



SUNSET PARK GREEN RESILIENT INDUSTRIAL DISTRICT



A REPORT BY COLLECTIVE FOR COMMUNITY, CULTURE, & ENVIRONMENT
for UPROSE & POWWA
SEPTEMBER 9, 2019



PREFACE

UPROSE commissioned the Collective for Community Culture and Environment (CCCE) to: 1. Analyze the impacts of zoning changes proposed by Industry City, which would expand luxury commercial development on Sunset Park’s industrial waterfront, 2. Provide technical assistance in creating an alternative proposal, the Green Resilient Industrial District (GRID). The GRID proposal addresses climate resilience, mitigation, adaptation and a Just Transition. The evaluate of the Draft Environmental Impact Statement (DEIS) for the land use actions, awaits the release of the DEIS and the Special Sunset Park Innovation District zoning text.

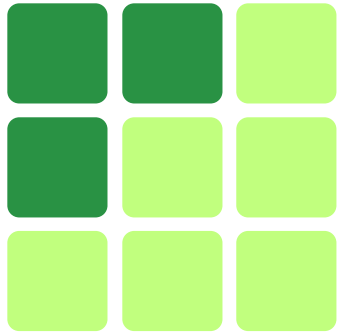
This report is the compilation of data analyses, interdisciplinary research, and plans and policies related to Sunset Park, climate adaptation, and green industry and clean energy sectors. The following report was prepared by CCCE with edits provided by UPROSE.

The report consists of three sections:

1. An analysis of existing conditions: land use, demographics, housing and industrial real estate conditions, industrial base and labor force. Models of sustainable industrial sectors and policies to address climate change and environmental justice consistent with the existing maritime and industrial character of Sunset Park.
2. A geographic framework of implementation strategies to facilitate a Green Resilient Industrial District in Sunset Park (GRID).
3. A comparison of GRID and Industry City proposals and recommendations

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Sunset Park is a strong, ethnically diverse working-class neighborhood that has provided housing options and work opportunities to both long time New Yorkers and new immigrants. It also hosts New York City's second largest Industrial Business Zone (IBZ), many of whose employees live in the neighborhood and surrounding communities.

In recent years, rising prices for housing and industrial space is threatening the affordability of the neighborhood for current residents and businesses. Market pressures from the gentrification of adjacent Brooklyn neighborhoods are exacerbated by the influx of high tech, design, entertainment and retail uses such as Industry City. Many developers see Sunset Park's industrial waterfront as a place to change into commercial spaces that do not support the local workforce or prepare the waterfront for climate events.

The Industry City rezoning, if approved as proposed, will likely result in greater proliferation of commercial development in the manufacturing zones in Sunset Park. This will result in gentrification and loss of social cohesion as white-collar residents move into the neighborhood. This can result in even greater price increases and displacement pressures similar to those experienced in cities such as San Francisco and Seattle after they enacted similar rezoning. The resulting displacement will hurt the most environmentally and economically vulnerable residents and businesses.

A BETTER ALTERNATIVE: GRID

Industry City's proposed rezoning is not "innovative" or needed in Sunset Park. A number of tech hubs are already in place or planned throughout New York City and there is certainly no lack of commercial, retail, hotel, or entertainment spaces in Brooklyn. In contrast to the Industry City proposal, this report proposes the creation of a Green Resilient Industrial District (GRID) - which would foster sustainable industrial development and create a truly "innovative" district that would benefit Sunset Park's industrial waterfront and protect the Sunset Park community while responding to

New York City's climate challenges.

Sunset Park has the opportunity to become New York City's first Green Resilient Industrial District. Based on the goals of all community and City plans for Sunset Park, the GRID would support maritime and industrial development that integrate climate resilience and adaptation measures and provide good local jobs and workforce training. The development of a Sunset Park GRID could become a national model for local grassroots planning and implementation of a Just Transition economy. GRID can operationalize many goals of the nationally proposed Green New Deal, New York State passed Climate Leadership and Community Protection Act (CLCPA), and the green development goals called for by climate justice advocates.

Much of Sunset Park is industrially zoned. It is New York City's largest Significant Maritime and Industrial Area (SMIA) as well as an Industrial Business Zone. Many neighborhood blocks are designated as Opportunity Zones. The industrial waterfront is largely publicly owned with vacant land, and the deep water and rail access can be developed as a multi-modal hub. The industrially zoned areas in Sunset Park provide over 12,000 jobs. There are many construction, food, apparel warehousing, e-commerce as well as green industrial businesses including Sims Municipal Recycling Center, Fabscrap and others that are currently planned. Working together, these businesses could further the synergy accruing from the city's first dynamic center for green industrial development.

The GRID will: 1. Leverage the existing green and industrial resources and public investments in Sunset Park, 2. Harness additional targeted technical and financial assistance to improve air quality and local environmental conditions, and 3. Create new green jobs such as those in energy retrofits and green industries, and 4. Provide workforce development to make sure that these benefits accrue to New York City workers, which would support the goals of the Mayor's 80X50 plan, New York City Climate Mobilization Act (CMA), Freight NYC and the CLCPA.

HOW IS THE SUNSET PARK GRID STRUCTURED?

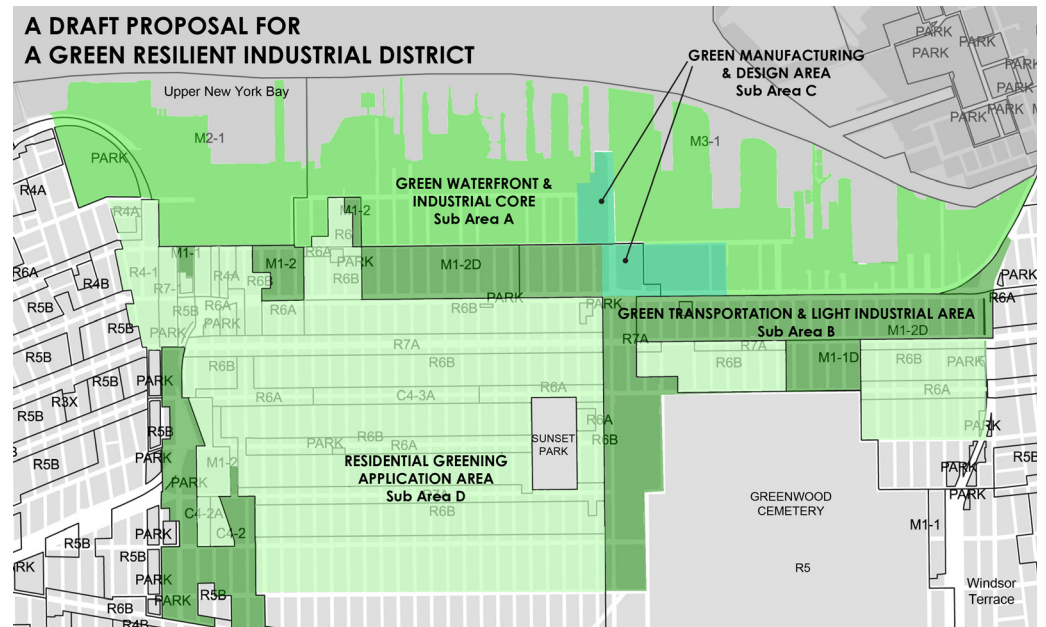
The proposed Sunset Park GRID encompasses all of the industrially zoned land in Sunset Park including Industry City (current and proposed expansion), and upland residential areas up to 9th Ave. It is a comprehensive programmatic overlay and requires zoning actions. It targets technical and financial assistance to apply the concepts and strategies of Green Ports, Eco-Industrial Park and Resource Recovery/Circular Economy to Sunset Park. The principles and goals of Environmental Justice, Workforce Development, Climate Resiliency and Just Transition apply to development in all four Sub Areas.

The goals of the GRID mirror crucial policy goals of New York City and the local community:

- Preserve the maritime and industrial character of the Sunset Park waterfront
- Retain and create well-paying working-class jobs that that respond to the educational and skill levels of existing workforce
- Support green industrial innovation that capitalizes on the unique synergies of the port, green transport, resource recovery and construction, automotive, food and other local businesses
- Promote climate resiliency and Just Transition through circular industrial economy and environmental justice principles and practices

The GRID is divided into four sub-areas based on geography, land use and zoning. The Sub-Areas are:

- A Green Waterfront and Industrial Core (Sub Area A)
- A Green Transportation and Sustainable Light Industrial Area (Sub Area B)
- A Green Manufacturing and Design Area (encompassing the proposed Industry City rezoning) (Sub Area C)
- A Residential Sustainability Pilot (Sub Area D)



SUMMARY OF OVERALL RECOMMENDATIONS

Establish a multi-stakeholder organization to guide, implement and promote the GRID.

- Designate Sunset Park as New York City's first Green Resilient Industrial District (GRID), a programmatic overlay that incorporates circular economy, eco-industrial and environmental justice principles.
- Solicit input from the business and larger community to create more detailed design and implementation strategies for GRID.

The Department of City Planning to:

- Reject the Industry City proposed Special District rezoning
- Preserve and enforce existing industrial zoning and limit large retail and offices to accessory uses.
- Suspend rezoning of properties along or over rail lines until long-term needs of the Sustainable South Brooklyn Marine Terminal (Green Port) and Freight NYC are determined.

Incorporate the principles of climate adaptation and sustainability in the rehabilitation and development on City-owned property in Sunset Park.

New York City Economic Development Corporation (NYCEDC) to:

- Designate space and issue Request for Proposals (RFP) for green industries and retrofit businesses in all City owned properties
- Review the impact of ongoing development at the waterfront and potential for water and/or rail transport in Sunset Park.

Provide New York City and/or State Tax incentives to property owners who provide longer term leases at affordable rents and hire local workers.

Create a Manufacturing and Industrial Energy Exchange (MIEEx), a training and research center, modeled after the Building Energy Exchange (BEEEx), in Sunset Park to:

- Develop programs that assist businesses in greening operations and practices
- Provide workforce training in green building trades, off shore wind and vehicle electrification and community engagement and training.
- Advocate for government commitments to provide technical and financial support for Sunset Park business and property owners to reduce their carbon emissions through:
 - Clean energy infrastructure
 - Greening supply chains through logistics consolidation
 - Carbon neutral shipping
 - Pollution prevention by improving industrial performance
 - Expansion of the Department of Transportation's Hunts Point Clean Trucks Program to Sunset Park
 - Support for UPROSE's work with automobile related businesses to upgrade their operations and reduce their environmental footprint

Provide training and financial assistance through existing City and State programs to Sunset Park's:

- Construction businesses to position them to perform for the building energy retrofits required to meet NYC's Climate Mobilization Act goals.
- Automotive businesses to adopt pollution prevention practices and to gain expertise in repairing and servicing electric and hybrid vehicles.
- Food production industry to adopt waste reduction and circular economy practices.

The New York City Department of Transportation (NYC DOT) and the New York City Department of Environmental Protection (NYC DEP) to:

- Work with community stakeholders to complete the Sunset Park section of the Brooklyn Greenway
- Provide assistance to businesses and residents in identifying locations for siting trees, bioswales and permeable surfaces as proposed in the Greenway Plan.

The New York State Department of Conservation and New York City Office of Environmental Remediation to:

- Implement Sunset Park Brownfield Opportunity Area (BOA) recommendations in collaboration with UPROSE and other community stakeholders

Provide services, training and funding to businesses to reduce environmental impacts and improve public health

- Energy efficiency assistance through New York State Energy Research and Development Agency (NYSERDA)
- Pollution prevention practices through the New York State Pollution Prevention Institute

City University of New York (CUNY), State University of New York (SUNY) and NYSERDA to:

- Provide technical and financial assistance to community organizations and local businesses for solar and wind installations.

Multi-stakeholder organization to:

- Encourage Sunset Park public and private institutions to adopt green practices

Various City agencies to:

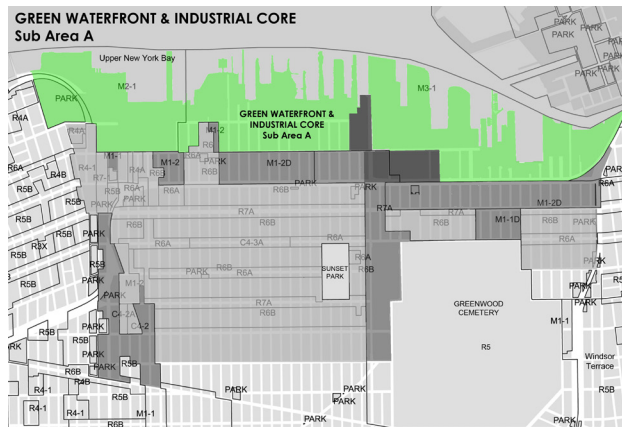
- Engage local public and private institutions, community organizations, and individual residents in energy efficiency, waste reduction and renewable energy projects through public education and community campaigns

Focus Opportunity Zone Funds as well as New York State and City financial and tax incentives in industrial zones on new green resilient industrial development and the preservation and greening of existing industries in the Sunset Park GRID.

Target a significant portion of the 35-40% of incentives and funds dedicated to frontline communities as provisioned in the Climate Leadership and Community Protection Act to the Sunset Park GRID.

SUMMARY OF RECOMMENDATIONS FOR SUB AREAS:

SUB AREA A



Preserve the existing industrial uses and zoning in this subarea so they may function integrally with the reactivated, greened waterfront with a caveat:

- Allow commercial and retail development only as accessory to industrial uses.

Develop Sustainable South Brooklyn Marine Terminal (SSBMT) as a green industrial accelerator by Incorporating all the best practices for a Green Port.

- Link port activities with both existing and new businesses on the waterfront and upland areas.
- Support offshore wind staging, production and transport facilities.
- Require use of renewable energy on site and electric vehicles by the port operator.
- Support the ongoing role of the Sunset Park Task Force in the planning and implementation of the SSBMT.

Preserve existing City-owned land and facilities for maritime, port related and other green industrial uses and for potential port expansion, including upland sites and rail infrastructure.

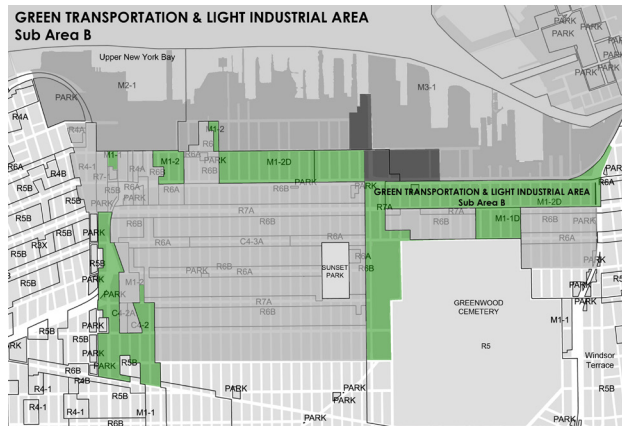
Support Sims Municipal Recycling Facility (MRF) expansion plans and Freight NYC plans for modernization and expansion of rail lines and freight facilities.

Support the creation of new public and private freight distribution hubs that:

- Incorporate green construction
- Use process and operations best practices including the renewable energy, rail and electric delivery vehicles for last mile delivery.

NYCEDC to offer preferential marketing for green industries and those businesses that hire locally and offer wages that reflect prevailing industry standards and provide paths to upward mobility.

SUB AREA B



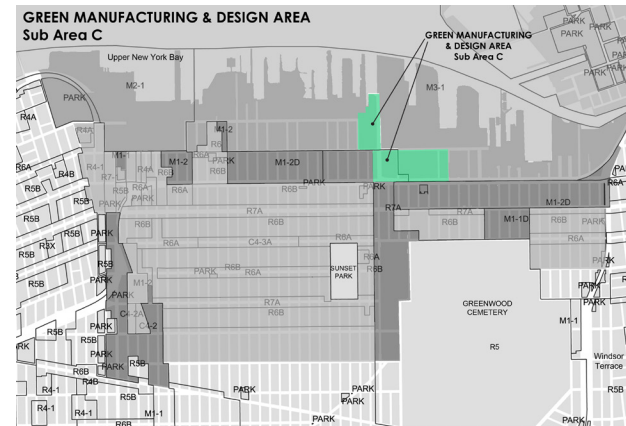
Preserve existing industrial uses and zoning

Limit rezoning and redevelopment of properties for residential or mixed use along or over rail lines in this sub area until the long term needs for Freight NYC are determined

Link industrial areas to the Sustainable South Brooklyn Marine Terminal and other waterfront facilities

Evaluate the potential for installing solar collector “trees” or canopies over the rail lines and rights of way and parking lots.

SUB AREA C



The City Planning Commission must preserve existing zoning and

- Limit retail and commercial uses as accessory to industrial uses
- Limit eating and drinking establishments and entertainment facilities
- Prohibit hotels in M2 or M3 districts
- Require at least 50% of the area in Industry City to be occupied by industrial uses

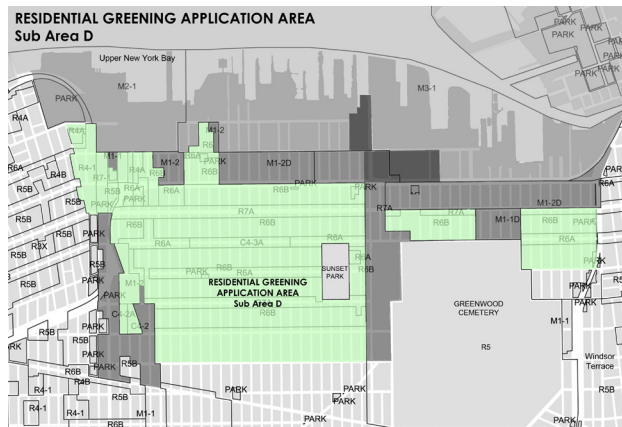
Green uses defined in terms of operations, design and products should occupy a significant proportion of uses in this area.

Connect green businesses in this sub area with technical assistance and financial incentives through the South Brooklyn IBZ and NYSERDA.

Redesign Industry City’s Innovation Lab with key goals of sustainability and climate resiliency and Just Transition.

- Focus on the existing marine and industrial anchors in Sunset Park
- Connect these businesses to innovation through educational and research based organizations and businesses
- Place residents in well-paid jobs with ladder for growth.

SUB AREA D



Engage residents in energy efficiency, waste reduction and renewable energy projects including community ownership models like UPROSE's Community Solar Cooperative.

- Provide targeted information on the GRID with a focus on climate change awareness and resilience.
- Train and fund community and public organizations to assist in these campaigns.

Apply and showcase the newly acquired energy retrofit and renewable energy expertise of local construction industries to Sunset Park residential and commercial areas.

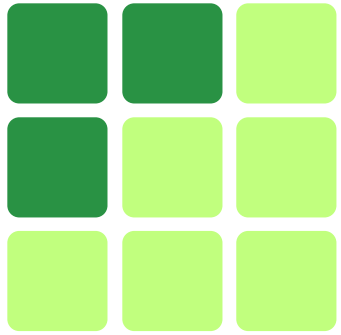
Promote waste reduction and Circular Economy measures such as composting, sharing economy and swap/trade centers by working with resource recovery and reuse businesses.

The full report contains more detailed and specific recommendations pertaining to each sub-area.

CONCLUSION

In establishing a Sunset Park Green Resilient Industrial District (GRID) New York City can seize an opportunity to re-envision a comprehensive plan for the industrial waterfront that integrates climate resilience, mitigation, adaptation, and supports industrial economic development. The Industry City Innovation District and rezoning proposal would only perpetrate gentrification, loss of social cohesion, disparity, and climate risk. The GRID alternative is not a simple rejection of the Industry City economic development model. While green tech and green design businesses and academic and research uses are important components of a GRID, much of Industry City's current marketing, and its proposed rezoning to promote big box retail, entertainment and hotels, are not. Rather, GRID emphasizes the critical role that existing Sunset Park residents and maritime, industrial and manufacturing business must play for New York City to become a leader in a Just Transition to a green economy with widespread, equitable benefits. An enlightened program, accompanied by applicable government financial incentives will help New York City implement GRID.

This report shows how the creation of a GRID as a new model for economic development responds to the very real challenges facing NYC and indeed the planet in the 21st century - promoting equity and addressing climate change. The creation of a GRID is both essential and feasible. Sunset Park is uniquely appropriate to become the first Green Resilient Industrial Innovation District.



INTRODUCTION

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The Sunset Park community -- including Brooklyn Community Board 7; local elected officials, and community groups like UPROSE and POWWA, Protecting Our Waterfront Alliance - are challenging Industry City's proposed rezoning to facilitate increased floor area ratios, more retail, hotels and institutional development in support of its tech innovation hub. This report suggests a new industrial model based on sustainability, green industry, and Just Transition concepts¹ in Sunset Park, especially in its Industrial Business Zone (IBZ), as long advocated by community stakeholders. It introduces an alternate vision for Sunset Park, the Green Resilient Industrial District (GRID), that can develop climate adaptation measures and a Just Transition. The GRID would leverage existing assets and investments towards a plan that benefits residents and businesses locally and throughout New York City.

The Sunset Park Waterfront and IBZ is an active industrial district growing in both innovative and traditional industrial sectors. It is New York City's largest Significant Maritime and Industrial Area (SMIA) in the Waterfront Revitalization Program, which sets forth City's waterfront policy.² For the past decade, City and locally generated policy documents have envisioned the area as a center for maritime and green industry. The New York City Economic Development Corporation's (NYCEDC) recent decision to lease the South Brooklyn Marine Terminal (SBMT) to the Red Hook Terminal Port for redeployment as a port represents one step forward in realizing this vision. The vision integrates retention of existing industrial space, creation of working-class jobs, attracting new industrial uses and jobs, and addresses climate change, resiliency and the changing global. Offshore wind assembly and staging and sustainable recycling facilities are just a few examples of important elements of a new industrial district.

Construction, manufacturing, warehousing, transportation and waste industries that dominate the Sunset

¹ Just Transition is a vision-led, unifying and place-based set of principles, processes and practices that build economic and political power to shift from an extractive economy to a regenerative economy. This means approaching production and consumption cycles holistically and in a waste free manner. The transition itself must be just and equitable, redressing past harms and creating new relationships of power for the future through reparations. If the process of transition is not just, the outcome will never be. Just Transition describes both where we are going and how we get there - Climate Justice Alliance.

² The major criteria used to delineate these areas generally include: concentrations of M2 and M3 zoned land; suitable hydrographic conditions for maritime related uses; presence of or potential for intermodal transportation, marine terminal and pier infrastructure; concentrations of water-dependent and industrial activity; relatively good transportation access and proximity to markets; relatively few residents; and availability of publicly owned land - NYC Dept. of City Planning, Waterfront Revitalization Program.

**OUR MANUFACTURING ZONES CAN SERVE
THE CLIMATE JOBS OF THE FUTURE!**

"The Sunset Park waterfront provides ample opportunity to encourage sustainable business practices by attracting tenants who promote environmentally-sound business models and produce locally consumed goods."
- Sunset Park Waterfront Vision Plan

"There is an opportunity to build upon the success of existing green businesses in the BOA to brand the area as a center for green industry in New York City."
- Sunset Park Brownfield Opportunity Area Study

"Consider additional measures to strengthen the Southwest Brooklyn Industrial Business Zone (IBZ) and preserve affordable manufacturing and industrial space, such as adoption of an Industrial Employment District (IED)."
- Sunset Park 197-A Plan

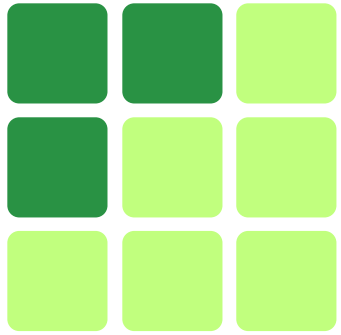
"Land use policies that protect manufacturing must be maintained and enforced."
- Sunset Park Greenway Conceptual Plan

LOCAL JOBS 🌻 **SUSTAINABLE ECONOMY** 🌻 **LIVABLE CLIMATE**

UPROSE **P.O.W.W.A.**
Protect Our Working Waterfront Alliance

Park industrial landscape are essential to the City’s ability to address the challenges of climate change. A green industrial sector that focuses on the retention and growth of the industrial sector in Sunset Park can address the two-fold goal of addressing climate change and promoting quality working class jobs with opportunities for professional advancement.

In Summer 2019, the political will to address climate change has aligned at the city, state and federal levels. The “Green New Deal” proposed to Congress promotes green industry as a solution to reach greenhouse gas (GHG) reduction goals in all sectors while fostering economic justice with living wage green jobs. New York State and City join other state and local leaders in assuming the US pledge to the Paris Agreement on climate change with a powerful commitment to reduce GHG emissions 80% by 2050 from 2005 levels. The New York State Legislature recently enacted the New York State Climate Leadership and Community Protection Act (CLCPA), hailed as the most progressive climate-equity policy in the nation. New York City’s Climate Mobilization Act (CMA) also mandates carbon emission reductions in its building sector. Sunset Park is the ideal place to become an implementation site for these policies and visions.



CONTEXT

POLITICAL AND POLICY CONTEXT

After years of calling for sustainable and green industrial development in New York City and in Sunset Park, the political and policy context has emerged to actualize those goals. In the last year, several City, State, and the Federal policies have been proposed or enacted that address the climate crisis and sets the stage for addressing the need for climate resilience and good jobs in Sunset Park.

The April 2019 **New York City Climate Mobilization Act (CMA)** requires that medium and large buildings reduce their greenhouse gas emissions by 40% by 2030 and 80% by 2050. In addition, the Act includes the following laws:

- Require green roofs and solar photovoltaic on some new construction and renovation.
- Assess building energy performance with standardized metrics.
- Establish clean energy financing tools for building owners.
- Require the New York City Department of Buildings to include wind energy as a renewable energy technology.

The June 2019 **New York State Climate Leadership and Community Protection Act (CLCPA)**:

- Require Statewide reduction of greenhouse gas emissions by 85% by 2050.
- Ensure that at least 35% of investments in clean energy and energy efficiency are invested in disadvantaged communities.
- Require prevailing wages in projects resulting from CLCPA.
- Establish a Climate Justice Working Group and a New York Climate Action Council.
- Require State agencies to assess and implement strategies to reduce greenhouse gas emissions
- Make investments in renewable energy

The March 2019 **Green New Deal** - proposed United States legislation will address climate change and economic inequality. It will:

- Create 20 million new jobs by transitioning to 100% clean renewable energy by 2030 and investing in transit, sustainable agriculture, conservation and restoration of infrastructure.
- Implement a Just Transition by supporting and empowering the most climate change impacted communities and workers including those displaced by a move away from fossil fuels.
- Promote public, community and worker ownership of the energy systems.
- Move research and development funds from fossil fuels to renewable energy.
- End energy extraction activities.
- End subsidies for fossil fuels and impose a greenhouse gas tax.

In July 2019, Governor Cuomo announced **the largest offshore wind agreement in the United States**. The agreement includes:

- Development of 1,700 megawatts of offshore wind with a projection of \$3.2 billion economic activity and 1,600 new jobs.
- \$287 million will be invested in supportive infrastructure in the Capital Region, Brooklyn, Staten Island and Long Island.
- The State will establish:
 - The New York State Advisory Council on Offshore Wind and Workforce Development
 - A \$20 million Offshore Wind Training Institute (OWTI) and
 - A \$3 million Community and Workforce Benefits Fund (CWB) to educate, train and employ New Yorkers.

With plans for an offshore wind staging area at SBMT, Sunset Park is a logical location for training.

The **Just Transition model** is a guiding framework for the above policies. It is a set of principles, processes and practice framework developed by the Climate Justice Alliance that:

- Recognizes the existing system is a linear one that perpetrates waste, inequality, and disparity and caused climate change.
- Requires building economic and political power to move away from an extractive economy and political structure to a regenerative one.
- Approaches production and consumption in a holistic and waste free manner.
- Is just, equitable and protects worker's rights.
- Creates new power relationships and includes reparations for those impacted by climate change.
- Describes the goals process for achieving this change.

However, the opportunity for New York City to take advantage of green jobs generated from these initiatives could be jeopardized by developments like Industry City which focus primarily on office, retail, entertainment and high tech uses and price out green industrial development.

Industry City's development does not fit into the Just Transition model. Industry City's existing campus and proposed expansion is rooted in the extractive economy that only prioritizes short-term profits and compromises all consideration for community, climate, or health.

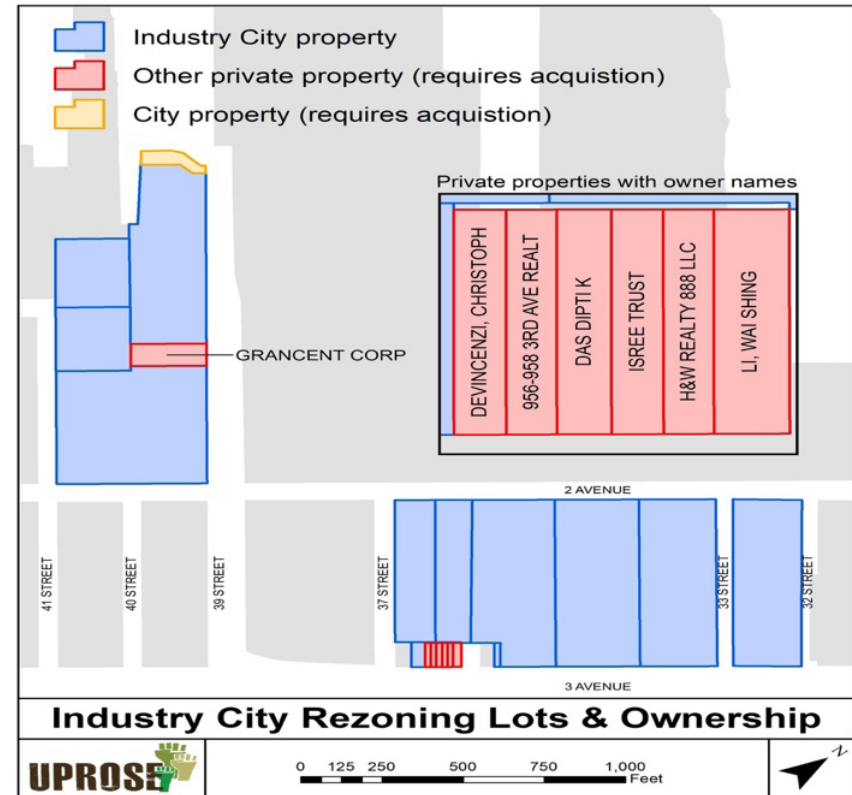
INDUSTRY CITY: HISTORY & REZONING PROPOSAL

In the 1890s, Irving T Bush built a huge intermodal manufacturing, warehousing and distribution center called Bush Terminal in Sunset Park that became fully operational around 1910. Tremendously successful, it employed nearly 25,000 workers and enabled Brooklyn to become a major international seaport.

Following the decline of urban manufacturing in the 1960s, sections of Industry City, as Bush Terminal was then called, were demolished or converted into other uses, such as a shopping mall, a federal prison, and a garment manufacturing district operated by the NYC Economic Development Corporation. By 2012, Industry City was only 66% occupied.

Investors that included: Belvedere Capital Real Estate Partners, Jamestown Properties and Angelo, Gordon & Co., purchased Industry City in 2013 and announced a \$1 billion renovation plan in March 2015. As part of the renovation plans, in 2017, Industry City proposed an expansion plan which would rezone the campus and add 3,300,000 square feet of commercial space. This led to concerns regarding the potential of the expansion to accelerate the gentrification of Sunset Park voiced by community based organizations such as UPROSE and POWWA. Given widespread community concern over these potential impacts, at the request of the Community Board 7 and local elected officials, Industry City postponed consideration of their Land Use application in March 2019, giving the community more time to discuss the proposals.

The proposed rezoning affects Industry City property and several privately-owned parcels that are proposed to be acquired by Industry City. Bush Terminal Owner LP (IC) filed a Land Use Application with the New York City Department of City Planning seeking actions to facilitate the redevelopment and re-tenanting of the Industry City complex. The project would comprise



6,571,205 square feet³ of mixed-use space including manufacturing, commercial and community facility uses as an “Innovation Economy Hub”. The proposed measures would broaden the range of uses allowed in this location to include additional retail, academic and hotel uses and would increase the allowable density of the project area.

³ According to the DEIS 3,570,000 sq.ft. “Innovation Economy” uses; 900,000 sf. retail; over 700,000 sq. ft. academic, hotel & event space—to generate 13,000 on-site jobs and \$5 billion in economic activity.

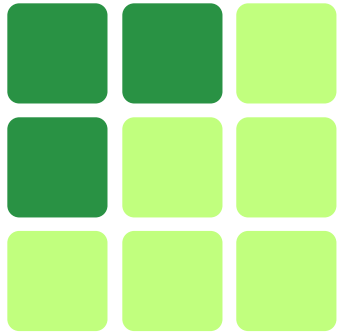
The following discretionary actions were requested to facilitate the expansion of Industry City:

- A Zoning text amendment to establish the Special Sunset Park Innovation District;
- A Zoning Map amendment to map the Special Sunset Park Innovation District and to change the zoning designation of a portion of the area affected by the District from an M3-1 to an M2-4 district;
- A Special Permit to modify, bulk, use, parking and public access area requirements pursuant to findings and a site plan;
- A Special Permit to allow a hotel use; and
- An amendment to the City Map to de-map 40th Street between 1st and 2nd Avenues.

The project was classified as Type 1, requiring an Environmental Impact Statement (EIS) under City Environmental Quality Review (CEQR) rules. The Department of City Planning (DCP), designated Lead Agency, held a public scoping hearing on a Draft Scope of Work for the EIS on October 24, 2017. Most significantly, that Scope narrowly defined its study area as a radius of only 400 feet around Industry City.

There are several concerns related to Industry City's rezoning proposal:

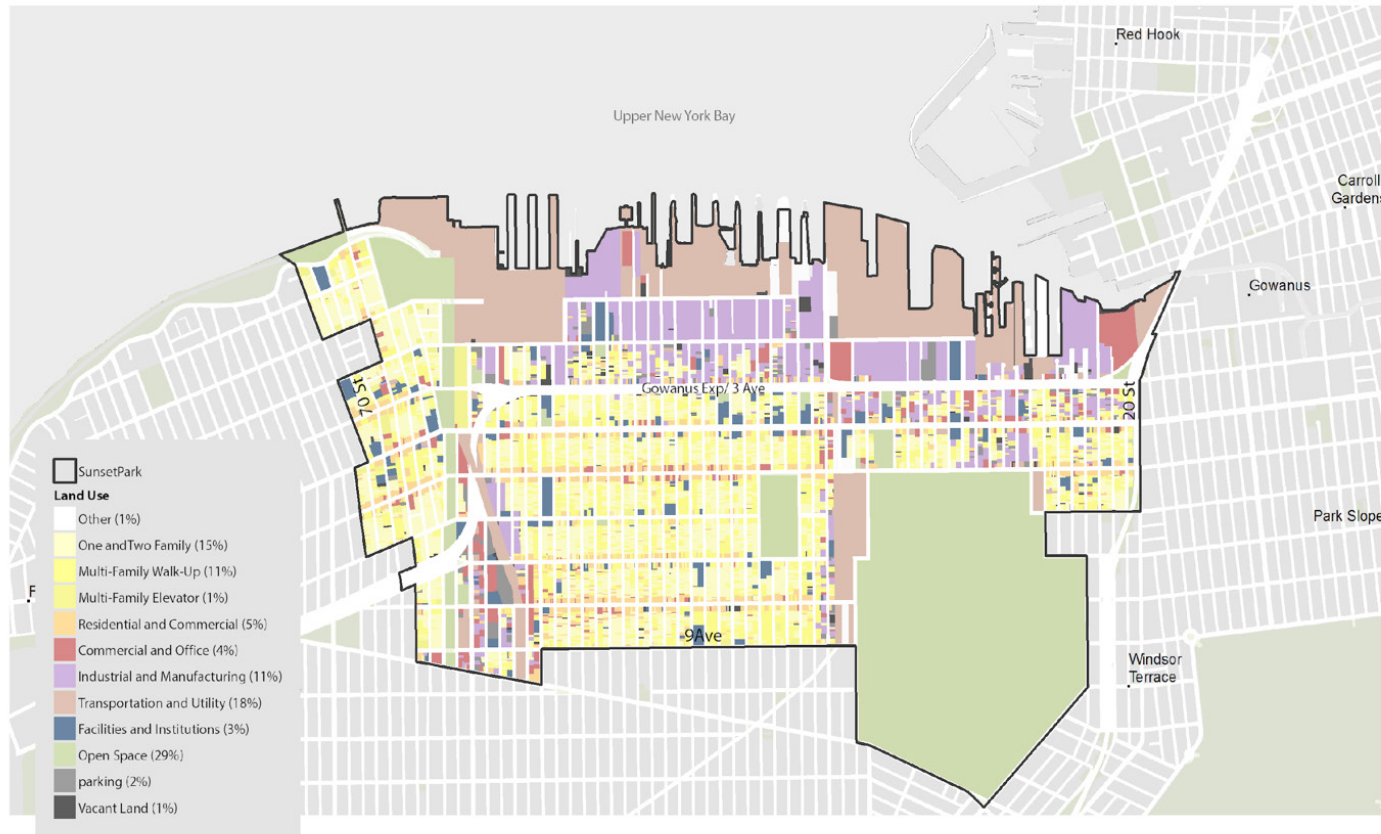
- It will negatively impact Sunset Park's character as an industrial working waterfront with working class jobs by bringing in retail and entertainment uses and highly paid, skilled tech workers.
- It will result in indirect residential and small business displacement based on the gentrifying effects of new retail and hotel clientele and highly skilled innovation economy staff who will seek luxury products and services.
- Negative impact of the rezoning from heavier M3 manufacturing zone to medium M2 manufacturing on traditional industry. Proposed M1 performance standards can have a negative impact on heavier manufacturing uses.
- A special permit for a hotel in a M2 zone, is not as of right and sets a dangerous precedent for such zones across the city and especially in Sunset Park. Most jobs associated with hotels are lower wage service sector jobs that do not provide opportunities for growth. Such jobs can erode the stable base of working class jobs in Sunset Park.
- Lack of workforce development to train Sunset Park residents for the higher paying jobs in an innovation economy means that most of these jobs will go to people who are not Sunset Park residents.
- Lack of clear benefits to the Sunset Park community to offset all the above hardships is a concern as there is no evidence of mitigation measures.
- Puts the whole Sunset Park waterfront at heightened risks of climate hazards by not addressing resiliency, mitigation, or adaptation measures.



EXISTING CONDITIONS

1. LAND USE

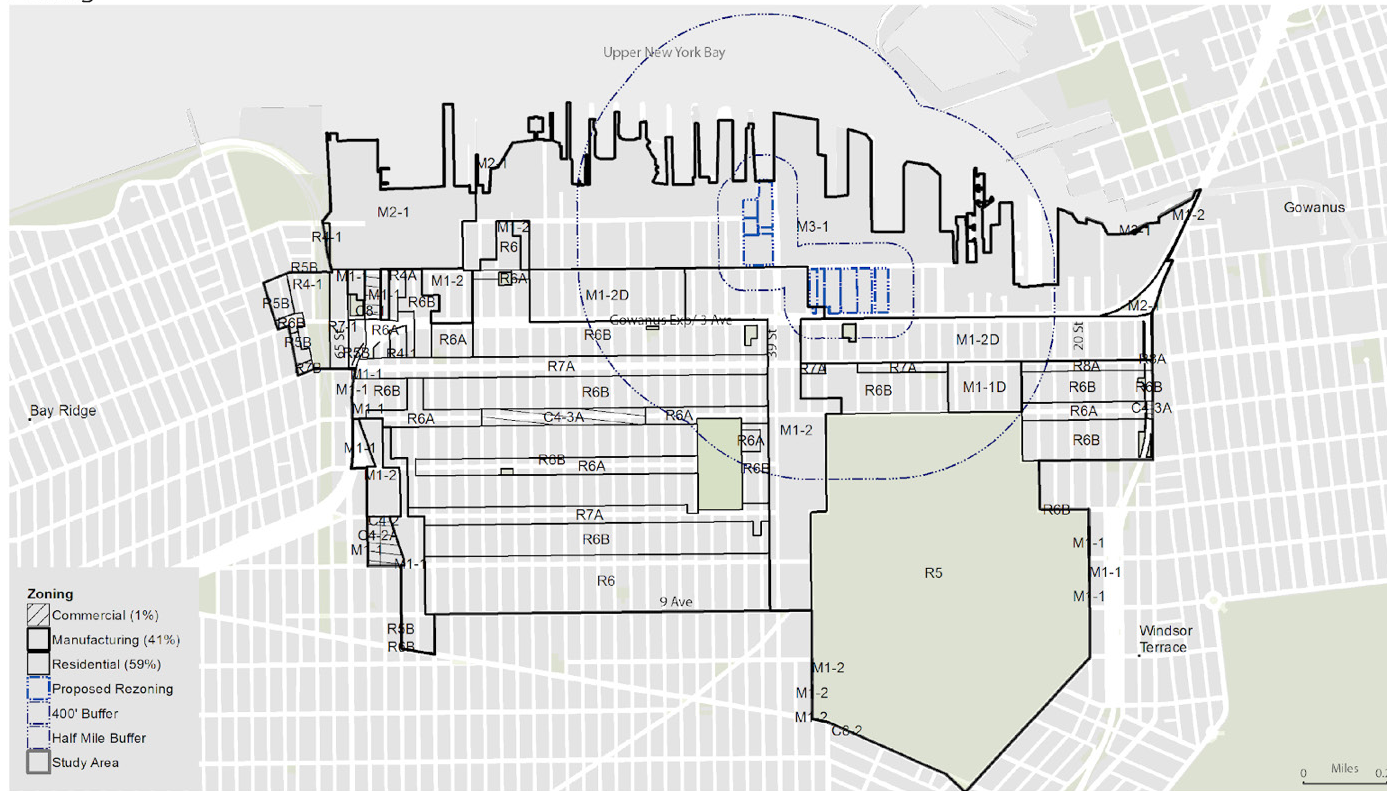
Sunset Park Land Use



Sources: NYC DCP 2018-Boroughs, Neighborhood Names, Census Tract Boundaries, LION Roads, MapPLUTO, NTA 2017; NYC DoITT 2017-Parks and Open Spaces, Hydrography, Subway Lines, Subway Entrances; NYS MTA 2017-Subway Lines; Pratt; SAVI 2018-Study Area Boundaries; ESRI 2008- NYS Tristate Water

Sunset Park is roughly divided into equal thirds of residential, open space and industrial uses. The waterfront is predominantly zoned M3 (the heaviest industrial district) with some pockets of M2. Moving inland, there is a north to south swath of M1-2 and M1-2D zones which are primarily lighter manufacturing zones mixed with some residential, retail, institutional and transportation uses.

Sunset Park Zoning

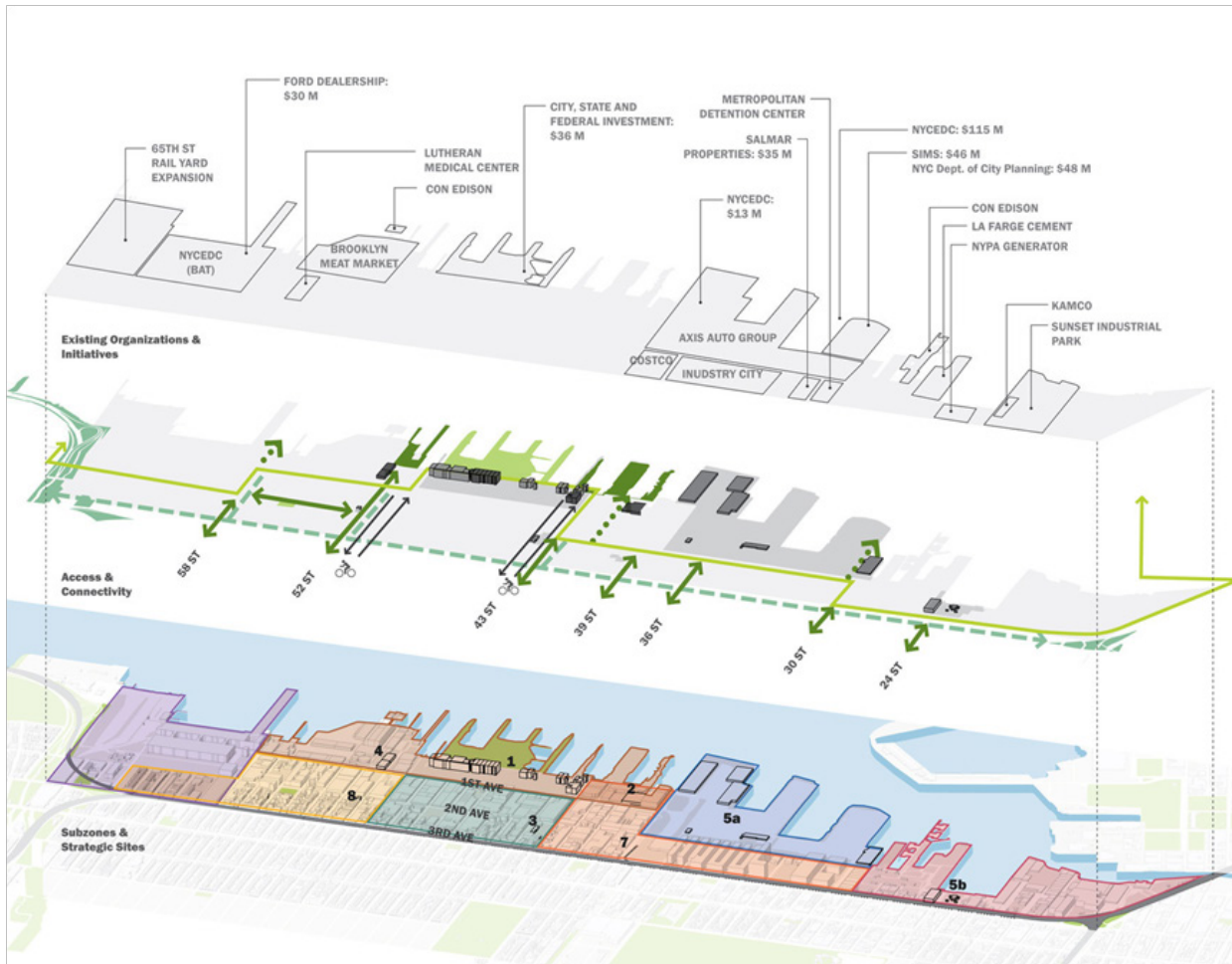


Sources: NYC DCP 2019-Boroughs, Neighborhood Names, Census Tract Boundaries; MapFLUTO, NTA 2017; NYC DoITT 2017-Parks and Open Spaces, Hydrography; ESRI 2009- NYS Tristate Water

The manufacturing zones stretch into the neighborhood along the southern edge of Greenwood cemetery and the southern edge of the neighborhood where the freight train line connects to the Bay Ridge Rail Yard just south of the Brooklyn Army Terminal. Beyond Sunset Park and Greenwood cemetery, the neighborhood is predominantly residential with commercial overlays along certain corridors.

1a. THE SUNSET PARK WATERFRONT

Spanning 600 acres,⁴ and predominantly City-owned, the Sunset Park waterfront is designated a Significant Maritime and Industrial Area (SMIA) due to the concentration of industrial firms and port dependent businesses. The New York City Economic Development Corporation (NYCEDC), manages the City-owned properties in this area and exerts influence over its development. Together these City-owned properties engage in some of most innovative and sustainable industrial initiatives in New York City. The Sunset Park waterfront is also home to the Southwest Brooklyn Industrial Business Zone (IBZ), the second largest IBZ in New York City. As part of the Mayor's Freight NYC Plan, this area is also slated for improvement as a multimodal freight hub.⁵ Public investment to the order of \$753 million into the industrial and environmental infrastructure of the Sunset Park Waterfront area has yielded 5,635 actual or projected jobs.



Source: Sunset Park Brownfield Opportunity Area Study, Waterfront, WXY

⁴ https://www1.nyc.gov/assets/planning/download/pdf/plans-studies/vision-2020-cwp/vision2020/appendix_b.pdf

⁵ https://www.nycedc.com/sites/default/files/filemanager/Programs/FreightNYC_book__DIGITAL.pdf

1b. BROOKLYN ARMY TERMINAL (BAT)

NYCEDC is developing the 4 million square feet Brooklyn Army Terminal as a “premier 21st century industrial campus” and has invested \$300 million on its renovation. BAT, which celebrated its 100th anniversary in September 2018, is the second largest campus in the manufacturing zone in Sunset Park after the privately-owned Industry City. It currently houses 100 industrial businesses with 4,000 employees including bioscience, distribution, food manufacturing, arts, light manufacturing and fashion. The BAT campus includes a food manufacturing hub for small manufacturers, space for fashion and garment producers and a Micro-Manufacturing Hub that helps small manufacturers scale up their businesses. It also houses ArtBuilt Brooklyn, a 50,000 square foot space offering studio spaces to artists at below market rents.⁶ According to the New York Times,⁷ BAT will slowly phase out warehousing and distribution uses on its campus in favor of those that are involved in production and bring jobs, thus transforming it completely into a manufacturing hub. In Fall 2019, Sunset Park Solar, New York’s first community owned solar garden will be installed on the roof of BAT. According to the New York Times, salaries in BAT jobs range from \$42,000 - \$75,000 per year.

1c. BUSH TERMINAL:

NYCEDC is developing the Bush Terminal as a “Made In New York” campus for creative manufacturing uses including fashion, film and media production. Bush Terminal consists of a 36-acre campus with 11 buildings with 1.4 million square feet of built area. NYCEDC is investing \$136 million

⁶ <https://www.nytimes.com/2019/04/22/arts/design/artbuilt-brooklyn-army-terminal.html>

⁷ <https://www.nytimes.com/2018/11/23/nyregion/the-brooklyn-army-terminal-new-yorks-next-manufacturing-hub.html>



Brooklyn Army Terminal

to create a garment manufacturing space (200,000 square feet), upgrading industrial space (160,000 square feet) and other site improvements. A new film and television production facility (100,000 square feet) is also being built.

1d. BROOKLYN WHOLESALE MEAT MARKET

This 175,000 square foot facility on the Sunset Park waterfront is owned and operated by NYCEDC. Currently, the market consists of 40 wholesale meat, poultry and fish processing and distribution businesses located in two buildings, with additional space available for lease.

1e. SOUTH BROOKLYN MARINE TERMINAL (SBMT)

NYCEDC owns the South Brooklyn Marine Terminal. It is one of four cargo facilities in Port NYC. It can handle general and special cargo, automobiles and other vehicles, break-bulk and other commodities. This 88-acre facility served as a container terminal until the 1980s, after which it was used for break-bulk and project cargo. Since 2011, NYCEDC has invested over \$115 million to rehabilitate and reactivate the marine terminal. This includes \$20 million to extend rail infrastructure from the 65th Street yard to SBMT. It is the only maritime industrial site capable of handling ocean-going vessels and rail east of the New York Harbor. In May 2018, a lease to operate the Sustainable South Brooklyn Marine Terminal (SSBMT) was awarded to the Red Hook Container Port Terminal (RHCP) and Industry City. It is estimated that the project will create 250 jobs initially and take 11,000 truck trips off the city's roadways. The port operator will be responsible for subleasing areas of the port for projects that will use maritime transport, such as off shore wind developments. Sims Municipal Recycling (discussed next) is currently the largest single tenant at SBMT.



1f. SIMS RECYCLING FACILITY

The Sunset Park Materials Recycling Facility, opened in 2013, occupies 11 acres of the SBMT site. It processes 200,000 tons of plastics, glass and metal collected by the NYC Department of Sanitation annually. The project created 85 permanent jobs with priority for local hiring. Construction was funded with \$46 million from the City and another \$48 million investment by Sims Municipal Recycling. This is a joint project of the New York City Department of Sanitation, New York City Department of Small Business Services, NYCEDC, and Sims Metal Management. Sims has expressed interest in expansion.



Sims Material Recovery Facility

1g. BROOKLYN WATERFRONT RAIL SYSTEM



Sunset Park hosts all four segments of the Brooklyn Waterfront Rail System that is part of Port NYC, an NYCEDC program:⁸

- 65th Street Rail Yard and Cross Harbor Float Bridge, a 14-acre break bulk and transload site
- 1st Avenue Rail
- Bush Terminal 51st Street Rail Yard
- South Brooklyn Marine Terminal

This Waterfront Rail System, the only remaining rail float operation in New York City, links Long Island with New Jersey through cross-harbor rail-barge freight. It is the shortest freight rail route connecting New York City to points South and West. It is a critical part of the Mayor's Freight NYC plan that seeks to invest in multimodal hubs using a combination of barges and railroads to reduce truck trips and traffic congestion.⁹ It was acquired in 1981 by the City and renovated at a cost of \$20 million in 1999. In 2018, it moved 4,900 loaded rail cars carrying 490,000 tons of freight. The Port Authority of New York and New Jersey (PANYNJ) has recently acquired two new barges with higher capacity for the cross-harbor freight using the 65th Street Rail Yard.

⁸ <https://www.nycedc.com/program/rail-facilities>

⁹ <https://www.nytimes.com/2019/04/07/nyregion/rail-freight-nyc.html>

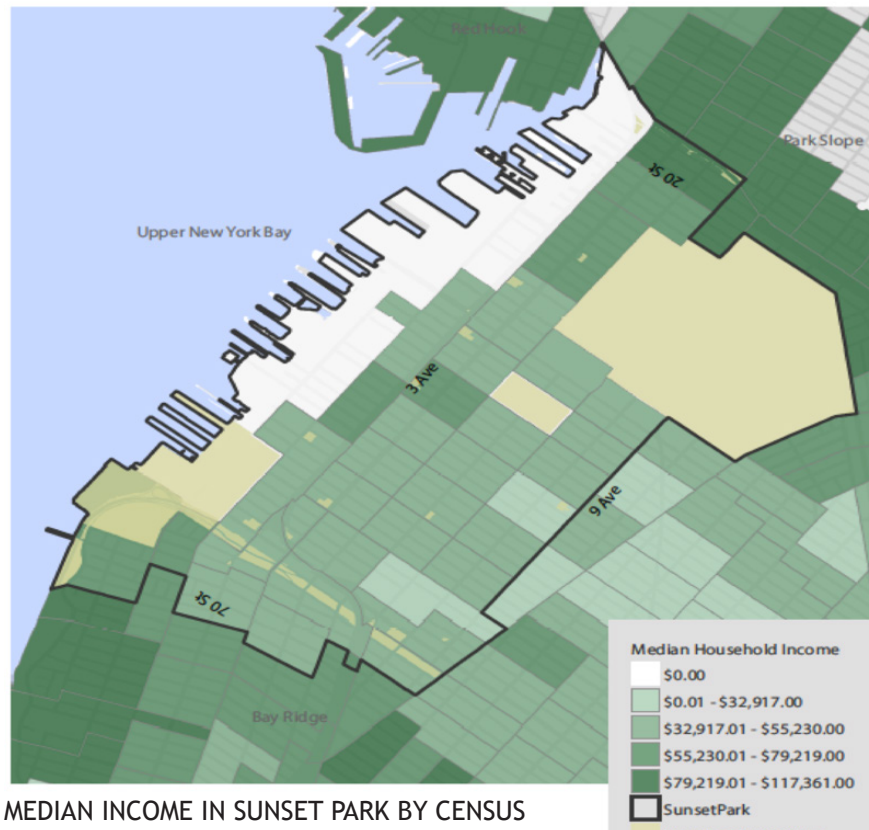
1h. SIGNIFICANT PRIVATE OWNERSHIP

The Sunset Park waterfront also includes privately owned properties.

- Industry City, a 6 million square foot mixed use campus with a focus on commercial, retail, entertainment and food related uses and some manufacturing.
- Sunset Industrial Park, recently sold for \$255 million, will house a new 1.4 million square feet, four storied warehouse and distribution center.
- Liberty View Industrial Plaza also focuses on a mix of commercial and retail with some industrial uses.
- New York University Langone Hospital - Brooklyn (formerly the Lutheran Medical Center) is a 450-bed academic teaching hospital located inland from the waterfront. As the single largest employer in Sunset Park, it employs over 5,000 people and treated 75,808 patients in 2011. It has one of the busiest emergency departments in Brooklyn, treating about 80,000 patients annually.

2. DEMOGRAPHIC CONDITIONS

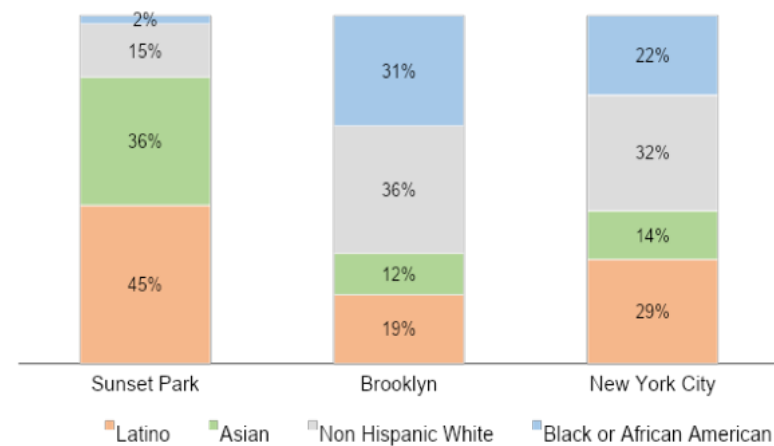
Located in Southwest Brooklyn, Sunset Park was home to 122,313 residents in 2016, a two percent increase since 2010. It is a young neighborhood with the 25 to 40 age group predominant in 2016. While a majority Latino community (about 45%), Asians comprised 36% of the population and whites comprised about 15% of the population.



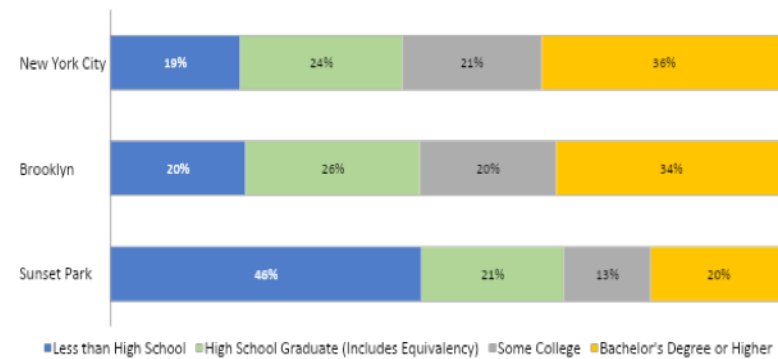
MEDIAN INCOME IN SUNSET PARK BY CENSUS

SIGNS OF GENTRIFICATION AND INCOME POLARIZATION

- From 2010 to 2016, 17% increase in residents with bachelor's or higher degree and a 7% increase in those without a high school degree.
- From 2010 to 2016, 17% increase in median income, twice the rate of Brooklyn.
- 2016 median income of \$46,279 is lower than surrounding neighborhoods.
- Increase in poverty rate from 24% in 2013 to 32% in 2016.



RACE & ETHNICITY BY GEOGRAPHY 2016

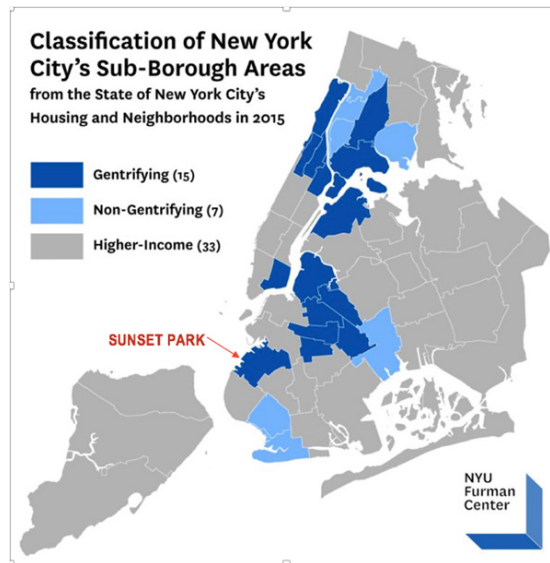


EDUCATIONAL ATTAINMENT 25 Years & ABOVE

3. HOUSING¹⁰

Renters occupy 75% of Sunset Park’s 38,000 housing units. Rising rents have caused significant negative affects on renters. In 2013, the purchase of Industry City has led to real estate speculation that has impacted the area’s housing market and threatens the industrial business landscape.

DRAMATIC INCREASE IN HOUSING COSTS SINCE THE INDUSTRY CITY ACQUISITION IN 2013



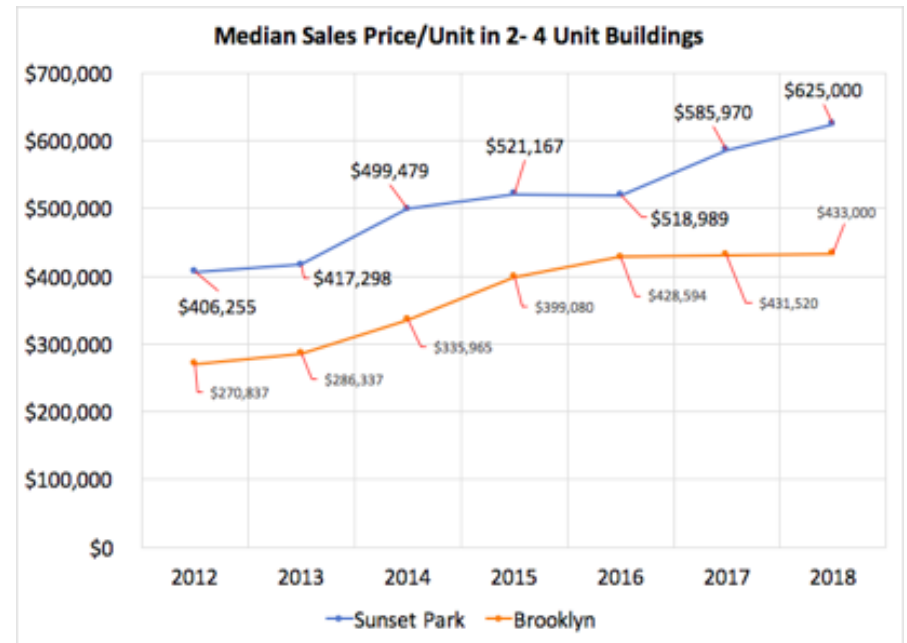
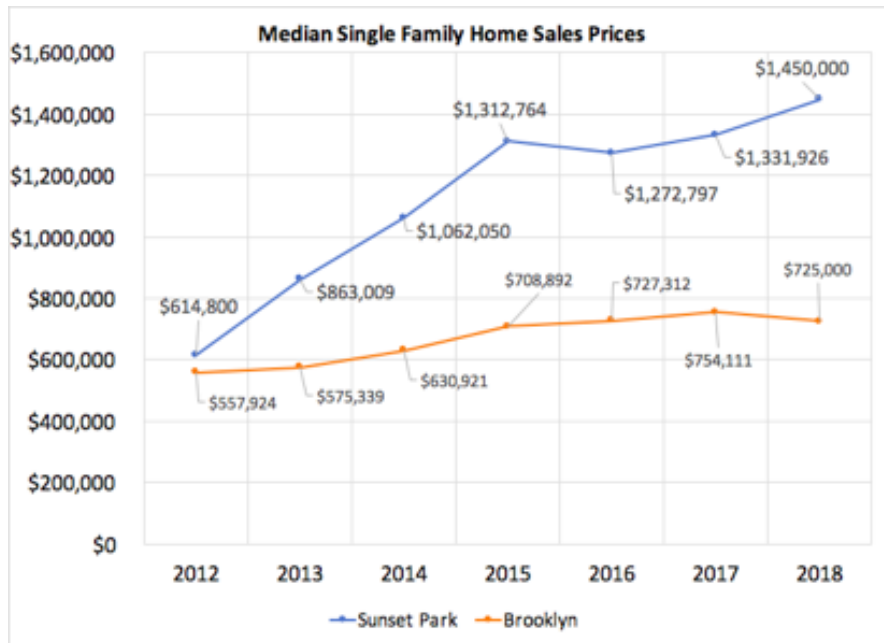
RENTAL HOUSING

- Between 2010 and 2013, CB7* median rents rose by 2%.
- Between 2013 and 2017, CB7 median rents increased 10%.
- 2017 median rent of \$1,470 is higher than Brooklyn as a whole and New York City.
- The rental market has tightened. Between 2010 and 2014, the rental vacancy rate was 3.5%. Between 2012 and 2016, it had declined to 2.5%.
- Consequently, rent-burdened households rose dramatically. Rent-burdened households increased from 28.8% in 2013 to 60.4% in 2016. In 2018, there were 45.3% rent burdened households.

*Brooklyn Community Board 7 (CB7) includes the neighborhoods of Sunset Park and Windsor Terrace.

OWNER OCCUPIED HOUSING

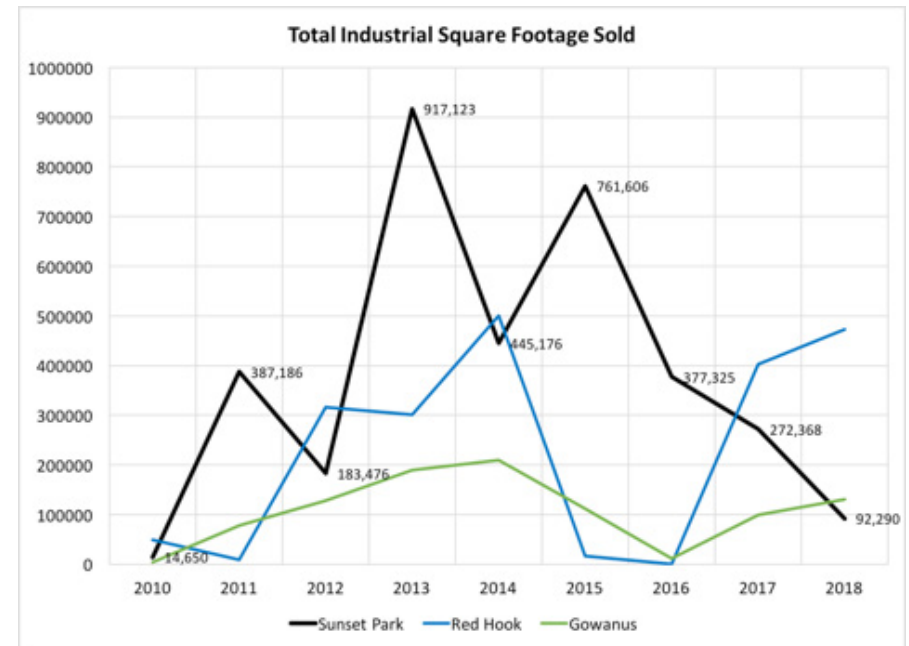
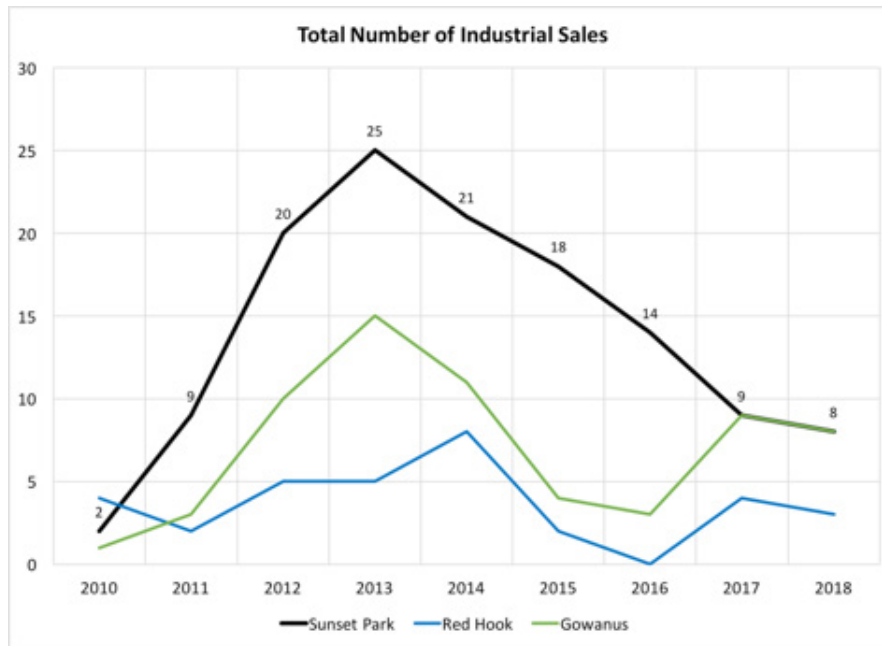
¹⁰ Data in this section was obtained from New York University's Furman Center. This data uses the boundaries of Brooklyn Community Board 7, which includes the neighborhoods of Sunset Park as well as Windsor Terrace.



- Median CB7 sales prices for single family homes rose 136% between 2012 and 2018, to \$1.45 million, compared with just 30% increase in Brooklyn overall.
 - Between 2012 and 2014 (during the Industry City purchase period), the median CB7 single family home sales prices rose by 73% compared to a mere 13% in Brooklyn.
- Median CB7 sales prices per unit in 2 to 4 unit buildings increased by 54% between 2012 to 2018 to \$625,000, which is nearly \$200,000 higher than that of Brooklyn as a whole.

4. INDUSTRIAL REAL ESTATE: PROPERTY SALES¹¹

SUNSET PARK INDUSTRIAL REAL ESTATE MARKET IS THE SWEET SPOT FOR INVESTORS!



Sunset Park had the highest or second highest industrial property sales in Brooklyn each year between 2012 and 2018. In 2011 and 2016, it had the second highest number of industrial property sales in Brooklyn.

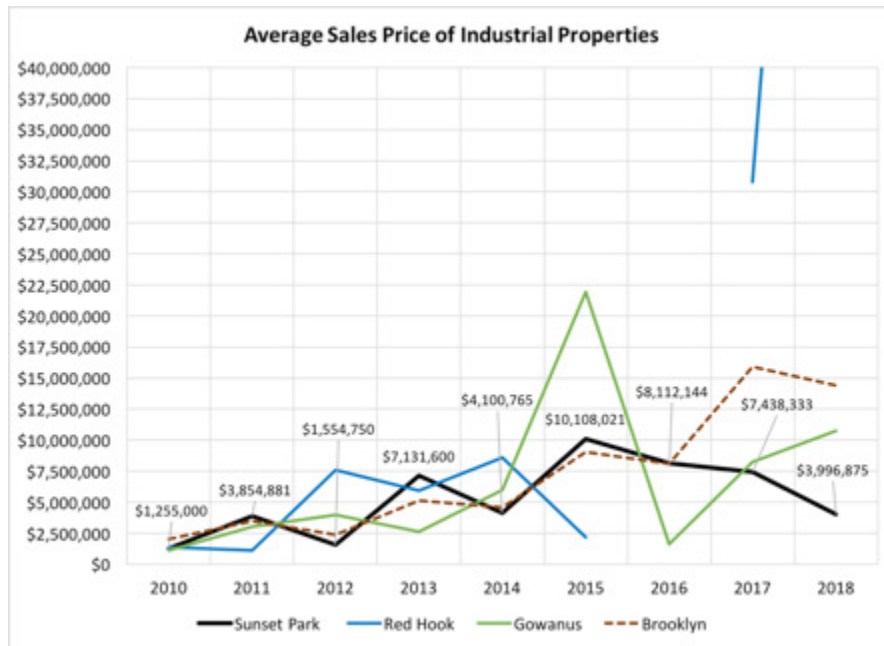
- The highest number of transactions occurred in 2013, the year that Industry City was acquired by Jamestown Properties.

The total industrial square footage sold in Sunset Park was far greater than that in Gowanus or Red Hook between 2011 and 2016.

Since 2017 the amount of industrial space sold in Sunset Park has declined, comparable to general trends in Brooklyn.

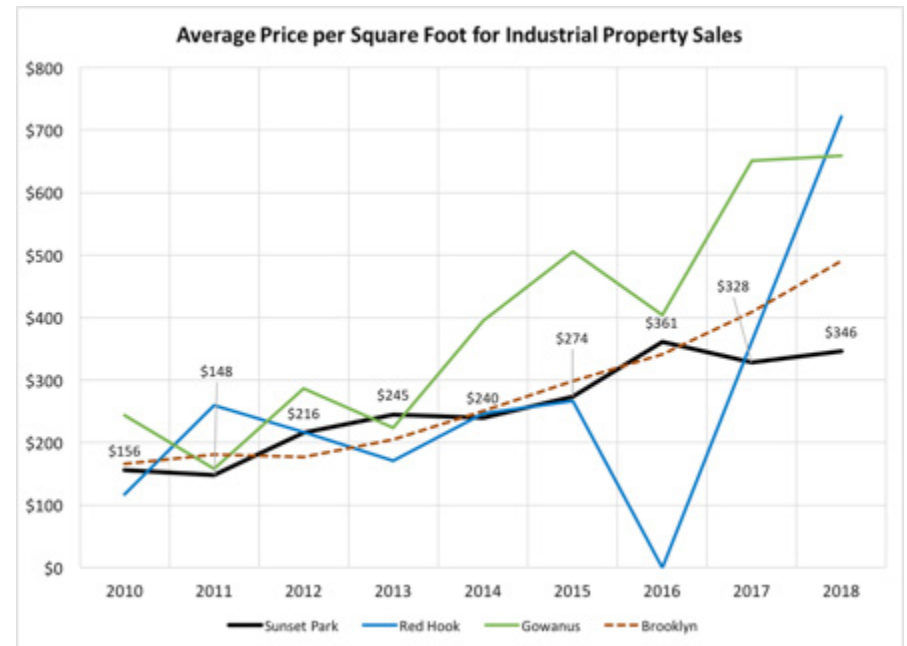
¹¹ Based on Brooklyn Industrial Sales Reports published by TerraCRG

SUNSET PARK INDUSTRIAL REAL ESTATE TENDS TO BE CHEAPER THAN SURROUNDING AREAS



The average sales price of Sunset Park industrial properties has been comparable to Brooklyn overall, and often at or below that of neighboring Red Hook and Gowanus.

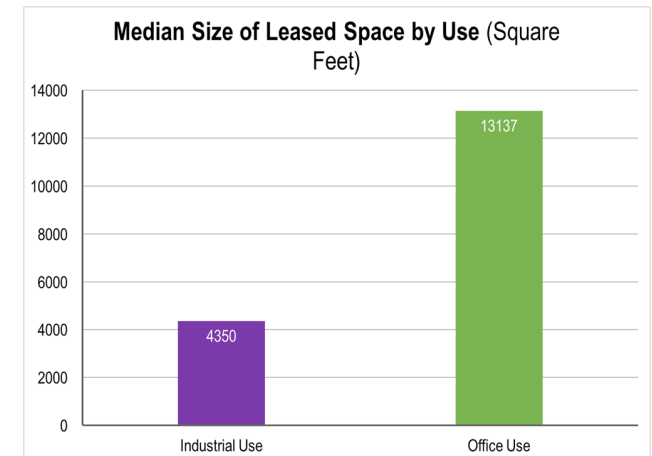
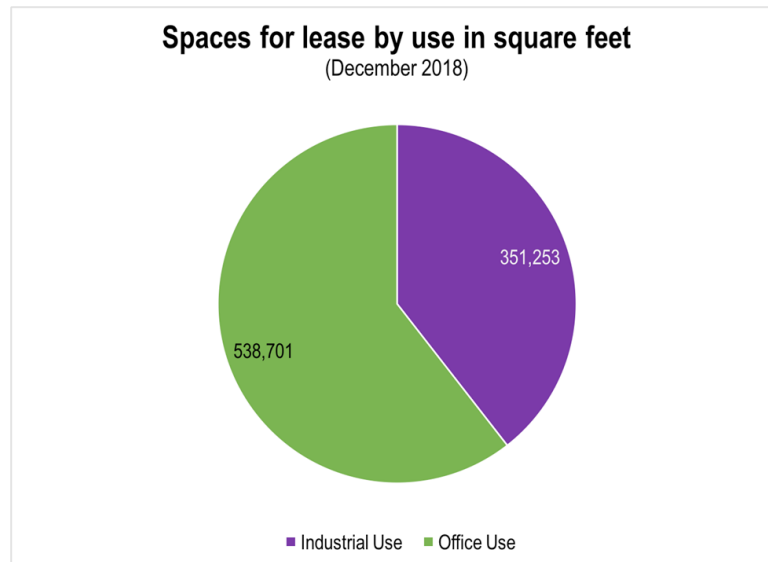
- In 2018 the average sales price for industrial properties dipped significantly below Brooklyn overall, as well as neighboring Red Hook and Gowanus.



The average price per square foot of Sunset Park industrial properties increased 41% between 2013 and 2018, roughly tracking Brooklyn until 2016, although consistently lower than Gowanus.

- From 2017 onwards, the average price per square foot has dropped well below Brooklyn as well as Gowanus and Red Hook.

5. INDUSTRIAL REAL ESTATE: PROPERTY LEASES¹²



Greater number of industrial spaces are offered for lease as office uses than industrial uses

- 66 spaces were offered for lease in Sunset Park manufacturing zones in December 2018.
 - 32 spaces marketed for industrial use and 34 spaces for offices.
- Total of 889,954 square feet for lease,
 - 39% for industrial use.
 - 61% for office use.

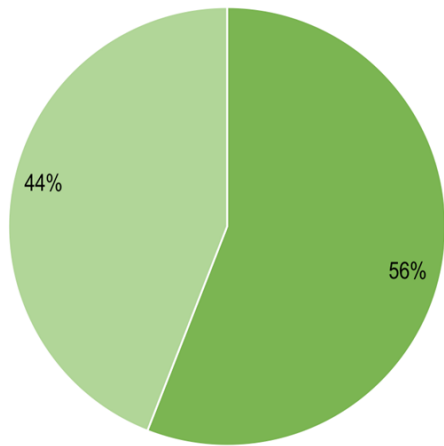
On average, spaces offered for office uses tend to be larger than those for industry.

- Median size of office spaces for lease was 13,137 square feet.
- Median size of industrial spaces for lease was 4,350 square feet.

Most spaces for lease were located in the M3-1, M1-2, M2-1 and M1-2D zoning districts.

¹² Information from local realtor for December 2018 & CoStar

Office Use Leases by Size (December 2018)

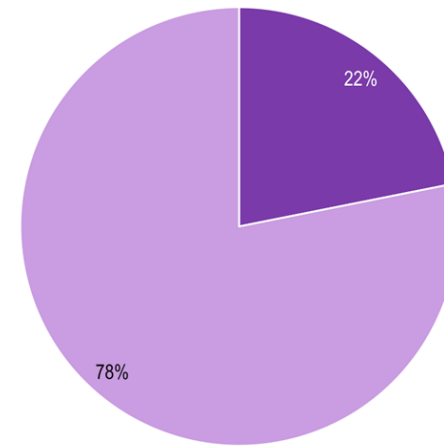


■ Office use leases over 10,000SF ■ office use leases under 10,000 SF

Greater number of spaces offered for office uses tend to have footprints that are larger than 10,000 sf.

- Only 15 out of 34 spaces offered for office uses were less than 10,000 square feet in size each.

Industrial Use Leases by Size (December 2018)



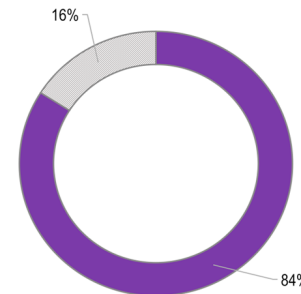
■ Industrial use leases over 10,000SF ■ Industrial use leases under 10,000 SF

Majority of spaces offered for industrial use are smaller than 10,000 sf.

- 25 out of 32 spaces offered for industrial uses were less than 10,000 square feet in size each.

Large number and square footage of industrial spaces being offered for office uses indicates a potential for loss of space available for manufacturing uses. According to Association for Neighborhood Housing Development, between 2003-2015, 16% of Sunset Park's manufacturing land was converted to other uses.

Industrial Land Lost - Sunset Park 2003-2015

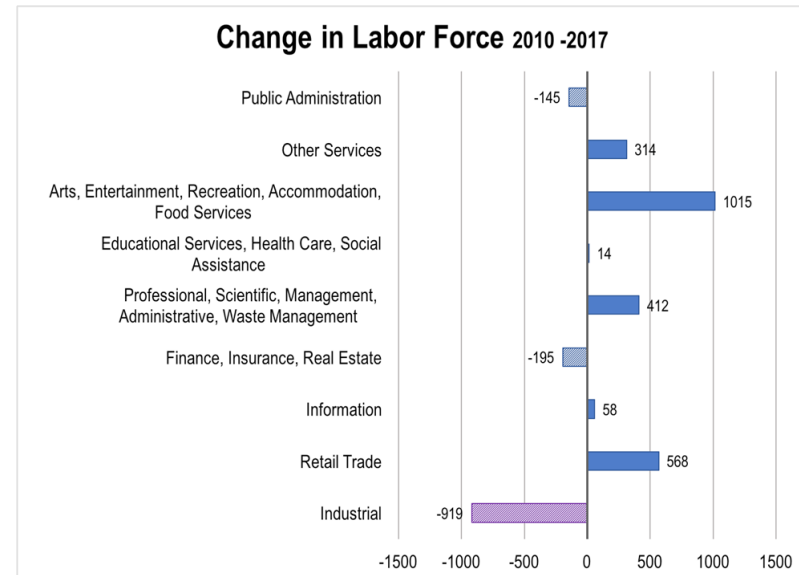
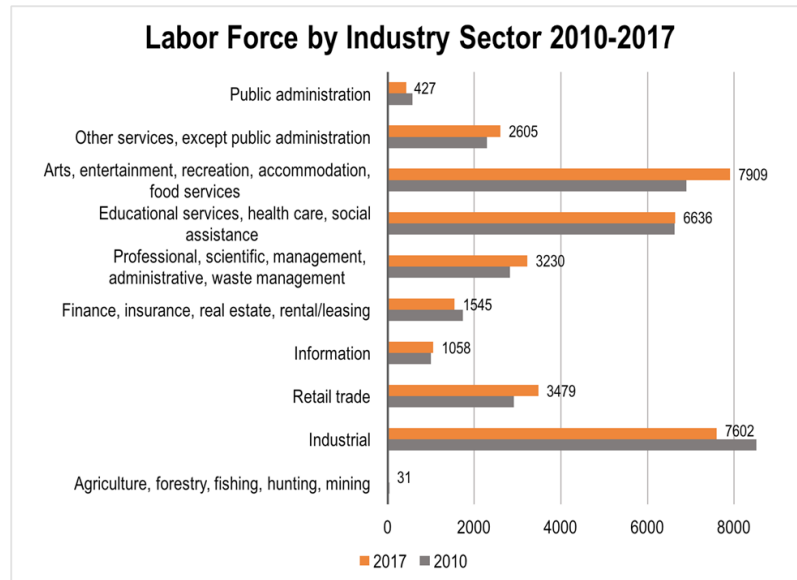


■ Industrial Land Left ■ Industrial Land Lost

6. SUNSET PARK LABOR FORCE¹³

A total of 34,522 Sunset Park residents worked in various sectors in New York City in 2017, a 3% increase since 2010.

A WALK TO WORK COMMUNITY: Roughly 14% of Sunset Park residents walked to work in 2017. (21% increase since 2010)



About 23% of Sunset Park residents worked in Arts, Entertainment, Recreation, Accommodation and Food Services.

Another 22% worked in the Industrial sector followed by 18% in Educational Services, Health Care and Social Assistance.

CHANGE IN SUNSET PARK LABOR FORCE SINCE 2010

Industrial sector (Construction, Manufacturing, Wholesale, Transportation, Warehousing & Utilities): **11% decrease**

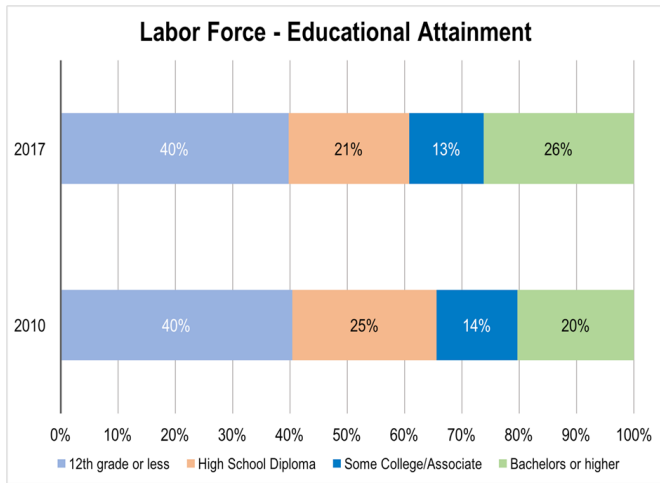
Arts, Recreation, Entertainment, Food & Accommodation: **15% increase**

Retail sector: **20% increase**

Professional, Scientific and Management firms: **15% increase**

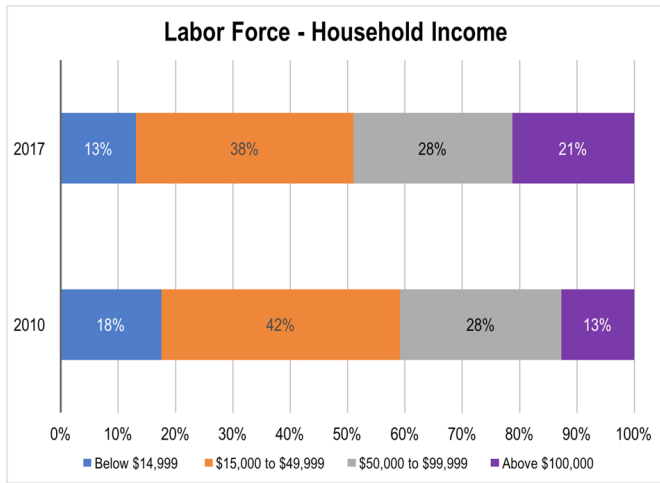
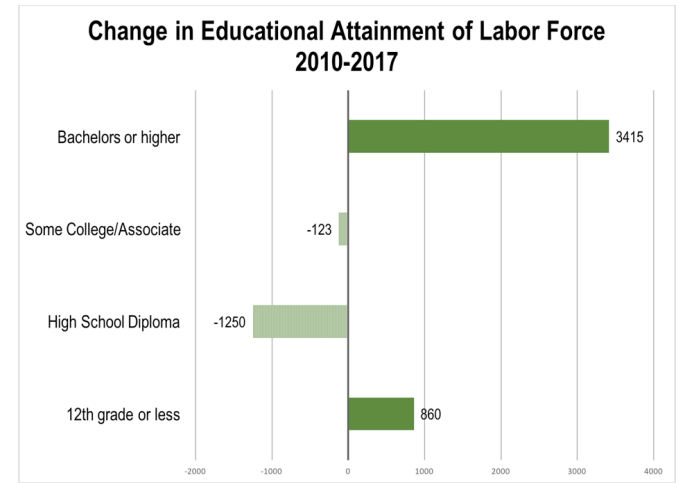
Educational Services and Health Care: **No change**

¹³ Census 2010 and 2017: Sunset Park residents, 25 years and older, who were either employed or trying to find work.



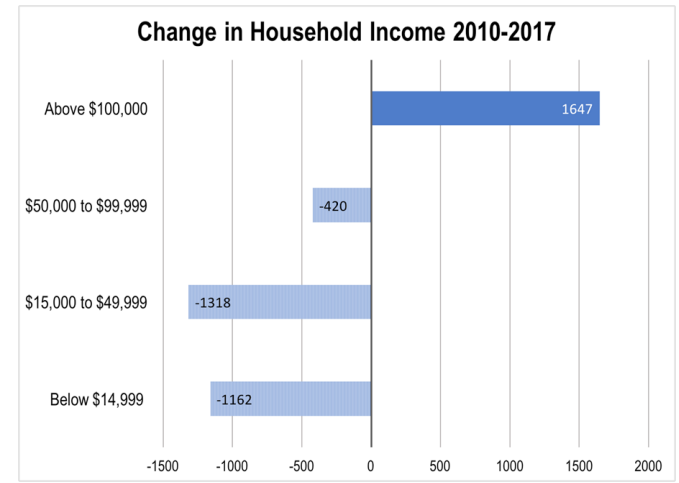
40% of the Sunset Park residents in the labor force had no High School Diploma in 2017.

Sunset Park residents in the labor force with a bachelor's or higher degree increased by 37% between 2010 and 2017. A SIGN OF GENTRIFICATION.



Sunset Park households earning less than \$50,000 per year decreased from 2010 to 2017 and those earning over \$100,000 per year increased.

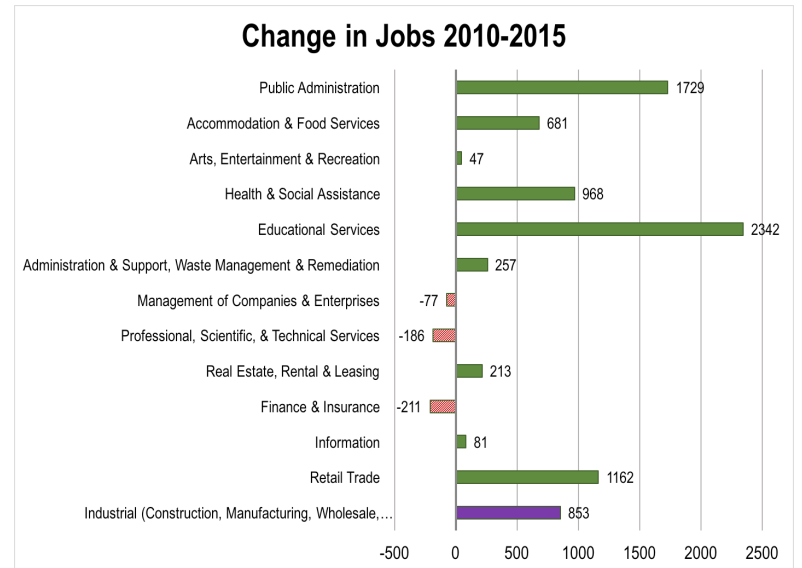
Households earning over \$100,000 per year increased by 57% between 2010 and 2017. A SIGN OF GENTRIFICATION.



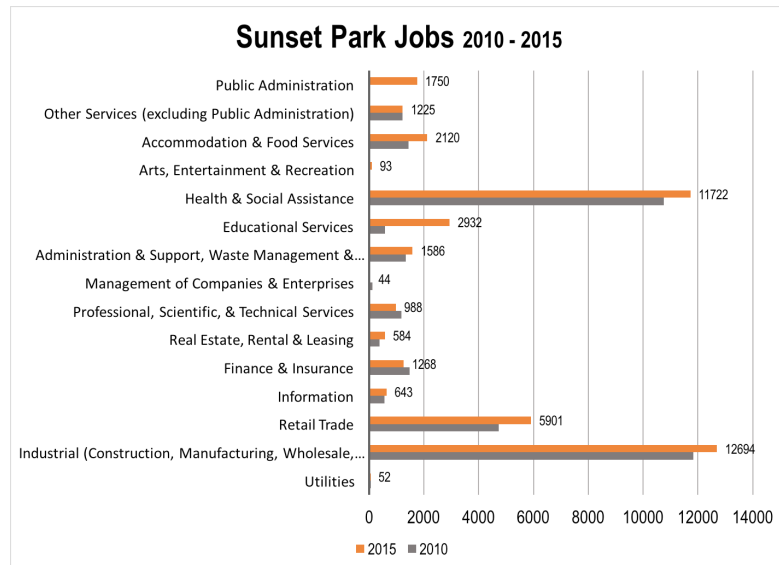
7. SUNSET PARK JOBS¹⁴

The Southwest Brooklyn IBZ on the Sunset Park waterfront, provided 26,000 jobs in 2014 - 52% in the industrial sector. It is New York City's second largest IBZ in terms of employment. (DCP 2015). **Between 2010 and 2015, the number of Sunset Park jobs increased by 22% to 43,607. (This includes all of Sunset Park.)**

SUNSET PARK HAS THE HIGHEST CONCENTRATION OF MANUFACTURING JOBS IN ANY NEW YORK CITY NEIGHBORHOOD in 2014 (Office of NYS Comptroller)

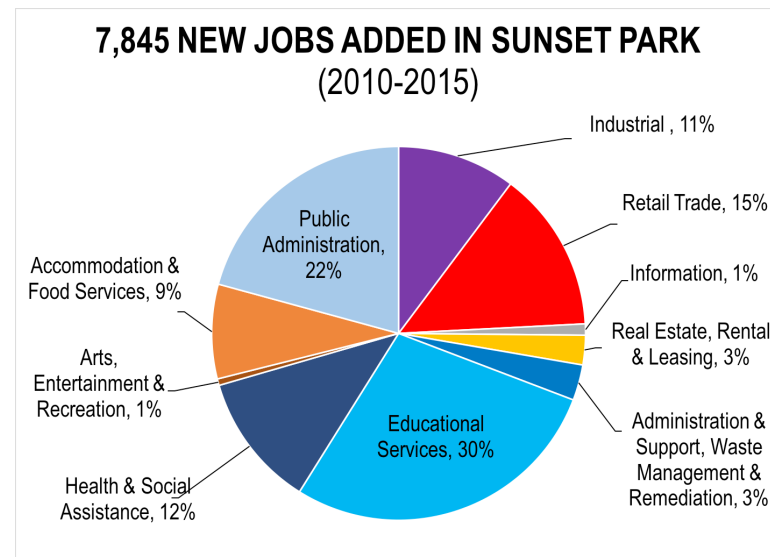


Between 2010 and 2015, Industrial jobs in Sunset Park grew by 7% while Health Care and Social Assistance jobs grew by 9%. Sectors that grew dramatically are Public Administration (8233% increase) and Educational Services (397% increase).



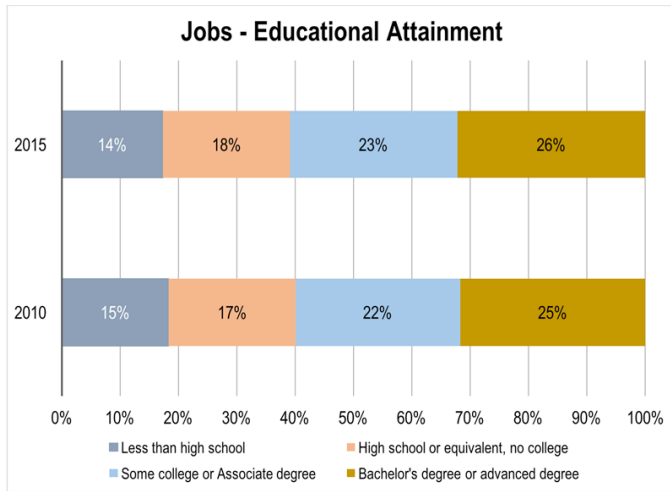
The Industrial sector (Construction, Manufacturing, Wholesale Trade, and Transportation and Warehousing) had the largest number of jobs in Sunset Park in 2015 (29%)

Health Care and Social Assistance sector had the second largest number of jobs in Sunset Park in 2015 (27%)



Educational Services had the largest gain in new jobs in Sunset Park followed by Public Administration and Retail Trade. 11% of new jobs were in the Industrial sector.

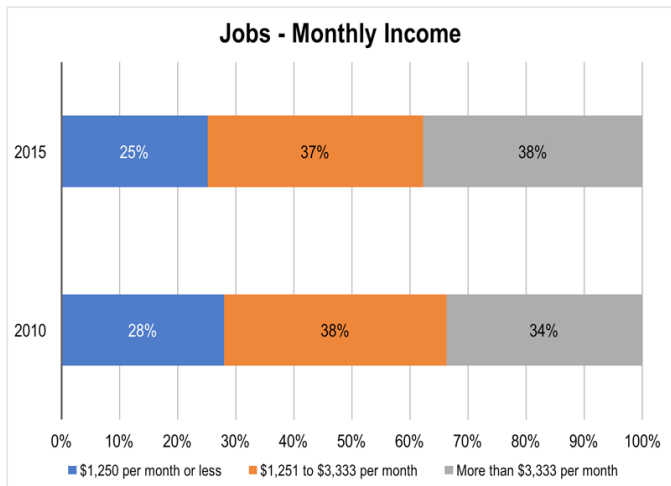
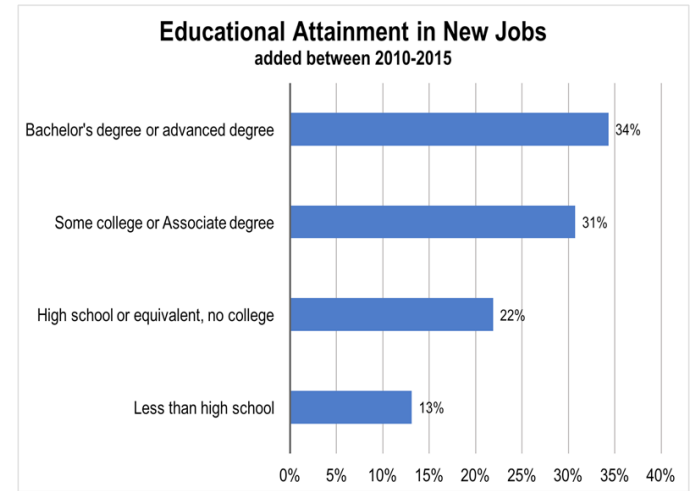
¹⁴ Longitudinal Employer-Household Dynamics 2010 -2015



Between 2010 and 2015, the distribution of educational requirements for jobs in Sunset Park did not change appreciably.

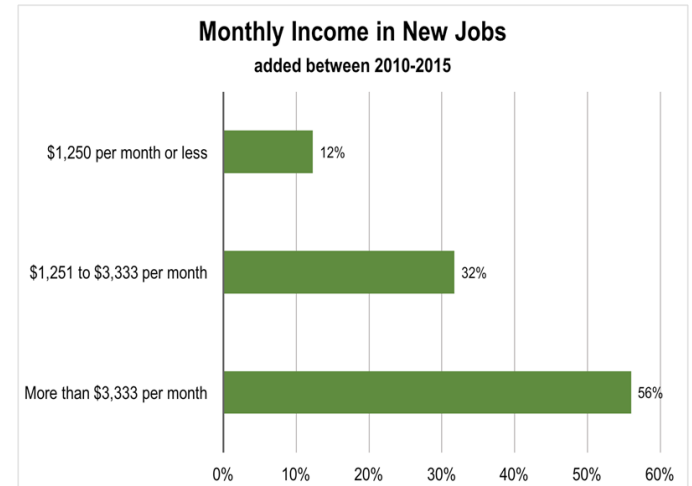
Only 14% of Sunset Park jobs require less than high school education, while 40% of the resident labor force has no high school diploma.

65% of the new jobs in Sunset Park require some college education or more. These jobs do not match the educational profile of the Sunset Park labor force.



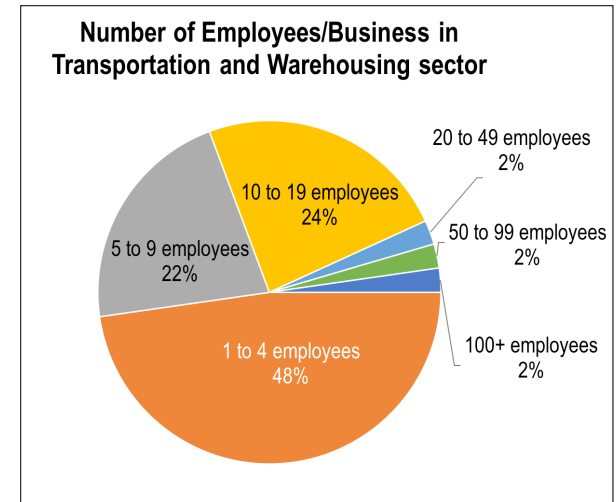
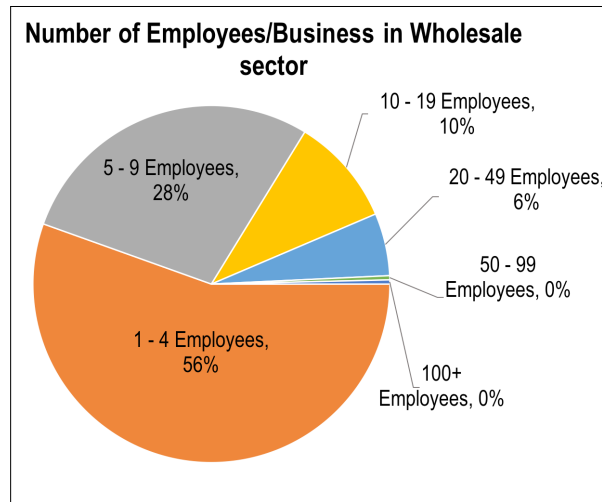
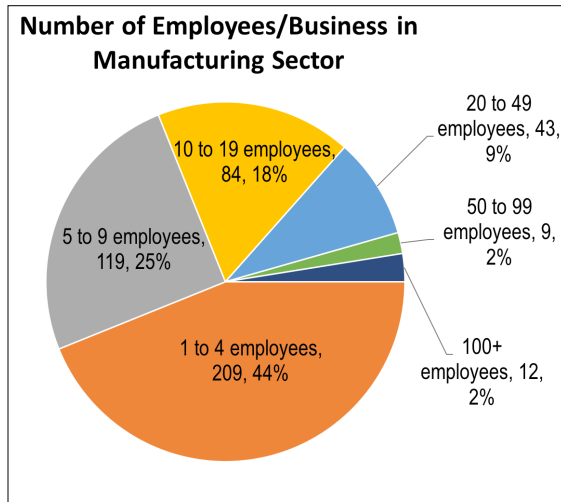
Between 2010 and 2015, the distribution of monthly incomes of jobs in Sunset Park remained relatively stable.

Large number of highly paid new jobs reflect a movement away from working class jobs.



8. SUNSET PARK BUSINESSES

Between 2000 and 2014, the number of **Sunset Park businesses grew 56%**, a faster rate than Brooklyn (43%) and New York City overall (15%). (Office of NYS Comptroller). **Sunset Park hosts 830 manufacturing, wholesale and transportation related firms.**¹⁵ (Total Annual Sales Volume: **\$3.7 billion**)

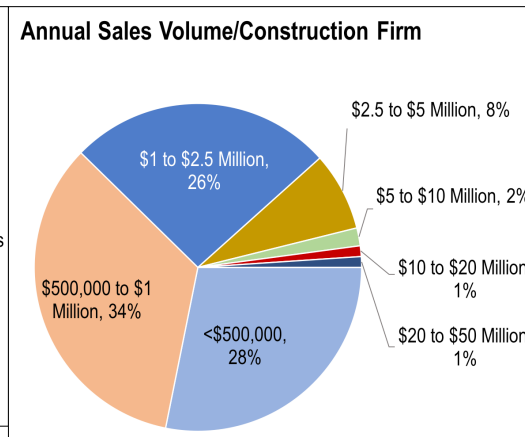
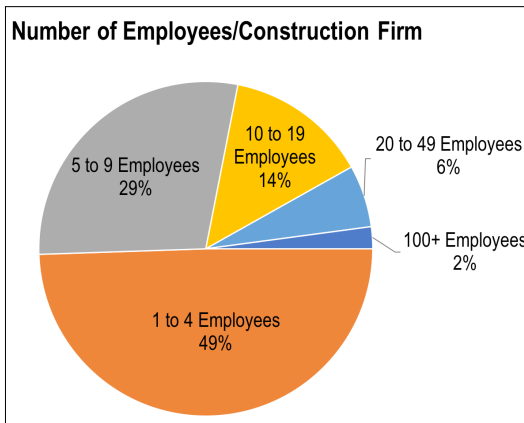


Sunset Park businesses tend to be small. 2015 (Office of the NYS Comptroller)

- 65% fewer than 5 employees
- 80% fewer than 10 employees
- Only 55 businesses with 100 or more employees

284 construction businesses employ 2,694 people - One of the Largest Industrial Sectors in Sunset Park.

- Total annual sales volume: \$442,490,000



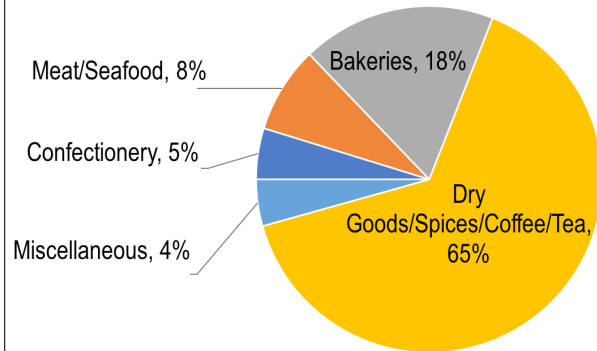
Construction businesses tend to be small in number of employees as well as sales volume.

- Nearly half (140 firms) of the Construction firms employ 1 to 4 people.
- 89 firms or nearly 30% employ between 5 and 9 people.
- 62% of the firms having annual sales volume under \$1 million.

¹⁵ Reference USA, a private self-reported business database for this section.

Employees in Food Manufacturing Firms by Sector

(Total Number of Employees: 943)

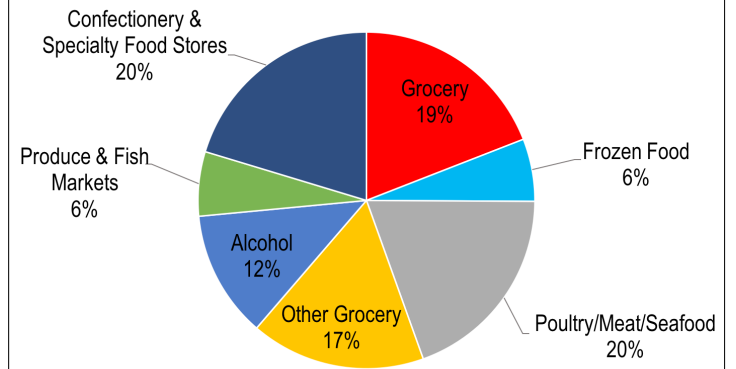


32 Food Manufacturers employ 983 people. Total Annual Sales Volume: \$271,406,000

46 Food Wholesalers employ 349 people. Total Annual Sales Volume: \$549,562,000

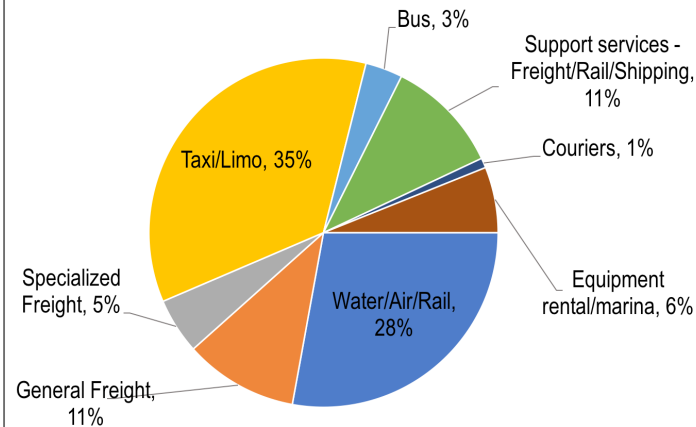
Employees in Food Wholesale and Distribution Sectors

(Total Employees: 566)



Number of Employees in Transportation Sectors

(Total Number of Employees: 987)



88 Transportation-related Businesses employ 987 people. Total annual sales volume: \$83,393,000

Two additional manufacturing sectors employ a large number of people:

- 28 metalwork and machinery manufacturing firms employ 521 people. Total Annual Sales Volume: \$62,751,000
- 10 electronics and electrical manufacturing firms employ 358 people. Total Annual Sales Volume: \$45,454,000

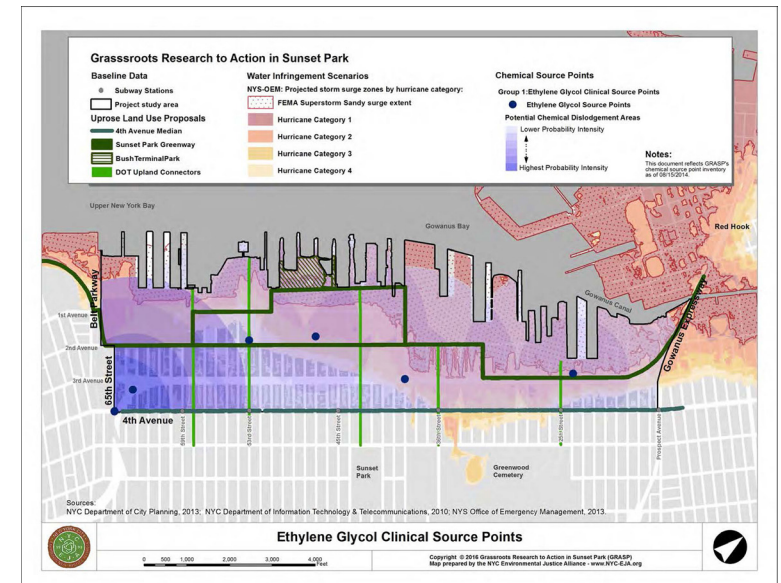
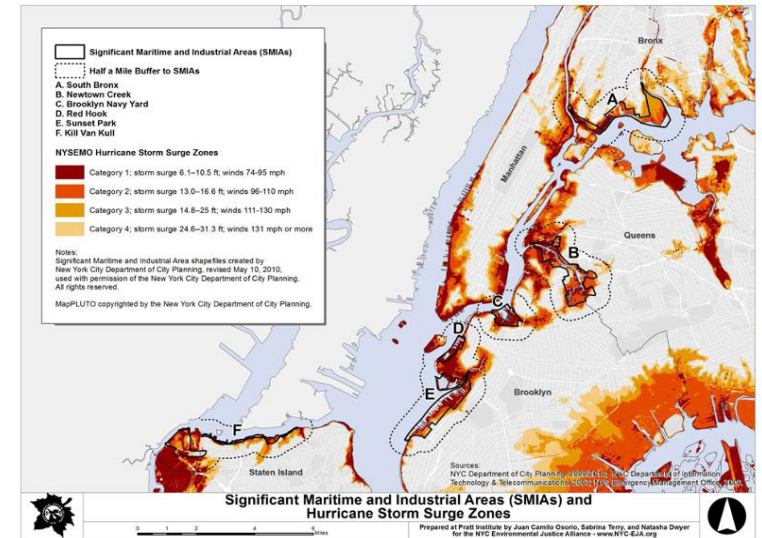
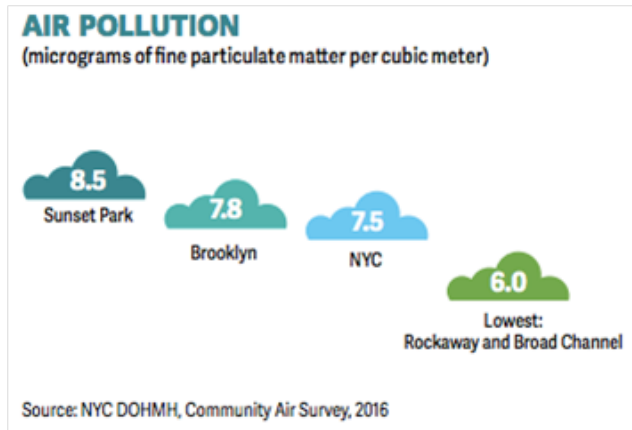
9. ENVIRONMENTAL FACTORS

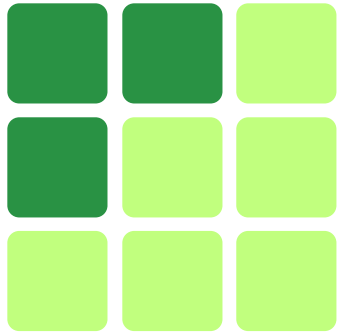
Sunset Park is located in a flood, storm surge, and sea level rise zone.

In extreme weather, contaminants from industrial properties may be released into the floodwaters exposing workers, residents and relief workers, as well as contaminating soils and the waters of Lower East River and NY Harbor. This will result in health impacts and the potential creation of new Brownfield and /or Superfund sites.

Sunset Park suffers from unsewered waterfront areas and combined sewer overflows (CSOs) during heavy rain. Combined sewer systems are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. They are a major cause of water pollution as CSO discharges may contain mixtures of domestic sewage, runoff, and, sometimes, industrial wastewater, including high levels of suspended solids, toxic chemicals, floatable material and other pollutants directly into local waterbodies. This is a particularly serious as the waterfront includes industrial uses which use hazardous materials and toxics. Climate change, sea level rise, added population and new development will exacerbate this impact by increasing the volume of water handled by wastewater treatment plants.

Sunset Park suffers from air pollution from the Gowanus Expressway and local truck routes. Level of the most harmful air pollutant, fine particulate matter (PM2.5) in Sunset Park is 8.5 micrograms(mcg)/cubic meter as compared to 7.8 mcg/cubic meter for Brooklyn and 7.5 mcg/cubic meter for New York City. New development and e-commerce will increase pollution from transporting of goods via trucks.





SUNSET PARK NEEDS

SUNSET PARK NEEDS APPROACHES FOR MITIGATION:

Community needs were determined based on the analysis of existing conditions and within the context of recently enacted or proposed policies and guided by the Just Transition model. Three key needs that must be addressed in Sunset Park:

- Stop Displacement
- Retain and Create Well-Paid Jobs
- Develop Community and Climate Resiliency

ADDRESSING DISPLACEMENT:

According to data, Sunset Park residents and businesses are experiencing significant displacement pressures as a result of rising rental and sales costs, increasing poverty, influx of jobs that require higher educational attainment and the associated impacts of gentrification. Studies of similar re-zonings in San Francisco and Seattle suggest that high-end commercial development with boutique retail, hotels and entertainment uses such as those proposed at Industry City will not meet the needs of the resident population and will increasingly push them out of Sunset Park.

In San Francisco, there was a boom in the demand for tech office space starting in the early 1990s. Tech offices began moving into the Northeast Mission Industrial Zone (NEMIZ) and displacing industrial businesses, calling themselves “businesses service industry” to get around the ban on office buildings in an industrial area. The asking price for manufacturing space is now \$420 per square foot. The City of San Francisco realized that its commercial businesses depend on many of the industrial businesses that were being displaced by the tech offices. As a result, it is one of the few cities to pass legislation to restrict non-manufacturing uses in industrial districts.



The Mission district’s residential sections were also affected by the tech boom. In 1999-2000, the Mission had the highest eviction rate in San Francisco. The Influx of highly educated residents led to the displacement of working class residents without high school diplomas. Households making 200% of Area Median Income (AMI) doubled between 2000 and 2014. Over 25% of the Latino community was displaced since 2000.

Industrial ordinances and mitigating measures adopted by cities where industrial businesses experienced displacement measures include:

PROTECTIVE ORDINANCES:

- Kinzie Planned Manufacturing District (PMD) in Chicago sought to maximize the production of real and virtual products, and provide adequate space for a broader range of businesses, while still protecting against the potentially negative impacts of housing, entertainment, and lodging uses.

PRIORITIZING GROUND FLOOR INDUSTRIAL VS GROUND FLOOR COMMERCIAL

- Portland's southeast Quadrant Plan includes a Ground Floor Industrial Bonus, which incentivizes full ground floor industrial use in exchange for increased FAR for industrial office uses (enforced by a covenant).
- Chicago's Fulton Market Innovation District Plan restricts commercial uses to no more than 25% of the ground floor.
- San Francisco's Office Subsidy (2014) Industrial business protection legislation (2017) promotes ground floor industrial uses.
- NYC's Enhanced business areas does not incentivize ground floor commercial.

BALANCING MANUFACTURING/TECH USES

- Portland, Oregon created an "Industrial Office" use, which focuses on the development, testing, production, processing, packaging, or assembly of goods and products (which may include digital products)
- San Francisco conducted a survey of businesses in each use group looking at rents and type of space/building occupied. Despite its need for flexible workspace, Research and Development was not classified as Manufacturing use because of its preference for new office space and the high rent it can afford.

ENFORCEMENT

- In San Francisco, all projects require conditional use permitting and the city will only issue a certificate of occupancy (CO) for commercial space in tandem with the CO for manufacturing space. Private developers are required to do periodic reporting and create a manufacturing business plan, which are included in the terms of the Special Permit and then written into a deed restriction.
- In Portland, agreements about industrial versus commercial space are enforced by a covenant. Also, the city requires industrial

businesses to provide disclosure statements so new residential and industrial office development does not have the ability to file actionable complaints regarding noise, fumes, etc.

RETAINING AND CREATING WELL-PAID JOBS:

The Sunset Park Industrial Waterfront has provided stable jobs to community residents as evidenced by the large proportion of residents who walk to work in Sunset Park and the large number of residents who work in the industrial sector. While the industrial sector continues to provide the largest number of jobs in Sunset Park and is growing, jobs in educational services and retail trade, which usually provide low-paying wages, make up a large proportion of the new jobs. Public administration jobs, which are mostly white-collar jobs, are another sector that increased dramatically. With the increased interest in commercial development on the waterfront, there is a strong possibility that more industrial businesses and jobs will be displaced with new jobs that required higher skills and educational attainment.

According to Making It in America: Revitalizing US Manufacturing, a recent report from the McKinsey Global Institute, manufacturing jobs have "historically offered opportunities for workers without college degrees to gain technical skills and climb the economic ladder." In addition, the Economic Policy Institute states that manufacturing workers earn 13% more per hour than comparable workers earn in the rest of the private sector. According to the New York State Department of Labor, the average annual wage for a manufacturing worker is over \$53,000, compared to \$36,000 for retail work and \$24,500 for employment in food service, two large sectors projected for growth in Sunset Park and Industry City.

Since 40% of Sunset Park residents do not have a high school diploma, it is

Manufacturing hourly wage premium*, by gender, education, and age, 1980s–2010s

Period	All	Men	Women	Non-college	College or more	Ages 25–34	Ages 35–44	Ages 45–54
1980s	14.7%	13.3%	14.8%	13.1%	22.8%	12.3%	12.6%	13.6%
1990s	11.9%	11.3%	11.3%	10.3%	18.1%	9.7%	10.0%	11.9%
2000s	9.4%	8.2%	10.4%	7.1%	16.3%	8.2%	7.6%	8.7%
2010s	10.4%	9.3%	11.5%	7.8%	16.7%	10.3%	7.7%	9.0%
Percentage-point change								
1980s–2010s	-4.3%	-4.0%	-3.4%	-5.3%	-6.1%	-2.0%	-4.9%	-4.6%

* $\exp(b) - 1$, where b is the coefficient on manufacturing in log wage equation.

Notes: The manufacturing hourly wage premium is for workers ages 18–64 and shows how much more a manufacturing worker makes than a nonmanufacturing worker in the private sector, adjusted for gender, experience level, education level, regional division, race, and Hispanic ethnicity.

Source: Analysis of Current Population Survey Outgoing Rotation Group data

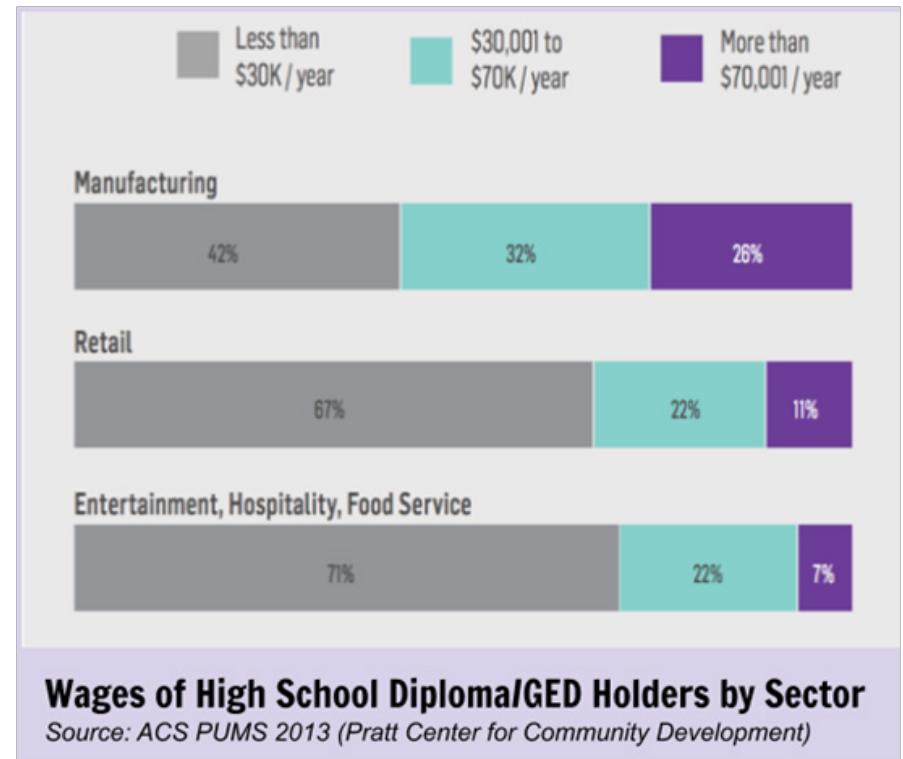
Economic Policy Institute

essential to retain and create jobs that match their educational profile and provide ladders for economic advancement. This need coupled with recent political commitments to climate adaptation and mitigation, presents an opportunity for job creation that matches the needs of the Sunset Park community.

Industry City has not kept its promise of local recruiting and job placement. Based on the numbers reported in Industry City’s February 2019 ULURP presentation, only 2.8% of Sunset Park’s work force is employed in Industry City. In addition, only 0.17% of Sunset Park residents have been placed in jobs by Innovation Lab of Industry City.

GREEN JOBS:

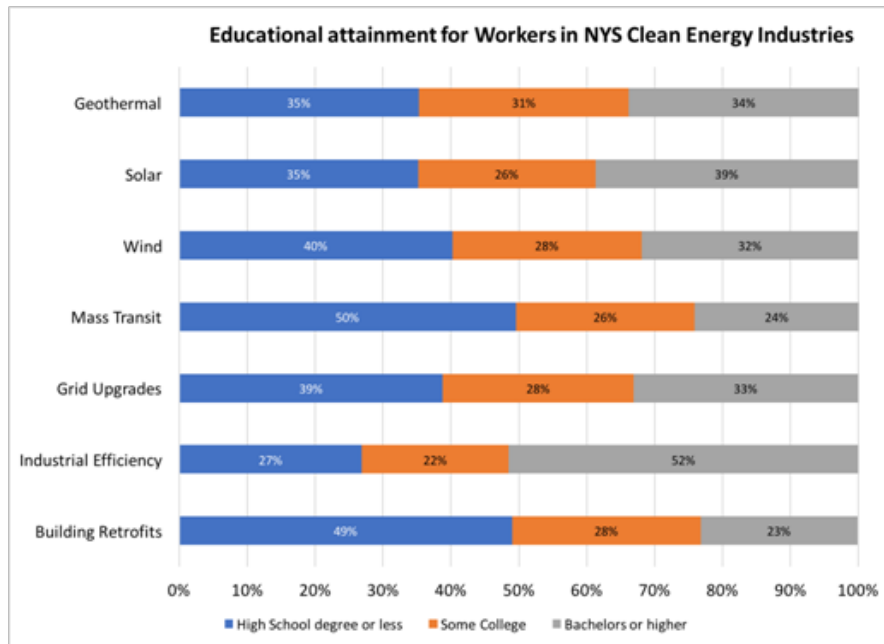
“Green Jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy or energy efficiency.” - International Labour Organization. Green



manufacturing and industrial development can provide good jobs that meet the labor profile of Sunset Park residents.

The clean energy transformation and pledge to reduce carbon emissions have the potential to become the new economic development drivers similar to the tech boom. NYSERDA’s 2018 New York Clean Energy Industry Report demonstrates the economic growth spurred by New York State and City’s ambitious clean energy agenda. Between 2015 and 2017, clean energy employment grew by 7.4% compared to 3% growth in all non-farm employment.

Even before the recent climate adaptation bills, the clean energy and green jobs sectors were growing. The New York State Bureau of Labor Statistics conducted a special assessment of green jobs in 2010. They identified the types of businesses currently engaged in green industry from



building maintenance to renewable energy.¹⁶ The study indicates a demand for construction, building and professional services occupations ranging from insulation workers, plumbers, construction managers to stationary engineers, boiler operators, commercial/industrial designers, mechanical and electric technicians and engineers. Many of these jobs are a good fit for the existing businesses in Sunset Park. The educational credentials required for much of the clean energy sector are a good match Sunset Park residents' educational profile. Most construction fields have entry-level jobs that can lead to supervisory positions and/or higher skilled technical positions with some training. Surveys of employers indicate that targeted training, apprenticeships and work experience are more important than academic degrees for many clean tech jobs.

The recently passed New York City Climate Mobilization Act is estimated to generate 27,000 construction and clean tech jobs per year and 16,995 indirect jobs in areas such as maintenance and operations and along the supply chain such as supply manufacturing.

The State projects 150,000 jobs per year over a decade from New York State's Climate Leadership and Community Protection Act (CLCPA) in the construction and clean energy fields.

¹⁶ New York State Dept. of Labor Division of Research & Statistics, New York State Green Jobs Survey, 2010.

COMMUNITY AND CLIMATE RESILIENCY

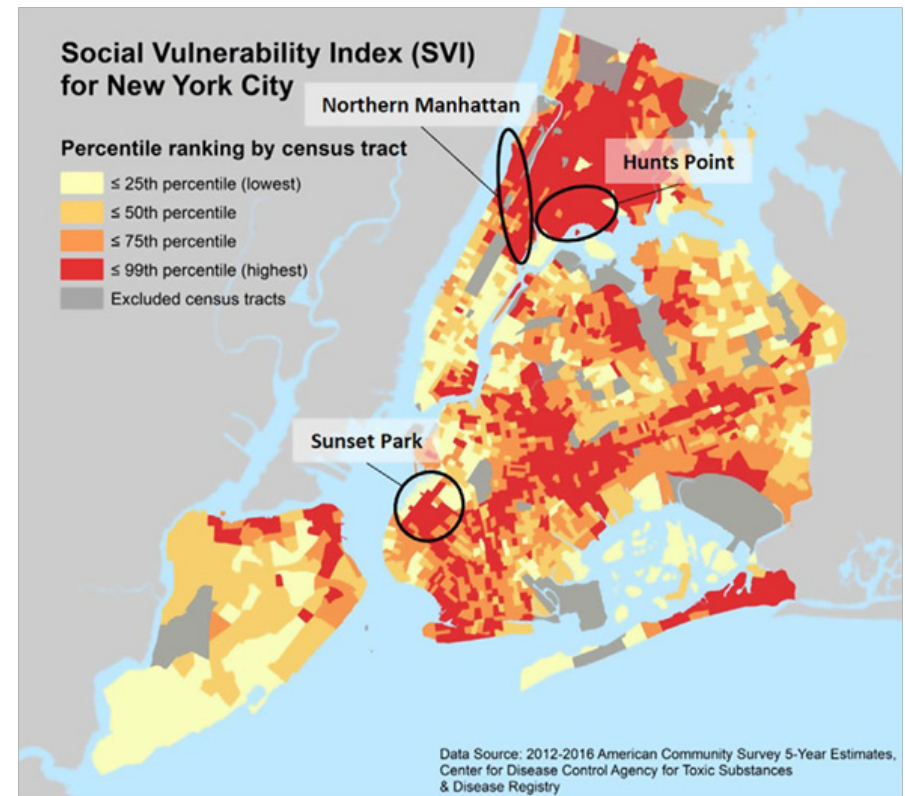
Climate resilience has been defined as the capacity for a socio-ecological system to:

- Absorb stresses and maintain function in the face of external stresses imposed upon it by climate change and
- Adapt, reorganize, and evolve into more resilient configurations that improve the sustainability of the system, leaving it better prepared for future climate change impacts.

Climate Resiliency is a top priority of the Sunset Park community. It is also a cornerstone of the Mayor's OneNYC policies as well as New York City's Climate Mobilization Act and New York State's Climate Leadership and Community Protection Act.

SEVERAL SOCIO-ECONOMIC RESILIENCE FACTORS MAKE THE SUNSET PARK COMMUNITY VULNERABLE

- A 32% poverty rate (2016)
- Language challenges of its predominantly immigrant population (45% Latino and 36% Asian)
- 45% rent burdened households
- Impact of displacement of industrial jobs and the inability to find comparable well-paying jobs for Sunset Park residents with limited educational attainment
- Displacement vulnerability for many existing businesses that do not own their own property



COMMUNITY STRENGTHS CAN HELP MITIGATE SOME OF THESE ISSUES

- Community and public organizations such as UPROSE POWWA, SBDIC, elected officials, educational and religious organizations, Brooklyn Community Board 7, labor unions, and NYU Langone Health facilities can provide support and advocate for community needs.
- City and State plans and policies committed to CO2 reductions with 35-40% benefits going to frontline communities can be beneficial in mitigating the socio-economic resilience challenges.

PHYSICAL, ECOLOGICAL, AND INFRASTRUCTURE RESILIENCE ISSUES AND NEEDS

NEED: Reduce health and physical risks associated with Sunset Park's location in a flood, storm surge, and sea level rise zone.

Possible approaches:

- Although NYC zoning industrial performance standards need to be updated, many Sunset Park industries will find it financially and operationally difficult to make changes. Technical and financial support must be provided to help existing industries adopt pollution prevention practices, secure dangerous materials and develop new green businesses.
- All public and private building investments and new developments in Sunset Park must include measures such as building fortifications, wet and dry walling against flooding. Waterfront facilities may also need to raise their bulkheads and properties to protect against sea level rise as is being done by Sims Recycling.
- Alternative energy back up sources are needed. Space for electric charging can be provided to facilitate the electrification of vehicles for the movement of goods. Roofs of industrial buildings are excellent locations for green roofs or solar arrays.

NEED: Reduction of flooding and runoff risks from direct industrial runoff and Combined Sewer Overflows

Possible approaches:

- Incorporate green infrastructure elements where possible such as bioswales, rain gardens, wetlands, trees and shrubs, open space and porous surfaces and detention tanks to reduce runoff. The New York City Department of Environmental Protection (Green Infrastructure Report), the Sunset Park Brownfields Opportunity Area (BOA) and the Sunset Park Greenway Plan -- all recommend such practices for both waterfront and upland areas. These improvements, along with water conservation, will require business as well as residential stewardship and can create good green jobs for local residents in

construction and maintenance.

- Grey and green storm water management strategies:

NEED: Mitigation of air pollution from the Gowanus Expressway and

1. The replacement of impervious pavement with vegetation and/or porous pavement will allow more water to percolate into the ground and recharge the aquifer instead of flowing to storm drains.
2. Green Streets
3. Rain gardens and bio-swales - not the same as conventional planted areas. A properly designed rain garden or bio-swale has a deep section filled with layers of sand, gravel and soil that resists compaction and thus allows water to percolate easily. Sand and gravel allows for retention of high volumes of water and the various densities of the different layers are extremely effective at filtering the water as it percolates to the aquifer below.
4. Green and blue roofs
5. Rain Barrels and Cisterns - in industrial, commercial and residential areas
6. Detention systems

local truck routes.

Air pollution can be minimized through requirements for and investments in use of rail, water, electric vehicle and bicycle transport.

NEED: Community-based renewable energy sources to address climate change, especially in extreme weather events.

Models and additional opportunities exist in Sunset Park for growing and expanding renewable energy sources, including both alternative renewable back up energy sources leading to economic development, carbon reduction, reduced energy costs, job opportunities and climate resilience.

The Sims Municipal Recycling Facility generates 20% of its electric needs with onsite renewable energy. UPROSE and the Sunset Park Solar team are constructing a 385 kilowatt community solar system utilizing 80,000 square feet of the Brooklyn Army Terminal rooftop. This can be the first of many



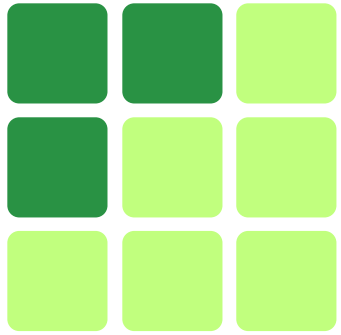
A mechanic at Brooklyn Army Terminal points to the parts of the roof where Sunset Park Solar will be installed. Photo: Amy Howden-Chapman

rooftop solar projects providing clean and affordable energy to the Sunset Park community. NYCEDC should increase the supply of renewable energy on its property, which could host additional community solar projects and bring clean energy to area businesses and residents.

NEED: Waterfront access in industrial areas.

While the NYC Zoning resolution does not require waterfront access in industrial areas, the Sunset Park Greenway Plan identifies the feasibility and importance of access. Unfortunately, Sunset Park is one of the last legs of the Brooklyn Waterfront Greenway to be built. Construction of Bush Terminal Park, a goal of both the BOA and the Greenway Plan, is only partially completed. Along with planned bicycle lanes and green infrastructure improvements New York City Department of Transportation and New York Department of Environmental Protection are now implementing the first two of three waterfront access corridors that will link the upland to the waterfront with improved street crossings, including

the area under the Gowanus Expressway. In the event of extreme weather improved waterfront access can make waterborne delivery of food and materials possible, and even facilitate ferry rescue potential.



POTENTIAL APPROACHES

POTENTIAL APPROACHES AND MODELS TO ADDRESS COMMUNITY NEEDS:

The three approaches along with model applications discussed below address issues of: 1. Mitigating housing and business displacement, 2. Creating well paid green jobs and building resilience, and 3. Reducing air and water pollution associated with the industrial sector. These approaches can strengthen the Sunset Park industrial waterfront and make it an accelerator for green industrial development that provides good jobs and builds resilience. Together they build on Sunset Park's existing assets and provide a better model for community stability and Just Transition than more of the same kind of development that focuses on high end retail and commercial development on the Sunset Park Waterfront.

These approaches are:

- Green Ports
- Eco-Industrial Park/Zone
- Resource Recovery and Circular Industrial Economy

GREEN PORTS:

Green ports have the potential to address resiliency and sustainability goals while working as accelerators to reinvigorate industrial areas and create new jobs. The Maritime industry transports about 80% of global trade volume and accounts for 2% of global carbon dioxide emissions. Although shipping was not considered in the Paris agreement on climate change, in April 2018, the International Maritime Organization (IMO) engaged representatives from 170 countries to agree on a goal of cutting shipping emissions 50% by 2050. By 2030, new ships will run without fossil fuels.¹⁷

For over a decade, ports have been enacting sustainability plans to reduce greenhouse gas emissions and increase competitiveness and efficiency. They have used technology to create more integrated solutions that increase connectivity, demand management and energy efficiency. Sustainable ports have seen their cargo numbers increase and emissions drop.

While in the past the main port drivers were labor and capital, sustainable green ports focus on new ideas, innovations, and transition in the process of technological development.¹⁸ This creates new business opportunities and a diverse range of jobs from manual labor to highly skilled technology and engineering. Successful Green Ports are environmental stewards that work close with the local communities to meet resilience and sustainability goals.

¹⁷ Independent, Carbon Emission from global shipping to be halved by 2050, says IMO.4/13/18

¹⁸ Vellinga, T.: Green Ports Fiction, condition or foregone conclusion, Faculty of Civil Engineering and Geosciences, 2011.

Some characteristics of green ports are:

- Utilization of rail power and clean smart truck technology.
- Improvement of land and water operations to address global environmental change.
- Effective recycling processes.
- Sustainable design and construction guidelines.
- Sustainable global supply logistics and supply chains are key elements to increasing resiliency in port cities.

GREEN PORT INNOVATIONS AND MODELS:

To meet sustainability goals, ports across the globe are devising innovative strategies to protect their waterways and reduce greenhouse gas production. These strategies include reduction in fossil fuel use, onsite renewable energy production, eco-friendly industry and technological innovations. For instance:

- Ports of Yokohama and Kitakyshu are powered by off- shore wind generation.
- Port of Baltimore uses algae to clean nutrients from the river and bay. The algae is converted to biogas and fed to a fuel cell that powers port lights and recirculation pumps.
- Ports of Maryland and Rotterdam created “trash eating” technologies called Mr. Trash Wheel that clean debris from waterways.

MODEL: PORTS OF LOS ANGELES AND LONG BEACH

- The largest port in the Americas that is known for its innovation and sustainability programs.
- Their Clean Air Action Program has resulted in reductions of 85% of particulate matter, 50% of nitrogen oxides and 95% of sulfur oxides through replacement of older diesel trucks and reduction of emissions in cargo ships.
- They co-fund a Technology Advancement Program (TAP) to identify promising clean technology and fund demonstration projects that help to bring the technology to market.
 - The port provides 50% of the funds for this program, matched by private investments. It has funded a hybrid tugboat, natural gas fueled heavy-duty truck engines, emissions capture systems and a zero-emission electric-battery for heavy-duty trucks.

MODEL: ROTTERDAM, RDM and PORT XL

- Europe's largest port and a center for maritime innovation is a good example of a green port and the application of eco-industrial principles.
 - Home to RDM - Research, Design, Manufacturing - a campus of educational institutions, innovative companies, research institutions and governmental partners.
 - Developed in part to counter jobs lost due to the closing of the adjacent shipyard.
 - Combines business, research and vocational training targeted at the maritime and clean tech industry.
 - Sustainability, resilience and industrial job creation are key goals of the project as it is closely related to the Rotterdam Climate Initiative so.
- Port XL Program, the first Port and Maritime accelerator program to drive innovation in the maritime industry.
 - Business-to-business linkages of maritime industry startups and scale-ups.
 - Hands on mentorship.
 - Corporate sponsors for pilot opportunities in the maritime sectors of: energy, refinery, and shipping and logistics.
 - Attracted over 15 startups in its first solicitation including
 - Tuly wind (Arkom) a small turbine for land use
 - EONcrete - special concrete mixtures that promote biodiversity,
 - Cargo Ledger - block chain-based solutions for cargo handling,
 - Whale Washing - Innovative ship cleaning technology that reduces long term power consumption.
- • Port XL is expanding and seeking a partner site in the USA

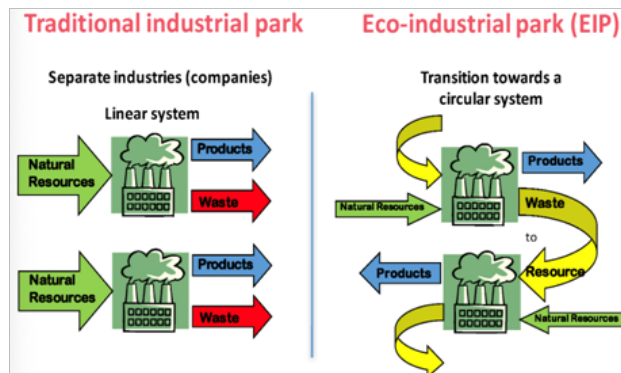
RDM CAMPUS IS...

...a new purpose for a historical industrial location: shipyard and buildings of the 'Rotterdamsche Droogdok Maatschappij' (Rotterdam Dry Dock Company). The abbreviation RDM now stands for: *Research, Design & Manufacturing* ...a cooperative venture between Albeda College, Rotterdam University and the Port of Rotterdam Authority ...situated in Heijplaat, centrally located in the CityPorts area, easily accessible, with transportation to the city centre by fast ferry Aqualiner ...Innovation Dock – a monumental industrial hall of 23,000m², 'Droogdok' (Dry Dock) – the former head office of the RDM – and 'Dokhaven' (the Dock) ...a place where students and companies collaborate in an open environment and focus on new economic activity and sustainable and innovative solutions in the markets *Building, Moving & Powering* ...a location for education: intermediate and higher vocational education under the same roof, with plenty of space for experiment and for practical research ...a location for business: accommodation for the innovative and creative manufacturing industry ...a location for events: accommodation for meetings and conferences.

ECO-INDUSTRIAL PARK/ ZONE:

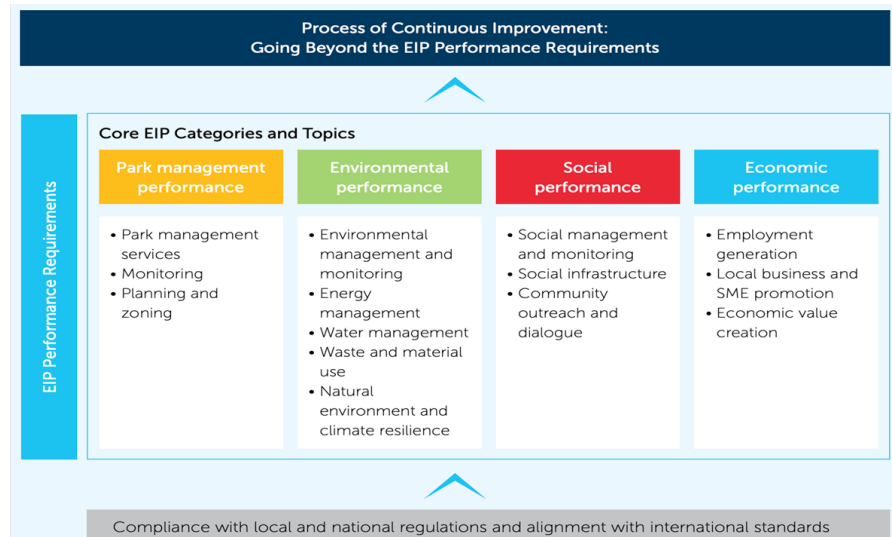
An eco-industrial park (EIP) is a network of businesses and organizations working together to improve their environmental, economic and social performance and eliminate pollution and waste. The term “industrial ecosystem” is often used to describe the type of symbiotic relationships that develop amongst participating entities. According to the United Nations Industrial Development Organization (UNIDO), over the past 20 years approximately 250 EIPs were organized worldwide, ranging in size from a few hundred participating businesses to several thousand as in many of China’s EIPs. An EIP can be a distinct industrial park, zone, or cluster of companies sharing common goals, principles, and resources.

Adoption of EIP components and practices by existing businesses is challenging. The rewards must be clear, with some benefits quickly attained. The application of components to different sectors must be developed by the local stakeholders to meet their needs and build their commitment. EIPs have frameworks to monitor social, environmental and economic performance as well as management to ensure compliance. The following framework was developed by the World Bank Group, the United Nations Industrial Development Organization (UNIDO) and GIZ (German Society for International Cooperation) and cited in the report, “An Economic Framework for Eco-Industrial Parks”, December 2017.



MODEL: MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT, CALIFORNIA - A Resource Recovery and an Eco-Industrial Park.

- Processes more than 100,000 tons of community waste annually, with a 75% target for recycling and reuse.
- Reuses around 60% of the Park’s accepted Household Hazardous Waste materials through a “drop and swap” program, significantly reducing disposal costs.
- Private companies lease District property for recycling operations including concrete recycling and composting yard trimmings.
- Sorts construction and demolition materials and waste wood and provides composting for green products and soil blending facilities.
- Four generators provide approximately 5 megawatts of clean alternative power, meeting all of the District’s own power needs and electricity for approximately 3,000 homes.
- “SmartFerm” anaerobic digestion system is a state-of-the-industry food scrap and organic material composting system.



RESOURCE RECOVERY AND CIRCULAR ECONOMY PRINCIPLES

Circular Industrial Economy (CIE) follows the adage: REDUCE, REUSE, RECYCLE. CIE eliminates production waste and non-recyclable materials from production; CIE must involve all of society and business, guided by government mandates. Sunset Park already has several businesses that abide by the principles of the Circular Industrial Economy such as Sims MRF and Fabscrap.

CHALLENGES:

- After importing 45% of the world's plastic waste since 1992, China stopped accepting recyclable material from the U.S. in January 2018. This loss of China as an end market exposes the dysfunction in the U.S. recycling industry.
- SWEEP (Solid Waste Environmental Excellence Protocol), which monitors the impact of China's material import ban, reports that the West and Northeast will be most heavily impacted as they recover the most municipal solid waste at 34% and 37.1% respectively.
- As recycling costs increase, municipalities resort to landfill or waste-to-energy incineration plants, which are neither sustainable nor without negative impacts such as methane production and loss of land resources.
- Achieving a systemic change to eliminate waste costs by creating value in waste-objects at the end of life.

New York City has postponed its plan to adopt single stream recycling, as is the practice in most U.S. cities.¹⁹

SOLUTIONS:

- Extended Producer Responsibility (EPR) assigns liability to an owner, usually the producer or importer.
- "Mining the Waste Stream" uses efficient production involving recyclable materials with an end-of-life plan.



¹⁹ NYC has a multi-stream recycling process that is more costly in collection but more effective in providing material for re-processing. Even with sophisticated MRF's, more recycled materials end up as residuals to land fills with co-mingled trash. Scientific American, <https://www.scientificamerican.com/article/single-stream-recycling/>

MODEL: SIMS MATERIALS RECOVERY FACILITY (MRF)

Located in the South Brooklyn Marine Terminal, it is the largest and most advanced MRF for commingled residential recyclables in North America. It offers an excellent example of applied principles of the circular economy, eco-Industrial principles and clean transport.

The Sims MRF processes the bulk of NYC's curbside material for reuse in production processes, replacing virgin materials.

- It handles more than 200,000 tons of glass, metal and plastics from New York's curbside trash annually.
- Recycled glass aggregate (RGA) is sold as structural and non-structural fill, drainage and filtration medium, embankment material and pipe bedding.
- Aluminum cans and foil are reused in production of beverage cans, foil, and parts for aircraft, boats and bicycles.
- Plastics are recycled into carpeting, clothing, pillows, plastic bottles, lumber, pipe and toys.
- It provides 85 jobs.

It is recognized for its design excellence, sustainability and resilience features, receiving a WEDG - Waterfront Edge Design Guidelines certification for comprehensive, multi-disciplinary approach to waterfront design and adaptive management and a 2009 Excellence in Design Award from the NYC Public Design Commission.

The approximately 8 acres surrounding the MRF offers the possibilities of expansion and exploration of other creative repurposing services.



Sims MRF Sustainability & Resilience:

- Takes advantage of its waterfront location by using barges, rail and trucks for transport, removing approximately 240,000 New York City Department of Sanitation collection truck miles from city streets.
- Produces up to 20% of its electricity demand from onsite solar and wind sources - a 600 kW(Kilowatt) solar installation and the first commercial scale wind turbine in New York City installed in 2014.
 - At a cost of \$750,000, its commercial scale turbine provides 4% of the MRF's energy use with a projected five-year payback period.
- An on-site gravity fed system based on retention pond and bio-swales handles storm water.

MODEL: FABSCRAP

Fabscrap is a non-profit organization that recycles textiles received as donations from the fashion industry.

In 2017, Fabscrap collected 68,000 lbs. of fabric from designers.

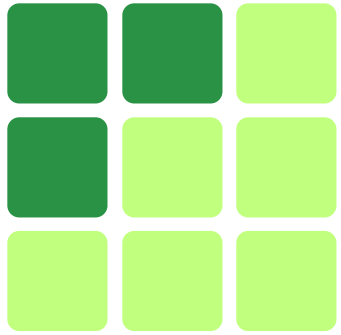
It relies on a volunteer workforce to sort the fabric it receives.

Fabrics are resold online and in stores. Scraps and proprietary material is recycled into insulation, carpet padding, furniture lining and moving blankets.

Additional opportunities to work with the apparel companies to introduce zero waste production and recycling should be explored.

Engaging the entire Sunset Park community in improved recycling, waste elimination, reuse, repurposing and sharing provides a grand demonstration of the Circular Economy in New York City.





OPPORTUNITIES & THREATS

The following opportunities provide the rationale for green industrial development in Sunset Park. The threats arise from the trend of converting the industrial working waterfront into higher end commercial development such as the one proposed by Industry City and its rezoning application.

1. OPPORTUNITIES

Community and City Plans Support a Maritime and Industrial Waterfront:

Every plan produced by the Sunset Park community and the city has proposed the preservation and growth of both the industrial and maritime character of the area with a focus on businesses that protect and improve the environment. Plans include, but are not limited to, the Sunset Park 197a plan, the Brownfields Opportunity Area (BOA) plan, as well as the NYCEDC's Sunset Park Vision Plan and Vision 2020-NYC's Comprehensive Waterfront Plan. The Freight NYC Plan seeks to improve NYC's freight infrastructure, improve air quality, address traffic congestion and create good jobs, by focusing investment in Sunset Park at the SSBMT and 65th Street Rail Yards.

Resurgence of Maritime and Industrial activities:

The City of New York owns most of the Sunset Park Waterfront. After years of losses of port and maritime businesses to New Jersey and the departure of industry from New York City, there has been a recent increase in maritime and industrial activities and plans. These include port growth at the Red Hook Marine Terminal, NYCEDC's physical improvements and tenanting initiatives at Brooklyn Army Terminal, proposals for the Sustainable South Brooklyn Marine Terminal (SSBMT) Green Port and Bush Terminal, Sims Recycling Facility, the Meat Market and the 65th Street and 51st Street cross harbor rail freight barge floats. These developments provide an opportunity to use the waterfront as an accelerator for green industries and jobs.

Physical Attributes and Infrastructure:

Sunset Park's waterfront has deep water required for port operations and industrially zoned land and buildings. It is an ideal location for NYCEDC's proposed Green Port development, which would significantly reduce truck traffic and pollution. The 65th Street cross harbor rail freight barge float and rail infrastructure make Sunset Park an ideal multi-modal location for a transition away from truck goods movement.

Density of Industrial Uses, Jobs and Proposed investment:

Given the density of industrial uses and jobs, port and multimodal transportation opportunities as well as the significant investment made by the City (Refer to section on Land Use) in rehabilitating buildings and infrastructure to support industrial and green, sustainable uses, Sunset Park is ripe for the development of a green industrial district. Demand for workers to fill diverse job types in the green business sector has been growing in NYC and the region. With proper training, Sunset Park working class residents could benefit from this need.

Opportunity for Green Port:

The Port Authority of New York and New Jersey (PANYNJ) has developed a Comprehensive Port Improvement Plan that has environmental, sustainable and resiliency strategies for its ports. Elements of these strategies reflect many characteristics of Green Ports. Mayor DeBlasio's Freight NYC plan supports PANYNJ's plans to increase cross-harbor freight through multimodal transport, which will reduce truck trips and pollution while creating jobs. A critical portion of these plans focuses on the Sunset Park waterfront.

Number of Residents Working in Industrial sector:

According to the Office of the New York State Comptroller, Sunset Park has the highest concentration of residents working in industrial jobs as compared to any other New York City neighborhood. 22% of Sunset Park residents worked in its Industrial jobs in 2017. Industrial and manufacturing jobs pay higher wages and provide greater ladders for professional growth than those in retail and food sector, thus enhancing economic security. Roughly 14% of Sunset Park residents walk to work, which significantly

reduces their carbon footprint. Retaining and expanding industrial jobs, especially those whose entry requirements fit the community's educational profile will increase neighborhood stability.

Affordable Industrial Real Estate:

Compared to many other Brooklyn waterfront communities including nearby areas, Sunset Park's industrial real estate market has remained more affordable. This presents an opportunity to develop and sustain innovative green industrial initiatives.

Existing Clusters of Construction Businesses:

A significant number of construction businesses already exist in Sunset Park. With training, financial support and zoning protections, they are able to grow and work with both the public and private sectors retrofitting of buildings to meet the Mayor's goal of 80x50. Thus, they would support both the city's climate change and resilience goals and provide good local jobs. Similar strategies could also be applied to Sunset Park's food industry.

Urgency of fostering climate resilience in the city:

The Mayor, city agencies and the City Council have all called for measures that address climate change, energy efficiency, zero waste and resilience. The city's OneNYC report represents a unified vision for a sustainable, resilient, and equitable city with equity a guiding principle of its environmental planning, policymaking, and governing.

Local implementation of Green New Deal Principles:

Inspired by the Environmental Justice movement, the national call for a "Green New Deal" seeks to address the urgency of transitioning the economy away from dependence on fossil fuels and promoting good jobs that respect the environment, equity and economy. To be effective, the actual implementation of these goals will need to be accomplished locally by the community.

Availability of Space and Financing for Green Uses:

NYCEDC's port development plans at the South Brooklyn Marine Terminal and in other city-owned properties provide appropriate vacant land and

space for wind and solar energy. The rooftops of industrial buildings are ideal locations for the installation of solar panels as shown by UPROSE's community owned solar project at Brooklyn Army Terminal. The recent federal designation of Opportunity Zone areas in Sunset Park can be an accelerator if limited to financing green industrial and maritime uses and community owned businesses as these areas are clustered around maritime and rail infrastructure.

Sims MRF as a Catalyst for Resource Recovery:

Sims Municipal Recycling Facility, a national leader in recycling with interest and plans for expansion, can serve as the catalyst for significant growth in businesses that produce reprocessed, redesigned and reused products. Fabscrap, also located in Sunset Park, is an excellent example. Similar businesses need to be actively solicited and financially supported for industrial spaces in both Industry City and in other city and privately owned industrial buildings.

2. THREATS

Rising Rents and Purchase Prices:

In recent years, rising rents and purchase prices for housing and industrial space have been threatening Sunset Park’s affordability for both current residents and businesses. Market pressures are already spilling over from the gentrification of adjacent areas like Park Slope and from the influx of high tech, entertainment and both large and boutique retail uses in industrial spaces such as Industry City.

Threat of Displacement:

Recently released research by the University of California Urban Displacement Project cautions “... that with new investment in the New York region from tech and other industries that bring high-wage, high-skilled jobs, as well as new policies like Opportunity Zones, it is even more critical for legislators to consider the potential impact on affordability and displacement in the region.” The threat of primary and secondary displacement is a reason for rejecting the Industry City model of development and their proposed rezoning.

Impact of Non-Industrial Uses:

Currently, Industry City extensively markets tech, entertainment and retail opportunities rather than industrial uses. Real estate professionals see great opportunities for investment and speculation based on the promise of dramatic neighborhood transformation. The proposed Industry City rezoning will only result in even greater price increases and displacement pressures on the current industrial uses, small businesses and residents throughout the entire Sunset Park neighborhood as higher income workers opt to live, shop and be entertained in close proximity to their work.

Justin Fitzsimmons of GFI Realty Services said, “With their [tech startups] arrival comes demand for new amenities in those neighborhoods, cuing investors to create more office space as well as mixed-use and residential

projects. And that, in turn, spurs the arrival of more tech companies.”²⁰ Referring to Industry City, he states “that while the residential sector has yet to catch up, the neighborhood’s commuting infrastructure has undergone profound changes These transit amenities, on top of the retail and dining options at Industry City, make the neighborhood more accessible and more appealing to new tenants and developers alike...”

Loss of Industrial Space:

A large proportion of industrial properties are being marketed for office uses. Majority of these spaces are much larger than those being marketed as industrial spaces. 76% of the new jobs created in Sunset Park between 2010 and 2015 were in commercial, retail and food sectors. 16% of Sunset Park’s industrial land was converted to other uses between 2002 and 2015. The possibility of further losses in industrial space in the near future looms over Sunset Park absent essential protective measures. Such losses will impact the city’s ability to take advantage of the job opportunities for all New Yorkers that are called for and financed in the CLCPA and 80X20 Plans

Lack of Local Job Opportunities:

Most new high tech and white-collar firms spurred by developments such as Industry City have attracted new workers for higher paid jobs. Most of the higher skill and higher paid jobs created by non-industrial uses are not likely to go to current Sunset Park residents with lower educational attainment, whose local employment options will be limited to low wage service and retail jobs will be offered. Industry City claims that “700 area residents have either landed a full-time job or internship at an IC business through its on-site employment and business support center.” However, there is no available information about the types and wages of the Industry City jobs held by residents. Since internships are included in this number, it is not clear how many of the 700 residents hold full time jobs at Industry City. Even if a large proportion of them were full-time jobs, 700 jobs represents less than 10% of the 7,500 jobs at Industry City.

²⁰ <https://www.bisnow.com/new-york/news/commercial-real-estate/as-tech-companies-look-beyond-manhattan-the-outer-boroughs-grow-up-97803>

Community and City Plans Jeopardized:

The higher rent potential of the uses promoted by Industry City and its rezoning proposal jeopardizes the implementation of all earlier publicly created plans for Sunset Park and its waterfront, which have called for the preservation and greater development of maritime and industrial uses and housing affordability.

No Requirement for Including Climate Resilience Measures at Industry City and similar Developments:

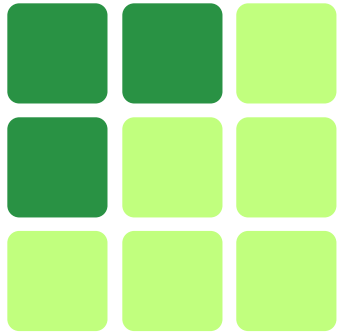
The entire Sunset Park waterfront and adjacent upland business and residential areas are vulnerable to flooding, extreme weather events and sea level rise from climate change. Any development in the area that fails to fully incorporate measures to address climate resilience as identified in the city's Green Infrastructure Plan and the community's BOA and Greenway Plans will contribute to even greater impacts. The Industry City DEIS does not fully describe what measures it currently has taken or proposes to take to address resilience.

Increased Traffic:

Sunset Park already suffers from the pollution generated by fossil fuel-using truck and car trips. Without providing for a transition to rail and barge movement and requiring the use of alternative fuels, new development, such as large retail uses as proposed by Industry City, and e-commerce, will expand potential traffic and trucking, and increase pollution.

Lack of Technical and Financial Resources for Use and Storage of Hazardous Materials:

The New York City Environmental Justice Alliance's Waterfront Justice Project identified that many industrial businesses in Sunset Park use and store hazardous materials that could pose a real risk in the event of extreme weather events. While improving performance standards would be an important measure for addressing these risks, without technical and financial support many businesses will find it extremely difficult to meet those standards.



SUNSET PARK GREEN RESILIENT INDUSTRIAL DISTRICT (GRID)

Despite New York City’s stated commitments to addressing climate change and promoting green, resilient and sustainable businesses and practices, currently there is no “Green” District in New York City. The development of a Green Resilient Industrial District (GRID) in Sunset Park as a unique place-based implementation strategy is a holistic and viable approach to climate and sustainability issues faced by this community and others. The GRID proposal calls for four distinct use-based sub areas that incorporate green building technology and industrial processes, use of renewable energy resources and circular economy principles. It relies on rail and water transport more than trucks for the movement of freight. It supports New York City’s strategies to reduce greenhouse gases produced by buildings, industry, transportation, and waste. It will create permanent well-paid blue-collar jobs in the green building, resource recovery and maritime industries, incorporating existing local businesses and labor force.

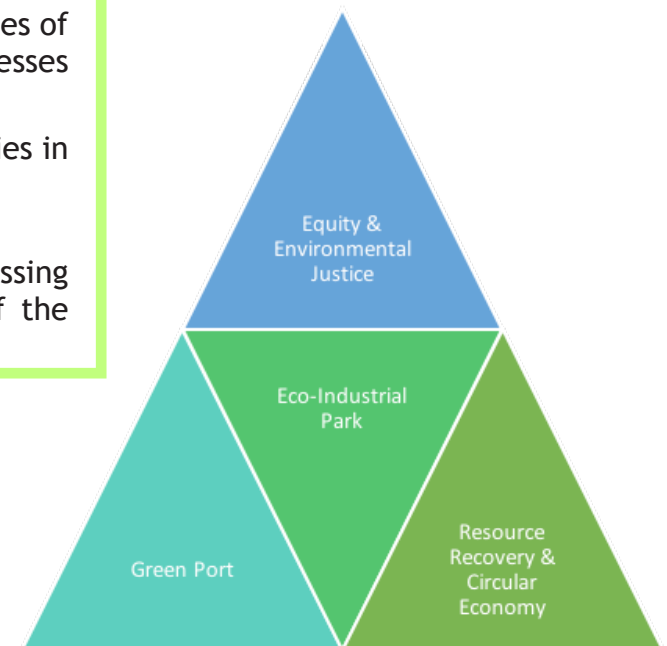
The GRID is a programmatic overlay encompassing Sunset Park. The GRID promotes retention and expansion of green industry, transportation and lifestyles by building on unique existing uses while incorporating environmental justice and sustainability principles.

The GRID goals align with New York City and the local community’s policy goals:

- Enhance the maritime and industrial character of Sunset Park
- Retain and create well-paying working-class jobs that meet the educational and skill levels of the local workforce
- Leverage the significant investment in Sunset Park and the unique synergies of the port, green transport, resource recovery and local industries and businesses
- Integrate climate resiliency, circular economy and Just Transition strategies in all industries and development
- Support a living laboratory for climate change mitigation strategies addressing carbon reduction in buildings, transport, industry, and the greening of the electric grid

The key elements of the GRID proposal are:

- A. Green Port
- B. Eco-Industrial Park
- C. Resource Recovery & Circular Industrial Economy
- D. Workforce Development and Job Creation
- E. Climate Resiliency



Several important elements make Sunset Park the ideal New York City neighborhood for accomplishing the climate change response and green development goals. The Sunset Park community has advocated and organized around climate resiliency and community displacement for many years. Now is an opportunity to let the community decide the future of their neighborhood and industrial waterfront.

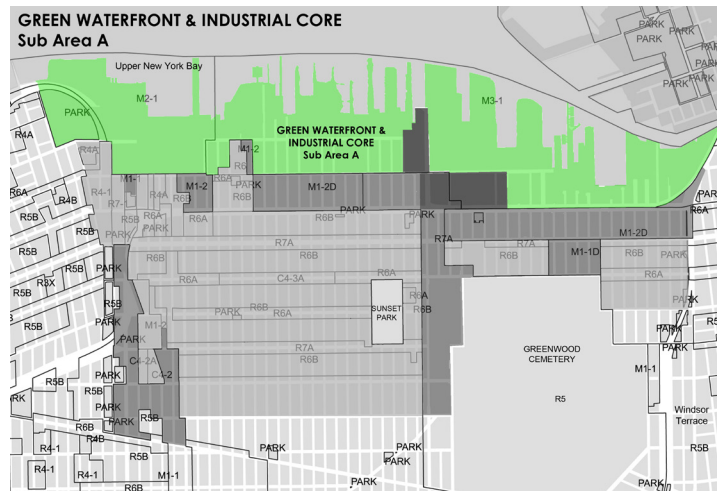
- Sunset Park already hosts numerous “green” industrial, tech and design firms, which focus on issues of alternative energy, energy efficiency, pollution prevention, waste reduction and recycling. (Refer to section on Land Use). Presently, however, despite awareness of each other, they operate separately.
- GRID will foster potential interrelationships between these businesses to help create an ecosystem that not only sustains the businesses but also helps to attract other complementary businesses to the area. These businesses would function as the core of potentially New York City’s first dynamic and growing center for green industrial development and jobs.
- Leverage the existing green and industrial resources and investments made in Sunset Park.
- Create technical training and financial assistance that address goals of the 80x50 Plan including improved air quality, new green jobs such as those in retrofits and green industries, and workforce development to make sure that New Yorkers are ready to fill these positions.

REASONS WHY SUNSET PARK IS IDEAL FOR GRID:

- 1. A Vibrant Industrial Sector that employs over 12,000 New Yorkers**
- 2. A large concentration of Construction and Food Manufacturing & Wholesale firms**
- 3. Nearly 1 in 4 residents work in the Industrial Sector**
- 4. Over \$750 millions of Public Investment in Sunset Park waterfront and infrastructure**

SUB AREA A:

GREEN WATERFRONT AND INDUSTRIAL CORE (M2 & M3 ZONING)



The Sustainable South Brooklyn Marine Terminal (SSBMT), Sims Material Recovery Facility and Bush Terminal are located in this Sub Area and have the potential to be accelerators for the creation and expansion of green maritime services, ancillary industry and resource recovery businesses. The large amount of publicly owned land and buildings is a resource for targeted industrial development.

Between 2002 and 2016, 16% of Sunset Park's M zoned was converted to non-industrial uses. In addition, our analysis of leases of industrial properties indicates that a large percentage of industrially zoned properties is being marketed as office space. The development of various non-industrial uses such as retail, food and accommodation and recreational uses are threats to manufacturing uses as well as well-paid industrial jobs. However, our data also shows that the industrial sector is the largest employer in Sunset Park, with over 12,000 workers. Enforcement of existing use restrictions

for M2 and M3 zones will help to support, protect and grow businesses in this core.

RECOMMENDATIONS FOR SUB AREA A

1. Public and Private property owners should preserve the existing industrial uses in this subarea so they may function integrally with the reactivated, greened waterfront

- Preserve and enforce M2 and M3 zoning regulations and restrictions except for only allowing commercial and retail development as accessory to industrial uses.
- Prohibit additional large retail (big box) development or expansion.

2. Port Authority of New York and New Jersey and NYCEDC to incorporate all best practices for a Green Port in the development of South Brooklyn Marine Terminal and Port related waterfront and upland uses and transportation.

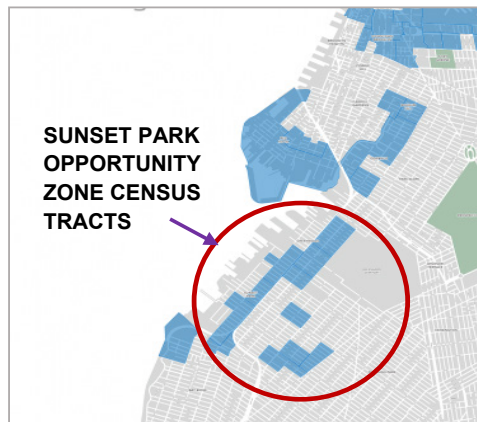
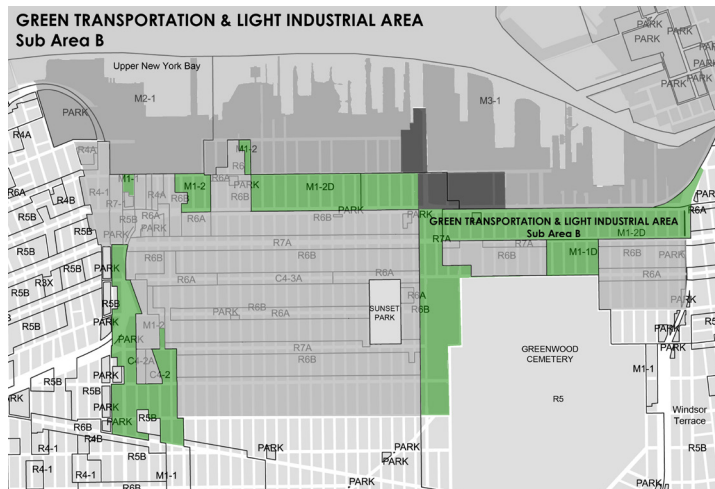
- As in the Rotterdam RDM program model, the Sustainable South Brooklyn Marine Terminal should link port activities with both existing and new businesses on the waterfront and upland areas, thus making SSBMT into a green industrial accelerator.
- The Sunset Park Task Force should commit to an ongoing role in planning and implementation of the SSBMT.
- The Port Operator should
 - Support off shore wind staging, production and transport facilities in SSBMT.
 - Require development of renewable energy on site, use of electric vehicles by the port operator and space for electric vehicle charging stations.

3. NYCEDC should preserve existing city-owned land and facilities for maritime and port related and other green industrial uses and for potential port expansion, including upland sites and rail infrastructure.

4. Support SIMS MRF expansion plans
 - Incentivize the development of new and existing businesses that work with Sims to reuse waste materials.
5. Support Freight NYC plans for modernization and expansion of rail lines and freight facilities.
 - Prevent rezoning or redevelopment of sites needed for port functions to maximize efficient transportation and industrial potential in Sunset Park.
6. Support the creation of new public and private freight distribution hubs -- new distribution, warehousing and trans-load facilities, including an Urban Distribution Center at the Brooklyn Army Terminal, that:
 - Incorporate green construction
 - Use process and operations best practices including the renewable energy, rail and electric delivery vehicles for last mile delivery
 - Offer preferential marketing for green industries and local hiring with wages.
7. NYCEDC to offer preferential marketing for green industries and those businesses that hire locally and offer wages that reflect prevailing industry standards and provide paths to upward mobility.
8. Public and private facilities should provide worker training, technical assistance and public education (e.g. Sims MRF education center), focused on circular economy, green uses to address climate change and resilience.

SUB AREA B:

GREEN LIGHT INDUSTRIAL AND TRANSPORTATION AREA



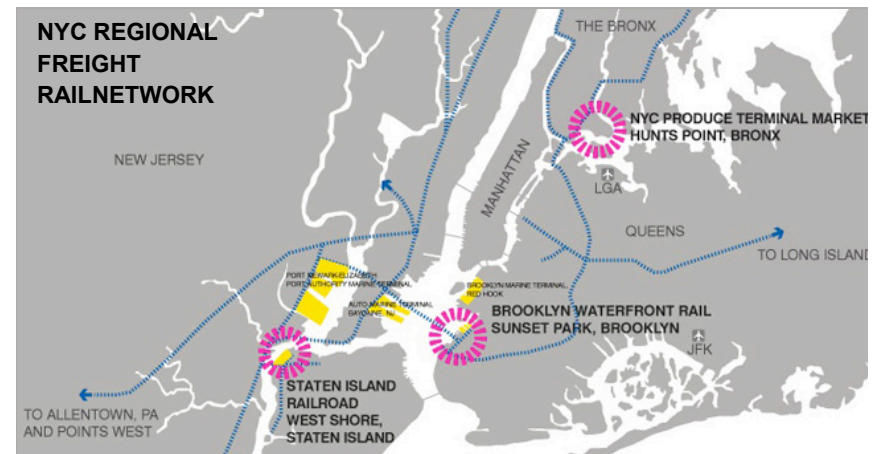
This sub area is located between the heavy industrial waterfront and the residential community. It is zoned for lighter industrial uses and has higher performance standards than Sub Area A. It is predominantly mixed use with industrial, construction supply and warehousing, e-commerce, auto related businesses and swaths of transportation related uses extending deeper into the neighborhood. Many industrial uses are lower rise, often 1 - 3 stories. Significantly, this area has rail lines and railway rights of way that link the Sunset Park Waterfront to the

upland rail network and, as such, are an important element for achieving NYCEDC’s plans for Freight NYC.

This Sub Area also includes both major institutional uses such as the NYU Langone Hospital Brooklyn, which is Sunset Park’s largest employer, and a number of residential uses interspersed among the industrial uses. Along with sections of Sub Area A, this Sub Area is designated as an Opportunity Zone, (see map) making development in it eligible for substantial tax incentives to support business development.

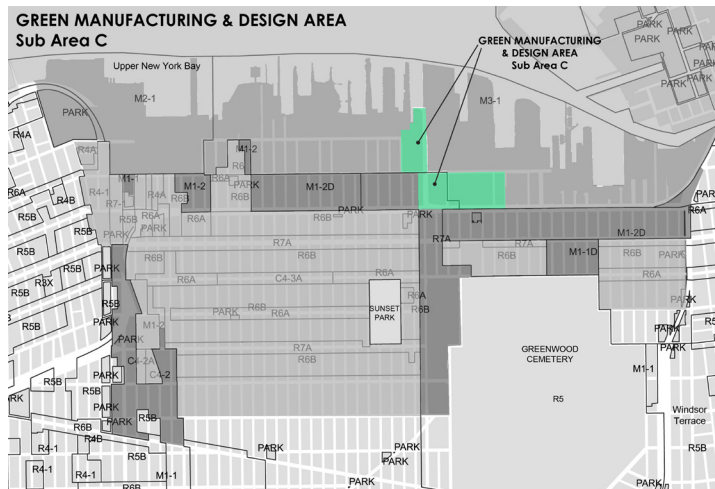
RECOMMENDATIONS FOR SUB AREA B

1. Preserve existing industrial uses and link them to the Sustainable South Brooklyn Marine Terminal and other waterfront facilities
 - Preserve and enforce M1-1, M1-2 and M1-2D zoning regulations including use and density restrictions.
 - Limit rezoning and redevelopment of properties for residential or mixed use along or over rail lines in this sub area until the long term needs for Freight NYC are determined.
2. NYCEDC with the Mayor’s Office of Sustainability and rail operators should evaluate the potential for installing solar collector “trees” or canopies over the rail lines and rights of way and parking lots.



SUB AREA C:

GREEN MANUFACTURING AND DESIGN AREA (INDUSTRY CITY)



This Sub Area encompasses the Industry City property and envisions it as a manufacturing and design area focused on green operation, practices and products and that relies on local recruitment and workforce development for well-paid jobs.

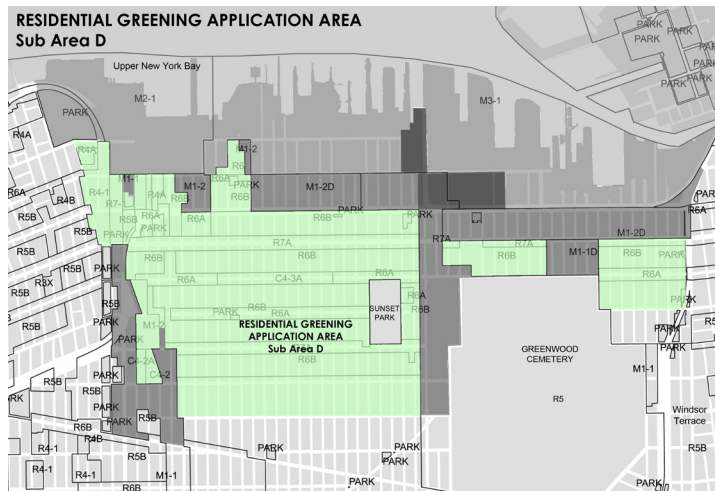
Only 16.6% of the real estate at Industry City is occupied by manufacturing uses. An Industry City spokesperson told The Gothamist that area residents hold less than 10% of the jobs or internships at Industry City. Since Industry City is located amidst a large swath of M3 and M2 zones on the Sunset Park waterfront, its conversion into mainly a retail, food and accommodation and entertainment venue will have far reaching adverse impact on the surrounding area. Such uses generate lower-wage service sector jobs that do not usually have ladders for economic mobility.

RECOMMENDATIONS FOR SUB AREA C

1. The City Planning Commission should preserve the existing zoning and
 - Limit retail and commercial uses to accessory uses to industrial uses
 - Limit eating and drinking establishments and entertainment facilities
 - Prohibit hotels in M2 or M3 districts
 - Require at least 50% of uses in Industry City to be industrial uses
2. A significant proportion of uses in this area should be green uses defined in terms of operations, design and products
 - Industry City should create a marketing strategy that prioritizes green uses on its campus, including but not limited to green design and technology.
3. IBZ and NYSEDA should help green businesses in this sub area access technical assistance and financial incentives.
4. Industry City's Innovation Lab should be redesigned to work in a manner similar to RDM Rotterdam with key goals of sustainability, climate resiliency and Just Transition.
 - Focus on the existing marine and industrial anchors in Sunset Park
 - Connecting them to innovation through educational and research based organizations and businesses.
 - Place community residents in well-paid jobs at all skill levels with ladder for growth.

SUB AREA D:

RESIDENTIAL GREENING APPLICATION AREA



This residential area runs upland from the waterfront to 9th Avenue, from the cemetery across the length of the waterfront. It contains a cross section of building types providing opportunities to apply different energy retrofit strategies. NYSERDA sponsors clean energy campaigns such as Solarize and Clean Heating and Cooling (CHC). Con Edison and National Grid, offer prescriptive and custom retrofit programs for residential, commercial and industrial buildings. Application of these programs provides opportunities for resident education and construction businesses to develop and apply green construction and retrofit skills.

RECOMMENDATIONS FOR SUB AREA D

1. Engage residents in energy efficiency, waste reduction and renewable energy projects including community ownership models like UPROSE's community solar project. This can be accomplished by working with the New York City Environmental Justice Alliance and other environmental organizations, academic institutions, NYSERDA, New York State Pollution Prevention Institute, New York City Departments of Sanitation and Buildings and the Mayor's Office of Sustainability.

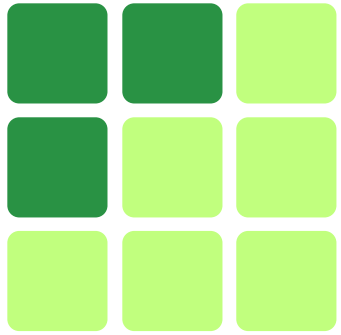
- Schools, community facilities, churches, community-based and non-profit organizations should be trained and funded to assist in such campaigns.

2. Apply and showcase the newly acquired retrofit expertise of local construction industries to Sunset Park residential and commercial areas. Create a national model for community wide application of energy efficiency retrofits and renewable energy development.

3. Actively engage individuals to reduce greenhouse gas emissions using energy efficiency programs, education, and community leadership opportunities.

4. Work with resource recovery and reuse businesses such as Sims and Fabscrap to promote waste reduction and Circular Economy measures such as composting, sharing economy and swap/trade centers.

5. Fund engagement strategies and campaigns to provide targeted information on the GRID with a focus on climate change awareness, resilience, and the role of the individual resident, business and consumer.



RECOMMENDATIONS

GRID ACTION PLAN

In order to implement the GRID proposal, a number of actions need to take place. First, is the establishment of a multi-stakeholder organization to guide the overall process for the GRID. Secondly, there are a number of specific actions that various governmental agencies need to undertake to make GRID a reality. These actions are described more fully below.

FIRST STEPS

Establish a multi-stakeholder organization to guide, implement and market the GRID.

- Designate Sunset Park as New York City's first Green Resilient Industrial District (GRID).
- Reach out to the business and larger community for their input to create a more detailed design and implementation strategies.

The Department of City Planning to:

- Reject the Industry City proposed Special District rezoning
- Preserve and enforce existing industrial zoning and limit large retail and offices to accessory uses.
- Suspend rezoning and redevelopment of properties along or over the rail lines for residential or mixed use until the long term needs for the Green Port and Freight NYC are determined.

THE MULTI-STAKEHOLDER ORGANIZATION is an essential part of the implementation of the GRID. It will:

- Guide, market and coordinate the implementation of the GRID.
- Coordinate and support the sustainable symbiotic relationships among existing and new businesses similar to those seen in Eco-Industrial Parks.
- Conduct outreach to the community
- Connect residents and businesses to incentives and programs for green industry development, building retrofits, automotive electrification and employee training, including technical and financial assistance.
- Increase awareness and participation in programs such as those offered NYSERDA and opportunities related to the New York City Climate Mobilization Act (CMA) and the New York State Climate Leadership and Community Protection Act (CLCPA).

Stakeholders to include UPROSE, POWWA members, CB7, the City Councilperson and other elected officials, SBIDC, NYCEDC and other public agencies, businesses, property owners, unions and educational and community institutions. The organization will be convened and coordinated by UPROSE and the Councilman in collaboration with the Mayor's Office of Sustainability.

Funding: New York City and State agencies and utility companies.

ACTIONS BY CITY AGENCIES

Require rehabilitation and development on City-owned property to be energy efficient, resilient and have on-site renewable energy production with battery storage.

NYCEDC to:

- Designate space and issue RFPs for green industries and retrofit businesses in all City owned properties, as it has for film, entertainment, fashion industries and artists.
- Review the impact of ongoing development at the Brooklyn Army Terminal, Bush Terminal, Sims expansion, e-commerce in the Sunset Industrial Park on the area and potential for water and/or rail transport in Sunset Park.

Provide New York City and/or State Tax incentives to property owners who provide longer term leases at affordable rents to both existing and new green and local industrial uses and hire local workers.

Complete the Sunset Park section of the Brooklyn Greenway including completion of the Bush Terminal Piers Park green infrastructure improvements, bicycle lanes and upland waterfront access routes as shown in the Consensus Plan for the Sunset Park Greenway: New York City Department of Transportation (DOT) with community stakeholders.

Further the implementation of Sunset Park BOA recommendations: New York State Department of Conservation and New York City Office of Environmental Remediation with UPROSE and other community stakeholders.

TECHNICAL ASSISTANCE FOR GREEN INFRASTRUCTURE & WORKFORCE DEVELOPMENT

Create a Manufacturing and Industrial Energy Exchange (MIEEx), a training and research center, modeled after the Building Energy Exchange (BEEEx) in Sunset Park to:

- Work with local businesses to share concepts, understand their needs and develop programs that address greening their operations and practices,
- Facilitate the adoption of initiatives similar to the Rotterdam Port XL Program and the Los Angeles TAP program that brings green technology to market.
- Provide workforce training in green building trades, off shore wind and vehicle electrification among others
- Provide community engagement and training
- Advocate for government commitments as well as public/private partnerships to provide technical and financial support for business and property owners to reduce their carbon emissions by:
 - Developing clean fuel infrastructure, including sites for compressed natural gas and electric charging.
 - Greening their own supply chains through logistics consolidation, carbon neutral shipping, and use of clean vehicles.
 - Preventing pollution by industrial performance improvements and securing toxic and hazardous materials in areas vulnerable to extreme weather impacts.
- This includes UPROSE's work with auto related businesses to upgrade their operations and reduce their environmental footprint.
 - Promoting the expansion of the Department of Transportation's Hunts Point Clean Trucks Program to Sunset Park that offers a rebate to applicants that replace, retrofit, or retire older, heavy polluting diesel trucks.

Provide training and financial assistance through existing City and State programs to Sunset Park's:

- Construction businesses to position them to perform for the building energy retrofits required to meet NYC's Climate Mobilization Act goals.
- Automotive businesses to adopt pollution prevention practices and to gain expertise in repairing and servicing electric and hybrid vehicles.
- Food production industry to adopt waste reduction and circular economy practices.

Provide technical assistance to businesses and residents in identifying where trees, bio swales and permeable surfaces can be planted as proposed in the Sunset Park Greenway Plan and link them to both public and private green infrastructure professionals: New York City Department of Transportation (DOT) and the New York City Department of Environmental Protection (DEP)

- Technical assistance organizations and educational programs should train business workers and residents alike for maintaining the green infrastructure. This training will result in paid jobs as well as volunteer skills.

Provide businesses with services, training and funding to implement energy efficiency improvements and pollution prevention practices that reduce environmental impacts and affect public health: NYSERDA and the New York State Pollution Prevention Institute.

Provide technical and financial assistance to both community organizations and local business for solar and wind installations: CUNY, SUNY and NYSERDA.

COMMUNITY EDUCATION

Multi-stakeholder organization to encourage public and private institutions such as NYU Langone Hospital Brooklyn, schools, retail and residential uses to adopt green practices including alternative energy and waste minimization.

City agencies to provide public education and sponsor community campaigns to engage schools, health facilities, community-based and non-profit organizations, and individual residents in energy efficiency, waste reduction and renewable energy projects through environmental justice and other environmental organizations

- Focus on community ownership projects such as UPROSE's Community Solar Project
- Funding through New York City and State agencies.

FUNDING OPPORTUNITIES

Opportunity Zone Funds as well as New York State and City financial and tax incentives should be focused on new green resilient industrial development and the preservation and greening of existing industries in the Sunset Park GRID. This does not apply to residential buildings that may be located in the Opportunity Zones. All efforts must be made to stop displacement of residents and businesses from Opportunity Zone tracts. Community should work with elected officials to ask that Opportunity Zone Funds in the residential areas of Sunset Park be limited to LEED certified 100% affordable housing (affordable to local AMI.)

A significant portion of the 35-40% of incentives and funds targeted to frontline communities as stipulated in the Climate Leadership and Community Protection Act should go to the Sunset Park GRID.

DISTRICT WIDE APPLICATIONS OF GREEN RESILIENT INDUSTRIAL STRATEGIES:

1. GREEN PORT OPPORTUNITY AT THE SUSTAINABLE SOUTH BROOKLYN MARINE TERMINAL (SSBMT)

The Sustainable South Brooklyn Marine Terminal will play a major role on the Sunset Park waterfront and in the Sunset Park community. Community representatives and elected officials created a vision for the SSBMT for productive maritime use bringing economic and environmental benefits including local jobs. These commitments are part of SSBMT's long-term lease. Continued active community and business involvement will ensure consideration of local and regional businesses as well as community needs. Adoption of Green Port strategies at SBMT will enhance resiliency and business supply chains. It will leverage synergies amongst existing businesses in Sunset Park and spur the development of new businesses and jobs.

Some Green Port characteristics already exist or are included in plans that that guide the development of the Sustainable South Brooklyn Marine Terminal.

1. The Port Authority of New York and New Jersey (PANYNJ) is currently undertaking a 30-year master planning process. This presents an opportunity to interject creative thinking on short and long term needs and priorities for New York City's waterfront. This plan builds on PANYNJ's Comprehensive Port Improvement Plan that includes essential carbon reducing measures.²¹

²¹ GreenPort Congress and Cruise Conference is in its 12th year facilitating sharing of sustainable development and environmental practice with seaports, terminals and logistics supply chains.
<https://www.greenport.com/congress>



2. Rail and clean truck transport are key features of green ports. SBMT operator Michael Stamatis has expressed interest in electrifying its vehicle fleet.

3. The Freight NYC Plan presents another city commitment to green port goals advocating to:

- Transform freight movement in New York City by investing in maritime and rail transport and
- Improve air quality by supporting an environmentally sustainable and resilient supply chain network.

These goals support the development of SBMT as a green port, since it has deep water ocean access and rail connections as well as the acreage and zoning to support an environmentally sustainable supply chain.

4. Both Freight NYC and PANYNJ Cross Harbor Freight Program (CHFP) seek to replace 11,000 truck trips with rail ships and barges. This will require adequate land zoned for uses (heavy manufacturing M3 zoning) that can accommodate the expansion, storage and transport related activities at SBMT and its vicinity .

5. City owned manufacturing buildings provide space to house an “accelerator” for maritime and clean energy industry innovation and start-ups like RDM, Port XL or the Long Beach TAP.

PANYNJ Environmental, Sustainability and Resiliency Strategies

- The Clean Air Strategy reduces diesel and GHG emissions by replacing older trucks, retrofit of switcher locomotives, installing shore power at the Brooklyn Cruise Terminal, and modernizing cargo-handling equipment used by terminal operators.
- Conduct emission studies.
- Environmental Stewardship to safeguard air, water, land, natural resources, flora, fauna, and people.
- Electrify port cranes.
- Green Practices Task Force: tenants taking conservation measures.
- Harbor Restoration and Shoreline Stabilization including a comprehensive restoration plan for the Gowanus Bay and Canal.

2. ESTABLISHING AN ECO-INDUSTRIAL PARK IN SUNSET PARK

Eco-Industrial Park components are:

- Sustainable green design
- Clean production techniques and methods
- Pollution prevention
- Energy efficiency and renewable energy
- Inter-company partnerships
- Benefits for neighboring communities

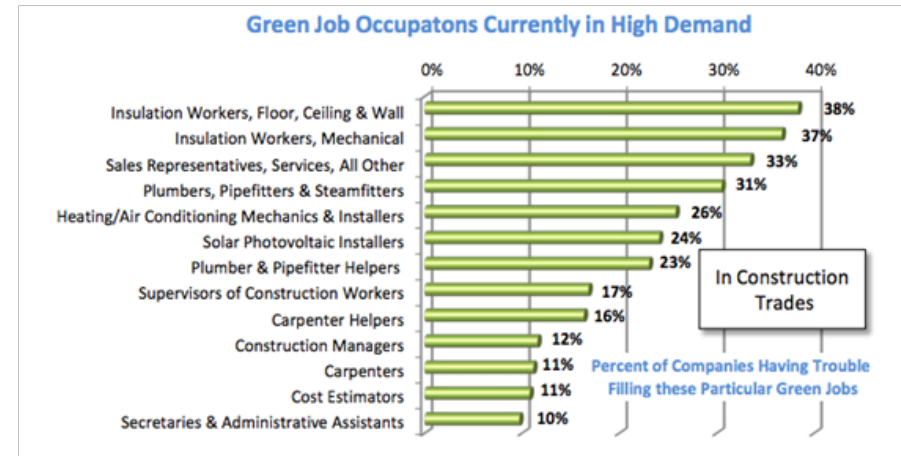
Eco-industrial principles can be integrated into business practices.

In the figure, these principles are applied to two sectors:

1. Construction
2. Food industry

The GRID will focus on applications of Eco-Industrial Park principles in the following areas: Greening Construction and the Electric Grid, and Sustainable Food Industry.

ECO-INDUSTRIAL PRINCIPLE APPLICATIONS	INDUSTRIES	
	CONSTRUCTION	FOOD
EIP COMPONENTS		
Sustainable Green Design	Use sustainable design in projects & facilities	Use sustainable design in facilities
Cleaner Production Techniques & Methods	Zero Waste processes	Zero waste processes, buy local products
Pollution Prevention	Use of green products & electric vehicles	Use of green products & equipment
Energy Efficiency & Renewable Energy	Energy efficient retrofits & renewable installations	Rooftop solar, provision of food scraps to fuel anaerobic digestion
Inter-company Partnerships	Share space, employees, equipment, warehouses, refer clients, buy equipment locally	Supply chain & buy ingredients/food locally
Benefits for Neighboring Communities	Local hires	Local hires, provide left over food to food pantries



Greening Construction and the Electric Grid to Reach 80X50

According to the New York State Department of Labor, there is already a high demand for green construction workers.

Sunset Park has all components necessary to grow a green construction sector, creating synergies amongst supply businesses, construction firms and warehouses. Existing construction and other industries such as auto, apparel, warehousing and ecommerce and their workforce can assist in accomplishing the retrofits called for in the Mayor's 80x50 Plan, thereby providing jobs to New Yorkers.

In Sunset Park's construction industry, 60 businesses work in the small building sector and could play a role in bringing energy efficiency and renewable energy to residential buildings and homeowners citywide. (See Appendix).

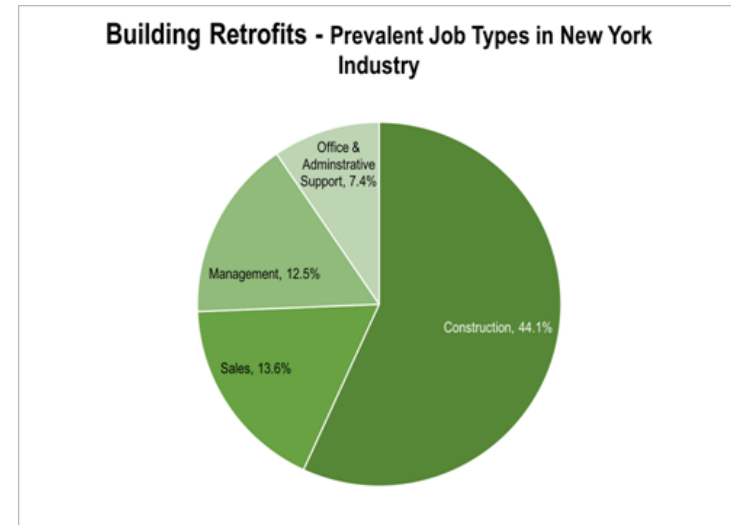


The area's 58 electrical and 48 plumbing businesses could participate in the burgeoning retrofit industry using green building practices such as: new passive house air sealing techniques, LED lighting, boiler upgrades/controls, triple pane windows, air source and ground source heat pumps and solar panel installations. Connecting these businesses to each other for client referrals, space, back office services and equipment sharing will improve their efficiency. Connecting them to manufacturers of new technologies, utility and New York State contractor training and incentive programs, will direct their businesses in a sustainable direction with sizeable growth potential.

The work of local nonprofits such as UPROSE, South Brooklyn Industrial Development Corporation (SBIDC) etc. can be leveraged to bring

Representative Occupations in Building Retrofits:

Construction Laborers, Carpenters, Electricians, First-Line Construction Supervisors, Plumbers, Retail Salespersons, First-Line Sales Supervisors, Cashiers, Wholesale Sales Representatives, Construction Managers, Chief Executives, Marketing & Sales Managers, Operations Managers, Financial Managers, Secretaries, Bookkeeping Clerks, Customer Service Representatives, Stock Clerks.



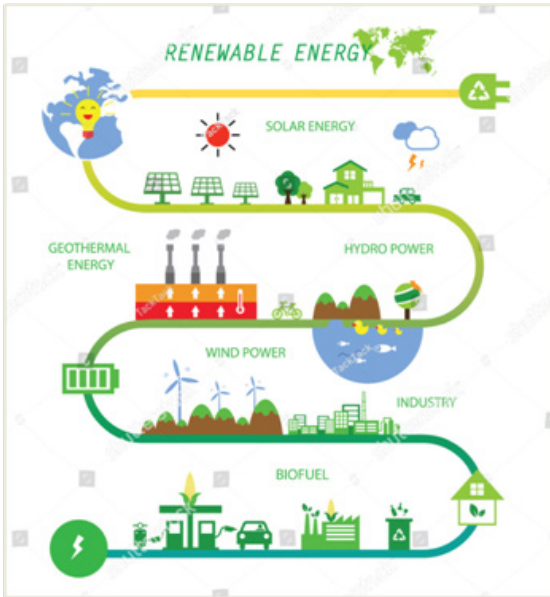
government, utility, and private financing resources and training programs to assist in implementing green practices in local businesses.

Greening the Electric Grid

Replacing fossil fuels with renewable energy is a strategy for reducing carbon emissions in buildings, industry and transportation. Climate change and population growth adds stress on the electrical grid. Climate hazards cause widespread blackouts that threaten human health and safety. Sunset Park Solar is the first community solar project in New York City, and is posed to be a model for future cooperatively owned renewable energy projects.

UPROSE is seeking subscribers to join the New York City Community Energy Cooperative to receive 15-20% energy cost savings and ownership of the 385 kilowatt solar garden. The project will produce power to serve approximately 200 households and businesses with a projected \$1 million in net electric bill savings over 25 years. A joint venture of UPROSE, Solar One, Co-Op Power, and 770 Electric Corp. won EDC's solicitation to build a solar installation





on the Brooklyn Army Terminal. Local workers will be trained by Solar One to install the panels. The project was financed by tax equity investment and loans, which makes it a replicable model for many industrial buildings in the GRID.

Currently the Sims MRF generates 20% of its electric needs from onsite renewable solar and wind energy. Developers are interested in using the SBMT for manufacturing

and transporting of off shore wind turbines in response to NY State’s solicitations for 1700 MW of off shore wind. The GRID will be a demonstration of scaling up of renewable energy production in Sunset Park.

Sustainable Food Industry

The food industry, encompassing production, wholesale and retail, has the highest sales volume and employment among Sunset Park’s industrial sectors. Globally, food business accounts for 1/3 of all jobs.

As with construction, there is great opportunity to reduce greenhouse gas emissions by reducing food waste beginning in the early stages of distribution and production.

The U.S. Food and Agriculture Organization (FAO) estimates that 1/3 of all food produced for humans is lost or wasted contributing 8 percent of all anthropogenic or human generated greenhouse gas emissions annually.



Opportunities for Sustainable Food Industry:

The NY State Legislature passed the New York Organics Recycling Law and the Plastic Bag Ban in January 2019.

- Requires diversion of food waste from landfills.
- Implementation would include donating excess edibles to food insecure residents and recycling food scraps through anaerobic digestion or composting.

The NYS Department of Environmental Conservation provides \$4 million in grants for generators of excess wholesome food and food scraps to fund food waste reduction strategies, thereby increasing the sustainability of the food industry.

Local food pantries can increase their food donations with assistance from the Food Bank Association of New York State's \$2.8 million allocated for grants.

Paths to Zero Waste:

- Improving food manufacturing and production processes to minimize waste.
- Increasing productive reuse of food scraps in anaerobic digestion or composting.

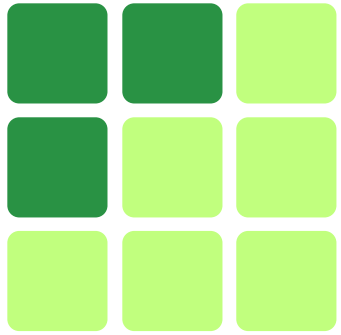
Green workforce training is funded by a variety of public and private sources.

- Public Service Commission funding (from ratepayers) has supported green job training for more than 10 years.
- The CUNY and SUNY systems have developed extensive curricula for a variety of green professions/jobs.
- Some high schools are also developing green job vocational programs.
- Training is provided by unions as well as some equipment manufacturers.

MODEL: The Building Energy Exchange (BEEEx)

The Building Energy Exchange (BEEEx) is a NYC based non-profit energy efficiency resource center and networking hub that assists with market and opportunity analysis to scale up energy efficiency retrofits to meet 80X50 goals.

- Help building owners, operators, and designers reduce pollution and carbon emissions through energy efficiency measures, targeted research, education, exhibits, and other tools.
- Facilities include an exchange where people can learn about new technologies, meet with industry leaders and collaborate on projects.
- Hosts trainings, networking events, roundtables and exhibits that further their mission.
- A similar organization focused on manufacturing innovation and energy efficiency should be created in Sunset Park.



CONCLUSION

ECONOMIC DEVELOPMENT

197a Plan

MAXIMIZE RESOURCES:

Strengthen **SOUTHWEST BROOKLYN IBZ**

Preserve **AFFORDABLE INDUSTRIAL SPACE**

Zone to protect **INDUSTRIAL AREAS FROM COMPETING USES**

Convert Vacant & Underutilized Property into **JOB-INTENSIVE MARITIME & INDUSTRIAL USES**

DISCOURAGE RETAIL & OFFICE DEVELOPMENT unless Accessory to Industrial Uses or Supports Waterfront Access

Industry City

PROPOSED/EXISTING USES IN INDUSTRY CITY:

**RETAIL
HOTELS
ACADEMIC
INNOVATION ECONOMY**



ONLY 1/6th SPACE USED FOR TRADITIONAL MANUFACTURING

RENTS BETWEEN \$25 - \$40/SF

ONLY 2.8% OF SUNSET PARK RESIDENT WORKERS ARE EMPLOYED IN INDUSTRY CITY

GRID

Create **GREEN INDUSTRIAL & MARITIME JOBS**

Leverage Existing Industrial Base to Create **NEW ECONOMIC OPPORTUNITIES WITH LADDERS FOR GROWTH**

Preserve **M2 & M3 ZONING. RESTRICT RETAIL, OFFICE, HOTEL USES**

Create A **MULTI-STAKEHOLDER ORGANIZATION** To Support **GREEN INDUSTRIES**

EDUCATION

197a Plan

DEVELOP VOCATIONAL TRAINING CENTER ON WATERFRONT to train for Maritime, Manufacturing, Green Building & New High Tech Jobs

USE MARITIME & INDUSTRIAL OPERATIONS for Apprenticeship & Internship Opportunities & Future Jobs

Industry City

INNOVATION LAB
Job Training & Placement; Business Development
PLACEMENTS in

- Entry Level Food Prep
- Retail
- Some Manufacturing, Design & Tech

ONLY 0.16% Sunset Park residents in labor force placed in jobs to date in 2019

- IC provides Rent Free Space
- Equipment provided by PUBLIC FUNDS
- Services subsidized by PUBLIC FUNDS

GRID

Create **A MULTI-STAKEHOLDER ORGANIZATION** to:

- Support & Grow INNOVATIVE SUSTAINABLE INDUSTRIES
- Develop Programs & Support EXISTING & NEW BUSINESSES GREEN their PRODUCTS & PRACTICES
- Provide WORKER TRAINING in GREEN CAREERS
- Support GREEN INDUSTRIAL INNOVATION in collaboration with other institutions & businesses

ENVIRONMENT

197a Plan

PURSUE ENVIRONMENTALLY SOUND Maritime & Industrial Development

REDUCE DEPENDENCE on Truck Traffic & USE Environmentally Friendly Practices

CREATE SUSTAINABLE INDUSTRIAL DISTRICT as Pilot Program for Environmentally Sound Industrial Development

Industry City

FOCUS ON ENERGY EFFICIENCY IN ITS BUILDINGS

15,000 New Energy Efficient Windows

New Boiler Vacuum Systems cut natural gas consumption by 1/2

Electrical Upgrades

FUTURE: Solar Reflective Roof Membranes

GRID

Create **A GREEN RESILIENT INDUSTRIAL DISTRICT:**

- Support the creation of a **SUSTAINABLE SOUTH BROOKLYN MARINE TERMINAL**
- Create & Support **GREEN INDUSTRIES & GREENING** of Existing Industries
- Support **GREEN INDUSTRIAL INNOVATION** with other institutions & businesses
- **PROGRAMMATIC OVERLAY** similar to an IBZ. **NOT A ZONING DISTRICT**

CONCLUSION

The Sunset Park Green Resilient Industrial District (GRID) includes four distinct use -based sub areas that incorporate green building technology, and industrial processes, use of renewable energy resources and circular economy principles. It relies on rail and water transport more than trucks for the movement of freight. It supports NYC's strategies to reduce greenhouse gases produced by buildings, industry, transportation, and waste. It will create permanent well-paid blue-collar jobs in the green building, resource recovery and maritime industries. It will incorporate the existing local businesses and labor force. GRID will also utilize Green Port and Waterfront Edge Design Guidelines for the redevelopment of the SBMT and other waterfront sites will increase resiliency from flooding. The community aggregation, composting and education campaigns can serve as scalable neighborhood models.

Too many industrial neighborhoods in New York City have experienced rapid gentrification and loss of social cohesion due to rezonings that allow developers to build luxury commercial spaces. These rezoning proposals do not consider the long-term community, climate, or health needs in the neighborhood. Developers approach rezonings with false promises of jobs for the community to build faux support. The Sunset Park industrial waterfront will not benefit from another short-sighted profit-driven development scheme. The industrial waterfront is the heart of Sunset Park's character and culture, and needs to be re-envisioned to incorporate climate resilience, green economy job training, eco-industrial development, and human health aspects.

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