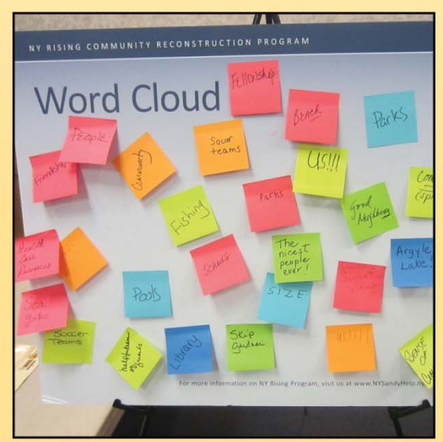
NY Rising Community Reconstruction Program

Recover from yesterday, plan for tomorrow

Conceptual Plan -
VILLAGE OF BABYLON/WEST BABYLON



OCTOBER 2013

This document was developed by the Village of Babylon/West Babylon Planning Committee as part of the NY Rising community Reconstruction (NYRCR) Program within the Governor's Office of Storm Recovery. The NYRCR Program is supported by NYS Homes and Community Renewal, NYS Department of State, and NYS Department of Transportation. Assistance was provided by the following consulting firms:

- *Jacobs*
- *Cameron Engineering & Associates, LLP*

Village of Babylon/West Babylon NYRCR Committee		
Committee Role	**Name**	**Position**
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Co-Chair	Dominic Bencivenga	Babylon Helps and Babylon School Board Member
Member	Jon Taylor	President, Village of Babylon Chamber of Commerce
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Member	Richard Rozakis	Superintendent of Schools - Babylon
Member	Mary Adams	Village of Babylon, Business owner, Resident
Member	Tony Davida	Village of Babylon Trustee
Member	Theresa DePietto-Roesler	President, Neighbors Supporting Neighbors Babylon
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Municipal Representative	Rich Groh	Chief Environmental Analyst, Dept. of Environmental Control, Town of Babylon

JACOBS

FOREWORD

The New York Rising Community Reconstruction (NYRCR) program was established by Governor Andrew M. Cuomo to provide additional rebuilding and revitalization assistance to communities damaged by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. This program empowers communities to prepare locally-driven recovery plans to identify innovative reconstruction projects and other needed actions to allow each community not only to survive, but also to thrive in an era when natural risks will become increasingly common.

The NYRCR program is managed by the Governor's Office of Storm Recovery in conjunction with New York State Homes and Community Renewal and the Department of State. The NYRCR program consists of both planning and implementation phases, to assist communities in making informed recovery decisions.

The development of this conceptual plan is the result of innumerable hours of effort from volunteer planning committee members, members of the public, municipal employees, elected officials, state employees, and planning consultants. Across the state, over 102 communities are working together to build back better and stronger.

This conceptual plan is a snapshot of the current thoughts of the community and planning committee. The plans will evolve as communities analyze the risk to their assets, their needs and opportunities, the potential costs and benefits of projects and actions, and their priorities. As projects are more fully defined, the potential impact on neighboring municipalities or the region as a whole may lead to further modifications.

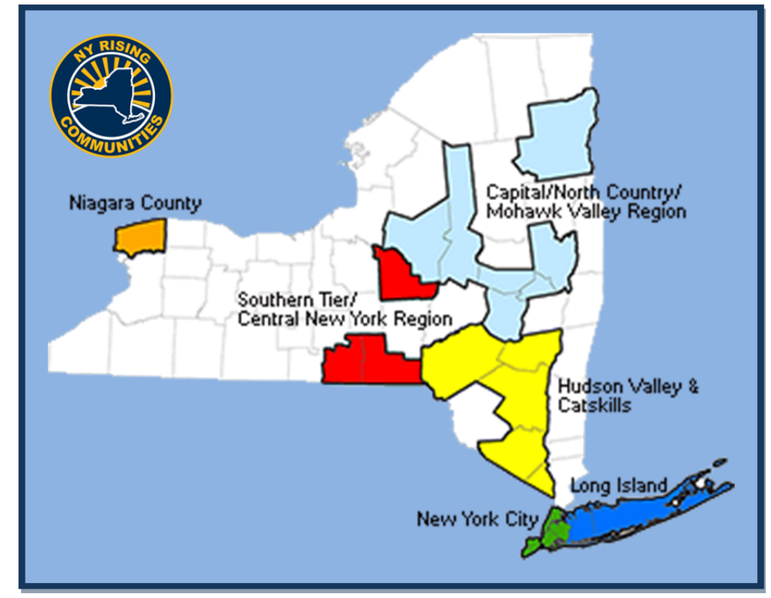
In the months ahead, communities will develop ways to implement additional strategies for economic revitalization, human services, housing, infrastructure, natural and cultural resources, and the community's capacity to implement changes.

Implementation of the proposed projects and actions found in this conceptual plan is subject to applicable federal, state, and local laws and regulations. Inclusion of a project or action in this conceptual plan does not guarantee that a particular project or action will be eligible for Community Development Block Grant – Disaster Recovery (CDBG-DR) funding. Proposed projects or actions may be eligible for other state or federal funding, or could be accomplished with municipal, nonprofit or private investment.

Each NYRCR Community will continue to engage the public as they develop a final plan for community reconstruction. Events will be held to receive feedback on the conceptual plan, to provide an understanding of risk to assets, and to gather additional ideas for strategies, projects and actions.

October 31, 2013

New York Rising Communities



Find out more at:

www.stormrecovery.ny.gov

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1. Program Overview

Description of the Program

The New York Rising Community Reconstruction (NYRCR) Program is intended to empower the communities most affected by the storms to develop and implement locally-created strategies for rebuilding, strengthening, and making their respective communities more resilient against future weather events. The intent of the NYRCR Program is to assist communities to rebuild better and safer based on locally derived plans which consider current damage, future threats to community assets, as well as the economic future of the community.

NYRCR Plans, in accordance with the US Federal Emergency Management Administration (FEMA) *National Disaster Recovery Framework*, will consider the needs, risks and opportunities related to assets in the following recovery support function categories[i]:

- Community Planning and Capacity Building
- Economic Development
- Health and Social Services
- Housing
- Infrastructure Systems (Transportation and Utilities)
- Natural and Cultural Resources

A total of 102 communities across New York State have been designated for Community Reconstruction Program assistance. Of these, a total of 10 communities, noted below, make up the eight NYRCR Committees in Suffolk County.

- Village of Amityville/Copiague
- Village of Lindenhurst
- Village of Babylon/West Babylon
- West Islip
- Oakdale/West Sayville
- Mastic Beach and Smith Point of Shirley
- West Gilgo to Captree
- Fire Island

The successful completion of a NYRCR Plan, will allow each participating community to be eligible to obtain funds to support the implementation of resilient and innovative reconstruction projects and other needed actions identified in their respective Plan.

Description of the Planning Process

As part of the NYRCR planning process, communities will assess their vulnerabilities to future natural disasters as well as their needs for economic development. The planning process will also help to identify where funds should be used to repair or reconstruct critical facilities and essential public assets damaged or destroyed by these storms. Lastly, the planning process will facilitate the identification of projects that will increase resilience while also protecting vulnerable populations and promoting sound economic development.

Elements of the planning process are as follows:

- *Public Engagement:* Providing opportunities for public involvement and input at key milestones in the planning process
- *Asset Inventory:* Compiling an inventory of the community's social, economic, and natural resource assets that have been or have the potential to be affected by coastal or riverine hazards
- *Risk Assessment:* Assessing risk to key community assets based on the following three contributing factors to risk: (1) Hazard, the likelihood and magnitude of anticipated storm events; (2) Exposure, local landscape characteristics that typically increase or decrease storm effects; (3) Vulnerability, the capacity of an asset to return to service after an event
- *Needs and Opportunities Assessment:* Determining needs and opportunities to improve local economic growth and enhance resilience to future weather events
- *Strategies for Investment:* Developing strategies and the projects and actions needed to implement the strategies; prioritizing projects and actions; conducting cost benefit analysis of chosen projects and actions as well as identifying potential funding sources
- *Implementation Schedule:* Preparing an implementation schedule of the actions needed to implement the strategies

Role of the Committee

Each participating community has established a NYRCR Planning Committee ("Committee") that accurately reflects the community's populations and represents both the needs of the community and its members' various talents. Committee co-chairs have been selected by the State in consultation with the participating communities. The composition of the remaining committee members varies, but typically includes Town, Village, and County representatives, elected legislative representatives, the County, local residents as well as established business leaders and community organizations.

NYRCR Planning Committees meet frequently and are charged with building consensus among local residents and stakeholders for a locally-

based reconstruction plan. Committee tasks range from the development of a Community Vision Statement to identifying critical assets and future projects. The Committee is also tasked with developing a public engagement plan to both inform and involve residents of the NYRCR Program.

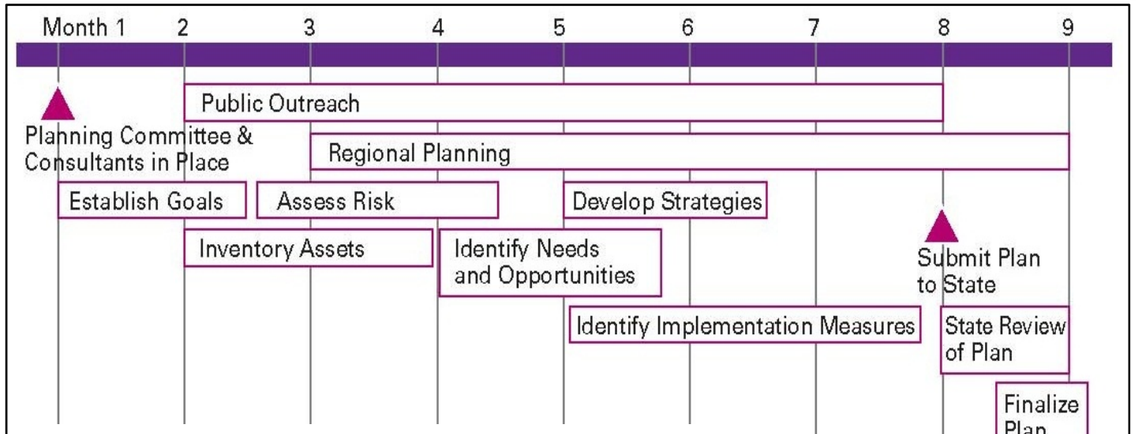
The Babylon and West Babylon Committee is particularly attuned to community issues stemming from Superstorm Sandy. Many of the Committee members volunteered their time and energy to assist community members both during the storm and throughout the recovery process. The location of the Committee meetings - the First Presbyterian Church of Babylon - exudes tremendous meaning, emotion and significance for this community, as it served as a place of shelter and food and a hub of face-to-face communication networks while power and cell-phone service was out. This element of the NY Rising process further underscores the importance of community and social capital in storm preparedness and recover; this message is reinforced in real human terms each time the Committee convenes.

Planning Process Timeline

The NYRCR planning process is anticipated to last approximately eight months. Final plans submittals to the State are due in March 2014. Key milestones in the planning horizon (e.g., public engagement, risk assessment, identification of needs and opportunities) are shown in the adjacent graphic. This Conceptual Plan highlights the progress of the Committee for the one-year anniversary of Sandy and next steps for the completion of a final plan in March 2014. It is important to remember that project implementation will likely begin before the 8-month planning period, and will continue well beyond as the State continually works to match other funding sources -- federal, state, local, private, philanthropic, not-for-profit -- with these projects.

Elements of a Successful Plan

A successful NYRCR Plan will describe projects and actions needed for the community to rebuild a more resilient and economically strong locality. A successful NYRCR Plan, which would qualify communities to receive funding and grants to implement projects and actions identified in their plans, must contain the following components:



Source: New York Rising, *Guidance for Community Reconstruction Plans*. p.3.

- ***Inventory and assessment of risk to key assets and systems.*** This inventory and assessment of vulnerable key assets and systems is required in order to prioritize projects and actions.
- ***Projects and actions to restore and increase the resilience of key assets.*** This plan element addresses the restoration of key assets as well as actions that will make local assets more resilient to future threats (e.g., wetlands, dunes, modifications to land use regulations, other improvements in community systems).
- ***Protection of vulnerable populations.*** Development of new measures to protect vulnerable persons through housing decisions and other services.[ii] Measures to protect these populations may include siting new facilities in lower risk areas, requiring back up power systems for critical facilities like hospitals and nursing homes, and improving communications systems to ensure that vulnerable persons are not left without aid.
- ***Projects with economic growth co-benefits.*** This characteristic of a successful plan relates to projects that will improve the future of the local economy but also enhance the community's resilience. Illustrative projects may include a transportation infrastructure improvement project that may result in the ancillary growth of a main business corridor. Similarly, an investment in open space could potentially serve a dual purpose as both a recreational space/community destination and also as a coastal flooding buffer protecting against storm damage.
- ***Regional Coordination.*** While designated NYRCR communities in Suffolk County have specific local needs, reconstruction and resiliency efforts must also relate to regional issues that arise across Long Island. As such, NYRCR Plans must also address long-term regional objectives across Long Island.
- ***Detailed implementation agendas.*** Each NYRCR Plan must include a concise description of the tasks it will take to implement the plan. This includes assigning responsibility for specific actions to specific entities or individuals and establishing timelines for each action, as appropriate.

The Conceptual Plan

The purpose of the Conceptual Plan is to provide an overview of the Babylon/West Babylon NYRCR Committee's planning efforts to date. This includes highlighting the Committee's initial findings with regards to the Community's critical assets, the associated breakdowns that were discovered during and after Sandy that need to be addressed, and the Committee's preliminary ideas for projects and actions to address those immediate needs while thinking strategically about how to build back stronger, smarter, and more resiliently for the long-term sustainability of the community.

2. Community Overview

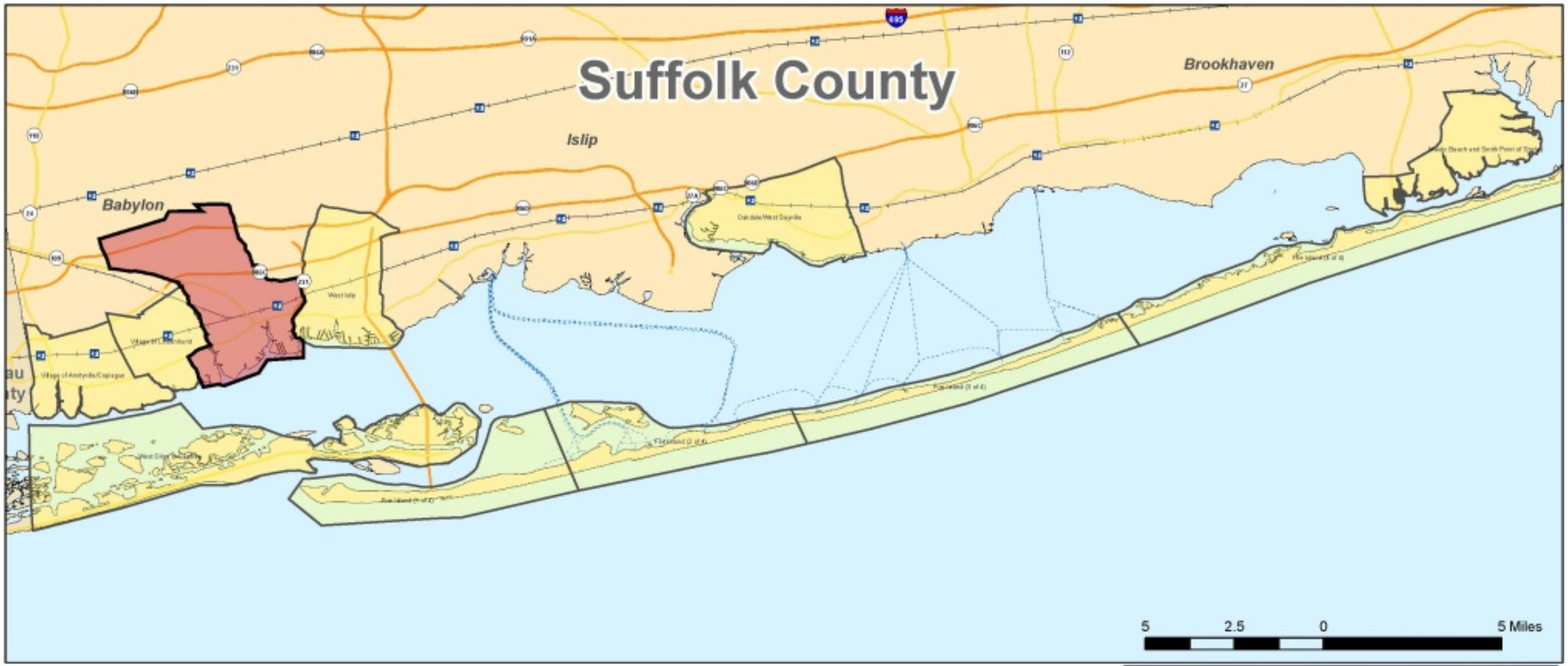
The Village of Babylon and West Babylon NYRCR Planning Area comprises the hamlet of West Babylon, a census-designated place (CDP) within the Town of Babylon, and the Incorporated Village of Babylon. The West Babylon CDP also includes Venetian Shores, a small peninsula located in the southwest corner of the Town. Although Venetian Shores is within the boundaries of the West Babylon CDP, it is served by the Lindenhurst School District and Lindenhurst Fire Department. Residents in this area also have a Lindenhurst address and zip code. In addition to Lindenhurst to the west, the West Babylon-Babylon community is also bordered by North Babylon and Wyandanch to the north, West Islip to the east and the Great South Bay to the south.

The Village of Babylon was incorporated in 1893 and is the oldest village within the Town of Babylon. Its bustling and walkable downtown district is unique for Suffolk County, making the Village a well-known regional destination. Both Babylon and West Babylon also feature waterfront parks, local marinas, historic structures, and significant amounts of preserved open space. The Long Island Railroad runs to points both east and west, providing service to local residents and visitors alike. The community's accessibility to New York City played a large role in driving post-war growth and development in both the Village of Babylon and West Babylon and continues to draw people to the area. Today, West Babylon is the largest hamlet within the Town of Babylon.

The southern portion of West Babylon and all of Babylon is developed on top of low lying filled lands (former wetlands) that are within the 100 year flood zone. The water table in this area is generally very high, leading to drainage issues throughout the community. In addition, land gradually slopes north to south towards the Great South Bay – bringing flooding from the Carlls River watershed and its numerous underground streams. As a result, during storm events with significant rainfall, the Village of Babylon and West Babylon faces floodwaters approaching from all directions.

The community is also unique among other Suffolk County villages and hamlets as it is served by a large-scale, municipal wastewater treatment plant - Bergen Point. Since it is sewered, the area can support a denser pattern of development, particularly within the Village of Babylon downtown district. Sewerage also allowed the community to avoid the wastewater issues experienced by communities to the east, many of whom grappled with significant damage to septic systems as well as the local environment. However, Bergen Point itself was very close to failing during the height of the storm, highlighting the need for stronger and more resilient infrastructure within coastal areas.

NYRCR: Village of Babylon/West Babylon
Planning Area Location



Legend

- Village of Babylon/West Babylon Planning Area
- Other NYRCR Planning Areas
- Long Island Railroad Station

Roads

- Interstate
- Highways
- Ferry
- Long Island Railroad

Counties

- Nassau
- Suffolk
- Municipal Boundary

Community Reconstruction Planning Area Demographic Overview

Geographic Area and Data

The Village of Babylon/West Babylon Community Reconstruction Program Planning Area is composed of most of the Village of Babylon Census Designated Place (CDP) and the West Babylon CDP. With the exception of data on ethnicity and race, all demographic data depicted below is taken from the US Census Bureau's American Factfinder at the CDP level, and reflects data from the most recent American Community Survey (ACS). Demographic data relating to ethnicity and race were derived from the 2010 Census in order to provide the most recent data available in those categories.

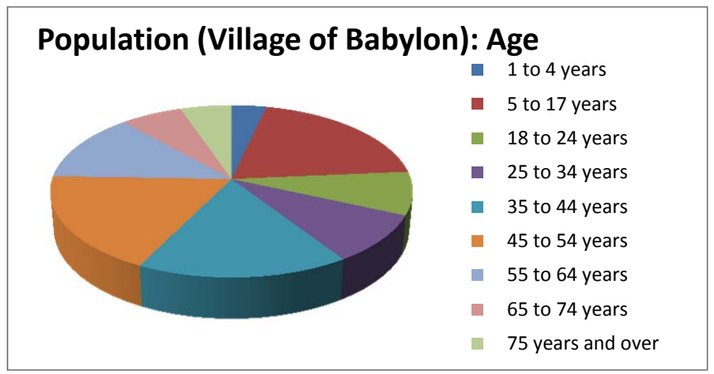
The CDP level was selected because the availability and detail of current Census data varies by geographic location and level of analysis (CDP, Census Tract, Census Block, etc.). The CDP level provided a uniform level of data detail and reporting period. It is acknowledged that the CDP data may include some areas that are not contained within the identified NYRCR Planning Area; however, across all CDPs in Suffolk County, the differences between the Census CDP boundaries and the NYRCR Planning Area definitions are not large. Additionally, the Census data's intended use in this report is to provide an overview of the composition and general habits of the community. It is unlikely that areas included in the CDP but excluded from the NYRCR Planning Area would result in a substantial effect on the overview-level interpretation of the data or affect the identification of needs and opportunities or projects under the Community Reconstruction Program.

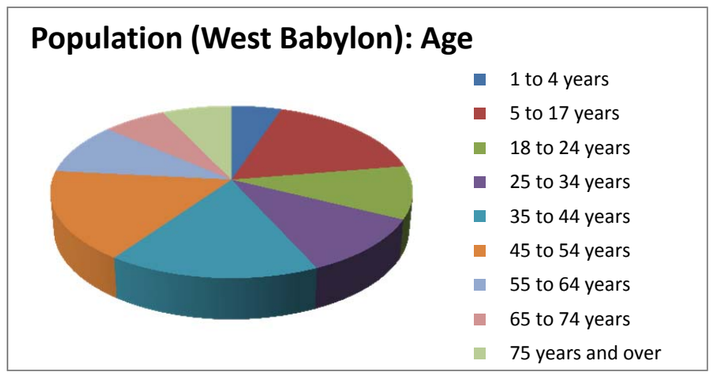
Village of Babylon/West Babylon General Demographics

The Village of Babylon/West Babylon NYRCR Planning Area is composed of two suburban communities. The age of the population in both communities shows a typical suburban distribution among the Census age groups, with about 30% of the population between 35 and 54 years old, and the remaining thirds nearly evenly split between residents under 35 and over 55 years old.

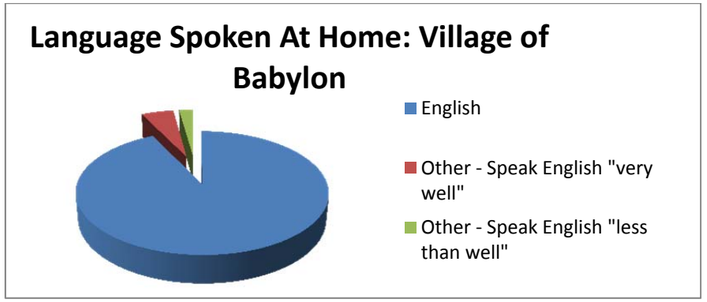
Ninety-two percent of the population of the Village of Babylon is White, with 2% African American, 2% Asian, and the remaining classified as 2% other and 2% two or more races. Eighty percent of the population of West Babylon is White, with 11% African American, 3% Asian, and the remaining classified as 4% other and 2% two or more races. The percentage of Hispanic/Latino residents in the Village of Babylon is about 7% and about 12% in West Babylon.

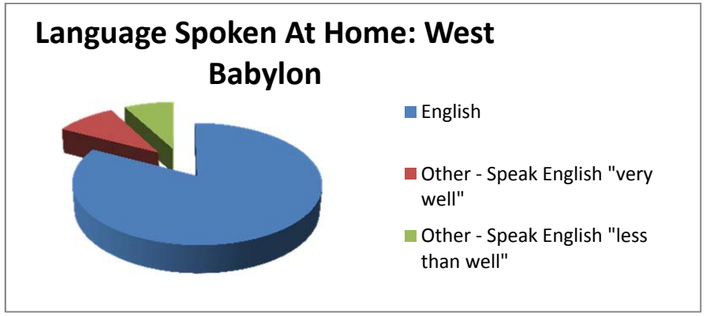
About 20% of the population in West Babylon reports that they do not speak English at home, and about 10% of the population says they do not speak English "very well."





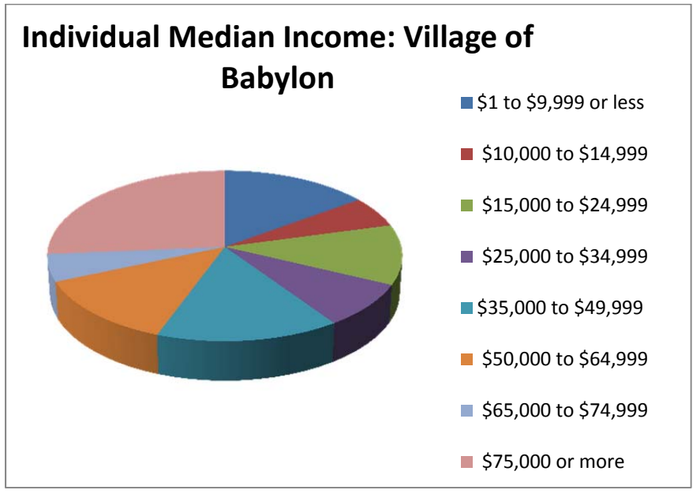
In the Village of Babylon, more than 90% of the population speaks English at home, but of the non-English speakers, most responded that they do not speak English "very well," either. This data is important for the identification of needs and opportunities as the non-English speaking population represents a community of concern that may not have easy access to important life safety information.

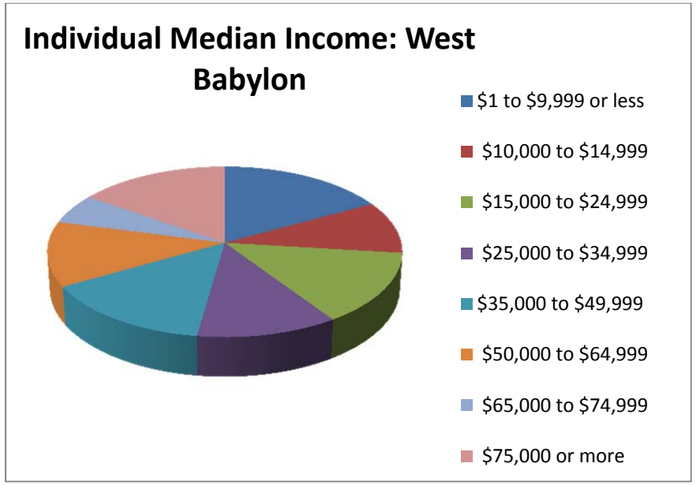




Income and Poverty

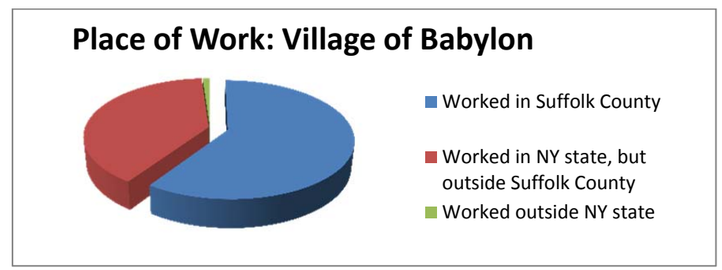
Both communities include a diverse range of individual wage earnings. The Village of Babylon's population includes proportionally more earners in the $75,000 or more range, while West Babylon reports a more even distribution of individual earnings. About 20% of the residents in both communities report that they earn under $10,000 a year, but neither community includes a significant population under 150% of the poverty level, indicating that the population reporting individual income under $10,000 is primarily composed of individuals who are financially secure by means other than their personal earnings, not individuals or families who represent an economically disadvantaged population.

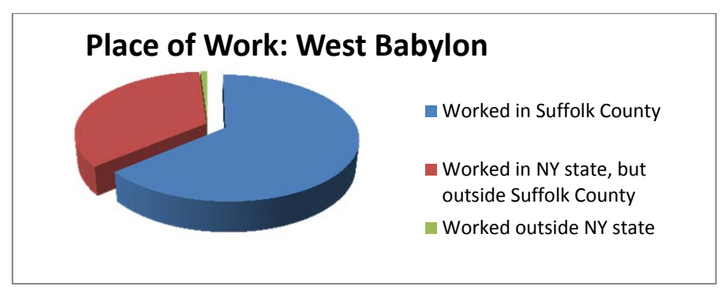




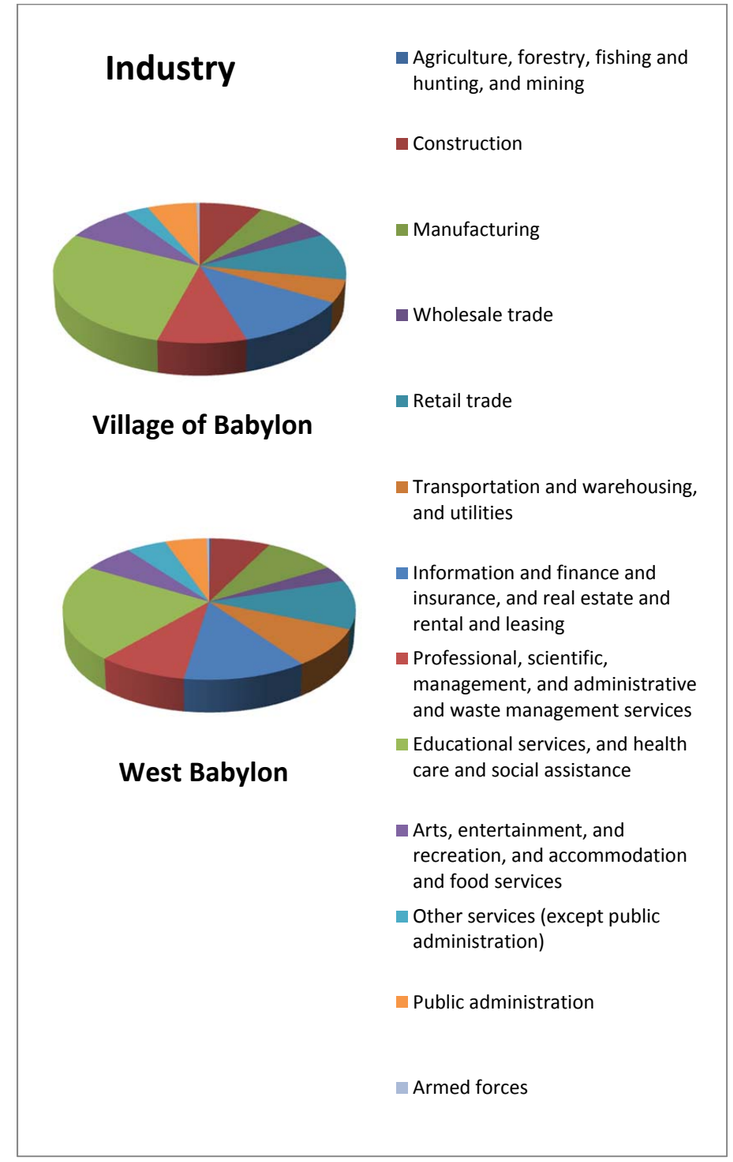
Employment and Journey to Work

Understanding the general character of the communities' workforce helps identify needs and opportunities and prioritize projects to maintain, restore, and enhance the economic vitality of the community. More than half of the residents in both the Village of Babylon and West Babylon work within Suffolk County, and nearly all of the residents in both communities work somewhere within New York. The majority of workers in both communities drives alone to work or carpools. The next largest means of travel to work is by rail, but the percentage of rail commuters as a portion of all commuters in either community is 10% or less. As would be expected, the percentage of zero-car households in either community is less than 5%.



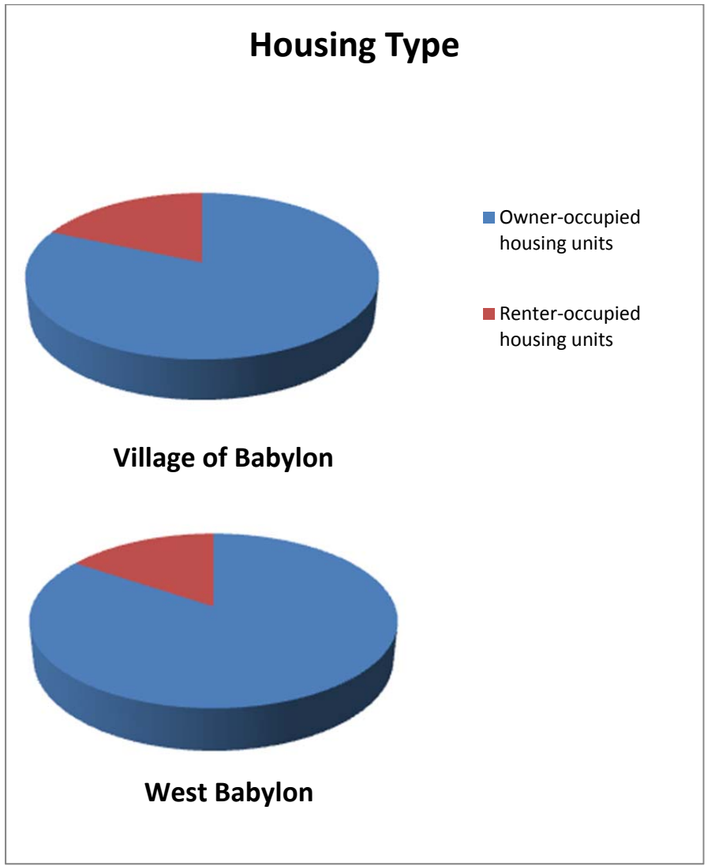


While workers resident in each community support a diverse array of industries, educational services employ the greatest percentage of residents in both communities. In West Babylon, the second greatest employment sector is split between finance/real-estate and professional services.

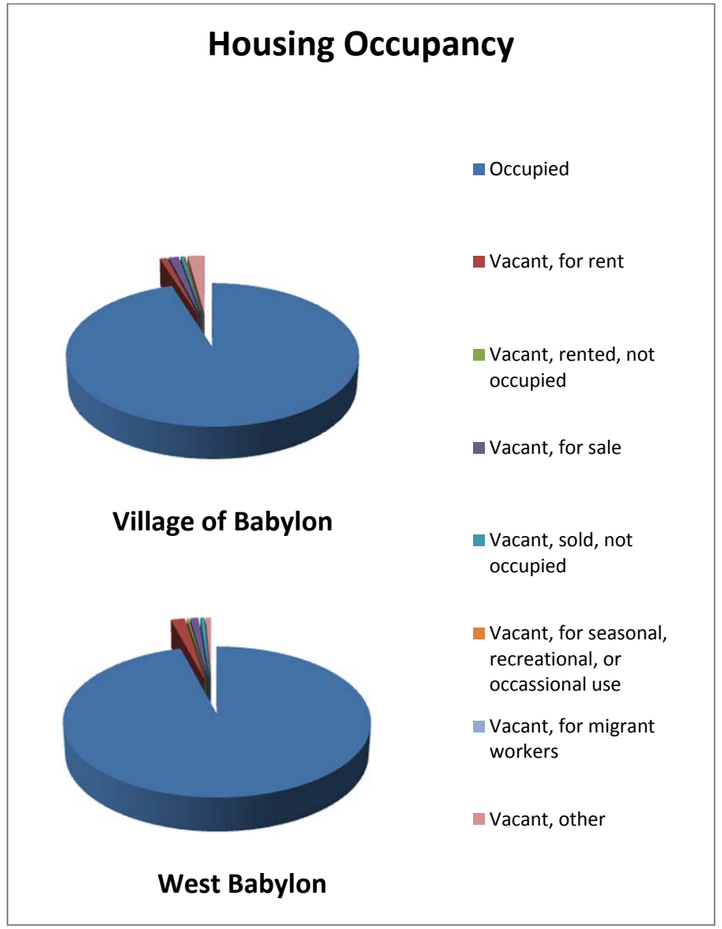


Housing

In both the Village of Babylon and West Babylon, most housing units are owner-occupied, and few are vacant. Although the NYRCR community enjoys coastal resources, none of the reported vacancies are associated with seasonal rentals.



In West Babylon, most of the vacancies are unoccupied rental units. In the Village of Babylon, the property owners responded that the vacancy is for reasons other than the seven options provided by the Census.



Guidance and Insight from Demographic Analysis

The demographic analysis indicates a few important trends and characteristics that may help shape the identification of needs, opportunities, and projects for the Village of Babylon/West Babylon NYRCR Planning Area. One of the first observations is that schools and similar educational facilities are critically important. Not only are they important public facilities that provide a necessary service in terms of education, the schools themselves are major employers. Ensuring the resiliency of educational facilities is therefore a goal strongly suggested by the Census data.

Additionally, the journey to work data indicated that most of the NYRCR's workers commute by car. This may raise the priority of resilient roadway infrastructure to provide a means to travel to a worker's place of employment. While at the same time the opportunity to improve, to create, and provide resilient improvements to the pedestrian, bicycle, and transit networks should not be overlooked.

Lastly, housing type and occupancy indicates that the resiliency of the housing stock is of vital importance. There are very few renter-occupied units in the NYRCR Planning Area, indicating relatively low residential turnover and few vacancies. The vacancy assumption is further supported by the occupancy statistics. This indicates that in the event of a catastrophic event, the homes affected are permanent residences and the affected homeowners and their families have few options for relocation within their community. The Census data therefore strongly suggests that programs and incentives to protect and preserve the existing housing supply, to provide for potential increases in the diversity of house types, as well as to provide for the temporary housing of dislocated residents, be prioritized in the NYRCR plan. These Census findings will be incorporated into the ongoing dialogue with the NYRCR Planning Area Community and reflected in the work of the Committee as they go forward with the identification of projects to help ensure their community's resilience.

3. Overview of the Effects from Superstorm Sandy

On Friday, October 19, 2012 a tropical depression formed in the Caribbean. In only six hours the depression intensified into a tropical storm. This 18th named storm of 2012 was designated Tropical Storm Sandy. By the following Wednesday, on October 24th, the storm's maximum sustained winds had increased to 74 MPH and Sandy was upgraded to a Hurricane.[iii]

After passing through the Caribbean including Jamaica, Cuba, and the Bahamas, and fluctuating between a Category 1 and Category 2 Hurricane, on Saturday October 27th Sandy turned north toward the US coast. The storm made landfall near Atlantic City, NJ around 8 PM on Monday, October 29th. The winds had decreased to just below the threshold for a Category 1 Hurricane and meteorologists and the press christened this near hurricane as "Superstorm Sandy."

The track of Sandy resulted in a worst-case scenario for storm surge for coastal regions from New Jersey north to Connecticut, including New York City and Long Island. The storm surge came ashore near the time of high tide along the Atlantic Coast, as well as during a full moon when tides are strongest. These factors combined for record tide levels. The storm surge in NY Harbor reached almost 14 feet at the Battery. Thirty-five miles away, on the south shore of Suffolk County in Babylon, the Storm surge reached nearly 6.5 feet. This was on top of the morning tide that had already inundated the bay and had yet to retreat.

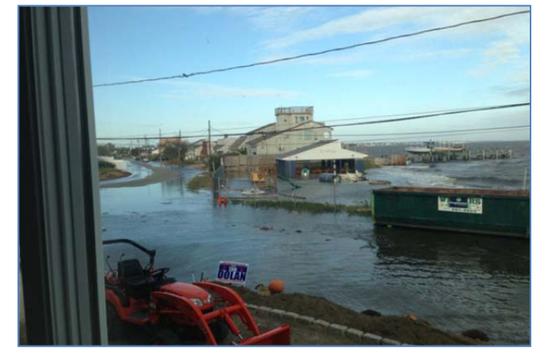
In addition to the triple threat of the enormous storm surge, the coinciding high tide, and the full moon, other factors conspired to create the devastation that resulted from Sandy. Nearby maximum wind gusts ranged from 79 mph in East Farmingdale to 90 mph at Islip Airport. Wave action during the storm was also fierce. An off-shore buoy located 15 nautical miles southeast of Breezy Point on the Rockaway Peninsula reported a wave height of 32.5 feet (the largest since record keeping began).

The devastation along the mid-Atlantic seaboard was unprecedented. Many lives were lost and estimates of damage range between 50 to 100 billion dollars in damage. On the local level, along Long Island's barrier beaches, damages were also substantial.

Arriving on October 29th, 2012 Superstorm Sandy inundated the Village of Babylon and the hamlet of West Babylon with high winds and a storm surge amplified by a full-moon high tide. The impact of the storm was devastating to both Babylon and West Babylon. Many of the dwellings and businesses located along the shore lost power and communications in the period during and following Sandy. Outages persisted for an extended period during the recovery process as Long Island faced one of the largest storm-related outages on record. In addition, many dwellings and commercial buildings were inundated with a tidal surge of approximately six feet that extended well into the communities.

Fires caused by eroded electrical wires destroyed property, posed safety concerns and strained an already taxed crew of emergency responders.

Rescue operations continued throughout the night as attempts were made to evacuate residents and provide vital services to those in need. Nursing homes along the waterfront presented significant challenges as access for vehicles and equipment was restricted by floodwaters. The Village of Babylon and West Babylon are fortunate to have a team of such dedicated and experienced first responders and emergency service personnel.



When the winds died and the waters calmed, residents were confronted with a level of destruction most had never experienced. Many streets remained partially flooded over the next few days as the water slowly receded back into the bay.

Roads were obstructed, traffic signals were not functioning and vehicles that had been destroyed during the storm were stranded in place.

Homes were completely destroyed and rendered unlivable. Many were condemned, leaving residents without a home and away from the support of their community.

Storm impacts left much of the community's infrastructure damaged or unusable and power remained unavailable to some residents for weeks. Debris removal was a major issue for the community in the immediate aftermath of the storm. Many of the shorefront communities have only one access road in and out of the community. Debris on these roads had to be cleared and staged before relief to the hard-hit shoreline community could be provided.

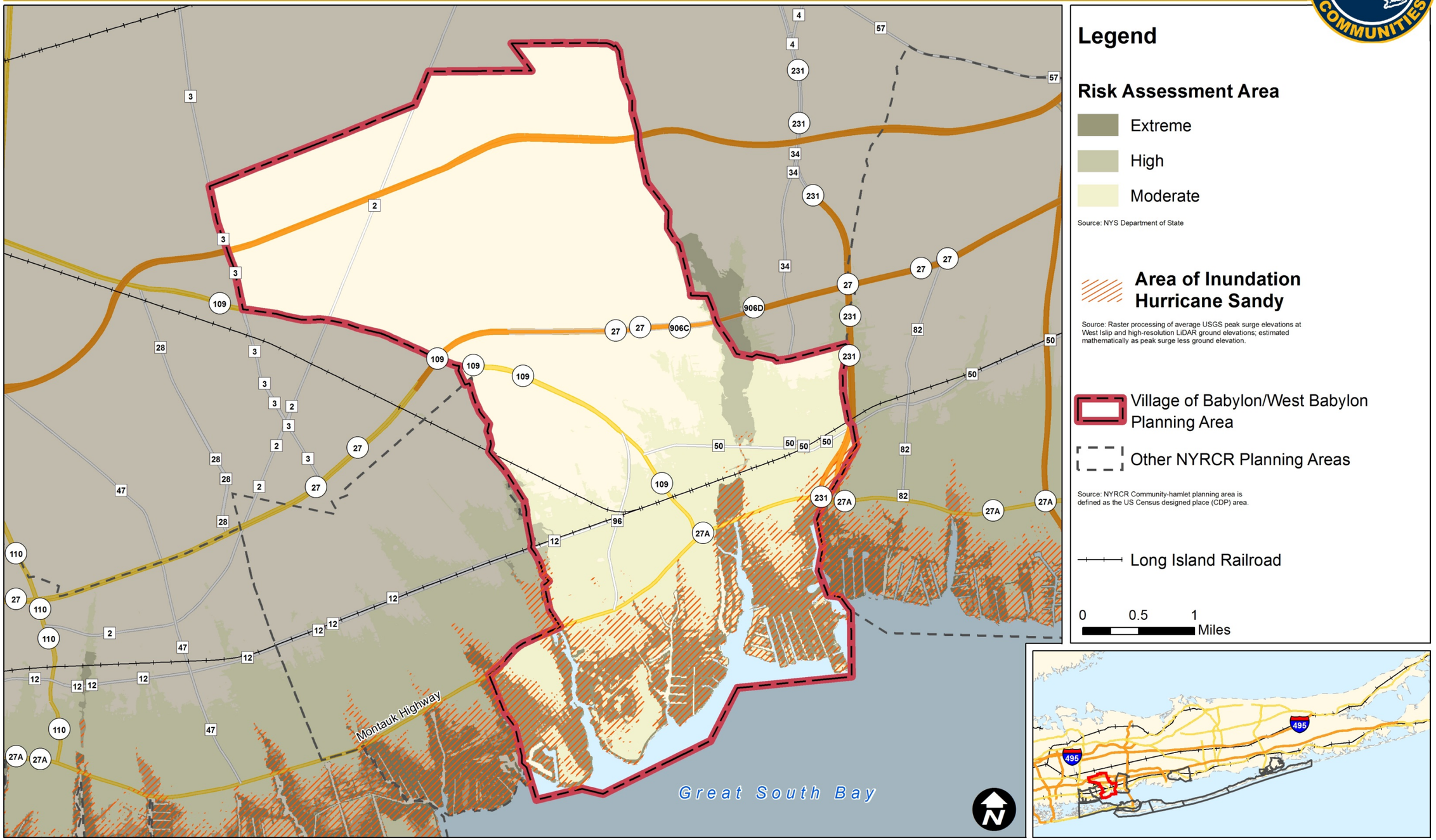
The community also faced a serious problem with floating debris. Residential fuel oil tanks used for home heating and boats stored at the various local marinas floated away as the floodwaters rose. The volume and mass of the debris caused damage to other structures and obstructed roadways and access routes. Many oil tanks ruptured, leaking their contents and contaminating the water and soil. Without natural gas service in many areas, residents typically rely on outdoor fuel oil tanks to provide heating fuel.

Remarkably, amidst the battering from Sandy, many local residents banded together to provide food, shelter and supplies for those who lost everything. These volunteers often set aside their own problems to assist their neighbors in any way possible.

Businesses, local civic associations, community organizations and residents less affected by the destruction mobilized to provide necessities and support services both immediately following the storm and throughout the recovery process. Despite widespread community devastation, Babylon and West Babylon residents were committed to helping their neighbors and restoring the community as quickly as possible. In fact, some residents organized specific support networks and organizations, like Neighbors Helping Neighbors and Babylon Helps.

NYRCR: Village of Babylon/West Babylon

Risk Assessment & Hurricane Sandy Inundation Areas



4. Geographic Scope of the Plan

The identification of a geographic scope for each NYRCR Plan is of paramount importance as it helps to develop parameters and inform the extent of the planning effort. As such, establishing a geographic scope is a crucial responsibility that is undertaken by the Committee. Properly scoping the NYRCR Planning Area includes meeting federal guidelines for the appropriate use of reconstruction funds. NYRCR Plans are intended to address the damage directly resulting from Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. As a result, communities seeking to implement projects indirectly impacted by those storms will need to demonstrate how such projects and/or policies would help to mitigate the risk of potential storm damage in the future. Guidance provided by New York State, and noted below, relative to establishing the geographic scope of a NYRCR Plan relates to asset location, risk assessment areas as well as floodplains.

Community assets most likely to be at risk due to future weather events are typically located in extreme, high, and moderate risk areas of the community. However, a review of current and historical storm damage may necessitate the inclusion of other areas in the geographic scope.

The geographic scope of the NYRCR Plan includes areas: where assets are most at risk; where future construction or reconstruction of existing development should be encouraged or discouraged; or where key investment to improve the local economy can be instituted. The identification of more resilient areas for future development can later be reinforced in municipal comprehensive plans as well as other local regulatory requirements.

The Village of Babylon/West Babylon NYRCR

The Village of Babylon and West Babylon NYRCR Planning Area comprises one incorporated village (Village of Babylon) and one hamlet within the Town of Babylon (West Babylon). The NYRCR planning boundary follows the official boundaries of the village and hamlet. In defining the NYRCR boundary, several committee members expressed specific concerns about the neighborhood of Venetian Shores, which is a small peninsula located in the southwest corner of West Babylon. Venetian Shores is a unique neighborhood as it is within the boundaries of the hamlet of West Babylon, but it is served by the Lindenhurst School District and Lindenhurst Fire Department. Residents in this area also have a Lindenhurst address and zip code.

Since Lindenhurst is also a NYRCR planning area, committee members from both communities were initially unclear about which community would cover the peninsula. After discussions with both committees and the NYS Department of State, it was determined that Venetian Shores would remain within the Village of Babylon and West Babylon NYRCR Planning Area. However, if there is an issue of regional significance affecting the peninsula, both communities are encouraged to collaborate and work together on such large-scale projects. By clearly defining the geographic scope and jurisdictional boundaries of the planning area, the committee can move forward with the identification of critical assets and engage key stakeholders early in the planning process.

5. Review of Relevant Existing Plans and Studies

In order to better understand the planning environment and the work done to date within the Village of Babylon and hamlet of West Babylon, as well as at a regional level, an effort was undertaken to review pertinent plans, studies and reports. The following plans have been identified and reviewed:

- A Plan for the Future of the Town of Babylon, Draft Comprehensive Plan, March 1998
- Town of Babylon Complete Streets Policy, July 14, 2010
- Environmental Study of the Barrier and Bay Island Communities, Town of Babylon, 1994
- Suffolk Country Comprehensive Plan 2035, August 2011
- Managing Stormwater – Natural Vegetation and Green Methodologies, 2011
- Land Available for Development and Population Analysis Western Suffolk Country, October 2009
- Hazard Mitigation Plan, October 2008
- Long Island South Shore Estuary Reserve Comprehensive Management Plan, April 2001
- Fire Island Inlet to Montauk Point New York Reformulation Study, May 2009

Most notably, neither the Village of Babylon nor the hamlet of West Babylon have a comprehensive land use or vision plan for their communities. Such documents often provide the necessary framework to address community-wide issues. As a result, one of the key tasks assigned to the Committee is the establishment of a guiding vision for the future of both communities.

Despite a lack of local land use plans, there are several plans and studies from the Town of Babylon and Suffolk County that address issues within the Babylon/West Babylon NYRCR Planning Area.

Town of Babylon Plans and Studies

Town of Babylon Comprehensive Plan

In 1998, the Town of Babylon adopted *A Plan for the Future of the Town of Babylon* with five central themes including preserving the Town's suburban character, responding to the changing population, improving quality of life in economically distressed areas, job and economic development, and protecting natural resources. The comprehensive plan proposes town regulations, such as building code to preserve the suburban character of the Town. While Villages within the Town often have Zoning or Planning Boards to manage certain approvals and zoning requests, the Town's Comprehensive plan informs local code and ordinances.

Sustainable Complete Streets Policy

In 2010, the Town of Babylon published a *Sustainable Complete Streets Policy* that analyzed the relationship between road, bike, and pedestrian networks and recommended strategies which promotes multi-modal transit options, limiting greenhouse gas emissions, and ensuring safety for all modes of transportation.

Environmental Study of the Barrier and Bay Island Communities

In 1994, the Town of Babylon released an Environmental Study to identify environmental and land use concerns along the coast including water quality, erosion control, natural systems, developable land, community cost/benefit analysis, homeowner equity, and public access. The recommended strategies intend to maintain existing character of the coastal communities, support appropriate land use and development, maintain and improve natural systems, implement mitigation measures to protect public property, and properly utilize coastal regions as a public good.

Suffolk County Plans and Studies

Suffolk County Comprehensive Plan 2035

The Comprehensive Plan, adopted in August 2011, details the vision for County growth through 2035 and is used to inform policies and programs. The Comprehensive Plan serves as an update to the 1970's plan with the inclusion of additional topics including groundwater protection, farmland preservation, and open space planning. Each of Suffolk's ten towns and 32 villages are included in the study. Topics include demographic and economic estimates and projections, natural resource identification and recommendations for preservation and quality improvements, land use inventory and identification of future needs, human and cultural resources, energy supply and consumption including carbon impact study, and a solid waste plan. The plan also coordinates closely with Long Island Regional Planning Council's *Sustainable Strategies for Long Island 2035 Plan.*

Managing Stormwater – Natural Vegetation and Green Methodologies

In February 2011, Suffolk County presented a guidebook on stormwater management to inform municipalities on benefits, processes, and best practices for stormwater management and managing green infrastructure. Topics include policies to protect groundwater such as overlay districts, subdivision regulations with design flexibility, site plan review process, and disincentives for inappropriate use of fertilizers.

Land Available for Development and Population Analysis Western Suffolk County

In October 2009, the Suffolk County Department of Planning prepared this plan for the Department of Health Services as part of the Comprehensive Water Resources Management Plan. The study details developable land by residentially, commercially, and industrially zoned lots by size, neighborhood population, and groundwater management zone. The intent of the study is to project developable land based on type of allowable use, available water, and existing demand.

Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan: October 2008

In 2008, Suffolk County developed an All-Hazard Mitigation Plan with participation from Towns and Villages, including the Town of Babylon and the Village of Babylon. Implementation of mitigation strategies is the responsibility of local governments and regional partners. The plan is submitted and approved by the New York State Emergency Management Office and FEMA. The plan details strategies to reduce the impact of future disasters and hazards including, developing more sustainability and disaster resistant, resource management, and planning processes that reduce long term impacts to health and property loss. Suffolk County is currently in the process of updating their Hazard Mitigation plan.

Long Island South Shore Estuary Reserve Comprehensive Management Plan

Long Island South Shore Reserve Council, New York State Department of State- 2001- This estuary plan includes the Great South Bay and the other bays that are part of the estuary that lies between much of mainland Long Island and the barrier beach. The plan includes recommendations for management of the estuary in a holistic manner and in contrast to the multitude of municipal, county and state jurisdictions that divide the estuary. The plan addresses, "improving water quality, restoring and protecting living resources, expanding public use and enjoyment, sustaining the estuary–related economy and increasing public education, outreach and stewardship…" Both the Village of Babylon and West Babylon are bay-front communities that are inextricably tied to the estuary both economically and environmentally. The South Shore Estuary Reserve Council is assisted by the New York State Department of State.

Fire Island Inlet to Montauk Point (FIMP) Reformulation Study, U.S. Army Corps of Engineers (USACE)

According to a summary of the planning process prepared by the Corps, the purpose of the study is to identify, evaluate and recommend long-term solutions for hurricane and storm damage reduction for homes and businesses within the floodplain along the ocean and bay shoreline from Fire Island Inlet to Montauk Point. The planning area extends across the bays to the mainland of Long Island (all in Suffolk County). In some locations, the study area extends northward to Sunrise Highway. Recent media reports indicate that the study is slated to be completed in the near future. Upon approval, funding will become available to complete projects recommended by the study. It is expected that this will include increasing the height and width of the primary dune on the ocean side of the island and widening the beach face. There are also components of the plan that could affect the South Shore and could potentially involve the Village of Babylon and West Babylon. Possible projects that have been reported include raising houses and roads and buy-outs of certain highly vulnerable properties. Details are expected when the study is completed.

Together, these plans have formed the initial basis for an overall understanding of existing conditions as well as the desired vision for the future of the community.

The Jacobs/Cameron Team (NYRCR Consulting Team) will continue to identify pertinent technical studies as they are found and will work to integrate the findings and conclusions of these studies into our work where appropriate.

6. Community Vision

The first major step in the NYRCR planning process involved the development of a vision statement that captured the community's vision for its future. The Village of Babylon and West Babylon Committee members established a vision tailored to the specific goals and objectives unique to their community. The intention is to address damage caused by Sandy, Irene and Lee; capitalize on social and economic assets to improve the local economy; and rebuild a more resilient community to reduce future risk, all while preserving the character and appeal of the community and its assets.

Goals established by the Committee during the visioning process focused on:

- Opportunities for innovative and green reconstruction and resilience projects with potential for economic growth;
- Buildings, infrastructure, or services that must be built, rebuilt, or relocated to sustain service in response to future hazards;
- Development and implementation of long-term, cost-effective and environmentally-sound mitigation projects to make the community more resilient in the future;
- Protecting buildings/areas that are part of the area's heritage (e.g. Historical Society, Conklin House, Old Town Hall, houses of worship, Argyle Park)
- Making Village Hall, local fire departments and other public facilities more resilient with proper communication and safety measures to better serve the community;
- Promoting the use of disaster-resistant building technologies in high-risk areas (e.g. a community/ crisis center that would float rather than flood)
- Creating a strong educational outreach program to provide information, Ensure that a system and adequate infrastructure is in place for notification, evacuation and emergency response
- Protecting vulnerable populations from future hazards, and improving emergency response protocols for elderly and special needs populations where necessary;
- Protecting key assets of the Village downtown commercial district including businesses and services;
- Protecting the shoreline, and minimizing the impact of coastal and watershed flooding, and the potential for flood damage to property and loss of life.
- Reduction of risk to assets from frequent natural disasters through relocation, elevation, or safer reconstruction;
- Expanding the availability of affordable housing types to better accommodate post-storm and post-buyout housing demands; and
- Resilience awareness and education.

The community vision was further refined during the first public engagement event, which was held on September 26, 2013 at the American Legion Hall in Babylon. During the event, local residents were asked "What is great about your community?" and provided with post-it notes to write a word or short phrase in response and post it on a board. Their contributions will be turned into a "Community Word Cloud," brought to future events and potentially added to over time. Next, attendees had the opportunity to view the draft vision statement developed by their Committee and to respond with their own additional statements.

Participants provided numerous items that they value within their community. These items have been summarized below in the table, and shown as a word cloud at the right.

Sense of community	Waterfront & beaches
Parks	Pools
The Library	Schools
School sports	Trains
Fishing & boating	Fire Department
Healthcare resources	Helpfulness of friends
Fellowship	Support
Good neighbors	

After incorporating public input from the first public engagement event, the Committee approved the following Vision Statement:

Vision Statement

The residents of Babylon Village, West Babylon and Venetian Shores are committed to developing stronger, more resilient communities by implementing innovative infrastructure projects, land use policies, "green" technology and emergency management procedures to better prepare for natural disasters and to preserve the region's historic and nautical character and quality of life. We will accomplish those goals through sustained economic investment, improved communication, and strong educational outreach, which will provide an ongoing example of what can be achieved when communities come together with a common purpose.

The community vision sets the stage for the NYRCR Plan. It helps in the identification of needs and opportunities and leads to the formulation of strategies. From strategies, projects can be developed, refined and memorialized for inclusion within the full NYRCR Plan.

7. Community Assets

One critical element of the NYRCR Plan is to ensure that both reconstructed assets and new construction post-storm are more resilient against future storms. This begins with the preparation of a community asset inventory for each NYRCR Planning Area. The purpose of the inventory is to compile a comprehensive description of the assets located within as well as beyond the planning area (i.e., a resource that is physically located outside of the NYRCR planning area but whose service area encompasses the NYRCR planning area) whose loss or impairment due to weather events and/or flooding would put critical facilities and essential social, economic or environmental functions of the community at risk.

Generally, community assets include places or entities where economic, environmental and social functions of the communities occur in addition to critical infrastructure required to support those functions. Identified assets can consist of public and privately-funded facilities and services such as schools, hospitals and medical facilities, as well as emergency services including fire and police protection. Community assets can also include cultural, natural and recreational resources that play a critical role in a community's identity and that advance the health of the natural environment. These critical community resources promote the health, safety, and general welfare of the communities within which they are located. Aside from structures or services, another important community asset class relates to infrastructure and/or physical systems. These range from electric and gas utilities to key transportation routes which provide access to and within a community (i.e., roadways and rail systems). Concentrations of land uses such as those that would comprise a downtown commercial district were also noted.

Numerous data sources were reviewed and local community and Committee feedback were used in order to identify assets within each NYRCR planning area. These assets were characterized based on their location relative to risk area designations/flood hazard regions, classification as a critical or non-critical facility as well as asset class guidance provided by New York Rising Community Reconstruction Program documents.[iv]

Initial Asset Inventory

The identification of known assets is an important step in developing strategies to improve the resiliency of New York Rising Communities. The mapping effort is intended to supplement the work of the local New York Rising Community Reconstruction Program Committees, identifying resources that may be inaccessible to the public but regulated by a public agency (such as undeveloped parklands and marshes), as well as those that may hide in plain sight—assets vital to the community's health and resilience that go unnoticed on a day-to-day basis because they only become obvious when they fail, such as small roadway bridges and more obscure government service offices. The assets identified through the mapping effort will be combined with the asset data provided by the NYRCR Committee and community residents during committee and public workshop sessions. The result will be a complete picture of not only the physical assets themselves but their value as perceived by the community.

The thematic maps located at the end of this section illustrate various assets located within each NYRCR planning area. Map data is sourced primarily from geodatabase and shape-file resources provided by the New York State Department of State and supplemented by data readily available to the public through the New York State Department of Environmental Conservation. Some data sources were cross-referenced with the US Federal Emergency Management Administration (FEMA) HAZUS data sets for New York to verify the accuracy of the federal data, although in most cases, NYSDOS data was presented.

Risk Assessment

Risk Assessment Area data is included to convey graphically the risk level to various government services and community resources and suggest issues for further consideration in the development of strategies and projects. Understanding which areas have been and will be affected by storms and other threats such as sea level rise is the first step toward understanding what's at risk in the planning area. The three risk assessment areas – extreme, high, and moderate – depict geographic areas at risk from coastal hazards according to differences in the exposure of the landscape. Assets located in the extreme risk area are currently at risk of frequent inundation, vulnerable to erosion in the next 40 years, or likely to be inundated in the future due to sea level rise. Assets located in the high risk area are currently at infrequent risk of inundation or at future risk from sea level rise. Assets located in the moderate risk area are currently at moderate risk of inundation from infrequent events or at risk in the future from sea level rise. The tables in this section summarize the preliminary findings, listing the assets and the Risk Assessment Area where they are located.

1. Cultural, Natural, and Recreational Resources

The South Shore of Long Island has historically been and continues to be a natural and recreational resource. The area along the coastline is also the location most likely to be inundated during a storm event, but for undeveloped natural coastal resources, their location provides protective detention capacity lessening the impact of storm surges on inland locations. Many of these resources are relatively large in geographic area and span multiple risk assessment areas.

Cultural and Recreational Resources are named according to the data set provided by the responsible government agency. Natural features that are elements of the landscape and not given place names by an agency are not named or listed individually. When wetlands are associated with a waterbody, they are named as associated with that waterbody.

Five parks are located within the Village of Babylon/West Babylon NYRCR Planning Area: Belmont Lake State Park, Southards Pond Park, Bergen Point Golf Course, Venetian Shores Park, and Argyle Lake Park. These parks are all located in risk areas. Belmont Lake State Park and Southards Pond are located partially in the moderate risk area. Bergen Point, Venetian Shores and Argyle Lake are all located near major water bodies and include areas at high and extreme risk.

Parkland Resources

Asset/Resource	Risk Assessment Area(s)
Belmont Lake State Park	Moderate and N/A
Southards Pond Park	Moderate and N/A
Bergen Point Golf Course	Moderate, High, and Extreme
Venetian Shores Park	Moderate, High, and Extreme
Argyle Lake Park	Moderate, High, and Extreme

The rivers and creeks that flow north to south through the NYRCR planning area are associated with several areas of freshwater wetlands, and the wetlands along Carlls River support a Natural Heritage Community.

Natural Resources

Asset/Resource	Risk Assessment Area(s)
Freshwater Wetlands associated with Carlls River, Santapoque Creek, Sampawams Creek, and the Babylon and West Babylon Creeks	Moderate, High, and Extreme
Natural Heritage Communities: Red Maple-Blackgum Swamp	Moderate

Two National Register-listed resources are located in the Village of Babylon/West Babylon NYRCR Planning Area. Both are north of Montauk Highway, in the moderate Risk Area.

National Register Listed Historic Resources

Asset/Resource	Risk Assessment Area(s)
Nathaniel Conklin House	Moderate
Babylon Town Hall	Moderate

2. Health and Social Services: Life Safety

Health and Social Services: Life Safety includes fire protection, police services, hospitals, and emergency operations facilities.

There are five Emergency Operations Facilities in Suffolk County. These facilities would coordinate emergency services during an emergency. Two of these facilities are along the South Shore of Long Island: the Babylon Town Civil Defense facility is located directly north of the Village of Lindenhurst NYRCR Planning Area and the Islip Public Safety facility is located between the West Islip and the Oakdale/West Sayville NYRCR Planning Areas.

The Village of Babylon/West Babylon NYRCR Planning Area has one police station, the Suffolk County Police Department, within it. The building housing the police department is located outside of the Risk Assessment Areas.

The Village of Babylon/West Babylon NYRCR Planning Area has eight Fire Stations within it from four fire departments. The Argyle, Babylon HQ, W Babylon 3, and Cedar St Fire Stations are all located in the moderate Risk Assessment Area. The four other fire stations are located outside of the Risk Assessment Areas.

There are no hospitals located within the Village of Babylon/West Babylon NYRCR Planning Area. The closest hospital, Good Samaritan Hospital Medical Center, is located in West Islip.

Police Stations

Asset/Resource	Risk Assessment Area(s)
Suffolk County Police Department	No Risk

Fire Stations

Asset/Resource	Risk Assessment Area(s)
Argyle HC	Moderate
Babylon HQ Fire Station	Moderate
E Farmingdale Fire Station 2	N/A
N Babylon Fire Station 2	N/A
W Babylon Fire Station 2	N/A
W Babylon Fire Station 3	Moderate
W Babylon HQ Fire Station	N/A
Cedar St Fire Station	Moderate

3. Health and Social Services: Administration and Education

Community assets reviewed in this category serve a variety of public functions, from health treatment facilities to general purpose shelters in public schools, and post offices to town halls. During a storm event, these facilities may potentially serve as critical disaster response and recovery centers, the identification of which is essential to future disaster management and preparedness.

A New York State Parks Recreation & Historic Preservation office is located in non-risk area in the northeastern corner of the NYRCR Planning Area adjacent to the Southern State Parkway.

NYS Facilities and Offices

Asset/Resource	Risk Assessment Area(s)
OPRHP - Long Island Region	N/A

A total of 22 Office for Persons with Developmental Disabilities locations are spread throughout the NYRCR Planning Area, 17 of which are sited in non-risk areas. The remaining five sites all fall within moderate risk areas in the southern portion of the NYRCR Planning Area near the Babylon LIRR station and marina areas.

NYS OPWDD State and Voluntary Program Locations

Asset/Resource	Risk Assessment Area(s)
Dzugas-Smith, Donna	Moderate
134 Park Ave., Apt 4U-IRA	Moderate
93 Clair Court	Moderate
Catholic Charity of Rockville Center	Moderate
WORC Park Ave VOIRA	Moderate
17 Facilities	N/A

Two post offices serve the NYRCR Planning Area, one in Babylon near the LIRR station and the other serving West Babylon in the northwest portion of the NYRCR Planning Area. The Babylon post office is located inside a moderate risk area.

Post Offices

Asset/Resource	Risk Assessment Area(s)
Babylon	Moderate
West Babylon	N/A

There are thirteen schools located in the NYRCR Planning Area, nine of which are located in non-risk areas. The remaining four schools are located in Moderate risk areas near the LIRR rail line and Montauk Highway. Four schools are identified by NYSDOS as emergency shelter facilities, as noted in the following table; all are within non-risk areas.

Schools

Asset/Resource	Risk Assessment Area(s)
Harding Avenue School	Moderate
John F Kennedy School	Moderate
Saint Joseph's School	Moderate
South Bay School	Moderate
Belmont Lake Junior High School	N/A
Belmont School	N/A
Forest Avenue School (Shelter)	N/A
Our Lady of Grace School	N/A
Santapogue School	N/A
Tooker Avenue School (Shelter)	N/A
West Babylon High School (Shelter)	N/A
West Babylon Junior High School (Shelter)	N/A
West Babylon School	N/A

Shelters

Asset/Resource	Risk Assessment Area(s)
Forest Avenue School	N/A
Tooker Avenue Elementary School	N/A
West Babylon High School	N/A
West Babylon Jr. High School	N/A

The Department of Transportation is located on John Street within a moderate risk area between Montauk Highway and Farmingdale Road. Three other state-owned buildings are identified in the NYRCR Planning Area and fall within non-risk areas.

State-owned Buildings and Properties

Asset/Resource	Risk Assessment Area(s)
Transportation Dept. - Hwy Maint., John St.	Moderate
Mental Health Main Office	N/A
Mental Health Main office - Lindenhurst Hostel #2753	N/A
Transportation Dept. - Hwy Maint., North Babylon	N/A

The Babylon village hall is located within a moderate risk area south of the Babylon train station and north of the marina.

Town/Village Hall

Asset/Resource	Risk Assessment Area(s)
Village of Babylon	Moderate

The Babylon Veteran Center is located in the southeast corner of the NYRCR Planning Area near Babylon train station north of the marina. It falls within a moderate risk area along Montauk Highway.

Veterans Affair Facilities

Asset/Resource	Risk Assessment Area(s)
Babylon Vet Center	Moderate

4. Infrastructure: Transportation

Data sets reviewed within this category include both transportation infrastructure as well as transportation-related facilities. Transportation assets within the Village of Babylon/West Babylon are catalogued below.

Major roadways extending through this NYRCR planning area include the Southern State Parkway, Sunrise Highway (SR 27) and State Route 109. Additionally, W. Montauk Highway/Main Street (SR 27A) is located mostly in a Moderate risk assessment area with a small portion from Argyle Avenue to Carlston Place designated in the Extreme area. Roadways beneath the elevated LIRR right-of-way such as Railroad Avenue/Trolley Line Road are in a Moderate area. Little East Neck Road from Waterman Street south to Montauk highway is in a Moderate area. Similarly, Great East Neck Road from Arnold Avenue to Montauk Highway is also in a Moderate area.

Long Island Railroad's (LIRR) heavily-utilized Babylon line provides frequent service to points west and east. This particular NYRCR Planning Area is home to one elevated LIRR station. In addition, one inter-city bus station, at 235 Deer Park Avenue, is located within the Village of Babylon/West Babylon NYRCR Planning Area.

A total of six LIRR spans, built in the early 1960s, were identified as being in poor condition based on state data. These resources are:

Bridges in Poor Condition

Asset/Resource	Risk Assessment Area(s)
LIRR Bridge crossing SR 109 (BIN # 7036910)	Moderate
LIRR Central Branch crossing Great East Neck Rd. (BIN 7709640)	Moderate
LIRR Montauk Branch crossing Great East Neck Rd. (BIN 7709980)	Moderate
LIRR Montauk Branch crossing Litchfield Ave. (BIN 7709990)	Moderate
LIRR Montauk Branch crossing Deer Park Ave. (BIN 7710010)	Moderate
LIRR Montauk Branch crossing Cooper St.	Moderate

Two grade crossings (Muncy Street, Albine Avenue) with two LIRR crossing gates each are located along the LIRR Central Branch within the Village of Babylon/West Babylon. This infrastructure is not within a risk assessment area.

NYSDOT facilities located within this NYRCR Planning Area are noted below.

NYSDOT Facilities

Asset/Resource	Risk Assessment Area(s)
N. Babylon (Salt Shed)	N/A
Babylon BC (Special Crew HQ)	Moderate
Babylon BC (Special Crew HQ)	Moderate

5. Infrastructure: Utilities

No major utility property was identified within the Extreme and High Risk Areas of the Babylon/West Babylon planning area. A number of utilities are present with the Moderate Risk Area including, in particular, the Bergen Point sewage treatment plant which serves the Southwest Sewer District, Suffolk County's largest sewer district. Gas, electric and water distribution systems are present throughout these Areas, but have not been identified and mapped.

Infrastructure Resources

Asset/Resource	Risk Assessment Area(s)
1 flood control property	Extreme
1 sewage treatment plant	Moderate
1 drinking water treatment plant	Moderate
2 drinking water wells	Moderate
2 microwave towers	Moderate
2 rail support facilities	Moderate
1 telephone utility	Moderate

6. Housing

A significant number of residential structures are at-risk of future flooding and/or storm surge events within the Babylon/West Babylon planning area. Almost 2,000 residential structures are located within the Extreme Risk Area while a smaller number, or approximately 230, are found within the High Risk Area. The Moderate Risk Area contains an estimated 4,325 single-family, 272 two-to-three-family, and 129 multi-family residential structures.

Housing Resources

Asset/Resource	Risk Assessment Area(s)
1,932 single-family, 63 two-three-family, 2 multi-family structures	Extreme
227 single-family, 4 two-three-family structures	High
4,325 single-family, 272 two-three-family, 129 multi-family structures	Moderate

7. Economic Centers

Over 90 percent of the at-risk commercial properties, or 228 parcels, are located along Montauk Highway and within the Moderate Risk Assessment Area. Approximately 20 at-risk commercial properties are situated in Extreme and High Risk Areas south of Montauk Highway. In addition, there are over 30 industrial properties to the north of the planning area; these are located adjacent to or near the Babylon Branch of the Long Island Rail Road and within the Moderate Risk Assessment Area.

Economic Resources

Asset/Resource	Risk Assessment Area(s)
18 commercial properties	Extreme
2 commercial properties	High
228 commercial, 34 industrial properties	Moderate

Initial Asset Inventory: NYRCR Committee and Public Outreach Contributions

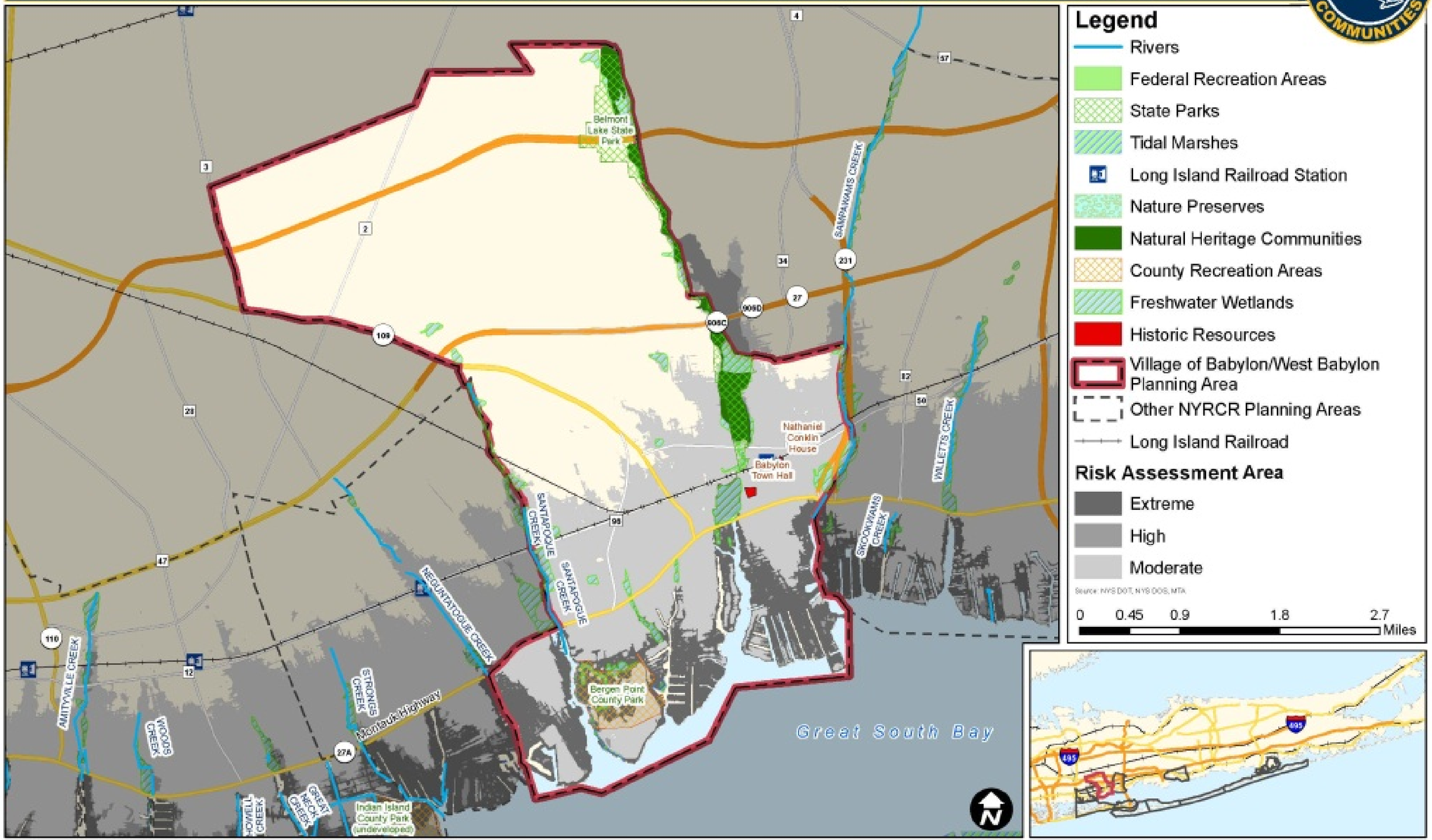
The initial plan was to have the GIS data driven maps discussed previously serve as a base for the asset inventory work of the NYRCR Committees and community residents; however, the urgency of the New York Rising Community Reconstruction Project required that the NYRCR committees begin assessing their community's needs and opportunities before the GIS data was available. The results of this approach proved to be beneficial: without a basemap of pre-identified assets, the NYRCR committees and community residents felt free to identify all manner of assets that were vital to the functioning and identity of their community. Community and regional asset identification was a top priority during initial Committee meetings. The committee broke into groups to analyze the risk assessment maps, and identify key assets, needs and opportunities. Later, at the public outreach event, the residents of the community were given the same opportunity.

As a result, the NYRCR Committee and community input maps call out typical assets, such as police and fire stations, but also important community features, such as popular restaurants and meeting halls that serve as community centers. This latter category is vitally important as the services of these community centers, such as VFW halls and other civic organization headquarters, have established themselves as resources during times of crisis, centers for normalizing and stabilizing community identity in the aftermath, and places of celebration during good times.

The NYRCR Committee and community input maps of assets are shown on the following pages. This data will be reconciled with the GIS data to complete the whole picture of assets, needs, and opportunities in the NYRCR Planning Area.

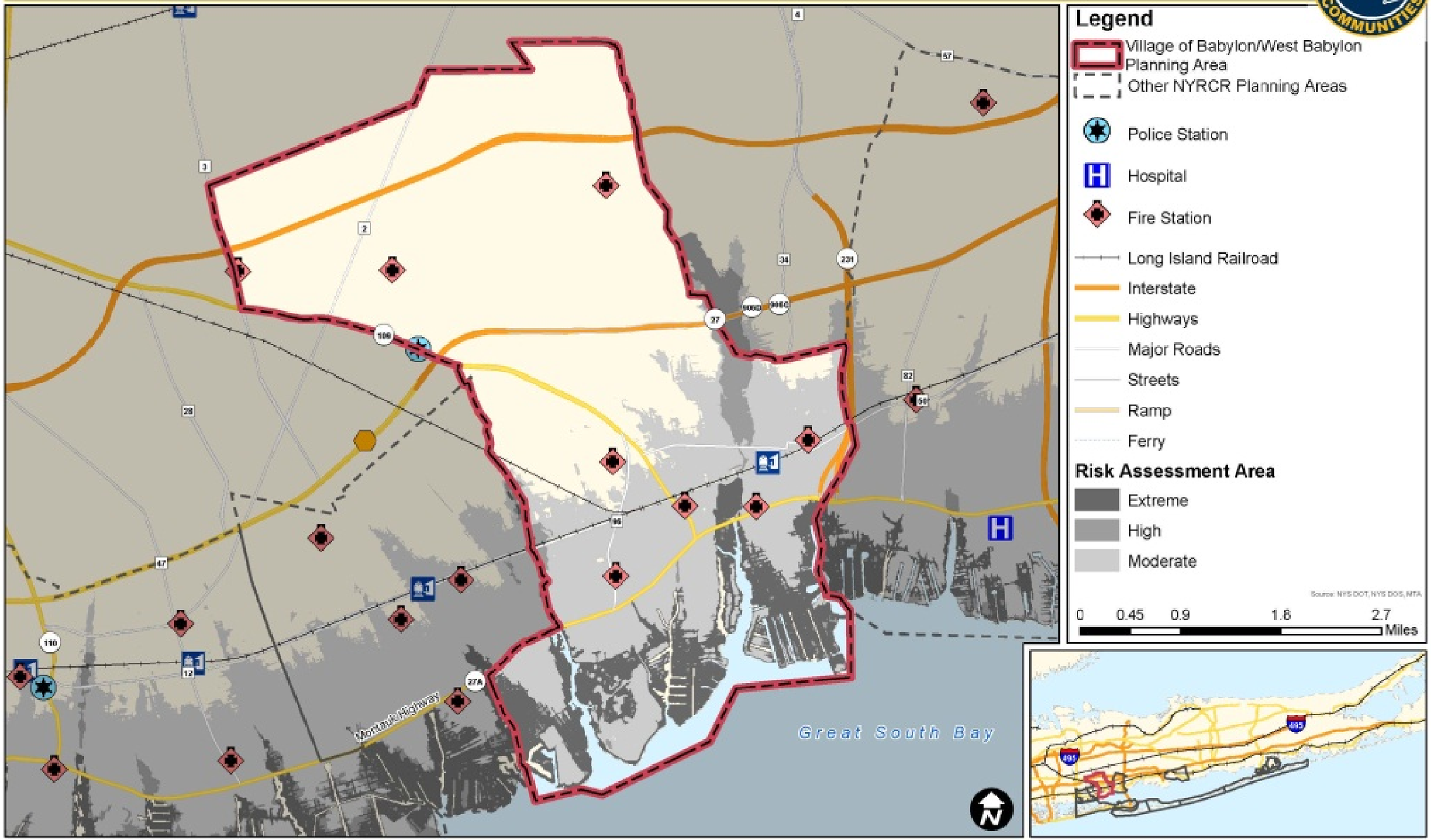
NYRCR: Village of Babylon/West Babylon

National Register Historic Resources, Natural Resources, and Recreational Areas



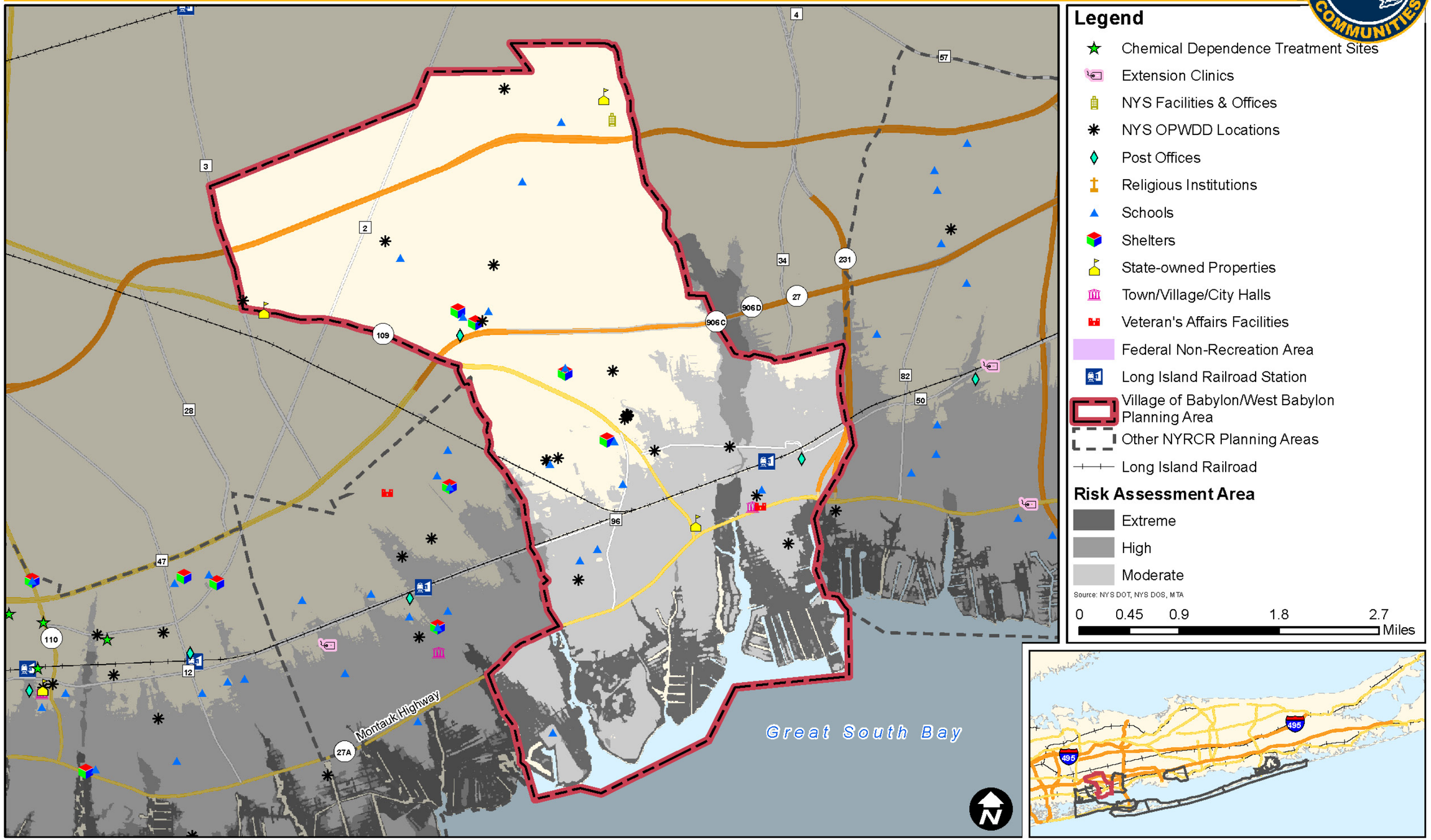
NYRCR: Village of Babylon/West Babylon

Emergency Services

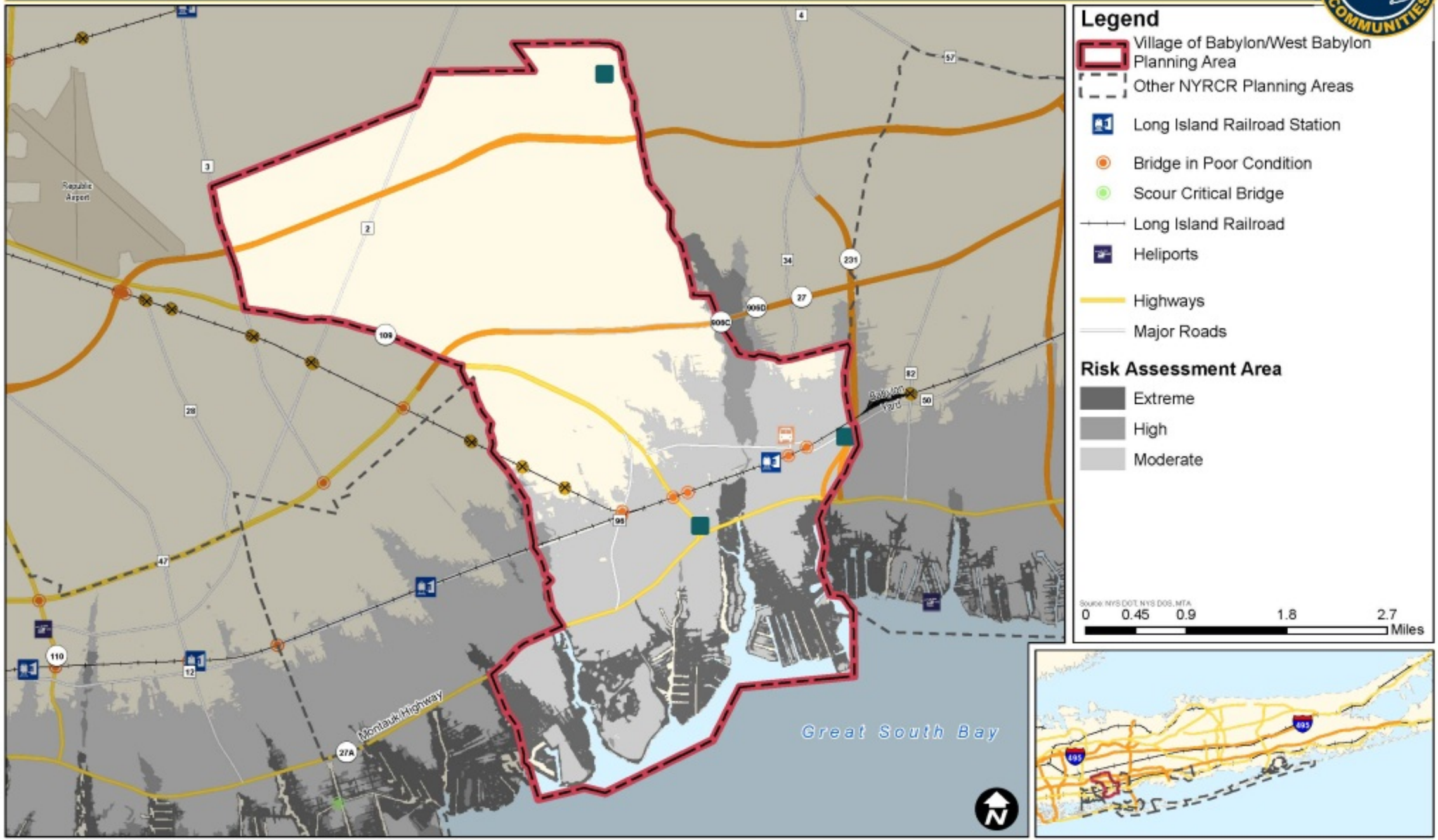


NYRCR: Village of Babylon/West Babylon

Health and Social Services: Adminstration and Education

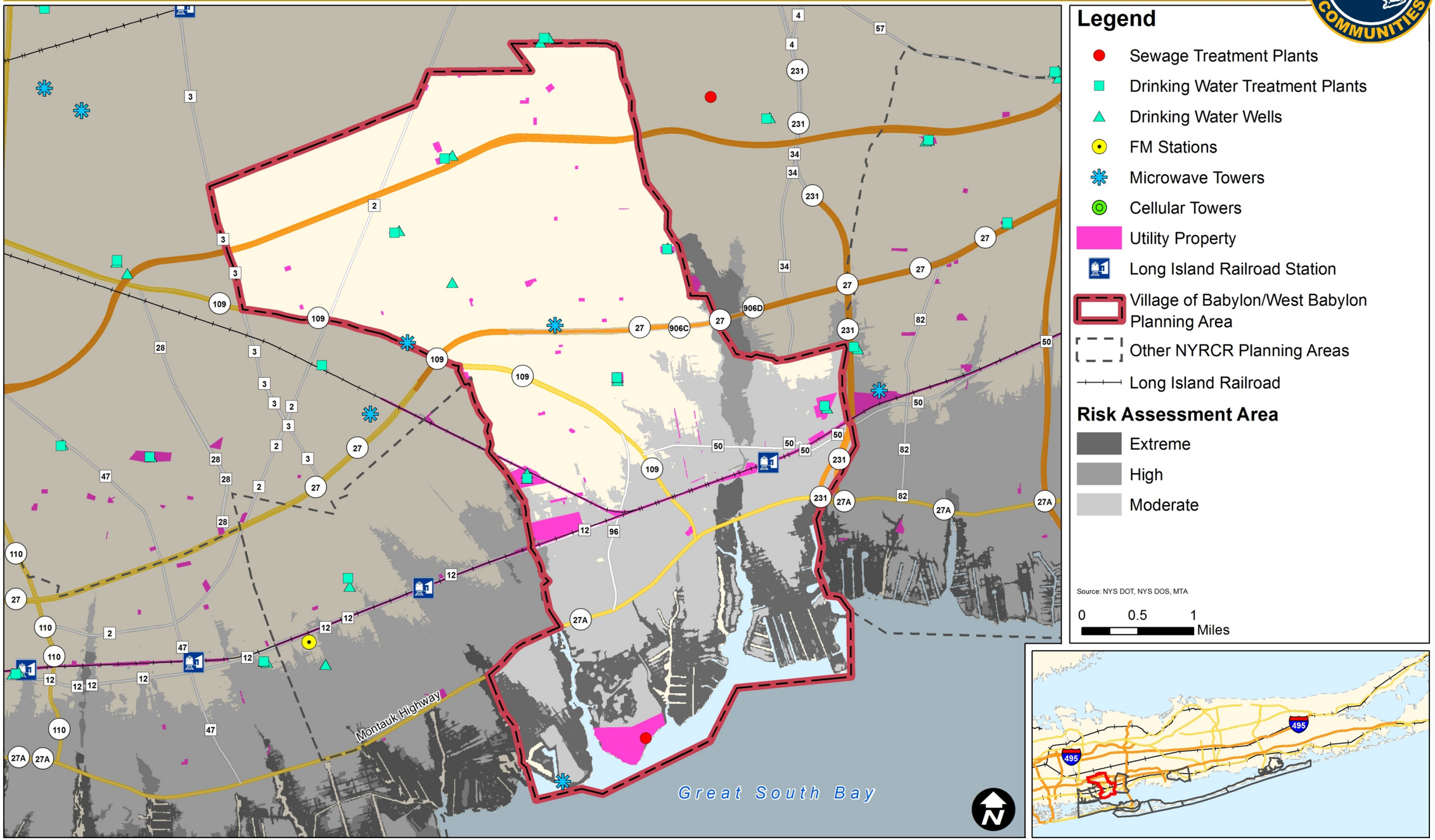


NYRCR: Village of Babylon/West Babylon
Transportation Assets



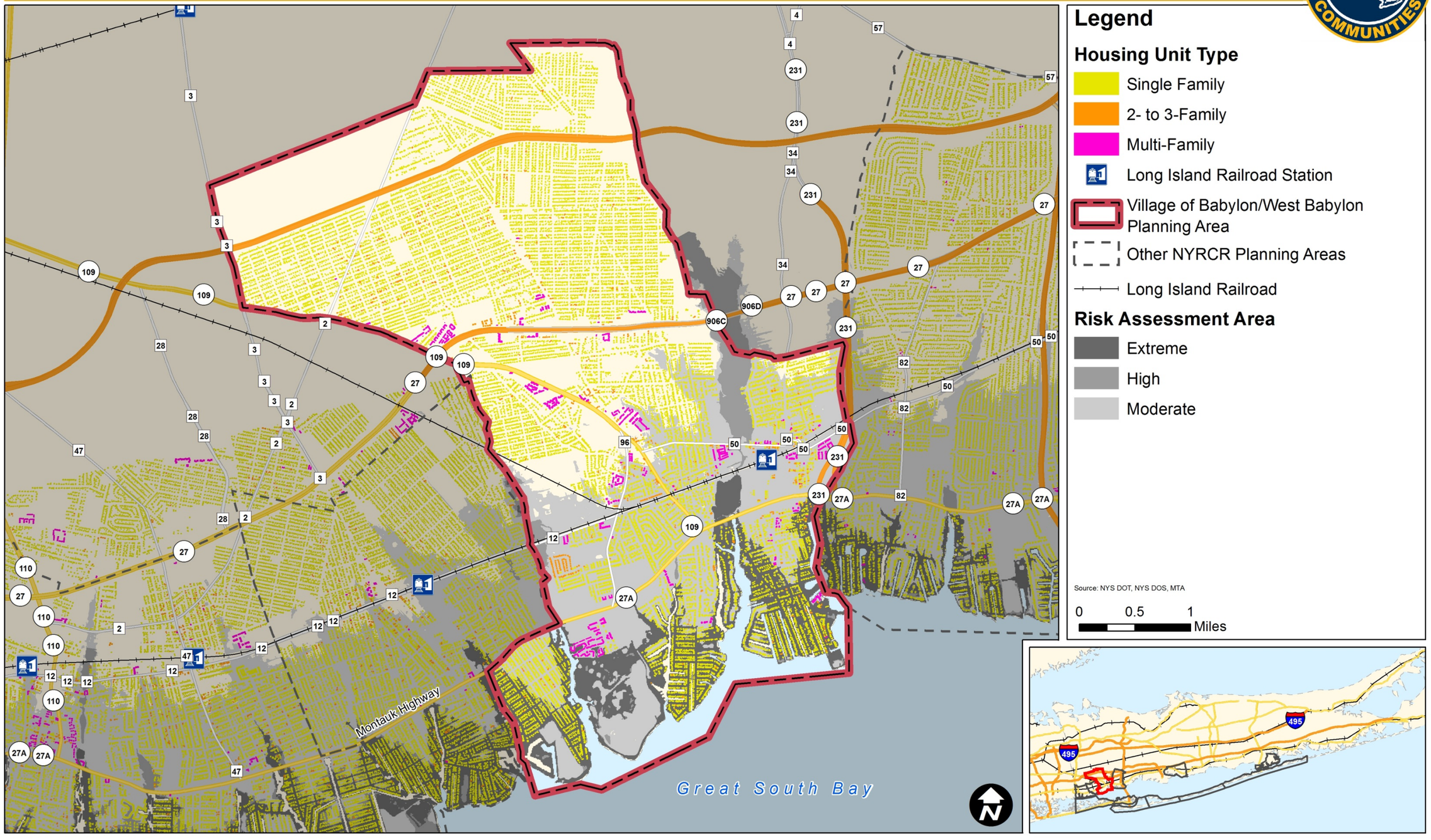
NYRCR: Village of Babylon/West Babylon

Utilities



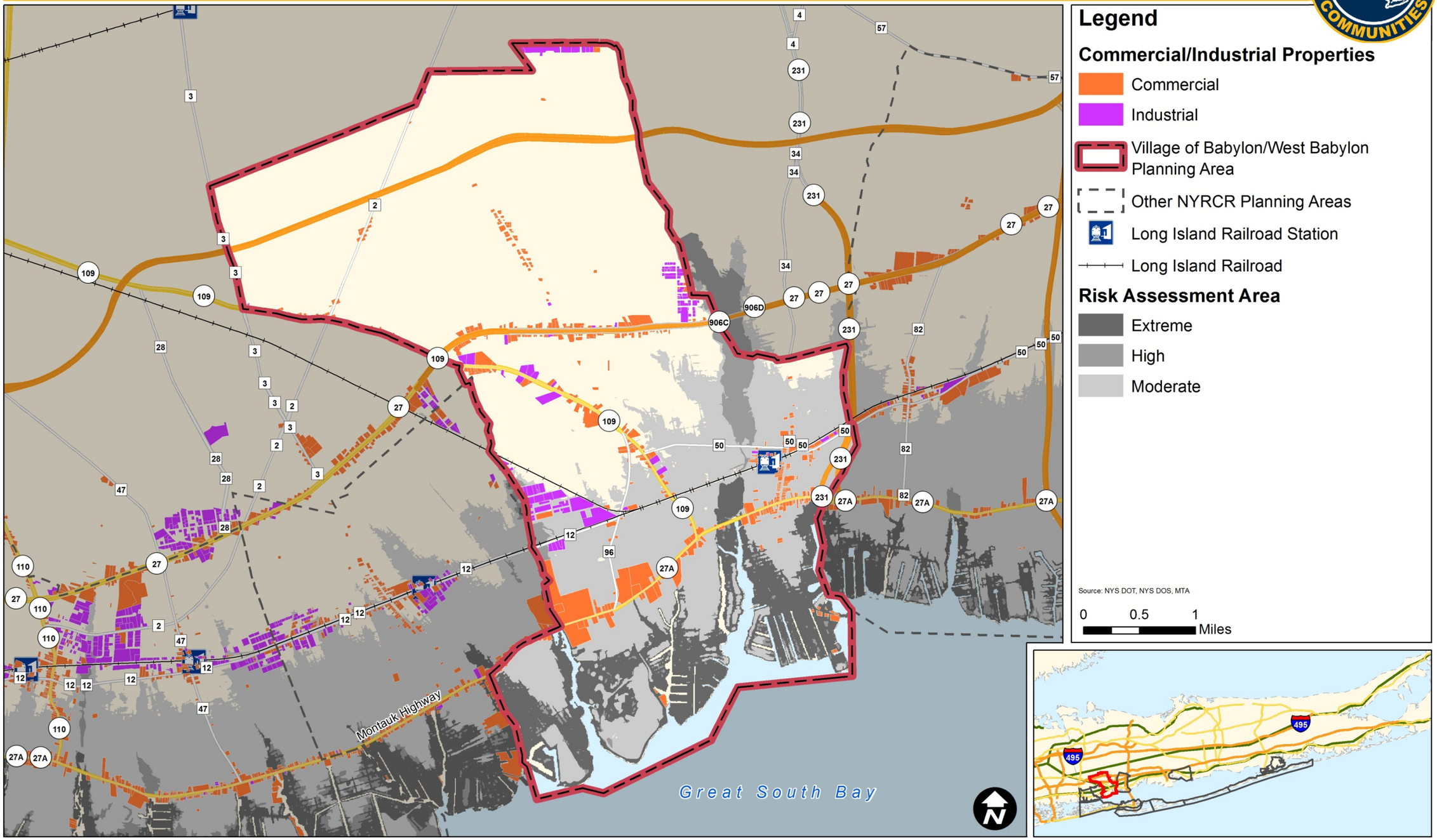
NYRCR: Village of Babylon/West Babylon

Housing: Single- and Multi-Family



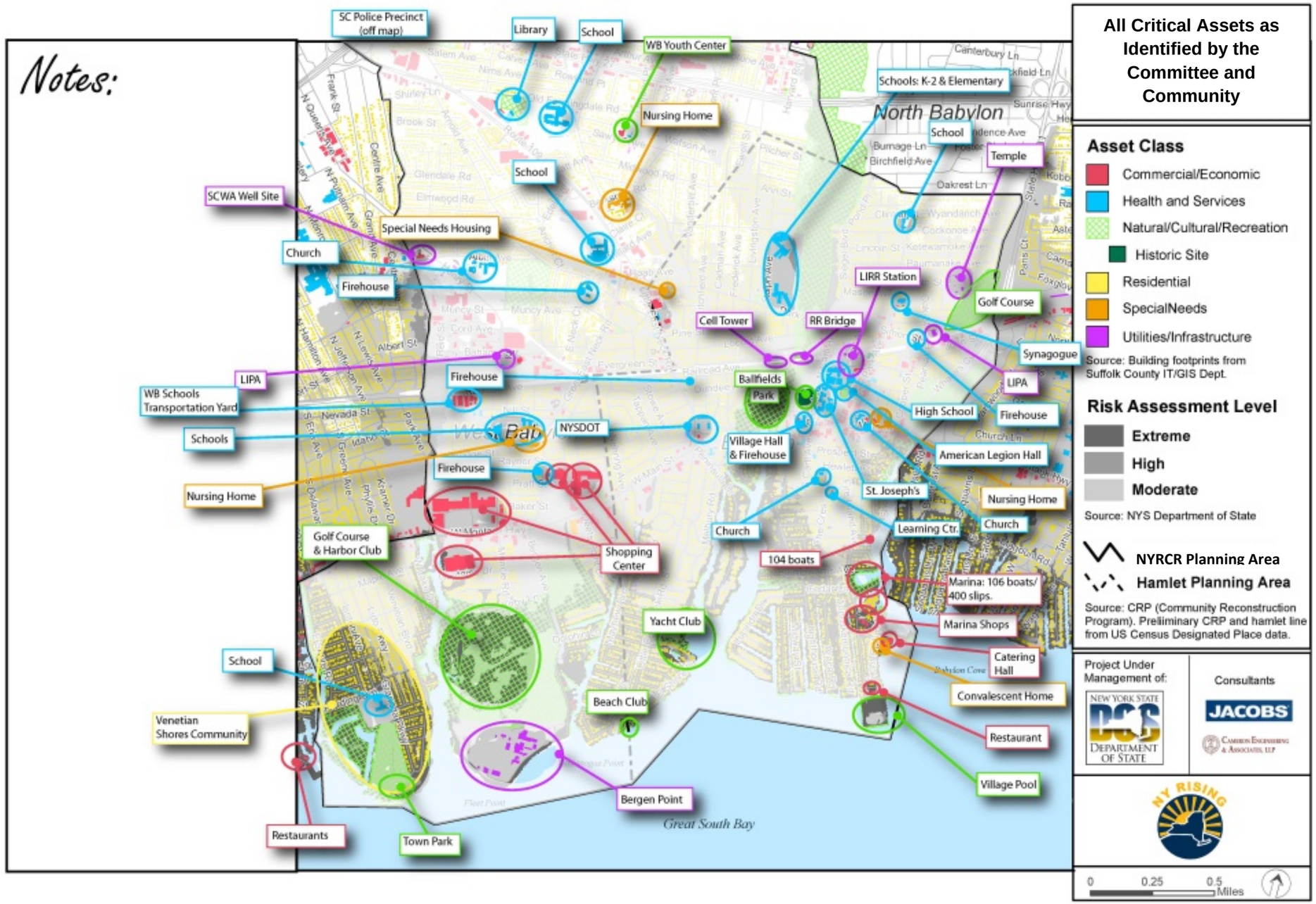
NYRCR: Village of Babylon/West Babylon

Economic Assets: Commercial and Industrial Properties



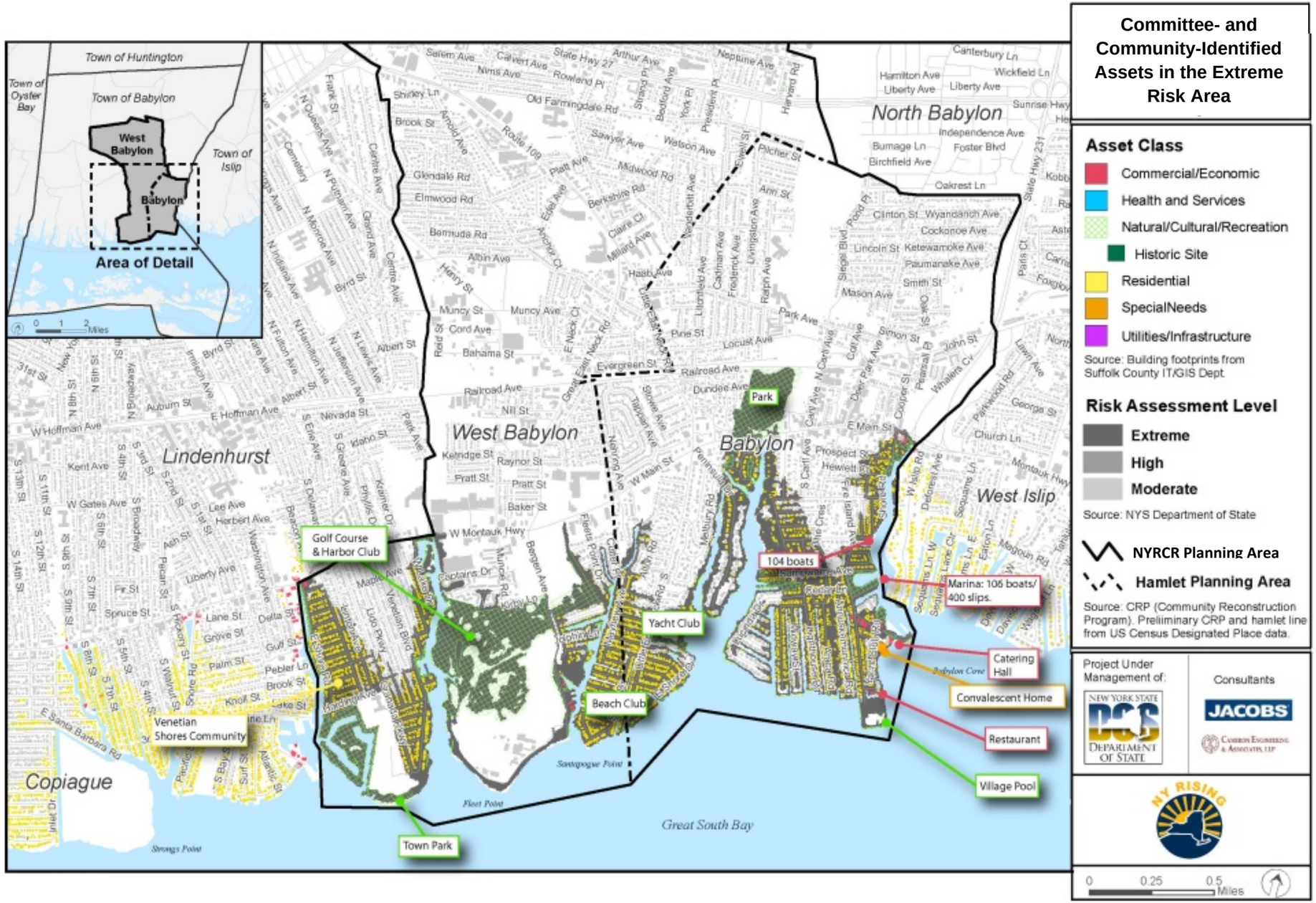
NYRCR: Village of Babylon/West Babylon

All Critical Assets Identified by the Committee and Community



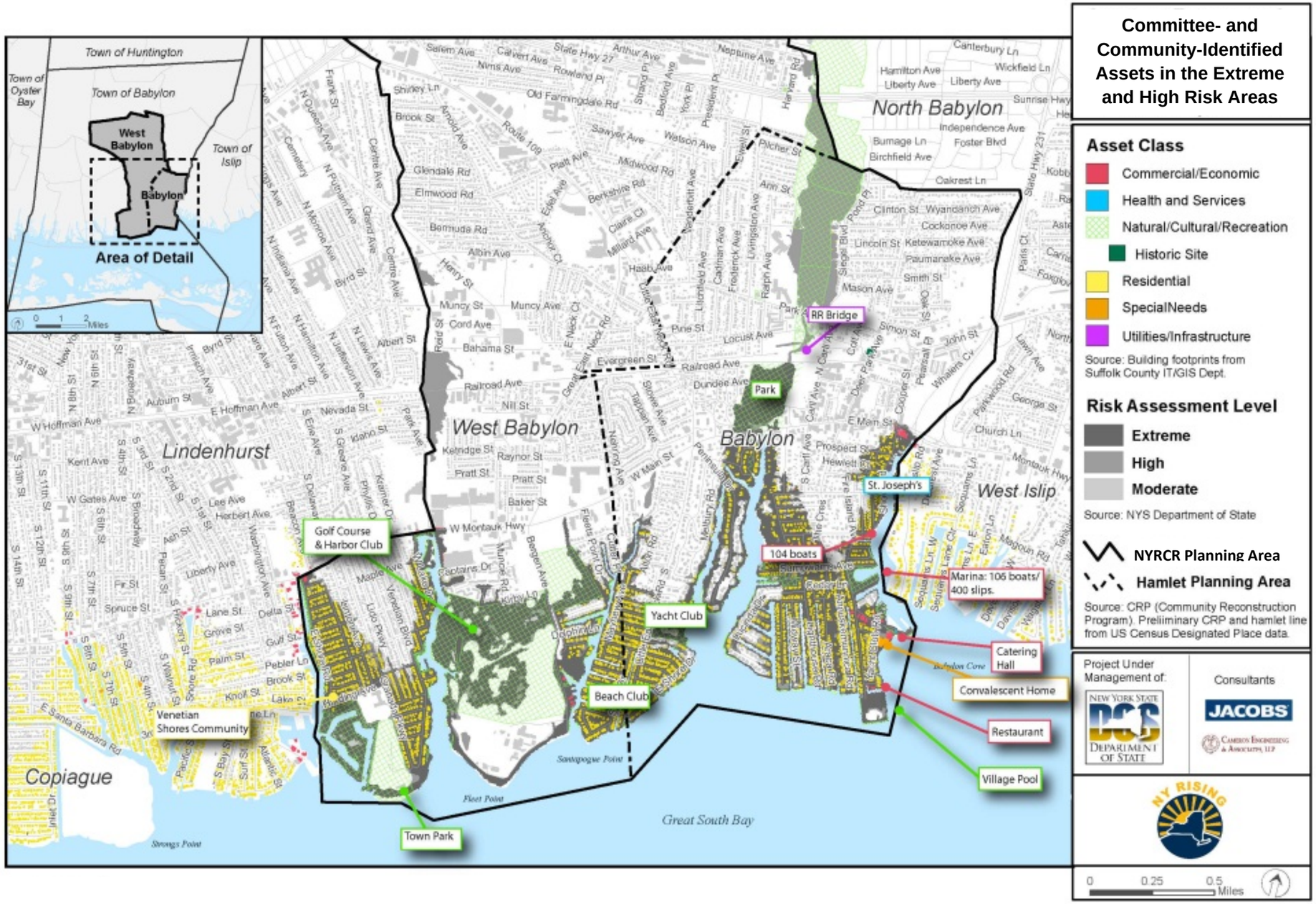
NYRCR: Village of Babylon/West Babylon

Committee-and Community-Identified Assets in the Extreme Risk Area



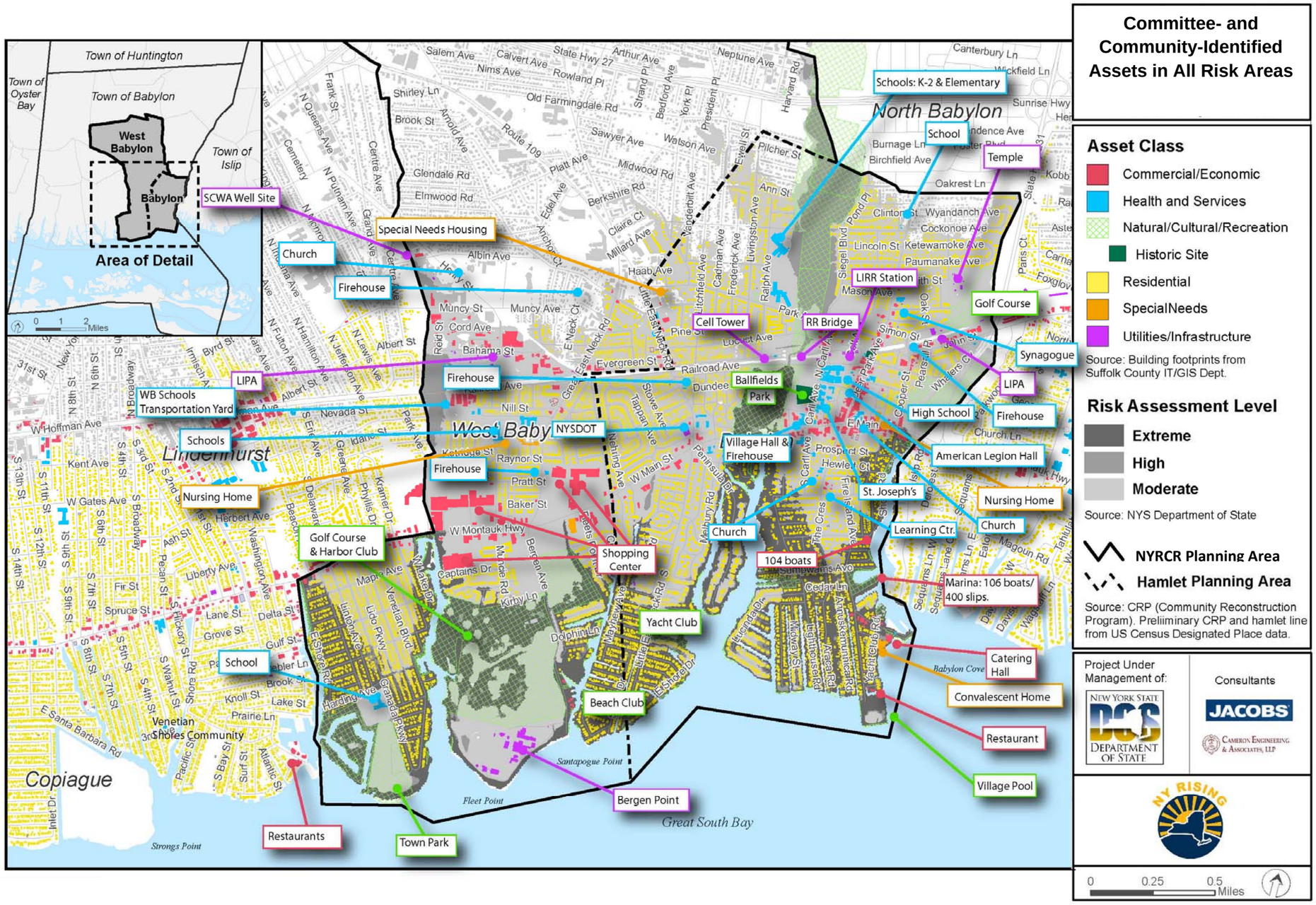
NYRCR: Village of Babylon/West Babylon

Committee-and Community-Identified Assets in the Extreme and High Risk Areas



NYRCR: Village of Babylon/West Babylon

Committee-and Community-Identified Assets in All Risk Areas



8. Needs/Opportunities and Strategies

Determine Needs and Opportunities

The Community Reconstruction Program aims to develop a community-based plan that achieves the following three goals: define the rebuilding strategy, achieve resilience and spur economic development. The Plan is guided by the community vision and developed based on the needs and opportunities identified by the community, which is in direct response to the community assets developed earlier by the Committee. Once these needs and opportunities were identified, strategies were developed to implement the community's reconstruction and economic growth goals. The development of implementation strategies is guided by at least the following factors:

- Risk assessment
- Combined benefits
- Critical facilities
- Value to the community
- Coordination with other improvements
- Life-cycle costs
- Availability of funds

Several strategies will be considered priority strategies as they have the potential to both reduce risk to critical assets that serve the greatest number of vulnerable residents. Actions that simultaneously protect the built environment while preserving natural and cultural resources are preferred.

While the committee and community members were encouraged to "think big" during the initial phases of the project, the committee and project team will ensure that the community's plan focuses on feasible and realistic projects. With this in mind, the project team will work to refine strategies and projects based on several metrics, including detailed cost-benefit and risk assessment analyses.

While many residents and businesses need to rebuild quickly to get back into their homes and reopen their businesses, there are long-term needs and opportunities that can be addressed as part of the recovery process. This is a vital part of the Community Reconstruction Program, as many impacted businesses were already suffering from the economic downturn before the storm.

The post-disaster environment also presents opportunities to rebuild in such a way to create a community that is stronger and more resilient to future storms. Resilient communities tend to have redundant infrastructure and communication systems, diverse and flexible adaptation strategies, and collaborative public and private partnerships involved in managing risk. Some future environmental changes will be difficult to predict, necessitating flexibility and adaptive capacity. Continued progress toward resilience will require increasing adaptive capacity and innovative solutions to address risk.

The NYRCR Plan is built around six recovery support function categories, which include: housing, community planning and capacity building, infrastructure, natural and cultural resources, economic development, and health and social services. The Committee and Sub-Committee identified key needs and opportunities within the six asset categories. The Committee's efforts were performed in smaller group "break-out" sessions over the course of two Committee meetings. Following is a discussion of the needs, opportunities and strategies formulated during the proceedings, followed by a table that summarizes this information.

Housing

Like many communities on the south shore of Long Island, the Village of Babylon and West Babylon flourished as summertime destinations for those looking to escape New York City. During this time, which predated environmental and floodplain regulations, large swaths of wetlands and marshes were filled and subdivided into the now-familiar suburban pattern of development. As a result, much of the area remains highly vulnerable to flooding and storm impacts. The NYRCR Committee has identified the following needs and opportunities and associated strategies related to housing.

Develop codes, policies and incentives to encourage disaster-resilient housing.

Community reconstruction and new residential construction should be rebuilt according to clearly defined requirements that promote resiliency during future storm events. Local codes and regulations should be updated to protect new / rebuilt homes and avoid high flood insurance costs. Building plan review should ensure minimum flood plain development requirements, including elevations, anchoring and utility protection Inspections should be strengthened and new and existing regulations should be adequately enforced. Incentives should be formulated to address movement out of the extreme and high risk areas over time, as well as the funding of retrofits for non-conforming conditions, including:

- Securing fuel oil tanks to prevent flotation during flooding
- Elevating homes
- Elevating/hardening critical equipment (e.g., boilers, electrical panels)

Update building codes, land use regulations, and design code for green construction.

The community should identify building codes that can be enhanced to promote green development, including green infrastructure; the community can work with the Codes Division of the NYS Department of State in its future review and revision of the State Building Code. Existing standards developed by the U.S. Green Building Council can be implemented into new construction and incentives can be established to promote green, efficient retrofits and a reduced carbon footprint. Locations should be identified that stand to benefit the most from implementing green technology. Existing incentives and resources can be identified that can assist in the funding of such projects. The development of comprehensive land use plans, both for the Village of Babylon and the hamlet of West Babylon, would provide the necessary framework to develop and implement these code changes.

Establish service to identify temporary housing following major storm events.

Identifying the availability and location of housing during the aftermath of the storm was a great challenge to the Village of Babylon and West Babylon Community. A mechanism should be established to identify and disseminate temporary housing information to those in need. Information should include availability and location and be available on mobile devices. Online message boards/forums can be created that cater to temporary housing and may even be crowd-sourced. Locations and availability can be discussed on the forum and information updated remotely and instantaneously. Utilizing existing electronic sign boards should be coordinated to help reach the local population.

Protect the preservation of historic properties and structures.

The region's rich historic and nautical character is of paramount value to the community and its preservation and rehabilitation have been incorporated into the Community's Vision Statement. Historic properties in the Village of Babylon and West Babylon should be identified with assistance from the local Historical Society. Structural enhancements, modifications or relocation options should be considered to help maintain the appeal of the community. Some structures could be restored as museums, for commercial use, or as bed and breakfast establishments.

Community Planning and Capacity Building

Communities that are represented by local governments can have an advantage in terms of land use planning and emergency preparedness. The Village of Babylon and West Babylon NYRCR Planning Area includes both an incorporated village and an unincorporated part of the Town of Babylon. Planning and actions for the area inside the Village boundary fall to Village officials and staff. Plans and strategies for the properties in West Babylon fall to Town officials and staff and in some cases to community organizations. As such, NYRCR strategies must take into account the differences in land use control across the two communities. Certain strategies will require new or amended zoning codes to improve economic vitality, reduce risks, and incentivize resilience, which will require coordination between the Village government and the Town government.

Improve emergency evacuation preparedness and procedures.

The Village of Babylon and West Babylon community should prepare for future storm events through the development of a comprehensive, shared emergency preparedness plan. The development of a local emergency preparedness plan would help all community and emergency response personnel synchronize efforts during and after the storm. A key aspect of the plan should be to identify and mark out existing and potential evacuation routes as well as alternate routes in the event that one becomes impassable. The Committee recommended conducting public education efforts to help disseminate the key strategies of the Plan as well as information on impact on life-safety, property and preparedness measures.

Infrastructure

Much of the infrastructure in the Village of Babylon and West Babylon was constructed during the post-World War II Boom and is therefore not designed to today's standards. Stormwater systems are generally undersized for the decline in pervious areas and increased development. Many of the systems also discharge to sensitive waterbodies degrading natural systems. Today, stormwater management is guided by EPA regulations and State oversight that prefer 'green infrastructure.' Green infrastructure systems are more natural, and absorb and recharge rainwater closer to where it falls. Climate change scientists predict that rain storms will become more intense and droughts more frequent. Those conditions will lead to more frequent and potentially damaging inland flooding. The Plan should address stormwater management and the potential for increased flooding. The Plan should incorporate green infrastructure into the landscape (*e.g.*, rain gardens, bio-retention areas). In addition to the severe flooding, stormwater conveyance systems experienced backflow conditions as high floodwaters pressurized the pipes.

Additional infrastructure includes roads and facilities for communication, transportation, and government operations. While many of these facilities are under the control of other entities (*e.g.,* state and county roads, private communications equipment), their functions are critical to the community.

The Village of Babylon and West Babylon Community also has existing infrastructure devoted to shoreline hardening including bulkheads, piers, and docks. Some of these structures worked well to protect and preserve shore-side facilities, while others may have accelerated erosion and sand loss and led to the loss of tidal wetlands.

Ensure that municipalities and first responders, including fire departments, have the necessary resources to prepare for and protect the public, property and the natural environment during and after disasters.

The services provided by municipalities and first responders during the Storm were nothing short of heroic. Emergency responders should be well prepared to safely and effectively assist the needs of the communities that they serve. Materials and equipment for emergency responders and municipal personnel for rescue operations and addressing other hazards (hazardous materials, fires, restricted access, etc.) should be provided and maintained.

Strengthen and harden the infrastructure servicing downtown Village commercial district.

The Village downtown commercial district is a unique asset in that it consists of a concentration of key assets in and of itself (i.e. Village hall, fire houses, schools, places of worship, businesses, etc.). While the concentration of key assets presents a higher level of potential vulnerability, the Committee recognized the opportunity to address the cluster of key assets "holistically" rather than individually. Committee members suggested strengthening the downtown by implementation of micro-grid technology to help maintain power in the district during storm events. Innovative green technology and power can be incorporated into the micro-grid to provide further resiliency and back-up power sources. The installation of green technology could be incentivized or make use of existing incentives to help secure funding

Acquire environmentally sensitive land in flood zones and watersheds to reduce exposure and provide flood and stormwater storage and mitigation.

The Community should identify potential stormwater storage locations to reduce flooding by increasing ground infiltration. Some of these areas might be used for outdoor recreation and as gathering places during dry weather. Tidal flow check valves should be installed in the piped stormwater system to prevent back flow onto streets during storms and high tides. Funding could be provided for the acquisition of such properties through existing open space programs.

Repair, enhancement and/or relocation of infrastructure (roads, culverts, sewer, communications etc.) to reduce flooding.

Both the Village and Town must perform regular maintenance on public infrastructure such as culverts and dams and ensure proper capacity and function. In an area that is susceptible to both upstream and downstream flooding, it is critical that infrastructure is regularly updated and maintained.

Improve communications systems before, during and after disasters.

The Village and Town should work with the Suffolk County Office of Emergency Management to improve and link local emergency communication systems. Developed with local emergency service personnel and first responders, the communication system should disseminate warnings and evacuation notifications, coordinate responses to emergencies, provide timely status updates, and assist in recovery efforts.

Repair, replace, or enhance critical shoreline stabilization infrastructure.

The Village, Town, County, and NYS DEC should work together to identify critical areas and vulnerable assets, evaluate a variety of structural and natural approaches and determine the technical and regulatory approach required to improve shoreline infrastructure. Shoreline facilities, such as marinas and boatyards, should provide as much public outreach as possible to ensure that boat owners secure their boats properly. This will help to protect shoreline infrastructure as well as the local community.

Natural and Cultural Resources

It was clear from Hurricane Katrina and subsequent Gulf Coast storms that natural systems play a critical role in the protection of coastal communities. Vast acres of Gulf coast wetlands were lost in the decades prior to Katrina and the protection they offered New Orleans and the other communities was severely degraded. Long Island faces a similar situation. Many of Long Island's south shore communities, including sections of Babylon and West Babylon were constructed on former wetlands. Portions of the coast have been hardened by bulkheads and no wetlands remain. Since upland wetland migration is not possible along bulkheaded shores, the wetlands eventually die and the natural wetland buffer disappears. It may be prudent in some areas to replace degraded bulkheads with more natural shoreline treatments. Green infrastructure can help mitigate the harmful effects of stormwater on coastal resources and can provide storage that doubles as public or green space.

Natural and cultural resources can play a very large role in the future of the Village of Babylon and West Babylon. These features are critical during storms as they reduce the velocity of waves and thereby lessen inland damage. Wetlands also filter the stormwater that runs off the peninsula, cleansing it before it enters the Great South Bay. But the wetlands of the Village of Babylon and West Babylon offer more than storm protection and the treatment of runoff. The shoreline environment, including wetlands, creeks and coves, is also what makes this shoreline beautiful and attractive to both residents and visitors. The Committee and public share the understanding that the waterfront is what makes this community special. The wetlands and estuary are also critical in supporting the area's maritime economy. In the United States, approximately 75% of commercially and recreationally caught fish and seafood rely on estuaries during their life cycle. Many of the community's needs and opportunities and the strategies that derive from them revolve around their natural resources.

Designate land as protected open space to reduce exposure and provide flood and stormwater storage and mitigation.

Committee members expressed a strong interest in designating more land as protected open space to enhance stormwater management and reduce impacts from coastal flooding. The Community could place key parcels into public ownership or conservation easement for flood protection, public access or specific recreational use. Properties that are adjacent to State-regulated wetlands and inside the extreme risk area should be identified for potential acquisition.

Protect tidal wetlands and other natural infrastructure.

As discussed earlier, new regulations and/or incentives should be developed to prevent the release of petroleum and hazardous materials in flood prone areas. In addition, the Village and Town can look to strengthen existing land use and floodplain management regulations to protect wetlands and other forms of natural infrastructure.

Restore public recreational infrastructure for residents and tourists.

Identify safe, interesting and scenic routes that may be combined to develop a network of bicycle trails. On-road and off-road routes that connect destinations and assets should be identified and mapped out. The Committee identified the strategy of adopting a Complete Streets policy interconnecting the Babylon Village Main Street and the waterfront district.

Restore/conserve natural resources (e.g., wetlands, dunes) to reduce vulnerability (both at the local and regional levels).

Dunes on local barrier beaches must be sufficiently tall and wide to withstand the most severe storms. The system must be unbroken between inlets or storm water will pass through the breaks. In addition, dunes must be sufficiently vegetated to maintain some level of structural integrity during storm events.

Economic Development

Businesses in the Village of Babylon and West Babylon NYRCR were directly affected by the storm. They lost business while rebuilding and reopened in some cases to a smaller customer base. Many took loans to rebuild, which added to debt they may have had from the recession. Many rebuilt quickly to reopen and are as vulnerable today as they were before the storm. In many cases, commercial property owners have left improvements to their tenants.

Both the Village and Town were already dealing with declining real estate and sales tax revenues throughout the recession. Superstorm Sandy generated large infrastructure repair and replacement bills for the NYRCR communities. Although FEMA will reimburse municipalities for most of those costs, completed repairs created deficits.

The NYRCR Plan is an opportunity for these communities to plan a strategy for economic recovery that addresses core economic issues like workforce development, business retention, attraction of new business, land use and zoning regulations, and the infrastructure needed to support economic development.

Economic development is perhaps the most critical element of a successful recovery. Economic opportunity is a vital part of a community's resiliency and ability to withstand catastrophic events. Communities rely on area businesses for employment, for goods and services, and for the tax revenue they bring to support municipal and school district services. Communities also depend on their local businesses for the recreational and cultural life that comes with an active and thriving downtown.

The Village of Babylon has a downtown commercial district oriented around its bustling Main Street. The well-established and historic downtown gives the Village of Babylon and West Babylon community a distinct advantage over other communities in terms of their existing economic assets. While West Babylon does not have an existing downtown center, there is significant opportunity to develop an identity for West Babylon and increase economic development within the hamlet.

Create an identity for West Babylon.

The Hamlet of West Babylon should create a hamlet center/hamlet identity along the Montauk Highway corridor (main business arterial) with long-term economic investment in the community. Strategies include the creation of a "hamlet green" achieved through property acquisition and/or public/private partnerships with existing land owners along Montauk Highway. Additionally, the Community should create a centrally located, town-wide/regional emergency disaster facility to provide space for recovery organizations, supply storage, temporary shelter facilities, etc. through the adaptive reuse of an existing underutilized building located along an existing rail spur. This project will also include development of natural and green infrastructure systems, such as constructed wetlands, to improve stormwater management within the community.

Strengthen Village downtown commercial district.

As touched on in the Infrastructure section, Babylon Village possesses a unique downtown in which dozens of key assets (i.e., Village Hall, Fire House, business district, schools, places of worship, American Legion, etc.) are concentrated in a very compressed geographic area. The Committee has identified the opportunity to address infrastructure resiliency, health/social services, emergency services, shelter, schools, and economic investment as a single entity. The possibility of a separate utility "micro-grid" for the area has been identified. Beyond the capacities of serving the community before, during and after a future natural disaster, this type of project would likely result in increased economic development, property values and overall improved quality of life for the Village and surrounding communities.

Strengthen recreational areas.

Both the Village of Babylon and West Babylon have a considerable amount of parkland, open space and recreational areas. Restoring and enhancing public access is vital to the long-term well-being of the community. Public events and new activities could help to attract other from across the region, which helps to increase commercial traffic and revenue within the community.

Strengthen Tourism

Several communities across Long Island have launched successful advertising campaigns highlighting the progress made since Sandy. The City of Long Beach in Nassau County has developed a well-publicized series of internet, television and print advertisements. Since these advertisements were launched, the City has seen several new businesses open as well as the establishment of new business services, such as the City's beachfront food truck area. Tourism in Babylon and West Babylon could take a similar approach in capitalizing on its unique assets. As a waterfront community, expanded fishing and charter services could help to restore the hard-hit local maritime industry.

Transportation improvements could also help to bolster tourism in Babylon and West Babylon. The adoption of a community-wide Complete Streets policy would help to address vehicle-pedestrian conflicts and improve connectivity throughout the area. A local trolley system could help to link the waterfront and downtown commercial area, providing car-free access to the area's most popular attractions. Similarly, local pedestrian and bicycle infrastructure improvements could greatly improve mobility within the relatively compact downtown district. These localized transportation improvements would complement existing transportation assets, such as the highly-traveled Babylon Branch of the LIRR and major local thoroughfares.

Health and Social Services

Nearly one year after Sandy devastated the south shore of Long Island, health and social service needs have not been completely restored. Many agencies and organizations that serve vulnerable populations suffered damage to their facilities. Others that may have been spared found their services and supplies severely taxed by the needs of storm survivors.

Promoting the long-term health and well-being of Sandy impacted populations requires an examination of the services currently available to communities including its most vulnerable populations. Health and social service providers should be able to continue to provide services during and especially after future storm events.

Develop a town-wide emergency communication system coordinated between government agencies, emergency personnel, schools, and the public.

The public and Committee agreed that communication was a critical requirement during and after the storm. The Committee suggested providing uniform communication devices for emergency responders and municipal entities during storm events. This would facilitate communication between key agencies and allow for a more efficient rescue and response effort. It would also allow first responders and emergency personnel an opportunity to communicate with and direct vital services into the community.

Create a centrally-located, town-wide/regional emergency disaster facility to provide space for recovery organizations, supply storage and temporary sheltering by re-purposing an existing underutilized building.

Emergency supplies were difficult to acquire immediately following the storm. The Community could stockpile ready-to-eat meals, drinking water, and other emergency supplies for use by emergency workers and the most vulnerable in the community at a centralized staging area. A centrally located facility would help to better utilize and coordinate existing resources.

Integrate the needs of the special needs population into laws, regulations and plans.

The community should prioritize special needs populations into everyday preparedness plans. If necessary, individualized contingency plans could be developed and filed with the Village, Town and County governments to ensure that the safety and well-being of vulnerable residents.

Regional Initiatives

Improve coordination with other emergency service providers, municipalities and key Institutional entities.

The community should work towards developing a town-wide or county-wide communication system for better coordination between emergency government agencies, emergency personnel, and schools. The public and Committee agreed that communication was a critical requirement during and after the storm. The Committee suggested providing uniform communication devices for emergency responders and municipal entities during storm events. This would facilitate communication between key agencies and allow for a more efficient rescue and response effort.

Address storm surge on Long Island in regional context.

As mentioned previously, both hard and natural infrastructure designed to mitigate the effects of a storm surge must consist of a system of continuous, unbroken components. The system will only be as effective as its weakest, most vulnerable component. If stormwater passes through the system at any location, it will render the entire mitigation system ineffective. For this reason, the Committee has expressed interest in evaluating the construction of inlet barriers in conjunction with dune reconstruction, re-vegetation, and other, more traditional barrier island improvements that have already been proposed. The construction of a comprehensive storm surge barrier system could provide benefits to shoreline communities that carry across all asset categories as well as consideration of natural systems in attenuating storm surge.

Harden key utility and transportation infrastructure (e.g., electric, natural gas, LIRR) to reduce future vulnerability.

The community should coordinate with local utilities to draft comprehensive plans focusing on updating obsolete infrastructure. The opportunity should be used to help create redundancy within Babylon Village. Key components of the Community electrical system (i.e. transformers, electrical cabinets / fuse boxes, transfer switches, etc.) can be relocated above the flood line.

The railroad arrived in Babylon in 1867 and has been a critical asset to the Community ever since. The railroad provides easy access to NYC for work and pleasure and plays an important tourism role for the community, allowing city dwellers easy access to beaches, sport fishing and restaurants. Railroads tracks should be evaluated for vulnerabilities during flooding and reinforced accordingly. Shoreline stabilization measures should be considered in order to prevent erosion to track infrastructure during storm conditions.

Ensure continued operation of the Bergen Point wastewater treatment plant.

The Bergen Point Wastewater Treatment Plant (WWTP) serves approximately 340,000 people from the Towns of Islip, Babylon and a small area of Huntington, known as Sewer District 3. The Sewer District stretches over an area of approximately 57 square miles and is comprised of nearly 1,000 miles of sewer pipes. The facility treats an average of 30,000,000 gallons per day. The Committee and Community have identified the WWTP as critical, regional infrastructure, as it is a Suffolk County operated treatment plant serving multiple Towns. The treatment plant was inundated during the Storm however it was able to remain in operation due to ceaseless efforts made by Suffolk County Department of Public Works. The WWTP should be evaluated and recommendations made on how to harden the plant infrastructure to reduce future exposure. Repairing the existing seawall (or construction of a new seawall) should be considered along with plant and system upgrades that focus on relocating vulnerable equipment to above the flood line.

No.	Need / Opportunity	Strategy
1. Housing		
1.1	Develop codes, policies and incentives to encourage disaster-resilient housing	Address fuel tank regulations to reduce hazards and become more resilient
		Formulate incentive program to fund retrofits of non-conforming conditions, including local codes and federal floodplain regulations
1.2	Establish service to identify temporary housing following major storm events	Provide mechanism to identify and disseminate temporary housing information
		Utilize existing electronic sign boards
		Create online message board / forum with postings for temporary housing locations and availability
1.3	Protect the preservation of historic properties and structures	Develop structural enhancements, modifications or relocation options
		Identify all historic properties in Babylon and West Babylon via information from the historical society
1.4	Provide safe, resilient housing meeting the needs of the community	Encourage provision of disaster resistant housing
		Provide incentives for elevation or retrofit of homes.
		Updates to local codes and regulations to protect new / rebuilt homes and avoid high flood insurance costs.
		Provide service to identify and disseminate temporary housing information
		Strengthen inspections and enforcement
2. Community Planning and Capacity Building		
2.1	Opportunity to update building codes, land use regulations, and design code for green / resilient construction	Identify building codes and places that stand to benefit the most from going green
		Identify existing incentives and resources that may already be available
		Develop green initiatives to reduce carbon footprint
2.2	Public education and outreach programs that encourage pre-storm preparedness and resilient reconstruction	Utilize mass communication such as email or SMS
2.3	Improve emergency evacuation preparedness and procedures	Conduct public education effort on storm impacts on life-safety, property and preparedness measures
		Develop a local emergency preparedness plan
		Identify alternative evacuation routes
2.4	Protect tidal wetlands and other natural infrastructure	Develop new regulations/incentives to prevent the release of petroleum and hazardous materials in flood prone areas
		Update land use and/or stormwater regulations to protect tidal wetlands and natural infrastructure
2.5	Opportunity to integrate the needs of the special needs population into laws, regulations and plans	Prioritize special needs into everyday preparedness plans
2.6	Regional - Improve coordination with other emergency service providers, municipalities and key Institutional entities (i.e. schools, hospitals, etc.)	Develop a town- or county-wide communication system for better coordination between emergency government agencies, emergency personnel, and schools

No.	Need / Opportunity	Strategy
3. Infrastructure		
3.1	Repair, enhancement and/or relocation of infrastructure (roads, culverts, sewer, communications etc.) to reduce flooding.	Perform regular maintenance on public infrastructure such as culverts and dams and ensure capacity/function to reduce upstream/downstream flooding
		Identify key roadways, coordinate with evacuation needs
3.2	Acquire environmentally sensitive land in flood zones and watersheds to reduce exposure and provide flood and stormwater storage and mitigation	Provide funding for acquisition of properties through existing open space programs
		Identify freshwater wetlands / watersheds for acquisition
3.3	Ensure that municipalities and first responders, including fire departments, have the necessary resources to prepare for and protect the public, property and the natural environment during and after disasters	Provide materials and equipment for emergency responders and municipal personnel for rescue operations and addressing other hazards (Hazardous materials, fires, restricted access, etc.)
		Provide specialized training to first responders
3.4	Improve communication before, during and after disasters	Improve and link local emergency communication systems to disseminate warnings and evacuation notifications, coordinate responses to emergencies (fire/rescue), provide timely status updates and assist in recovery efforts
3.5	Use natural infrastructure (e.g., wetlands), to manage stormwater runoff	Require natural recharge of precipitation consistent with NYSDEC Stormwater Design Manual in public ROWs and private development
3.6	Strengthen Village downtown commercial district	Address concentration of existing key assets (i.e. Village Hall/fire houses, schools, places of worship, businesses, etc.) as one district rather than individual assets.
		Create incentives to attract and retain businesses
		Develop marketing campaign to encourage support of local businesses
		Electric: Utilize innovative technology
		Facilitate economic growth
3.7	Make electric supply more resilient	Electric: Utilize innovative (Smart Grid) technology
		Identify priority electric lines for burial around key assets / groupings
3.8	Repair, replace, or enhance critical shoreline stabilization infrastructure	Identify critical areas, evaluate structural approaches (bulkheads, riprap, shoreline enhancements, levees, seawalls) and non-structural approaches (wetlands, living shorelines, green infrastructure), determine technical and regulatory feasibility
3.9	Regional - Address storm surge on Long Island in regional context	Evaluate the construction of inlet barrier (lock system) as well as natural infrastructure options in coordination with barrier island improvements
3.10	Regional - Harden key utility and transportation infrastructure (e.g., electric, natural gas, LIRR) to reduce future vulnerability	Coordinate with local utilities
		Update obsolete infrastructure
		Create system redundancy for Babylon Village
		Reduce exposure of private property to flood hazards
3.11	Regional - Ensure continued operation of the Bergen Point wastewater treatment plant	Support resiliency of Southwest Sewer District 3 plant at Bergen Point
		Reinforce Bergen Point Wastewater Treatment Plant

No.	Need / Opportunity	Strategy
4. Natural and Cultural Resources		
4.1	Acquire environmentally sensitive land in flood zones and watersheds to reduce exposure and provide flood and stormwater storage and mitigation	Place key parcels into public ownership or conservation easement for flood protection, public access, or specific recreational use; consider establishing a 'green zone'
		Evaluate possible property easements that would form a greenbelt
		Evaluate and identify key properties for public access including possible use for each property (e.g., fishing docks, wading, beach, kayak launch, wetland creation/migration, living shorelines)
4.2	Restore/conserve natural resources (e.g., wetlands, dunes) to reduce vulnerability (both at the local and regional levels).	Update land use and/or stormwater regulations
5. Economic Development		
5.1	Strengthen Village downtown commercial district	Address concentration of existing key assets (i.e. Village Hall, fire houses, schools, places of worship, businesses, etc.) as one district rather than individual assets.
		Create incentives to attract and retain businesses
		Develop marketing campaign to encourage support of local businesses
		Utilize resilient and renewable technology to improve infrastructure
		Facilitate economic growth
5.2	Establish an identity and increase economic investment along the Montauk Highway corridor in West Babylon	Create centrally-located open space/park as a hamlet “center” in West Babylon to spur economic investment along the Montauk Highway corridor
5.3	Strengthen recreational areas	Restore public access and increase recreational opportunities along the waterfront
		Increase the number of public events in the community to attract others from the region
		Increase access to community assets
5.4	Strengthen Tourism	Advertising campaign
		Restore charter boat services
		Trolley system
		Adopt complete streets policy to enhance connectivity (biking, walking, trolley) between Main Street corridor and waterfront resources to promote and expand tourism and recreational activities. Streetscape/complete street project(s) would be formulated including shoreline protection, storm water management upgrades, etc.

No.	Need / Opportunity	Strategy
6. Health and Social Services		
6.1	Create a centrally-located, town-wide/regional emergency disaster facility to provide space for recovery organizations, supply storage and temporary sheltering	Better utilize and coordinate existing resources
		Enhance all pre-identified disaster "centers"
		Identify existing properties that can be re-purposed and/or enhanced to multi-purpose structures or set aside land for use as emergency responder staging area
		Create local, safe shelters
		Identify and evaluate existing facilities to help determine which projects are fundable
		Make enhancements to existing facilities so that they can serve as temporary shelters
6.2	Establish a Red-Cross Tier 1 shelter in a closer vicinity to the shoreline	Identify and improve existing facilities and upgrade them to tier 1 shelters
6.3	Develop a town-wide emergency communication system coordinated be-tween government agencies, emergency personnel, schools, and the public	Provide uniform communication devices for emergency responders and municipal entities during storm events
6.4	Protect special needs populations	Update laws, regulations and plans

9. Key Projects

The next critical step in the planning process will be for the Committee to refine the list of potential strategies to those that are most needed and best suited for the NYRCR planning area and then to develop detailed projects to implement those strategies. Building on the assets, needs and opportunities identification effort undertaken earlier, the Committee has identified the following preliminary projects based on discussions of assets, needs and opportunities. The projects previewed here appear to have broad agreement among Committee members. Inclusion of these projects in the Conceptual Plan does not guarantee their recommendation in the final plan. Nor does it preclude the inclusion of alternative or additional projects going forward. The projects contained herein are preliminary in nature and will continue to be developed, expanded upon, or in some instances, eliminated from consideration. The Committee will continue to refine its strategies and list of resiliency projects in the coming months.

The Committee started the planning process with dozens of "immediate" projects as well as longer term conceptual projects, ranging from equipment for first responders, temporary shelters, and communication upgrades to traditional Department of Public Works projects addressing storm water management and flooding conditions. The Town of Babylon Department of Environmental Conservation and the Village of Babylon and West Babylon Fire Departments were particularly instrumental in providing these immediate projects and identifying community needs. As the planning process progressed from the community vision to detailed asset analysis, a number of key projects began to emerge. These key projects are consistent with the Committee's vision statement and focus strategies of creating stronger and more resilient communities with sustained economic development. To date, the NYRCR committee has identified four key projects within the community:

Village of Babylon – Increasing resiliency in the downtown district

Project Category: Infrastructure/Economic Development

Project Location: Village of Babylon central business district

Project Description: The Village of Babylon is unique in that it has dozens of key assets (i.e., Village Hall & Fire House, business district, schools, houses of worship, American Legion, etc.) concentrated in a very compressed geographic area. The Committee has identified the opportunity to address infrastructure resiliency, health/social services, emergency services, shelter, schools, and economic investment as a single entity by potentially implementing a separate utility "micro-grid" for the area. The micro-grid could utilize solar photovoltaic panels and high-capacity fuel cells to generate, distribute and store energy and be interconnected with the main grid utilizing "Smart Grid" technologies.

Project Benefits: Micro-grids have the ability of increasing the resiliency of a community and its key assets from extreme weather events by creating distributed, local energy systems independent from the larger regional grid. Beyond the capacities of serving the community before, during and after a future natural disaster, this type of innovative infrastructure has the potential ability to deliver cleaner and more efficient energy on a regular basis.

Implementation Time Line: An initial plan and design for this infrastructure could be developed in a 12 to 18 month time-frame with the actual installation of the grid infrastructure taking an additional two to three years.

Next Steps: As Strategies and projects are refined, the Committee will begin to prioritize potential projects. Once a firm direction is established a more detailed feasibility assessment, scope and funding strategy for the project will be developed along with potential costs. A cost benefit analysis will be undertaken and based on the outcome as well as it's comparison to other potential projects, the Committee will determine whether to proceed with this project or not.

Village of Babylon – Complete Streets

Project Category: Infrastructure/Natural and Cultural Resources/Economic Development

Project Location: Montauk Highway, Main Street, Shore Drive, Crescent Avenue, Fire Island Avenue

Project Description: The Community would like to implement a range of Complete Streets strategies to enhance connectivity (biking, trolley, walking paths, green spaces etc.) between the Main Street corridor and waterfront resources. Key locations along the route could be marked with distinctive features and signage. The connectivity would serve to promote and expand tourism and create opportunities for recreational activity. The "Complete Streets" approach would consist of projects that incorporate shoreline protection, storm water management upgrades, functional streetscapes, etc. with innovative/green infrastructure upgrades for resiliency.

Project Benefits: Given the Town of Babylon's adoption of a town-wide Complete Streets policy in 2010, this project could become a model for local implementation of the Town's recommended strategies.[v] This system of roadways will also function as a critical economic development link between the waterfront and the central business district. A system of roadways with enhanced streetscape treatments and signage will provide a direct physical link to the waterfront for vehicles, pedestrian and bicycles.

Implementation Time Line: The initial planning and design for this project can be completed within one to two years year with the implementation of the larger project occurring over a two to four year time frame.

Next Steps: As Strategies and projects are refined, the Committee will begin to prioritize potential projects. Once a firm direction is established a more detailed feasibility assessment, scope and funding strategy for the project will be developed along with potential costs. A cost benefit analysis will be undertaken and based on the outcome as well as it's comparison to other potential projects, the Committee will determine whether to proceed with this project or not.

West Babylon – Hamlet Center

Project Category: Economic Development/Infrastructure/Natural and Cultural Resources

Project Location: Montauk Highway corridor, West Babylon

Project Description: The Community recognizes that establishing a "Hamlet Center" offers the opportunity to establish a distinctive identity for the hamlet of West Babylon. The project concept envisions the creation of a hamlet open space which incorporates stormwater management improvements including constructed wetlands, rain gardens and bio-swales. The Center could be located along the Montauk Highway business corridor to maximize exposure and help stimulate economic growth. One approach includes the creation of a "Hamlet Green"; achievable through local property acquisitions and public/private partnerships between existing land owners along the corridor. The large parcels located along Montauk Highway and Great East Neck Road/Bergen Avenue could provide an opportunity to develop natural infrastructure to enhance local stormwater management and treatment.

Project Benefits: The establishment of a West Babylon hamlet center would help to create an identity for the community along the heavily-traveled Montauk Highway corridor. The creation of new public space would transform an auto-dominated environment to a vital community space. The hamlet center would also incorporate green and natural infrastructure to increase local stormwater management capacity.

Implementation Time Line: The initial planning and design for this project can be completed within one to two years year with the implementation of the larger project occurring over a two to four year time frame.

Next Steps: As Strategies and projects are refined, the Committee will begin to prioritize potential projects. Once a firm direction is established a more detailed feasibility assessment, scope and funding strategy for the project will be developed along with potential costs. A cost benefit analysis will be undertaken and based on the outcome as well as it's comparison to other potential projects, the Committee will determine whether to proceed with this project or not.

Village of Babylon and West Babylon – Central Emergency-Response Facility

Project Category: Health and Social Services

Project Location: West Babylon (exact location TBD)

Project Description: The community has identified the need for a centrally located, town-wide/regional emergency disaster facility. The facility must provide staging areas for recovery organizations, supply storage and temporary shelter facilities. The Community should identify underutilized buildings and spaces that may be "re-purposed". Proximity to evacuation routes, the existing rail spur, the shoreline and the center of the community should be taken into account. The Committee has preliminarily identified the warehouse property at 301 Henry Street as a potential location for the facility.

Project Benefits: A regional, town-wide emergency response facility would provide several benefits. The emergency resources from the Town and County would be coordinated to improve emergency response and distribution times. Essential supplies and services would be managed from a central location, meaning that residents know how and where to access help at all times. As a full-service emergency center, the facility would provide shelter space, food, water, medical supplies, emergency services, and storm-resistant communication infrastructure.

Implementation Time Line: The initial planning and design for this project can be completed within 12 to 18 months, with construction lasting one to two years.

Next Steps: As Strategies and projects are refined, the Committee will begin to prioritize potential projects. Once a firm direction is established a more detailed feasibility assessment, scope and funding strategy for the project will be developed along with potential costs. A cost benefit analysis will be undertaken and based on the outcome as well as it's comparison to other potential projects, the Committee will determine whether to proceed with this project or not.

10. Regional Perspective

Regional Overview

One of the major outcomes following Superstorm Sandy was a collective realization that many of the significant issues affecting Long Island communities must be addressed at the regional level. Due to the geography of Long Island, many of the communities and counties within the Island share similar challenges as well as opportunities relative to the natural environment, physical infrastructure, and other built systems. Additionally, it is important to understand the cause and effect relationship that occurs on the Island. For example, new impervious development in northern areas may result in excessive run off in South Shore communities. Potential Island-wide issues are expanded upon below.

Potential Regional Issues and Concerns

Natural Environment: Long Island has 1,180 miles of shoreline fronting the Atlantic Ocean, Sound, and a number of lakes, bays, inlets and canals. Approximately one-fifth of Long Island's land is protected from development by federal, state, county, or municipal entities. About half of this land represents over 800 public parks on Long Island ranging from small community playgrounds to larger parks like Fire Island National Seashore and Bethpage State Park.[vi] The Pine Barrens contain wetlands and dry upland areas and are inhabited by an array of wildlife species, many of which are endangered or threatened. The continued protection of Long Island's water supply from sole source aquifers is also a significant regional issue.

Developable Land Supply: Almost two-thirds of Long Island's land surface is developed with buildings, pavement and other manmade structures. This condition in combination with the large amount of protected/ preserved land, results in a limited supply of available vacant land to accommodate new housing or economic development activities.

Water Quality: Long Island's aquifers receive their fresh water from precipitation which percolates into the ground and is recharged into the groundwater system. The greatest threat to the quality of this water is development (residential/commercial/industrial) in sensitive areas that would add pollutants and impede the absorption of precipitation. In coastal areas, as water is drawn for use, less groundwater is available to be discharged into the estuaries. The subsequent loss of water and pressure allows saltwater from the ocean to flow into the aquifer, causing the groundwater to become saline and undrinkable. This is known as "saltwater intrusion" and is a threat to the Island's drinking supply.[vii]

Other threats to water quality include non-point source pollution and storm water runoff, which are county-wide concerns. Non-point sources typically include fertilizer and pesticides, oil and other automobile fluid, as well as animal and pet waste. This type of pollution has the potential to seep into ground water and impact surface waters such as the Great South Bay. While the Great South Bay is a surface water body, it is also a significant habitat comprised of features such as barrier beaches and islands, wetlands as well as marsh islands. Additionally, the bay is a key component of the local economy which relies on the health and stability of the bay ecology. As a result, the bay is in many ways a regional resource. Degradation of water quality as a result of non-point source runoff is of rising concern relative to the bay.

Non-point source releases into the bay can result in increased bacteria levels which in turn can lead to the closure of large areas of the bay to economic activities like fishing as well as recreational marine-dependent uses. The continued discharge to ground and surface waters in addition to increased runoff from roadways and septic systems have been adversely impacting water quality and vegetation in the vicinity of the Great South Bay. These water quality concerns also have the potential to impact spawning habitats as well as many marine species that are dependent on these systems.

Utilities: Electricity and the susceptibility of the power grid are both national and regional issues of concern. Long Island's Regional Economic Development Council (REDC) strategic economic development plan update has similarly stressed the importance of addressing utility vulnerabilities which currently exist across the Island. More specifically, one of the longest-lasting impacts of Superstorm Sandy was the vulnerability of Long Island's electric power grid. The Smarter Grid Research, Innovation, Development, Demonstration & Deployment (SGRID3) initiative, a collaboration between Stony Brook University and Brookhaven National Laboratory, initially focused on the development and deployment of new smart grid technologies as a mechanism to reduce energy and associated costs to consumers. However, this objective changed in the wake of Superstorm Sandy with the focus shifting to autonomous control capabilities that when employed would make Long Island's grid more resilient during weather events and able to recover more quickly in the aftermath.

Climate Change: As a coastal area, Long Island is susceptible to rising sea levels, especially as it relates to storm surges. Flooding generated by major weather events, 100-year storms, or just a heavy downpour, causing damage to residences and property, have been occurring with greater frequency. According to a joint Columbia University and City University of New York study, the sea level is anticipated to increase by 4 to 12 centimeters in the New York region by the 2020s and by 30 to 56 centimeters by 2080.[viii] Should polar icecaps melt rapidly, climate models projects that sea levels will rise even more. As a result, climate change is a significant Island-wide issue.

Other issues that are pertinent on a regional level include those related to public health and economic equity. These include projects designed to improve the quality of life for the Island's impoverished, underinsured or at-risk populations. Emergency preparedness projects are also important to improve the overall safety of the Island's population. These include: maintaining evacuation route access; improving the communication capability for a multi-jurisdictional response during emergency events; and emergency access to healthcare services to both the East (Good Samaritan Hospital in West Islip) and/or to the West (Nassau County).

Regional Issues and Public Engagement

In order to obtain input regarding larger issues important to the community, a sampling of potential town-wide and regional issues have been presented to the community during public outreach events. Community members have been asked to agree or disagree with the sampling of regional project ideas. To date, the public has indicated their preference or displeasure by placing a thumbs up or thumbs down sticker on large display boards. NYRCR Committees have also been asked to provide feedback related to regional projects. Projects on a regional level may include:

- Enhance barrier beach protection to protect mainland communities
- Harden the electrical grid to mitigate/shorten power outages
- Harden the natural gas distribution systems
- Expand natural gas connections into new areas to decrease reliance on fuel tanks
- Harden land line and cellular communication facilities
- Facilitate communication between all regional utilities/services and local government
- Long Island Rail Road (LIRR) improvements to ensure adequate transit operations
- Improve roadways to ensure emergency vehicle access and functioning evacuation routes
- Update regional hazard mitigation plans to address local issues
- Streamline environmental permitting procedures
- Implement regional shoreline stabilization projects emphasizing the Living Shoreline concept
- Consider regional water quality protection
- Enhance resiliency of Bergen Point Sewage Treatment Plant
- Consider region-wide storm surge protection

11. Overview of Public Engagement to Date

Public Engagement Strategy

Governor Cuomo has been a strong proponent of bottom-up, community-driven planning; in other words, the real "experts" are the residents of the communities that confronted these natural disasters first-hand. A significant component of the NY Rising Community Reconstruction Program involves the exchange of information between the NYRCR Consulting Team, the Committee, and the public in order to identify appropriate projects, strategies, and/or solutions that are likely to carry community support. The public in this case is defined as area residents, employees, civic groups, neighborhood and homeowner associations, environmental and other interest groups, business interests, governmental agencies, educational, medical, religious, and other institutions, the media and elected / appointed officials.

The Public Engagement Strategy will:

- Establish means engage and facilitate information-sharing with the public throughout the development of the NYRCR Plan.
- Educate the public and elicit public comments and suggestions regarding all aspects of the Plan within the NYRCR planning area.
- Employ outreach techniques that will allow for collection and coordination of public communication and comments.
- Reach out to groups that might normally be underrepresented in a planning study, such as minorities, non-English-speaking residents, low-income residents, seniors, youth and the disabled.

Outreach Techniques for Disseminating and Receiving Information

The NYRCR Consulting Team utilized a number of dissemination techniques to achieve a thorough, responsive, open, and transparent communication process.

Committee Members/Meetings

All Committee meetings are open to the public. Meeting dates and times are posted on the NY Rising website. For each committee meeting, notifications are sent and meeting materials are prepared. They include agendas, sign-in sheets, minutes, comment log, PowerPoint presentations, graphics/boards, and handouts. The Public can comment on the work of the Committee by filling out a comment form available at each Committee Meeting.

While the Committee represents the interests of many, it is important to provide opportunities for the public to participate in the development of the Plan. While the primary vehicle for this effort is public engagement events, additional outreach opportunities for comment are provided at different venues in the Planning Area and through the NY Rising website.

Public Engagement Events

Each public engagement event includes the presentation of work completed to date, as well as opportunities for attendees to provide feedback. The NYRCR Consulting Team provides the following materials for each event: public notice (including press releases, announcements, individual mailings, and other appropriate means), outreach to underserved communities and displaced stakeholders, information gathering from those attending, and the collection and inclusion of feedback into the ongoing planning process. A summary of each public outreach session is available both in hard copy and electronically.

Public engagement events are scheduled to coincide with major project milestones. A targeted and well-executed public involvement process is intended to educate and raise awareness during the development of the Plan, which ensures that when the Plan is put into implementation, the public, elected officials, and key stakeholders have had ample opportunity to actively participate in the decision-making process. Members of the public who are informed and engaged in the process are more likely to support the overall Plan or become interested in a targeted component within the Plan. Sign language interpreters can be provided upon request at public engagement events to accommodate the hearing impaired. Event materials are available in English and if requested, in Spanish.

Presentation materials are developed for each event that illustrate the key points of the information presented using plain language, graphics, simulations, etc. These are available following the event on the NY Rising website for download. All materials are reviewed and approved by the State prior to their use and distribution. A summary of each event is prepared and available for public distribution.

The process includes a series of four public engagement events:

1. To define the Community Vision and solicit initial input on the asset inventory and assessment of risk to community assets
2. To solicit input from the public concerning the content of the conceptual plan
3. To confirm projects and implementation frameworks
4. To present the investment and action strategies

Outreach for public engagement events include: posting on state NYRCR webpage and other electronic media; ads in weekly print media when time and budget allows; flyers and posters at strategic locations throughout the community including libraries, community centers, and other centers of activity (as listed below); e-mails and/or texts to lists available from chambers, civics, school district, churches, synagogues, American Legion, VFW, AARP, Hibernians and other community leaders. Outreach also includes requests to community organizations to post information on their websites. Phone calls are made to: elected officials and other key players in the local residential and business community and calls to each committee member to assist them with their outreach effort (e.g., calls/e-mails to their contacts and announcements at their events).

Each event is formatted as an open house that the public can attend during any part of the allotted three-hours. Stations are positioned around the room for the various topics. Committee members, municipal

representatives, State planners and the NYRCR Consulting Team staff each station to provide opportunity for the community to exchange ideas in a comfortable setting. This structure provides an opportunity for each attendee to work within their own schedule and comment on all or some of the specific aspects of the process in a meaningful way.

As the project progresses, the public is presented with maps, a geographic scope, community assets, and a vision statement, needs and opportunities, strategies and projects that have been vetted and/or created by the Committee. The desired outcome of each public engagement event is to obtain the public's reactions and feedback to the Committee's work in order to incorporate their input. These comments will be compiled by the NYRCR Consulting Team and provided to the Committee in a clear and comprehensive manner. The Committee will review the public's feedback and incorporate it into the NYRCR Plan.

Other Considerations

Although the events are advertised as events for NYRCR Planning, community members attend who are more interested in assistance with individual property concerns. To accommodate these individuals at each public engagement event, tables are available in a separate area for State, FEMA, and NGO staff from the various intake centers to provide individual assistance. These community members are subsequently encouraged to participate in the NYRCR Planning process.

Requests for Information

All requests for information will be acknowledged by the NYRCR Consulting Team within a week with a letter or email accompanied by the materials requested or by a referral to the state's website where the material can be downloaded. If a response to the request requires more than a week, the individual making the request will be contacted with an estimate of the anticipated delivery date. An offer will always be made to provide further assistance should it be necessary.

Website

The NY Rising website (http://stormrecovery.ny.gov/community-reconstruction-program) will serve as a repository for downloadable versions of all public information and event notifications. Posted materials include an overview of the planning process, reports, maps, and documents, summaries of public engagement events, notices of public engagement events, and contact information. The website includes an area to accept public comment, as well as a section for Frequently Asked Questions (FAQs). All materials and information on the website is kept up to date.

Social Media

This Committee has a particularly broad and sophisticated social media network that has provided information and outreach, particularly for public engagement events. Many of these networks arose and matured during the immediate aftermath of Superstorm Sandy as some Committee members led and participated in organized relief efforts through Neighbors Helping Neighbors, Babylon Helps and other venues.

Print and Broadcast Media

Study information is also disseminated through selected local, print, radio, and TV media to keep the community informed and to respond to media inquiries. A particular effort will be made to include publications, radio, and TV stations that target minority populations.

Outreach Techniques for Receiving Input

An important component of the outreach program is to understand public sentiment and to be able to answer questions and address public concerns. Several methods are provided for the public to make comments and ask questions. The NYRCR Consulting Team uses these comments to enhance and improve the NYRCR. The team documents all comments received and adds them to the record. Comments are also reviewed by the Committee and the NYRCR Consulting Team.

Surveys (Optional)

A web-based survey tool may be used to gauge public opinion over a range of issues. The advantage of a survey is its potential reach to individuals that cannot or choose not to attend public engagement events. Surveys are restricted to one per email address to limit 'ballot stuffing.' The survey is an opportunity to get feedback on very specific questions. Surveys completed by the public that might not come to events can help balance the opinions of those that do attend.

Study Team Communication

The Study Team is also available to directly answer specific questions and receive comments. The primary contact for the Study Team is: Vanessa Lockel, Community Reconstruction Program Suffolk Lead, New York Rising Community Reconstruction Program. Ms. Lockel can be reached at vlockel@stormrecovery.ny.gov.

E-Mail

E-mail comments and requests for information can be sent to the State's e-mail address at: info@stormrecovery.ny.gov. This email address is prominently displayed on all materials and the website so that it is widely disseminated and available for public use. The NYRCR Consulting Team monitors the e-mails and incorporates input and/or respond, as appropriate. The team will work with NYS to post comments or questions (with responses) that appear repeatedly to the FAQ page on the state's website.

Comment Forms

Comment forms are available at committee meetings and public engagement events/open houses and on the state's website to provide an opportunity for the public to contribute their thoughts, which are then passed along to the Committee and the NYRCR Consulting Team.

12. Next Steps

Strategies and Projects

The process undertaken by the Committee has focused on building towards the final development of a specific plan of projects and implementation strategies that will make Babylon/West Babylon more resilient. The strategies and projects presented in this NYRCR Plan are in the early stages of development. They require narrowing of scope and purpose, expert input, and prioritization. Input from specialists in several planning areas and from the public will be solicited in the coming weeks in order to begin the process of narrowing down the options to the most effective, most feasible, most appropriate, most needed, as well as most desirable to the public. The Committee will use the feedback from their peers and experts to prioritize the final list of strategies, which will be submitted to the State by November 30, 2013.

The NYRCR Consulting Team will work with the Committee to flesh out the strategies with the greatest potential into implementable projects. Steps to prioritize strategies will include, but will not be limited to, conducting a thorough risk assessment of assets, exploring new and innovative ideas for addressing resiliency issues, and linking vulnerable assets to innovative strategies. The development of projects from these strategies will require homing in on the exact desired outcomes of projects and/or the specific geographic areas, developing detailed scopes of work and cost estimates, and defining the community benefit values to calculate the cost/benefit ratios.

The NYRCR Consulting Team, along with the State Planning team will help the Babylon/West Babylon Committee to consider innovative strategies and actions to address their specific list of resiliency issues, particularly strategies that create co-benefits with other community issues. Wherever possible, the team will seek to leverage existing programs, upcoming projects, and eligible funding sources to incorporate resiliency measures that have been prioritized by the Committee.

Prioritization will be interwoven throughout the process. The assets will be categorized by risk assessment area and community value, which will serve to highlight those most critical. Stemming from the assets, the needs and strategies will be categorized into immediate, short-, medium-, and long-term, as well as discussed at length in terms of feasibility, necessity, and value. Finally, projects will be ranked by value and criticality. Additional considerations will include relation to the Community Vision and the comprehensiveness of the list (ensuring the inclusion of projects with local and regional impact and with immediate to long-term project implementation timelines).

A final list of potential projects to be advanced in this process will be submitted to the State by December 31, 2013.

Consideration of the Implementation Structure

The implementation timeline of potential projects will vary based on the complexity of the project, the institutional coordination necessary, and the potential for necessary environmental permitting. The intention of this program is to identify a range of projects which would include immediate implementation projects that could occur within 0 to 6 months; mid-term implementation projects that could be implemented within 6 months to three years; and, long-term implementation projects that could occur over a period in excess of three years.

The ability to identify projects that are programmatic in nature or that could be implemented incrementally over time is also desirable. These projects could begin with planning and design, progress to property acquisition and eventually be implemented in sections based on risk, community desire, and relationship to critical asset. These projects may also have the ability to access or leverage multiple funding sources if they address multiple resiliency issues or can provide benefit to multiple community assets.

As projects are better defined and prioritized by the Committee and through public engagement, implementation structures and schedules will be developed and optimized to encourage the quickest and most efficient expenditure of resources and associated benefits for the Village of Babylon and West Babylon.

Technical Support

At present, the NYRCR Consulting Team is developing a format to engage multiple experts to discuss strategies and projects that would be most suitable for Suffolk County in general, as well as for each NYRCR community in particular. Based on Babylon/West Babylon's identified needs and preliminary list of strategies, expertise may be sought from the following entities (in addition to the specialist available on the NYRCR Consulting Team) in these specified areas:

- Suffolk County Emergency Management
  - Evacuation routes
  - Fire prevention
  - Emergency management plans
- Suffolk County Police
  - Post-event public safety and looting protection
- Suffolk County Economic Development & Planning
  - Commercial corridor development
  - Housing mix
- Suffolk County Public Works
  - Mitigation of repetitive flooding on roads and from creeks and inlets
  - Shoreline stabilization projects
- Good Samaritan Hospital
  - Critical facility plan
  - Post-event physical and mental health role in community
- FEMA Hazard Mitigation
  - Hardening of critical facilities and mitigation of homes
- National Grid/PSEG
  - Expansion of natural gas connections
  - Information on clean energy alternatives
- Verizon/Other Telecommunication Utilities
  - Hardening of critical facilities
- NYS Department of Conservation
  - Permit streamlining
- US EPA
  - Green infrastructure for repetitive flooding and water quality
- US Housing and Urban Development
  - Relocation out of hazard zones

NYRCR Plans will be refined as community needs evolve and based on correspondence/feedback from the organizations listed above. At a future date, as potential projects and strategies are refined, engineers/experts on the project team will be incorporated into the Plan to discuss the feasibility and cost of projects. Additional next steps may include a potential Island-wide webinar to tackle regional issues common to all of Long Island. The Babylon/West Babylon Committee has expressed the need for not only physical projects but also policy improvements related to streamlining the permitting and regulatory process (i.e., canal dredging, storm and sanitary sewer drainage improvements).

Recent and Upcoming Events

Recent and upcoming events, aside from regularly scheduled committee meetings are noted below.

Rebuild by Design, Nassau/Suffolk Counties, New York: The Rebuild by Design event took place in early October 2013. This event provided an opportunity to showcase Long Island and to explore the potential for innovative projects in the area. Design teams from across the nation and the Netherlands toured Nassau County extensively and also spoke with first responders from Suffolk County. The experts felt that the feedback from Suffolk's first responders was invaluable in terms of strengthening their knowledge of resilient post-storm design as well as designing for practical and emergency situations.

Community Reconstruction Event, Albany, New York: Suffolk County had two NYRCR communities featured at this event – Babylon/West Babylon and Oakdale/West Sayville. The event was held on October 23rd in Albany, New York. This conference, with Governor Cuomo, was a unique opportunity to see what is going on with other NYRCR communities in the State as well as to learn about other design solutions.

Public Event #2: The NYRCR Consulting Team is currently engaged in organizing the format, logistics, and materials for the second public engagement event, tentatively scheduled for the second week of November. The event will offer an opportunity for the community to review and provide feedback on the contents of this conceptual plan.

Upcoming Milestones

- Complete public engagement events for presentation of Conceptual Plan (November 2013)
- Submit final NYRCR-accepted list of strategies to the State (End of November 2013)
- Complete public engagement event for investment and action strategies (End of January 2014)
- Submit final NYRCR-accepted list of project and actions to the state (End of March 2014)
- Provide final NYRCR Plans to State for review and approval (End of March 2014)

Photo Credits

All photos contained in this Conceptual Plan have been sourced from the NYRCR Consulting Team or Committee members with the following exceptions:
P. 1: Governor Cuomo photo provided by NYSDOS.
P. 8: Village of Babylon Fire Department, babylonfd.com. FEMA. Neighbors Supporting Neighbors Babylon.
P. 11: Town of Babylon, Parks and Recreation Department, townofbabylon.com
P. 43: Dalton Point Breakwater/Marsh Demonstration Project, November 2006.

Endnotes

[i] The National Disaster Recovery Framework (NDRF) is a guide that enables effective recovery support to disaster-impacted states, tribes, territorial and local jurisdictions. This framework provides a flexible structure that focuses on how best to restore, redevelop, and revitalize the health, social, economic, natural and environmental fabric of the community and build a more resilient nation. The NDRF is consistent with Presidential Policy Directive (PPD) -8, related to National Preparedness. Excerpted from FEMA. *National Disaster Recovery Framework* http://www.fema.gov/national-disaster-recovery-framework

[ii] Vulnerable populations include people with disabilities, low and very-low income populations, elderly, young children, homeless and people at risk of becoming homeless.

[iii] Factual information incorporated into this section of the report has been gathered through review of the NOAA website for the days leading to and directly after Superstorm Sandy, as well as review of pertinent Newsday and local Patch articles.

[iv] New York Rising Community Reconstruction Program. *The Process for Inventory, Risk Assessment in Coastal Areas and the Assessment of the Effectiveness of Flood Reduction Actions in Riverine Areas.* Prepared by a multi-firm working group.

[v] http://www.smartgrowthamerica.org/documents/cs/policy/cs-ny-babylon-policy.pdf.

[vi] Long Island Regional Planning Council. *Long Island 2035 Visioning Initiative Final Report*. December 2009. p. 19.

[vii] Ibid. p.21.

[viii] Ibid. p. 21.

NY Rising Community Reconstruction Program