Regional Plan Association

Downtown Jamaica: Gateway to the New York Region

Design, Market and Mobility Assessments

December 2016

Acknowledgments

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JAMAICA AV
153 ST
ONE WAY
HANDS-ON HISTORY
FREE FAMILY PROGRAMS
Queens Parent
QUEENS Family
EASTSIDE
23

Source: RPA

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Executive Summary

Home to over 500,000 residents of diverse backgrounds, at the nexus of rich bus, rail and airport infrastructure, Jamaica is the gateway to the New York region. Upon landing at John F. Kennedy International Airport, one is just minutes away from Downtown Jamaica along the AirTrain. As one enters the downtown, the community's vibrancy, combined with the levels of both public and private investments taking place, is astounding. The downtown has seen more than $1 billion in accelerating public and private investments over the last decade, catalyzed by the 2003 completion of the AirTrain and a 2007 city rezoning that enabled significant development capacity. Thousands of residential units, hotel rooms, and commercial spaces, public spaces and though delayed, several road redesigns, are in progress. Because of this, there is a need to guide future investments to yield the best outcomes for the neighborhood and its diverse residents.

This report surveyed Downtown Jamaica's urban design, economy and transit links as part of Regional Plan Association's Fourth Regional Plan, and was informed by a robust community engagement process and a survey of previous studies. Systematic improvements are recommended that would leverage the Downtown's proximity to JFK Airport using the aerotropolis model for economic development. Key recommendations are summarized below. Like recommendations in the forthcoming Fourth Plan, the recommendations in this report are not constrained by current regulatory restrictions or even political cycles, and instead, begin to envision Jamaica in 2040, with both short- and long-term recommendations presented.

The urban design study treated the downtown as a system with a gateway at the Jamaica AirTrain and LIRR Station Area, and key nodes throughout the downtown. In the short-term, designs are needed to address severe pedestrian and vehicular congestion that elevate stress levels in the community. Pedestrian, cyclist and transit use of space should be prioritized over private automobiles and for-hire vehicles. A promising proposal is to maximize the potential of the 165th Street Bus Terminal as a visible mixed-use hub, making use of potential of a public-private partnership to leverage air rights in exchange for a modern bus facility. Relevant parties would study whether subterranean connections to the subway network could be possible. The Downtown's subway stations should improve wayfinding, and the intermodal hub at Archer Avenue should be redesigned, placing MTA employee private vehicles elsewhere and adding accomodations for cyclists. In the long-term, the north and south sides of the Long Island Railroad viaduct should be seamlessly connected, and land uses should be further studied south of the viaduct to support more light industrial businesses that fit with the Downtown's vibrancy. New, connected public spaces should be planned, including at the intersection of Sutphin Avenue and Liberty Avenue; and Hillside Avenue should eventually be enlivened with residential, retail and restaurant uses.

The market study recognized that Downtown Jamaica's commercial significance will grow tremendously as a result of projected long-term sea level rise over the next decades, which will require space at JFK Airport to be maximized for aeronautical activities while aviation-related cargo uses could be consolidated closer to the airport to rationalize and improve cargo operations. In the medium to long-term, aviation-related office and retail should be attracted to Downtown Jamaica. The Downtown office market could be catalyzed in the short term by creating a co-working space that provides affordable spaces to local entrepreneurial young professionals. In the medium term, second floor office spaces could be maximized by leasing to smaller firms. Also in the short term, the retail gap could begin to be addressed in a way that creates more of a 24-hour district with more dining, entertainment and hospitality options, in a manner that protects the existing booming fashion and other offerings unique to Jamaica. Diverse food and beverage options should be promoted in planned hotels. Finally, the market study supported the design recommendation to revisit land uses south of the LIRR tracks in order to activate employment clusters with lighter uses that fit with the downtown's commercial character.

The mobility study recommended ways to maximize Greater Jamaica's connectivity to surrounding neighborhoods, Manhattan and JFK Airport. Speeds could be improved on nine bus routes through bus rapid transit-type of interventions, and the Q9 could be extended to address the transit coverage gap to southwest and north Queens. Skip-stop operation in the reverse peak could be considered to improve headways on the J/Z, and the LIRR's Atlantic Branch's service could be converted to a hybrid urban transit type service between Jamaica and Babylon. In line with the Fourth Plan forthcoming recommendations around regional rail: LIRR headways could be shortened in Jamaica; additional stops could be added to improve access for Jamaica residents and visitors; and LIRR pricing could be changed to extend the more affordable CityTicket pricing, currently only available to city residents on the weekends, to all seven days. Finally, connection between the multi-modal Jamaica Station hub and Downtown Jamaica could be improved via physical access and programming , including integration with area business improvement districts, and biking amenities.

With a remarkable history of difficulty and regeneration, Jamaica is thriving. In promoting the city and state partnerships necessary to continue positive trends, community leaders and public officials must protect existing residents and small businesses from displacement and proactively ensure long-term residents are full participants in the success of their community. Taken together, the recommendations in this report provide a set of actions complementary to those being undertaken by the City of New York as a part of the Jamaica NOW Action Plan, and should inform future investments such as use of funds in the New York State Downtown Revitalization Initiative grant. These recommendations will serve as the foundation for the Fourth Plan's vision for Jamaica in the region in 2040 and beyond.

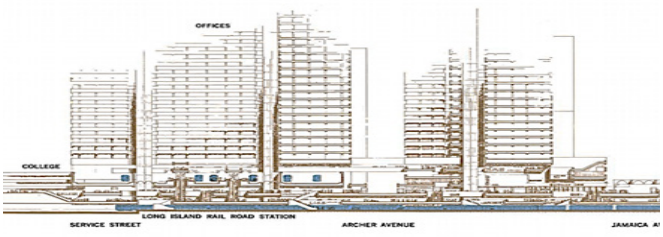
I. Introduction

Regional Plan Association and Jamaica, a History

When New York City was experiencing rampant and uncontrolled growth at the turn of the twentieth century. In the early 1920s, a group of prominent civic and business leaders came together to form Regional Plan Association (RPA). Their goal was to a chart a course for the rational growth of the New York metropolitan region for the following generations. This was no small task given the region's fragmented governance; the region was and is comprised of three states, 31 counties, 782 municipalities, and in 2016, approximately 23 million residents. Since 1929, RPA staff has produced a long-term regional plan every generation, spending the time in between advocating for implementation of the recommendations. These plans have largely shaped the trajectory of the New York Region as known today.

The first regional plan was the first of its kind –it proposed what became the region's elaborate network of highways, airports, and seaports– and included concepts for what would become the George Washington Bridge and the creation of city planning commissions. The second regional plan –released as a series of reports culminating in 1968– was responsive to changes caused by the advent of the automobile. In contrast to the process that yielded the first plan, RPA conducted significant public outreach in the development of the second. Recommendations ultimately focused on promoting compact development in a series of "regional centers," high-density urban areas with regionally significant assets such as transportation infrastructure, business and civic institutions that attract users from many miles away. These centers included Newark, NJ, Stamford, CT, and Jamaica in Queens, NY. The third regional plan was released in 1996, when the region's population and economy were again growing,

Figure 1.1: Jamaica in the Second Regional Plan



Source: RPA

and RPA found it important to emphasize the need to reinvest in New York City's subway system, trans-Hudson capacity, and to create opportunities for an increasingly diverse population. Many of these recommendations were still in the process of implementation in 2016, including East Side Access, the Second Avenue Subway, and the preservation of the New Jersey Highlands. RPA began work on the Fourth Regional Plan in 2012, with completion expected in 2017.

Many of the recommendations RPA wrote into the second plan's chapter on Jamaica Center came to fruition, for example: the founding of a community development organization to help steer public and private investments (Greater Jamaica Development Corporation), the attraction of significant density near Jamaica Station, the AirTrain, and civic uses including York College, U.S. Food and Drug Administration regional office, Jamaica Hospital Medical Center, U.S. Social Security Administration offices, Queensboro Library, and the State and City Civil Courts. RPA also recommended improvements that did not materialize including subway connectivity between Downtown Jamaica and Southeast Queens, and decking of the LIRR to create more permeability between the north and south sides of the viaduct.

After launching the Fourth Plan effort, RPA took a fresh look at Jamaica to highlight contemporary challenges for the regional center, and shed light on a different set of opportunities.

Issues Today

The region has changed dramatically since the 1968 release of the Second Regional Plan, and three significant contemporary challenges uniquely affect Jamaica today.

Climate Change and Sea Level Rise

Coastal regions around the world are struggling to adjust to the gradual but relentless encroachment of ocean waters caused by climate change. The New York metropolitan area, with 23 million residents and some 3,700 miles of tidal coastline, faces a severe threat from sea level rise, yet relatively little has been done to address the inevitable permanent inundation of buildings, infrastructure and communities. Sea level rise has begun to permanently affect communities and critical infrastructure in the New York-New Jersey-Connecticut region, requiring tough choices for what we can and must protect, and where we will need to begin

the process of returning the land to nature. The pace at which seas are rising is accelerating. Sea levels could rise at least one foot as soon as the 2030s. Three feet could occur as early as the 2080s. Six feet of sea level rise could come as soon as the beginning of the next century. The communities and infrastructure with the most at risk are those located in the region's bay areas.

This reality has tremendous implications for the region's airports, and thus JFK Airport and Downtown Jamaica. As sea levels rise, La Guardia Airport will be significantly compromised. Already challenged with meeting demand for air travel, JFK Airport will become even more important for the region's role as a place of global commerce and international exchange. Land uses on the airport must be devoted to aeronautical uses, and Downtown Jamaica, connected to JFK Airport via the AirTrain, must become the "ninth terminal" of the airport, absorbing commercial, office and other non-aeronautical uses.

Balancing Growth and Protecting Existing Residents

Investments in Jamaica are putting its lands to more productive uses that will lead to jobs and vibrancy in the community, including in construction, retail and industry. These investments should continue to be supported by leaders. However, soaring housing costs in the New York region, and especially in New York City, have resulted in a regional affordable-housing crisis. In Greater Jamaica, 56 percent of households are rent burdened, paying more than 30 percent of their income in rent. More than half of mortgages in 2006 were subprime, and South East Queens presently has some of the highest foreclosure rates in the country. A housing displacement risk index that highlights census tracts home to economically vulnerable residents in attractive urban places points to critical Greater Jamaica neighborhoods that must take care to protect economically vulnerable residents while they grow, through foreclosure prevention programs, affordable housing production and small business protections. Vulnerable residents include low- to moderate- income households.

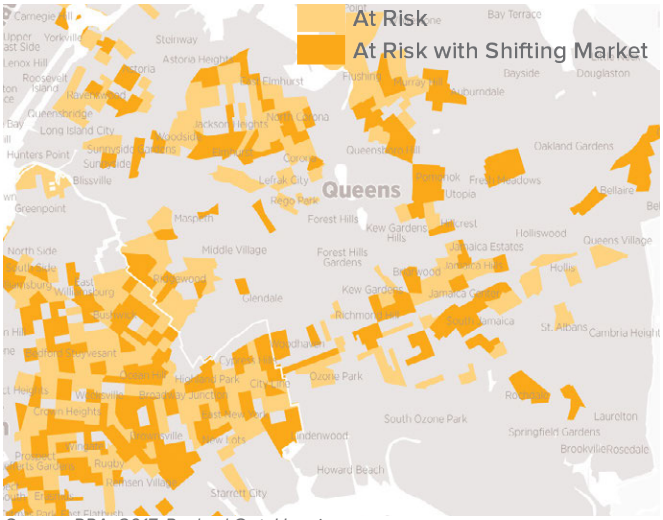
Street Space and Future Vehicle Technologies

On-demand and autonomous vehicle technology has begun to surface in recent years, and will have wide ranging implications for the future of mobility, land use, transit, the economy and the environment. These technologies could present tremendous benefits to a densely populated region, but leadership must maintain certain priorities ahead of significant impending changes. Specifically, pedestrian health and safety must have the highest priority in the allocation of urban street space because people are and will continue to be the primary users of space. Biking, transit and cargo operations should have next priority because they serve entire communities. And finally, individual for-hire vehicles and personal automobiles should receive lowest priority because they serve fewer people. Greater Jamaica and other New York City's outer borough neighborhoods have already seen weekend and evening commutation patterns transforming as commuters opt for on-demand services like Uber and Lyft to reach their final destinations, instead of bus service. As the future of Jamaica's streets are discussed, the impact of rapidly changing technologies must be considered.

Figure 1.2: Sea Level Rise in New York City, 1, 3 and 6 Feet

Source: RPA. 2017. Under Water: How Sea Level Rise Threatens the Tri-State Region

Figure 1.3: Displacement Risk



Source: RPA. 2017. Pushed Out: Housing Displacement in an Unaffordable Region

II. Conceptual Framework

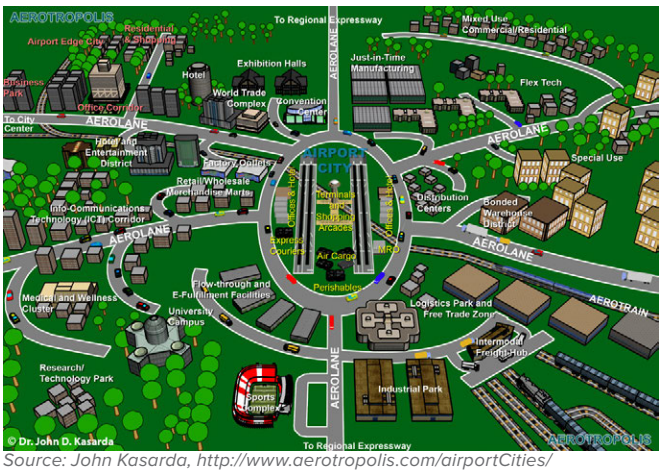
Airports are today what seaports, rivers and canals, railroads and highways were in previous centuries, a primary conduit for economic activity. In fact, goods movement occurs today more rapidly than ever before due to technological and telecommunications advances, globalized production and ever increasing time-based consumer demand.[1] One needs only inspect the supply chain of any large manufacturer, with raw materials sourced and produced on several continents, and end sales occurring in an even broader set. For this reason, airports are increasingly important nodes of economic activity in global supply chains enabled by ever-improving global telecommunications infrastructure, and airport proximity and connections are key assets to be leveraged for economic and community development.

Over the last 25 years, John D. Kasarda - a prominent economist and director of the Kenan Institute of Private Enterprise at the University of North Carolina at Chapel Hill - has termed this phenomenon the "aerotropolis," defined as a metropolitan subregion whose infrastructure, land use and economy are centered on an airport. Kasarda argues transportation infrastructure has historically shaped commercial location and urban development. For example, seaports, rivers and canal access influenced the siting and development of early American cities, railroad access shaped the beneficiaries of the industrial revolution, and highways contributed to post World War II development patterns. As telecommunication improvements have enabled economies to become more globalized in the last decades, major airports serving as global break-in-bulk points have become primary economic drivers. The aerotropolis concept presents a model of economic development with airports at the center. This report utilizes Kasarda's "aerotropolis" framework to analyze Jamaica's economic and community development prospects as an airport gateway, with the New York region serving as the aerotropolis. This section first explores the applicability of this economic development concept to Jamaica-JFK given the unique New York context, then reviews the factors that contribute to the success of an aerotropolis, and provides an analysis of the factors that apply to Jamaica-JFK.

When the Aerotropolis Model Works

An aerotropolis generally extends up to 20 miles outward from a major airport, with aviation-related enterprises concentrated near the airport and along transportation corridors radiating from the airport (see figure 2.1). At the core of the aerotropolis is an "airport city," a location that can attract a multitude of businesses linked to the airport via road and rail. A key goal of an aerotropolis is to make the airport and its surrounding areas more attractive to airlines, passengers, logistics operators, time-critical manufacturers and their supply chains, and supporting commercial and high-end business services, as these are the primary drivers of aerotropolis economic development. A related set of investments in the form of hotels, office buildings, convention, trade and exhibition complexes, retail, food and beverage establishments, and from health, wellness, entertainment, leisure, and education facilities are also supported by this economic development model.

Figure 2.1: Aerotropolis



Source: John Kasarda, http://www.aerotropolis.com/airportCities/about-the-aerotropolis, reproduced with permission.

Per recent aerotropolis development trends, the airport cities in an aerotropolis serve both local and foreign interests. Non-aeronautical revenues often exceed 60 percent, indicating the broad range of uses served by this place type. Commercial rental rates are typically lower for retail and office space compared with the

1 Barone, Richard. 2016. Goods Movement Matters. Regional Plan Association. http://goodsmovementmatters.org/

central business district, and accompanying spaces serve a flexible range of needs including warehousing, hotels, and office for multi-national corporations desiring a location near the airport.

Five key considerations aid in the determination of the viability of an airport city within an aerotropolis:

- **The presence of local and regional demand for air commerce**: the aerotropolis requires strong demand for air commerce. As such, the airport at the heart of an aerotropolis should be a significant regional and global player, and be experiencing robust growth. Inspection of the existing economic base, reasons for its current status and growth potential must indicate strong demand for air commerce at the airport.
- **The sufficiency and efficiency of air and ground connectivity**: Businesses are attracted to airport areas due to both their air and ground connectivity. The airport at the center of the aerotropolis must be well connected via air to other markets, and via ground to suppliers, warehouses and end-consumers.
- **The incorporation of stakeholders' and customers' wants and needs**: Community residents, other stakeholders including businesses, civic groups and elected officials, regulatory authorities, environmental interests will ultimately determine if airport related economic development takes place. Their interests must be aligned with the intended outcomes of this form of economic development. Stakeholder alignment while difficult is imperative.
- **The effective management of commercial real estate development**: The management of the real estate development is a complex challenge requiring skills and experience in local regulations and the needs of investors, developers and their business tenants. Any visioning must incorporate existing economic clusters, identify the zoning regulations that need to be changed, and consider land acquisition strategies. The success of any clusters depend on access to a talented labor pool, government that is friendly to the businesses, suppliers that cooperate with producers to innovate, and quality education, research and technology bases in the environs.
- **The attraction of investors and investment**: Finally, with all the aforementioned as foundation, air commerce related investors and investment may be attracted. Investors include government at all levels, as well as real estate investment trusts, public-private partnerships, and financial institutions. In the case of aerotropolis investment, the product is the land available for development and the hard and soft infrastructure supporting it, including the regulatory framework, stakeholder support and the other previously mentioned factors.

Evaluating Jamaica as an Aerotropolis, Airport City and Airport Gateway

With this explanation of when an aerotropolis works, this sections turns to an analysis of whether this economic development concept can apply in Jamaica, and to what extent. RPA finds the aerotropolis economic development concept can inform a vision for Jamaica, despite the unique New York context.

Presence of local and regional demand for air commerce

Globally, airports are driving growth in regional employment, population and gross domestic product (GDP). A 50 percent increase in air passengers can generate a 1.55 percent increase in population, and nearly 8 percent increase in local domestic product in surrounding metropolitan areas.[2] Nationwide, 17 percent of all employment is located within a 10-mile radius of the 25 busiest passenger airports, accounting for 22 percent of total wages. While it may be argued that this relationship is likely due to airport proximity to large pre-existing central business districts, studies have also found that major firms are attracted to airport hubs, even after controlling for the airport location within proximity to dense urban areas. Moreover, developers are increasingly choosing to locate destination retail and entertainment close to airports in order to leverage visibility along heavily trafficked routes and position themselves as tourist destinations, with hotels, recreation and entertainment amenities.

In the New York region, JFK International Airport, LaGuardia Airport (LGA) and Newark International Airport (EWR) are major contributors to the regional economy with air passengers and cargo generating $16.8 billion in wages and $48.6 billion in sales supported by 415,000 jobs and increasing. JFK Airport has 161,000 air travelers per day and 50,000 employees (2016). In a 2011 report, RPA documented the immense demand for growth in the New York region's airports, especially at JFK. While there are significant challenges to meet this demand, there is no question of the regional and global significance of JFK Airport.

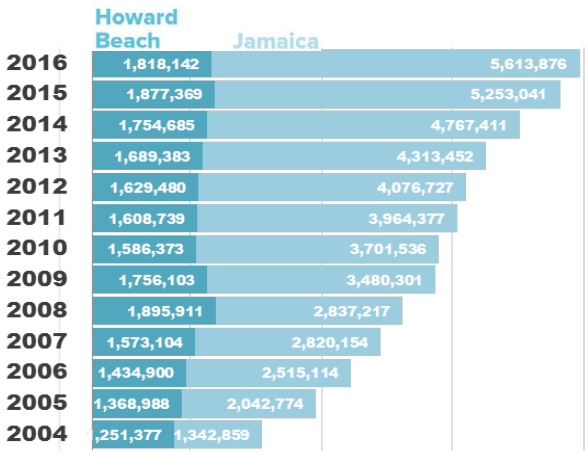
Sufficiency and efficiency of air and ground connectivity

Jamaica is directly connected to JFK Airport by the AirTrain that opened its doors in 2003 and has been serving an increasing number of riders (see figure 2.). Some have even referred to 2Downtown Jamaica as the ninth terminal of JFK Airport.

With respect to ground connectivity, Downtown Jamaica is connected to JFK Airport by a network of highways including the Van Wyck Expressway, Belt Parkway, Grand Central Parkway and the Cross Island Expressway. However, a multi-year cargo study by the Port Authority of New York and New Jersey and the New York City Economic Development Corporation found that JFK Airport

2 BJH Advisors. "2016. Jamaica Market Opportunity Study: Leveraging Jamaica's Role as the JFK Airport Gateway."

Figure 2.2: AirTrain Paid Ridership



Source: PANYNJ, 2016

faces ground accessibility challenges. The report recommends that JFK improve its ground accessibility, particularly for cargo, by expanding the national standard 53-foot trailer network and creating air cargo trucking services to JFK and EWR from Stewart International Airport in Orange County, New York. The report notes that in order to remain competitive JFK must expand its cargo capacity and revitalize cargo-related activities. The report finds that JFK has consistently lost cargo shipment market-share due to both post 9/11 security enhancements that encouraged using trucks over flights for domestic shipments, technological advancements that allowed other airports to capture market share, and inefficient physical configuration of freight infrastructure, which increases the cost of doing business at JFK. The report argues that cargo activities may be more efficiently clustered in large-scale functional areas for air cargo handling in Zone D, truck-to-truck integration in Zone C, and support ancillary cargo functions such as brokers and freight forwarders in Zone B at JFK. The report contends that establishing these clusters will enhance productivity, reduce the cost of doing business at JFK, and help to address capacity constraints. Moreover, the report indicates that, as a result of inefficient configuration of freight uses at JFK, some ancillary freight services have been forced to locate outside the airport boundaries, which further exacerbates inefficiency. Reconfiguring cargo operations could allow these firms to relocate within the airport. These recommendations are addressed in the market and design chapters of this report.

Incorporation of customers' and stakeholders' wants and needs

Jamaica has a robust civic infrastructure, with several multi-stakeholder bodies, including community boards 8 and 12, the Jamaica NOW Leadership Council and a technical advisory committee formed for the purpose of this report. These entities have been engaged by multiple parties over the past years in order to understand their reactions to an aerotropolis, airport city, airport village or airport gateway concept. Reception has been mostly positive but mixed, in large part because previous efforts did not analyze the aerotropolis' effects on a broad range of Greater Jamaica stakeholders, from current residents, civic groups, businesses to government entities and prospective investors. Community feedback has been mostly positive, and feedback is summarized in the next section on community engagement.

Effective management of commercial real estate development

In 2007, 368 blocks in community districts 8 and 12 were rezoned to enable millions of additional square feet of development. Community- and stakeholder-identified priorities including preserving Jamaica's unique character, provide for a mix of residential, business and community activities downtown, protect the neighborhood feel of residential areas, encourage affordable housing construction and importantly, create a vibrant new gateway at the AirTrain station. Thus, the 2007 rezoning demonstrates that City regulating entities are in favor of development that promotes the neighborhood as an airport gateway.

Attraction of investment

The attraction of air commerce related investors and investments is dependent on the previously described factors, and in Greater Jamaica, the Greater Jamaica Development Corporation (GJDC) is a force for the encouragement of private and public investment to the area. As a mission-driven organization, GJDC focuses on attracting investments in ways that enhance the quality of life for the people who live and work in Jamaica. In recent years, GJDC has succeeded in attracting significant development to the neighborhood in the form of more than 30 mixed-use projects planned or underway, containing nearly 3,000 residential units and nearly 2,000 hotel rooms. This topic is discussed further in the market recommendations section. Thus, Jamaica has a permanent steward for economic development in the form of GJDC, in addition to the other factors that make the neighborhood an excellent candidate for airport related economic development.

Implementing the Aerotropolis Model in Jamaica, the Airport Gateway

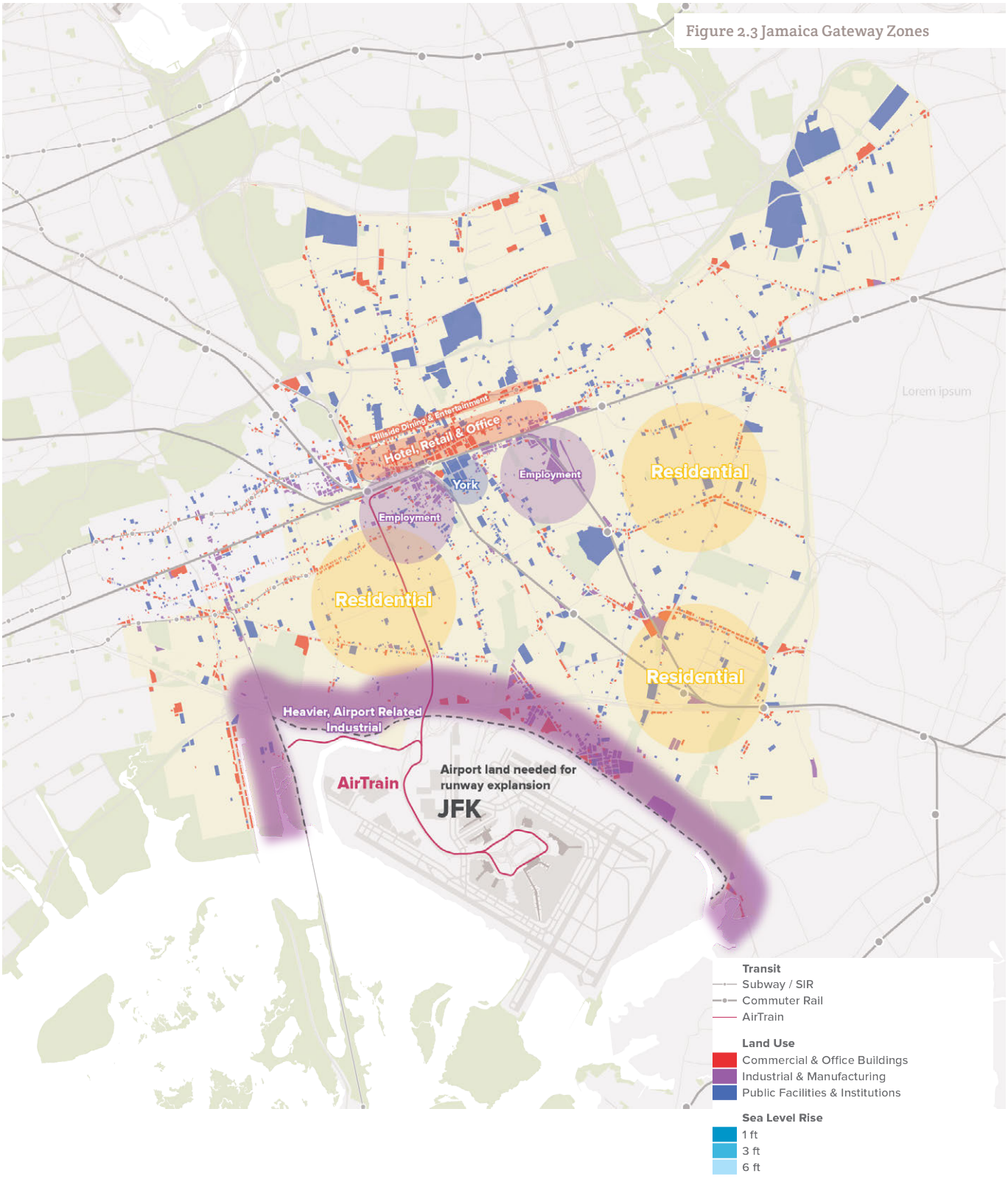
In sum, Greater Jamaica is an excellent candidate for airport -related economic development. However, Greater Jamaica, Queens and New York City are far from greenfield—they contain few vacant parcels and even less undeveloped land. While the New York region may function as an aerotropolis in some capacities, it is far from solely an aerotropolis. It is a global city, and the most productive economic engine in the United States.

Having established the relevance of aerotropolis concepts in Jamaica, the remainder of this report will expand upon specific market, urban design and transit improvement recommendations given the elements of the aerotropolis that apply in Jamaica. How can a vision for the neighborhood leverage the airport link while incorporating community priorities? And how can Jamaica's role

as an airport gateway be strengthened? The goal of this report is to leverage the airport connection for economic and community development, and thus community priorities.

The Greater Jamaica airport gateway would have four functions: the airport, the primarily residential areas, the industrial employment areas, and the commercial hub, as depicted in figure 2.3.

Figure 2.3 Jamaica Gateway Zones



III. Community and Stakeholder Engagement

Key to the success of any community vision, no matter the conceptual framework, is community and stakeholder input. Residents, business owners and other stakeholders must be involved in the research process to ensure their perspectives are incorporated into the plan. Jamaica's robust civic infrastructure, including several multi-stakeholder bodies, were engaged during the course of the production of this report. Stakeholders made their priorities clear and there has been excitement around the possibilities of airport related economic development in the Jamaica regional center.

This report treats these community priorities as foundational. The specific recommendations made in each section, which were arrived at using the aerotropolis conceptual framework, are thus evaluated against the community priorities identified in this section of the report.

Jamaica NOW! Action Plan and Leadership Council

Under the leadership of Mayor Bill de Blasio and Queens Borough President Melinda Katz, the City of New York proposed several steps to realize Jamaica's potential as part of a broader city-wide strategy to create new housing and employment opportunities in the New York's most disadvantaged communities. RPA worked in partnership with City Hall and GJDC to develop a new action strategy – called Jamaica NOW! – to advance this agenda.

The City's initiative kicked off with community forums in 2014, which set the stage for completion of an action strategy for Downtown Jamaica announced by Mayor Bill de Blasio in the spring of 2015. The action strategy is called the Jamaica NOW Action Plan.

RPA led the Jamaica NOW community forums in 2014 and summarized the community's priorities into a set of key strategies and investments that would drive the City's actions, all of which would support the shared goal of transforming Jamaica into a thriving and equitable regional center. These measures include improved accessibility, transformation of Jamaica's public realm -- streets, sidewalks and parks -- construction of new and renovated mixed income housing and commercial development and upgrading of the district's retail and entertainment opportunities. The action plan specifically calls out the following goals:

- Increased housing options for residents at diverse income levels
- Improved transportation connections and attractive public spaces and streetscapes
- Vibrant commercial districts that showcase Jamaica's identity as a fashion, arts and cultural hub
- Strong educational and community resources for youth and young professionals
- A robust economy providing quality jobs for both residents and entrepreneurs

The Plan was released to the public in 2015 and included 25 specific actions, with $153 million funding committed by Mayor Bill de Blasio that comprise the plan's implementation. To provide oversight for the implementation of the projects, the Queens Borough President facilitated the creation of the Jamaica NOW Leadership Council in 2015, in which RPA participated in 2015 and chaired in between 2016 and 2017. With Jamaica NOW and the community stewardship represented on the Leadership Council, Jamaica is well organized to achieve the outcomes it sets out to accomplish. The recommendations herein aim to further the community priorities identified through Jamaica NOW.

Community Board Statements of District Needs

Each year, New York City community boards - local representative bodies - put forth statements of needs for their districts, consisting of the volunteer board's assessment of the priority issues in the neighborhoods within their district boundaries. RPA reviewed the statements of district needs of each of the community boards located in Greater Jamaica in order to identify any additional priorities. The following section summarizes highlights.

Community Board 12

There are 245,946 people residing in Community District 12 in 2015. The board represents the neighborhoods of Jamaica, South Jamaica, South Ozone Park, Hollis, St. Albans, Addisleigh Park,

Rochdale Village and North Springfield Gardens. This district struggles with inadequate facilities to serve a growing population. They specifically mention the closing of Mary Immaculate hospital, across the street from Rufus King Park, which closed its doors in 2009. The complex is being repurposed as a mixed-income residential complex. The Board lists resilience, street flooding, groundwater flooding and economic development as their primary concerns, and also advocate for reforming of the dollar vans that operate in the downtown. They are concerned about the viability of local merchant businesses with new development coming in. Finally, they are concerned with the large concentration of homeless shelters in their community.

Community Board 8

There are over 161,612 residents in Community District 8 in 2015, which represents the neighborhoods of Briarwood, Flushing Suburban, Flushing Heights, Fresh Meadows, Hillcrest, Hillcrest Estates, Holliswood, Jamaica Estates, Jamaica Hills, Kew Gardens Hills, Utopia and West Cunningham Park. Residents are mostly middle income, multi-ethnic, multi-racial who own their own homes and co-ops or are renting. The residences consist of one and two-family homes, garden apartments, large apartment buildings such as the Fresh Meadows Development and Cunningham Heights, co-ops such as Electchester, Hilltop Village and Parkway Village. The community board is home to Queens College, CUNY Law School, St. John's University, and Lander College for Men. They call out a need for student housing. They have very little rent regulated housing. They have a New York City Housing Authority complex, Pomonok. They identify their primary concerns as parks, street conditions and street flooding. After school programs are another concern. Of note, the district needs statement also mentions that most of the district is in a two-fare zone.

Additional Communities

Community boards 9, 10 and 13 border JFK Airport airport, and thus resident concerns in the airport-adjacent neighborhoods must be considered together with any land use recommendations, particularly the neighborhoods of Richmond Hill, South Ozone Park and Rosedale.

Figure 3.1: Greater Jamaica Community Districts

Source:: NYC PLUTO

Technical Advisory Committee

This report also engaged a technical advisory committee consisting of government entities and Jamaica stakeholders, including: Queens Borough President, York College, the New York City Departments of City Planning, the Economic Development Corporation, Port Authority of New York and New Jersey, Metropolitan Transportation Authority, Long Island Rail Road, the Jamaica NOW Leadership Council and members of the board of directors of both Regional Plan Association and Greater Jamaica Development Corporation Their feedback is reflected throughout the report. Committee members expressed frustrations that despite large investments in Downtown Jamaica over the decades, the neighborhood has not reached its potential, enthusiastically spoke about coming investments, and made proposals to ensure present and future investments are catalytic.

IV. Design Study Recommendations

Introduction

The previous section established that the aerotropolis model of economic development has applicability in Jamaica. Yet, how do lessons from the aerotropolis model of economic development apply spatially in the area? In this chapter, RPA makes recommendations on the distribution of airport related uses in and around Greater Jamaica.

In order to understand the potential of the Airport Gateway concept, it is important to consider how the downtown fits in the broader context of Southeast Queens. Inspection of the existing distribution of land uses in Southeast Queens, and the ground and rail connectivity between Downtown Jamaica and JFK International Airport clearly suggests commercial uses including retail, dining and entertainment should be largely concentrated north of the LIRR tracks in Downtown Jamaica, while industrial uses should be concentrated south of the LIRR tracks. Heavier industrial uses, including cargo-related operations should be consolidated closer to the airport fence. This framework is depicted in figure 2.4. Next, it is key to benchmark the development potential of Greater Jamaica: how much development can be accommodated and still retain the essential character of Jamaica and support the community objectives as articulated in Jamaica NOW and other documents? Over the years there have been numerous studies for transit-oriented development around the station, and GJDC has a list of planned and potential development projects. But this information was never been assembled in a one place or in a single three-dimensional representation of Greater Jamaica. By doing so, this urban design study helps answer several strategic questions:

- Does the location and scale of future development support larger urban design goals such as creating new nodes of development around transit resources, or reinforcing the role strategic corridors that knit greater Jamaica together?
- Does the current zoning, including the 2007 368-block rezoning, enable the right development in the right places to accomplish these goals?
- How can the urban design studies inform the other initiatives that are under way, including the New York City Department of Transportation's (NYCDOT) Downtown Jamaica Streetscape Plan and Transporation Study and the York College Master Plan? What short term and long term actions should be taken to support a coherent urban design framework?

Pulling it Together: An Urban Design Framework for Greater Jamaica

Greater Jamaica is endowed with an incredibly strong set of resources. It is a major transportation hub where the Long Island Railroad (LIRR), New York City (NYC) Subways, the AirTrain and 35 bus routes intersect. It is home to York College, Queens Supreme, Family and Civil Courts, the Jamaica Performing Arts Center, The Queens Library and other important institutions. It has a diverse economy, from a thriving commercial downtown, to several industrial business zones, to nearby hospitals, and government operations. The building stock here includes many extraordinary structures and nicely scaled neighborhoods.

Yet somehow, the whole feels less than the sum of the parts with respect to neighborhood's urban design. The underlying idea behind the urban design framework is basic: reinforce several existing, emerging and potential nodes of investment and link these with well-defined al corridors that are themselves spines of development. The framework plan illustrates this strategy (figure 4.3 and 2.4). The key nodes for investment are the station area or "Gateway", the Sutphin/Liberty Avenue Crossing , the two areas marked "employment", York College, and "East" – the area anchored by the former Union Hall station and the Merrick Boulevard bus terminal. These nodes are areas of focus for the build-out studies and the design concepts described in detail below.

The primary east-west corridors that link these nodes are Hillside Avenue, Jamaica Avenue, Archer Avenue and Liberty Avenue. The primary north-south corridors are Sutphin Boulevard and 168th Street. These corridors are also covered by the build-out studies. A completed, walkable Downtown Jamaica will rely on the ability to comfortably walk anywhere within the Downtown, including the many north-south corridors between Archer Avenue and Hillside Avenue. The transformation of these corridors can take place over the long-term. In the immediate-term, the most important segment of Archer Avenue is that between Sutphin and Merrick. This framework informed the NYCDOT Streetscape Plan that was getting underway as this study concluded.

What Can Get Built Here? Build-out for Greater Jamaica

Whether it is a result of the rezoning, the post-recession recovery, or the good efforts of the GJDC, the Queens Borough President's office, the NYCEDC and others, Greater Jamaica is seeing a significant amount of new development. 'Build-out" in the context of this report, is a representation of the total amount of new development that could take place under the existing zoning assuming that there is enough demand from the real estate market. The objective of the build-out study is to create a comprehensive three-dimensional representation that captures at once all of the various development proposals in their various stages of implementation as well as the additional development that is enabled under the current zoning.

Zoning build-out

The zoning build-out work was done in two steps. In the first, a theoretical build-out of the nodes and corridors was generated by creating a three-dimensional model illustrating the maxi-

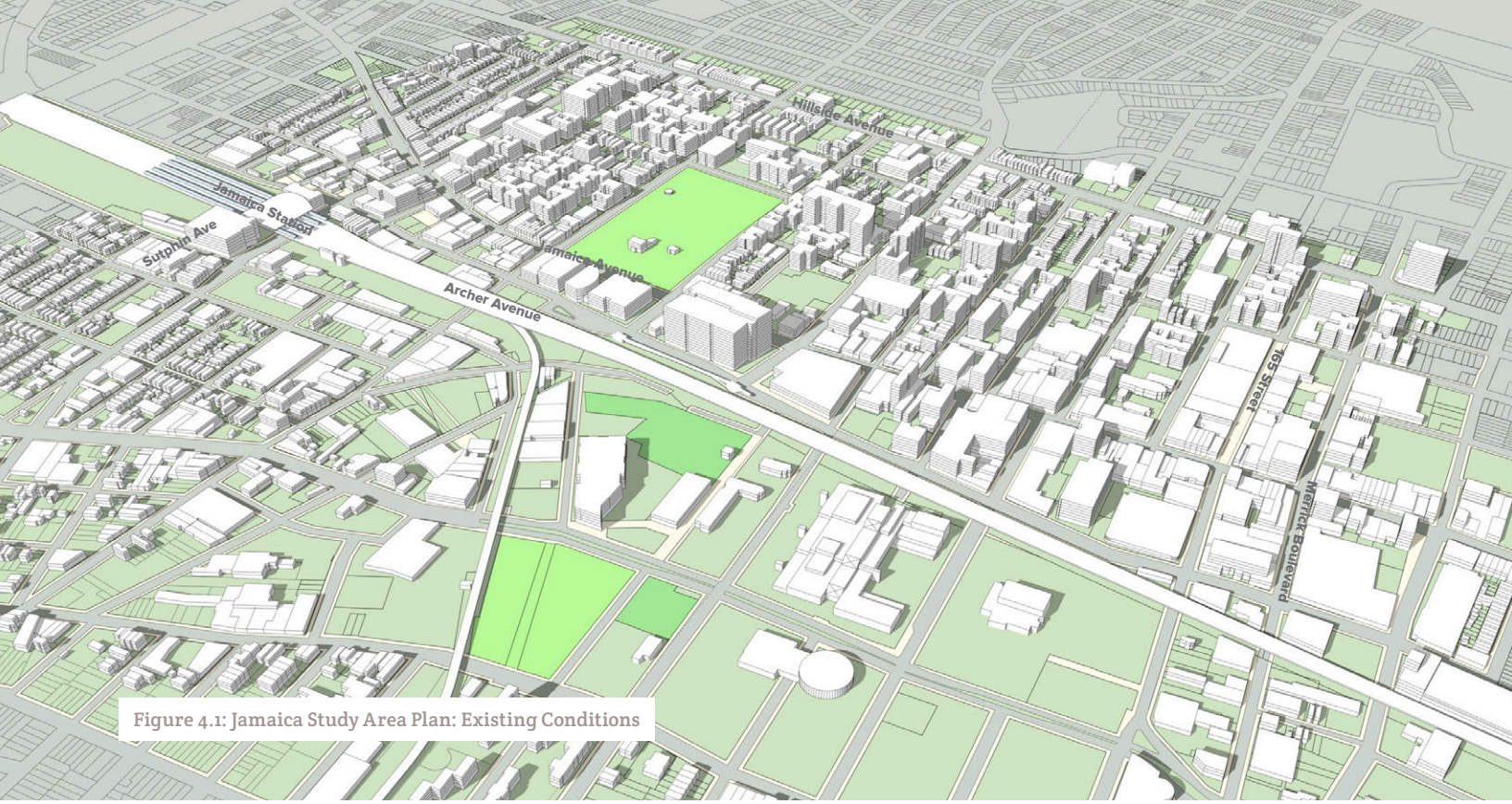


Figure 4.1: Jamaica Study Area Plan: Existing Conditions

mum zoning envelope for all of the sites that are at 50 percent or less of their current enabled capacity and then subtracting the amount of existing development. Sites at 50 percent or less of their current enabled capacity are more likely to redevelop because they are substantially under-built. In the second step, this theoretical build-out was refined by considering other factors such as whether the site seemed to be well-utilized, whether the buildings on the site contributed to the neighborhood character, or whether there was multi-family housing on the site.

Within the volumes created by the build-out, assumptions were then made about programs, as well as the uses that could occupy the additional floor space, again using the existing zoning as a starting point and then considering the location. For example, a new building along one of the established commercial corridors was assumed to have retail on the ground floor and housing above or, a building closer to the Gateway might be a mixed-use building with retail and office on the lower floors and housing above. So as not to create a false sense of certainty, assumptions about program, except in the industrial business zone (IBZ) areas, were not refined beyond the broad categories of commercial, office and residential uses. Potential residential square footage (square feet) was converted into numbers of dwelling units (du) by taking 80 percent of the gross floor area and dividing by a blanket assumption of 1,000 square feet /du.

The likely build-out, excluding the redevelopment studies at the IBZs and the York College Campus could produce millions of square feet. In the digital model, existing conditions shown in white (figure 4.1), the likely zoning build-out is shown in the salmon color (figure 4.2). The possible development programs for the IBZs and York College are discussed below and shown in the digital model in purple and blue respectively.

Development proposal build-out:

Development proposal build-out is the total amount of new development currently underway or proposed. As stated above, there is a significant amount of development activity in Greater Jamaica. GJDC has been tracking this and provided RPA with its master list. The list includes everything from projects that are breaking ground, such as BRP's "The Crossing," to highly speculative projects for which there is little more than an expression of interest by a developer. Because the development programs are part of the proposals, there is no need to speculate about this as was done for the zoning build-out. Instead, the proposed square footage was taken as the base assumption. The development proposal build-out could also produce millions of square feet. In the digital model (figure 4.2), the development proposals are shown in the gold color.

Strategic Nodes

As described above, the urban design framework is organized around a series of strategic nodes linked by important corridors:

The Gateway

This is the area immediately around the Jamaica station. Not surprisingly, this area has garnered the most interest over the years, both from a design perspective and more recently, from the development perspective. The build-out study shows that two million square feet of likely potential development are enabled by the existing zoning, and several developments are already being planned in this area. The amount of development suggested here points to the importance of two urban design initiatives that are currently underway: "Station Plaza" by the New York City

Figure 4.2: Jamaica Study Area Plan: Full Build-Out

Economic Development Corporation is a $52 million investment in the Gateway's public realm. While the scope has evolved over time, initial plans included new subway entrances and canopies, roadway realignment and new landscaped medians, widened sidewalks, and simplified plazas by 2020.

Archer Avenue is the most critical corridor in this framework because of its role in linking the 165 Street Bus Terminal to the Gateway via Merrick Boulevard, and because the north south corridors to the industrial area and York College intersect along this road. Thus, Archer connects key North-South and East-West corridors. The NYCDOT Streetscape Study also views Archer Avenue as a key corridor.

The mobility section of this report touches on the possibility of linking the station platforms to the east side of Sutphin Boulevard. The LIRR believes that there are technical challenges to doing this, but it should remain a potential investment if the opportunity arises.

The Sutphin/Liberty Crossing

Despite the fact that this intersection is less than a quarter mile from the Gateway, it is largely underdeveloped and is completely undefined as a space. In the urban design framework, this is an important intersection because Liberty Avenue is the corridor that can link several of the other nodes including the industrial employment zones, York College and Jamaica East. The build-out studies also show that there is a lot of development enabled by zoning along the Sutphin corridor, which can help complete the loop up to the Gateway. If this area intensifies, then a new public space should be created on the leftover triangle of land bounded by 146th Street, Sutphin Boulevard and Liberty Avenue, which at the moment is occupied only by a gas station.

Industrial employment districts

The Jamaica Industrial Business Zone (IBZ) is an industrially zoned area along the south side of the tracks and just outside of the core station area. The IBZs are places where industrial retention and job-creation is a priority and these should remain policy objectives. The Jamaica IBZ was mapped by the NYCEDC in 2013, and is not well utilized: it includes non-conforming uses such as housing, a significant number of vacant parcels, parking uses, and has no overall theme in usage (storage and moving companies; marble, stone or sand companies, auto shops, live poultry shops), which represents an opportunity for strategic further growth. The former Elmhurst Dairy Company closed its operations in 2016, vacating an estimated 11,620 square foot property on a 14,500 square foot lot.

Given the intersection of several strategic resources – connections to the airport, proximity to the Jamaica Gateway, the LIRR and NYC subway connections to Manhattan/Downtown Brooklyn, and especially York College – it is worth considering the transformation of this area over the long-term into an "innovation district." An innovation district is a dense enclaves that merge the innovation and employment potential of research-oriented anchor institutions, high-growth firms, and tech and creative start-ups in well-designed, amenity-rich residential and commercial environments. In this case, a revitalized York College would be the anchor institution. See the life-sciences discussion in the market study chapter.

An innovation district – like any vital urban manufacturing district – depends on the density of interactions created by a variety of spaces and building types, as well as linkages both within and beyond the district boundaries. These design studies suggest how

this pattern might look. The open spaces within the core of the district are connected to each other and to the surrounding context including the suggested open space network at York College.

This is an ambitious and very long-term vision. But because this area has so much potential, the innovation district concept can inform the way a more expansive rezoning could be fashioned: to enable a broader range of uses in a diverse set of building types. The market study recommended establishment of a life-sciences themed cluster, although this is not supported by some previous market studies. But, regardless of the ultimate development program, the design studies here suggest what some of the features of any district plan should include: a connected street and block network, transitions in scale to the surrounding neighborhoods, a network of well-defined and accessible open spaces that link to the surrounding area and to York College.

Protecting the Industrial Business Zones (IBZs)

This area is mapped as an Industrial Preservation Zone or IBZ. IBZs are places that the City is committed to maintaining industrial jobs by protecting against displacement by other uses. Nothing should be done to weaken or undermine the current IBZ policies. In fact, some advocates for urban manufacturing suggest that the IBZ policies could be strengthened by disallowing some of the non-industrial uses that are currently allowed in IBZs such as hotels. In this context, the innovation district model, of industrial/commercial and industrial/residential mixed use at the edges of the district and along strategic connecting corridors, should only be contemplated over the long-term after a complementary set of policies and protections are in place. Based on the experience of other cities, long-term success would depend on having a mission-driven entity, perhaps a consortium of the city, York College and GJDC, to assess the performance of the district over time.

There are precedents for this in other cities, although it is difficult to generalize too much about this experience because urban manufacturing as well as the regulations and procedures to manage it are very place-bound. Nevertheless, experiences in other cities do share certain features which could be part of this initiative, and in particular the need to assess how the district as a whole is performing in terms of the numbers and kinds of jobs and the economic viability of different kinds of businesses.

In San Francisco, for example, the project sponsor needs to submit a "PDR (Production, Distribution, Repair) Business Plan" that explains the kinds of businesses being targeted for the site, includes a plan for keeping PDR space affordable, and a detailed overview of the workforce and hiring strategy for the PDR businesses on the site and how various city, state and federal hiring programs will be utilized. The “property owner of PDR projects needs to submit an annual report to the Planning Department and Office of Economic and Workforce Development, on or before January 31 of each year, describing the status of the implementation of its PDR Business Plan.” In Chicago, “the Plan Commission is responsible for monitoring the effectiveness of planned manufacturing districts in achieving the purposes set forth.” Taken together, these softer “performance objectives” constitute a kind of discretionary regime that enables cities to curate the uses in the district. In fact, a few cities even track performance over time.

Many cities have been willing to embrace complex regulatory and administrative regimes to manage the way industrial districts work and evolve. The challenge is that each of these approaches requires resources and capacity for implementation, monitoring and enforcement.

Realizing the campus at York College

York College is one of the signature assets of Greater Jamaica, the full potential of which has not been realized. The City University of New York established York College in 1966, and in 1968, 49.8 acres of existing residential area in Downtown Jamaica were condemned for the York College Urban Renewal Area. The college’s first master plan in 1975 laid out an ambitious vision that was never realized, though some of its concepts can be identified throughout the campus today. Since 1975, the college has regularly updated its master plan, yet funding from the City and State has not satisfied its growing needs. The college has a lack of connection – programmatic as well as physical – to the surrounding context, which is discussed below. But the campus also lacks spatial coherence; while there are many well-designed and interesting buildings on the campus, they often do not relate to each other in ways that create clearly defined and image-able spaces such as those found in more traditional and well-resourced urban campuses. Many of the buildings present an unfriendly face to the streets they line.

In the conceptual design study shown here (figure 4.3), new buildings are sited in ways that create more complete groups of buildings organized around a new network of linked open spaces. Most of these buildings would be purely academic departments. But along the edges of the campus, and particularly along South Road, the new buildings could be mixed-use with commercial and office spaces on the lower floors and apartments for students and faculty above. These more clearly defined and better designed spaces would advance the long-standing objective of better linking the College to the Downtown by creating destination spaces at the ends of the corridors, such as shown for the 160th Street and Guy R. Brewer corridors. In the same way, a new open space network would be used to create stronger connections to the new industrial employment center west of the LIRR viaduct.

Connecting York College to Downtown Jamaica on the north side of the tracks is another long-standing objective of planning in Jamaica. Most of the attention has been focused on getting through the LIRR viaduct, which is certainly a big challenge. This urban design study is meant to take this one step further by showing the full extent of the connecting corridors and better articulating the kinds of destination open spaces that would anchor the ends of those corridors. Not coincidentally, our conceptual design aligns closely with proposals in York College’s recent master plan update in 2011, in which the college identified several urban design improvements including circulation and open space needs. The soon to be built York College Academic

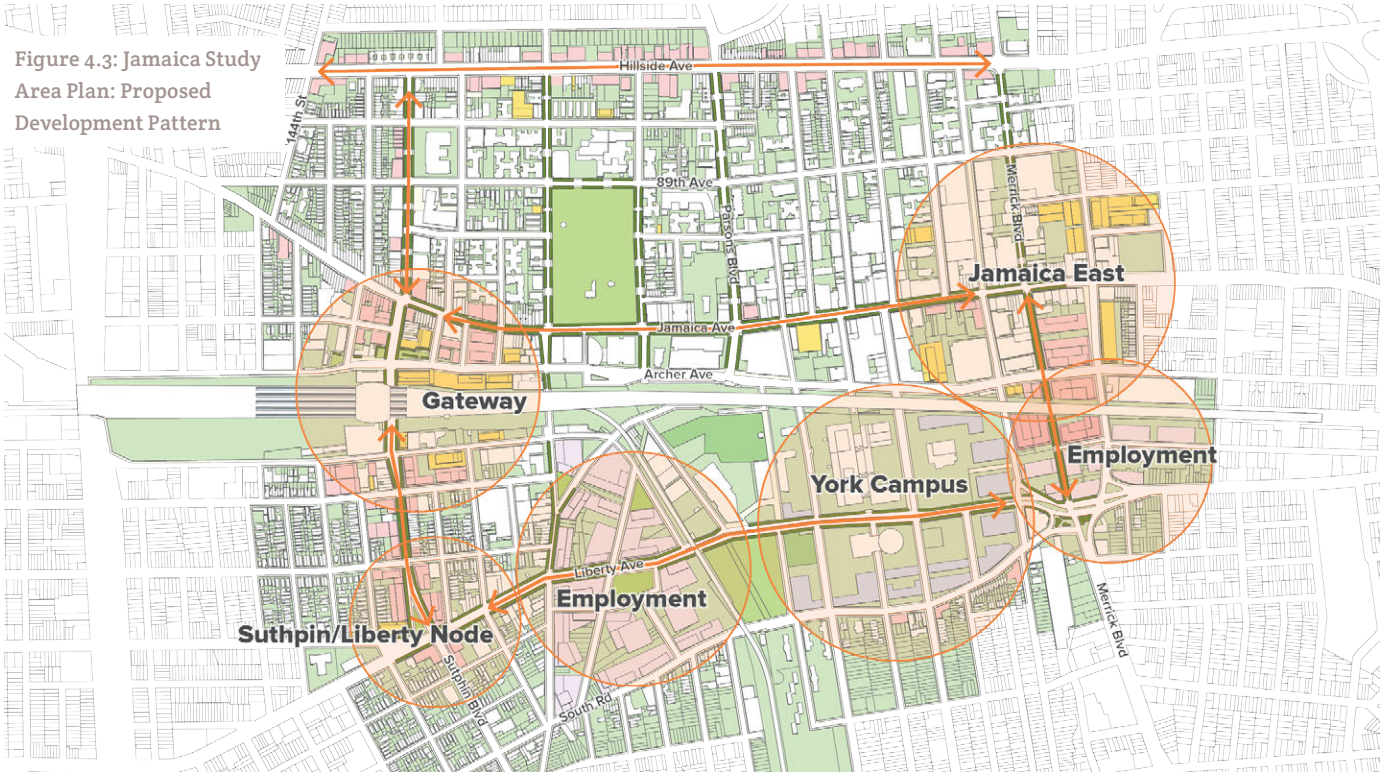


Figure 4.3: Jamaica Study Area Plan: Proposed Development Pattern

Village and Conference Center along 159th Street will create the kind of "gateway development" promoted here and in the Master Plan, drawing people under the viaduct and onto the campus. York College wants this building to be a tower so that it will be visible from north of the viaduct, enhancing its role as a marker for this campus entry and projecting the York College identity to the Jamaica Downtown north of the LIRR tracks. Our design marries the college's own aspirations, with greater connectivity of the campus to Jamaica.

Recommendations in this section should also be seen as part of an effort to link York College to Greater Jamaica not just through physical connections, but also through programmatic relationships to the innovation economy and the airport. As important as the physical connections, are the potential programmatic connections between York College and Greater Jamaica. Linking the academic departments to the business development opportunities around the College is an important strategy and comports with the "Innovation District" concept.

Jamaica East

As the development and build-out studies show, there is an emerging center of gravity in what might be considered "Jamaica East." Nearly one million square feet of development are currently proposed for this area as well as almost half a million square feet of development enabled by the existing zoning. In the area around the former LIRR Union Hall Station, there is an opportunity to create another mixed-use and employment center. This node can then become the eastern anchor for a reconceived York College campus. As in the industrial area to the west, special district zoning would be required to enable a more diverse mix of production-related activities while insuring a future for production-related activities that create diverse employment opportunities for Jamaica residents and York College graduates.

Another significant opportunity in Jamaica East is the area around the 165 Street Bus Terminal. In this area, there are several proposed developments. The Queens Library headquarters is also here. The bus terminal connects at grade to the 167th Street pedestrian mall, an important public space in Downtown Jamaica. The bus terminal itself is very problematic: the structure is aging and unattractive, and bus circulation is inefficient and dangerous for pedestrians, further discussed in the mobility section. A redeveloped bus terminal could take a variety of forms, including a mixed-use development with the bus terminal on the lower levels and residential or commercial development above. Even more ambitious would be to build some or all of the terminal below grade. There are several interesting precedents for this. In Cambridge, Mass, the entire bus and metro intermodal facility takes place below the buildings and public spaces in Harvard Square. While in the near term the focus should remain on the Jamaica Station area, planning and design should anticipate this build-out.

Findings and Recommendations

The recommendations below envision a future Jamaica, in 2040 per the time horizon of RPA's Fourth Regional Plan. The 2007 Jamaica Plan rezoning, sponsored by the Department of City Planning and adopted by the City Council after a robust commu-

nity and stakeholder engagement process, with a few exceptions that deserve further study and public input in the longer-term, appropriately positions Jamaica for future growth opportunities.

The existing zoning, including the 2007 Special Downtown Jamaica District Zoning, enables enough development in the right places to support the node and corridor concepts diagrammed here. The likely build-out under the existing zoning (not including the proposed innovation employment zones or York College) could enable nearly 10 million square feet of development. This greatly exceeds the short-term demand projected by the market study, which suggested 1.3M square feet of retail, 800,000 square feet of office, and 600 square feet of industrial uses in the short term.

The Special Downtown Jamaica zoning also includes basic design guidelines relating to urban design issues such as extent of street wall and street wall transparency, corner massing, and entry or service location. In combination with the in-process NYCDOT Streetscape Study design principles, these city guidelines should produce developments that support the primary corridors identified in this framework.

The current IBZ zoning would not support the innovation employment concept modeled here

The existing light manufacturing zoning in the IBZs does not allow the more ambitious range of activities suggested by the innovation zone concept. An exploratory study should look at a more complex zoning regimen that would be based on performance instead of use-based lists and would be able to account for the ongoing and rapid changes in the manufacturing sector. As suggested above, this would require a commitment to industrial retention as well as more institutional capacity for implementation over time.

Archer Avenue is the strategic corridor in this larger framework

NYC DOT is already focusing on the streetscape in this area. The suggested framework points to importance of the intersections with several important north-south corridors, which extend north to Hillside Avenue and south to York College. Parsons and 153 Street are also important north-south corridors in the downtown.

There is an emerging node of density around "Jamaica East"

There is a cluster of proposed developments in the general area of the 165th Street Bus Terminal. This location is the nexus of a variety of resources and special conditions: proximity to the bus terminal which can be repositioned as a mixed-use redevelopment site; the 165th Street pedestrian mall, one of the established locations for community-oriented commercial activity; the Queens Library headquarters; the 168th Street corridor which links Hillside Avenue, Archer Avenue and the transit facilities there, and the Liberty Avenue connection to York College and a potential innovation employment center at the IBZ.

The complexity of this suggests that the GJDC should in the long-term work with the city to enhance the special district along the lines of what was created around the LIRR and AirTrain station. This would have similar elements including increased density and basic design guidelines. GJDC should do this in the context of a comprehensive redevelopment plan for this area that would include transit connections discussed elsewhere in this report.

Implementing the Urban Design Framework for Greater Jamaica

To implement these ideas, this report makes short, medium and long-term recommendations:

Short term

- Incentivize NYCDOT design guideline adherence for Archer Avenue farther east
- Extend design guidelines for Sutphin between Jamaica Avenue and Liberty Avenue
- Develop designs for 165 Street Bus Terminal, address safety perception concerns through lighting and other design interventions and consider using air right sales in exchange for contributing to a modern bus facility

Medium term

- Redesign/Rebuild the Archer Ave intermodal facility, move MTA employee parking, add cycling amenities
- Create the link along 159th between re-built intermodal facility on Archer Avenue and the York College campus
- Anticipate link along 150th Street from Rufus King Park to a future industrial/innovation employment area and York College, leverage 3Ps for development

Medium and long term

- Create a new public space at Sutphin and Liberty and conduct a study to rezone to create a future employment node in that location
- Reimagine Liberty Avenue between Sutphin & 165th/168th as a job rich mixed-use corridor through redesign
- Revisit and study land use at 165th/168th and Liberty
- Create new transit opportunities for the emerging node at Jamaica East
- Enliven Hillside Avenue as a residential/retail/restaurant mixed-use street with a landscaped median to bring in much-needed housing units, and revive the corridor
- Consolidate freight uses scattered throughout the Downtown Jamaica IBZ near the airport fence via attrition and incentives over time

Relationship to Previous Work

The recommendations in this section build from previous studies. In 2005, GJDC's 10-year strategic plan included the establishment of an "Airport Village," which would consist of planning, marketing and pre-development work to enable development of a new mixed-use commercial business district, an "airport vIllage" (or JFK Corporate Square) around the AirTrain rail service which connects Downtown Jamaica to JFK International Airport via the then new $350 million terminal at the Long Island Rail Road's Jamaica Station. To draw airport related and other businesses to the station area, GJDC worked to attract modern office space at competitive rents in close proximity to the AirTrain terminal, hotels with conference and training facilities, affordable off-street parking, new residential facilities, improved highway access, and an attractive environment with open space and other amenities. The vision for a cost-efficient corporate park located 20 minutes from Midtown Manhattan by LIRR and 8 minutes via AirTrain to JFK would keep pace with the national trend toward transit-oriented development. The objective was to support the operation of the airport, an economic engine and major employer for Queens County, and to create substantial numbers of new jobs and economic benefits for area residents. Through the "Airport Village" concept, GJDC commissioned several studies including design guidelines for the AirTrain station area completed by FXFowle Architects, place-making opportunities identified by Projects for Public Spaces, and has directly pursued capital investments with the City of New York, including realignment of particular streets through the Intermodal Atlantic Avenue Exension (IMAX) program.

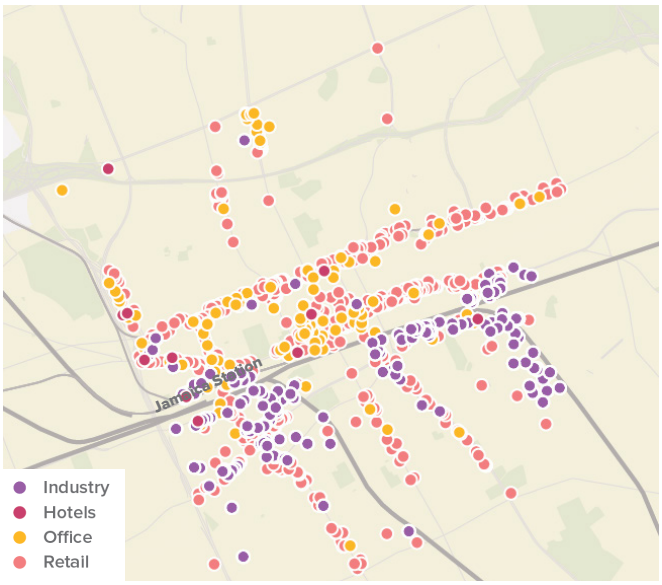
NYCDOT is presently undertaking two studies that may include some of the recommendations from this report and set them up for implementation. The Streetscape Plan and Transportation Study are both due for release in late 2017. In completing these, NYCDOT will build on partnerships formed under the Jamaica NOW Neighborhood Action Plan. The Streetscape Plan will be conducted by NYCDOT in partnership with Arup, and will articulate a framework and vision for a vibrant Downtown Jamaica. From this framework, capital strategies for implementation will be proposed for a few focus areas. The Streetscape Study's existing conditions analysis reported the following main findings, which informed RPA's considerations:

- No dominant streetscape character in Downtown Jamaica
- Unique grid pattern and view corridors due to curved streets
- Opportunities for greening and lighting
- Strong demand for seating and public open spaces
- Strong demand for bus amenities including shelters and seating, especially near and on Archer Avenue

The recommendations in this section build upon the airport village and aerotropolis concepts, inform the NYCDOT Streetscape Plan, and provide a unifying framework for implementation of future projects by multiple stakeholders including York College, New York City and Greater Jamaica Development Corporation.

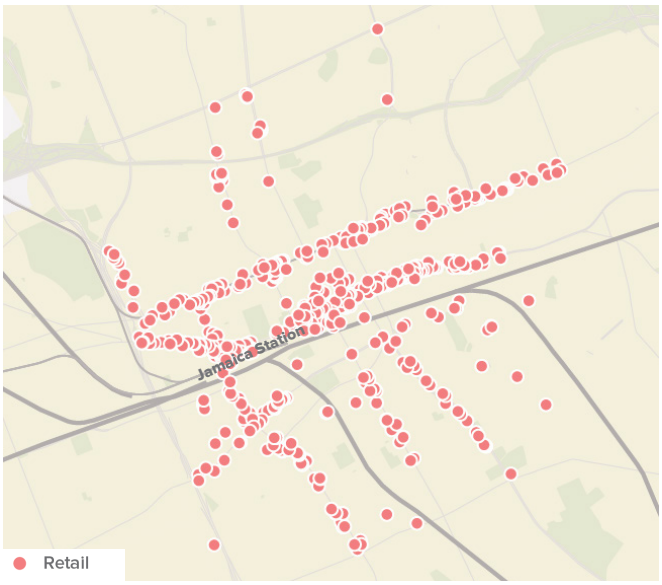
V. Market Study Recommendations

Figure 5.1: Overview of Market Supply in Downtown Jamaica



Source:: CoStar

Figure 5.2: Overview of Retail Supply in Downtown Jamaica



Source:: CoStar

Introduction

The previous chapter explored land-use and urban design in Jamaica and recommended how to distribute land uses in and around Downtown Jamaica in order to best leverage airport proximity. Yet, what types of businesses should be attracted to Greater Jamaica in order to leverage airport proximity, and where in Jamaica do they belong? In this chapter, RPA summarizes the results of an aviation industry-focused market demand study that offers insights into these questions.

The aerotropolis model recommends the identification of land around the airport that could be purposed for a range of airport supporting activities. As mentioned in the conceptual framework description, these purposes include airline support services, logistics functions, time-critical manufacturers and their supply chains, and commercial and high-end business services. Related investments come in the form of hotels, office buildings, convention, trade and exhibition complexes, retail, food and beverage establishments, as well as human-centered services like health and wellness, entertainment, leisure, and education facilities. To this end, the goal of the market demand study was to identify unmet demand for the economic categories under which these uses fall: retail, office, industrial and hotel. The study focused on three areas including Downtown Jamaica, the JFK, and an identified existing cluster of hotels near the airport boundaries.

After establishing the unmet demand, the study made a series of recommendations to meet it, including: attract a destination retail and entertainment complex in Jamaica, revitalize office spaces along retail corridors, locate aviation related offices in Downtown Jamaica, invest in building a more efficient cargo cluster outside the airport fence, activate industrial employment clusters in Downtown Jamaica, possibly in the life sciences, and promote unique food and beverage options in planned hotels. These recommendations and the findings that support them are presented below.

Retail

Key findings

1. **Downtown Jamaica retail market is strong**: Rents in the downtown are high (figure 5.3) and vacancies are low (figure 5.4), as compared to Queens. Downtown Jamaica's retail mix features a vibrant assortment of fashion stores, yet the offerings are relatively homogenous, primarily comprised of small-scale retailers along Sutphin Boulevard and Jamaica Avenue (figure 5.2 - map). Moreover, the low vacancy rate offers little opportunity for new retailers to locate in Jamaica. The retail gap analysis (figure 5.5) indicates that more than 1.3 million square feet of new retail space could be supported in Jamaica, with a focus on the entertainment and recreation, general merchandise, and food and beverage categories (table 5.7).
2. **Downtown Jamaica retail demand is expected to increase in the coming years:** With 3,000 new residential units in the pipeline, retail sales potential is expected to grow over the next two years. Because preference for walkable, urban communities is growing, retailers will be able to advertise Jamaica's walkability, and transit accessibility for airport workers and users, and Brooklyn and Queens residents. One of Downtown Jamaica's strongest competitors is Green Acres Mall in Valley Stream, a more suburban commercial development that requires access to a car.

3. **JFK Airport retail demand is strong:** There is strong demand for retail services among airport passengers. JFK is the top performing North American airport in terms of per passenger retail spending despite a $277 million retail gap (figure 5.6), and comparison to other international airports illuminates opportunities to increase retail sales. This retail demand at JFK has strong implications for Jamaica due to airport capacity needs and climate considerations that indicate non-aeronautical growth is best accomplished outside the airport fence.

Recommendation: Attract a destination retail and entertainment complex in Jamaica

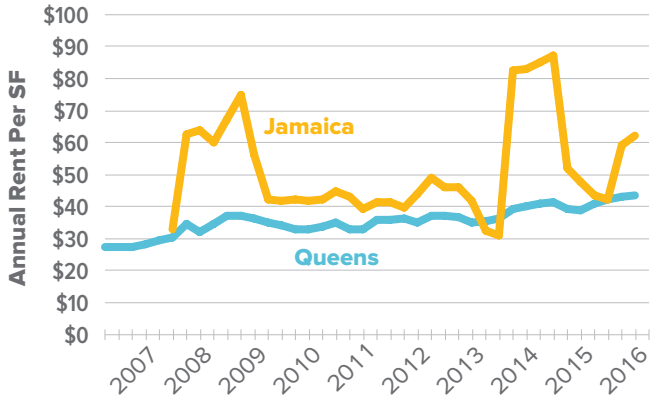
Why? As evidenced by the strong market conditions and unmet demand both inside and outside the airport illustrated above, the Jamaica retail sector is well positioned to host a destination retail and entertainment complex that builds on the existing amenities and attracts residents, regional visitors, airport staff and passengers. The existing retail mix is relatively homogenous, and with 3,000 residential units and 2,000 hotel rooms in the pipeline, retail potential will continue to grow.

How it would work: Successful destination entertainment complexes have recently been developed near airports in Dallas and Edmonton, Canada. Key components of these complexes are a unique entertainment focus and ease of transportation to the airport. In order to serve as an attraction for regional visitors and airport passengers, it is critical that the complex pair shopping and dining options with unique, large-scale entertainment and recreation amenities, similar to the plan for the Staten Island Wheel and adjacent shopping development. While the retail gap analysis points to entertainment and recreation as a primary unmet need in the area, available data does not identify specific entertainment and recreation uses. Specific recommendations for destination entertainment facilities should emerge from community visioning, research to substantiate airport passenger interest and/or negotiations with potential developers. Ideal locations of this spending are located in and near the Gateway, as described in the following chapter, and in the implementation plan. Some stakeholders indicated a good place for such a use would be near the AirTrain station area on underutilized land south of the tracks.

Benefits: This strategy will provide entry-level jobs that are accessible to community residents and New Yorkers, regardless of education and work experience. Furthermore, creating a new complex on underutilized site will protect and support the vibrant mix of retail already existing in Jamaica.

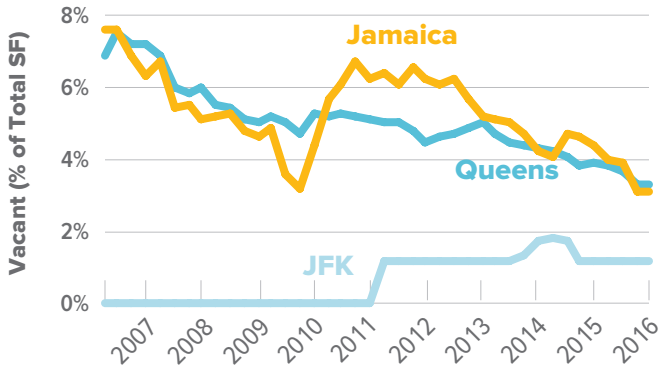
First step to implementation: Destination retail and entrainment complexes around the country rely on available land and active advocates for development. The first step to implementation is to identify large parcels within Downtown Jamaica that would be suitable for construction of such a space, and, second, to identify key stakeholders to steward the parcels, i.e. potential developers as well as retail tenants that could serve as anchors.

Figure 5.3: Retail Rents in Jamaica and Queens (2006–2016)



Source: CoStar, BJH Advisors Calculations

Figure 5.4: Retail Vacancy in Jamaica, JFK and Queens (2006 – 2016)

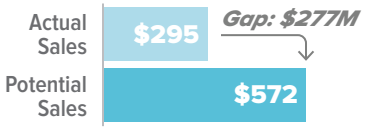


Source: CoStar, BJH Advisors Calculations

Figure 5.5: Aggregate Retail Gap in Jamaica

Source

Figure 5.6: Aggregate Retail Gap in JFK



Source: CoStar, BJH Advisors Calculations

Table 5.7: Retail Gap by Category

Retail Category	Potential Sales	Actual Sales	Gap	Retail Gap (%)
Furniture and home furnishings stores	$20.1	$24.8	-$4.7	-23%
Electronics and appliance stores	$41.7	$46.1	-$4.4	-11%
Building material and garden equipment and supplies dealers	$82.3	$91.8	-$9.5	-12%
Grocery, other food and beverage stores	$286.1	$202.6	$83.5	29%
Health and personal care stores	$199.1	$175.7	$23.4	12%
Clothing and clothing accessories stores	$91.3	$221.6	-$130.3	-143%
Sporting goods, hobby, musical instrument, and book stores	$26.1	$17.0	$9.1	35%
General merchandise stores	$120.0	$32.1	$88.0	73%
Arts, entertainment, and recreation	$77.1	$13.4	$64.1	83%
Drinking places (alcoholic beverages)	$5.3	$3.3	$2.0	37%
Restaurants and other eating places	$150.2	$123.3	$26.9	18%

Source: U.S. Census, U.S. Census Bureau's 2013 Zip Code and County Business Patterns

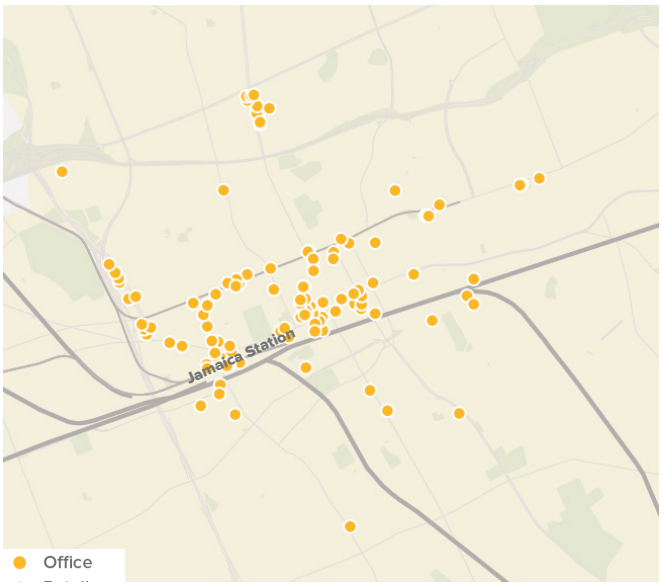
Office

Recent aerotropolis development trends show airport cities in an aerotropolis serve both local and foreign interests. Non-aeronautical revenues often exceed 60 percent, indicating the broad range of uses served by this place type. Commercial rental rates are typically lower for retail and office space compared with the central business district, and accompanying spaces serve a flexible range of needs including warehousing, hotels, and office for multi-national corporations desiring a location near the airport.

Key findings

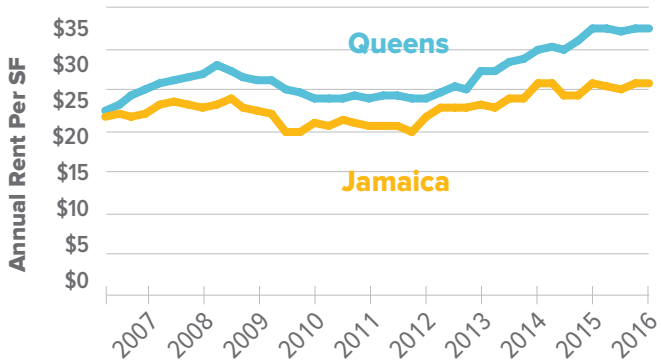
1. **Office rents in Jamaica are moderate, compared to Queens:** As result of relatively low rents in Jamaica (figure 5.9), no new office space has been developed in Jamaica over the past 10 years and some space has even been removed from the inventory. This trend actually presents an opportunity in the aerotropolis model of economic development, because when rents are lower in the airport city (Jamaica) than in the central business district, new businesses can be attracted to the airport city.
2. **Smaller Jamaica firms may demand Class B office spaces:** While the commercial office inventory in Jamaica has declined slightly and demonstrated negative absorption over the past decade, the market presents some strengths and opportunities. Office rents are below $30 per square foot, so while Jamaica is not likely to realize new speculative

Figure 5.8: Office Supply



Source: CoStar

Figure 5.9: Office Rents in Jamaica and Queens (2006 – 2016)



Source:: CoStar, BJH Advisors Calculations

office development without subsidy, smaller firms could be interested in the cheaper rents. In fact, a significant number of Jamaica firms are classified as professional, scientific, and technical services. These firms employ few workers, suggesting the shops are small with demand for non-traditional office products, such as Class B and co-working spaces.

3. **Aeronautical office space is inside the fence, but other constraints indicate they should go outside:** The office uses at JFK airport are aeronautically related, and many government agencies that regulate and/or support the flow of goods and passengers into the country are located in or near JFK. Discussions between GJDC and several agencies indicate that there is a strong preference for these agencies to locate within the boundaries of the airport. However, airport capacity needs and sea level rise considerations may soon require these agencies consider space elsewhere, with Downtown Jamaica an attractive candidate.

Recommendation: Revitalize office spaces along retail corridors, support the creation of a catalytic coworking space

Why? Currently off-market upper floor spaces along Jamaica Avenue and Sutphin Boulevard retail corridors offer moderately-sized floor plates and affordable rents that are attractive to small, price-sensitive firms. These properties may offer unique physical characteristics that are also attractive to entrepreneurial firms, such as high ceilings and historic features. Analysis of firms and employees by sector indicate that there are many small professional, technical, and design firms in Jamaica, which are a source of demand for unique Class B upper floor offices with small floor plates. These smaller entrepreneurial firms could use a coworking space to launch, before moving into upper floor offices.

How it would work: Small and price-sensitive firms, entrepreneurial firms, and professional, technical and design firms in Jamaica would be interested in the second floor office spaces along retail corridors. A co-working space that attracts entrepreneurial neighborhood professionals and professionals traveling through JFK, as well as local and regional sole practitioners and small firms, would also be ideal on or along the retail corridor. These professionals may be attracted to Jamaica because it offers a mixed-use environment that includes hospitality, retail, and office amenities in a walk-able setting. Throughout the region, there is growth of co-working spaces both inside the urban core and along the fringes. WeWork, a national co-working operator, has aggressively grown its footprint in New York City over the past three years, including planned spaces in Brooklyn and Queens. Additionally, a scan of co-working spaces outside of the urban core indicates there are six co-working spaces ranging in size from 2,000 to 7,000 square feet in counties surrounding New York City, including Great Neck, Long Island and Stamford, Connecticut. Jamaica offers a unique location for a co-working space within a secondary business center with easy access to the Manhattan core and JFK airport. Co-working spaces could also be attractive to artists and other young non-traditional workers searching for affordable spaces.

Benefits: An affordable co-working space could benefit smaller firms, younger workers and Jamaica residents looking for work space. If coupled with other subsidies, an affordable co-working space could also benefit young entrepreneurs and artists seeking work space.

First step to implementation: Downtown Jamaica's three business improvement districts, the Jamaica Center BID, the 165 Street BID and the Sutphin Boulevard BID, are in the process of consolidating. Discussions should be had with them as they consolidate and potentially expand their boundaries, so they may advise on the status of retail properties in the downtown, for example, current uses, rent levels, goals of the property owners. The BIDs can assist in surveying property owners on what it would take for them to be interested in participating in a business attraction program that better utilizes their second floors. Greater Jamaica Development Corporation should explore options for public support of the founding of a co-working space that would offer affordable rates.

Recommendation: Locate aviation related offices in Downtown Jamaica

Why? As noted, JFK Airport's significance to the New York region will only increase in the coming decades. RPA Fourth Regional Plan climate research indicates the region's airports will be significantly compromised by sea level rise. With growing demand for already congested airports, there is a strong case for hardening and/or expanding the region's airports, but major expansion of aviation capacity will need to take place at JFK and Newark Liberty International. Thus, with this projected increased demand for aeronautical uses at JFK, and the building height restrictions that accompany them, there will be a need to move non-aeronautical uses from JFK Airport. Downtown Jamaica is the perfect candidate to receive the activities that are consistent with its character, given it is a 10 minute ride from the airport.

There is a strong history of attempting to attract JFK Airport uses to Downtown Jamaica, including the bid for Jet Blue headquarters several years ago, which ultimately moved to Long Island City. This is a unique time, however, and increased investments in Downtown Jamaica, a growting population and sea level rise considerations may make this a more attractive proposition in the coming decade.

How it would work: Recent discussions between Greater Jamaica Development Corporation and several government agencies connected to JFK indicate there may be demand for office space from the Transportation Security Administration and U.S. Customs and Border Protection which could strengthen the connection between Jamaica and JFK.

Benefits: Aviation related anchor tenants in Downtown Jamaica could drive new office development.

First step to implementation: Work with the Jamaica Center BID to determine the precise nature of the office uses in Downtown Jamaica, and whether there has been any additional interest in office develpment. Conversations should also begin with

the office users inside the airport fence to determine low-hanging fruit in terms of users looking for upgraded space. This could lead to the identification of an anchor tenant.

Industrial: John F. Kennedy

Key Finding

Freight related activity has declined at JFK Airport: As a result of cargo capacity constraints and inefficiency in the physical clustering of cargo operations, freight activity has declined at JFK Airport in recent years (figure 5.10), and resulted in industrial employment volatility.

Recommendation: Invest in building a more efficient cargo cluster, primarily outside the airport fence

Why? According to the 2013 JFK Air Cargo Study by NYCEDC and PANYNJ[1], the current disadvantageous layout of cargo operations has caused the capacity constraints and inefficiencies that limit JFK from achieving potential growth in the cargo sector. The study recommended investments in rationalizing the layout of cargo operations within the airport to enhance efficiencies and build a fully-functional on-airport cargo ecosystem. Specifically, NYCEDC and PANYNJ recommend more efficiently clustering freight activity in large-scale functional areas for air cargo handling in Zone D, truck-to-truck integration in Zone C, and support ancillary cargo functions such as brokers and freight forwarders in Zone B at JFK.

However, as previously explained, land within JFK Airport boundaries is sorely needed for expansion of aviation capacity, and this need will only grow over the next decades as aviation demand and sea level rise necessitate increased aviation capacity at JFK Airport. Thus, where possible moving forward, cargo operations-- especially back-office operations and indirect cargo operations including freight forwarders and customs brokers, trucking, and other supporting firms-- should be placed outside the fence through attrition.

How it would work: Per the NYCEDC and PANYNJ study, airport cargo uses refer to a range of activities. The Federal Aviation Administration (FAA) defines air cargo as freight and mail. Cargo is typically categorized as either international or domestic. Air cargo shipments begin with the shipper, who has the option of taking a product directly to a carrier or, alternatively, using a third party logistics provider, usually a freight-forwarder. These entities ensure the shipment is trucked safely to the airport where it will be enplaned. Sometimes forwarders will work with consolidators to combine shipments to a common destination. For international shipments, it is necessary for the shipment to be inspected by customs officials of the destination country. As this can be a detailed and cumbersome process, the shippers and forwarders typically work with a customs broker (an importer) who works with the government agencies to clear the goods for entry into the country. Once cleared the shipment is picked up by, or trucked to the consignee. Each step in this process has a related set of companies, jobs and economic activity collectiviely referred to in this report as “cargo uses” and “cargo activity.”

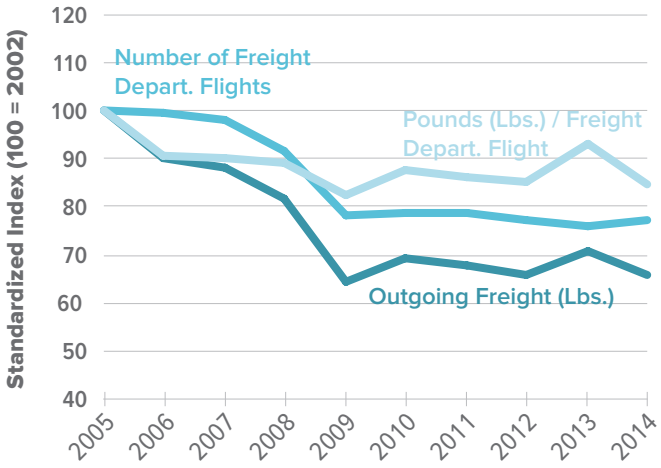
With the projected increased demand for aeronautical uses at JFK, and the building height restrictions that accompany the aeronautical uses, there will be a need to move non-aeronautical uses from JFK Airport. In the case of cargo operations and logistics functions, a cluster should be created immediately outside the airport boundaries, in an area with good highway access.

Consideration should also be given to the relocation of millions of square feet of airport related industrial uses, including freight forwarders, located near Downtown Jamaica, which may benefit from being more proximate to the airport.

Figure 5.10: Overview of Industrial Supply, JFK

Source: CoStar

Figure 5.11: Freight Cargo Volume and Flights at JFK (2005-2014)



Source: CoStar

1 PANYNJ and NYCEDC JFK Cargo Study, 2013

Benefits: Improved efficiency will make JFK Airport more competitive globally, and will have the added local benefit of creating new transportation jobs that are accessible to entry-level workers. Moreover, the small cargo and freight firms that are dependent on the airport and are unable to access space in the airport that currently locate throuhgout Queens and Downtown Jamaica, would be able to locate closer to the JFK Airport fence. This shift could thus open industrial spaces in Downtown Jamaica for new office and industrial uses that may more appropriately knit into the fabric of the retail, academic, and office uses in the area.

Furthermore, per the 2013 NYCEDC and PANYNJ cargo study, the economic benefits of JFK's varied cargo operations would reach the community through multiple channels. Direct benefits are felt in the airport, including jobs in loading and unloading of cargo, work related to leasing and security, and cargo handling in the warehouse. Indirect benefits are felt off-airport, including a wide range of functions including the work of freight forwarders and customs brokers, trucking, and a number of other diverse supporting firms. Induced benefits arise from the expenditures by the recipients of direct and indirect wages and salaries. For instance, wage earners spend a portion of their income on goods and services, thereby creating employment for additional persons. The process continues indefinitely, with each successive transacting individual spending part of his or her income. Since a portion of the income of each step goes to taxes, savings, or imports, the stimulus declines with each round. Catalytic benefits result from the structural changes that a facility such as an airport makes in the business environment of a region, for example, a firm that establishes a warehouse on Long Island to benefit from the availability of JFK's extensive air cargo services generates a catalytic impact.

First step to implementation: The JFK industrial business improvement district (IBID) was formally approved by City Hall in 2016. This IBID should be supported by Greater Jamaica stakeholders, and the IBID should maintain a goal of growing in area given the growing need, especially because of climate change and sea level rise's implications for JFK Airport. Expansion of the IBID's boundary may be a 10-15 year goal.

Industrial: Jamaica

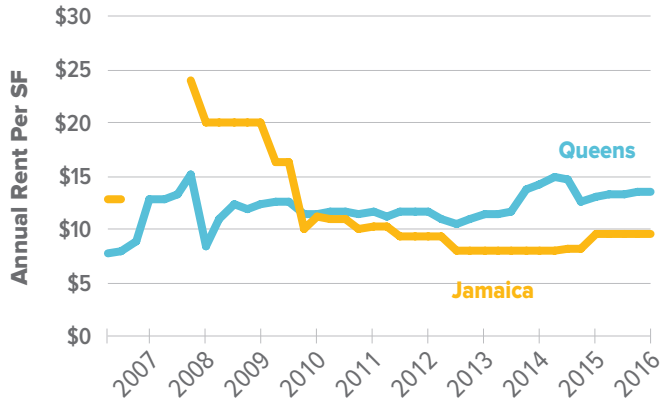
Key findings

The Industrial Business Zone in Downtown Jamaica offers affordable rents near anchor institutions: While the industrial sector is declining regionally, Jamaica presents several assets that indicate it has the potential to attract new industrial activity, particularly if the industrial area outside JFK fence is expanded to accommodate the more transportation-related firms that are currently located in Jamaica, as described above. Specifically, Downtown Jamaica offers a protected supply of industrial land within the Industrial Business Zone (IBZ) and adjacent to two anchor institutions. Jamaica's IBZ abuts York College, a baccalaureate awarding institution consisting of three

Figure 5.12: Overview of Industrial Supply, Downtown Jamaica

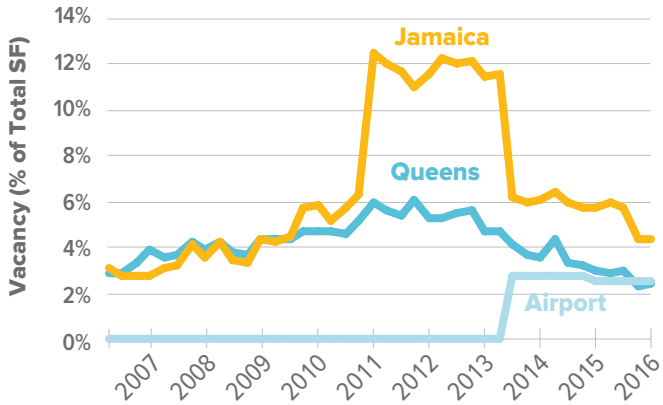
Source:: CoStar

Figure 5.12: Industrial Rents



Source:: CoStar

Figure 5.12: Industrial Rents



Source:: CoStar

schools: arts and science, business and information systems, and health and behavioral sciences. Within York College, the Food and Drug Administration occupies a 224,000 square foot regional office and laboratory facility.

Recommendation: Activate industrial innovation employment clusters in downtown Jamaica, possibly in the life sciences

Why? Combined with relatively affordable rents as compared to Queens, Jamaica could foster the development of new industrial activity that stands to uniquely benefit from airport proximity, and can leverage proximate anchor institutions. One such activity is life sciences firms. Two factors contribute to the plausibility of a life sciences cluster in Jamaica. First, the regional FDA library in Jamaica is a regulatory agency and research indicates that life sciences firms benefit from clustering, and in particular life sciences firms benefit from locating near their regulatory agencies in order to maximize efficiency. Second, life sciences firms have limited opportunities to access space in New York City, due to zoning regulations, which limit most lab uses to manufacturing zones. A third factor could make life sciences or other innovation uses successful: the effects of the previous recommendation on freight-use consolidation, which would free even more land in Downtown Jamaica for new office and industrial uses that more appropriately knit into the fabric of the retail, academic, and office uses in the area. Additionally, airport proximity is important to the life sciences, as many life sciences firms have consolidated in recent years and established headquarters overseas.

How it would work: Construction of life sciences labs and research facilities is extremely costly and it is unlikely these developments would be built without subsidy, particularly given average rents in Jamaica. However, New York City has identified life sciences as a sector that it plans to foster through incentives and economic initiatives. Moreover, York College was selected as a Start Up New York designee, which provides incentives for the college to partner with early stage companies. York College has announced its Start Up New York efforts will focus on firms in the health and medical sector, including the pharmaceutical research and manufacturing, medical device research and manufacturing.

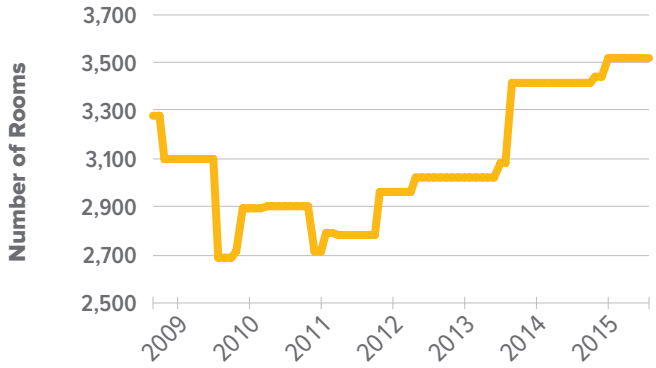
Benefits: Repositioning industrial property in Jamaica for a life sciences cluster can diversify employment opportunities, support growth in the retail sectors by attracting more high-income employees to the area, and offer an opportunity to improve the physical character of the IBZ so that it connects more seamlessly with the adjacent retail and office uses. In addition, the new sector could open up training options in York College or by local workforce training providers, to benefit local adults and youth.

First step to implementation: Downtown Jamaica was awarded a $10 million Downtown Revitalization Initiative grant by Governor Andrew Cuomo. These funds can be leveraged to identify and attract key companies to Downtown Jamaica. Placement could begin on or near the York College campus, which is a host of the StartUp NY, a program that provides tax benefits to early stage companies locating in specified places. Any discussions on this topic should include the 180 Street IBID, or future unified

Figure 5.13: Overview of Hotel Supply

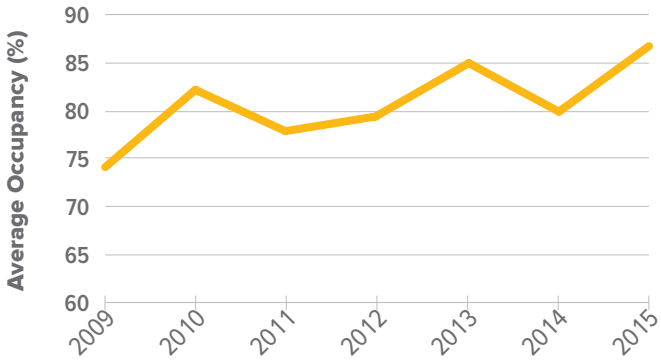
Source:: CoStar

Figure 5.14: Number of Hotel Rooms (2009-2015)



Source:: CoStar

Figure 5.15: Average Hotel Occupancy (2009 – 2015)



Source:: CoStar

Jamaica BID, which is looking to expand its boundaries. Furthermore, Mayor Bill de Blasio's recent announcement of over $500 million in investments for the development of the city's life sciences industry may be a boon to Jamaica efforts. Jamaica must get on the city's radar to receive some of this economic development funding. Stakeholders could begin by identifying appropriate spaces for wet lab uses and developing materials marketing the amenities of Downtown Jamaica to potential firms.

Hotel

Key findings

Hotel development is robust in Downtown Jamaica: In recent years, the hotel sector has responded to strong demand by investing in development of new hotels in Downtown Jamaica and at JFK Airport. Over 2,000 new hotel rooms are expected to come online in the neighborhood over the next three years (figure 5.13), doubling the existing supply.

Recommendation: Promote diverse food and beverage pptions in planned hotels

Why? These hotels will serve as a key asset, attracting tourists to spend more time in the Jamaica area, and offering an opportunity to strengthen and diversify the current food and beverage options in Jamaica and at JFK by attracting exciting bars and restaurants that service both residents, hotel customers and visitors to the area.

How would it work: A concerted effort to secure unique, destination, and/or acclaimed restaurants, chefs, and dining experiences within these hotels is critical to building a successful hospitality sector in Jamaica and at JFK, and can create new jobs that are accessible to entry-level workers.

Benefits: By promoting unique food and beverage offerings in the ground floor of coming hotels, Downtown Jamaica would take a step toward becoming a more integrated, walkable dining and entertainment district. Vibrant retail lined streets with increased pedestrian activities could spur further streetscape improvements, and importantly, increase safety in the neighborhood due to the increased number of eyes on the street during later hours.

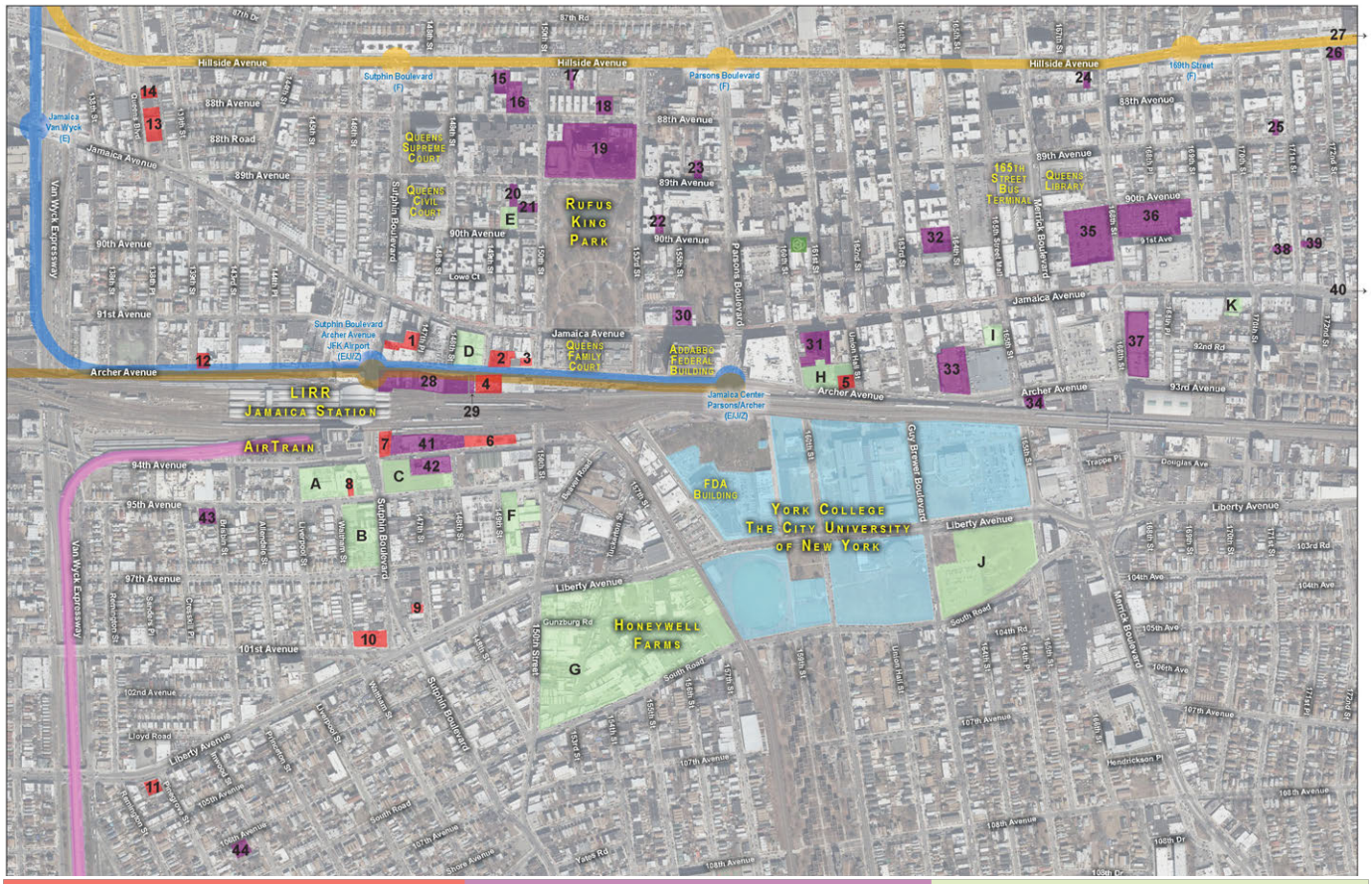
First step to implementation: As hotels coming online search for tenants, Jamaica stakeholders should strongly advocate for unique food and beverage options to supplement other food offerings in the Downtown, and where shoppers can take respite. In the longer term, as Hillside is developed, unique food and beverage options should be promoted there as well. The first step is to have conversations with the developers.

Relationship to Previous Work

As may be gleaned from the previous studies catalogue, many market studies have been performed for Downtown Jamaica and Greater Jamaica. In the early 2000s, consultants PricewaterhouseCoopers (PwC) recommend that planning for the environs of AirTrain focus on five particular business activities: hotel and conference facilities: technical training operations, share service-centers for small and start-up operations, back-office and middle-market office operations and value-added manufacturing. The PwC qualitative analysis outlined Jamaica's business environment, labor force, infrastructure, real estate and quality-of-life conditions in comparison to Newark and Philadelphia; they found Jamaica competitive.

During the process that led to the 2007 rezoning of Jamaica, AppleSeed assessed development opportunities in the AirTrain station area for NYCEDC. The report included a comprehensive assessment of Jamaica's strengths and weaknesses with respect to a range of airport related economic development opportunities, with many lessons that apply to and informed the recommendations contained herein. Thus, while many of the recommendations in this chapter are not new, contemporary considerations fine-tune the details in previous recommendations.

Figure 5.16: Development Projects in Downtown Jamaica, Queens



	PLANNED/UNDERWAY HOTELS
1	90-75 Sutphin Blvd (Hampton Inn & Suites - 242 rooms)
2	149-03 Archer Ave (AbbfElement Hotel - 283 rooms)
3	92-18 150th St (Hotel brand TBD - 68 rooms)
4	92-32 Union Hall Street (Hotel brand TBD - 110 rooms)
5	148-18 Archer Ave (Marriott Courtyard - 224 rooms/Fairfield Inn & Suites - 114 rooms)
6	148-23 94th Ave (Four Points by Sheraton - 155 rooms)
7	93-43 Sutphin Blvd (Hilton Garden Inn - 225 rooms)
8	145-07 95th Ave (Hotel brand TBD - 48 rooms)
9	97-26 147th Pl (Red Roof Inn - 86 rooms)
10	145-15 101st Ave (Wyndham Garden Hotel/La Quinta Inn & Suites/ Country Inn & Suites - 398 rooms)
11	143-18 Liberty Ave (Hotel brand TBD - 76 rooms)
12	139-01 Archer Ave (Hotel brand TBD - 85 rooms)
13	140-35 Queens Blvd (Marriott Springhill Suites - 128 rooms)
14	140-17 Queens Blvd (Sleep Inn - 49 rooms)

	PLANNED/UNDERWAY MIXED USE DEVELOPMENTS
15	148-46 Hillside Ave (Century Development Group)
16	148-33 88th Ave (Century Development Group)
17	150-16 Hillside Ave (Muhammad Alam, property owner)
18	152-09 88th Ave (Chetrit Group - former Mary Immaculate Hospital)
19	150-13 89th Ave (Chetrit Group - former Mary Immaculate Hospital)
20	148-36 89th Ave (Parthenon LLC)
21	89-14 150th St (Kingston Property)
22	153-11 90th Ave (King Hua Lin)
23	153-33 89th Ave (Jia Meng USA LLC)
24	167-14 Hillside Ave (Yuval Jacob, property owner)
25	170-19 89th Ave (Zorik Construction)
26	172-02 Hillside Ave (Ben Kaffari property owner)
27	178-02/26 Hillside Ave (Piermont Properties)
28	93-01 Sutphin Blvd, aka 147-22/30 Archer Ave (BRP Companies - "The Crossing at Jamaica")
29	148-12 Archer Ave (TCX Development)
30	153-19 Jamaica Ave (SMJ Development/BFC Partners)
31	160-08/16 and 161-02 Jamaica Ave (United American Land)
32	89-48 164th St (First Jamaica Community and Urban Development Corp/The Bluestone Group - "Tree of Life Center")
33	163-05/25 Archer Ave (Chris Xu/UCDGC)
34	92-61 165th St (Baker Companies) 35. 90-01 168th St (GJDC)
35	90-01 168th St (GJDC)
36	36. 90-02 168th St (GJDC)
37	37. 92-33 168th St (NYCEDC - former 168th Street Garage)
38	38. 90-34 171st St (Green Manor)
39	39. 90-31 171st St (Kingston Property)
40	40. 172-18 Jamaica Ave (Parthenon LLC)
41	41. 147-07 94th Ave (Phoenix Realty Group/Atrinus Construction)
42	42. 147-20 94th Ave (Atrinus Construction)
43	43. 139-12/22 Atlantic (95th) Avenue (Anthony Galb, property owner)
44	44. 144-16/24 106th Ave (Shanti Ammay/Anata Inc.)

	POTENTIAL DEVELOPMENT SITES	ZONING
A	144-06 94th Ave (Various)	C6-3
B	95-02/38 Sutphin Blvd (Clinton Graham)	C6-3
C	94-01 Sutphin Blvd (Rita Stark)	C6-4
D	148-05/15 Archer Ave (Various)	C6-3
E	148-31 90th Ave (Modern Spaces)	R7A
F	Abbott Industries	M1-4
G	Honeywell Farms/Bartlett Dairy/Steuben Foods	M1-4
H	92-25 160th St and 92-32 Union Hall St	C6-3
I	92-12 165th St	C6-2
J	"Site 9 at York College" - StartUp NY	R6
K	169-18/24 Jamaica Ave (Bellne Bikes)	R6A

Source: Greater Jamaica Development Corporation;
GJDC maintains an updated development map

VI. Mobility Study Recommendations

Introduction

Of the many communities that surround John F. Kennedy International Airport, Jamaica is the one best suited to leverage airport proximity as the airport's gateway. It is connected to the airport via light rail and road, and to the rest of the New York region via bus, subway and commuter rail. The recommendations in this chapter aim to improve transit so as to strengthen the neighborhood's role as a regional center that leverages airport proximity. Pedestrian and vehicular congestion, being analyzed in the NYCDOT Transportation Study, are not specifically addressed in this report. Finally, this report should be viewed in the broader context of the mobility recommendations of "A Region Transformed", RPA's Fourth Regional Plan, which will survey the region's streets, railroads, highways, analyzing the infrastructure, policies and organizations of each, and making recommendations for region-wide improvements. The recommendations herein will be in line with the recommendations to be released with the Plan in late 2017.

The chapter begins with a description of the transit system serving Jamaica, and then evaluates each mode of transit by ten factors that make transit usage attractive to commuters. Recommendations are summarized in the final section.

Description of Transit System Serving Jamaica

Jamaica is served by a robust and well-used transit system. On an annual basis, some 165 million people ride transit that serves Jamaica; 542,000 on the average weekday, as shown in Table 6.1. The majority of these people ride on the 35 bus routes that fan out in all directions from the downtown as shown in Figure 6.1, which serve 323,000 people on an average weekday, and 100 million per year. This volume of riders is more than all but six metropolitan bus systems in the United States. Five subway stops – two on Archer Avenue and three along on Hillside Avenue – are served by four subway lines (E, F, J, and Z) and have 53 million transit riders entering and leaving those stations a year, 173,000 on the average weekday. All but one of the Long Island Rail Road's (LIRR) 11 lines stop at the Jamaica-Sutphin Boulevard station. This is the only LIRR station in the area, and it connects to Penn Station in Manhattan and Atlantic Avenue in Downtown Brooklyn. The station in Jamaica has a total of 22,000 riders boarding and alighting from trains each weekday and 28,000 on weekend days. The AirTrain links the LIRR Jamaica Station and the Sutphin Boulevard subway station (E, J, Z lines) to JFK Airport and carries 6.4 million per year, 17,500 per day. Furthermore, an informal van system, also known as jitneys, supplements the formal transit system. While no formal analysis of this system has been done in the past, a city-wide commuter van study by NYCDOT will survey these service providers. These finding will directly inform the NYCDOT Transportation Study.

Table 6.1: Jamaica Two-way Transit Trips

	Weekday	Annual Trips	Year
Bus (35 routes)	329,939	100,013,035	2012
Subway (five stations)	172,898	53,586,610	2014
LIRR (one LIRR station)	21,200	5,300,000	2007
JFK Paid AirTrain (+ Howard Beach)	17,500	7,432,018	2016
Total	541,537	165,299,645	

Notes: Bus riders include those not boarding in Jamaica, but include data for entire route. Ridership of jitneys not determined.

Market for Work Trips to JFK Airport

The proximity of Jamaica to JFK Airport with its 161,000 air travelers using it a day and 50,000 employees represents a potential economic opportunity for Jamaica because what is good for JFK Airport can also be good for Jamaica. RPA's 2011 report Upgrading to World Class: The Future of the New York Region's Airports recommended what must be done for the airport system in the region to establish the capacity to handle growth at the three major airports. It recommended that at least one new runway be added at JFK Airport. This is still the case as air passenger demand continues to grow, adding two million passengers every three years. With the inevitability of sea level rise, JFK Airport is best positioned among the three major airports in the New York region to withstand that real threat. Not providing added capacity is the biggest threat to the health of JFK Airport, and by extension cannot do Jamaica any good.

The U.S. Census data tabulates the number of trips and mode to work. For work trips to JFK Airport the data shows some 34,100 workers traveling to it on a daily basis, of which 51 percent reside in Queens, 13 percent in Brooklyn, and 10 percent in Nassau and Suffolk counties -- the popular figure of 50,000 workers at JFK is higher since it counts transitory people like pilots and flight attendants who don't get counted in the Census. As would be expected, Queens residents who work at the airport tend to live in the neighborhoods proximate to the airport. About 40 percent of Queens and Brooklyn residents who work at JFK Airport arrive by transit; the majority of Queens residents arrive by bus and Brooklyn residents by subway and AirTrain. Nearly all Long Islanders drive, though a few come in on the LIRR.

Market for work trips to Jamaica

Before starting this process of evaluation, it is important to have a sense of what generates transit activity in Jamaica, beginning with the pattern of travel to work in Jamaica itself. The same US Census referenced above provides a comprehensive source of data by geographic detail and mode for work trips. The Census tallied 37,800 trips to work into the Greater Jamaica area defined here as south of Hillside Avenue, east of the Van Wyck Expressway, north of 108th Avenue, and west of the Montauk Branch of the LIRR. Table 6.2 details where these workers reside by county in the tristate New York region. Not surprisingly, the vast majority of these trips are generated by Queens residents. 77 percent of all workers in Jamaica live in New York City.

Table 6.2: Work Trips to Jamaica by County of Residence

	Number	%		Number	%
Bronx	1,168	3.1	Dutchess	0	0.0
Brooklyn	4,022	10.6	Putnam	35	0.1
Manhattan	877	2.3	Westches	114	0.3
Queens	23,323	61.7	HVE	149	0.4
Staten Island	129	0.3	Orange	55	0.1
NYC	29,519	78.1	Rockland	15	0.0
Nassau	4,593	12.1	Sullivan	4	0.0
Suffolk	2,838	7.5	Ulster	34	0.1
LI	7,431	19.7	HVW	108	0.3
Bergen	179	0.5	Fairfield	0	0.0
Essex	100	0.3	Litchfield	4	0.0
Hudson	64	0.2	New Have	0	0.0
Hunterdon	10	0.0	CT	4	0.0
Mercer	0	0.0	TOTAL	37,804	100.0
Middlesex	76	0.2			
Monmouth	69	0.2			
Morris	0	0.0			
Ocean	0	0.0			
Passaic	20	0.1			
Somerset	0	0.0			
Sussex	0	0.0			
Union	75	0.2			
NJ	593	1.6			

Source: US Census

These data are further divided into zones to highlight specific neighborhoods that are most oriented toward Jamaica as work place and shown in Table 6.3, which is organized in rank order within county for zones with at least 200 work trips and showing the percent traveling by bus, subway and commuter rail. Of those from Queens, workers predominately originate the neighborhoods surrounding Jamaica in southeast Queens and Elmhurst, Corona and Jackson Heights to the north, and from southeast Brooklyn neighborhoods. The zones closer to Jamaica tend to rely more on buses, those further rely more on the subway and, unsurprisingly workers from Nassau and Suffolk primarily travel by commuter rail (LIRR). These data allow the identification of focus areas for transit improvements.

What Makes a Good Transit System? (Conceptual Framework)

While these numbers are prodigious, they do not mean that these transit systems provide ideal service for their riders. A closer look reveals flaws in each of these transit modes and suggests ways to overcome them. The goal is to improve the attractiveness of the mobility options to Jamaica, and by extension the attractiveness of investment in Jamaica. Some of these remedies may be accomplished in the short-term with little or no capital investment while others require greater investment over a longer period.

To judge how well transit system serves Greater Jamaica as a center of commercial and residential activity for the people who live and work in Jamaica, it is useful to evaluate the quality of transit service considering what characteristics the transit customer values that can either make his or her trip more attractive, or for those not now using transit, what qualities would draw them to use transit. Nine such characteristics are identified:

1. **Proximity/Coverage:** Is the transit stop nearby or will I have to walk too far at either end of my trip?
2. **Connectivity:** Will I get to where I am going directly or will I have to transfer to another transit service?
3. **Frequency of service in peak, midday, weekends:** Will the service arrive often so as to be more convenient or will I have to wait too long?
4. **Span:** Is service available and frequent enough at all the times I need to make the trip, especially in the late evening?
5. **Speed:** Does the trip take too much time because the vehicle travels at slow speeds?
6. **Crowding:** Will I be able to get a seat or will the vehicle be uncomfortably overcrowded?
7. **Reliability:** Does the transit service arrive when I expect it to, based on the schedule?
8. **Amenity:** Is the service comfortable, easy and convenient to use and offers an inviting environment both on the transit vehicle and at the transit stops and between other modes and the surrounding land uses?
9. **Price:** Is the fare set at a reasonable level or is too high putting an economic burden on the users, leading to a choice not to use it?

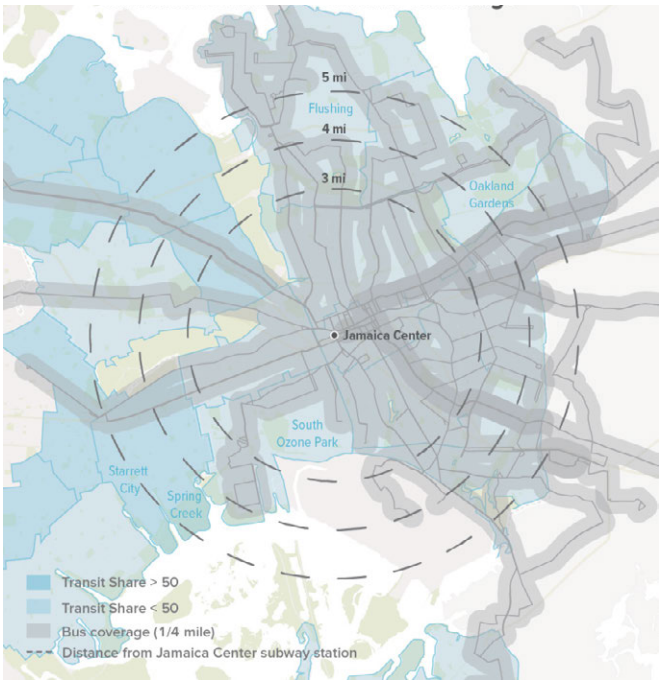
The following sections explore the quality services to Jamaica provided by each mode, identifying where the service is deficient, and making recommendations for improvement. The recommendations are summarized in the final section of the mobility chapter.

Bus Service

Proximity, coverage and connectivity

To assess the coverage and connectivity of bus service, the routes emanating from Jamaica were examined to determine what neighborhoods surrounding Jamaica it is not possible to reach by bus directly. Figure 6.1 illustrates areas within a fifteen minute walk (one fourth mile) of the 35 Metropolitan Transportation Authority / New York City Transit (MTA/NYCT) and six NICE (Nassau County) local bus routes serving Greater Jamaica. Since bus service is slow, averaging about 9 miles per hour in Queens, the map focusses on areas within five miles, or about 35 minute trip by bus. Figure 6.1 highlights the neighborhoods to the southwest of South Ozone Park, Spring Creek and Starrett City without direct bus service to Jamaica and areas of Flushing and Oakland Gardens to the north. The absence of service to South Ozone Park is particularly noteworthy, a scant three miles from Jamaica and can be addressed by extending the Q9 bus route which ends just short of the neighborhood. RPA recommends that the MTA/NYCT review that possibility.

Figure 6.1: Jamaica Bus Route Coverage



Source:

Another aspect of bus service proximity is how well Greater Jamaica is served by bus routes to JFK Airport. Only two bus routes, Q6 on Sutphin Boulevard which runs to the northern boundary of the airport and the Q3 on Farmers Boulevard into the Central Terminal Area of the airport connect Jamaica to the airport leaving many gaps in service. Although the AirTrain fills some of those gaps, large areas of Jamaica are not served. Census data shows that only 22 percent of the 564 work trips from Jamaica to JFK AIRPORT are drivers highlighting the need for extended coverage. By improving transit, the number of Jamaica residents who would find a job at the airport and attractive place to work would likely grow.

Frequency and span

Of the MTA/NYCT 35 bus routes, only four do not meet the minimum peak service standard of six buses per hour, only four do not meet the midday standard of four per hour, and only three do not meet the weekday standard of three per hour. Of these, only the Q42 to St. Albans falls far short, with only two buses per hour (half hourly service) in the midday during weekdays. This route does not meet an acceptable standard in the peak and weekends either. However, its lack of service is understandable; it has the lightest ridership of the 35 routes. Overall, the bus service frequency for the vast majority of routes meets acceptable service standards at various times for both weekdays and weekend days. Where they do not, it is recommended that service be increased to meet the standard. These findings are summarized in Table 6.4.

Of the 35 routes, only three stop running well before midnight, the Q42, Q43, and the Q77. The Q43 and Q77 serve Queens Village and Floral Park, which are more distance and more low density areas, so their limited span is acceptable.

Speed

The average speed of local bus in the borough of Queens is 9.2 miles per hour, faster than the city-wide average of 8.2 mph. To evaluate the speed of the 35 routes serving Jamaica a “Speed Need Index” (SNI) was calculated to prioritize which of these routes were most in need of speedier service. The SNI combines the speed with the intensity of use measured by the average number of riders per mile of route, the lower the speed the higher the index, the higher the intensity of ridership the higher the index. Table 6. 4 shows the SNI for the Jamaica in sequence from highest (worst) to lowest. Of the 16 worst routes, six operate on Sutphin Boulevard, five on Jamaica Avenue, four use the 165th Street Terminal, three operate on Archer Avenue, and three on Hillside Avenue. Only one among the worst operates on Parsons Boulevard. Most telling is that six of the worst eight operate on Sutphin Boulevard. Thus, it is strongly recommended that this roadway get early attention to speed buses.

Possible actions include:

- Exclusive or preferential lanes (time of day) for buses while excluding other vehicles from that right-of-way,
- Space near intersections to give buses the ability to “queue jump,” and
- Signal preemption that detects buses and gives more green light time to reduce the waiting time for buses, more widely spaced stops, and off vehicle fare collection.

Combinations of these actions by the MTA and NYCDOT have been applied on nine routes to date in a program called Select Bus Service (SBS) and the top SNI routes should be considered to speed bus service in Jamaica. However, it is costly to install fare dispensing machines at all bus stops, which has to be done

Table 6.3: Work Trips from Place of Residence to Jamaica by RPA Zone and by Mode

Zone	County	# Commuters to Jamaica	Percent Transit	Percent Bus	Percent Subway	Percent Commuter Rail
South Jamaica, St. Albans	Queens	3,391	46.6	39.5	6.3	0.4
Jamaica	Queens	3,125		18.3	4.8	0.4
Queens Village, Rosedale, Laurelton	Queens	2,463	36.3	31.1	4.2	1.0
Jackson Hts., Corona, Elmhurst	Queens	2,404	56.9	8.4	48.4	0.0
Flushing, College Point	Queens	2,292	40.4	28.4	11.1	0.9
Woodhaven, Richmond Hill	Queens	1,646	48.1	25.1	21.0	1.5
Ozone Park, Howard Beach	Queens	1,567	37.7	29.1	8.6	0.0
Jamaica Estates, Fresh Meadows	Queens	1,531	28.3	23.4	4.6	0.3
Ridgewood, Middle Village, Maspeth	Queens	1,086	34.2	14.5	16.4	0.9
Rockaways	Queens	864	41.6	31.8	8.6	1.2
Bayside, Little Neck, Douglaston	Queens	833	35.3	29.3	6.0	0.0
Rego Park, Forest Hills	Queens	716	50.0	6.1	40.4	3.5
Sunnyside	Queens	684	62.7	1.5	57.6	0.0
Astoria	Queens	440	58.6	15.9	42.7	0.0
Long Island City	Queens	278	68.0	0.0	64.4	3.6
East New York, Spring Creek, Starrett City	Brooklyn	747	71.6	30.1	39.5	2.0
Canarsie, Flatlands	Brooklyn	522	28.5	12.3	11.5	4.8
Bushwick	Brooklyn	350	60.0	0.0	60.0	0.0
East Flatbush, Rugby	Brooklyn	343	59.2	23.0	36.2	0.0
Brownsville, Ocean Hill	Brooklyn	264	65.9	20.8	41.3	3.8
Valley Stream, Rockville Center	Nassau	916	25.1	3.8	0.0	42.4
Elmont, Floral Park	Nassau	623	14.4	4.0	0.0	20.8
Baldwin	Nassau	573	29.5	3.5	2.6	46.5
Westbury, Carle Place	Nassau	517	23.2	2.9	0.0	40.4
Syosset	Nassau	373	26.8	0.0	0.0	53.4
Hempstead	Nassau	343	35.0	20.4	5.8	17.4
Oyster Bay Branch	Nassau	223	26.0	4.5	0.0	42.8
Babylon	Suffolk	752	47.7	0.0	1.3	46.4
Yaphank, Bellport	Suffolk	547	41.7	0.0	0.0	41.7
Deer Park, Bayshore	Suffolk	476	55.0	0.0	3.2	51.9
Huntington	Suffolk	455	43.7	0.0	3.3	40.4

Source: US Census

for all the stops if an SBS route is established. Since the MTA is planning to replace the MetroCard system with a system that can read devices "in the vicinity" in the next few years, which should speed service on all routes, it might be more efficient to get the benefit of faster speeds for Jamaica buses all at once. We recommend that the MTA MetroCard replacement program be moved forward quickly, which will speed up all the bus routes that serve Jamaica.

The importance of speeding up bus service cannot be overestimated. Not only are faster buses a benefit to existing riders, but they hold the promise of enticing new riders. And speed affects the other features that a rider values. If the speed of buses can be improved, many of the other factors that can make a bus ride a better experience can come along for the ride, both literally and figuratively. Faster buses can mean more reliable buses that are not bunched up in unexpected traffic delays. Faster buses can translate to improved service since buses can be turned around more often so that the wait for connecting service is shorter and more service can be offered at night. Faster buses can be more efficient, with vehicles and drivers turned around quicker, which can lead to lower fares. These actions could be taken outside of the DOT/MTA SBS program.

Crowding

While there is no easily available data here, any recommendation that speeds buses or make them more frequent will have the effect of making them less crowded.

Reliability

The introduction of select bus service (SBS) features and a new fare collection system will not only speed service, but make it more reliable. Reliability also will depend on continued investment to replace aging buses and keep maintenance facilities up to date.

Amenity

Amenity encompasses many of the features of the environment that the transit rider faces both on and off the vehicle – lighting, seating, shelter, information, way-finding, vehicle traffic interference, "defensible" space (space that offers visibility to offer a sense of safety), and walking distances between vehicles for transfers, to name the most obvious ones. Amenity also includes the relationship between the transit service and the surrounding land uses. Is it easy and pleasant to negotiated movement from one to the other? To explore these features, RPA organized a site visit with representatives of NYCDOT and GJDC in February 2016. The observations from this trip are presented below and the ones related to amenity are starred (*). These observations are not intended to be comprehensive in order to not be redundant with NYCDOT streetscape study of Downtown Jamaica to be completed in late 2017, and other Jamaica NOW efforts tackling these problems. The observations below were incorporated into the urban design recommendations contained within this report.

- Archer Avenue, between Sutphin Boulevard and Parsons Boulevard
  - Redesign Archer Avenue, incorporating changes from Sutphin to Parsons to make the area more functional and higher amenity – redesign the boarding areas, eliminate free and privileged government staff parking from 150th to 153rd Streets*
  - Improve lighting and add way-finding between Jamaica and Archer Avenues *
- 165th Street
  - Add greater visibility and way-finding off 165th Street to the 165th Street bus terminal *
  - Consider constructing air rights on the site of the 165th Street terminal, giving developers option to build in exchange for contributing to a modern bus facility
  - Address safety concerns along 165 Street bus terminal *

Price

With the advent of MetroCard in the 1990s, two-fare zone was eliminated in most areas. Two-fare zones are areas in NYC where transit riders need to pay twice to make a single trip due to transfers. Previously, most bus rides that connected to the subway required two fares. Today, riders transferring within 90-minute periods among buses and subways need pay only one fare. Some have argued that since buses provided a lower level of service and are disproportionately used by lower-income households, bus fares should be lowered. However, the MTA deficit is already at $2.4 billion annually from buses alone. The reduction of fares as a "social fare" is tough issue. Not all people using buses are poor and with a higher fare on subways to offset a lower fare on buses, those that are poor and use the subways would be negatively impacted. Still, a social fare for transit riders may be worthwhile and any proposal to lower transit fares should be evaluated in framework of city-wide policies.

Subway Service

Proximity, coverage and connectivity:

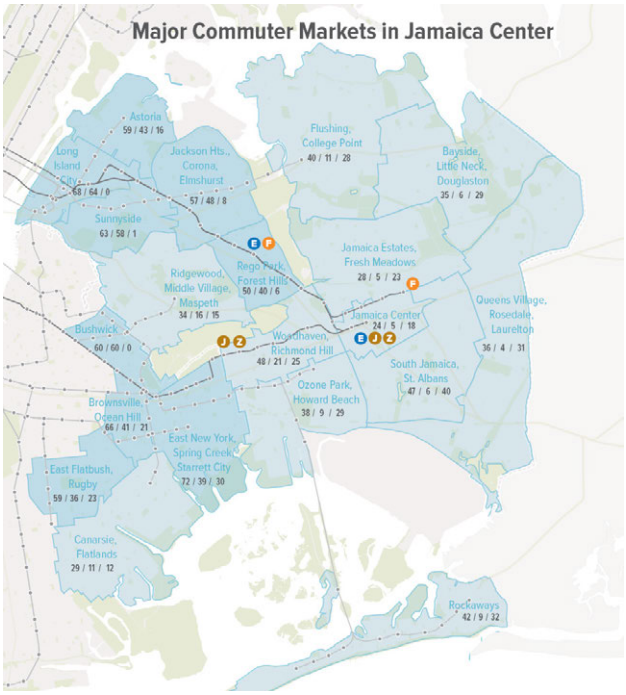
The five subway stops in Jamaica place most of the Jamaica area within a half mile walk of subway service, the exceptions are areas to the south of Liberty Avenue and to the east of Guy Brewer Boulevard. This gap could be filled by converting the Atlantic Branch of the Long Island Rail Road, between the Jamaica LIRR station and the Babylon Branch to some form of urban transit, which has been proposed for decades including in RPA's 1999 "Metrolink" and 2008 "Tomorrow's Transit" reports. This was the original intent of the Archer Avenue subway extension. The Archer tunnel was halted at South Road with the intention of connecting it to the Atlantic Branch.

Mapping the data from Table 6. 3 and superimposing the rapid transit service helps to evaluate proximity and coverage. It can also tell us whether a trip to Jamaica can be made directly, i.e. not requiring a transfer from one transit vehicle to another to complete the trip. Figure 6.2 shows this for the subway network,

mapping the zones in New York City that contribute the greatest number of commuters to Jamaica with an overlay of the subway network. Jamaica is served by three BMT services – the J/Z from the west which runs from lower Manhattan through Brooklyn and into Archer Avenue, the E that operates from Manhattan, along Queens Boulevard and into Archer Avenue ending at Parsons Boulevard, and the F line, also operating from Manhattan and then under Queens Boulevard and running under Hillside Avenue to 179th Street.

Because of this connectivity, neighborhoods in Brooklyn and Queens with J/Z stations house many residents who work in Jamaica, ranging from 40 to as high as 82 percent use the subway. For these neighborhoods, the total transit shares are consistently above 50 percent. In neighborhoods that either have no access or indirect access and require multiple transfers -- such as Flushing, Ridgewood, Maspeth, Canarsie or South Jamaica -- the subway is used much less often and consequently the overall transit share falls below half. Any increases in the share of workers using transit in these neighborhoods would require significant investment in new subway lines. However, the proposal to extend the Archer Avenue line to Southeast Queens on the LIRR's Atlantic Branch or convert the entire branch (from Valley Stream to Atlantic Terminal) to a more rapid and frequent transit service would address the coverage gap in South Jamaica and South East Queens.

Figure 6.2: Major Subway and Bus Commuter Markets within NYC to Jamaica by Mode



Source: RPA

Frequency and Span

Service on the J/Z, and to a lesser extent on the F, falls short of the standard of four-minute headways in the peak, six minutes in the off peak and weekends. While a case can be made for service increases, it is likely to be rebuffed by the MTA, citing limited resources and higher costs. Since subway service operates 24/7 the span of service criterion is met.

Table 6.4: Jamaica Bus Routes Service Shortcomings

		Standard Not Met				
Route	SNI	Peak	Midday	Weekend	Late Night	Streets Operated On
Q9	6.4					Jamaica, Sutphin Avenue
Q6	4.8					Jamaica, Sutphin Avenue
Q40	4.6					Sutphin
Q20	4.2					Archer, Sutphin
Q83	4.2					Archer
Q25	3.8					Sutphin
Q43	3.6				X	Hillside, Sutphin
Q8	3.4	X				Jamaica, Sutphin Avenue
Q60	3.3					
Q4	3.2					
Q112	2.9					Archer
Q54	2.8					Jamaica
Q56	2.6	X				Jamaica
Q2	2.5					165th, Hillside
Q17	2.3					Hillside
Q5	2.2					
Q110	1.9					Jamaica
Q34	1.6					Sutphin
Q42	1.4	X	X	X	X	Archer
Q24	1.4					Jamaica
Q31	1.4	X	X			Jamaica, Archer
Q77	1.3				X	Hillside
Q30	1.3					Jamaica, Archer
Q1	1.2			X		Jamaica, Hillside
Q65	1.0					Hillside, Parsons
Q85	0.9					
Q41	0.7		x			165th, Jamaica
Q84	0.5					
Q36	0.2					165th, Hillside
Q44	-0.2					Sutphin, Archer
Q76	-0.3	X	X	X		165th, Hillside
Q113	-0.6					Archer
Q111	-0.9					Archer
Q88	-2.1					
Q3	-2.5	X				165th, Hillside

Source: MTA and RPA

Speed

Subway service speeds are influenced most by station spacing, which is most apparent on the J/Z line, with 22 stops between Jamaica and Manhattan. The MTA has recognized this by employing a skip-stop service during the peak period in the peak direction. Skip-stop service refers to setting the schedule so that alternate trains skip some stops to speed service. It is recommended that the skip-stop operation be examined for the reverse peak direction as well to see if it is practical. It would give the workforce that commutes to Manhattan from Jamaica the benefit of faster service to and from work. Despite a range of transportation options, the area had the second-highest average commute time in the City (50 minutes) in 2014 (NYC Comptroller report, 2016).

Crowding

The 53rd Street subway tunnel, which carries the E and F trains under the East River, is the second most crowded entry point into Manhattan. No additional trains can operate due to limitations of the current signal system. RPA has recommended that a modern signal system called communications-based train control, which would create added train capacity, be installed within the next two five-year MTA Capital programs. This would especially benefit Jamaica residents working in Manhattan. The crowding on this line would

be less if LIRR rail fares were reduced, encouraging some subway passengers to shift to the LIRR. See the pricing section under the commuter rail service heading for more detail.

Reliability
NYC subway service was very unreliable in the 1970s and 1980s, suffering from years of deferred maintenance. An infusion of funds to bring the system closer to a state of good repair has gone a long way to reverse that. Continued investment in the infrastructure will be needed to maintain and improve its reliability.

Amenity
MTA should attempt to negotiate, where still possible, the provision of subway entrances inside building lines at the intersection of Sutphin and Archer, in order to improve pedestrian flows at this crowded intersection. Wayfinding from the station platforms should also be improved. With respect to safety, the community has expressed concerns with the perception of safety at the stations, especially at night.

Price
See price section in bus service.

Commuter Rail Service

Proximity, coverage and connectivity
Only one LIRR station serves Jamaica and it is located in the southwest part of the district, beyond walking distance from many of the neighborhood's work sites and activity centers. In the past, GJDC proposed opening the long-closed station at Union Hall, about 0.7 miles east of the centerline of the Sutphin Boulevard station. The proposed station area is proximate to York College and has been an area of considerable development, as discussed in the urban design chapter. Discussions with the LIRR about this possibility resulted in the rejection of this concept because they are in the process of implementing plans that conflict with reopening the station. LIRR is making signaling and interlocking upgrades that will create the capacity for 17 added peak hour trains through Jamaica as a part of the East Side Access project, which precludes the placement of a new station at Union Hall. There is also the possibility of a new station on the Atlantic line was converted to subway service or some other form of rapid transit.

The LIRR in Jamaica has services to the west terminating at Penn Station, Atlantic Terminal in Downtown Brooklyn and to Long Island City, stopping at five locations west of Jamaica in Brooklyn and Queens. The LIRR connects to multiple subway lines en route to terminal and intervening stations to the west, offering connectivity to significant portions of Brooklyn, and most of Manhattan. Transfers to five of NJ Transit rail lines and Amtrack are available at Penn Station. LIRR service connects to points east on nine lines and branches, including more than 100 stations in Nassau and Suffolk counties, and a handful in eastern Queens. Many of these stations have connections to local bus service, but outside New York City local bus service is infrequent and of limited use to those using the LIRR to reach Jamaica. One possible improvement in connectivity that could expand the reach of the LIRR is to operate through trains at Penn Station between New Jersey and Jamaica. RPA is examining these possibilities as part of its Fourth Plan work .

The commuter rail network serving Jamaica is ubiquitous, with nine lines stretching eastward into Nassau and Suffolk counties and two to the west, one through Queens to Penn Station and one through Brooklyn to Atlantic Avenue in Downtown Brooklyn. Even with some 111 stations in the system that provide direct service to Jamaica, it not possible to cover the entire length of Long Island with stations within a short walk, perhaps ½ mile from a rail station. In New York City, among the 17 LIRR stations that serve Jamaica, only two provide good connecting subway service that expands the transit coverage – Atlantic Terminal with connections to nine subway lines and Woodside. (Other LIRR stations with direct connections to the NYC subway are in East New York, Nostrand Avenue and Penn Station, Forest Hills and Hunterspoint Avenue.) The other do not have proximate subway service, the LIRR service is scant (as explained below), or use is inhibited by prohibitively expensive fares in NYC. Many of the other stations are also served by local buses that expand coverage, but limited LIRR service and high fares discourage use of the LIRR. Infrequent bus schedules also make the bus/LIRR combination unattractive for reaching Jamaica.

Commuters beyond walking distance must rely on an automobile to reach LIRR stations. RPA is pursuing other approaches to suburban mobility as part of its Fourth Regional Plan (4RP), which may yield useful recommendations that would benefit Jamaica by making suburban areas, and thus the suburban workforce and shoppers, more accessible.

Frequency and span
Using RPA standards for commuter rail service frequency developed as part of the 4RP, an analysis was done of the service offered at high usage stations to Jamaica in the morning peak from those zones in Table 6. 3 with more than 200 work trips a day to Jamaica. They were scored as to whether they provided 12 or more trains in the peak three hours from 7am to 10am (every 15 minute service) for major stations (more than 5,000 riders a day), nine or more for intermediate sized stations (1,000 to 5,000 a day) and six for minor stations (under 1,000 a day). Stations west of Jamaica were all classified as major stations with the expectation that with lower fares for intra-city LIRR rail travel, these stations would be more heavily used and need more service.

Table 6.5: LIRR Station Peak Hour Frequencies Requirements

		# in Morning Peak 3 Hours	Needed to Meet Standard	Added Trains Recommended
Nassau and Suffolk Stations	Babylon	23	12	0
	Baldwin	11	12	1
	Bellmore	10	12	2
	Floral Park	8	12	4
	Hempstead	6	12	3
	Hicksville	20	12	0
	Huntington	10	12	2
	Long Beach	11	12	1
	Lynbrook	17	12	0
	Mineola	27	12	0
	Rockville Centre	11	12	1
	Ronkonkoma	7	12	5
	Valley Stream	25	12	0
	Wantagh	10	12	2
New York City Stations east of Jamaica	Laurelton	10	9	0
	Locust Manor	9	9	0
	Rosedale	9	9	0
	St. Albans	4	9	5
New York City Stations west of Jamaica	Atlantic Terminal	23	12	0
	East New York	23	12	0
	Nostrand Avenue	23	12	0
	Penn Station	50	12	0
	Woodside	21	12	0
	Forest Hills	6	12	6
	Kew Gardens	6	12	6

Source: RPA and LIRR

As Table 6.4 shows, of the 14 stations in Nassau and Suffolk counties, nine fell short of the recommended frequencies. Ronkonkoma, Floral Park and Hempstead need more than two additional trains in the three peak hours. St. Albans stands out as being the only East Queens station having a gap in service. Many trains pass by that station from further east, but few stop, since the ridership is low because of high intra-city fares. For the stations in Brooklyn and Queens west of Jamaica, the two on the main line (Forest Hills and Kew Gardens), service is inadequate. With many peak trains operating on the line but bypassing these stations, the gap can be closed with minimal expense to the MTA.

The LIRR is now planning its schedules for the opening of East Side Access, which is still about six years away. They are upgrading their signal system in the vicinity of Jamaica to handle 17 more peak hour trains into Manhattan. These additions should be able to take care of the gaps in service to Jamaica from the east, but there is no reason to wait to add stops. Added stops can be scheduled, and their impact on train speeds can be weighed.

Frequency issues at particular stations can also be addressed in the long-run by considering a proposal to extend the E train at Parsons Boulevard onto the Atlantic Branch, which would give the Atlantic Branch transit-like frequencies and would divert more trains onto the Montauk Branch serving St. Albans. A new subway station on the Atlantic Branch could be added adjacent to York College. These findings and recommendations would create a more robust rail service to meet Jamaica's needs and should be the subject of discussions with the LIRR.

Speed

The speed of LIRR service is quite good from most places, with the average speed on the LIRR at 32 miles per hour. Any steps to improve the operating speed of trains into Jamaica would require removing stops and thus would require lower frequency of service at some stations. In turn, proposals to increase frequency may result in slower service. A balance needs to found between the two. The LIRR's current plans to replace antiquated signals in the vicinity of Jamaica station will also help speed trains.

Crowding

A recent report makes the case to lower the cost of LIRR service. The report produced data showing that there is capacity for greater ridership on LIRR trains going into Jamaica. Lowering fares to ride these trains would encourage more ridership. Thus, crowding is not an issue. Should ridership growth create a crowding issue in the coming years, ESA should mitigate crowding concerns. (See discussion of pricing on the commuter rail system.) Once the East Side Access (ESA) project is completed, approximately 50 percent more peak trains will be operated between Jamaica and Manhattan. Completion is now slated for 2022. This will add seating capacity on LIRR trains that could eliminate or reduce any crowding resulting from subway passengers shifting transit mode due to more affordable fares.

Reliability

The reliability of the LIRR is an issue that has come under scrutiny for many years. Improved reliability depends on continued investment to maintain state of good repair standards on the railroad. As with the other modes, funding the MTA capital program is a must and diligence in investing in the LIRR's infrastructure – vehicles, track, power, and structural elements – will keep the railroad at a high standard.

Amenity

During a February 2016 site visit, RPA made the following observations about the LIRR Jamaica station area:

- Extend egress from LIRR station to east side of Sutphin – access to that side of the street makes retail there problematic unless something is done.
- There is a need to secure 24/7 bicycle parking at the LIRR and subway stations in the Jamaica area, especially in and around the AirTrain Station area/Jamaica Avenue. NYCDOT should explore opportunities to create a network of bike lanes leading to LIRR and subway stations to encourage this mode of access to transit and adjacent development nodes.

Price

Currently, fares between Jamaica and other stations within New York City are at a level that effectively prohibits the use of the railroad by many people who would otherwise use the LIRR to travel to and from Jamaica. Such a price point reduces the attractiveness of Jamaica as a work destination. Table 6.6 shows the current fares and two separate proposals for changes. For the nine stations to the west of Jamaica (excluding stations on the Port Washington Line) but within New York City, the one-way fare is set at $10 in the peak and $7.25 in the off-peak. The monthly fare is $218 and the weekly fare is $69.75. For the six stations on the LIRR to the east, but within New York City the fares are considerable lower to and from Jamaica – the one-way fare is $5.25 in the peak and $3.75 in the off-peak, monthlies are $139 and weeklies $43. There is also a CityTicket fare of only 4.25 between all NYC stations, but is only in place on weekends and must be purchased on the day of use.

These fares are considerably higher than the subway fare, which is now $2.75 for a one-way trip, $116.50 for a monthly and $31 for a weekly MetroCard. As pointed out earlier, the frequency of service is inadequate from some of these stations, particular east of Jamaica where subway service is absent. The combination of the high cost and poor service of the LIRR relegates those wishing to travel to Jamaica or to transfer to the subway, to a slow bus ride. The LIRR has for many years claimed that there is limited capacity in the peak period on these lines. But the report referenced above by the New York City Transit Riders Council (NYCTRC) counters this, showing that there are thousands of seats available on most of these trains during peak periods, which could accommodate riders who would be attracted by the lower fares and added service. Service from stations to the west is adequate, but the high fares keep many potential riders away as well.

What is the best way to reduce fares to attract riders to these available seats? NYCTRC has proposed to lower fares for trips between southeast Queens, including Jamaica to points east of Jamaica (Atlantic Terminal and Penn Station) by keeping the LIRR fare levels but with a free transfer to the MTA's subway and bus systems. The intent of this "Freedom Ticket" is to lower the cost of using the LIRR for those living in southeast Queens (including Jamaica) and for those who travel on the LIRR to the core of the region, including Manhattan and Downtown Brooklyn. While this would lower fares for those who switch modes, it would retain the same high fares for those who only use the LIRR. While the proposal does not apply to LIRR riders holding tickets for Nassau and Suffolk counties, it would open the door for other communities to press for this change, leading to further deficits unless the localities were to subsidize the losses.

As Table 6. 5 shows, NYCTRC would lower fares for these trips to Jamaica whose other end is to the west, but says nothing about trips between Jamaica and the seven stations on the LIRR to the east. Their proposal, which would essentially eliminate the subway or bus fare for all LIRR riders, would likely be very costly to the MTA, although the report does not estimate the impact on the MTA's deficit. It would be still more costly if suburban LIRR riders petitioned and received the same benefit, which could occur if the Freedom Ticket was established within New York City.

Another approach would to be expand the discounted City Ticket fare to weekdays and establish a monthly and weekly City Ticket with a similar discount. The fares for this approach are also presented in Table 6.6. This would lower fares for everyone who uses the LIRR for travel within the City. The price would be lower than the Freedom Ticket for those who do not use the MetroCard, but higher for those who do use the MetroCard to transfer to local buses or the subway. Although precise estimates of the revenue losses are not possible without much more detailed data and analysis, a rough estimate puts the loss at approximately $86 million annually partially offset by those switching to the higher fares of the LIRR from the subway or bus and by additional riders who did not previously use transit. This estimate does not include the losses to the MTA if the same proposal were applied to Metro North.

The City Council has yet another proposal -- fare equalization -- different from Freedom Ticket. Resolution 0670-2015, which would lower commuter rail fares to subway and bus levels. This proposal is likely to shift subway riders in large numbers to the LIRR, threatening to overwhelm the capacity of the railroad. It would not maintain the premium fare for premium service – seated and more comfortable than the subway. It is recommended that RPA's proposal be advanced; it would maintain a higher fare for commuter rail but bring it down enough to levels that would shift some riders and give them a choice of superior service for a somewhat higher fare.

AirTrain

The examination of the ten characteristics as applied to AirTrain suggests that there are two areas for special consideration --- frequency and price. Improvements to each would establish a closer relationship between the two, as increased frequency would warrant a higher price, a prime purpose of RPA's effort here. Service frequency between Jamaica and JFK Airport can be increased to match the connecting subway service at Sutphin Boulevard. In addition, additional cars can be added to increase capacity. Future work will delve deeper into these topics.

Jitneys

This study did not analyze jitney service, also known as commuter vans, instead reports on community feedback in the summary table. The NYCDOT's Downtown Jamaica Transportation Study and city-wide Commuter Van Study, due in 2017, will survey and report on jitney service, particularly with respect to their effect on congestion.

Table 6.6: LIRR Fare Proposal Comparisons

		Between Jamaica and points East	Between Jamaica/ East and west of Jamaica	Between points west and points west of Jamaica
		Jamaica/ Laurelton	Laurelton /East New York	Woodside /Kew Gardens
Existing	LIRR one-way fare in peak	$5.25	$10.00	$8.25
	LIRR one-way off-peak	$3.75	$7.25	$6.00
	LIRR peak plus subway/bus	$8.00	$12.75	$11.00
	LIRR off-peak plus subway/bus	$6.50	$10.00	$8.75
	City Ticket (weekends only)	$4.25	$4.25	$4.25
	LIRR Monthly	$139.00	$218.00	$184.00
	LIRR Weekly	$43.00	$69.75	$59.00
	Subway/bus monthly	$116.50	$116.50	$116.50
	Subway/bus weekly	$31.00	$31.00	$31.00
NYCTRC Proposed	One-way LIRR	NA	$6.50	NA
	One-way LIRR plus subway/bus	NA	$6.50	NA
	Monthly LIRR	NA	$215.00	NA
	Monthly LIRR plus subway/bus	NA	$215.00	NA
	Weekly LIRR	NA	$57.25	NA
	Weekly LIRR plus subway/bus	NA	$57.25	NA
RPA Proposed Expanded Universal City Ticket	One-way LIRR	$3.75	$4.25	$3.75
	One-way LIRR plus subway/bus	$6.00	$7.00	$6.00
	Monthly LIRR	$139.00	$157.00	$139.00
	Monthly LIRR plus subway/bus *	$255.50	$273.50	$255.50
	Weekly LIRR	$43.00	$49.00	$43.00
	Weekly LIRR plus subway/bus *	$76.00	$80.00	$76.00

*Indicates summation of fare of separate tickets for the LIRR and MetroCard.

Relationship to Previous Work

The New York City Department of Transportation' (NYCDOT) comprehensive streetscape study and traffic study, built upon partnerships formed under the Jamaica NOW Neighborhood Action Plan, and in collaboration with the Department of City Planning and the Economic Development Corporation, is being led by Arup and the NYCDOT traffic engineering department to articulate a comprehensive streetscape and transportation framework and vision for a vibrant Downtown Jamaica.

Furthermore, RPA's long history of work in Downtown Jamaica, and close monitoring of transportaion in the region inform the conclusions in this section.

Summary

Mode Evaluations

Table 6.7 summarizes the outcomes explained in the previous section.

Yellow indicates where the transit mode's service or other characteristic was deemed deficient and where recommendations were made. These will be followed up with the appropriate agency.

Green indicates where the service /characteristics were deemed adequate or sufficient.

Gray indicates where work will be completed in future studies.

Recommendations

- Add greater visibility and way-finding at 165 Street Bus Terminal, enhance as mixed-use area per design study recommendation
- Extend Q9 to address the coverage gap in southwest and north Queens
- Improve speed on 9 bus routes through bus rapid transit-type interventions: exclusive/preferential lanes, signal preemption, more widely spaced stops, and off vehicle fare collection
- Redesign bus boarding areas, eliminate free and privileged government (MTA) staff parking from 150th to 153rd Streets
- Examine the potential of skip-stop operation to improve J/Z headways for the reverse peak direction; employ communications based train control throughout the system
- Improve service frequencies at 9 LIRR stations, add stops to 3 LIRR stations
- Expand CityTicket pricing from weekends to all 7 days to better connect borough residents and encourage more use of the LIRR
- Link signage, physical access and programming at Jamaica Station to Downtown Jamaica, add egress to east side of Sutphin
- Operate through commuter rail trains at Penn Station between New Jersey and Jamaica
- Convert the LIRR Atlantic Branch to some other hybrid from of urban transit between Jamaica and Babylon
- Improve AirTrain service frequencies to match the subway service at Sutphin Boulevard

Table 6.7: Summary of Status

	Bus	Subway	Commuter Rail	AirTrain	Jitney
Proximity	Sufficient	Sufficient	Deficient - recommendations made	Sufficient	Sufficient
Frequency	Deficient - recommendations made	Deficient - Recommendations made	Deficient - recommendations made	Deficient	Sufficient
Span	Deficient - Recommendations made	Sufficient	Sufficient	Sufficient	TBD
Speed	Deficient - Recommendations made	Deficient - Recommendations made	Sufficient - Corrdinate with frequency recommendations	Sufficient	Sufficient
Crowding	Addressed under Bus Speed	Deficient - Recommendations made	Deficient - Recommendations made	Deficient	Sufficient
Reliability	Sufficient	Deficient - Recommend funding captital program	Deficient - Recommend funding captital program	Sufficient	TBD
Connectivity	TBD	TDB	TBD	Sufficient	Sufficient
Amenity	TBD	TBD	TBD	Sufficient	Deficient
Price	Sufficient	Sufficient	Deficient - recommendations made	TBD	Sufficient

VII. Recommendations Matrix

			Neighborhood Node						
			The Gateway	The Sutphin/ Liberty Crossing	Industrial Employment Districts	York College	Jamaica East	Hillside	Airport
Design	Short Term	Incentivize NYCDOT design guideline adherence for Archer Avenue farther east	X						
		Extend design guidelines for Sutphin between Jamaica Avenue and Liberty Avenue		X					
		Develop designs for 165 Street Bus Terminal, consider air rights usage					X		
	Medium Term	Redesign/Rebuild the Archer Ave intermodal facility, move MTA employee parking, add cycling amenities	X						
		Create the link along 158th between re-built intermodal facility on Archer Avenue and the York College campus	X			X			
		Anticipate link along 150th Street from King Park to the new special district/York College, leverage 3Ps for development	X			X			
	Medium and Long Term	Create a new public space at Sutphin and Liberty and rezone to create a future node in that location		X					
		Reimagine Liberty Avenue between Sutphin and 165th/168th as a job rich mixed-use corridor through redesign		X	X	X			
		Revisit land use at 165th/168th and Liberty		X	X	X			
		Consolidate freight uses scattered throughout the Downtown Jamaica IBZ's near the airport fence			X				X
		Create new transit opportunities for the emerging node at Jamaica East					X		
		Enliven Hillside Avenue as a residential/retail/restaurants mixed use street with a landscaped median to bring in much-needed housing units, and revive the corridor						X	
Market		Attract a destination retail and entertainment complex in Jamaica	X		X		X		
		Revitalize office spaces along retail corridors, support the creation of a catalytic co-working space	X						
		Locate aviation related office and retail in Downtown Jamaica	X				X		X
		Invest in building a more efficient cargo cluster, primarily outside the airport fence							X
		Activate industrial employment clusters in Downtown Jamaica, possibly in the life sciences			X				
		Promote Diverse Food and Beverage Options in Planned Hotels	X						
Mobility		Add greater visibility and way-finding at 165 Street Bus Terminal, enhance as mixed-use area per design study recommendation					X		
		Extend Q9 to address the coverage gap in southwest and north Queens					X		
		Improve speed on 9 bus routes through bus rapid transit-type interventions: exclusive/preferential lanes, signal preemption, more widely spaced stops, and off vehicle fare collection					X		
		Redesign bus the boarding areas, eliminate free and privileged government (MTA) staff parking from 150th to 153rd Streets	X						
		Examine the potential of skip-stop operation to improve J/Z headways for the reverse peak direction; employ communications based train control throughout the system	X					X	
		Improve service frequencies at 9 LIRR stations, add stops to 3 LIRR stations	X						
		Expand CityTicket pricing from weekends to all 7 days to better connect borough residents and encourage more use of the LIRR							
		Link signage, physical access and programming at Jamaica Station to Downtown Jamaica, add egress to east side of Sutphin	X						
		Operate through commuter rail trains at Penn Station between New Jersey and Jamaica							
		Convert the LIRR Atlantic Branch to some form of transit between Jamaica and Babylon							
		Improve AirTrain service frequencies to match the subway service at Sutphin Boulevard	X						X

Agencies							Community Profiles				
Port Authority	LIRR	MTA/NYCT	QBPO	NYCDCP	NYCEDC	NYCDOT	Increased housing options for residents at diverse income levels	Improved transportation connections and attractive public spaces and streetscapes	Vibrant commercial districts that showcase Jamaica's identity as a fashion, arts and cultural hub	Strong educational and community resources for young professionals	A robust economy providing quality jobs for both residents and entrepreneurs
				X		X	X	X			X
				X		X	X	X			X
		X				X	X	X			X
		X	X			X	X	X			X
			X	X		X		X		X	X
			X					X		X	X
				X		X	X		X	X	X
				X		X	X				X
					X		X	X			X
X		X						X			X
	X	X				X	X	X		X	X
				X	X	X	X		X		X
					X			X	X		X
X					X						X
					X	X		X		X	X
					X					X	X
					X	X		X	X		X
		X				X	X	X			X
		X				X	X	X			X
		X				X		X			
		X					X	X			X
	X						X	X			X
	X						X	X			X
X	X					X		X	X		X
	X							X			X
	X	X				X	X	X			X
X								X			X

Regional Plan Association

Regional Plan Association is an independent, not-for-profit civic organization that develops and promotes ideas to improve the economic health, environmental resiliency and quality of life of the New York metropolitan area. We conduct research on transportation, land use, housing, good governance and the environment. We advise cities, communities and public agencies. And we advocate for change that will contribute to the prosperity of all residents of the region. Since the 1920s, RPA has produced four landmark plans for the region, the most recent was released in November 2017. For more information, please visit **www.rpa.org** or **fourthplan.org**.

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