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INTRODUCTION

Ocean Bay Community Development Corporation (OBCDC), Asian Americans for Equality (AAFE), Local Initiatives Support Corporation (LISC) New York City, and Hester Street Collaborative (HSC) are taking a participatory approach to resiliency in the Rockaways. We are working together with residents to identify community priorities, develop multifunction solutions, and leverage built environment opportunities for long-term community benefit.

LISC NYC funded this effort and has been providing grant funding and technical assistance to neighborhoods in Queens, Brooklyn and Staten Island hard hit by Hurricane Sandy. LISC’s Sandy capacity building program is designed to address the urgent issues that many of these neighborhoods were struggling with before the storm – a lack of access to healthy food, jobs, and economic development investment. These kinds of persistent and complicated issues require locally-driven, comprehensive planning that meaningfully involves neighborhood residents in a development process that creates healthy communities of growth, hope and opportunity.

Arverne and Edgemere, adjacent neighborhoods in Far Rockaway, Queens, were among the communities hardest hit by Hurricane Sandy in 2012. With train service down, the peninsula was literally cut off from the rest of the city and thousands of residents were without essential services including electricity, heat, clean water and health care for weeks. However, the social, economic, public health and infrastructure challenges residents faced in the wake of Sandy were not created, but only exacerbated by the storm.

Given the history of inequitable development in the Rockaways, any re-visioning of a resilient peninsula must include a comprehensive approach to rebuilding that is founded in the deep knowledge of Rockaways residents themselves. An overall framework and a collection of strategies that address the resiliency of the community; preserve the environment; boost economic prosperity and foster improved public health and wellbeing are required.

An unprecedented amount of attention and funding has been showered upon the Rockaways since Superstorm Sandy, and a number of important recovery and resiliency efforts are currently underway. In addition to our work with Rockaways residents, we relied on a number of excellent, recent studies for background data (complete reference list at back). Given the rich amount of planning work available, our challenge was to build on previous and ongoing planning and development work, to pinpoint specific development opportunities and to create a network of innovative, community-driven recommendations and design solutions that leverage those opportunities in order to address persistent neighborhood problems.

OUR GOALS ARE:

1) To equip residents with the tools necessary to play an integral role in ongoing Rockaway re-development and resiliency efforts;

2) To add our strategic, outcomes-based physical intervention ideas to the Rockaways re-development conversation, and;

3) To create opportunities for Rockaway residents to come together to map out a comprehensive, integrated vision of their community, and, in the process, to build crucial social resiliency.

This is a first step – that true community planning and development requires extensive outreach and deep engagement, thorough research and analysis, and active collaboration. We look forward to continuing to work with residents, community organizations, government agencies and other key stakeholders to help make the Rockaways a more equitable, healthy, vibrant and resilient place to live.
BACKGROUND

The Rockaway Re-Visioning and Resiliency initiative grew out of LISC’s partnership with OBCDC and AAFE to assist Rockaways residents to recover from Hurricane Sandy. With capacity building grant funding and technical assistance from LISC, OBCDC created a neighborhood outreach operation to connect residents to critical housing recovery and other post-Sandy resources, and began working closely with AAFE, a citywide, 40-year-old community developer. Over the past year and a half, the two organizations have been carrying out joint initiatives that foster neighborhood stabilization, revitalization and development.

HSC, a citywide participatory planning, design and development center, is working with OBCDC, AAFE and LISC to ensure that Arverne and Edgemere residents play an integral role in a community-driven redevelopment process. A New York City Housing Authority (NYCHA) RFP for a mixed-use community/retail re-development site provided a strategic entry point for community-wide planning. Our approach therefore, was two-pronged. We worked to understand what community members wanted and needed from the new development and incorporated their feedback in our proposal. We also identified broadly held community priorities, challenges and potential solutions in order to map out future development on vacant, underused, and City-owned land.

By combining research and technical planning with community engagement, we identified built environment opportunities for strategic design solutions to community-identified priority problems. Residents named economic development, health and health care, and infrastructure repair and development as their top concerns.
2 } EXISTING CONDITIONS

DEMOGRAPHICS

The Rockaways have a total population of approximately 115,000, which has been steadily increasing since 1990. The relatively young, working population is diverse: approximately 47% African-American, 29% white, 22% Latino, and 2% Asian. Race distribution is greatly influenced by geography. The western end is almost exclusively white, whereas the eastern end is populated predominately by African-Americans and Latinos.

Vast contrasts in socioeconomic status exist between the two ends of the peninsula. Almost one in three east Rockaway households have a total annual income of under $25,000 and 34% of children live below the poverty level. The unemployment rate is a high 14% — almost double the national rate of 7.8%. Over 35% of residents receive financial support, including cash assistance (TANF), supplemental security and Medicaid.

Affordable housing developments are mostly concentrated in the eastern half of the peninsula, with no subsidized housing complexes built west of Seaside. In Arverne and Edgemere, two eastern Rockaway neighborhoods most susceptible to flooding, 20% to 30% of households do not have access to a vehicle. Single-parent families are also heavily concentrated in the eastern part of the peninsula. While over a third of the 25 and over population on the western end of the peninsula have bachelor’s degrees, less than 10 percent of Edgemere adults have a baccalaureate.

As detailed earlier, Rockaway was severely impacted by Hurricane Sandy. Low-income residents are less resilient to shock and thus, disproportionately affected by natural disasters. Lack of resources such as cars and insurance, inadequate healthcare and financial wherewithal make it more difficult for low-income residents to recover from emergency disasters compared to their more affluent counterparts.

LANDUSE + ZONING

Rockaway is predominately a residential community. The existing zoning permits a range of residential housing types, including detached, semi-detached, and attached row houses. Tower in the park residential buildings are also permitted, however floor area ratios (FARs) are generally limited to less than 3.0. The west side of Rockaway is marked mostly by single-family homes. As one moves east, the number and frequency of multi-family housing types increases. The far eastern portion of Rockaway contains

DATA FROM AMERICAN COMMUNITY SURVEY, U.S. CENSUS BUREAU, U.S. BUREAU OF LABOR STATISTICS, AND NYC DEPARTMENT OF CITY PLANNING
today only about 387 remain. Edgemere is dominated by older bungalows and single-family homes. Other housing in the area includes newer, affordable home-ownership and rental units; five large NYCHA campuses; the Nordeck Apartments, a Mitchell-Lama development, and; New York State’s Division of Homes and Community Renewal’s Ocean Village Apartments. Most of the historical bungalow housing in Arverne was cleared as part of an urban renewal project in the 1960’s.

ARVERNE BY THE SEA

New York City Department of Housing Preservation and Development’s Arverne by the Sea project, a 117-acre mixed-use development, dramatically impacted the Far Rockaway landscape. Close to two-thirds of the 2,296 units have been completed, rented or sold to date. Half of the units are affordable to households making no more than $92,170 for a family of four. Arverne East, a decades-vacant, 80-acre site adjacent to Arverne by the Sea, has the goal of building 1,200 housing units, 154,000 square feet of commercial space, and a 50-acre nature preserve. Infrastructure issues and a lack of funding have plagued the project, but construction is set to begin this year (2015). Less than half – 43% – of Arverne East units are slated to be reserved for households with incomes no greater than $92,170 for a family of four.

Both developments contain retail establishments, including the area’s first completed full-service grocery store. As desperately needed as the new services are, there is a perception outside of the development that the stores are for Arverne by the Sea residents alone. The new development projects have sparked a new building boom in the area – and with it, the hope of new jobs and improved services – but they have also caused several concerns. The older zoning laws that catered to the hotels in the area, allows for a scale of development that is out of character

MAIN BUILDING TYPES IN THE ROCKAWAYS
Arverne Vacant Structures, Vacant Land by Owner and Access to Services

Map based on a joint survey performed by the residents of Arverne and Pratt Institute students, Summer 2014.
with the surrounding low-density fabric. Residents in the surrounding community have voiced concern that the housing is not affordable to them and that up-scale development has the potential to eventually displace long-time residents.

NEW YORK CITY HOUSING AUTHORITY (NYCHA)

NYCHA houses 10,496 Rockaways residents in 3,576 apartments in 60 buildings on five campuses – Ocean Bay Apartments, Hammel Houses, Redfern Houses, Beach 41st Street Houses, and Carleton Manor – all within a four-mile stretch of Far Rockaway. Incomes of NYCHA residents are approximately one third of that of Rockaways residents as a whole ($16,521 versus $47,924). According to a report by the Alliance for a Just Rebuilding, Hurricane Sandy impacted 60 buildings and affected 10,100 residents. However, the mold, rodent, elevator, and heating malfunction problems exacerbated by the Storm were present long before 2012.

NYCHA properties include hundreds of acres of un- or underdeveloped open space surrounding the apartment towers. In addition, first floor apartments are slowly being vacated and residents relocated after the Storm, leaving thousands of square feet of un- or under-used space.

OPEN SPACES

The residents of the Rockaways are situated adjacent to 7.2 miles of beach, and close to a large network of green and recreational opportunities through the Gateway National Recreation Area, an approximately 26,000 acre park managed by the National Park Service that includes the Jamaica Bay Wildlife Refuge, Floyd Bennett Field, Fort Tilden, and Jacob Riis Park. Much of this open space however is geared towards serving a regional population as opposed to Rockaway residents.

These areas are difficult to reach by public transportation for Far Rockaway residents, and connections between the areas are limited. In addition, historical barriers to swimming make Rockaway beachfront not only inaccessible to a large portion of Arverne and Edgemere residents, but dangerous. Nationwide, the drowning rate of children between 5 and 14 years old in the African-American community is 2.6 times higher than that in the white community. Nine people drown every day in the US; six out of the nine are people of color.

Additional open spaces in the area include Rockaway Community Park, the Rockaway Beach Boardwalk and a few community gardens, including Edgemere Farm and The Healing Garden, but they are not enough to serve the needs of the entire community. Rockaway Community Park is selected to be one of 35 parks targeted for major capital improvements by Mayor De Blasio’s Community Parks Initiative.

TRANSPORTATION

Transportation is a major challenge for the Rockaway Peninsula. Its relative isolation from the rest of the city is further aggravated due to the lack of easy and affordable means of connecting to the mainland. Long subway rides – it takes close to 1.5 hours to reach Grand Central from Edgemere, bridge tolls, and a low rate of car ownership combine to make intra-borough travel time consuming, expensive and complicated. Cross-peninsula transit options are also an issue of concern. There is no express bus service, and so east-west travel is long and slow.

The A-Train is the only subway line on the Rockaway peninsula, and has been undergoing extensive repairs following widespread damage from Hurricane Sandy. Close to one third (27%) of A train stations lack Americans with Disabilities Act (ADA) access requirements. The Long Island Railroad's Far Rockaway line is another expensive and hard to access transit option. The cross-Peninsula “H” service and the Seastreak ferry, which ran to southwest Brooklyn and Lower Manhattan, put in place after Sandy, have both been discontinued.

The lack of robust and sustainable means of transportation leaves the Rockaway population extremely vulnerable. It limits access to jobs, schools, food and other vital resources and contributes to a perception of isolation. As a result, evacuation and access to emergency services, fear and panic can all become critical issues in extreme conditions.

SOCIAL CAPITAL

Social capital – the “collective value of all social networks [who people know] and the inclinations that arise from these networks to do things for each other” – can add immensely to the resiliency of a community and for Rockaway, it is one of its core strengths. There are several civic groups and block associations in the area, as well as approximately 55 religious institutions and 40 community based organizations. OBCDC is one such organization, and has, since its founding in 2002, served the Arverne and Edgemere neighborhoods by providing a range of vital programs including workforce development, senior services, and youth development. In the wake of Hurricane Sandy, OBCDC along with many other civic and religious groups, played a key disaster response role by transitioning from their traditional missions into resource hubs and emergency outreach workers for the local community.
CRIME AND SAFETY

The crime rate in the overall area has fallen dramatically between 2000 and 2013. However, with crime, too, the story of a divided Rockaway continues. The crime rate for the 101st precinct, which serves the east side of the peninsula, is 45% higher than the 100th precinct, which serves the west side, and 27% higher than the overall rate for the borough of Queens.

HEALTH AND HEALTHCARE

The community health profile of the Rockaways indicates high unmet need, contiguous with high place-based inequity, when compared to Queens and New York City. Adverse health outcomes are reflected across key indicators of health, including heart disease, obesity/diabetes, respiratory health, stress/mental health, supermarket/food access, safety, and access to health and social services. While these indicators paint a picture of high population vulnerability, it is important to note that much of the morbidity and even mortality is preventable.

A pattern of illness and death reveals not only missed opportunities for prevention, but serious delays in care. Rockaway has a very high rate of avoidable hospitalizations—ranking 34 out of the 42 NYC neighborhoods for avoidable hospitalizations. Adult emergency department visits for respiratory disease are twice that of the rest of Queens. For older adults (over 65), hospitalizations for falls are 30% higher than the rest of NYC.

The major health facilities located on the Rockaways include Joseph P. Addabbo Family Health Center, St. John’s Episcopal Hospital South Shore and a satellite building for the Addabbo Family Health Center. The closure of Peninsula Hospital in 2010 caused distress throughout the community, making residents fearful of not being able to access reasonably proximate emergency care. When the peninsula was virtually cut off from the rest of the city as a result of Hurricane Sandy, that fear increased. The three closest municipal hospitals – Coney Island Municipal Hospital, Elmhurst Hospital Center, and Queens Municipal Hospital – take approximately 30 minutes and 1.5 hours to reach by car and public transportation, respectively. With only 257 beds, Rockaway only has 2.2 beds per 1,000 people compared to the national average of 2.9 in 2011. It is important to note that this doesn’t include a weighted average for high population need against beds and population size. Figure 2 demonstrates the reciprocal relationship between access to health care and social vulnerability – the more limited the access to care, the higher the vulnerability.

FOOD + EXERCISE

The Rockaways are a USDA-declared food desert. While there are a few grocery stores in the area, including the new grocery store at Arverne by the Sea, they are not within walking distance of the majority of the population. It is mostly delis and bodegas that are within easy access. There are seasonal farmers markets but they don’t offer year-round produce.

Several parks, gardens and stretches of beach and boardwalk serve for exercise and recreation. Access to them however is not always easy. The beaches are not continuous; and often under-utilized by residents because they are viewed as dirty or unsafe. There are 18 sites listed as playgrounds within Rockaway, but many of them are cluttered with garbage, broken glass, overgrown grass, weeds, and trees, and broken playground equipment.

SOCIAL VULNERABILITY

Access to health care services and fresh, healthy food are two key variables that, when limited, result in a reduction in a community’s ability to prepare for, respond to, and recover from hazards. (Fig. 3, see page 11).

ROCKAWAYS ENVIRONMENTAL HEALTH

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Stress-related illness, including mental illness, has increased by 40% in the last decade. Rockaway has two times the annual rate of hospitalization for mental illness as compared to Queens. Many residents expressed suffering from un-diagnosed and un-treated post-traumatic stress disorder (PTSD) since Sandy hit. Further, fatality due to drugs is twice as high as the rest of Queens. Drug-related hospitalizations are on the increase and five times as high as the rest of Queens and twice as high rest of NYC. Incidences of alcohol related illness are also twice as high as the rest of Queens and 40% higher than the rest of NYC.
MARKET ANALYSIS

Though Rockaway has a history as a thriving beach town, today it is a primarily a residential community that has experienced a significant amount of disinvestment, particularly in the 1980s and 1990s. Recent investment in the area has mostly taken the form of retail and commercial activity within new housing developments. For example, a 44,000 square foot YMCA is currently under construction as part of the Arverne by the Sea development.

Local commercial corridors have been slow to recover since Sandy. Businesses that managed to reopen after the storm found they had fewer customers because so many residents had been displaced. Damaged businesses continue to struggle to find sufficient and affordable financing to repair and strengthen their buildings. Storm recovery-related jobs are not being filled by local workers. In addition, there seems to be a significant spending leakage within the area in nearly every category of goods and services, the greatest in the category of grocery store spending. A growing population with increasing demands for locally available goods and services, particularly in the area of grocery stores and restaurants, may bring needed investment and businesses to the area.

FIG. 3 | SOCIAL VULNERABILITY
Access to health care services and fresh, healthy food are two key variables that, when limited, result in a reduction in a community’s ability to prepare for, respond to, and recover from hazards.
In an effort to engage Arverne and Edgemere residents in Hurricane Sandy recovery and resiliency efforts, OBCDC, along with Battalion Church and other local partners, created a Long Term Recovery Group, Call to Action.

For the past year, “Call to Action” meetings have brought together between 30-60 residents every other week to discuss ongoing challenges, link community members with available resources, and empower residents to act collectively to resolve neighborhood issues. This forum served as the platform from which we gathered community feedback and engaged residents in neighborhood planning. We administered a survey to 187 residents and conducted a four-hour community visioning workshop. The data from the survey informed our workshop activities, allowing a deeper analysis of residents’ concerns. During the Workshop, we equipped residents with fundamental Citizen Planning information and resources, identified community priorities, discussed challenges and solutions, and mapped those solutions on existing vacant land.

THE SURVEY

The survey was conducted by HSC and OBCDC staff members to residents over four weeks at Call to Action meetings, local churches, service providers, community events and the offices of elected officials. The survey asked respondents to prioritize the top three most necessary social and retail services, and pressing community issues in their neighborhood. It also asked about the overall quality of life. The majority of respondents were female (56%), black (65%) and over the age of 30 (57%).

SURVEY

This is your opportunity to weigh in on the future development of the Rockaways.

We will be talking about opportunities to develop the kinds of resources you want and need in order to make your neighborhood a safer, healthier, more resilient and vibrant place to live for you, your family, and your neighbors.

Join us for an informational workshop about community priorities, neighborhood planning and real estate development. You will receive all of the information you need to become a Citizen Planner. Let’s make sure the future of the Rockaways is shaped by the people who live here. Come to learn, share your experience and take an active role in determining the fate of your neighborhood!

For More Information: Call or Email Corey Terry, OBCDC Director of Community Engagement 718-945-8640 x 218 OR obcdc3@gmail.com

OCEAN BAY COMMUNITY DEVELOPMENT CORPORATION INVITES YOU TO MAKE YOUR VOICE HEARD!

This is your opportunity to weigh in on the future development of the Rockaways.

We will be talking about opportunities to develop the kinds of resources you want and need in order to make your neighborhood a safer, healthier, more resilient and vibrant place to live for you, your family, and your neighbors.

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ROCKAWAYS COMMUNITY PLANNING + ENVISIONING SATURDAY, NOVEMBER 15TH 12PM-3PM Challenge Preparatory Charter School 710 Hartman Lane For Rockaway

ALL ARE WELCOME! WE WILL PROVIDE: LUNCH ACTIVITIES FOR YOUTH SPANISH TRANSLATION ALL FREE!

For More Information: Call or Email Casey Sarty, OBCDC Director of Community Engagement 718-945-8640 x 218 OR obcdc3@gmail.com

WHAT ARE YOUR COOKING NEEDS?

DO YOU HAVE ACCESS TO: STOVE/OVEN • HOT PLATE • REFRIGERATOR • FREEZER • MICROWAVE

HOW MANY TIMES DO YOU COOK A MEAL?

**EVERYDAY**

- A few times a week
- Once a week
- A few times a month
- Once in a blue moon

WHERE DO YOU BUY OR GET MOST OF YOUR FOOD?

- Local Supermarket
- Fruit and vegetable street cart
- Farmer’s Market
- Specialty food markets (like Whole Foods, Fairway, etc.)
- Bulk stores (like Costco, BJ’s, Sam’s Club, etc.)
- Local Pantries
- Other

DON’T FORGET TO RATE YOUR COOKING NEEDS! 

- Four 5-15 minutes
- 15-30 minutes
- 30-45 minutes
- 45-60 minutes
- 1+ hours

WHERE DO YOU BUY OR GET YOUR FRESH FRUIT AND VEGETABLES? (PLEASE ESTIMATE A PERCENTAGE)

- Local Supermarket
- Fruit and vegetable street cart
- Farmer’s Market
- Specialty food markets (like Whole Foods, Fairway, etc.)
- Bulk stores (like Costco, BJ’s, Sam’s Club, etc.)
- Local Pantries
- Other

WHERE DO YOU GET YOUR FAVORITE FOOD?

- Hot dog
- Pizza
- Chinese
- Mexican
- Italian
- Other

WHERE DO YOU GET YOUR LEAST FAVORITE FOOD?

- Hot dog
- Pizza
- Chinese
- Mexican
- Italian
- Other

COMMENTS:
VISIONING WORKSHOP

We envision this workshop to be the first step in a participatory neighborhood planning process. As such, residents were equipped with “Citizen Planning 101” tools – information and resources necessary to play an integral role in ongoing Rockaway redevelopment efforts. This introduction highlighted a holistic approach to community planning that includes both technical planning by professionals and citizen planning by local stakeholders. Based on survey data, we identified the following key community priorities:

**ECONOMIC DEVELOPMENT + JOBS**

**CRIME + SAFETY**

**FOOD + ENVIRONMENT**

**HEALTH + HEALTH CARE**

**HOUSING**

**YOUTH + SCHOOLS**

**STORM RECOVERY, PREPARATION + RESILIENCY**

**PRIORITIES**

**Economic Development + Jobs** were a top priority for all participants. Some key solutions were:
- Fix boardwalk and make beaches usable;
- Attract year round businesses and local jobs;
- Develop job training/workforce development centers;
- Develop a small business incubator;
- Empower local business owners;
- Maintain ferry service for easier access to jobs off the peninsula;
- Increase density in the Rockaways – a bigger tax base will allow more services.

**Health + Health Care** was the second highest priority. Residents identified the need for:
- Affordable hospitals, clinics and specialists;
- Urgent care center;
- Mental health and counseling services;
- Marina activities and better open spaces for exercise and enjoyment;
- Access to affordable fruits and vegetables.
MAPS

In the next activity, we spread out a table-sized map of the neighborhood for each small group (Fig. 4). It highlighted key landmarks in the neighborhood – subway stops, schools, libraries, parks, hospitals. It also identified all current vacant lots – lots that could potentially be redeveloped as a community amenity. We asked participants to identify problem spots and locations that could be best used for various opportunities. For example, one table identified a specific area of the neighborhood that could really use some youth facilities. Another table pointed out streets and intersections that were constantly flooded. Another called out an area with many vacant lots as an ideal spot for much needed affordable housing.

Together, the maps revealed the following ideas and themes:

- **Peninsula Hospital site redeveloped** for various community needs including, but not limited to, Urgent Care Center, Tech High School, Job Training, local retail;
- Better **waterfront access** and more waterfront activities/programming on both the bay and ocean sides;
- Develop more **sites for youth programming**;
- Focus on **physical infrastructure improvements** (roads, sewers) as well as preventive measures for upcoming storms and disasters;
- Increase number and quality of **affordable housing** on the peninsula.

**FIG. 4) COMMUNITY-IDENTIFIED BUILT ENVIRONMENT SOLUTIONS**
Results from Rockaways Community Visioning Workshop
KEY FINDINGS OF SURVEY

Most survey respondents were only “somewhat satisfied” or “very dissatisfied” with the current condition of their neighborhood.

An overwhelming number of respondents identified a hospital as the community facility most needed in the neighborhood, followed by a community center, and job center.

71% Hospital  
55% Community Center  
42% Job Center

Half of survey respondents identified a grocery store as the top retail facility needed in the neighborhood. A sit down restaurant, and bank rounded out the top three.

50% Grocery Store  
45% Sit-down Restaurant  
41% Bank

The top three most pressing neighborhood issues, according to survey respondents are:

43% Crime  
39% Lack of Good Doctors or Hospitals  
36% Unemployment
After analyzing those physical and social conditions that increase community vulnerability and working with residents to identify priorities, we developed a network of design solutions that address top neighborhood concerns, utilizing existing vacant and under-used land. We then employed an outcomes-based design approach to develop a network of “smarter,” data-driven, strategic interventions that generate opportunities to advance community resilience.

An outcomes-based approach identifies how a set of strategies can generate specific benefits at an indicated population scale (neighborhood, city, county, regional, national). This approach is well accepted in the field of community health and utilizes an established set of methods and evidence-based research to define outcomes and track metrics that assess change and effectiveness over time. It is performance-driven, specifying both the type of benefits as well as types of beneficiaries (specific populations). This approach is also accountability-driven, specifying opportunities for transformation that can be measured and monitored, in order to evaluate effectiveness against community needs and priorities.

Outcomes-based design integrates an outcomes-based approach with the design process and articulates explicit connections between spatial design decisions and the social and environmental determinants of community wellbeing. This application of performance standards is critical for optimizing the precision with which design can respond to community needs and priorities.

KEY STEPS IN DEVELOPING THE STRATEGIC INTERVENTIONS INCLUDE:

• Review of community health trends, needs and priorities;
• Review of the health and social science literature;
• Development of an impact framework linking priority areas for the Rockaways with the environmental and social predictors that can be influenced by the design process;
• Defining and specifying design strategies that could address the necessary predictors of impact based on opportunities and parameters determined through site analysis; and, finally,
• The development of networked design strategies across geographies with areas of high vulnerability and physical opportunity (under-utilized and vacant land) to collectively promote social and environmental outcomes with long-term impacts.
OUTCOMES-BASED DESIGN APPROACH

Social vulnerability is a function of diverse demographic and socio-economic factors that influence a community's sensitivity to climate change. Social vulnerability is unevenly distributed across geographies, households, and social groups and can worsen due to climate related events. Geographically concentrated vulnerability translates to health and economic inequity when juxtaposed with unequal access to services, transportation, and climate change risks.

Addressing the determinants of vulnerability that are most applicable to the Rockaways community will promote social and physical resilience. This proposal for a strategic neighborhood intervention plan seeks to optimize neighborhood level determinants of resilience.
Addressing these determinants requires a networked and strategic design approach - no one intervention will serve as a silver-bullet solution.
OUTCOMES-BASED DESIGN APPROACH

FIG. 2
OUTCOMES AND IMPACT

Neighborhood determinants are linked to social, economic, health, and ecological outcomes through an evidence-based framework. Specific content of pathways and outcomes in conjunction with community input, inform design decisions that have proven health impacts and that hold design accountable to performance.
OUTCOMES

- Health disparities
- Mortality and premature death
- Accidents and related illnesses
- Cardiovascular diseases
- Asthma
- Increased primary prevention

OUTCOMES IMPACTS

- Emergency preparedness reduces mental health and social capital.
- Housing stability reduces community health disparities.
- Physical assets in low-lying areas reduce mental health.
- Increased primary prevention reduces stress-related illness and heart disease.
- Obesity-related illness increases premature death.

DETERMINANTS

- Tree canopy reduces heat island effect and social capital.
- Physical activity reduces obesity-related illness and premature death.
- Storm water management reduces combined sewer overflow.
- Ecological awareness promotes environmental stewardship.
- Neighboring enhances social capital.
- People presence increases neighborhood safety.
- Mood and chronic stress are related to mental health and stress-related illness.
- Improved nutrition reduces obesity-related illness.
- Disposable income enhances food security.
- Lowers crime increases property values.
- Outdoor environment / lighting / porosity increases neighborhood safety.
FIG. 3
OPPORTUNITIES
Proposed neighborhood interventions seek to amplify community outcomes through the coordinated design of three networked opportunity areas. Areas that exhibit high social vulnerability and high urban opportunity were targeted to maximize design investment and impact. Sites include corridors, vacant parcels, and areas located below the flood plain.
VACANT PARCELS

BELOW FLOOD PLAIN
OUTCOMES-BASED DESIGN APPROACH

FIG. 4
CORRIDORS (1)
Corridors are connectors that cut across, between, and through areas of existing social vulnerability. They create linkages between people and place, creating easy access to the Atlantic Ocean, Jamaica Bay and surrounding Arverne and Edgemere neighborhoods. Interventions leverage multiple sites and simultaneously activate the social and physical determinants of resilience.

Corridor typologies function as linear parks and work together to promote access to transit, connect people to nature, encourage social interaction, manage storm water, and provide opportunities for recreation and shared resources. Corridor typologies include (1) bay to coast connections, (2) east to west connections, and (3) elevated subway connections.

CORRIDORS ARE SOCIAL AND PHYSICAL CONNECTORS THAT CUT ACROSS, BETWEEN, AND THROUGH AREAS OF EXISTING SOCIAL VULNERABILITY. INTERVENTIONS CAN BE DESIGNED TO LEVERAGE MULTIPLE SITES AND SIMULTANEOUSLY ACTIVATE THE SOCIAL AND PHYSICAL DETERMINANTS OF RESILIENCE.

1 BAY TO COAST CONNECTION
Bay to coast connections cut across existing neighborhood social stratification in the north-south direction and promote exchange between residents on either side of the tracks.

2 EAST - WEST CONNECTION
East to west connections serve as primary vehicular and pedestrian routes linking east and west Rockaways and provide opportunities for shared resources, access, and gathering.

3 SUBWAY CONNECTION
Elevated subway connections parallel to the tracks serve as a shared buffer zone between bay and coastal areas and encourage mixing between and across geographies.
Bay to coast connections cut across existing neighborhood social stratification in the north-south direction and promote exchange between residents on either side of the tracks.

East to west connections serve as primary vehicular and pedestrian routes linking east and west Rockaways and provide opportunities for shared resources, access, and gathering.

Elevated subway connections parallel to the tracks serve as a shared buffer zone between bay and coastal areas and encourage mixing between and across geographies.

**CORRIDORS ARE SOCIAL AND PHYSICAL CONNECTORS THAT CUT ACROSS, BETWEEN, AND THROUGH AREAS OF EXISTING SOCIAL VULNERABILITY. INTERVENTIONS CAN BE DESIGNED TO LEVERAGE MULTIPLE SITES AND SIMULTANEOUSLY ACTIVATE THE SOCIAL AND PHYSICAL DETERMINANTS OF RESILIENCE.**

- access to health + social services
- social interaction / connection
- job development
- climate change literacy
- local economic development
- opportunities for recreation
- physical assets in low lying areas
- safety
- indoor environment
- outdoor environment / shade / open space
- food security / food environment
- outdoor environment / lighting / porosity

**diverse gathering**

diverse gathering areas that accommodate multiple users and encourage people to get outside, get active, and connect socially.

**storm water management**

maximize water collection and management on site whenever possible to relieve pressure from built systems and to improve capacity.

**connection to nature**

providing connections to natural resources including bay and coastal landscapes promotes physical and mental well-being.

**connective pathways**

pathways provide access to community resources, encourage community mixing, promote physical activity, and link residents to transit and natural systems.

**communication portal**

community display and message boards serve as information hubs that connects the community to current information.

**ride sharing hot spots**

organized community car pooling allows for maximum flexibility in transit options and conserves financial resources.

**diverse gathering**

diverse gathering areas that accommodate multiple users and encourage people to get outside, get active, and connect socially.
OUTCOMES-BASED DESIGN APPROACH

FIG. 5)
CORRIDORS (2)
Corridors are targeted in areas that are currently economically challenged and lack easy access to public transit and personal vehicles. These populations tend to be highly vulnerable due to social isolation, lack of economic investment, and extreme weather events when evacuation may be necessary and/or local resources become temporarily unavailable.

Strategically located design interventions – physical activity zones, ride share hot spots, communication portals, and storm water management systems – will promote social interaction and connection, improve local economic development, create opportunities for recreation, address low lying areas, and improve neighborhood safety.
- 60% of existing households have incomes below the poverty level.
- less than 0% - 30% of existing households have access to a vehicle.

**EXISTING INEQUITY: SOCIAL VULNERABILITY + TRANSIT ACCESS**

- 40% - 60% of existing households have incomes below the poverty level.
- less than 0% - 30% of existing households have access to a vehicle.

**TARGET AREAS WITH HIGH POVERTY LEVELS**

**FILL VERTICALS IN TRANSIT ACCESS**

**ACCESS TO TRANSPORTATION IS AN IMPORTANT PREDICTOR OF EMPLOYMENT.**

**RACE / ETHNICITY**

- 65% BLACK
- 18% WHITE
- 05% 2+ RACES
- 12% OTHER

(24% OF TOTAL POPULATION IS HISPANIC)
OUTCOMES-BASED DESIGN APPROACH

FIG. 6) CORRIDORS (3)
Design strategies can be mixed and matched across corridors and tailored to specific local contexts. This image portrays a vision for an intersection along the elevated subway corridor and is representative of one of many design solutions for the corridor intervention. As a strong dividing line between north and south residential zones, the existing traffic lane under the elevated subway is reimagined as a central pedestrian path and gathering zone. The use of overhead lighting, natural buffers, and traffic calming measures will improve safety and promote use. An elevated walkway mirroring the subway’s path provides safe evacuation routes and doubles as a neighborhood emergency beacon.

CORRIDORS - SUBWAY CONNECTION

physical activity zones
pedestrian routes under the elevated subway take advantage of underutilized space and encourage people to get out and get active.
organized community car pooling is centrally located between beach front and bay front residences for easy access.

**flood proof construction**

Elevated walkways, connected to the elevated subway provide safe evacuation routes and gathering areas and serve as neighborhood beacons.

**storm water management**

Storm water management solutions along Rockaway Freeway creates a natural buffer between pedestrian and vehicular traffic.

**ride sharing hot spots**

Organized community car pooling is centrally located between beach front and bay front residences for easy access.

**connective pathways**

Pathways extend dead-end north-south street corridors to create unobstructed pedestrian connections between the bay and coast.
Outcomes-Based Design Approach

Vacant parcels are networked nodes that function in tandem to activate underutilized properties within areas of existing ecological and social vulnerability. Interventions unify disparate geographies to the east and west of NYCHA campuses while addressing hyper-localized community need.

Vacant parcel typologies function collectively as a system of temporary and permanent resource spaces that are tethered to a single community hub. Together, interventions improve access to health and social services, connect people to community, and improve local resilience knowledge and information. Vacant parcel typologies include (1) scattered lots with vacant buildings, (2) scattered lots with vacant land, and (3) a community hub, formerly known as the Peninsula Hospital.

Vacant parcels can be transformed to a networked series of spaces that collectively promote resilience through localized interventions on underutilized land.

1. Scattered Lots - buildings
   Vacant buildings heavily concentrated in the site’s northern low-lying pockets of residential fabric create a network of localized community resource spaces.

2. Scattered Lots - land
   Vacant parcels heavily concentrated in the site’s northern low-lying pockets of residential fabric create a network of localized park and community pop-up spaces.

3. Hub (Former Peninsula Hospital)
   Peninsula Hospital, closed in 2012 occupies a full city block area and provides potential for a community resilience hub serving the needs of local residents.
Vacant parcels heavily concentrated in the site's northern low-lying pockets of residential fabric create a network of localized community resource spaces.

**VACANT PARCELS CAN BE TRANSFORMED TO A NETWORKED SERIES OF SPACES THAT COLLECTIVELY PROMOTE RESILIENCE THROUGH LOCALIZED INTERVENTIONS ON UNDERUTILIZED LAND.**

**information exchange**
Information exchange centers promote knowledge exchange between municipalities and residents regarding climatic events and public decision making.

**mobile services**
Mobile services - clinics, home repair, classrooms, grocery stores, etc - make community programs accessible to a segment of the population that may otherwise not have access.

**community resources**
Community resources fill the gap present in existing neighborhood services such as healthcare, healthy food access, and elderly care facilities.

**diverse gathering**
Mixed use gathering spaces accommodate a range of users and provide spaces for recreation, relaxation, and conversation that promote physical and mental well-being.

**communication portal**
Community display and message boards serve as information hubs that connect the community to current information.
FIG. 8
VACANT PARCELS (2)
Vacant parcels are targeted in areas that lack easy access to health care facilities, contain a high percentage of individuals with disabilities, and are highly susceptible to storm surges and high velocity wave action. These populations tend to be highly vulnerable due to their inability to access preventative health and social services, their lack of physical mobility, and economic fragility regarding asset investment.

Strategically located design interventions – community health resources, mobile clinics, information exchanges, and diverse gathering areas – will promote social interaction and connection, improve local economic development, create opportunities for recreation, address low lying areas, improve neighborhood safety, create shade and open space, and enhance outdoor lighting.

EXISTING INEQUITY: SOCIAL VULNERABILITY + TRANSIT ACCESS

ROCKAWAYS HAS 2X THE ANNUAL RATE OF HOSPITALIZATION FOR MENTAL ILLNESS AS COMPARED TO QUEENS IN 2010.
**EXISTING INEQUITY: SOCIAL VULNERABILITY + TRANSIT ACCESS**

71% of community members surveyed prioritized access to health care as the highest community need.

WITH ONLY 257 HOSPITAL BEDS, THE ROCKAWAY PENINSULA ONLY HAS 2.2 BEDS PER 1,000 PEOPLE COMPARED TO THE NATIONAL AVERAGE OF 2.9 IN 2011.

71% OF COMMUNITY MEMBERS SURVEYED PRIORITIZED ACCESS TO HEALTH CARE AS THE HIGHEST COMMUNITY NEED.
OUTCOMES-BASED DESIGN APPROACH

FIG. 9}
VACANT PARCELS (3)

Design strategies can be mixed and matched across parcels and tailored to specific local contexts. This image portrays a vision for a vacant parcel located within the residential neighborhood to the east of the central NYCHA campus and is representative of one of many design solutions for vacant parcel interventions. The empty lot depicted is reimagined as a central gathering zone for people of all ages and backgrounds for use throughout the year as a safe community gathering place. Temporary and permanent structures fill gaps in existing services and inject medical care into an area that formerly lacked access to preventative treatment. Seating areas with shade canopies, opportunities for play, lively colors, and cultural expression create inviting areas for active pedestrian activity that improve overall mental and physical well-being.
**mobile services**
Mobile services deployed from a centrally located hub address local needs through temporarily docked outreach stations that include health, social, and economic services.

**communication portal**
Communication portals maximize access to remote resources by broadcasting classes and facilitating conversations between residents and “experts.”

**diverse gathering**
Diverse gathering areas are neighborhood nodes that serve the needs of surrounding residents and accommodate neighborhood meetings and social interaction.

**health resources**
Health resources include programs to address mental and physical well-being and provide preventative services, reducing the need for emergency care.

**information exchange**
Information exchange boards broadcast local information regarding resiliency and are places where residents can share questions, events, and resources.

**community health resources**
Community health resources include programs that address mental and physical well-being and provide preventative services, reducing the need for emergency room care.
OUTCOMES-BASED DESIGN APPROACH

FIG. 10
BELOW FLOOD PLAIN (1)

Properties located below the flood plain are clustered segments of integrated interior and exterior spaces that inject activity into socially vulnerable areas. They create linkages between NYCHA housing, surrounding neighborhood fabric, and people, creating opportunities for local economic synergies and vibrant pedestrian fabric. Interventions inject flexible programming into first floor NYCHA housing and surrounding grounds that is adaptable to changing environmental conditions.

Below the flood plain spaces function as flexible program areas that collectively activate pedestrian street frontage, provide job training opportunities, support local entrepreneurs, connect people to healthy food sources, and promote environmentally sustainable housing. Below the flood plain typologies include (1) NYCHA ground floor real estate, and (2) NYCHA land surrounding existing NYCHA buildings.

ASSETS LOCATED BELOW THE FLOOD PLAIN ARE CLUSTERED INTERIOR AND EXTERIOR SPACES THAT “CAN” SERVE AS FLEXIBLE AREAS FOR PROGRAM THAT IS ADAPTABLE IN CLIMATIC EVENTS.

1 NYCHA GROUND FLOOR

NYCHA ground floor real estate comprise over 360,000 square feet of clustered communal space and provide opportunities for temporary and flood-proof programming.

2 NYCHA GROUNDS

NYCHA grounds surrounding NYCHA buildings comprise over 56 acres of clustered land and provide opportunities for connective programming that activates exterior spaces throughout various times of day and year.
NYCHA ground floor real estate comprise over 360,000 square feet of clustered communal space and provide opportunities for temporary and flood-proof programming.

NYCHA grounds surrounding NYCHA buildings comprise over 56 acres of clustered land and provide opportunities for connective programming that activates exterior spaces throughout various times of day and year.

Assets located below the flood plain are clustered interior and exterior spaces that can serve as flexible areas for program that is adaptable in climatic events.

**Community Resources**
activate NYCHA ground floor plain by clustering mixed use program in adjacent spaces to add activity throughout the day.

**Densified Program Space**
subdivide ground level space to accommodate small start-ups and promote live/work environments within housing blocks.

**Flood Proof Construction**
relocate existing ground floor program to a higher elevation and retrofit ground floors to accommodate programs that are temporary in nature and resist water damage.

**Healthy Food Access**
grow, harvest, and sell fresh local produce. Invite NYCHA residents to join in food preparation classes and communal meals.

**Connect to Nature**
connect NYCHA grounds to natural systems and surrounding park land to promote ecological stewardship and social connections.

**Access to Health + Social Services**
Climate change literacy
Opportunities for recreation
Physical assets in low lying areas
Safety
Indoor environment
Outdoor environment / shade / open space
Food security / food environment
Outdoor environment / lighting / porosity
OUTCOMES-BASED DESIGN APPROACH

**FIG. 11} BELOW FLOOD PLAIN (2)**

Below the flood plain interventions are targeted in areas that are currently disconnected from surrounding neighborhood fabric, lack easy access to healthy food sources, and contain a high percentage of individuals with low educational attainment and employment rates. These populations tend to be highly vulnerable due to social isolation, lack of employment opportunities, and increased exposure to mental health triggers such as stress and drug and alcohol abuse.

Strategically located design interventions – community resources, healthy food access, job training programs, business incubators, and dense program space – will promote social interaction and connection, improve climate change literacy, stimulate local economic development, create opportunities for recreation, address low lying areas, improve neighborhood safety, create shade and open space, and enhance outdoor lighting.

**EXISTING INEQUITY: SOCIAL VULNERABILITY + TRANSIT ACCESS**

ZIP CODE 11692 QUALIFIES AS A FOOD DESERT - POST SANDY THERE WAS A NOTABLE LACK OF FOOD OPTIONS, ESPECIALLY FRESH FOOD.
51% of community members surveyed prioritized access to a grocery store as the highest need.

In the Rockaways, people are more likely to be obese (26%) compared to the rest of Queens (19%).

30% of existing population ages 25+ has a high school diploma.

31% of existing food outlet with 1/4 mile radius

20% - 30% of existing population ages 25+ has a high school diploma.

IN THE ROCKAWAYS, PEOPLE ARE MORE LIKELY TO BE OBESE (26%) COMPARED TO THE REST OF QUEENS (19%).

A FOOD DESERT WAS IDENTIFIED IN THE ROCKAWAYS.

ZIP CODE 11692 QUALIFIES AS A FOOD DESERT - POST SANDY THERE WAS A NOTABLE LACK OF FOOD OPTIONS, ESPECIALLY FRESH FOOD.

NYCHA grounds
NYCHA ground floor
EXISTING INEQUITY: SOCIAL VULNERABILITY + TRANSIT ACCESS

51% of community members surveyed prioritized access to a grocery store as the highest need.

In the Rockaways, people are more likely to be obese (26%) compared to the rest of Queens (19%).

30% of existing population ages 25+ has a high school diploma.

A FOOD DESERT WAS IDENTIFIED IN THE ROCKAWAYS.

ZIP CODE 11692 QUALIFIES AS A FOOD DESERT - POST SANDY THERE WAS A NOTABLE LACK OF FOOD OPTIONS, ESPECIALLY FRESH FOOD.
OUTCOMES-BASED DESIGN APPROACH

FIG. 12)
BELOW FLOOD PLAIN (3)

Design strategies can be mixed and matched across areas below the flood plain and tailored to specific local contexts. This image portrays a vision for first floor NYCHA housing and grounds located across Beach Channel Drive from the Ocean Bay Retail Redevelopment Site proposed to house a full-service grocery store, employment services, and community and youth services. As a strong mixing-zone between NYCHA residents and the surrounding community, this existing NYCHA front lawn and street frontage is reimagined as an extension of the street, connecting to the sidewalk and inviting pedestrians to patron new retail establishments. Repurposed ground level space is utilized as a communal kitchen where produce is locally prepared and enjoyed by the community. Neighborhood gardens activate surrounding grounds while relocated ground floor NYCHA residents enjoy new stress-free living accommodations elevated above the existing flood plain.

job training programs

job training programs engage youth in productive activities that help prepare them for future careers.

healthy food access

healthy food access promotes connections to natural systems and encourages residents to grow, sell, and consume locally harvested produce, improving overall community health and disposable income.
**densified program space**
densified program space at ground level NYCHA housing encourages visitors to engage NYCHA grounds and provides needed services to residents and the surrounding community.

**business incubators**
business incubators encourage entrepreneurs to test, iterate, and promote local business endeavors in a small, supportive environment.

**flood proof construction**
relocating existing ground level NYCHA apartments to higher ground offers opportunities to activate ground floor interior and exterior spaces with programs that can co-exist with fluctuating water levels.

**healthy food access**
healthy food access promotes connections to natural systems and encourages residents to grow, sell, and consume locally harvested produce, improving overall community health and disposable income.

**job training programs**
job training programs engage youth in productive activities that help prepare them for future careers.
FIG. 13}

COMPOSITE

Resiliency is a product of both people and place. It forms across environmental and social networks, building up over the course of daily life, yet tested by extreme events – personal traumas, recessions, and storms. Networked design interventions deployed across multiple opportunity areas target specific determinants of vulnerability and work together to amplify overall community resilience.
Part two of the two-pronged Rockaway Re-visioning process entailed a proposal for the re-development of a currently vacant NYCHA-owned retail development site, nestled among Ocean Bay Apartment towers on Beach Channel Drive between Beach 53rd and Beach 54th Streets. The OBCDC, AAFE, LISC and HSC proposal was informed by resident input, which identified employment services, youth activities, healthy food and banking as top neighborhood priorities. We envision the Ocean Bay Retail Development Site as an anchor for future community development efforts to help support and rebuild the central Rockaways in the wake of the devastation the peninsula suffered as a result of Hurricane Sandy.

We designed a multi-purpose retail and community facility that provides sorely needed quality retail and community center services. Our vision is a resilient and sustainable neighborhood hub—a focal point for everything from food to job training, from youth development to banking. Following the devastation of Hurricane Sandy and the isolation that many community residents felt, we designed the building to serve as a kind of beacon for both every day and emergency services.

OBCDC will occupy the approximately 4,000 sf community space in the development, from which they will operate their successful employment services, community and youth development programs, as well as an expanded set of programs. A full-service, 15,000 sf grocery store will include a pharmacy on site, and, adjacent to that, a non-profit credit union will round out the development.

In the wake of the crippling effects that Sandy had on the peninsula as a whole and, in particular, on those residents trapped in tall, elevator buildings for prolonged periods without power and heat, we designed our building to be both resilient and energy efficient. It will serve as a functional beacon site during any similar future events. In addition, we will mitigate our own impact on climate change by making the building as energy efficient as possible, minimizing our carbon footprint and the operating expenses for both the commercial and community tenants. The goal, in addition to maximizing local hiring, is to keep the rental spaces as affordable as possible to help ensure that all tenants succeed and remain in place over the long term.

A public plaza that runs the length of the block is designed as a multi-nodal community resource, appropriate for a community market, public gathering space, presentations or events. The proposal was submitted on December 12, 2014. NYCHA is expected to select the winning bidder some time in the first half of 2015.
SUSTAINABILITY

**Green Energy**
Photovoltaic panels harvest solar energy

**Roof Insulation**
R-value: 50

**Windows**
High efficiency insulated low-E glazing with thermally broken aluminum frames

**Rainwater Harvesting**
For planter irrigation

**Tree Pits**
Designed to harvest rainwater run-off

**Extensive Green Roof**
Lightweight tray system reduces stormwater run-off and heat island effect

**Cavity Wall Insulation**
Increases thermal performance and leads to tighter building envelope

**Smart Lighting Controls**
Including bi-level motion detectors and Energy Star light fixtures

**Below Grade**
Reduced below-grade construction decreases cost

LIVABILITY

**Natural Light in Circulation**
Cores encourage health, visibility and activity

**Gently Sloped Plaza**
Encourages access to retail & community offerings and provides a space to "see and be seen"

**Street Trees & Planted Plaza**
Provide shelter

**Permanent Stage**
Provides a natural gathering spot and a place for performances, screenings, movies, etc. (not shown)

**Handrail**
In lieu of parapet reduces building mass and allows more light into rear and street scapes

**Interior Partitions**
Include pest-proof penetrations at wet walls and sound dampening for privacy

**LED & Bi-Level Lighting**
Reduce energy use and allow a variety of lighting options for flexible usage

**Equal Access for All**
Permanent Stage provides a natural gathering spot and a place for performances, screenings, movies, etc. (not shown)

**Gently Sloped Plaza**
Encourages access to retail & community offerings and provides a space to "see and be seen"

**Street Trees & Planted Plaza**
Provide shelter

**Permanent Stage**
Provides a natural gathering spot and a place for performances, screenings, movies, etc. (not shown)
OCEAN BAY RETAIL REDEVELOPMENT SITE
We worked closely with NYCHA residents and their neighbors to develop a network of strategic and innovative built environment interventions that specifically address community-identified priorities. Those priorities – Economic Development, Recovery + Rebuilding, and Social Resiliency – are both broad and overlapping. They provide an important physical, social and economic framework for our recommendations and next steps.

Given the many comprehensive studies and reports that preceded our work, our goal is to add to the ongoing conversation. We are very aware that our work has only just begun. That being said, our list of recommendations is not exhaustive, but tactical, a first step towards taking advantage of existing opportunities – including, most notably, the NYCHA retail redevelopment site – and pairing those opportunities with innovative design solutions that address multiple priorities. Our overarching goal is a stronger, healthier, more vibrant and resilient Rockaway.

### NYCHA First Floor Small Business + Entrepreneur Incubation

- Take advantage of recently vacated first floor NYCHA apartments to support the many resident entrepreneurs currently operating informal businesses without sustainable space or supports;
- Identify needs and offer small business support services, including permitting, licensing, training, and networking;
- Build out vacated space to serve existing small business needs – eg. Department of Health-approved and licensed commercial kitchen to support food vendors.

### DEP Deputies Program

- Leverage local knowledge for improved city services;
- Chronically flooded roads and overflowing sewers were identified by residents as a priority neighborhood problem;
- Work with DEP to create a pilot program during which we train and equip local residents with the tools, knowledge and access they need to improve the physical infrastructure of the Rockaways;
- Residents supply real time, on-the-ground information directly to DEP, significantly reducing DEP time and resources invested in fieldwork, increasing efficiency and the speed at which chronic infrastructure problems are addressed.

### Design Out Crime Area Study

- Tackle high crime rates through the built environment;
- Work with residents and key stakeholders to conduct an area crime and environment study;
- Develop and implement design solutions to crime hot spots and places of perceived insecurity.
NYCHA OPEN SPACE RE-DEVELOPMENT STUDY

- Investigate the sustainable economic development possibilities offered by NYCHA resources – vacated first floor apartments & surrounding open space;
- Work with NYCHA residents, community organizations and other key stakeholders, and NYCHA to identify priorities and envision possibilities;
- Develop design solutions;
- Conduct feasibility analyses for re-development and/or renovation.

PUBLIC HEALTH CAMPAIGN

- Allay fears of isolation in the event of an emergency, create a legible map of existing local health resources and distribute widely;
- Use the map to identify gaps in essential health services and partner with NYC Department of Health and local health service providers to develop a comprehensive action plan to address local health priorities – clinical, economic, educational, and environmental.

FISHING CO-OPTERATIVE INCUBATION

- Take advantage of unique Rockaway geography to create jobs;
- Study local and regional market to determine demand;
- Work with local fishermen and women to pool resources and expedite and expand distribution;
- Train residents to perform all duties related to operating a fish catching and selling business.
NEXT STEPS

Our overarching goal with this project was to leverage the deep knowledge of Arverne and Edgemere residents and employ area-wide indicators and land use data, in order to map needs and priorities in space and to develop a set of design solutions that take advantage of vacant land opportunities and address the consequences of inequitable development. This was only the first phase of a long-term participatory planning and development process. In the next phase, we look forward to working closely with residents, local religious and civic organizations, business owners, elected officials, the City, and private funders to ensure ongoing, meaningful community engagement in the recovery and re-building of a stronger, healthier, equitable and sustainable Rockaways. The following next steps grow out of our engagement and design efforts to date, and prioritize public-private partnerships, sustainable economic development, and locally-driven planning and design.

A comprehensive resiliency approach addresses everything from dune restoration to housing repairs, workforce development to improved health services, restored water and sewer connections to expanded access to fresh, healthy food. An equitable and sustainable resiliency approach leverages local knowledge to identify community priorities and built environment opportunities. For the long-term physical and social resiliency of the Rockaways, our work must be comprehensive, equitable and sustainable.

1} Catalog current recovery + resiliency projects – identify gaps in services and funding and explore potential partnerships in program and/or real estate development;

2} Map out + conduct coordinated, comprehensive, participatory planning process in conjunction with local Community Based Organizations’s, city agencies and key stakeholders;

3} Work with Mayor’s Office for Recovery & Resiliency to convene city agencies to ensure an integrated, locally-driven approach to resiliency initiatives;
4 } Work with NYCHA to explore feasibility of short- and long-term first floor and open space re-development for resident and NYCHA benefit;

5 } Partner with NYC’s Department of Health, Community Based Organizations, local health care providers and medical universities to create community health plan that addresses critical access problems and long-term prevention and equity issues;

6 } Conduct feasibility analyses for vacant land re-development – work with Mayor’s Office for Environmental Remediation to identify, study, remediate and redevelop brownfields;

7 } Support the growth of Ocean Bay CDC into an anchor institution that serves as a hub of vital services, comprehensive neighborhood development, and community collaboration - physically, operationally, and programatically;
8 } Develop and add green jobs training and placement module to existing Ocean Bay CDC workforce development services;

9 } Create innovative economic development programming and land-use planning, driven by Ocean Bay CDC organizing efforts;

10 } Develop and advocate for policy tools that leverage new market rate development for support and expansion of physical and social infrastructure of long-term residents.
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PARTNER ORGANIZATIONS

OCEAN BAY COMMUNITY DEVELOPMENT CORPORATION
443 Beach 54th Street
Arverne, NY 11692
718-945-8640
www.oceanbaycdc.com

Ocean Bay Community Development Corporation (OBCDC) is a community-based nonprofit corporation that works with residents living in all the New York City Housing Authority developments in the Rockaways and residents living in the surrounding community to provide opportunities for socio-economic improvement that will create a healthier, safer, more prosperous, better educated and revitalized community. We do that through workforce development, community services and community engagement programs.

ASIAN AMERICANS FOR EQUALITY
www.aafe.org

Asian Americans for Equality (AAFE) is a non-profit organization dedicated to enriching the lives of Asian Americans and all of those who are in need. Founded in 1974 to advocate for equal rights, AAFE has transformed in the past four decades to become one of New York’s preeminent housing, social service and community development organizations. AAFE is committed to preserving affordable housing throughout New York and to providing new opportunities for the city’s diverse immigrant communities. Employing innovative approaches, the organization has preserved and developed 86 buildings, creating more than 800 units of housing. It has secured almost $300 million in mortgage financing for home buyers and disbursed $30 million in loans to hundreds of small businesses. Through a wide range of multilingual counseling services, AAFE provides education, financial assistance and training to empower people, small businesses and neighborhoods. Its research, advocacy and grassroots organizing initiatives help to shape government policy and to effect positive change. At its heart, AAFE embodies the hopes and dreams of New York’s many vibrant immigrant communities, and helps turn those dreams into reality.

LOCAL INITIATIVES SUPPORT CORPORATION (LISC) NEW YORK CITY
www.lisc.org/nyc

Local Initiatives Support Corporation (LISC) New York City is dedicated to helping low-income New York City neighborhoods become healthy communities of choice – good places to live, do business, work and raise families. LISC has thirty years of experience developing the infrastructure of community-based organizations by providing technical and financial assistance; building capacity of local institutions to respond to changing community needs; sharing best practices to maximize precious resources; and brokering collaboration among its vast network of partners—government, nonprofit, and corporate—to tackle issues on the community level.

Over the last 30+ years, LISC New York City has invested $2.3 billion in more than 75 New York City community development corporations (CDCs) and other local groups, leveraging an additional $5 billion in public and private dollars, financing the construction or rehabilitation of more than 34,600 homes and more than 1.6 million square feet of retail and community space. In the wake of Hurricane Sandy, LISC has provided nearly $2 million in capacity building funding to enable community-based partners in Brooklyn, Queens, and Staten Island to assist residents to recover from the storm; administered a $15 million Mold Treatment Program to treat mold in 2,000 homes; is managing a $19.2 million Home Repair Program to help up to 500 low-income, vulnerable homeowners with no-cost home repair; and is operating a $15 million Multifamily Repair Program that has completed rehabilitations on 23 properties and has approximately 90 more in the pipeline.

HESTER STREET COLLABORATIVE
www.hestersstreet.org

Hester Street Collaborative (HSC) provides community planning, design and development technical assistance to community partners throughout New York City. Our mission is to provide the tools and resources necessary for low-income residents to shape their built environment. We do this through a hands-on approach that combines design, education, research and advocacy. HSC seeks to create more equitable, sustainable, and vibrant neighborhoods where community voices lead the way.