include chart to show characteristics of each district)





# PROPOSAL CONSIDERATIONS

The changes to New Law tenements proposed in this document could have significant ramifications for the city’s social and built environment. Beyond the direct outcomes of creating more affordable and resilient housing tightly connected to existing neighborhoods, the development options here could have unexpected risks and consequences. Some implications are unknowable, but others are worthy of further speculation. Asking tough questions of the document—and iteratively changing the proposals in response to concerns—is key to ensuring that the proposed interventions are crafted responsibly.

Some questions to consider:

**Are the proposals too incremental? Conversely, how realistic are they?**

Ambition in steps. The incremental approach of this document is not because we have limited ambitions. Rather, it springs from our belief that architects, planners, and policymakers can productively focus more on how to improve the existing, everyday buildings that house most New Yorkers, and less on ground-up, brand-new typologies.

Implementation in tiers. We subdivided each of the five main interventions into a handful of smaller subproposals, recognizing that policy change is hard—especially in a city as large and complex as New York. Some of the subproposals are possible immediately and with little capital. Others carry a large price-tag but are legally feasible. Still others are only possible with policy change or new laws and regulations. The ‘degree of difficulty’ for each subproposal is marked in the document.

Flexible uptake. The interventions and subproposals are meant to be flexible. Some tenants, property owners, or policymakers may embrace the interventions wholeheartedly, while others might focus on a single modest and achievable subproposal. Ultimately, we hope the document will serve as a useful template for further action—not a comprehensive blueprint.

**What would be the impact of added density on existing neighborhoods and building services?**

New York City has an unceasing demand for housing, but very little vacant or underused land. We believe that responsibly increasing the density of existing buildings is less-disruptive (and cheaper) than adding to supply through demolition and new construction. This responds to the constraints of our metropolis now: New York City has an unceasing demand for housing, but very little vacant or underused land. Soaring housing costs result in part from this supply and

demand mismatch.

Increasing the number of residents in a neighborhood or building admittedly increases the amount of necessary services. Recognizing this, we have tried to balance increased density with calls for new shared amenities and building upgrades like elevators and balconies.

It should also be noted that many New York City neighborhoods are much less populated than they used to be—many neighborhoods in Manhattan have only half the population they did at the turn of the twentieth century!<sup>1</sup> While we don’t want to go back to the severely overcrowded conditions of the past, many neighborhoods do have the existing service capacity to accommodate more residents.

**How do these proposals respond to COVID-19? Should density still be a goal given what we know about disease transmission?**

New Law tenements are disproportionately (although far from exclusively) home to the low- and middle-income, black and brown communities hit hardest by the pandemic. The COVID-19 pandemic and subsequent urban unrest has revealed how systemic racism structures housing quality, household finances, and neighborhood condition—and how those criteria in turn affect health and wellbeing. Some of the interventions in this document speak directly to specific needs exacerbated by the pandemic (like private outdoor space), while others aim to influence the structural conditions that led to disparate pandemic impacts in the first place.

The crowded conditions of New York undeniably contributed to rapid disease transmission here. However, studies have found that the most significant causes for the rapid spread of COVID-19 was housing overcrowding, not neighborhood density.<sup>2</sup> That is, density within housing units, not among housing units. Increasing the supply of affordable apartments is thus part of the solution, not the problem.

**Could these changes spur gentrification? Who is/would be benefiting financially from these proposals to improve housing?**

Older multifamily buildings like New Law tenements are subject to New York City rent stabilization laws. These restrictions mean that there are some in-built protections to prevent the cost of renovations and improvements from being passed on to residents.<sup>3</sup> Many other New Law tenements are owned by nonprofit or faith-based community organizations. Still others are limited-equity cooperatives known as HDFCs, in where tenants collectively own the building.

We have crafted many of these interventions with HDFCs in mind. Rent stabilization laws protect against the immediate threat of displacement. However, to mitigate the risk of these proposed interventions spurring gentrification or secondary-displacement, standards should be set up to limit interventions to certain properties that pledge to maintain tenant protections. For example, policy changes proposed in the document could be made “discretionary” rather than “as-of-right.” This would mean that the city government could make the policy changes contingent on property-owners meeting certain conditions around continued affordability.

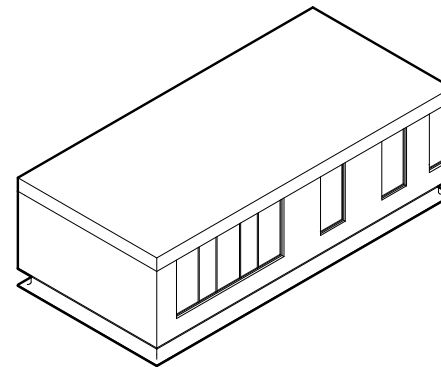
<sup>1</sup> <https://www.citylab.com/equity/2015/06/watch-210-years-of-manhattan-densification-in-2-minutes/394736/>

<sup>2</sup> <https://www.nytimes.com/2020/08/01/business/economy/housing-overcrowding-coronavirus.html>

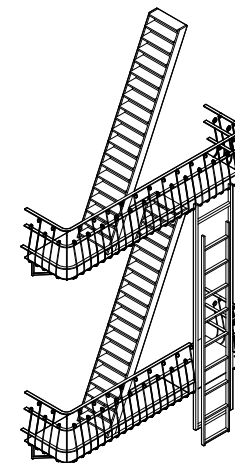
<sup>3</sup> <https://nyassembly.gov/Press/Files/20190614a.php>

## TARGETED BUILDING INTERVENTIONS

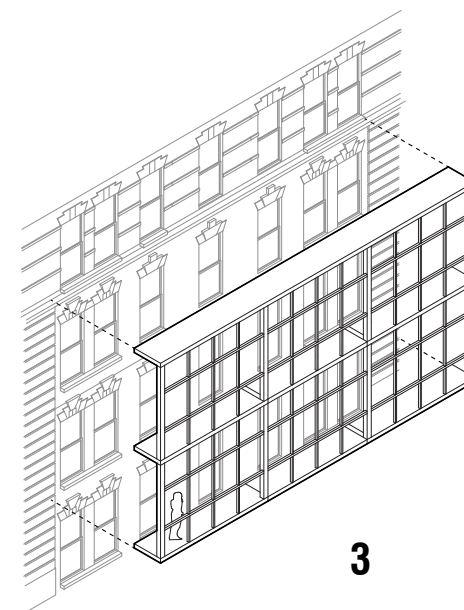
- 0 METHODOLOGY
- 1 ROOFTOP ACCESSORY DWELLING UNITS
- 2 FIRE ESCAPES
- 3 FAÇADE EXTENSIONS
- 4 ELEVATORS
- 5 SINGLE ROOM OCCUPANCIES (SROs)



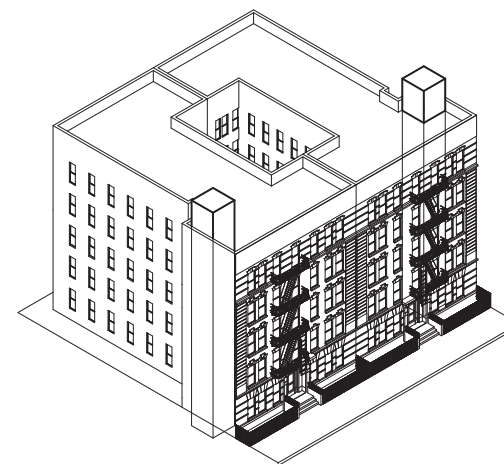
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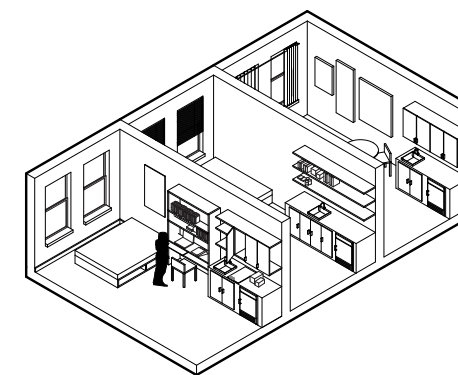
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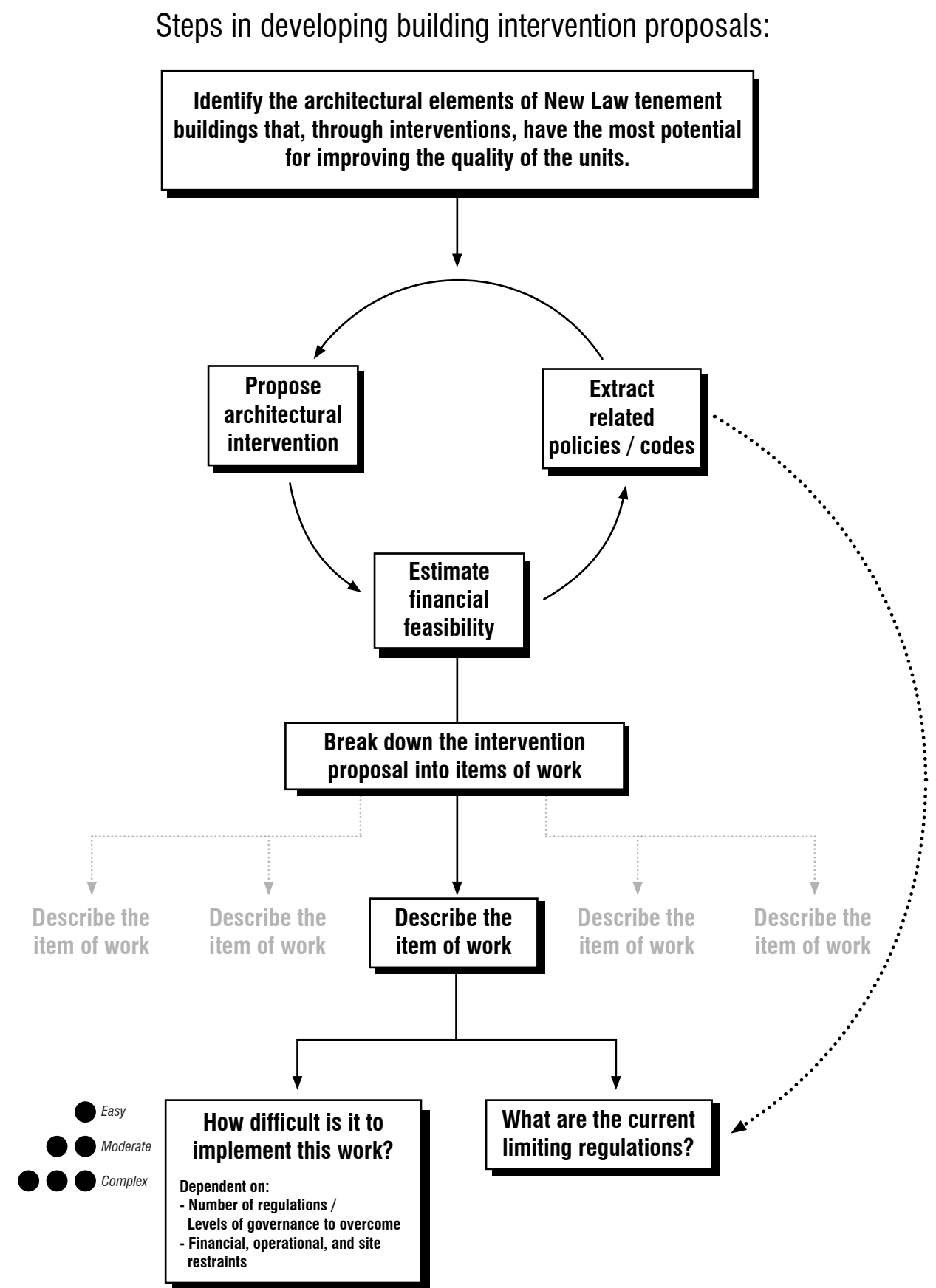


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# 0 METHODOLOGY

The commonality in the five building intervention proposals is that they focus on improving the conditions of middle and lower income buildings like New Law Tenements rather than creating a category of exemptions that can be used as a profiteering tool.



# 1

## ROOFTOP ACCESSORY DWELLING UNITS

Rooftop Accessory Dwelling Units take advantage of the historically underused flat roof construction of tenement buildings. As of the year 2020, over **380,000** New Law tenement buildings exist in New York City that are not built to the maximum 6-story height of a non-elevator building. There is untapped potential to add to these underbuilt tenement buildings while remaining within zoning height and setback controls.

The standardized typology of the New Law Tenement building facilitates scalable interventions. An additional 200,000 units - generally in accessible neighborhoods- could be added even if only one-tenth of the NLT buildings added rooftop units.

For buildings located within flood zones, ground level units can be re-located to the rooftop to reduce the risk of flood damage





Image 3 | A detached outdoor additional dwelling unit in Ojai, California



Image 4 | A rooftop accessory dwelling unit in Barcelona.

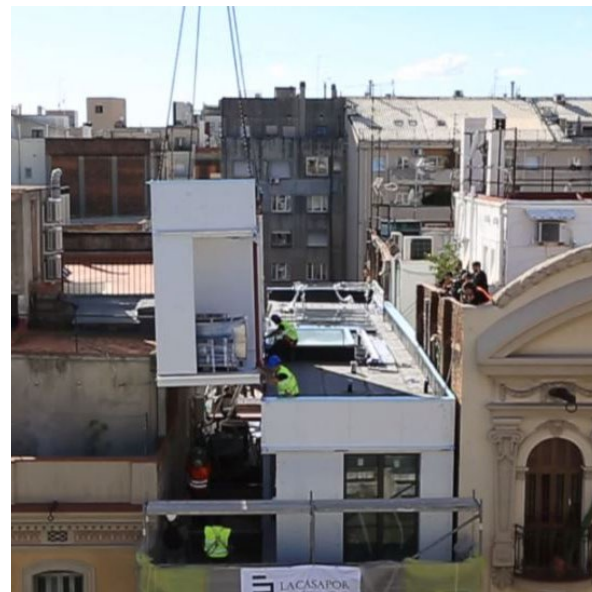


Image 5 | A modular rooftop accessory dwelling unit in Barcelona.

## ACCESSORY DWELLING UNITS (ADUs) CAN SUBSTANTIALLY INCREASE DENSITY - AND AREN'T JUST FOR BACKYARDS

Accessory dwelling units (ADUs) are supplementary housing units built on the lot of an existing dwelling. Such units can be located either within the dwelling itself (“internal ADUs”) or as new stand-alone construction (“external ADUs”). ADUs are most common in places where single-family detached homes constitute the majority of the housing stock and housing costs are high. West Coast cities are particular leaders: in 2017, over 2,000 ADUs were permitted in Los Angeles and in 2016, over 600 were permitted in Portland, Oregon.

The archetypal ADU is a small, standalone housing unit located in the backyard of a single-family detached home. Traditionally, it’s been thought that ADUs are most common in middle-class neighborhoods where homeowners have the “policy capital” to navigate the requisite permitting. However, recent studies have shown that ADUs proliferate across diverse neighborhoods. For example, in Seattle, Washington, minority household concentration actually correlates with ADU construction. Municipalities have also pushed to diversify the tenant side of the ADU equation. In Los Angeles, an innovative program helps homeowners finance the construction of an ADU in return for a commitment to rent the unit to families holding Section 8 vouchers.

Permitted ADUs are comparatively rare in East Coast cities where single-family housing is not the norm. However, in New York City, a new pilot program aims to legalize informal basement units, a type of internal ADU. The pilot program indicates that ADUs in New York are already here—but they tend to be unregulated housing adaptations in outer borough neighborhoods, rather than the type of backyard “granny flats” most commonly associated with the term.





Image 6 | La Casa por el Tejado, rooftop ADU project in Barcelona. Modular rooftop unit being lifted into place by crane.

# LA CASA POR EL TEJADO, BARCELONA: MODULAR CONSTRUCTION HAS UNLOCKED FINANCIAL FEASIBILITY FOR ROOFTOP ADUs

In Barcelona, a development company, La Casa por el Tejado (LCT), has specialized in prefabricated rooftop extensions to older buildings in the Eixample district. Identifying approximately 1,800 buildings in the district that have not been built to their full height allowance, this amounts to roughly 800,000 m<sup>2</sup> (over 8.6 million ft<sup>2</sup>) of potential buildable space.

Seven rooftop extensions have been piloted<sup>a</sup> and each project includes four general phases:

- 1] Acquiring the "air rights" of an existing building that is structurally feasible for an addition.
- 2] Undertaking any necessary structural reinforcements and making energy, safety, and accessibility improvements to the existing building. At the least, this has included elevator extensions and common area renovations.
- 3] Build modular rooftop units at an off-site production factory. Flooring, plumbing and electrical components are all incorporated into the module(s) during the construction process. Furnishings, cabinetry and other fixtures are installed after the unit is mounted and secured on the rooftop.
- 4] Installation of the new modular rooftop unit by crane. The new unit is then sold by the development company.<sup>b</sup>

<sup>a</sup> Reference the study carried out of the seven pilot projects  
<sup>b</sup> Financing model - need to contact LCT - who owns the base building? Only additional unit is owned by LCT?



PROPOSED INTERVENTION



1A  
ROOFTOP UNITS,  
MODULAR & PRE-  
FABRICATED WHERE  
POSSIBLE.

1B  
BUILD OUT ROOF TO FULL  
EXTENT OF SIX FLOOR  
HEIGHT LIMIT.

1C  
TIE IN TO EXISTING  
STAIRCASE AT ROOF  
LEVEL FOR  
CIRCULATION.

1D  
BUILD IN COMMUNAL  
ROOFTOP AMENITY



# PROPOSED INTERVENTION



PLACEHOLDER

**1A**  
**ROOFTOP UNITS, MODULAR & PRE-FABRICATED WHERE POSSIBLE.**

Minimize changes to base building  
- make it more adaptable for future changes in use.



**1B**  
**BUILD OUT ROOF LEVEL UNITS TO FULL EXTENT OF SIX FLOOR HEIGHT LIMIT.**

Additions on roof should not have to meet setback requirements (ie, at courtyards) until it has reached its maximum allowable height.



PLACEHOLDER

**1C**  
**TIE IN TO EXISTING STAIRCASE AT ROOF LEVEL FOR CIRCULATION.**

Use daylighting and measures to increase ventilation/light for existing stairs in the building and the new circulation corridor - transforming the area from just "circulation" to expanded living space.



**1D**  
**BUILD IN COMMUNAL ROOFTOP AMENITY.**

Build in new rooftop amenities (deck, roof garden, etc.) that can be used by all residents. Capital gains from the new units can be used to fund the installation and maintenance of new rooftop amenities.

# PROPOSED INTERVENTION

## 1A ROOFTOP UNITS, MODULAR & PRE-FABRICATED WHERE POSSIBLE.

<b>LIMITING REGULATIONS:</b> N/A	<b>DIFFICULTY:</b> ● ● Despite the steady growth of the modular construction industry for housing projects in NYC, it is still novel in the arena of affordable and retrofit projects. While not inhibiting the implementation of these types of projects, precautionary logistical and financial measures will likely be needed.
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## 1B BUILD OUT ROOF LEVEL UNITS TO FULL EXTENT OF SIX FLOOR HEIGHT LIMIT.

<b>LIMITING REGULATIONS:</b> MDL §51-6 MDL §104 FRA - SECTION 504	<b>DIFFICULTY:</b> ● ● ● ● The combined height of the new rooftop units with any required substructure may place the addition higher than a typically constructed rooftop addition. Depending on the existing height of the building, this may place the addition in the sky exposure plane, requiring setbacks that would limit the available area.
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## 1C TIE IN TO EXISTING STAIRCASE AT ROOF LEVEL FOR CIRCULATION.

<b>LIMITING REGULATIONS:</b> MDL §211-1 MDL §211-3 MDL §277 - 7 (d) ZR 12-10 ZR 23-662	<b>DIFFICULTY:</b> ● ● Ensuring that the circulation system of the existing building, particularly the means of egress, is not compromised during construction may require ancillary precautionary measures.
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## 1D BUILD IN COMMUNAL ROOFTOP AMENITY.

<b>LIMITING REGULATIONS:</b> N/A	<b>DIFFICULTY:</b> ● Per Local Laws 92 and 94, newly constructed buildings are mandated to have a green roof to mitigate heat island effect. This mandate should be extended to any new rooftop construction - improve upon the typical existing dark-colored roof membranes of New Law tenements by incorporating (at minimum) planting and heat-reflective materials.
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# REGULATIONS AS OPPORTUNITIES FOR CHANGE

**MDL 51-6**  
Requires that all buildings which exceed six stories or sixty feet must be equipped with an elevator.

**MDL §104**  
Outlines requirements for egress: some egress routes terminate at the roof, so attic would have to be configured as to not interfere.

**MDL §211-1**  
States that no non-fireproof tenement can be increased in height to exceed five stories, unless the building adheres to certain provisions that apply to tenements built after 1929. [\*Note - provisions?]

**MDL §211-3**  
States that penthouses can be built in elevator buildings, but that they must be set back at least five feet from the front walls and ten feet from the rear walls of the dwelling and at least three feet from any court wall.

**MDL §231**  
Requires two independent forms of egress, one of which extends to the roof.

**MDL §233-1**  
Requires that tenements have stairs extending to a rooftop bulkhead, with a fireproof door.

**MDL §277 - 7 (d)**  
“a mezzanine may be constructed above the level of the roof of a building as long as the aggregate area of roof structures does not exceed one-third of the total roof area and the roof structures conform with applicable building code requirements.

**ZR 12-10**  
Includes penthouses and attics as part of the total floor area of a building.  
CONTEXT: Floor area is the sum of the gross square footage of a building. It is used to calculate a building’s “floor area ratio” (FAR) which is the principal way that building bulk is controlled in zoning.

**ZR 23-662**  
Lays out height and setback regulations for quality housing buildings. Most buildings are required to be “set back” after reaching a maximum base height. The setback distance is 10 feet on a wide street or 15 feet on a narrow street. The specific height limitations vary by zoning district.

NOTE:  
Add 23-132, 23-22, 25-20



## **2**

### **FIRE ESCAPES**

Fire escapes are connected to the majority of non ground-floor units in tenement buildings but are often rendered obsolete by newer modes of interior egress. This outdated but ubiquitous system can be transformed into outdoor spaces, becoming assets for residents, and adapting an iconic part of the New Law tenement to contemporary and future needs.

Only a small handful of New Law tenements have access to dedicated, personal outdoor space. although some may consider this type of amenity a luxury, rising temperatures in urban centers and COVID-19 shelter-in-place precautionary guidelines have acted as a catalyst in making universal access to safe, outdoor spaces a necessity.

The de facto use of fire escapes as informal extensions of living space illustrates their potential for an entire network of units that can be enhanced drastically.

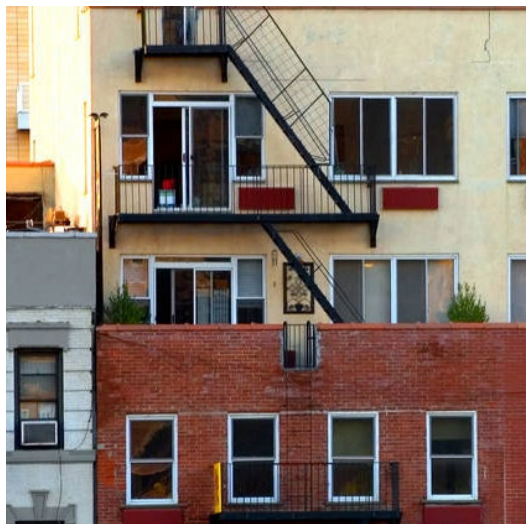
Legalizing this informal use will allow for the planning of safe retrofits and adaptation.



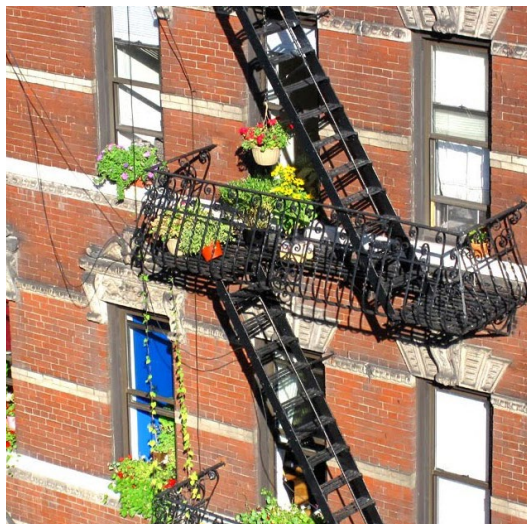
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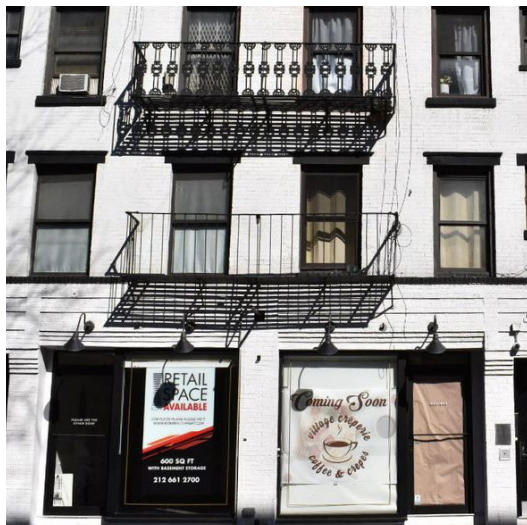
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5



6

## FIRE ESCAPES: ONLY DECORATIVE, BUT STILL OFF-LIMITS

In 1860, fire escapes were first mandated for New York City tenement buildings with more than eight families. This legislation, in response to a disastrous fire in a tenement building, regulated tenement construction during a time when overcrowding, shoddy construction, and the doubling of homes as workplaces was rampant and increased the risk of spreading fire.

Many building owners, in resistance to the new financial burden imposed by this law, erected flimsy exterior staircases that were often ineffective and posed additional hazards. In 1901, after a series of sanitary and safety inspections revealed the dangerous conditions of fire escapes across the city, regulations became stricter. Rules were further strengthened following the infamous Triangle Shirtwaist Factory fire in 1911.

The iconic cast-iron fireproof fire escape became ubiquitous across the city, replacing any previous versions of fire escapes. Despite the improvement to safety, the fire escapes caused an uproar with those who considered the iron structures an eyesore on the architecture.

Requirements for exterior fire escapes ceased after the 1968 Building Code, when new typologies such as the high rise coincided with new methods of fire egress. Currently, many of the fire escapes affixed to buildings are relics - replaced by interior, fireproof means of egress. Many remaining fire escapes have fallen into disrepair, becoming hazardous appendages hanging off the side of the buildings. There is a movement to remove the fire escapes from buildings altogether, however, much like the controversy between safety and aesthetics that surrounded its conception, many preservationists see them as important parts of the character of the cityscape that should be preserved.

<sup>1</sup> Source





Above: Access to balconies facilitated by floor-to-ceiling windows. East River Homes / Shively Sanitary Tenements

Right: View of balconies at East River Homes / Shively Sanitary Tenements



## EAST RIVER HOMES A.K.A. SHIVELY SANITARY TENEMENTS: THE LONGEVITY OF BALCONIES

The East River Homes, built in 1910, were progressive New Law tenement buildings focused on creating healthy environments during the turn-of-the-century tuberculosis (TB) crisis in New York City. During this period, the rapid spread of tuberculosis led to citywide shortages of beds in TB treatment clinics and institutions. For TB patients without access to clinics or countryside retreats, home care became the only viable alternative for recovery and treatment - the prescribed treatment at the time being abundant rest in well-lit, well-ventilated environments.

While the 1901 New Tenement Law was an effort to ensure a minimum level of light and ventilation to all tenement buildings across the city, the East River Homes established itself as a particularly exemplary embodiment of these goals. Based on Dr. Henry Shively's progressive theories of healthy living environments, and the innovative architecture of Henry Atterbury Smith, the East River Homes sought to maximize access to light and air throughout the entire building as well as from each unit.

Standout architectural elements included open-air communal staircases, rooftop pergolas with integrated seating, floor-to-ceiling operable windows in the units, and "sleeping balconies." The balconies, in particular, were an exceptional rarity - its architectural significance made clear through the robust form and ornate design, including a tiled soffit. The depth of the balconies were deliberately designed to accommodate a sleeping cot for open-air rest, and extended the space of the home, particularly valuable for home-bound patients and their families.

Ultimately, the cumulative 'luxuries' of the buildings rendered it too expensive for its intended users. The New York Association for Improving the Conditions of the Poor leased 48 of the 383 apartments as a "Home Hospital" until 1923 when the charitable trust that governed East River Homes was dissolved and the buildings were sold to the City and Suburban Homes Company. However, despite the short-lived stint serving its intended purpose, the East River Homes, and the balconies in particular, have xxxxxxxxxxxxxxxxxxxx



PROPOSED INTERVENTION





# PROPOSED INTERVENTION



**2A**  
**STRUCTURALLY REINFORCE EXISTING FIRE ESCAPE.**

If existing fire escape structure is in an acceptable condition to meet safety standards, reinforce its connection to the building.



**2B**  
**REMOVE EXISTING STAIR, WHERE POSSIBLE.**

Where fire escapes have been replaced as a secondary means of egress by an interior fireproof egress system, stairs and ladders should be removed to maximize useable space on the fire escape.



**2C**  
**EXTEND RAILING HEIGHT TO MEET CURRENT SAFETY STANDARDS.**

Install an additional handrail if existing fire escape does not meet current standards for safe barrier height. Include provisions so that entire guardrail meets safety standards.



**2D**  
**IF EXISTING FIRE ESCAPE CANNOT BE REINFORCED, CREATE ALLOWANCE FOR REPLACEMENT WITH BALCONY.**

Where the existing fire escape structure cannot be safely retrofit, create allowance for a new lightweight balcony structure that can replace at the location of the fire escapes. New balcony structure can be expanded in size as long as it does not impede onto the window of another unit.



**2E**  
**INCLUDE SAFETY RAILINGS AND IMPROVE ACCESSIBILITY VIA WINDOW.**

Modify access window (increase opening if necessary) to improve accessibility. Include support railing leading from access window if balcony ground does not align with unit ground level.  
  
Lower ground level of the balcony to align with ground level inside unit, if possible.

# PROPOSED INTERVENTION

2A STRUCTURALLY REINFORCE EXISTING FIRE ESCAPE. IF NOT POSSIBLE, SKIP TO '2D'	
LIMITING REGULATIONS: N/A	DIFFICULTY: ● ● Dependent on the structural integrity of the existing fire escape as well as the capability and condition of the existing walls to support additional structural loads.
2B REMOVE EXISTING STAIR, WHERE POSSIBLE.	
LIMITING REGULATIONS: N/A	DIFFICULTY: ● ● Dependent on the complexity of dismantling the fire escape system - in some cases, stair ladder removal may affect an integral part of the fire escape support structure.
2C EXTEND RAILING HEIGHT TO MEET CURRENT SAFETY STANDARDS.	
LIMITING REGULATIONS: N/A	DIFFICULTY: ● Pre-fabricated guardrail attachment should be affixed to existing structure as necessary to meet proper safety regulations.
2D IF EXISTING FIRE ESCAPE CANNOT BE REINFORCED, CREATE ALLOWANCE FOR REPLACEMENT WITH BALCONY.	
LIMITING REGULATIONS: RCNY §15 -10	DIFFICULTY: ● ● ● In addition to ensuring adequate structural integrity of the existing wall, and overcoming regulatory barriers, complex staging may be required to install the new balconies.
2E INCLUDE SAFETY RAILINGS AND IMPROVE ACCESSIBILITY VIA WINDOW.	
LIMITING REGULATIONS: N/A	DIFFICULTY: ● ● Eliminating physical barriers to access new balconies will - in most cases - require window enlargements. As the exterior walls are usually load-bearing masonry structures, this will require

# REGULATIONS AS OPPORTUNITIES FOR CHANGE

MDL §26 - 9 (b)	Excludes fire escapes from floor area calculations.
MDL §62 - 2	Prevents the affixing of any wires to fire escapes.
MDL §277 - 9 (a)(i)	Requires a fire escape from every (non-fireproof) dwelling unit.
MDL §53 -3	States that fire escapes cannot project more than 4.5 feet from the lot line and must be at least 10 feet from the ground plane.
MDL 53 - 4 (a)	Requires “Every fire-escape shall be constructed of open balconies and stairways of iron or stone capable of sustaining a load of at least eighty pounds per square foot.”
MDL 53 -4 (b)	Requires “balconies for fire-escapes shall be three feet or more in clear width” except for converted buildings, which can have two feet.
MDL 53 -4(c)	Requires “every stairway shall be placed at an angle of sixty degrees or less with flat open steps at least six inches in width and twenty inches in length and with a maximum rise of nine inches. The opening in any balcony for such a stairway shall be at least twenty-one by twenty-eight inches.”
RCNY §15 -10	No existing fire-escape shall be extended or have its location changed except with the written approval of the Department of Buildings

### **3**

## **FAÇADE EXTENSIONS**

The façades of rear-, side-, and court yards in New Law tenements are generally simple and subdued. Paired with standardized setback distances, these façades hold the potential to become activated as new outdoor spaces and extensions of living space.



The rear-, side-, and court yards mandated by the New Law were deployed as a means to ensure a minimum level of light and air to units. There is potential to *access* these outdoor yards, adding further value to an otherwise void space.

Much like the fire escape, utilizing standardized elements of the New Law tenements is a strategy to affect a widespread transformation of existing units.

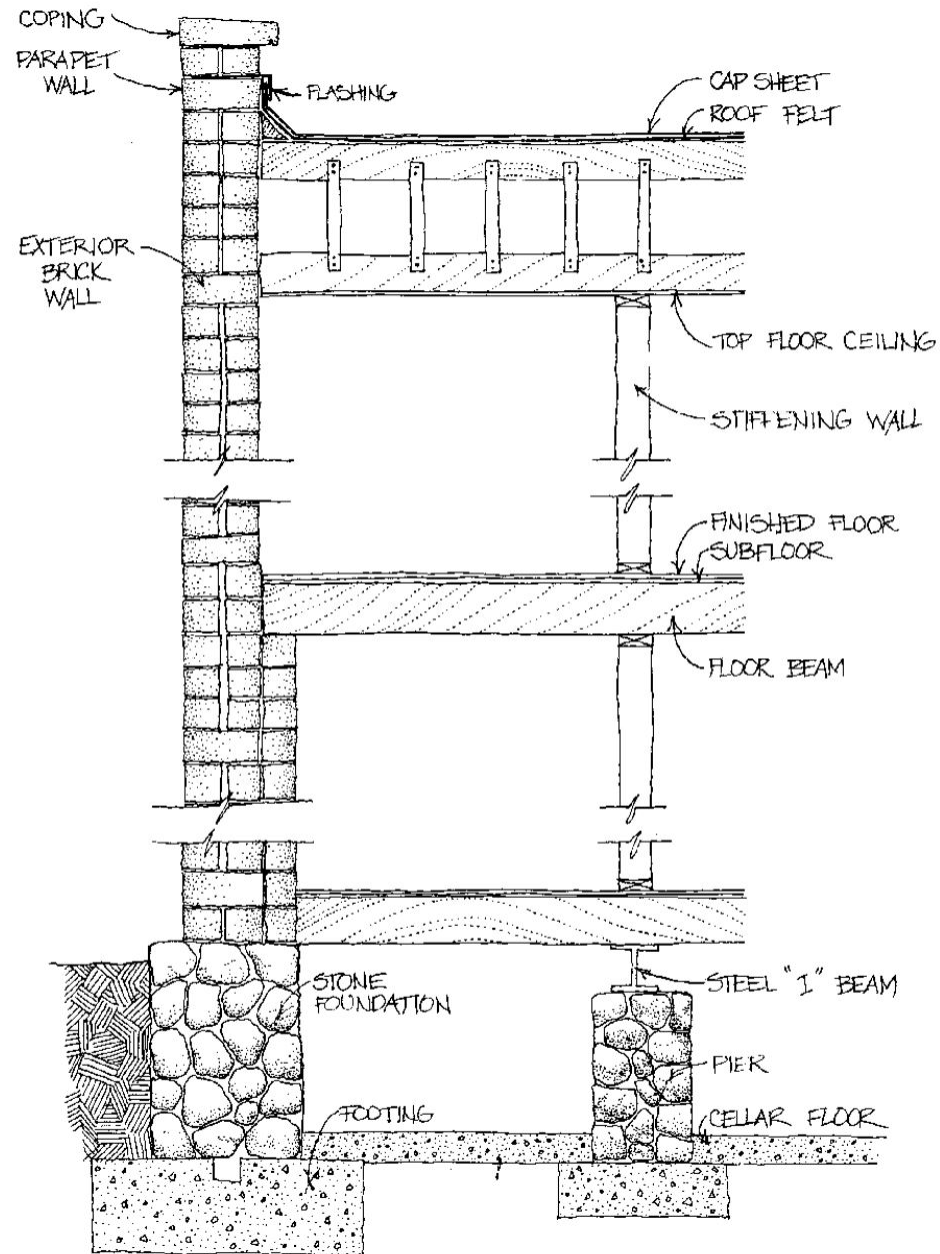


Figure X  
Typical section of load-bearing brick masonry wall construction utilized for New Law tenements.

## NEW LAW TENEMENT FAÇADES

### THE UBIQUITY OF LOAD-BEARING MASONRY CONSTRUCTION

The use of load-bearing brick masonry construction for tenement buildings resulted from the New Tenement Law mandating the use of fireproof construction for all new buildings. The widespread availability of clay and existing brick-making industries in the Hudson Valley region, and an abundance of labor were able to fulfill demands during the building boom, leading to the proliferation of brick as the fireproof material of choice and cementing its foothold in New York City tenement architecture <sup>a</sup>.

Typically supported by a stone masonry foundation, the load-bearing brick masonry walls would be constructed 3 to 4 wythes thick on at least the first storey to support the compressive loads from above, and taper to 2 wythes thick for floors above. Wooden floor and roof joists would be supported by the brick masonry wall <sup>b</sup>. The New Law also legislated minimum fenestration openings of 12 sqft per room (excluding windows in bathrooms) to ensure adequate ventilation <sup>c</sup>.

The combination of legislation, technological limitations, and material availability of the period led to relatively consistent facades for the bulk of buildings constructed during this period. Ornamentation, made of terracotta and stone, gave differentiation to the buildings, varying on the aesthetic preferences of the architects and developers, and the skillsets of the available local labor. However, the ornamentation was typically isolated for street facades - arguably a superficial treatment deployed by developers to feign prestige for buildings <sup>d</sup>. Facades that were less visible from the street, such as in the side-, rear-, and courtyards were generally left unadorned though for a period it was mandated that they be whitewashed or plastered with a light color <sup>e</sup>.

While load-bearing brick masonry facades have generally withstood the test of time, continual upkeep is required to ensure that its structural and protective integrity are not compromised from

<sup>a</sup> <https://www.gothamcenter.org/blog/notes-on-manhattan-bricks>

<sup>b</sup> [https://www.uhab.org/sites/default/files/doc\\_library/A\\_Guide\\_to\\_Maintenance\\_and\\_Repair.pdf](https://www.uhab.org/sites/default/files/doc_library/A_Guide_to_Maintenance_and_Repair.pdf)

<sup>c</sup> [https://www.people.iup.edu/rhoch/ClassPages/Intro\\_Planning/Readings/tenementlaw00fryerich.pdf](https://www.people.iup.edu/rhoch/ClassPages/Intro_Planning/Readings/tenementlaw00fryerich.pdf) (Section 68)

<sup>d</sup> <https://sites.udel.edu/mcses2012/papers/paper-iv/>

<sup>e</sup> [https://www.people.iup.edu/rhoch/ClassPages/Intro\\_Planning/Readings/tenementlaw00fryerich.pdf](https://www.people.iup.edu/rhoch/ClassPages/Intro_Planning/Readings/tenementlaw00fryerich.pdf) (Section 107)



Figure X: Before and after of the apartment block transformation. Photograph by Philippe Ruault.



Figure X: Interior View of unit with facade extension.

## TRANSFORMATION OF 530 DWELLINGS IN BORDEAUX, FRANCE BY LACATON VASSAL, FRÉDÉRIC DRUOT, CHRISTOPHE HUTIN

Cite du Grand Parc, a postwar social housing apartment block in Bordeaux France, was in a state of slow decline and slated for demolition when architects Lacaton Vassal, Frédéric Druot, and Christophe Hutin intervened with an alternative retrofit solution.

A self-supporting structure was added onto the exterior facades of the building, extending the living spaces and operating as enclosable sunrooms, terraces, and balconies. The existing punched windows on the facade were removed and replaced with floor-to-ceiling sliding glass doors that also access onto the facade extensions while also allowing deeper penetration of light and air into the units. Views from the units were enhanced, the height of the modernist tower being an asset that is no longer permissible by the region's zoning laws. Overall, 16,000 m<sup>2</sup> (172,000 ft<sup>2</sup>) of extended space was added to the building.

The social fabric of the block was also able to remain relatively undisturbed. The use of pre-fabricated elements ensured that residents were not displaced during the construction process and that the community could remain intact after completion of the project. The improvement to the quality of light and air in the units as well as the extensions of space offered a new type of dwelling environment not typically found in social housing projects. The cost - 27,200,000 Euros - and environmental impacts of the project were also considerably lower than what a full demolition and construction of new buildings would have amounted to.

The act of adapting rather than razing the postwar modernist towers was an evolutionary step for a typology that is often villified, and exemplified the necessary marriage of social, economic, and environmental sustainability factors to drive this evolution.



PROPOSED INTERVENTION: TYPE 1 (WORK IN PROGRESS)



DRAFT V1



DRAFT V1



PROPOSED INTERVENTION: TYPE 2 (WORK IN PROGRESS)





PROPOSED INTERVENTION: INTERIOR VIEW (WORK IN PROGRESS)



EXISTING CONDITION

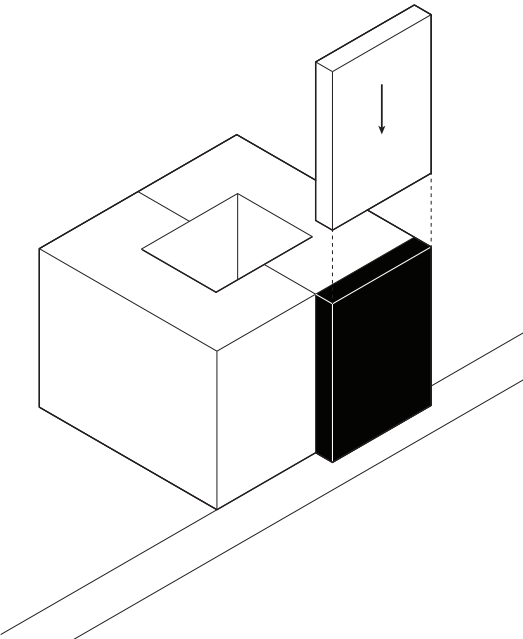


WINDOW ENLARGEMENT  
(ACCESS TO FACADE EXTENSION)



FACADE REPLACEMENT

# PROPOSED INTERVENTION

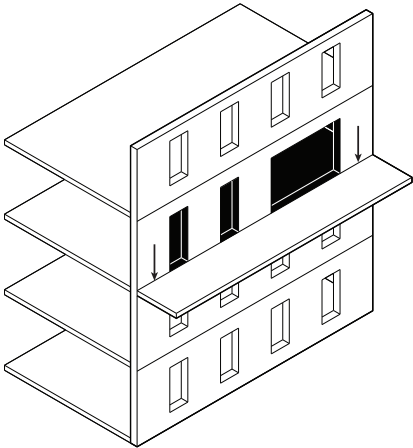


WIP

3A

Pre-fabricated, self-supporting facade system attached to existing building.

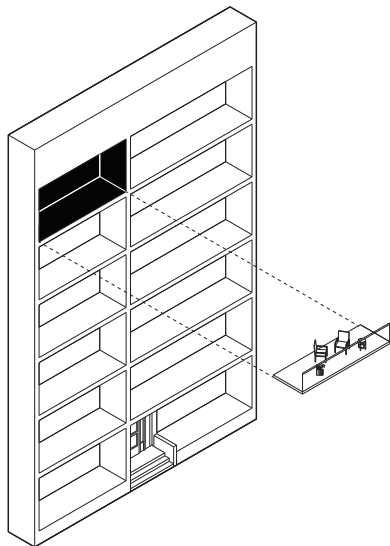
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3B

Existing openings enlarged for access to new facade extension.

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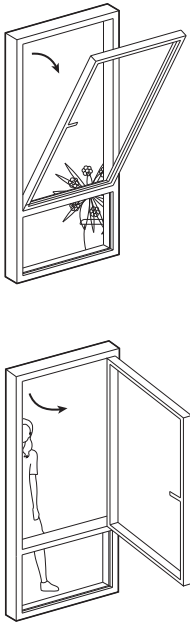


WIP

3C

Ground level units considerations\*\*

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3D

Egress considerations\*\*

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PROPOSED INTERVENTION

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REGULATIONS AS OPPORTUNITIES FOR CHANGE

MDL §9	Pertaining to buildings converted or altered after 1961, no multiple dwelling shall be enlarged or its lot diminished so that the yard or other unoccupied areas shall be less in size or area than the minimum dimensions prescribed in section twenty-six. (Grant exceptions if it can be proven that it does not negatively affect light to units?)
MDL §6 (b)	Requires 30 foot rear yard for buildings more than 125 feet above curb level, but states that ZR requirements override.
MDL §26 - 9(c)	Every yard and court shall be open and unobstructed at every point from the lowest level to the sky except for permitted obstructions (Outside stairways, fire towers, platforms or balconies or other similar projections). What would facade extensions get categorized under - enclosed balcony?
MDL §30	Lists rules / allowances for enclosed balconies, but only for buildings constructed after 1929. Include section on modifications for buildings constructed before 1929.
ZR 23-44 (b)	Lists allowable obstructions in a rear yard - does not include something akin to enclosed balconies.
ZR 23-47	Requires minimum 30-feet deep rear yards for interior block lots



## 4 ELEVATORS

New York City's supply of accessible housing – let alone *affordable accessible housing* – is limited at best. Federal fair housing laws passed in the late 1980s guarantee that most condo, co-op and rental buildings constructed in New York after 1990 are accessible to people with mobility needs. In practice, however, inaccessible conditions are still widespread, and buildings from the early 20th century still predominately have a barriers to entry.

Making New Law tenement buildings more accessible can alleviate some of the disparities in affordable accessible housing by making a greater number of units across the city accessible.

Retrofitting tenements with elevators also creates an opportunity for vertical growth, making possible multi-story rooftop ADUs or more substantive vertical additions.



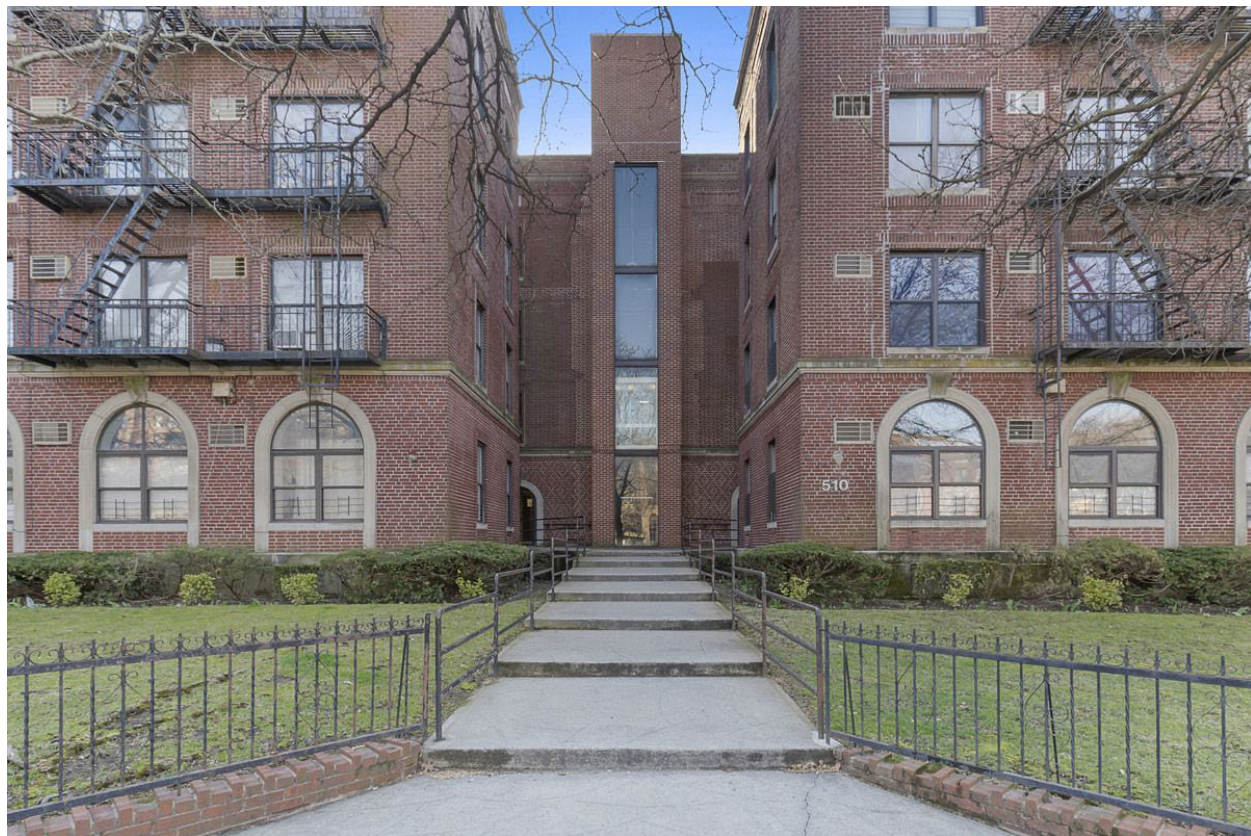


Figure X: Entry to 510 Ocean Parkway (built 1931). An elevator addition is prominently displayed in the front yard.

## BACKGROUND: ELEVATORS

The elevator was invented in Lower Manhattan in 1850 to move freight in shipyards on the waterfront. Just seven years later, the first passenger elevator was installed in the five-story Eder V. Haugwout Building in SoHo nearby. Though the advent of passenger elevators coincided with the proliferation of tenement building construction in New York, tenements were designed and built for affordability and as such did not incorporate the new technology. Still today, few tenement buildings in New York are equipped with elevators.





**COURTYARD  
ELEVATOR  
ADDITION**

Figure X: An aerial view of 155 Ross Street (built 1915) shows an elevator addition in the central courtyard.



**FRONT YARD  
ELEVATOR  
ADDITION**

Figure X: An aerial view of 510 Ocean Parkway (built 1931) shows an elevator addition in the front yard.

## CASE STUDY: ELEVATORS

There is already well-documented precedent for adding elevators in the city’s tenement houses. In January 1988, the New York Times called the process of retrofitting a tenement airshaft with an elevator “standard practice” in renovations to the buildings across the city. Elevator shafts have also been added externally, extending into the “open core” created by tenement courtyards, backyards and side yards. In some cases, neighboring tenement buildings have been joined to share an elevator built between them and able to service tenants in both buildings.

### Internal Elevator Retrofits:

In 1988, J. Harvey Rosenthal, who owned more than a dozen tenements on the Upper East Side, renovated an Old Law tenement on East 63d Street at First Avenue, making few changes to the original unit layouts but installing an elevator in the building’s former air shaft. “You can do a lot with a tenement for less than building a new apartment,” Rosenthal told the New York Times. “You end up with something that more people can afford.”

In 1983, developer Firestone Associates constructed an elevator shaft in the space between two five-story tenements at 226 East 95th Street, to make the development’s 29 apartments more accessible. The elevator was constructed as to not be visible from the street.

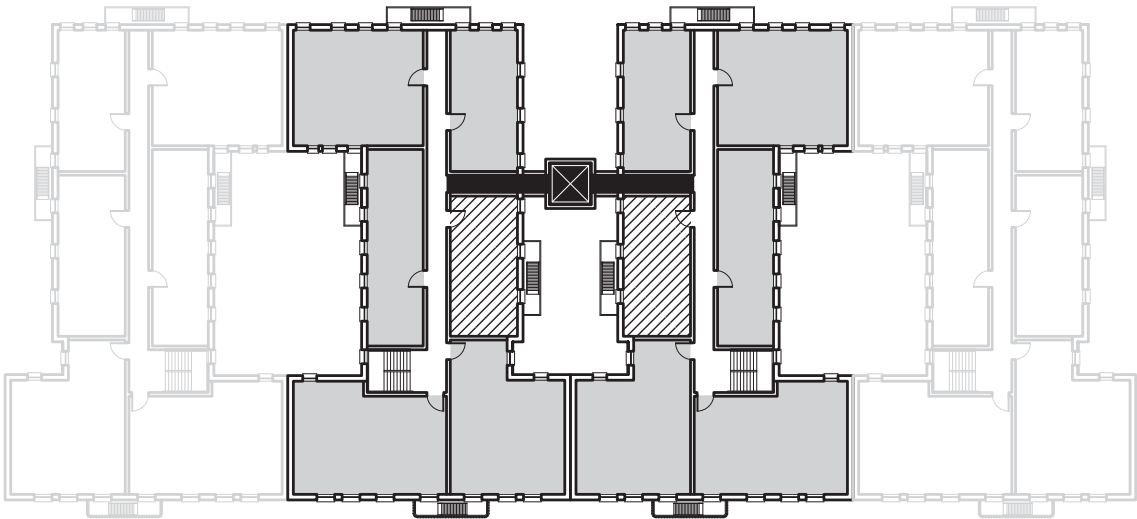
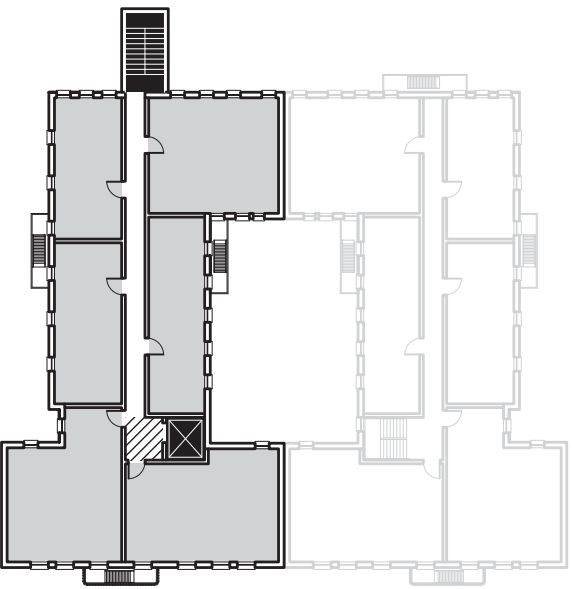
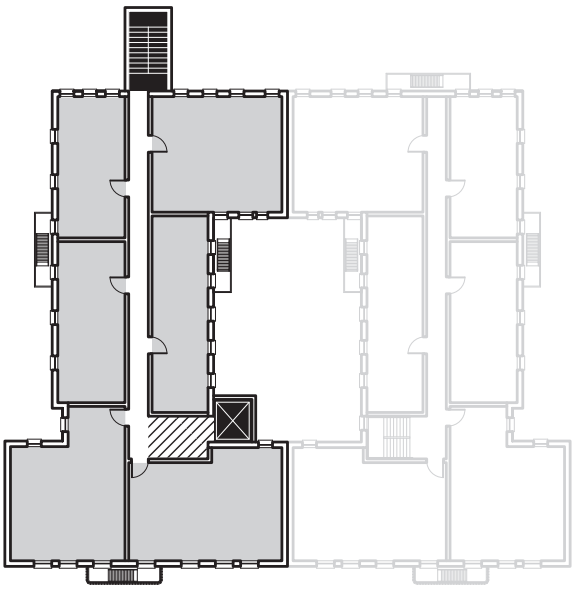
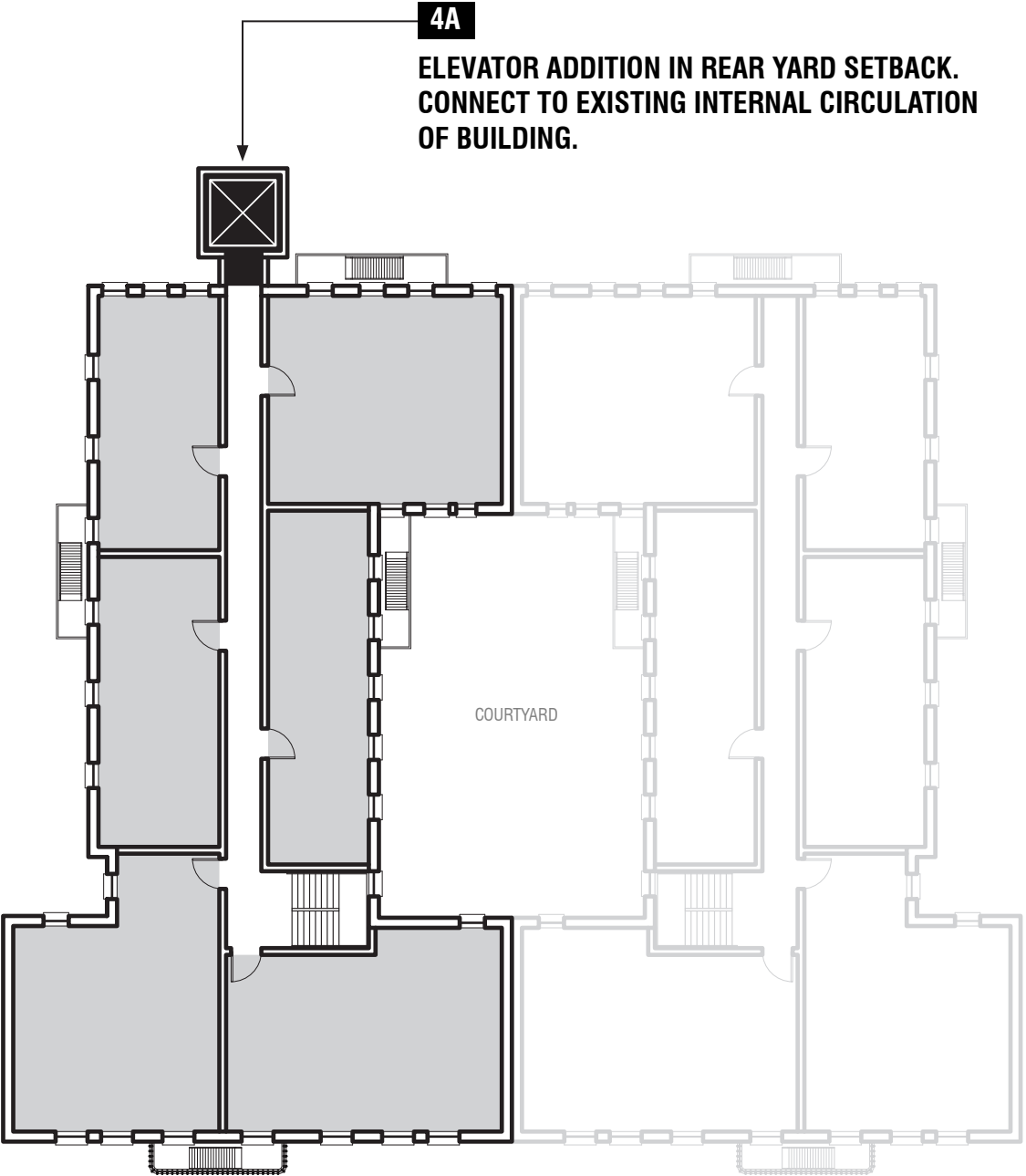
### External Elevator Retrofits:

In 1983, Architect George Schwarz installed an exterior elevator in a 55-unit, five-story building at 155 Ross Street in Williamsburg, Brooklyn (pictured top left). The building had a central court measuring nearly 600 square feet and corridors that joined at a corner facing courtyard to allow for the shaft to be installed without displacing tenants.

Alternatively, exterior elevator retrofits have also been carried out to be highlighted as an architectural feature, such as the case with 510 Ocean Parkway in Brooklyn (pictured bottom left and on previous spread). Designed by the firm DiFiore & Giaccobi, the elevator cab was centered strategically in the front entry yard, marking the entrance, and connecting the two wings of the building. Modifications were made to two units on every floor to accommodate access to the elevator from the public corridor. Prominent display of the elevator cab, rather than attempting to conceal its presence is an uncommon but notable strategy.



# PROPOSED INTERVENTION



# PROPOSED INTERVENTION

## FRONT ENTRY ACCESSIBILITY CONSIDERATIONS



**BARRIER:**  
\_ GRADE CHANGE APPROX 1 ft

**MITIGANT:**  
\_ POTENTIAL SIDEWALK RE-GRADE



**BARRIER:**  
\_ MASSIVE GRADE CHANGE (>6 ft)

**MITIGANT:**  
\_ RECESSED ENTRY ALLOWS ENOUGH SPACE TO  
\_ RECONFIGURE FOR ACCESSIBLE ROUTE



**BARRIER:**  
\_ MODERATE GRADE CHANGE (1 - 6ft)  
\_ NARROW SIDEWALK

**MITIGANT:**



**BARRIER:**  
\_ MASSIVE GRADE CHANGE (>6 ft)  
\_ ACCESS TO BASEMENT LEVEL FROM FRONT -  
SPACE TOO TIGHT FOR RAMPS  
\_ NARROW SIDEWALK

**MITIGANT:**



# PROPOSED INTERVENTION

4A	ELEVATOR ADDITION IN REAR YARD SETBACK. CONNECT TO EXISTING INTERNAL CIRCULATION OF BUILDING, IF POSSIBLE.	
	<b>LIMITING REGULATIONS:</b> MDL §9 MDL §26 - 5b ZR 23-44 (b)	<b>DIFFICULTY:</b> ● ● If the public hall does not terminate at or have a rear-yard facing elevation, base building unit layouts will require modification. Units on multiple floors will lose area and may need to be vacated. The elevator shaft addition in the rear yard cannot encroach on light or ventilation for existing units.
4B	ELEVATOR ADDITION IN COURTYARD. EXISTING STAIR REMOVED, REPLACED WITH NEW STAIR IN REAR YARD.	
	<b>LIMITING REGULATIONS:</b> MDL §9 MDL §26 - 7b ZR 23-44 (b)	<b>DIFFICULTY:</b> ● ● The elevator shaft addition in the courtyard and new stair in rear yard cannot encroach on light or ventilation for existing units. As with Alternative 4A, area loss in units and temporary vacancies may be necessary if the public hall cannot connect directly to the new stair addition in the rear yard.
4C	ELEVATOR ADDITION REPLACES LOCATION OF EXISTING STAIR. EXISTING STAIR REPLACED WITH NEW STAIR IN REAR YARD.	
	<b>LIMITING REGULATIONS:</b> MDL §9 ZR 23-44 (b)	<b>DIFFICULTY:</b> ● ● Space constraints may limit abilities to construct the new elevator shaft in the location of the existing stair. As with Alternative 4A/B, area loss in units and temporary vacancies may be necessary if the public hall cannot connect directly to the new stair addition in the rear yard.
4D	ELEVATOR ADDITION WITHIN SIDE YARD SETBACK TO SERVICE TWO BUILDINGS.	
	<b>LIMITING REGULATIONS:</b> MDL §9	<b>DIFFICULTY:</b> ● ● ● Area loss in units and temporary vacancies on multiple floors may be necessary if the public hall cannot connect directly to the new elevator addition. Size constraints of the shared side or courtyard may limit the ability to add in a new elevator shaft.

# REGULATIONS AS OPPORTUNITIES FOR CHANGE

<b>MDL §9</b> Pertaining to buildings converted or altered after 1961, no multiple dwelling shall be enlarged or its lot diminished so that the yard or other unoccupied areas shall be less in size or area than the minimum dimensions prescribed in section twenty-six. (Grant exceptions for small encroachments for stair/elevators if it does not negatively affect light/ventilation in units).
<b>MDL §26 - 5b</b> (For buildings built before 1961) Requires minimum 30-feet deep rear yards for interior block lots. A minimum depth of a required rear yard shall be thirty feet for the first one hundred twenty-five feet above curb level, and fifty feet above that point (if elevator or second stair is built in rear yard)
<b>MDL §26 - 7b</b> (For buildings built before 1961) Requires minimum 15-feet width at any point (if elevator is built in court yard, have some allowance depending on configuration of units around it? - ie, prove that it does not block light)
<b>ZR 23-44 (b)</b> Lists allowable obstructions in a rear yard - does not include elevators or new egress stairs.

## **5 SINGLE ROOM OCCUPANCY (SRO)**

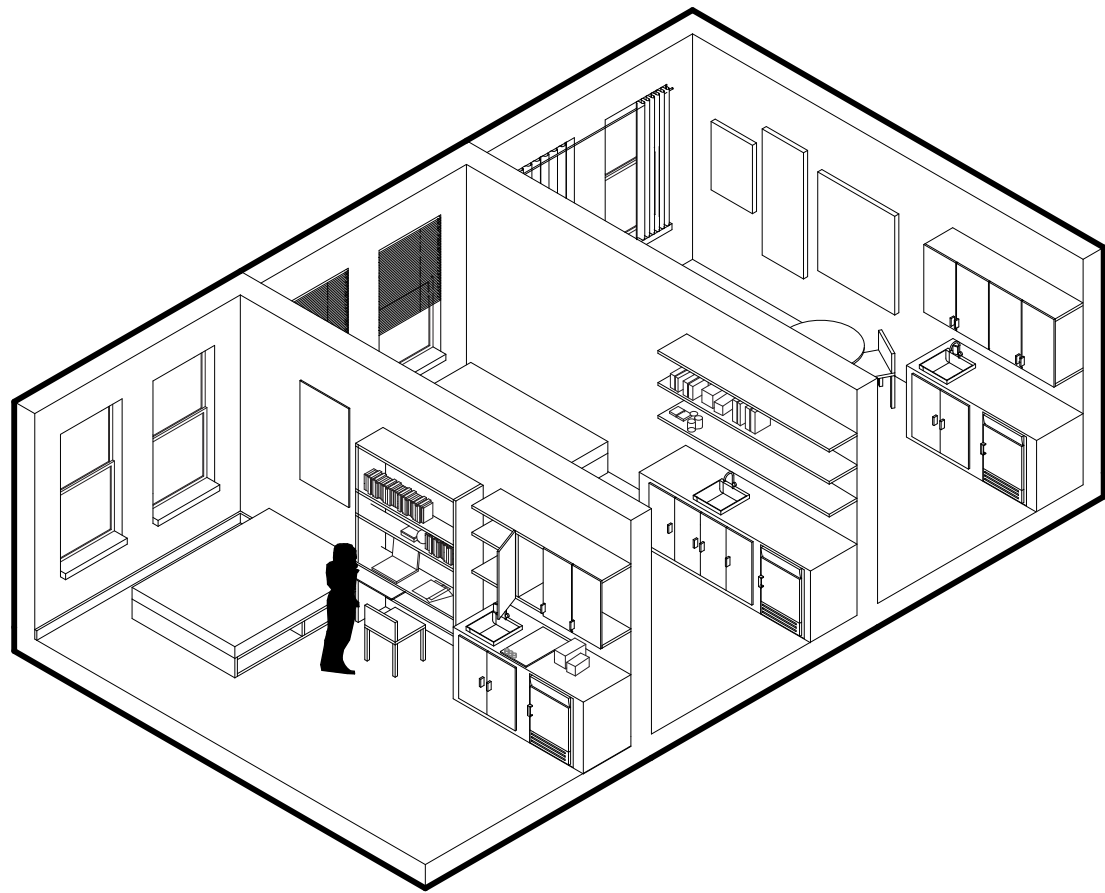
SRO units—private rooms with shared bathroom and kitchen facilities—are an affordable and flexible housing option for single adults. Over the course of the 20th century, SROs were disincentivized in New York City. However, the SRO didn't disappear—it was just renamed.

In recent decades, nonprofits have combined SRO units with social services in “supportive housing” buildings, start-ups have rebranded SROs as luxury “co-living,” and thousands of New Yorkers have teamed up with friends or strangers in de-facto SROs known as “apartment shares.” These models show that SROs remain a desirable form of housing for the growing number of New Yorkers who live in individual households.



Including SRO units in New Law tenement buildings can increase the number of affordable housing units in the city and provide new options for the growing number of single adult households.

High-quality SROs—individual rooms with generous shared facilities and clear maintenance protocols—can be reasonably integrated into New Law tenement buildings and paired with new shared amenities accessible to all residents.



## BACKGROUND: SINGLE ROOM OCCUPANCY

Single Room Occupancies (SROs) are units in multifamily residential buildings, in which residents occupy a single bedroom (or sometimes two small rooms). Typically under 300 sqft, SRO units often lack a complete bathroom or kitchen, and residents share access to a bathroom, kitchen, or other living areas. In the early 20th century, an estimated 200,000 New Yorkers –10% of the city’s total housing stock– lived in SRO buildings, providing an affordable source of housing for single adults including immigrants, the unemployed, and the formerly homeless.<sup>4</sup> Around the mid-century, a series of policy changes, including a 1955 law that banned the construction of new SROs and the J-51 tax break, which incentivized the conversion of existing SROs into market-rate apartments, decimated the city’s stock of SROs.<sup>5</sup> An estimated 30,000 SROs are left in New York City today.

Although existing laws ban new SRO construction (except for supportive housing), SROs have the potential to provide greater housing choice to low-income renters. Similar to basement apartments, SROs provide a viable form of affordable housing for single adults, including students, low-income renters, and immigrants. In Seattle and San Francisco, where new SRO construction is allowed, policymakers have started to turn towards SROs as a model to increase the supply of dense, affordable housing. These precedents suggest that there is both the demand and the policy environment to support new SRO construction in cities that like New York are facing escalating housing costs.

<sup>4</sup> Sullivan, B. J., & Burke, J. (2013). *Single-room occupancy housing in New York City: The origins and dimensions of a crisis*. *CUNY L. Rev.*, 17, 113.

<sup>5</sup> Supportive Housing Network of New York. (n.d.). *History of SROs and homelessness in New York*. Retrieved from <https://shnny.org/supportive-housing/what-is-supportive-housing/history-of-supportive-housing>





Image 1: Michael Maltzan Star Apartments



Image 2: Weldon Hotel communal outdoor area.

## CASE STUDY: LOS ANGELES' "RESIDENTIAL HOTELS"

In Los Angeles, the public and nonprofit sectors have moved aggressively to preserve and construct SRO options for the formerly homeless. Los Angeles' street homelessness crisis is so dire that it has drawn the attention of the United Nations Special Rapporteur on Extreme Poverty.<sup>1</sup> The long running and intractable nature of the crisis has forced the city to recognize SROs as an important source of affordable housing and prioritize the preservation of SRO units. Following the loss of thousands of SRO units in the early-2000s, Los Angeles officials launched a temporary moratorium on SRO conversions.<sup>2</sup> In 2008, the city council unanimously passed a permanent ordinance to replace the moratorium. The law strengthens protections of SRO buildings—which are referred to in L.A. as “residential hotels”—and requires developers replace any SRO units lost to conversion or demolition. While it is legal to demolish a residential hotel, the ordinance mandates that developers either reconstruct the units themselves (within a 2-mile radius of the original location) or reimburse the city for the cost of doing so.<sup>3</sup>

As a result of the residential hotel ordinance, and the concerted effort of the city's nonprofit sector, almost 5,000 formerly-homeless individuals are now housed in either SROs or supportive housing units in the city's infamous Skid Row.<sup>4</sup> The Skid Row Housing Trust, established in 1989, is at the forefront of this preservation and new construction effort.<sup>5</sup> The trust has commissioned a handful of high-profile Los Angeles architects to construct new efficiency apartment units in innovative buildings on difficult lots (see image 1). The organization also manages over a dozen renovated residential hotels with a mix of SRO and efficiency units. Examples of the trust's buildings include the Weldon Hotel Apartments—renovated by Brooks + Scarpa—which combines 58 SRO units with high-quality common spaces and outdoor areas (see image 2).<sup>6</sup> The trust's renovated residential hotels and the Los Angeles anti-demolition ordinance show that with progressive public policy, proper management, and good design, SRO units can be a crucial source of affordable housing.

<sup>1</sup> <https://www.theguardian.com/society/2017/dec/15/america-extreme-poverty-un-special-rapporteur>

<sup>2</sup> <https://www.innercitylaw.org/wp-content/uploads/2018/06/skid-row-zoning.pdf>

<sup>3</sup> [http://www.ladownatownnews.com/news/new-law-protects-residential-hotels/article\\_a8557453-67f5-590e-a0c0-1e94a41fac23.html](http://www.ladownatownnews.com/news/new-law-protects-residential-hotels/article_a8557453-67f5-590e-a0c0-1e94a41fac23.html)

<sup>4</sup> <https://www.innercitylaw.org/wp-content/uploads/2018/06/skid-row-zoning.pdf>

<sup>5</sup> <https://skidrow.org/about/impact/>

<sup>6</sup> <https://www.interiordesign.net/projects/17768-brooks-scarpa-updates-low-income-housing-units-in-l-a/>

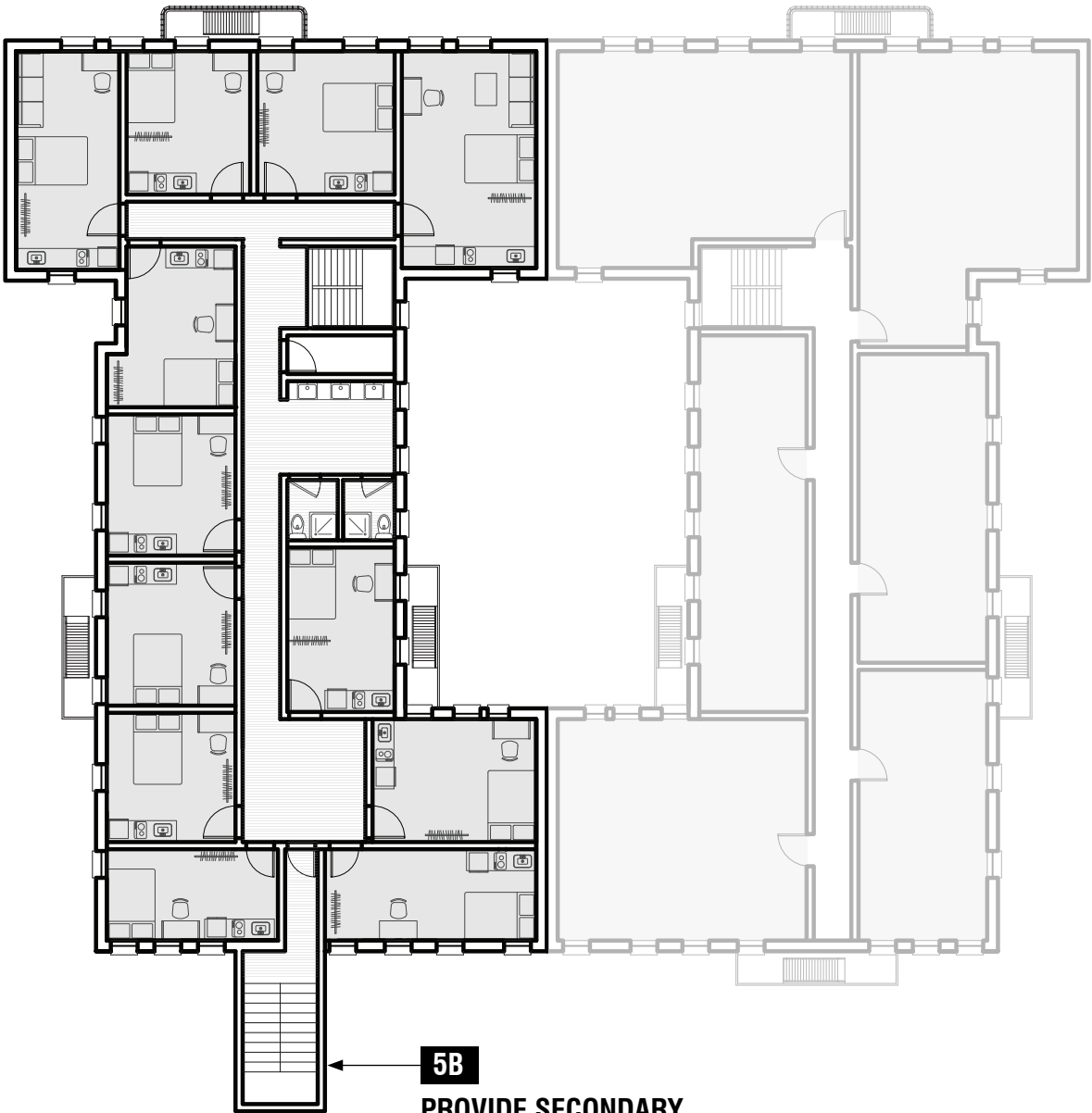
# PROPOSED INTERVENTION

Proposed SRO unit layout

Existing floor unit layout

5A

CONVERT UPPERMOST FLOOR TO SRO UNITS.



PROVIDE SECONDARY MEANS OF EGRESS.

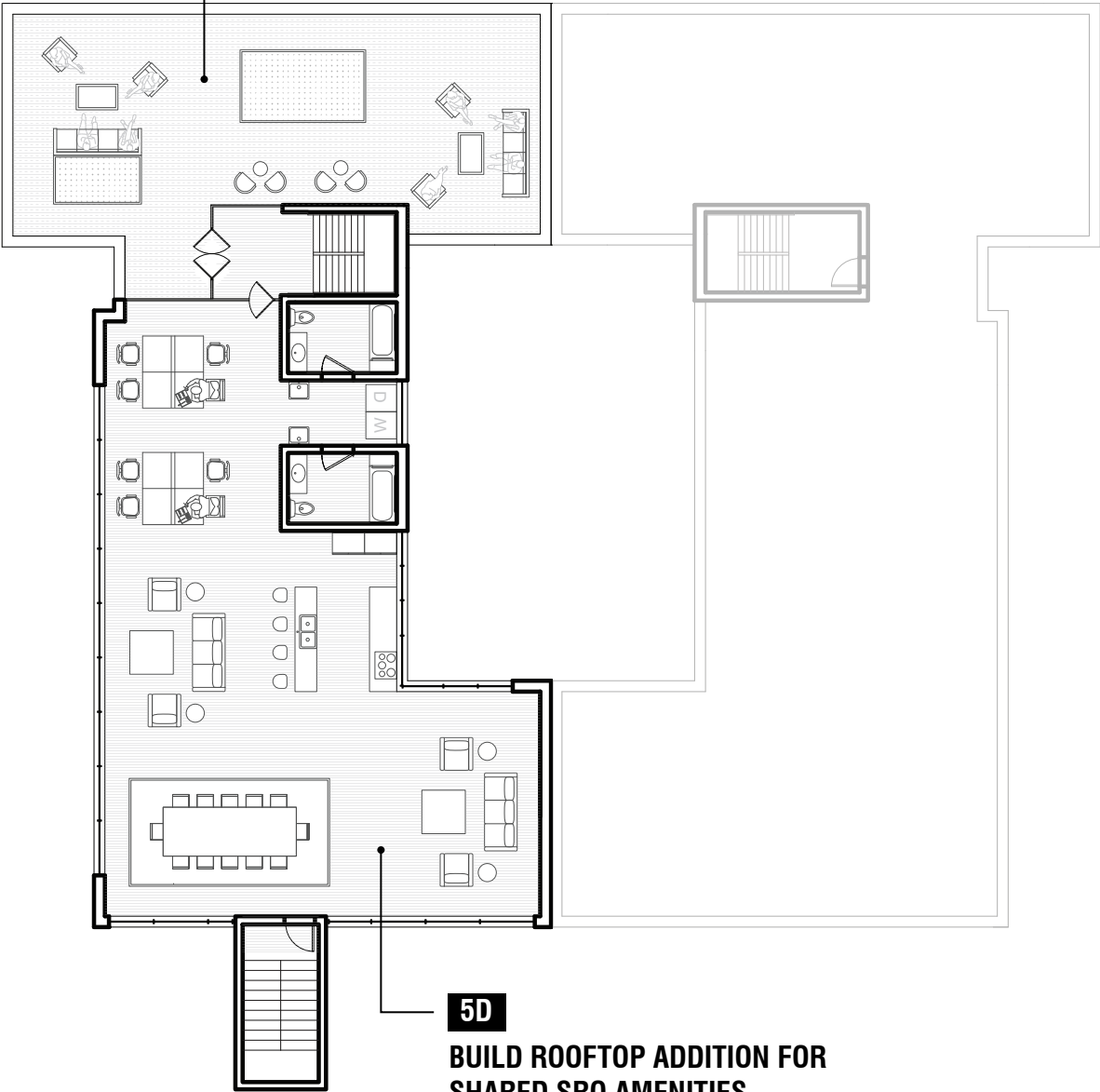
DRAFT V1

Proposed SRO amenities

Existing roof plan

5C

CREATE BUILDING ROOFTOP TERRACE AVAILABLE TO ALL TENANTS.



BUILD ROOFTOP ADDITION FOR SHARED SRO AMENITIES.

SHARED AMENITIES INCLUDE:  
BATHROOMS  
KITCHEN  
DINING SPACE  
RECREATIONAL SPACE

DRAFT V1



# PROPOSED INTERVENTION

<b>5A</b> CONVERT UPPERMOST FLOOR TO SRO UNITS.	
<b>LIMITING REGULATIONS:</b> N/A	<b>DIFFICULTY:</b> ●●● Converting the uppermost floor to SRO units will require coordinating simultaneous vacancy of all units on the floor. This will likely require developing a strategy to minimize the displacement of tenants.
<b>5B</b> PROVIDE SECONDARY MEANS OF EGRESS.	
<b>LIMITING REGULATIONS:</b> N/A	<b>DIFFICULTY:</b> ●● A new egress stair in the side-, rear-, or courtyard cannot encroach on light or ventilation for existing units.
<b>5C</b> BUILDING ROOFTOP TERRACE AVAILABLE TO ALL TENANTS.	
<b>LIMITING REGULATIONS:</b> N/A	<b>DIFFICULTY:</b> ● Per Local Laws 92 and 94, newly constructed buildings are mandated to have a green roof to mitigate heat island effect. This mandate should be extended to any new rooftop construction - improve upon the typical existing dark-colored roof membranes of New Law tenements by incorporating (at minimum) planting and heat-reflective materials.
<b>5D</b> SHARED SRO AMENITIES BUILT AS ROOFTOP ADDITION.	
<b>LIMITING REGULATIONS:</b> N/A	<b>DIFFICULTY:</b> ●● The rooftop addition to accommodate SRO amenities may require physical setbacks if the additional bulk falls within the sky exposure plane. Increased precautionary measures resulting from post-pandemic health & safety guidelines are likely to affect the design of shared amenities.

# REGULATIONS AS OPPORTUNITIES FOR CHANGE

<b>ZR 23-22</b> Prohibits rooming units from R1-R5 districts and requires a dwelling unit factor for each residential district. The smallest factor is 680 for R6 districts and above. The residential square footage divided by the dwelling factor gives you the maximum number of dwelling units allowed at a site.
<b>HMC §27–2004 (15)</b> Defines a rooming unit as a housing unit in which a single family does not have exclusive use of a kitchen or bathroom.
<b>HMC §27–2004 (17) and MDL § 16</b> Defines a single room occupancy (SRO) as any unit where a family resides in a single room such that the families reside separately and independently.
<b>HMC § 27-2077</b> Prohibits the creation of new rooming units unless related to a hospital, educational, or charitable capacity.
<b>HMC §27–2066 (c) (e)</b> States that all New Law tenement units must have bathrooms and that all new units created in tenement buildings must include bathrooms.
<b>HMC §27–2074</b> Requires that all SRO rooms have a minimum 150 square feet of living area
<b>MDL § 248 – 3</b> States that the number of rooms shall not be increased nor shall the light or ventilation of any room be impaired.
<b>MDL § 248 – 4(b)</b> Requires that all SRO units have two means of egress, one of which cannot be via a public hall. In lieu of such egress, every stair hall or public hall, and every hall or passage within an apartment, shall be equipped on each story with one or more automatic sprinkler heads approved by the department.

## NEXT STEPS

Ultimately, this document is intended to serve as a useful template for further action—not a comprehensive blueprint. It is an iterative document that will continue to be modified and crafted based on prompts and feedback from policymakers, industry experts, housing advocacy groups, etc.

To initiate this cross-disciplinary discussion, we pose questions generated during the research and development of this document. Beginning with:

***What is needed to turn these proposals into practice?***



# PROPOSED ADAPTATION TO ZONING FOR AN R-6 DISTRICT

# of NLTS	Zoning Districts	Max FAR	Max Bld Height	Max DU	% of Parking Required for IRHU
2,902	R6QH	2.20 - 3.0	70 (75 ft) – Max 8 stories for Wide Street	680	25%
			55 ft for Narrow Str	680	
	R6 HF		Sky Exposure Plane above the base of 60 ft	680	70%
2,124	R7-1	3.44	Sky Exposure Plane above the base of 60 ft	680	60%

## Regulations as opportunity for Change

### Additional notes – 15 ft for greenhouse

**23-62 Permitted Obstructions** - Balconies, unenclosed, subject to the provisions of Section 23-13; vegetated roofs, not more than 3 feet, 6 inches in height

### 12-10 Definitions

"Floor area" is the sum of the gross areas of the several floors of a building or buildings, measured from the exterior faces of exterior walls or from the center lines of walls separating two buildings. Floor area includes:

- elevator shafts or stairwells at each floor, except as specifically excluded in this definition
- floor space in penthouses – these new units will count towards the FAR, do we have an idea of how much for a typical building?

### 23-132 Balconies in R6-R10 Districts

Provides requirements for balconies in the district indicated including the depth of the projection from the building wall and height from the curb level. Balconies cannot project a distance greater than seven feet as measured from the plane surface of the building. Balconies for buildings containing residences may be located at or higher than the floor level of the second story provided that such balcony is located not lower than seven feet above curb level or seven feet above natural grade, whichever is higher.

### 23-153 For Quality Housing buildings

R6 -R10 in the districts indicated, for Quality Housing buildings, the maximum floor area ratio which varies.

### 23-22 Max Number of Dwelling Units

The max number of dwelling units equals the maximum residential floor area permitted on a zoning lot and varies by zoning district.

### 23-60

#### 23-64 Basic height and setback regulations

R6 R7 R8 R9 R10 – in the districts indicated without a letter suffix, this section provides the required height and setback requirements including the ratio for the sky exposure plane (SEP). The SEP defines the building envelope in non-contextual districts, begins at a specified height above the street line and rises inward over the zoning lot at a ratio of vertical distance to horizontal distance.

#### 23-66 Height and Setback Requirements for Quality Housing Buildings.

#### 23-662 Max Height and Building Setback Regulations

R6 R7 R8 R9 R10 - In the districts indicated, height and setback regulations for Quality Housing buildings. The regulations are mandatory in contextual R6 – R10 and optional in non-contextual R6-R10 districts, encourages development consistent with the character of many established neighborhoods. Its bulk regulations set high lot coverage, and base and maximum height limits.

#### 25-20 Required Accessory Off-Street Parking Spaces for Residences (maybe)

(WORK IN PROGRESS)

SUMMARY OF ALL PROPOSALS

- What components do you see as an effective pairing for varying plans of action (i.e., change to policy vs. a pilot program)?
- What components do you see as having the most immediate potential for change, and the most long-term prospects?
- What components do you believe have been overlooked? Not limited within New Law tenements but including all multi-family walk-up typologies.
- What information would help you and your organization/firm better gauge feasibility?
- Would it strengthen the business, policy and design case to more directly compare and contrast with the existing ecosystem of subsidized housing construction in New York?
- What would ensure equitable access to the improved housing units?







# APPENDIX:

## REVIEWERS COMMENT LOG - AUGUST 2020

REVIEWER	PAGE	COMMENT (COPIED)
OVERALL / GENERAL		
XX	18	<p>Comments related to: clarifying tidbits of info, clarifying graphics, book-related edits that can be adjusted easily in Indesign</p> <p>Comments related to: re-write, research, text edits</p>
Brian L.	n/a	do not fall into "uncanny valley" by trying too hard to prove the financial feasibility of the project. (maybe only focus on underutilized HPD financing tools right now for example) Instead, make the doc inspiring enough that you can then find a NLT or HDfC to do a more detailed "proof of concept" analysis (in phase II). Consider also shopping the idea to moneyed MSRED alums who are intersted in donating to something tangible beyond just the general fund.
Brian L.	n/a	show the impact of these interventions not only on the building level but on the block or streetface level. What would the impact be on a block that is all NLTs? (we used to have this, right?)
Brian L		How do we address need for affordability while also bringing buildings up to current code standards?
Arielle G.	38, 52, etc.	What is the max difficultly level? I don't know what the scale looks like. Is it three? Five?
Michael P.		A few elements that stick in my mind include elevators, public spaces, and common areas.
		Lack of elevators limits the usefulness of New Law tenements' upper floors. It's a bear to navigate up five or six flights with a full load of groceries, a baby, or a bad hip, but elevators are expensive while a single elevator has capacity to service --and be amortized by-- many buildings if you can solve the circulation and open spaces issues.
		Street level retail animates the urban fabric while providing necessary services. Killing retail for marginal increases in unit counts and residential density is shortsighted and counterproductive in my opinion. It undermines the quality of the neighborhood which in turn feeds the perception/reality of substandard housing.
		Availability of building common areas, roof decks, landscaped yards, or reservable rooms for larger gatherings encourages sociability while perhaps enabling increased density if tenants (and regulators) will accept smaller common areas in their apartments as a tradeoff for enhanced common areas. Co-Housing practice, and NORCs to a lesser extent, offer a lot of precedents and case studies for these sort of arrangements
		It's also worth noting that New Law tenements contributed to the trend for consolidating "standard" NYC 25'x100' building lots into larger assemblages. It's very difficult if not impossible to design a viable New Law apartment building on a single standard lot. There are several projects that combine multiple existing New Law tenements into apartment complexes with common elevators, open spaces, etc. You can see this on Manhattan avenue at around 103/104th street and elsewhere. You might also see how these interventions could be more viable at a relatively larger scale, say quarter block to full block which could
INTRO		
Michael P.	2	<ul style="list-style-type: none"><li>- NYC housing regulations regulations evolved over the 20th century to mandate better hygiene, life safety and accessibility.</li><li>- The Old Law started by mandating exterior windows in all habitable rooms</li><li>- The new law reduced density while ensuring more effective natural ventilation by requiring yards and courts thus effectively outlawing airshafts.</li><li>- The multiple dwelling law encouraged fireproof construction and elevator access.</li><li>- The 1968 building code further encouraged fireproof construction while also expanding elevator requirements (in buildings greater than 3 stories) and also requiring interior egress paths (no fire escapes)</li><li>- These measures had the result of increasing hard costs and reducing the supply of affordable ("substandard?") housing which leads to a renewed interest in the new law tenement type.</li></ul> <p>follow on questions:</p> <p>confirm when the regulations started to define "habitable rooms"</p> <p>when were "habitable rooms" (or the space) defined</p>

Michael P.	2	<div>two trends come to mind since the old law was superseded:</div> <div>1. reduction in density within apartments</div> <div>2. there are several developments city wide that combined several old law tenements into a single, larger apartment complex.</div> <div>One factor with New Law tenements, they are almost always walk ups....</div>
Michael P.	7	<div>FWIW, at the turn of the century all multiple dwellings, including apartment buildings (aka "French flats"), were classified as tenements and regarded as less desirable than individual townhouses.</div> <div>A public relations campaign at the start of the 20th century to make apartment living acceptable to wealthier New Yorkers that ultimately succeeded when senator Elihu Root was induced by an offer of cut rate rent to relocate from his Park avenue townhouse to 988 Fifth avenue (See New York 1900 Metropolitan Architecture and Urbanism 1890-1915, Stern Gilmartin and Massengale pp290-295)</div>
Michael P.	8	Consider adding a table summarizing the open space, access, and egress requirements of the New Law in relation to the Old Law as well as the Multiple dwelling law and subsequent developments...
Michael P.	8	Note that the New Law made it effectively impossible to build any viable tenement on a standard 25'x100' lot. This is a forerunner of the practice for assemblages, assembling multiple contiguous lots to maximize density and return that marks NYC real estate practice today.
Michael P.	9	<div>Density diagram:</div> <div>side yard requirement is 12' wide along side lotline with maximum length from rear yard. This is the case if a New Law tenement abuts an older building or one that does not have a side yard requirement.</div>
Michael P.	10	<div>Note:</div> <div>The density pattern also appears to mimic the expansion of the IRT subway network (and the BMT to a lesser extent)</div> <div>New Law:1901</div> <div>IRT subway: 1904,</div>
Arielle G.	12	It seems like some are also in high opportunity areas, e.g. in MN, which may be another reason to focus on them because staying in those areas may give residents opportunities to other amenities.
Brian L.	12	add some stats on planning challenges in NLT nhoods: overcrowding prblems, rent burdens, and age of structure
Michael P.	12	<div>As part of the discussion of quality dwellings, would you also consider a discussion of:</div> <div>--availability of mass transit / ease of getting to work</div> <div>--availability of open space, whether private or public</div> <div>--availability of basic retail and institutional services: fresh food, neighborhood retail, schools/daycare, libraries, public safety, etc</div>
Michael P.	12	Legacy of exclusion <=> access to homeownership, would you consider bringing this aspect into the scope of the study? Are there opportunities for renters in City owned and/or City subsidized housing to build equity in their buildings?
Michael P.	13	Add year of census to graph
Arielle G.	14	It seems strange to not reference the ZQA changes here, even if their impacts was more relevant to new construction. [note: ZQA is 2018 zonign ammendment that made the envelopes somewhat more generous and added MIH, was on our chart initially]
Michael P.	14	<div>Add:</div> <div>1929 Multiple Dwelling Law</div> <div>1938 NYC Building Code (Old Code)</div> <div>1968 NYC Building Coe</div> <div>2014 NYC Building Code</div>



Michael P.	16	Don't forget the Americans with Disabilities Act ("ADA") as this law has a far reaching effect on current housing and applies to all renovation projects.
Brian L.	18-19	add a diagram of a NLT with existing zoning envelope overlayed...showing clearly how NLTs are often "underbuilt"
Brian L.	20	address criticism that you are just packign more people into buildings that already don't meet code
Brian L.	20	consider adding a justification for the project on COVID-basis that NLTs are actually better suited to pandemic control b/c there are less people per door than a high rise (see Moody's study on NYC vs. DC)
Michael P.	20	"Others require policy change to be enacted" ----> Although policies and laws/regulations are intertwined they are not interchangeable ... changes in policy are arguably easier to accomplish than changes in law. It's definitely a different process.
Michael P.	20	According to current law, the impact of added density must be studied under ULURP (Uniform Land Use Review Procedure)...consider adding a discussion of ULURP and also an outline for how these proposals might might address or mitigate impacts raised under ULURP.
Arielle G.	21	This isn't quite right. Many HDFCs are not tenant collectives. The HDFC is an ownership structure that is also often used by nonprofits and others to receive funding/tax benefits, etc.
Michael P.	21	Risk factors in housing from what we understand about Covid-19 at this time (7/28/20): a. density within units b. lack of, or improper, social distancing c. lack of, or improper, PPE use d. extended exposure times outside the home, eg commuting and uncontrolled contact, for essential workers. it's worth noting that the tenement laws were first enacted to improve hygiene and public health
Michael P.	21	important to note that 1970s-1980s urban blight resulted from rent rolls not covering building operating costs so landlords abandoned their buildings. Shielding tenants in this way could recreate the same problem.
Michael P.	21	discretionary approval processes are frequently abused and exploited with unintended consequences... FWIW, I think it's better to work out an as-of-right policy to discourage sweetheart deals and blatant corruption
DCP - Zoning Division		Add demographic + neighborhood character data; look into the affordability of the units
ROOFTOP ADUs		
Michael P.	31	<p>This definition of Accessory Dwelling Unit is confusing to a NYC policy wonk because it works at cross purposes to the accessory use definition in the NYC Zoning Resolution.</p> <p>per NYC Zoning 12-10: "accessory use": (a) is a use conducted on the same zoning lot as the principal use to which it is related (whether located within the same or an accessory building or other structure, or as an accessory use of land), except that, where specifically provided in the applicable district regulations or elsewhere in this Resolution, accessory docks, off-street parking or off-street loading need not be located on the same zoning lot; and (b) is a use which is clearly incidental to, and customarily found in connection with, such principal use; and (c) is either in the same ownership as such principal use, or is operated and maintained on the same zoning lot substantially for the benefit or convenience of the owners, occupants, employees, customers, or visitors of the principal use</p> <p>further into the definition, accessory use includes "living or sleeping quarters for servants" in residnetial uses</p> <p>I think that you are actually proposing pre-fabricated apartment units to fill out the as-of-right building</p>

Michael P.	31	Can you provide a reference for this proposal to legalize additional dwelling units? Legalizing basement or attic apartments is a very controversial topic in many neighborhoods where it is seen as undermining quality of life and property values while also endangering the public by creating firetraps.
Michael P.	33	This is a interesting and technically viable strategy for quickly filling out unused Zoning bulk. In the past, NYC unions have opposed modular construction though this might change because of the weak economy. I suggest reaching out to modular builders in the NYC area to gauge their experience to date. I know that the SCA has periodically used modular construction for classrooms. Also, is the unit viable as a sixth floor walk up unit?
Michael P.	34	would you consider adding a "typical" floorplan?
Brian L.	36-37	address structural questions. Can NLTs support an additional floor? Many NLTs have structural deficiencies from age
Michael P.	36-37	consider discussing the financing plan. Is it a sale of air rights? or is the coop financing then selling a completed spec unit? If a rental property, how do you ensure that any gains are put back into the building.
Arielle G.	34-39	What is the likely financial feasibility here? Do you have a sense of the conditions of most HDFCs? Can they withstand these changes or do many need repairs to basic structural components that they have limited resources to address?
Michael P.	39	extend your research to the NYC building codes --old code, 1968 code, and current code  Include ADA and NYC rules and regs as they interpret ADA in your analysis.
FIRE ESCAPES		
Michael P.	44	would you trip over these plants if you leaving in a fire? Perhaps this proposal involves enlarging fire escape balconies to permit incidental use and/or occupancy?
Michael P.	45	<p>Also take a look at the 1929 law for egress rules.</p> <p>"relics" ----&gt; I'm not sure this is the case. Most new law tenements in my experience still rely on fire escapes for their second means of egress. Unfortunately, fire escapes are too often neglected (which is why they were eliminated under the 1968 code). They become dangerous and useless for their intended purpose.</p> <p>You would need to fully sprinkler the building to consider removing the fire escapes. It's a cost and aesthetics issue.</p>
Arielle G.	50	On 2B: Is it possible that the stairs facilitate easier maintenance of fire escapes above and below? Is that possibly a cost vs. space trade off? Not really my area, just a practical question.
Michael P.	50	<p>How will you ensure equal or better egress/fire safety without the stair?</p> <p>Context suggestion:</p> <p>Many buildings in Hasidic neighborhoods (Williamsburg, Boro park, etc) have exterior balconies that are used for religious observance and recreation. these are distinct from the egress system.</p> <p>Could an exterior balcony be considered as an "area of refuge" as defined under the current building code and ADA?</p>
Michael P.	52	lowering the window sill is very easy.
FACADE EXTENSIONS		

Michael P.	59	Only buildings exceeding 57' or five stories or 67' and six stories if frontage exceeded 40' were required to be of fireproof construction. Smaller buildings had to have fire proof or fire protected construction at the ceiling of the cellar of lowest floor level. Most new law tenements were of fire protected construction: non-combustible bearing wall with timber beams as shown in the illustration. the stair tower was fireproof (concrete masonry and protected iron/steel).
Arielle G.	62	This is an interesting proposal. I guess two critical concerns are of course cost and how extension of private space affects the experience of pedestrians at grade level. Is there a trade off, at least for front of the building interventions. Maybe that is worth at least mentioning?
Michael P.	64	interesting and promising proposal. How would it work at the ground plane? would you consider cantilevering out from the facade? also, how much of a projection would you propose? Could you make it work with as-of-right zoning?
Michael P.	65	Consider including a plan and section describing how the extension wold work with the existing space.
Arielle G.	66	How does this interact with, e.g. Enterprise Green Communities? Are these operable? That is also a question that tends to come up around balconies. Hard to tell because none of the text is written for this one.
Brian L		What are the politital / cultural behaviors associated with facade extensions... ex balconies in European cities... do we want people at the front of the building?
ELEVATORS		
Brian L		historically, # of stories permitted in NLT's is determined by structural analysis, not elevator ( maybe revisit language)
Michael P.	80	context suggestion: take a look at the egress tower added onto the back of the tenement museum in Manhattan for a strategy to add elevator and egress stair to an existing tenement.
Michael P.	80	please also indicate how this works at the ground floor and also provide "before and after" plans. The central elevator corridor appears to drive a major rework of the interior layouts.
Michael P.	80	FWIW, I think that adding an elevator is a key component for ensuring the viability --and ADA compliance-- of many of these proposals.  It's also expensive You might consider regulatory modifications to offer encouragement (increase density) for providing an elevator. NYC allows "lite" elevators known as LULAs (Limited Use Limited Access Elevator). These are more economical but NYC DoB does not like to approve them...
Michael P.	83	splice elevator lobby and facade extension into areaway?
Michael P.	84	elevators are also expensive. This intervention appears more feasible if you can insert an elevator to serve several contiguous new law tenements at the same time and/or allow some form of lightweight shaft construction for an elevator shaft is outside the building envelope
SROs		

Michael P.	90	provide sources on SRO intro write-up
Michael P.	92	this (very attractive) image suggests possibilities for making better use of required New Law tenement courtyards as public spaces, accessible open spaces for the benefit of tenants and their guests.... perhaps a mitigation for reduction of open space caused by elevator insertion?...insertion of communal spaces can also enhance the quality of the building per se.
Michael P.	94	Include typical ground floor plans.
Michael P.	94	what is the difference in bedroom counts between the original floor plan and the SRO floor plan?
Michael P.	95	consider an option for placing common areas at the ground floor. It's more easily accessible... also what is the streetscape like? neighborhood retail is (I believe) a better use of street frontage than private dwelling units....
Michael P.	96	decreasing this factor also allows micro-apartments, similar to European and Asian practice (Hong Kong, Paris, etc)
Michael P.	96	In addition, consider the policy and law changes needed adapt the SRO option to a co-housing model with private bathrooms, minimal in unit cooking, and extensive, proportionally sized cooking, eating and common areas.
CONCLUSION		
Michael P.	100	the proposal for facade extensions is as-of-right if you can describe them as balconies
Michael P.	102	consider a regulatory language tailored to allow co-housing practices.