



THE NEW YORK
CITY COUNCIL

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SPEAKER

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Engines of Opportunity

Reinvigorating New York City's
Manufacturing Zones for the 21st Century



THE COUNCIL OF
THE CITY OF NEW YORK
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Dear Fellow New Yorkers,

After many years of decline we have started to see some very promising signs that the industrial sector is stabilizing and growing.

The importance of this part of our economy is clear. Industrial companies employ approximately 350,000 New Yorkers — nearly 10% of our private sector workforce. In Brooklyn and Queens, where industry is particularly threatened by real estate speculation, the jobs pay almost twice as much as the service sector jobs which often replace them. Industrial jobs provide a ladder to the middle class for many first generation immigrants who haven't had the opportunity to attend college.

Unfortunately our regulations haven't done enough to support these companies and workers.

It is time to take a fresh look with three key goals in mind:

- To preserve and grow the industrial base of our economy. In places where there is a strong concentration of industrial activity we need to create predictability for companies as they engage in long term business planning.
- To expand employment opportunities across New York City. We are seeing remarkable interest from a range of companies to build new buildings and retrofit existing buildings in neighborhoods across the City — some light manufacturing but others more associated with the creative economy. We need to create the conditions to support this kind of investment and ensure that surrounding communities are connected to these new jobs.
- To reinforce the diversity of people and companies that makes New York City so dynamic. In places where investors and local stakeholders are interested in supporting both new residential development and new commercial/light manufacturing space we need to create new zoning tools to require it.

All of these goals will translate into different strategies as we engage with communities in shaping their future but the recommendations detailed in this report represent a clear direction forward.

Sincerely

A handwritten signature in black ink, appearing to read 'Melissa Mark-Viverito'.

Melissa Mark-Viverito
Speaker

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Executive Summary



Engines of Opportunity

When policy makers first began to regulate how and where New York City's economy would grow, the framework was clear. Many forms of economic activity, especially manufacturing with all of its noise and pollution, were fundamentally incompatible with residential neighborhoods and we needed to protect homes from industry.

Almost a century later our economy has transformed in fundamental ways but our rules have not kept up. For many reasons the industrial and manufacturing sectors are critical to our city's economic health. According to the US Bureau of Economic Analysis, every dollar in the final sale of manufactured products supports \$1.33 in additional output.¹ This is more than double the multiplier of sectors like retail (\$0.66) and professional/business services (\$0.61).

In Brooklyn and Queens, jobs in the wider industrial sector of manufacturing, wholesale trade, utilities, and transportation/warehousing pay an average salary of \$51,000 a year — more than twice the average salary of jobs in the retail, hospitality, and restaurant sectors.²

These jobs account for roughly 10% of New York City's private sector workforce.³

Although there has been a steep decline in manufacturing employment over the last several decades, if we look more closely, many subsectors of the manufacturing economy are doing well. Total manufacturing employment in New York City has stabilized since 2010 and is showing new signs of growth.⁴

Industrial Sector vs. Retail, Restaurant, Hotel Sectors in Brooklyn and Queens

(2013 US BLS QCEW DATA)

So how do we continue to nurture and support growth in the manufacturing sector and protect these jobs while continuing to diversify our economy?

What is the role of land use policy?

This report outlines a series of recommendations to help bring our zoning regulations in line with a broader economic development strategy. The existing zoning in many places is woefully out of date: not providing sufficient protections for essential industry, failing to provide a framework for the growth of job centers across New York City, and missing opportunities to integrate a range of housing options with other diverse uses.

To address these challenges we're proposing new approaches to thinking about our manufacturing districts. These approaches will need to be refined based on the specific factors at play in each neighborhood but provide a framework for creating new engines of opportunity. It's clear that we don't have the regulatory tools at our disposal to address these goals so we're recommending three new mechanisms.

1) Industrial Employment District – A zoning district which provides the space for those industries which are critical to the economic well-being of thousands of New Yorkers and the health of the overall economy. In places where a concentration of manufacturing/industrial activity exists – in many of the existing “Industrial Business Zones” for instance – a re-writing of the use regulations to focus on the protection and growth of these industries is essential, as is allowing for additional density to create the option for more space for new and existing firms to expand. Combined with strategic incentives and targeted enforcement, these districts will provide a stable regulatory framework for investment.

2) Creative Economy District – A dynamic new combination of industrial space and commercial office space. These creative economy districts would no longer be hindered by competition with incompatible uses like mini-storage or nightlife or blocked-out by unproductive warehousing of property in hope of future residential rezoning. With the additional density, property owners would gain much more lucrative development opportunities than under the current zoning while

Average Annual Wages



Industrial Sector includes manufacturing, wholesale trade, transportation and warehousing, and utilities

growing the City's employment base. Robust workforce development strategies will need to be implemented in tandem with these new districts to ensure a wide variety of New Yorkers will have access to these new jobs.

3) A Real Mixed Use District – Mixed-use industrial-residential-commercial neighborhoods like parts of SoHo or Long Island City or Williamsburg or the Gowanus have a unique dynamism that has made them tremendously desirable. Other cities are increasingly trying to emulate the dynamic synergy of these mixed-use neighborhoods. The creation of the “MX” zone acknowledged the value of mixed-use neighborhoods and tried to find a solution that could increase the residential capacity while maintaining their dynamism. Unfortunately because MX allows but does not require a mixture of uses, the economics of real estate have led residential development to dominate and displace other uses. A zone which supports and requires the creation of commercial and compatible industrial space alongside residential would create dynamic new neighborhoods instead of just residential development.

Zoning tools alone do not offer a complete solution for strengthening the industrial sector and local economic development. Coordinating infrastructure investment, linking workforce development with new job creation, deploying incentives strategically, and partnering with non-profits/ manufacturing advocates to help grow the sector are all necessary to unleash the full potential of our neighborhood economies.

But thinking differently about our regulations is a crucial first step in reinvigorating our manufacturing zones for a new century of growth that will benefit all New Yorkers. ●

Manufacturing employment in New York City has stabilized since 2010 and is showing new signs of growth.

Background

“The West Street and North River Piers,”
1916. New York Public Library



History of Industrial Land Use Policy

As the nation's premier port and commercial center during the height of American manufacturing power, New York City was a mecca of industry from the 19th to the mid-20th centuries. From the garment producers and printers of the Manhattan loft districts, to the sugar refineries and heavier industries of the East River waterfront, the manufacturing sector was the city's dominant economic engine. New York's population exploded from less than 700,000 in 1850 to over 4.7 million in 1910. During this same period, the city's manufacturing employment grew at an even faster rate — from roughly 45,000 to over 870,000.⁵

By 1910, 40% of all jobs in New York were in the manufacturing sector. New York produced a tremendous variety of goods for consumption in its own market, the nation, and the world. With virtually unlimited quantities of raw materials entering the city and inexpensive shipping for finished goods to leave, New York was the City of Industry powered by its premier seaports.⁶

During this period of exponential growth, manufacturing firms were free to locate anywhere in the city. This lack of

1916 Zoning Resolution

Residence Districts	Only for dwellings, clubs, churches, schools, libraries, museums, philanthropic institutions, hospitals, railroad passenger stations, farming and nurseries.
Business Districts	All the uses in residence districts allowed, as well as businesses, except for those that use heavy industrial processes (for example, chemical manufacturing, dry cleaning, metal working, printing, stone cutting). No “industry or use that is noxious or offensive by reason of the emission of odor, dust, smoke, gas, or noise.” If manufacturing does not include any of the above, it may occur in up to 25% of the floor area.
Unrestricted	All uses permitted.

control on manufacturing growth over time created conflicts between industrial and commercial property owners in the city’s business districts.⁷

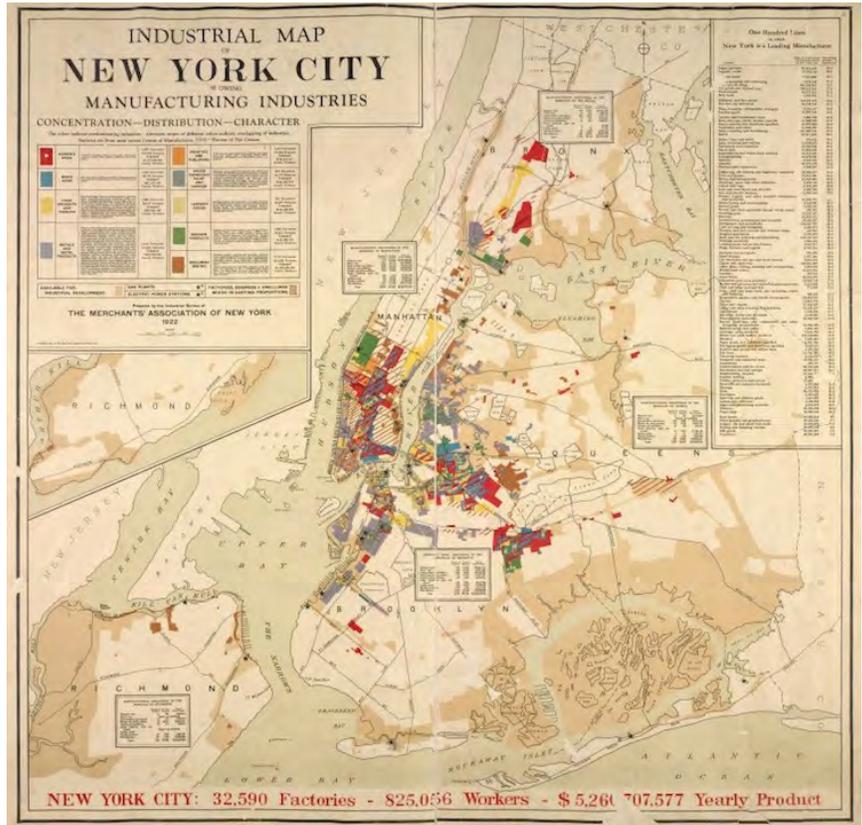
ZONING RESOLUTION OF 1916 – REIGNING IN INDUSTRY’S GROWTH

As the warehouses and factories began to creep closer to the high-end “Ladies Mile” retail district in Manhattan, New York’s policy makers took action and enacted the Zoning Resolution of 1916.⁸

The Zoning Resolution of 1916 was the first comprehensive zoning in the nation. It established regulations on height and setbacks and created three types of zoning use districts. “Residence Districts” allowed only dwellings, community facilities, and hospitals. The second use type, “Business Districts,” prohibited all “noxious or offensive” uses (including a long list of specific industrial processes), and therefore excluded nearly all manufacturing businesses, which were relegated to the so-called “unrestricted” zones.⁹ The Zoning Resolution of 1916 codified the principle of a hierarchy of separate uses with residential requiring the greatest degree of separation, commercial in the middle, and industrial at the bottom.

By prohibiting the spread of manufacturing in much of Manhattan, the Zoning Resolution of 1916 accelerated the growth of industry along the waterways and freight rail lines of the outer

Industrial Map of New York City, prepared by the Industrial Bureau of the Merchants’ Association of New York, 1922. New York Public Library.



boroughs of Brooklyn, Queens, and the Bronx.¹⁰ Manufacturing continued to dominate the city’s economy throughout the first half of the 20th century, with jobs peaking at nearly 1,000,000 in the immediate post-war period.

ZONING RESOLUTION OF 1961 – SEPARATION OF USES

In 1961, New York enacted a new, much more comprehensive and detailed Zoning Resolution. Following the prevailing ideology of the time, the Zoning Resolution of 1961 further emphasized separation of uses and the “towers in the park” model of modern high-rise office and residential development.¹¹ This period also saw the emergence of the environmental movement and a strong backlash against noxious industrial pollution.

The city was divided between residential, commercial, and a new category of manufacturing districts to replace the “unrestricted” zones. Although New York’s Zoning Resolution is often described as a “living document” that has been edited thousands of times, the 1961 use groups

1961 Zoning Resolution

Residential Districts	Ten types of district — R1 through R10 — reflecting various densities Only residences and community facilities allowed
Commercial Districts	Eight types of district — C1 through C8 — reflecting various densities and use types Residential and community facilities permitted as-of-right in C1 through C6 Some types of light industrial uses permitted in C5, C6, C8
Manufacturing Districts	Three types of district — M1 through M3 — reflecting various levels of industrial performance standards (emissions, noise etc.) Most community facilities and commercial uses, including hotels, permitted as-of-right in M1 Many types of commercial uses, but not hotels also permitted in M2, M3 Highly hazardous/noxious industrial uses restricted to M3

and principle of separation of uses remain a fundamental principle of this law to this day.

Manufacturing districts were divided into three basic categories based on the level of “objectionable influences and hazards”: “M1” for high performance (less polluting/noisy) manufacturing, “M2” for medium performance, and “M3” for low performance and open industrial uses like power plants and scrapyards.¹² Other undesirable uses like trucking, warehousing, and waste transfer were also relegated to the manufacturing districts.

The City’s stated reasons for creating separate manufacturing districts in 1961 were to protect residential and commercial areas from noxious emissions and noise, to encourage industry to have higher performance, to reduce congestion by limited bulk and requiring off-street parking, and to protect manufacturing uses from competing uses. In this last regard, the Zoning Resolution of 1961 specifically asserted the following goals:

NYC Zoning Resolution Manufacturing Districts: Uses Permitted As-Of-Right

M1	Certain types of community facilities such as hospitals and non-profit institutions.
	Hotels
	Most kinds of retail, certain stores like supermarkets limited to 10,000 sqf
	Restaurants, bars, entertainment venues
	Athletic facilities
	Office buildings
	Wholesalers and storage facilities
	High-performance industrial and manufacturing (no noxious emissions or safety hazards)
	Heavy industrial activities allowed if performance standards are met
	M2
Restaurants, bars, entertainment venues	
Athletic facilities	
Office buildings	
Wholesalers and storage facilities	
Heavy industrial activities allowed if performance standards (less restrictive than M1) are met	
M3	Most kinds of retail, certain stores like supermarkets limited to 10,000 sqf
Restaurants, bars, entertainment venues	
Athletic facilities	
Office buildings	
Wholesalers and storage facilities	
All industrial activities allowed	

“To provide sufficient space, in appropriate locations, to meet the needs of the City’s expected future economy for all types of manufacturing and related activities, with due allowance for the need for a choice of sites...To provide, as far as possible, that such space will be available for use for manufacturing and related activities...To promote the stability of manufacturing and related development, to strengthen the economic base of the City, to protected the character of the district and its peculiar suitability for

1980 – “In-Place Industrial Parks”

particular uses, to conserve the value of land and buildings, and to protect the City’s tax revenues.”

Despite this extensive language on protecting and separating manufacturing uses, the 1961 Zoning Resolution permitted many types of community facility and nearly all kinds of commercial activity, including hotels, restaurants, and retail, to locate in manufacturing zones. It appears as if policymakers did not conceive of hotels, restaurants, and large-scale retail ever having interest in locating in manufacturing zones and competing for space with industry.

1970’S - DECLINE OF NEW YORK MANUFACTURING

New York’s manufacturing employment remained above 800,000 until a steep decline began in the early 1970’s.¹³ The factors behind the rapid decline of the manufacturing economy are numerous and interconnected. The shift of freight transportation from railroad to truck meant that factories no longer had to locate near ports or rail facilities, and the planned relocation of the region’s port facilities to New Jersey further reduced the city’s locational advantages.¹⁴ New transportation and communication technologies spurred not only the move out of the city to the suburbs but also the relocation of production to cheaper labor markets (in Latin America and Asia, what became to be known as the larger trend of “globalization.”

In 1974, city planners took action to try to arrest industry’s decline and further protect manufacturing zones by requiring special permits for large retailers over 10,000 square feet such as department stores, supermarkets, and furniture stores that had previously been able to locate in them as-of-right.¹⁵ During the 1970’s the City also established several innovative mixed-use districts, such as the Northside Special Mixed Use District in Williamsburg and Special Tribeca Mixed Use District in Manhattan, which aimed to control and stabilize a balance of industrial and residential uses in certain neighborhoods.¹⁶

But these planning actions were no match for the global economic changes that were causing the decline of New York manufacturing during this period. By 1980, New York’s manufacturing employment had fallen to less than 500,000.¹⁷ In

New incentives and Local Development Corporations designated for eight industrial clusters:

Brooklyn	East New York	East Williamsburg	Sunset Park
Bronx	Bathgate	Port Morris	Hunts Point
Queens	Long Island City	Jamaica	

a further effort to try to improve conditions for the sector, the City initiated the “In-Place Industrial Parks” program which established new incentives and designated Local Development Corporations to help coordinate services for the eight strongest manufacturing clusters: Bathgate, Port Morris, and Hunts Point in the Bronx, East New York, East Williamsburg, and Sunset Park in Brooklyn, and Jamaica and Long Island City in Queens.¹⁸

In spite of this initiative, manufacturing employment in New York City continued to plummet throughout the 1980’s and by 1990 only 261,000 jobs remained.¹⁹ The severity and swiftness of the decline led to a widespread perception among policymakers that industry in New York was inevitably vanishing. The city’s future instead lay in the information and service economy of finance, real estate, hospitality, and tourism, the new central functions of a “global city.”²⁰

1990’S – BIG BOX STORES ENCOURAGED, “MX” SPECIAL MIXED USE ZONE CREATED

In 1993 the Department of City Planning published its “Citywide Industry Study,” a report that concluded that manufacturing in New York City was facing inevitable decline due to obsolete infrastructure and global restructuring. It did not envision a significant future for industry and instead recommended that the City reduce the amount of land zoned for manufacturing.²¹ The Giuliani administration took up these recommendations and actively encouraged big box stores like the Home Depot and Staples to locate on manufacturing-zoned land as part of an effort to recapture chain retail spending that had moved to the suburbs.²² In 1996 the Giuliani administration tried to push through a rezoning that would allow huge big-box stores up to 200,000 square feet to locate as-of-right in manufacturing zones

The severity and swiftness of the decline led to a widespread perception among policymakers that industry in New York was inevitably vanishing.



Because it allows fully residential development, if the “MX” zone replaces an M zone or a previous special-mixed use district with rules on protecting manufacturing uses, it can essentially function as a residential rezoning.

but the effort was halted by the City Council.²³

In 1997, the Giuliani administration created the “Special Mixed-Use District” or “MX” zone in order to “encourage investment in, and enhance the vitality of, existing neighborhoods with mixed residential and industrial uses in close proximity and create expanded opportunities for new mixed use communities.”²⁴ The “MX” zone permitted residential, commercial, or light industrial uses as-of-right but without any requirement for preserving a mixture of uses on either the neighborhood level or within an individual lot. Because it allows fully residential development, if the “MX” zone replaces an M zone or a previous special-mixed use district with rules on protecting manufacturing uses, it can essentially function as a residential rezoning.

During the 1990’s, commercial and residential real estate pressures on Manhattan’s remaining industrial areas accelerated rapidly and spread across the East River to Long Island City and Williamsburg. Industrial businesses in these neighborhoods increasingly found themselves in competition for space with commercial and residential uses as a result of rezonings, legal requests for variances, and ad hoc illegal conversions of lofts.

Industrial sector advocates assisted by the Pratt Center and Municipal Art Society launched “The Manufacturing Land Use and Zoning Initiative” in 1999 to try to address these issues and

recommend improved policies for industrial land use.²⁵ In addition to the pressure from residential development in the new MX zones, industrial uses in supposedly protected “M” zones were experiencing increasing competition from as-of-right commercial uses such as big box stores, hotels, and nightlife establishments. The Manufacturing Land Use and Zoning Initiative also alleged that industrial zones were being “hollowed out” by real estate speculation as industrial tenants were evicted and properties warehoused in anticipation of residential rezoning.

A recently published study by researchers at the Federal Reserve Bank of Cleveland substantiates many of these claims. The study analyzed urban employment changes during the 1990’s and found that across the nation, manufacturing employment declined at a faster rate in gentrifying urban areas. The decline of urban manufacturing employment during this period was not due only to global structural changes — gentrification and land price speculation were also “catalytic factors in accelerating the shift away from manufacturing within urban land markets.”²⁶

FOCUS ON RESIDENTIAL GROWTH

By 2000, the number of manufacturing jobs in New York City had declined a further 34% since 1990 — from 261,000 to 173,700. The total number of jobs in the wider industrial sector, including manufacturing, wholesale trade, and transportation, warehousing, and utilities, declined from 603,000 to 460,000, from representing over 20% of the city private sector workforce in 1990 to 15% in 2000.²⁷

In this context of increasing real estate pressure on manufacturing, the Bloomberg administration entered office. During his first term, Bloomberg accelerated the rezoning of manufacturing-zoned areas. From 2001-2005, major rezonings were undertaken in Long Island City, West Chelsea, and Williamsburg-Greenpoint. Just before the rezonings in 2000, these areas were identified by the Manufacturing Land Use and Zoning Initiative as the top three most job-intensive manufacturing districts in the city.²⁸ In Long Island City and Williamsburg-Greenpoint, the rezonings opened industrial waterfronts to high-rise residential development, and rezoned

New residential development lines 4th Avenue along the edge of the Gowanus manufacturing zones



interior mixed-use areas with significant concentrations of industrial businesses to the “MX” designation.

Overall from 2002-2007, the Bloomberg administration rezoned nearly 1,800 acres of manufacturing-zoned land, or nearly 15% of the total citywide stock.²⁹

In response to the Bloomberg administration’s aggressive rezonings, in 2003 the New York Industrial Retention Network organized the “Zoning for Jobs” coalition which included many of New York’s most prominent organizations in the business and planning community.³⁰ “Zoning for Jobs” called on the Mayor to preserve the remaining industrial areas through more restrictive zoning that would prohibit non-industrial uses, and for the creation of “Balanced Mixed-Use Districts” that would require a certain percentage of a district’s overall floor area to remain industrial.

“INDUSTRIAL BUSINESS ZONES” CREATED

Near the end of the first term, the Bloomberg administration recognized the need for an industrial strategy and convened a citywide task force led by the Department of City Planning, NYCEDC, and the Department of Small Business Services to develop recommendations to “support a viable industrial base.”³¹ The appointment of the industrial task force was part of an overall shift in economic development policy to emphasize diversification of the city’s economic base.

The industrial task force’s recommendations were formalized in a report released by the administration in January 2005 that outlined a “comprehensive industrial policy” to protect and

2005 – “Industrial Business Zones”

Pledge of no residential rezoning and strong discouragement of granting residential variances, support for local non-profit service providers. “Zones” are mapped and designated but no actual zoning change takes place. Fifteen IBZs created in 2005, six added since

Brooklyn	East New York	Flatlands/ Fairfield	Greenpoint- Williamsburg
	North Brooklyn	Southwest Brooklyn	Brooklyn Navy Yard*
Bronx	Bathgate Eastchester	Zerega	Port Morris
	Hunts Point		
Queens	Jamaica	JFK	Long Island City
	Steinway	Maspeth	Ridgewood*
	Woodside*		
Staten Island	North Shore*	West Shore*	Rossville*
	<i>*Designated in later years</i>		

grow jobs. New initiatives included the creation of a Mayor’s Office of Industrial and Manufacturing Businesses (MOIMB) and the replacement of the eight “In-Place Industrial Parks” with 15 new “Industrial Business Zones” (IBZs) where the City pledged to support the retention and expansion of industrial businesses through tax credits, and promised to maintain industrial zoning and to monitor and strongly discourage the BSA from granting variances. City Planning Commissioner Amanda Burden described the new policies as “an ironclad commitment to maintain manufacturing zoning” to make “these key industrial areas stronger and more competitive.”³²

The 15 IBZs created in 2005 were located in Bathgate, Eastchester, Zerega, Port Morris, and Hunts Point in the Bronx, East New York, Flatlands, Greenpoint-Williamsburg, North Brooklyn (East Williamsburg-Bushwick), Southwest Brooklyn (Sunset-Park-Gowanus-Red Hook) in Brooklyn, and Jamaica, JFK Airport, Long Island City, Steinway, and Maspeth in Queens.

Additional IBZs were eventually added for the Brooklyn Navy Yard, Ridgewood, and Woodside in Queens, and North Shore and West Shore and Rossville in Staten Island.³³

**City Planning
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The administration's commitment to supporting and protecting industry within the IBZs was not accompanied by any zoning changes to exclude competing commercial development.

Advocates for industrial businesses such as the New York Industrial Retention Network and the Pratt Center praised the Bloomberg administration for seeking to support the sector. But it was also noted that the new policies did not protect the Industrial Business Zones from competing commercial development as the “Zoning for Jobs” coalition advocated. The administration’s commitment to supporting and protecting industry within the IBZs was not accompanied by any zoning changes to exclude competing commercial development like hotels, retail, self-storage, and entertainment uses.

DEVELOPMENT PRESSURES INCREASE, POLICIES TO SUPPORT INDUSTRIAL SECTOR ARE SIDELINED

In 2006, City Council Member Melinda Katz, then Chair of the Land Use Committee, introduced Resolution 0141 calling on the Bloomberg administration to establish “Industrial Employment Districts” — a zoning overlay to require special permits for most types of commercial development within an industrial zone. A hearing was held on the bill in September 2006 and was well attended by representatives of the industrial business community and labor unions who urged the Council and administration to support the bill. But a representative from the Bloomberg administration stated “While we support the spirit

of Resolution 141...We believe it is premature to move toward more restrictive zoning measures.”³⁴

Another challenge to the effectiveness of the Bloomberg administration’s industrial policy was that a key portion of the IBZ program, the funding of local non-profit membership organizations to provide technical assistance to local businesses, was slashed soon after it was established. Mayor Bloomberg initially set funding for IBZ administration at \$4 million but cut funding to zero in the 2009 Executive Budget. The program was only kept alive by advocacy in the City Council led by Council Member Diana Reyna, which restored between \$1 and \$1.5 million in funding annually.

The Mayor’s Office of Industrial and Manufacturing Businesses initially consisted of a staff of six. But the office’s budget was cut back beginning in 2007 and the Director, Carl Hum, resigned to take a position with Brooklyn Chamber of Commerce. A new director was never reappointed and funding for MOIMB completely ended in 2011. The MOIMB’s functions were replaced by administrative support from the Department of Small Businesses and the “industrial desk” at the Economic Development Corporation.

Under the umbrella of EDC, the administration’s industrial strategy shifted to emphasize capital investments in city-owned industrial parks like the Brooklyn Navy Yard, Brooklyn Army Terminal, and Hunts Point Terminal Market. While hundreds of millions of dollars in infrastructure investments helped strengthen businesses in the city-owned industrial parks, the privately owned industrial areas of the IBZs received only limited support.³⁵

Manufacturing jobs in New York City continued to precipitously decline from 174,000 in 2000 to 75,000 in 2010,³⁶ though many attribute at least part of the decline to the displacement of industrial businesses by the rezonings and non-industrial development within manufacturing zones.

A bill calling for Industrial Employment Districts was again introduced by Council Members Brad Lander and Diana Reyna in 2011, with the additional detail that such districts should be established as overlays over the Industrial Business Zones. This bill, Resolution 957, was filed at the end of session in 2013. ●

1.



How Do We Protect and Grow The Industrial Economic Base?

From 2010 to 2014 a remarkable change occurred — the industrial sector in New York finally halted its decades-long decline. Since the beginning of the economic recovery in 2010 to 2013, manufacturing jobs held steady at roughly 75,000 and actually grew by nearly 4% in 2013-2014 to a current total of 77,000.

The total number of jobs in the wider industrial sector, including manufacturing, wholesale trade, and transportation, warehousing, and utilities, grew from 329,000 to 342,000. These other industrial sectors actually account for a larger share of jobs than manufacturing, with roughly 142,000 jobs in wholesale trade and 123,000 jobs in transportation, warehousing, and utilities. It is important to keep in mind that these sectors are also crucial to our economy, providing essential infrastructural and logistical support.

Industrial Sector Jobs in NYC 2002–2014
(not including construction jobs)

What Are Industrial Jobs?

The 342,000 total jobs in the wider industrial sector, which does not include jobs in construction, accounts for roughly 10% of New York City’s private sector workforce.³⁷

Economic data includes three major categories:

Manufacturing

All types of producers from food and beverage makers, to chemical manufacturers, to metal stampers, to furniture makers.

Wholesale Trade

Wholesalers buy products in bulk and then sort, grade, or break down the products into smaller packages for distribution. In New York they typically operate out of warehouses and often deliver goods by truck directly to retail stores.

Transportation, Warehousing, Utilities

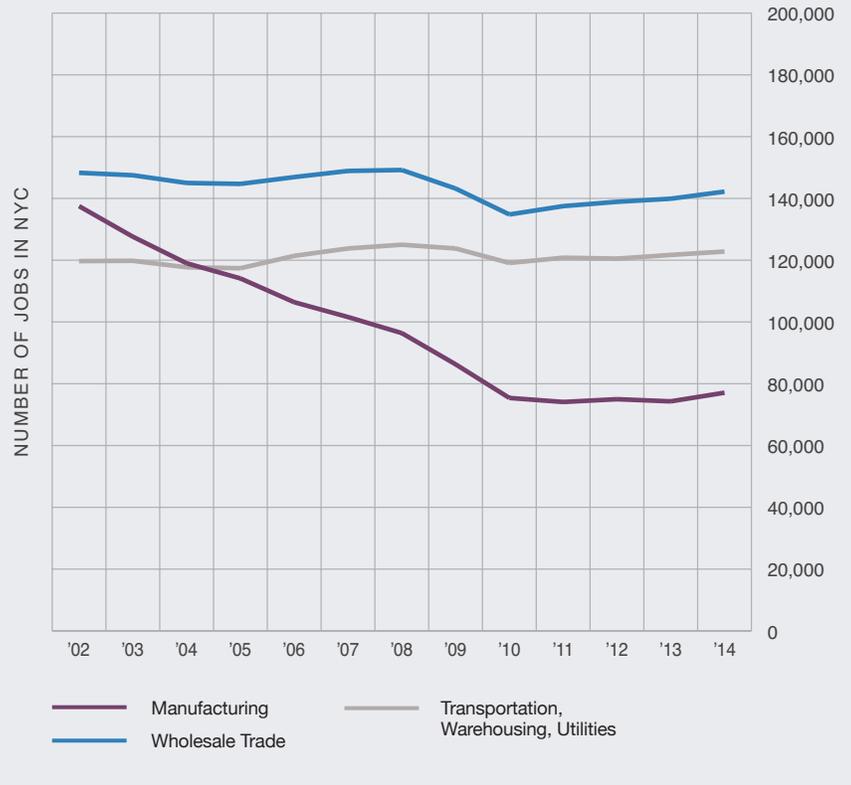
Transportation includes public transit, airports, freight and delivery services (by truck, rail, ship, etc.), and pipeline workers. It does not include auto repair.

What Do “Industrial” and “Manufacturing” Mean?

New York City’s industrial zoning districts are officially called “manufacturing zones” despite the fact that all types of industrial businesses are located within them.

But in the City’s land use data, there are separate categories for “transportation & utility” use (which includes airports, power plants, rail yards, gas stations and other infrastructure,) and “industrial & manufacturing” uses (which includes uses like manufacturing, wholesale trade, warehousing, and open industrial uses like scrapyards).

Construction jobs are not included in most definitions of “industrial jobs”.



NYS Department of Labor – Current Employment Statistics

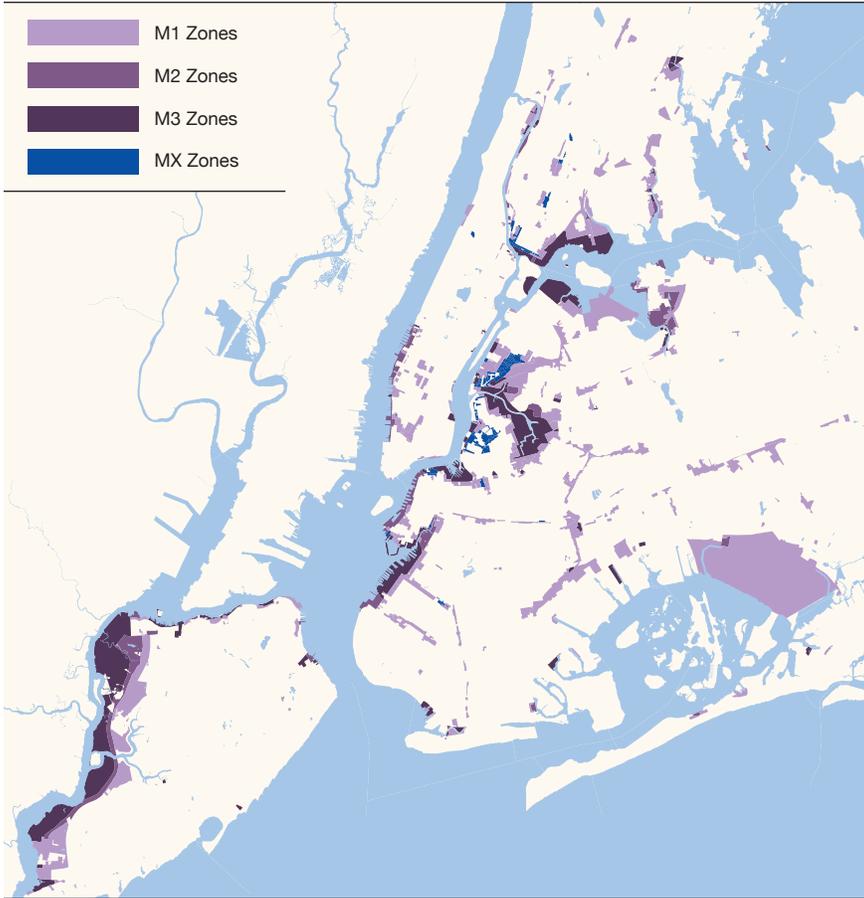
The 342,000 jobs in the wider industrial sector, which does not include jobs in construction, account for roughly 10% of New York City’s private sector workforce. This newfound growth in has taken place despite the continuing challenges of New York’s outmoded industrial land use policy.

CURRENT STATE OF INDUSTRIAL LAND IN NEW YORK CITY, 2014

Overall, roughly 42.2 square miles, or 14%, of New York City is currently zoned M or MX. However, nearly half of all manufacturing-zoned land is taken up by JFK and LaGuardia Airports and the western shore of Staten Island where much of the land is undevelopable wetlands.

Within the manufacturing zones, actual manufacturing uses occupy a surprisingly small percentage of the land. According to the most recently available city data,³⁸ “industrial and manufacturing” land use covers only 21% of the area under manufacturing zoning. The plurality of the land, 45%, is actually taken up by space-intensive “transportation and utility” uses like airports, rail yards, and power plants. In addition,

New York City Manufacturing Zones



Manufacturing Zones cover 14.1% of the city's total lot area. Much of this land is occupied by essential transportation and utility infrastructure. Job intensive manufacturing uses occupy only 3.5% of the city's total lot area.

commercial space of all kinds is increasingly common, especially in M1 districts. And reflecting their history as the “unrestricted” zones created in 1916, many manufacturing zones have significant numbers of non-conforming residential buildings.

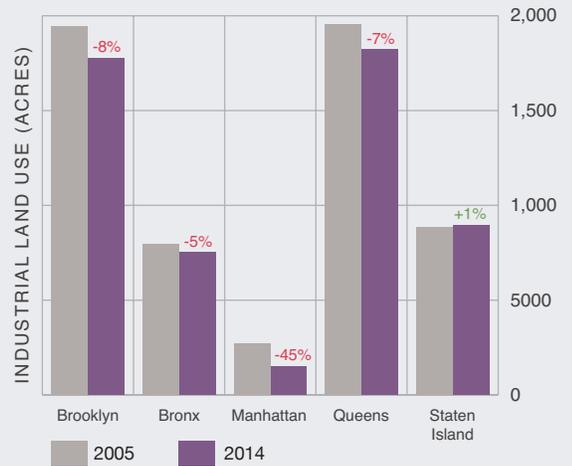
Looking only at the map of manufacturing zoning and the 14% of city land it covers misleadingly gives the impression that there is an abundance of available land. But the stock of land and buildings suitable for manufacturing and not occupied by competing uses is much smaller than the relatively large area of manufacturing zoning would suggest.

Since 2005, industrial and manufacturing land use in New York City has declined by nearly 8% or roughly 450 acres. The decline has been the sharpest in Manhattan where nearly half was converted to other uses. And since many industrial properties in Manhattan are high-density lofts, this loss represents an even more significant reduction of potential manufacturing space.

In Manhattan, the Bloomberg administration actively encouraged industrial conversion during

Change in Industrial Land Use 2005-2014

(DCP PLUTO data, not including transportation-utility category)



Overall in New York City, industrial and manufacturing land use (as measured by lot area) declined by nearly 8%, or 450 acres, from 2005-2014.

this period through rezonings of areas like West Chelsea near the High Line and West Harlem for Columbia University’s campus expansion. The few remaining historic loft areas that are still zoned M are rapidly being developed as hotels and offices. No Industrial Business Zones were mapped in Manhattan when they were created in 2005.

HAVE THE INDUSTRIAL BUSINESS ZONES BEEN EFFECTIVE?

With the establishment of the Industrial Business Zones, the Bloomberg administration sought to stabilize the sector and provide a safe haven by removing the threat of residential rezoning. The 21 current Industrial Business Zone boundaries, as last modified in November 2013, cover just over half (57%) of the city’s manufacturing zoned-area.

A 2011 Bloomberg Administration review of the IBZ program found that it had helped incentivize business investment through the relocation tax credits and technical assistance provided by the local Industrial Business Solution Provider program.³⁹ But this review did not examine land use and zoning issues.

Looking back a decade after they were created, the IBZs appear modestly successful in protecting industrial and manufacturing land use compared with other manufacturing zones not

New York City Industrial Business Zones



covered by IBZs. But for manufacturing zones located in areas with significant real estate market pressure, the IBZ designation does not appear to offer adequate protection from conversion to commercial uses.

Overall, industrial/manufacturing land use within the IBZs remained stable from 2005-2014, in contrast to a loss of over 13% in manufacturing zones not included within an IBZ. This finding suggests that the IBZs accurately cover the core industrial areas.

While total industrial land remained stable, the IBZ designation did not protect these areas from an increase in commercial uses. While still accounting for an overall small percentage, commercial lot area within the Industrial Business Zones has increased by 30% since 2005 — the same rate as zones not included within an IBZ.

The increase of commercial use has been most dramatic in the Brooklyn IBZs. In the Greenpoint-Williamsburg IBZ, there was no commercial use in 2005, city data now shows nearly 14% of the area has been converted. In

IBZs with the Greatest Rate of Commercial Conversion

IBZ	Commercial Land Use Increase 2005–2014	
Greenpoint Williamsburg	+211,728	+*%
North Brooklyn	+417,342	+191%
Southwest Brooklyn	+2,311,300	+155%
* no commercial use in 2005		

the North Brooklyn IBZ, commercial lot square footage nearly tripled during this period. In the Southwest Brooklyn IBZ, commercial uses more than doubled, increasing by over 2.3 million square feet. In all of these areas, site surveys consistently demonstrate that the official land use data lags significantly behind the rapid pace of change. Commercial conversions are undoubtedly higher than shown in the official data. The rise in commercial land use within the supposed industrial safe havens of the IBZs illustrates the first major shortcoming of New York’s current industrial land use policy.

WHAT IS THE PROBLEM?

1. Manufacturing Zoning Districts, especially “M1”, allow many non-industrial commercial uses as-of-right, uses with generally far fewer jobs – Reflective of their origin in the 1916 Zoning Resolution’s “unrestricted” category, manufacturing districts allow a very broad range of development as-of-right. Office buildings, most kinds of retail including malls and certain “big box” stores, self-storage facilities, restaurants, bars, and nightclubs, athletic facilities and health clubs are all permitted as-of-right. In M1 light manufacturing zones, many types of “community facilities” are allowed as-of-right.⁴⁰

In virtually all cases, each of these uses can typically generate a higher return per square foot for the landowner than most industrial uses. But perhaps the greatest current threat to industrial businesses in manufacturing zones is the as-of-right development of hotels and large-scale entertainment uses.

Many of New York’s most productive and dynamic industrial zones, including IBZs like Greenpoint-Williamsburg, North Brooklyn,

Z Hotel,
Long Island City Industrial Business Zone



Safeguard Self Storage,
North Brooklyn Industrial Business Zone



Southwest Brooklyn, and Long Island City, are located in close proximity to highly desirable residential neighborhoods and are increasingly marketed as commercial hotel, shopping, and nightlife development opportunities.⁴¹

In the last decade, dozens of hotels have been developed in manufacturing zones, including many within designated IBZs.⁴² Areas including Long Island City, Gowanus, Sunset Park, and North Brooklyn, have also seen increased development of entertainment uses like bowling allies and nightclubs.

In addition to directly displacing industrial real estate, hotels fundamentally change the character of areas previously reserved for manufacturing and industrial work. This is especially true of high-end boutique hotels that include additional attractions like restaurants and bars. These developments can change the economic character of entire districts, often with fewer jobs with poorer wages and benefits than the uses they replaced.

2. Most Manufacturing Zoning Districts Allow Very Little Density, Precluding Industrial Growth – Another significant challenge with existing manufacturing zoning in New York City is that much of it is zoned at very low density, constraining opportunities for any new industrial growth.

49% of all manufacturing zoned land is M1-1, allowing only for 1.0 FAR. With only 1.0 FAR, it is impossible for owners of industrial properties to add additional space in a second floor or on an underutilized parking lot. A further 40% of M zoned land is within districts that allow only 2.0 maximum FAR.

This constraint on density precludes the construction of large floorplate, loft-style industrial buildings in nearly 90% of New York's manufacturing-zoned land. The lack of available density, combined with the uncertainty created by inconsistent land use policy and permitted non-compatible uses like hotels, make it extremely difficult for industrial landowners to commit to the long-term and invest in their properties for industrial development.

3. Manufacturing zones have overly burdensome parking requirements – The most commonly zoned manufacturing districts – M1-1, M1-2, M1-3, M2-1, M2-2, and M3-1 – which together account for nearly 90% of manufacturing-zoned area, have extremely burdensome and unnecessary parking requirements.

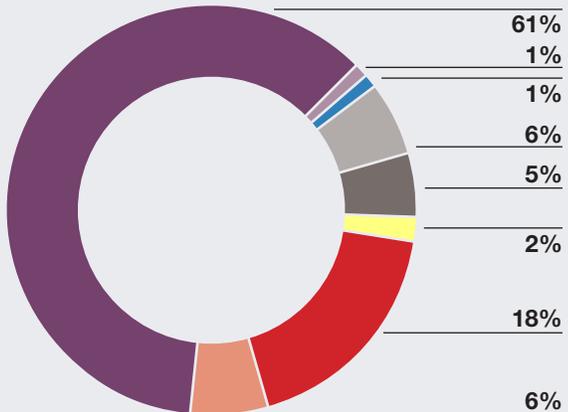
In these districts, for manufacturing or commercial uses, one parking space is required per 1,000 square feet of floor area or 1 space per 3 employees, whichever is higher.⁴⁸ These requirements apply to either new construction or enlargements of existing space.

While these requirements have been greatly reduced or eliminated for Manhattan and parts of Long Island City, they continue to apply in M zones throughout the rest of the city.

If a property owner in an IBZ in Brooklyn
continued on page 20

Greenpoint-Williamsburg IBZ Land Use

Greenpoint-Williamsburg IBZ Lot Square Footage by Land Use Survey Adjusted



In the unplanned, ad hoc transformation of an Industrial Business Zone into a nightlife district, New York City is missing an opportunity to preserve important industrial businesses and jobs and encourage more diverse and productive types of new development.

and multiple floors, they are incentivized to instead concentrate the allowable density into a tower occupying a small portion of the lot.

The under-construction “Level Hotel” illustrates this model taken to the extreme, concentrating the 2.0 FAR density of the large lot into a narrow tower.

Thus far, hotel and nightlife redevelopment in the Greenpoint-Williamsburg IBZ has concentrated below North 14th St, closer to the Bedford Avenue L subway. Industrial businesses still predominate in the northern half of the IBZ but it is likely only a matter of time before commercial development becomes the majority-use there as well. As a sign of the commercial development to come most private industrial landowners in the area are not granting long-term leases to existing tenants.⁴⁵

In the unplanned, ad hoc transformation of an Industrial

Business Zone into a nightlife district, New York City is missing an opportunity to preserve important industrial businesses and jobs and encourage more diverse and productive types of new development. The market has recently indicated a new interest in the development of creative office and light industrial uses in this area but it remains unclear if such projects will proceed without changes in land use policy.^{46,47}

The experience of the Greenpoint-Williamsburg IBZ in recent years makes it abundantly clear that the policy of designating Industrial Business Zones without also changing the underlying zoning to protect industry from competing commercial uses is not a forward looking strategy.

Most manufacturing districts allow only 1.0 or 2.0 FAR, severely constraining opportunities for expansion or redevelopment.



continued from page 17

wanted to build a new 40,000 square foot industrial building on a 20,000 square foot vacant lot, at least 40 parking spaces would be required, adding millions of dollars to development costs. The added cost of this parking is especially discouraging to potential industrial development with its lower average rents per square foot.

4. Industrial rents are quickly climbing as supply of space contracts due to land use issues

– According to the city’s official land use data, industrial and manufacturing land use has declined by nearly 8% or 450 acres since 2005. However, the updating of this data often lags behind the pace of change in city neighborhoods.⁴⁹ It is also unable to identify industrial buildings that are emptied of tenants and being “warehoused” for future redevelopment. The actual loss of industrial land use is likely significantly higher.

Since 2010, industrial jobs in New York City have halted their decades-long decline and have actually begun to grow. But despite the new demand for industrial spaces, the stock of active industrial land continues to decline due to competing residential and commercial uses. In areas

like Williamsburg where commercial conversions are on the rise, manufacturing-zoned land in prime locations has recently sold for nearly \$200 per buildable square foot.⁵⁰ In Gowanus, where speculation on residential rezoning continues, the price of industrial properties has nearly tripled in the last 10 years.⁵¹

As a result, industrial rents in New York City have begun to rise precipitously as firms compete for a dwindling supply of remaining spaces.⁵² Industrial rents in the outer boroughs rose from an average of \$11.50 per square foot per year in 2011 to \$14.25 in 2013.

In just the last year, the discussion about industrial real estate in New York has abruptly shifted from lamenting the wasted space of empty warehouses and brownfields, to mourning the lack of suitable factory spaces for manufacturers like Capsys⁵³ and the limited amount of space available at the Brooklyn Navy Yard.⁵⁴ As lease prices for many industrial properties prices rise to \$20 or even \$25 a square foot in Long Island City and North Brooklyn,⁵⁵ growing industrial firms can no longer afford to relocate or expand.

A recent Wall Street Journal article noted that Long Island’s industrial real estate market is directly reaping benefits from the displacement of firms from New York City.⁵⁶ One Long Island broker told the paper “We are seeing a lot of parties from the boroughs considering Long Island because all the industrial space in the boroughs is being converted to residential and office or some other use.”

New York City’s industrial land supply problem is not due to the amount of physical land that remains zoned for manufacturing. It is due to the lack of actual protection for industrial uses from commercial development, the continued pattern of speculation and warehousing in anticipation of eventual residential rezonings, and the lack of suitable zoning and incentives to spur new industrial construction.

5. Archaic use-group definitions and performance standards

– Yet another land-use related problem affecting the industrial sector in New York is the City’s failure to update the industrial use groups and performance standards.

Acme Smoked Fish, Greenpoint-Williamsburg Industrial Business Zone — Due to the rising cost and instability of industrial real estate, Acme recently chose to locate a new \$25 million expansion in North Carolina after spending over a year searching properties in Brooklyn and Queens.

These important regulations govern the types of businesses that are allowed to locate in each of the industrial zones, M1, M2, and M3. They remain largely unchanged since the publication of the Zoning Resolution of 1961.

Anachronistic references to outmoded technologies like typewriters and phonographs remain in the Zoning Resolution to this day. The closest the text gets to describing hi-tech manufacturing is in references to “Electrical equipment assembly, including home radio or television receivers, home movie equipment, or similar products, but not including electrical machinery” and “Machines, business, including typewriters, accounting machines, calculators, card-counting equipment, or similar products.” Many high-tech manufacturing processes like 3D printing remain in a use group limbo, unsure of where exactly it is legal to locate.

The 1961 use groups and performance standards are geared to the mass-production “smokestack” industries of the time and are no longer relevant to today’s manufacturing technology where production can often take place in smaller, flexible spaces with much less noxious emissions.

We need to undertake a comprehensive re-evaluation of the industrial use groups and performance standards and consider what types of manufacturing might be compatible with residential use and ensure that relevant pieces of the building code are also updated to ensure that mixed use buildings can be permitted in a reasonable time frame.

WHAT IS THE VALUE OF THE INDUSTRIAL SECTOR?

In spite of all of these challenges, since 2010 the New York City industrial sector has stabilized and is actually showing signs of growth. From 2013-2014, manufacturing employment grew 3.8% — a faster pace than the City’s overall private sector.

Recent growth in manufacturing is not isolated to New York. Nationwide, the manufacturing sector has steadily grown since the beginning of the recovery in 2010 with nearly 600,000 jobs added, representing 5.2% growth to 12.06 million total jobs.⁵⁷ Industrial vacancy across the country, at 7.6%, is at the lowest level



since 2001, and industrial property sales volume in 2013 grew by 22% year over year, faster than any other kind of property.⁵⁸

Many economists are predicting that manufacturing in the United States will continue to grow as the cost advantages of overseas productive decline. The cost of transportation and of labor in countries like China is rising and making it increasingly economical to “re-shore” production back to the US.⁵⁹ This is an especially appealing option for smaller manufacturers who face logistical challenges working with off-shore suppliers.⁶⁰

Industrial firms provide essential services for many of the city’s most highly valued industries but are often overlooked by policymakers. Urban manufacturers are overwhelming small, locally owned firms. The majority of New York’s manufacturing businesses employ less than 5 workers and more than 85% of New York manufacturing businesses employ less than 20 workers.⁶¹ The intense interconnectedness of these small manufacturing firms in the local supply chain is the reason manufacturing has the highest multiplier effect of any economic sector. According to the US Bureau of Economic Analysis, every dollar in the final sale of manufactured products supports \$1.33 in additional economic output.⁶² This is more than double the multiplier of sectors like retail (\$0.66) and professional/business services (\$0.61).

In addition to its value in supporting and spurring economic activity in other sectors,

“We are seeing a lot of parties from the boroughs considering Long Island because all the industrial space in the boroughs is being converted to residential and office or some other use.”
Tommy Tsiolis, Long Island Industrial

Penn State Fabricators, Greenpoint Manufacturing and Design Center



In Brooklyn and Queens, industrial sector jobs pay an average salary of \$50,934 more than twice the average salary of \$25,416 in the retail, hotel, and restaurant sectors.

industrial jobs are also of particular importance to communities of color, recent immigrants, and job-seekers who lack a college degree.

The industrial workforce in New York City is over 80% people of color⁶³ and over 60% foreign-born.⁶⁴ A plurality of the industrial workforce in New York is Hispanic, and nearly 1 in 7 working Hispanic New Yorkers has a job in the industrial sector. The sector is particularly important to men of color without college degrees — Hispanic and Black males together make up the majority of the industrial workforce.

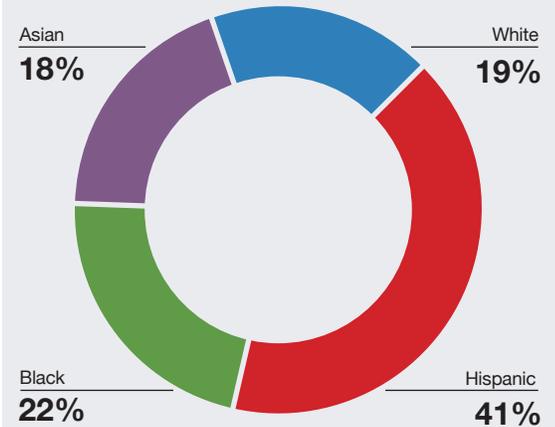
Considering that the unemployment rate for Hispanic and Black New Yorkers remains stubbornly high at over 12%, growing the industrial sector helps to target those many of those communities in greatest need.

Indeed, most industrial jobs pay a living wage that can provide a foundation for social mobility for workers and their families. In Brooklyn and Queens, jobs in the wider industrial sector of manufacturing, wholesale trade, utilities, and transportation/warehousing pay an average salary of \$51,000 a year — more than twice the average salary of jobs in the retail, hospitality, and restaurant sectors.⁶⁵

This is a comparison worth remembering

Industrial Workforce by Race/Ethnicity

US Census, American Community Survey 2012



Nearly 1 in 7 Hispanic New Yorkers who work have jobs in the industrial sector

when considering that hotels, retail, and restaurant/nightlife uses are increasingly displacing industrial businesses from manufacturing zones. In 2005, jobs in the industrial sector in Brooklyn and Queens outnumbered jobs in the retail, hospitality, and restaurant sectors 183,000 to 156,000. Since then, the low-wage service jobs in Brooklyn and Queens have grown to 207,000 while the industrial sector has shrunk to 172,000 jobs.⁶⁶

In addition to all the benefits of the manufacturing sector for the economy and of the larger industrial sector for New York City's workforce, reserving physical space for essential logistics and infrastructure uses is also crucial. Wholesale trade provides the underpinning for the entire local retail economy of the city. Shipping companies like UPS and Fedex need local sorting and distribution locations. City government needs space for waste and recycling, as well as garages and workshops for maintenance vehicles and tools. Loud and dirty industries dealing in heavy materials like concrete and scrap metal need locations separate from residential areas, with access to the water for shipping.

For all these reasons, city planners across the nation are increasingly recognizing that cities should develop strategies to support the core economic functions of the industrial sector.⁶⁷ ●

The four industrial buildings owned and operated by the Greenpoint Manufacturing and Design Center are a refuge for industrial businesses. The non-profit provides long-term leases at affordable rents for over 100 small manufacturers with over 500 employees. Below: Uberto LTD Woodworking, GMDC

Recommendation 1.

Industrial Employment Districts

RECOMMENDATION

■ For core industrial areas, areas where industrial/manufacturing are the dominant land use, establish “Industrial Employment Districts” that require CPC special permits for non-industrial commercial uses such as hotels, large-scale retail and office use, restaurants, bars, entertainment venues, and self-storage.

- Allow small accessory retail and restaurants that serve the business community and industrial workers to locate as-of-right.

- New York City Council Resolution No. 957 of 2011 offers recommended specific modifications to allowable use groups.

■ Increase the allowable FAR within designated Industrial Employment Districts to 3.0 or higher in order to facilitate increased industrial density and allow flexibility to upgrade and expand industrial buildings.

■ Eliminate burdensome and unnecessary parking requirements

■ Consider allowing a wider variety of commercial uses, such as larger retail, along busy streets on the edges of Industrial Employment Districts as a buffer between the core industrial areas and residential communities.

■ Investigate the creation of incentives for putting industrial space in the hands of mission-driven owners (Brooklyn Navy Yard, GMDC, SpaceWorks, are examples) as well as other stewardship models. This approach is also very important in thinking about the creative economy district and the mixed commercial/manufacturing/residential districts described in more detail below to maximize job creation, workforce development, marketing, and enforcement efforts.

■ Target financial incentives to support the growth and development of these industrial neighborhoods.

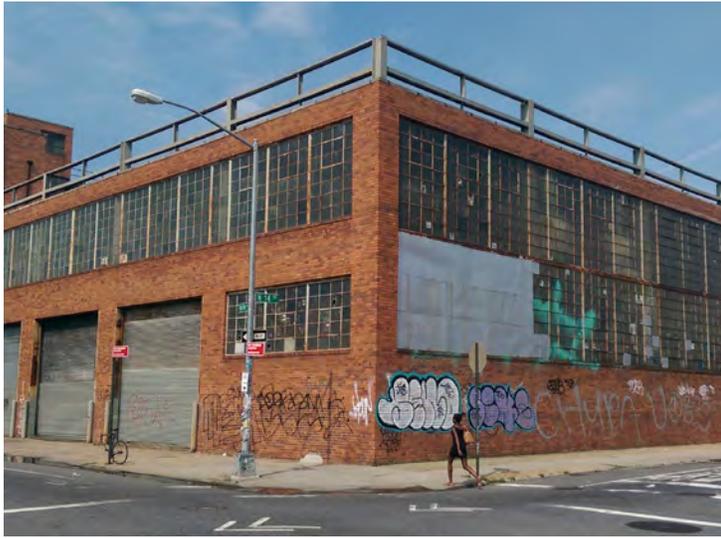


Given the extraordinary value of the industrial sector it is critical that we address the fundamental challenges the existing zoning presents which are described in more detail above:

1. Manufacturing zoning districts allow many non-industrial commercial uses as-of-right, uses with generally far fewer jobs.
2. Most manufacturing zoning districts allow very little density, precluding industrial growth
3. Manufacturing zones have overly burdensome parking requirements
4. Industrial rents are quickly climbing as supply of space contracts
5. Archaic use-group definitions and performance standards need to be updated

New York City needs to develop a zoning district which addresses these challenges and provides the space for those industries which are critical to the economic well-being of thousands of New Yorkers and the health of a variety of industries.

In those places where this concentration exists — in many of our IBZs for instance — a re-writing of the use regulations to focus on protection and growth is essential as is allowing for additional density in order to create more space for new firms and existing firms to expand. Much of the existing manufacturing zoning allows for uses which are not job intensive — mini-storage is a good example — and also have very low



FARs which doesn't allow for increased intensification of these areas.

In New York's few industrial areas with affordable real estate insulated from the pressures of the market, like the Brooklyn Navy Yard and the buildings owned by non-profit industrial developer GMDC,⁶⁸ space is filled to capacity with waiting lists for any availability.⁶⁹ The land use pressures caused by antiquated M zoning are quite likely holding back the ability of the sector to grow and recover more of the jobs lost in previous years.

Looking more closely at the subsectors, growth has concentrated in food and beverage manufacturing, in sectors like wood, metal, and stone-working, and in the promising field of high tech electronic manufacturing. Sectors that continue to shrink represent mostly heavier categories of industry typical the older industrial economy such as paper, machinery, chemicals, plastics, and textiles.

These findings support the assertions of industrial jobs advocates that most of the industrial firms remaining in New York City are those that need to be here in order to thrive.⁷⁰ They are deeply embedded in local supply chains and depend on geographical proximity to clients and partners. Food manufacturers deal with highly perishable products and must make daily deliveries to markets throughout the city. Highly specialized wood, metal, and stoneworkers manufacture customize products for the arts and design industries as well as the construction industry.

Mapping the industrial labor force in New York City illustrates the importance of the sector to people of color and immigrant communities.

Areas where the sector plays a particularly important role

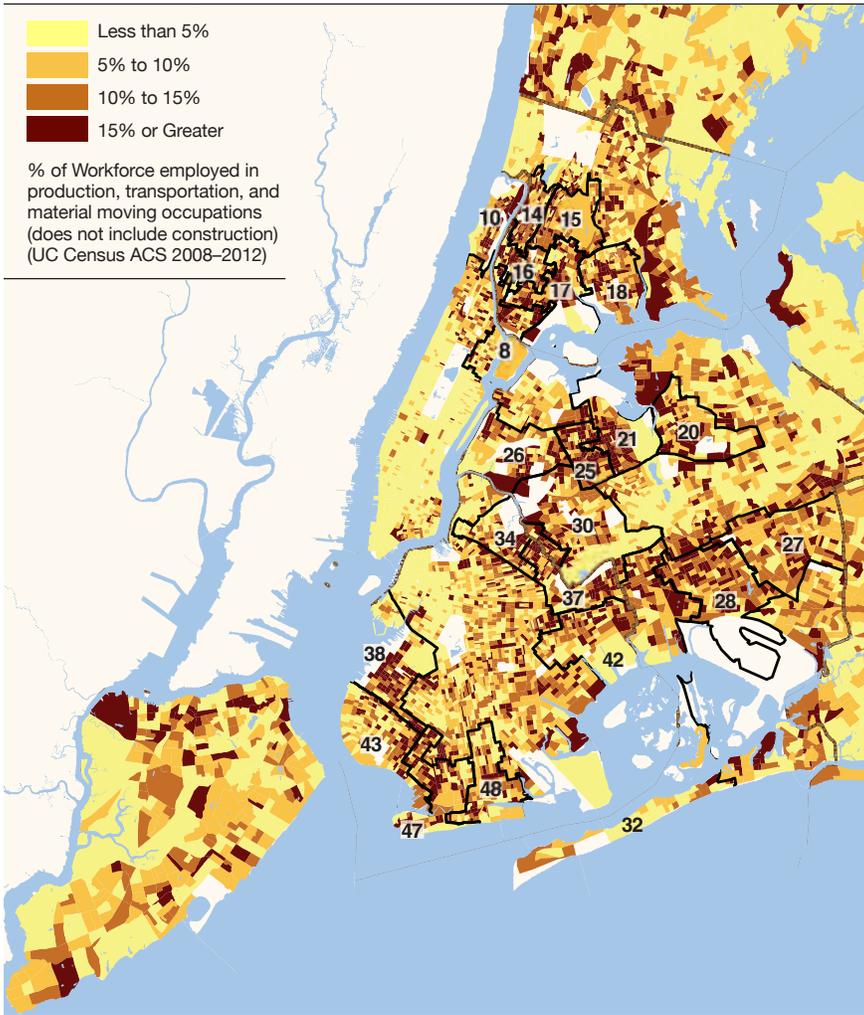
Change in Employment in Manufacturing Subsectors: 2010-2013

Sector	Change # Jobs	Change %
Growing Manufacturing Sectors in NYC		
Food	1,035	7.3%
Miscellaneous	412	4.6%
Fabricated Metals	234	3.9%
Computer & Electronic Products	146	5.3%
Nonmetallic Mineral Products (stone, clay, glass)	131	8.7%
Printing & Related	83	1.3%
Wood Products	74	10.9%
Primary Metals	61	23.1%
Beverage & Tobacco Products	51	8.5%
Shrinking Manufacturing Sectors in NYC		
Apparel	-673	-4.0%
Paper	-329	-24.0%
Electrical Equipment & Appliances	-269	-26.9%
Machinery	-243	-15.6%
Transportation Equipment	-233	-21.1%
Furniture & Related	-224	-7.2%
Chemicals	-218	-6.9%
Textile Mills	-208	-14.3%
Textile Product Mills	-170	-14.5%
Plastics & Rubber	-51	-3.2%
Leather & Allied Products	-37	-8.0%
Petroleum & Coal Products	-10	-14.7%
<i>US BLS QCEW Data 2013</i>		

in local employment include most of the south and central Bronx, Corona-Jackson Heights, Flushing, Richmond Hill, Jamaica, and Ridgewood in Queens, and Bushwick, Cypress Hills, East New York, Sunset Park, and Bensonhurst in Brooklyn. 22 City Council Districts have at least 10% of employed population engaged in the industrial sector.⁷¹

More than half of all City Council Districts have significant concentrations of manufacturing zoning and industrial businesses within their borders.

New York City Council Districts with 10%+ Industrial Labor Force



**% of Employed in "IBZ Jobs" —
Production, Transportation and Material Moving**

CD / Member	% Employed	CD / Member	% Employed
21 / Ferreras	16.1%	10 / Rodriguez	11.6%
25 / Dromm	15.2%	42 / Barron	11.6%
37 / Espinal	14.2%	8 / Mark-Viverito	11.6%
38 / Menchaca	14.1%	20 / Koo	11.4%
14 / Cabrera	14.0%	27 / Miller	11.3%
17 / Arroyo	13.9%	34 / Reynoso	11.3%
28 / Wills	13.2%	18 / Palma	11.2%
15 / Torres	13.1%	30 / Crowley	11.2%
16 / Gibson	12.8%	32 / Ulrich	11.2%
47 / Treyger	12.5%	43 / Gentile	10.0%
26 / Van Bramer	12.5%	48 / Deutsch	10.0%

Examples in Other Cities

CHICAGO - In 1988, to protect its industrial areas from real estate speculation Chicago created a new type of industrial preservation zoning called "Planned Manufacturing Districts." PMDs are a zoning overlay that prohibits incompatible uses like big-box retail, nightclubs, and hotels from locating in core industrial zones. Restaurants and bars are permitted but limited to 4,000 square feet, retail stores are restricted to 3,000 square feet, and community and athletic facilities are not allowed. Self-storage is barred from some of the PMDs but permitted in others, and office uses are allowed but restricted to a maximum size of 9,000 square feet. Artist studios are barred from all but two of the PMDs.⁷²

Chicago's PMD policy has not been static. The protections have been added to new districts over time and the city's "Fulton Market Innovation District" plan recently proposed altering a portion of a PMD to allow a broader range of commercial uses while still excluding housing, hotels, and entertainment.⁷³

PORTLAND - Portland, Oregon, known for its comprehensive land use planning, adopted "industrial sanctuaries" as part of its 1980 city plan, severely restricting commercial development in industrial areas. The city recognized at an early stage that "speculative pressure for commercial development in established and developing industrial areas can cause problems for industrial retention, relocation, and attraction through escalating land values, extra demands on public facilities, and land-use conflicts."⁷⁴ The industrial sanctuaries are widely regarded as a planning success, with the largest — Central Eastside Industrial Sanctuary — maintaining nearly 17,000 jobs as one of the most productive business districts in the city.⁷⁵ There are even new loft-style six-story industrial flex buildings now being developed in Portland's industrial sanctuaries.⁷⁶ ●

2.

Falchi Building, Long Island City

Google



How Do We Support New Kinds of Economic Activity?

It has long been a goal of successive City administrations to grow employment centers in the outer boroughs in order to increase economic diversity and reduce congestion and commuting times. But as of 2013, 60% of the City's private sector jobs were still located in Manhattan.⁷⁷

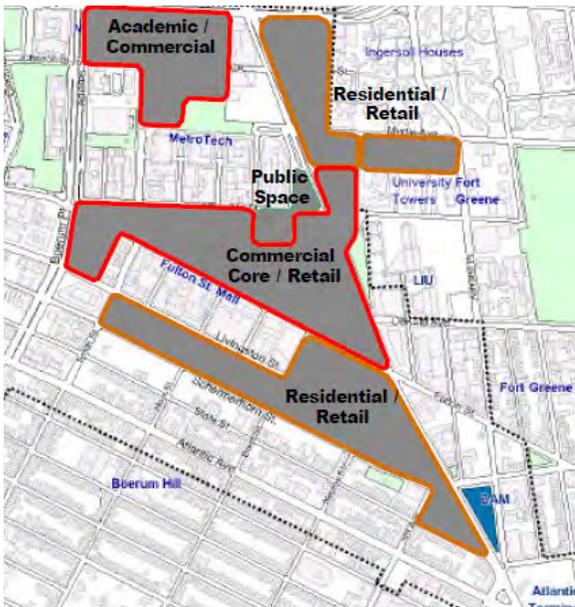
The industrial sector is not the only important part of the economy that has suffered from a lack of regulatory support. Development of new commercial office space in the outer-boroughs for growing sectors like technology and media has also been complicated by a zoning approach which does not support this policy goal.

COMMERCIAL ZONES INCREASINGLY DOMINATED BY RESIDENTIAL DEVELOPMENT

More than any time in the last half-century, businesses want the option to find a home in the burgeoning neighborhoods of the outer boroughs. Private sector jobs and business are growing much faster in the boroughs than in Manhattan. From 2002-2013, private sector jobs in the boroughs grew by 18% compared to 11% in Manhattan, and the number of private sector establishments grew by 29% compared to 11% in Manhattan.⁷⁸

But new development in the outer boroughs has been

2004 Downtown Brooklyn Plan map showing the intended “commercial core” between Fulton and Willoughby



almost entirely residential.

One of the challenges is that both commercial zones⁷⁹ and the “MX” special mixed use district allow residential development as-of-right. And in the current context of New York City, residential development brings a premium return compared to other uses. As Tucker Reed of the Downtown Brooklyn Partnership was recently quoted “When commercial spaces in desirable Brooklyn neighborhoods can top \$40 a square foot, but residential is surpassing \$60 a square foot, developers will choose the latter every time.”⁸⁰

On top of the higher rents offered by residential development, both New York City and New York State offer a far larger array of programs and tax incentives that support housing development than commercial and especially industrial development.

This situation has led to a contradiction in which commercial and industrial property is in high demand, yet hardly any new supply is being delivered because nearly all of our zoning outside of “M” zones allows residential as-of-right. As a result, businesses from start-ups to major corporations are searching for space in the increasingly popular neighborhoods of the boroughs but are coming up empty.⁸¹

High-density commercial zones would seem to be the perfect home for new office building development. But just as in MX zones, as-of-right

residential development is also permitted in nearly all of the city’s commercial zoning districts.

In 2004, the Bloomberg administration enacted a major rezoning of Downtown Brooklyn, allowing significantly larger towers in parts of the historic commercial core. The intent was to spur construction of a revitalized office district alongside new residential towers, creating 4.5 million square feet of new office space and 1,000 new housing units.⁸²

But the new office construction never materialized, with developers instead choosing to build only residential towers or hotels. From 2005-2014, developers built eight new residential towers and five hotels in the core upzoned areas of Downtown Brooklyn between Tillary St and Schermerhorn St, adding nearly 3,000 new condominiums and apartments.⁸³ Upwards of seven additional residential towers with nearly 4,000 more units are under construction or soon to break ground. Nearly half of these new and planned residential and hotel towers are located in the “Commercial Core” identified in the 2004 Downtown Brooklyn Plan as the target for new offices. Only the “City Point” project at the site of the former Albee Square Mall has a significant office space component planned.⁸⁴

Hotels and apartments simply provide a higher return per square foot for developers in the current market and if allowed to build any use, nearly all will naturally choose the use with the highest return. As a result, despite a high demand for office space, the intended third central business district for New York is rapidly becoming a bedroom community.

COMPANIES TURN TO M-ZONES TO FIND OFFICE SPACE

With commercial zones in areas like Downtown Brooklyn and MX zones in neighborhoods like Williamsburg producing new apartments and hotels, companies are increasingly turning to manufacturing zones to find office space. Manufacturing zones and the seldom used C7 and C8 zones designed for amusement parks and auto-body shops are the only zones in which commercial uses do not have to compete with residential uses.

In Manhattan, some of the last tracts of M

Private Sector Jobs in NYC by Borough (QCEW 2013)

60% Manhattan

15% Brooklyn

15% Queens

7% Bronx

3% Staten Island

1000 Dean Street in Crown Heights. Located in M1-1 zoning, the 137,000 former Studebaker factory has been renovated into office and light industrial space for creative economy businesses.

zoned land are in the Flatiron district from 23rd to 31st Streets between 5th and 7th Avenues. The large loft-style buildings in the neighborhood, protected from residential development pressure, fostered the growth of the “Silicon Alley” tech startup sector that has become a growing and highly value part of the city’s economy.⁸⁵ Fortunately, this area was not re-zoned for residential development and as a result houses a wide variety of companies in class B office space.

But the days of abundant office space for growing tech companies in Flatiron appear to be over. Increasingly high demand and competition for office space in the area have driven prices up 44% from 2010-2013 to nearly \$65 per square foot.⁸⁶

With Flatiron and Chelsea increasingly out of reach for smaller firms and startups, companies have started to turn to Brooklyn and Queens in search of more affordable office space. And with almost no new commercial space being built in Downtown Brooklyn or the MX zones, the search for office space is beginning to center on the manufacturing zones.

The two most high profile examples of this trend are the recent sale of the Jehovah’s Witnesses properties in DUMBO (located within M1-6 zoning) for \$375 million to a partnership of Kushner Companies, RFR Holding, and LIVWRK Holdings⁸⁷ and the purchase of a share of the enormous Industry City site in Sunset Park (located in M3-1 zoning) by Jamestown Properties, the developer known for Chelsea Market in Manhattan.⁸⁸ Both projects are looking to target their spaces to “creative economy” tenants in technology, media, and design.

This trend of developers and companies turning to manufacturing zones in Brooklyn and Queens for office space is accelerating rapidly.

- Amazon.com recently opened a 40,000 square foot photo and video studio in the Greenpoint-Williamsburg IBZ, with a spokesman stating “It’s going to be a mecca, we hope, for creative talent.”⁸⁹

- In April 2014, the renovated Studebaker factory at 1000 Dean Street in the M1 zoning of Crown Heights opened its doors to “creative” and light manufacturing tenants.⁹⁰

- In May, internet video company Livestream occupied a four story loft building in East



Williamsburg within the North Brooklyn IBZ.⁹¹ Livestream’s founder told the New York Times that “nearly half of his employees live in Greenpoint, Williamsburg or Bushwick and he believes that the future of his work force is here,” and industrial broker Christopher Havens told the paper that “People live here, and they want to work here. But they can’t, because there’s no space.”

- In June, the Standard Motors Building in Long Island City sold for \$110 million, nearly tripling in value since 2008 and illustrating just how strong demand for office space in these neighborhoods has become.⁹²

- In July, Vice Media announced a move to a 60,000 square foot industrial building in Southside Williamsburg, still zoned M3-1, where the company will invest \$20 million in renovations,⁹³ and online annotation company Genius announced a move to a new 43,000 square foot home in the manufacturing zone of Gowanus.⁹⁴

On top of all of this activity, there are also plans on the drawing board for two new office developments within in the Greenpoint-Williamsburg Industrial Business Zone. At 87 Wythe Ave, Cayuga Capital is planning a new office building⁹⁵ and at 19 Kent Avenue, Heritage Equity Partners is planning a mixed office-retail-community facility complex that will occupy an entire block.⁹⁶ However, both developments are highly constrained by the M1-2 zoning that permits only 2.0 FAR. As a result, Cayuga’s building (the only one of the two for which renderings have been released), is a slender tower with small floor plates. ●

29%
growth in establishments in the outer boroughs compared to 11% in Manhattan.

Recommendation 2.

Flexible industrial-commercial new construction in Danzigerkade, Amsterdam

Creative Economy Districts

RECOMMENDATION

■ For manufacturing-zoned areas where commercial market demand has already led to a significant amount of conversion to non-manufacturing uses, a new “creative economy” special mixed use district should be established to encourage the development of productive and dynamic employment centers while also stabilizing industrial employment.

- Significantly increase as-of-right density to allow for commercial office additions to existing industrial buildings and/or the development of new loft-style flexible industrial/commercial buildings.

- Require a certain percentage of floor area remain reserved only for industrial use groups.

- Establish height caps and lot coverage requirements to encourage the development of flexible large floor plate loft-style commercial buildings rather than narrow towers.

- Require special permits for uses which can erode but also may have the potential to complement the district in certain cases (hotels, large-scale retail and entertainment, self-storage, athletic facilities, schools and other community facilities).

Note – The “Creative Economy District” concept is appropriate for only some industrial areas. Core industrial areas with significant concentrations of manufacturing and industrial jobs should be protected from competing commercial development by Recommendation 1 – Industrial Employment Districts.



Market demand for commercial space in Brooklyn and Queens for technology and creative economy businesses is rapidly growing and zeroing in on manufacturing zones. But with low densities, high parking requirement and so many competing uses like hotels, mini-storage, and malls allowed, the current manufacturing zoning is far from ideal for development of new space.

How can the City best harness the growing energy of the creative economy to build dynamic employment districts for the 21st century?

In manufacturing-zoned areas where significant commercial conversions have already taken place, a new type of special zoning mechanism needs to be designed to encourage a mix of high-tech manufacturing, creative industries, and commercial office space.

Establishing “Creative Economy Districts” in addition to “Industrial Employment Districts” would unleash commercial and industrial growth and transform our manufacturing districts into “Engines of Opportunity.” These productive sectors would no longer be hindered by competition with incompatible uses like hotels and malls, or blocked-out by unproductive warehousing of property in hope of future residential rezoning. With the additional density, property owners would gain much more lucrative development opportunities than under the current zoning while still preserving these districts as employment centers.



Old American Can Factory

From 2003-2010, the Old American Can Factory in Gowanus was rehabilitated into a mixed-use center of creative economy employment. The 130,000 square foot complex is home to over 300 employees in dozens of small businesses in design, the arts, publishing, architecture, energy management systems, printing, music equipment, and sound recording.

The Old American Can Factory is located in a C8 zoning district which permits the full range of commercial activities, some community facilities, and light manufacturing.

Although intended to support automotive businesses, the combination of allowable uses in C8 zoning has allowed The Old American Can Factory to serve as a successful commercial model for how light manufacturing and creative production can be incubated, supported, and expanded. The facility is evidence of how industry and culture can not only coexist, but be mutually reinforcing. ●



3.



How Do We Promote A Diversity Of Uses?

New York’s 1961 manufacturing zones are no longer up to the task of maximizing productivity and employment. They neither protect our industrial sector nor encourage the full potential of innovative new sectors.

But while this report has described in detail how to turn these districts into “Engines of Opportunity,” it is also essential to recognize the strong imperative to find areas suitable for increasing the housing stock. When considering areas of the city to target for added residential density, it is worth considering how this can be accomplished while also retaining or adding capacity for productive commercial and light industrial space.

While we would strongly advocate preserving the core industrial areas solely for industrial and in some cases commercial development, there are some areas under M and MX zoning that already have a mix of residential, commercial,

The large-scale residential developments that have replaced industrial properties are often entirely residential, lacking even ground-floor retail.



In all of the MX zones across the City, residential lot area increased by 71% from 2005-2014 while industrial and manufacturing lot area fell by 34%.

and industrial uses and could benefit from additional activity of all types.

CURRENT “MX” ZONE DOESN’T LEVERAGE ECONOMIC DEVELOPMENT OPPORTUNITIES

As discussed earlier in the report one of the challenges of our zoning framework is that both commercial zones and the “MX” special mixed use district allow residential development as-of-right. And in the current context of New York City, residential development brings a premium return compared to other uses.

This situation has led to a contradiction in which commercial and industrial property is in high demand by businesses, but little new supply is being added.

With the establishment of the MX Special Mixed Use District in 1997, the City recognized that many types of light industrial use are in fact compatible in close proximity to residential. MX allows light industrial or commercial office uses to locate within the same building as residential, providing that the non-residential uses are located on floors below the residential. The zoning also allows up to 49% of a residential unit to be used for a “home occupation.”

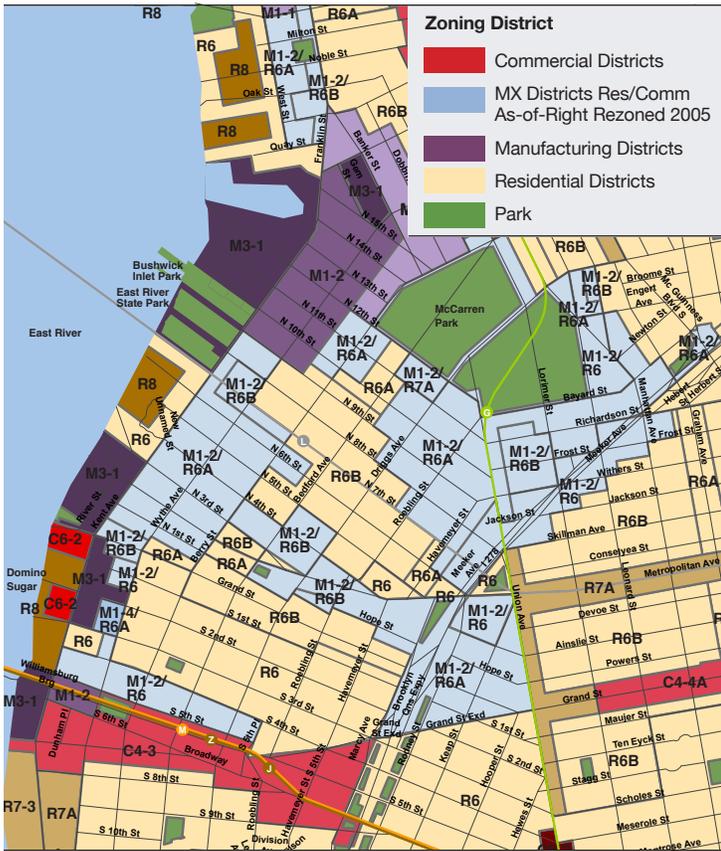
That stated purpose of the MX zone is “to encourage investment in mixed residential and industrial neighborhoods by permitting expansion and new development of a wide variety of uses... to promote the opportunity for workers to live in the vicinity of their work...[and] to promote the most desirable use of land in accordance with a well-considered plan.”

The creation of the MX zone acknowledged the value of mixed-use neighborhoods and tried to find a solution that could increase the residential capacity while maintaining their dynamism. At the time, the “MX” zone was innovative in its allowance for as-of-right development of a mixture of residential, commercial, light industrial, and community facility uses within the same building.

But because MX does not require a mixture of uses, the economics of real estate have produced almost exclusively residential development and in the process pushed out other uses. Due to the marked premium in price per square foot offered by residential development in comparison to other uses, it is not surprising that this has been the case.

In all of the MX zones across the City, residential (including the “mixed use” category

Williamsburg - Rezoned MX 2005 Current Zoning



for residential with ground floor retail) lot area increased by 71% from 2005-2014 while industrial and manufacturing lot area fell by 34%. Commercial lot area within the MX zones actually increased 50% from a low starting point, but the vast majority of these commercial uses are not offices but conversions of ground-floor industrial buildings into retail and restaurants to serve the new residential population.

2005 REZONING OF WILLIAMSBURG

One of the neighborhoods where these dynamics have played out over the longest period of time is Williamsburg and it therefore serves as a useful place to understand how these zoning districts interact with the real estate market.

In the 2005 rezoning of Williamsburg-Greenpoint, roughly 190 acres of land in Williamsburg was rezoned from either the Northside Special Mixed-Use District or manufacturing zoning to the “MX” designation, allowing residential development as-of-right.

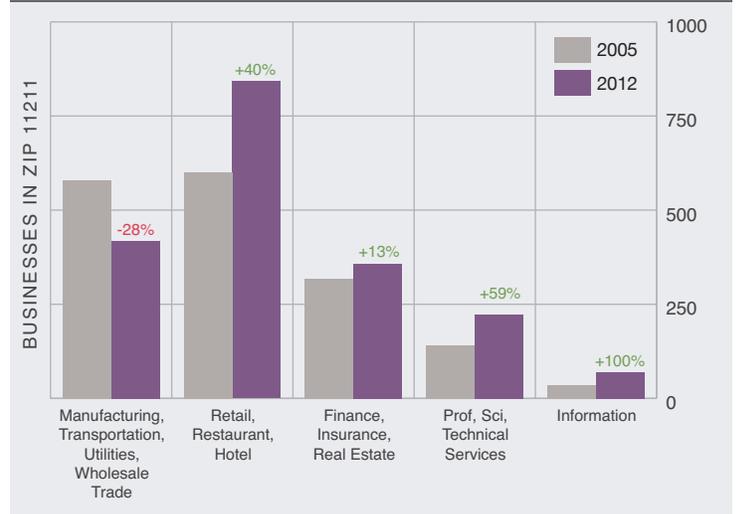
Since 2005, industrial land within the areas

Williamsburg Brooklyn (ZIP 11211) Economic Change 2005-2012



Annual Payroll in 1,000's, US Census Bureau – County Business Patterns

Williamsburg Brooklyn (ZIP 11211) Change in Number of Businesses by Selected Sectors



rezoned to MX has declined by 46 acres or over 55%. Residential use has correspondingly increased by 40 acres, or over 110%.

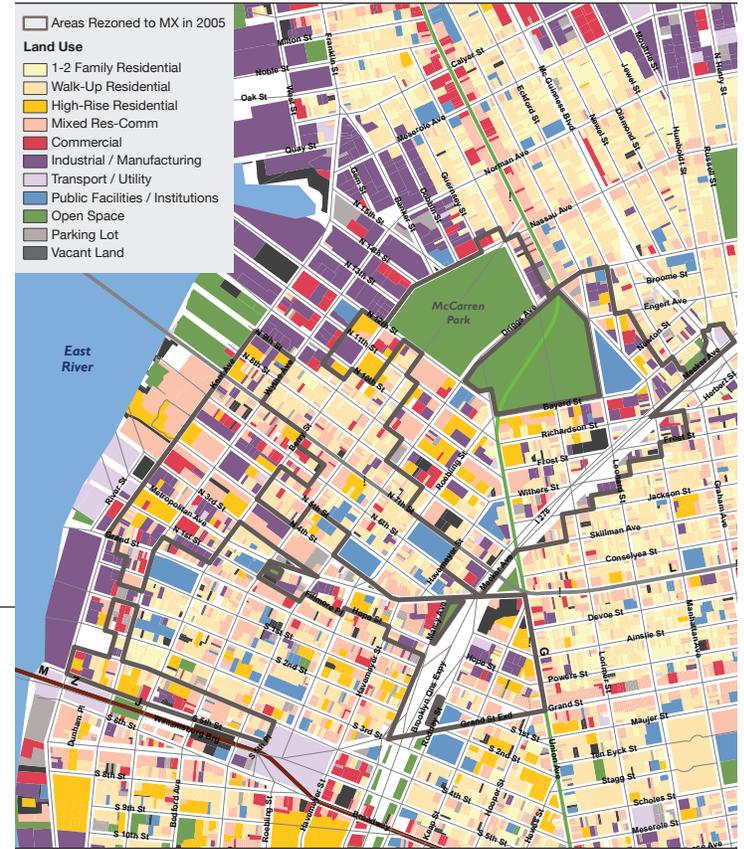
Williamsburg’s experience with “MX” zoning demonstrates that in areas with hot real estate markets, allowing all uses as-of-right leads residential – the “highest and best use” – to dominate. This change has affected the local economy in profound ways.

From 2005-2012, the number of retail, restaurant and hotel businesses increased by 40%, while the number of professional, scientific, and technical services business increased by 59% and “information” businesses increased by 100% (but from a low baseline).

Williamsburg Rezoned to MX in 2005 Land Use in 2005



Williamsburg Rezoned to MX in 2005 Land Use in 2014



But these gains were offset by a decline of 28% in the number of industrial businesses. Overall, total employment and payroll in zip code 11211 is virtually flat during this period despite the boom in new development.

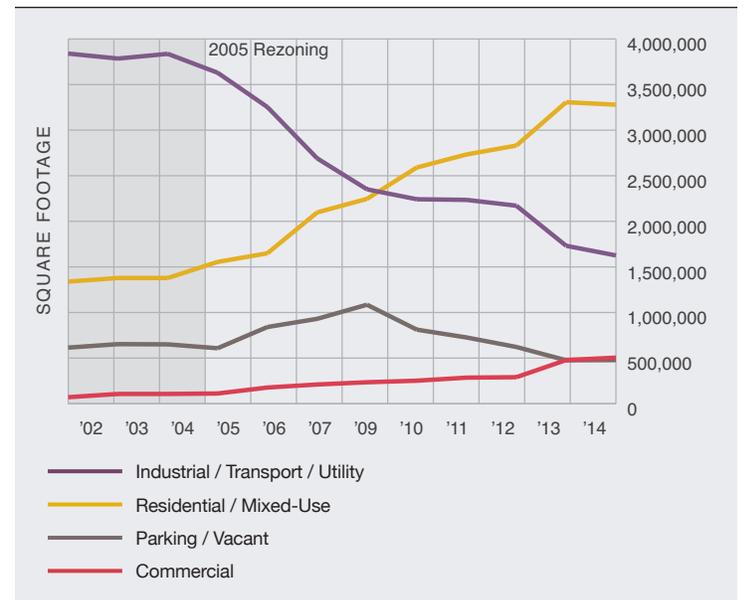
If one of our public policy goals is to grow the local economies of the outer borough neighborhoods and create new employment centers while permitting some residential growth, the “MX” zoning approach needs to be re-thought.

Traditional mixed-use industrial-residential-commercial neighborhoods have a unique dynamism that has made them tremendously popular. These kinds of diverse walk-to-work neighborhoods with a variety of flexible spaces for a range of different industries are often held up as the ideal urban environment for the 21st century.

While other cities are using a full toolbox of zoning and incentives to create mixed-use neighborhoods, New York’s “MX” zoning is actually undermining the mixed-use character that made these neighborhoods so successful. ●

Williamsburg Rezoned to MX in 2005 Change in Land Use 2002 – 2014

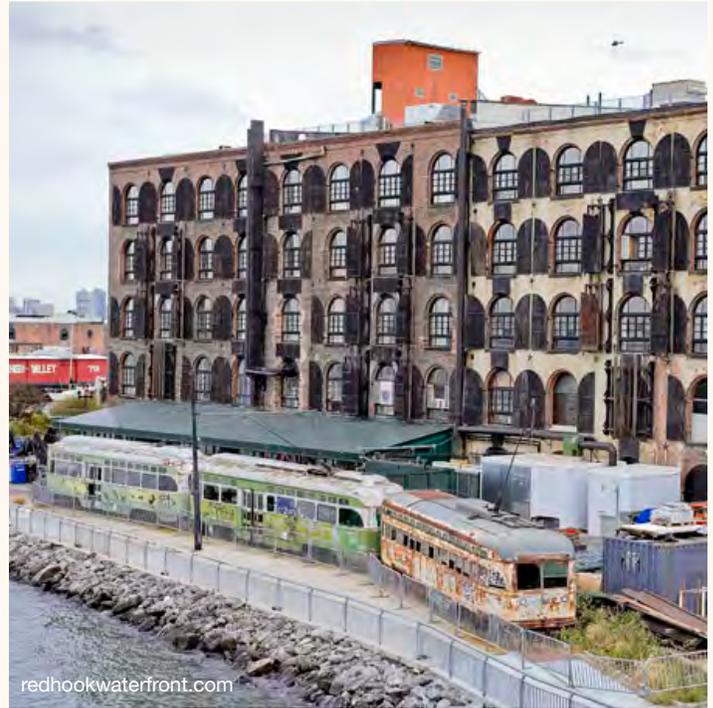
(Approximately 190 acres in total, nearly all in ZIP code 11211)



Residential/ Commercial/ Light Industrial Mixed Use Zones

RECOMMENDATION

- Establish new vertical mixed-use zoning designations that require a mixture of residential development with commercial and/or high performance industrial. Such districts can provide a new tool for facilitating additional residential density while also maintaining space for important job-generating businesses.
 - One such possibility may be to rezone to allow residential development but require 1 FAR to be set aside for high-performance light industrial use groups.
 - It may also be possible to strongly incentivize, rather than require, a mixture of uses by maintaining the current MX framework while tacking on additional employment oriented commercial and/or light industrial floor area that does not count against the total allowable FAR.
 - True mixed-use industrial-residential zoning might be especially well-suited for certain areas currently zoned M where there is consensus that new residential development may be appropriate, to improve the existing MX zones, and for upzoning of potential residential corridors that are currently industrial in character.
- Study the potential of a more flexible mixed-use preservation mechanism that would permit the transfer of residential development rights within mixed use districts in order to facilitate the preservation of industrial space.
- Explore incentives for “stewardship ownership” by mission-driven non-profit owners, as described in Recommendation 1 of this report, including the potential of such owners in managing permanent affordable industrial space within a mixed-use district.
- A different type of vertical mixed-use zone should also be developed for intended commercial zones like Downtown Brooklyn, requiring a certain percentage of FAR be reserved for commercial office space at the base of the building.



With the “MX” zone clearly failing in some cases to nurture a dynamic mixture of uses, we must explore new, more innovative ways to encourage diverse and equitable neighborhood growth.

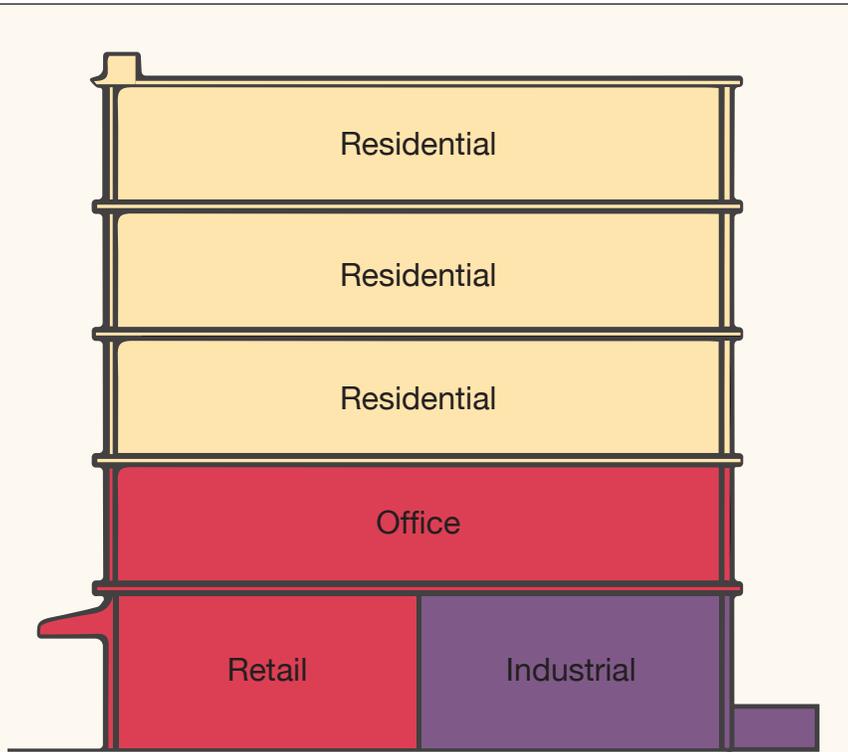
Vertical mixed-use zones, with a mixture of uses required or strongly incentivized, are a potential solution for increasing housing capacity while also ensuring that job-creating businesses retain space.

Although examples of existing vertical mixed-use zones in other cities that include industrial are fairly rare, it is important to remember that this kind of mixture of uses was common before modern zoning codes sought to enforce separation of uses.⁹⁷ Many of New York’s M zones have numerous grandfathered residential buildings interspersed among industrial buildings. Residential loft conversions in various stages of legality can also be found above active ground-floor industrial in many New York City manufacturing zones. One property owner in the Long Island City MX zone recently filed an application with the Department of Buildings for a new five-story mixed-use industrial-residential building with 25,018 sqf of residential and 11,415 sqf of manufacturing space.⁹⁸

Our regulations need to keep pace with the changes in our neighborhoods and our local economies and increasingly there are a range of companies that would prefer to cluster outside of our “central business districts.” And while the production of housing is a critical goal we also need to take

Potential Vertical-Mixed Use Layout

3200 Carbon Place at the Boulder Steelyards



Examples in Other Cities

BOULDER, CO - The City of Boulder, Colorado created an “Industrial – Mixed-Services” zone as a buffer between residential communities and core industrial areas. In “IMS-Z” zoning districts, “first floor uses are predominantly industrial in character; uses above the first floor may include residential or limited office uses.”⁹⁹ Although a very different built environment from New York, Boulder has been innovative in seeking to encourage a truly broad range of uses in new development projects.¹⁰⁰

AUSTIN, TX - In 2007, Austin established a vertical mixed-use zoning overlay district that provides strong incentives for developers to include retail and office space on the ground floor and second floor. In exchange for including a mixture of uses, developers are exempt from limits on FAR, lot coverage, and setbacks. Parking requirements are also reduced by 40%.¹⁰¹ Zoning districts that strongly incentivize vertical mixed-use construction are becoming increasingly common in cities across the nation.

WASHINGTON DC - As part of its recently released “Creative Economy Strategy,” Washington DC is currently exploring the creation of a new zoning district that would allow residential uses above ground floor “creative production” uses.¹⁰²

advantage of this interest on the part of small companies and individuals to create new commercial and light industrial space and find ways of supporting the texture and economic activity of our diverse neighborhoods.

It may not be possible in all cases to accommodate a mixture of residential and industrial uses within every individual building. When considering new required mixed-use zoning districts, it is also worth exploring models that allow the transfer of residential development rights among parcels when manufacturing space is permanently preserved. Such a mechanism could be more flexible than zoning lot mergers by allowing transfers to appropriate receiving sites.

Blocks within a mixed-use district that are more likely to support residential development could be designated as receiver sub-districts for new residential density while blocks that are more strongly industrial in character could be designated as generator sub-districts and preserved for industrial. Industrial sites that generate the transferred density, in order to complete the transaction, would ideally be required to engage in a preservation program either through deed restriction or an agreement with an industrial land trust.

This kind of strategy, which looks to ensure a mix of uses across a district instead of in one building, will require further study but is a potentially promising solution to maintaining truly mixed-use neighborhoods. ●

Notes

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