

STATEN ISLAND, NY

SUSTAINABLE NEIGHBORHOOD ASSESSMENT



September 11 - 13, 2013 | www.globalgreen.org/greencities



SUSTAINABLE NEIGHBORHOOD ASSESSMENT USING LEED-ND

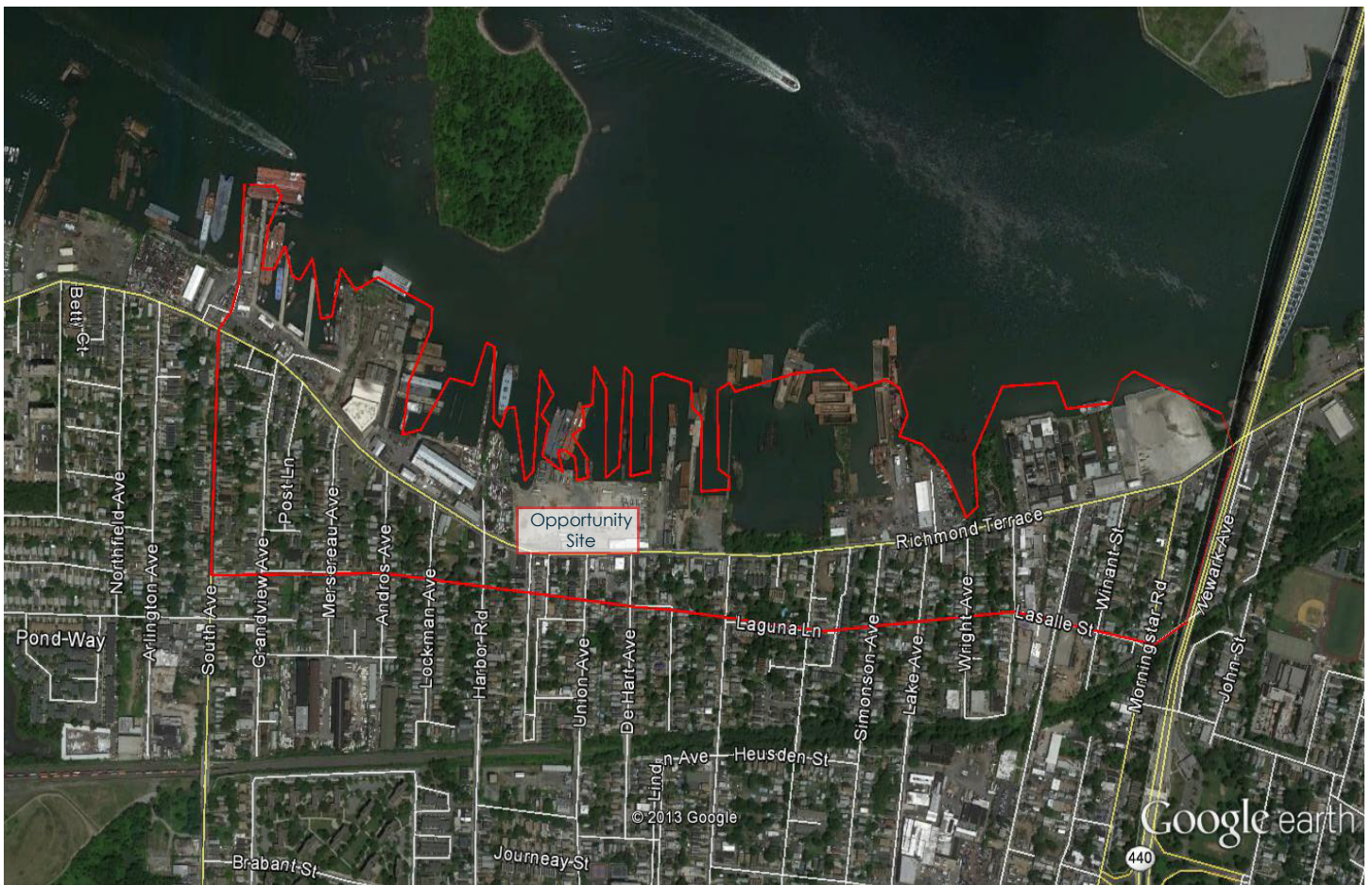
Through the Sustainable Neighborhood Assessment Tool developed by Global Green USA, public officials and local government staff are using the LEED for Neighborhood Development (LEED-ND) rating system to determine ways for future development in their communities to achieve high levels of environmental, economic, and social sustainability. LEED-ND integrates the principles of smart growth, walkable urbanism and green building into the first national rating system for neighborhood design. In Staten Island, Global Green used the tool as a means to evaluate existing conditions and plans for the North Shore, in order to identify opportunities to augment current revitalization efforts and develop recommendations to increase the neighborhood's overall level of sustainability.

ENVIRONMENTAL PROTECTION AGENCY

Technical Assistance provided by Global Green USA with the US Green Building Council to Staten Island was made possible through funding from the US EPA's Office of Sustainable Communities Building Blocks for Sustainable Communities Grant Program.

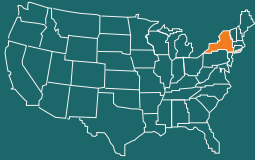
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Richmond Terrace

NEIGHBORHOOD LOCATION



NEW YORK STATE

SUSTAINABLE NEIGHBORHOOD ASSESSMENT PROCESS



NEW YORK CITY

The goal of the sustainable neighborhood assessment process is to identify topical and physical focus areas where policy or planning changes will promote sustainable urban development over the short and long term. To define these focus areas, Global Green USA and its team members utilize the Sustainable Neighborhood Assessment Tool, developed by Global Green and based on the LEED for Neighborhood Development (LEED-ND) criteria and checklist.

The site visit to Richmond Terrace is part of a special attempt to respond to Hurricane Sandy effected communities- expanding the sustainable neighborhood assessment to focus on resiliency. A resilient neighborhood is one that can meet functional requirements in the face of disruption or degradation, and realize a more fortified future in the process. The team aims to provide insight on how neighborhoods can reduce impact risks, facilitate a swift recovery, and increase adaptive capacity. These attributes are embedded within sustainable neighborhoods, thus establishing a balance for future generations.

Prior to visiting the assessment area, the team conducts a thorough baseline review of existing planning documents, code requirements, flood maps, borough and stakeholder priorities. An initial assessment is completed, with the credits in each of the three LEED-ND categories (Smart Location & Linkages, Neighborhood Pattern & Design, and Green Infrastructure & Building) marked as "achieved," "not achieved," "unknown," or "not applicable." Each

credit is further ranked for the degree that it correlates to regional or local policy priorities, regulatory support, technical feasibility, market support, and stakeholder input.

This initial assessment serves as the point of departure for the Global Green team's three-day site visit and evaluation. During the visit, the team walks the target neighborhood, photographs examples of positive qualities, areas for improvement, and notes potential for adaptation. In addition, the team conducts a series of informal interviews with local business owners on subsequent and potential future impacts of extreme weather events like Hurricane Sandy. Finally, targeted stakeholders, city staff, and relevant public agencies were consulted to discuss relevant land use and community development issues impacting the North Shore as a whole. At the end of the process, the preliminary checklist is edited and refined to incorporate the team's visual observations and contextual issues raised by stakeholders. The completed augmented checklist for Richmond Terrace can be found on pages 9-12.

The assessment process then enables the team to identify a series of recommendations based on LEED-ND credits that are applicable to disaster risk reduction. Recommendations also cover policy, planning, and development changes which aim to realize a more resilient and sustainable future for Richmond Terrace.



STATEN ISLAND



RICHMOND TERRACE

NEIGHBORHOOD BACKGROUND

Richmond Terrace is located on the North Shore of Staten Island in New York City. The assessment area is bound by the Bayonne Bridge to the east, South Avenue to the west, and encompasses the parcels to the north and south of Richmond Terrace. The land uses fronting Richmond Terrace from the north are all largely industrial with some commercial. The south side of the street is made up of predominantly small scale commercial and residential uses.

Historically, this area of the North Shore was mostly maritime industrial uses due to the proximity to Kill Van Kull. This narrow waterway separates Staten Island, New York and Bayonne, New Jersey. Kill Van Kull; spanned by the Bayonne Bridge, it is one of the most heavily travelled waterways in the Port of New York and New Jersey. In its height, the area was home to many industrial jobs that had negative environmental impacts to the land surrounding Richmond Terrace and its waterfront. While the regulatory landscape for industrial uses and environmental impacts has changed, the advantages of being a business on Richmond Terrace still remain. It is one of few remaining locations that allows for light to moderate industrial within New York City. Additionally, these large manufacturing parcels are in close proximity to transportation arteries reaching other parts of New York and New Jersey; making Richmond Terrace a desirable place from a business and economic perspective.

There are, however, some disadvantages for businesses located on Richmond Terrace. In terms of

physical constraints, it is a truck route with constrained right-of-way shared with non-truck traffic. Economically, businesses on Richmond Terrace maybe subject to high toll rates when trucking over the Bayonne Bridge. Regulatory restrictions on improving bulkheads and other infrastructure in the Kill also hamper development due to environmental protection requirements born from the legacy of soil contamination in the area. The City is in the process of using State Brownfield Opportunity Area grant funds to do reconnaissance in the assessment area and will identify what, if any, new regulatory changes will improve the areas existing conditions.

Looking forward, the Bayonne Bridge is slated for major reconstruction resulting in the roadway being raised within the structure of the bridge. The project will increase the height above the water by approximately 65 feet in order to let super container ships pass through the Kill. This project will bolster the local economy with an estimated 2800 new construction jobs. The new roadway is also slated for a wider, multi-use pathway, connecting pedestrians and cyclists to New Jersey.

Looking back, Richmond Terrace was heavily impacted by Hurricane Sandy. Businesses on the Terrace incurred damage to equipment, office machinery, trucks, ships, dry docks, etc., to the tune of 30 million dollars. Although most businesses survived the storm, many are still not running at full capacity one year after the Hurricane and many are still navigating insurance claims and heightened premiums.



Damage in Richmond Terrace following Hurricane Sandy

NEIGHBORHOOD HIGHLIGHTS



PROXIMITY TO WATER



TRANSPORTATION



JOBS



LARGE FLOOR PLATES

FUTURE ZONING CHANGES

Recommendation 1

The existing zoning within our assessment area is often in conflict with its surrounding uses. According to the New York City Zoning, M1 districts are often used as buffers between M2 or M3 districts and adjacent residential or commercial districts. Between South Avenue and The Bayonne Bridge, the M3-1 zone abuts residential uses (R3A). The need for a “buffer” came up in multiple conversations and while LEED-ND stays silent on the issue of industrial and manufacturing land uses abutting residential uses, it is clear that some by-products of the manufacturing uses are the issue as apposed to the use itself. Increased regulation on industrial and manufacturing business have increased over the years, thus reducing the environmental

impacts on neighboring users. The need to evaluate each business on their impact or performance as it relates to pollution, noise, vibration and odors is the only direct way to ensure residential safety and community cohesion.

The following action items focus on the future of Richmond Terrace and the surrounding development. Looking forward, zoning changes create opportunities for adaptive reuse that in turn brings new users to Richmond Terrace, creating a more vibrant and inviting environment for residents, employees, transit riders, and cyclists.



Future zoning changes can focus on waterborne and maritime uses



RESPONSIBLE DEPARTMENTS

Planning
Department

FUTURE ZONING CHANGES

1 Action Items:

- **Rezoning.** Re-zone the existing M3-1 land between South Avenue and the Bayonne Bridge to M1-5M, M1-6M, or M1-6D to create a buffer between heavy industry and residential land. These zones may allow for residential uses as displayed in other parts of the City.
- **Performance Metrics.** Update performance metrics to ensure a minimum requirement or maximum allowable limit for waterborne / maritime uses. This requires identifying which metrics are currently out of date and which metrics would allow for modern maritime uses, all while protecting residents from the noise, vibration, smoke, and odor that is more typical of the existing M3-1 zone.
- **Waterfront Access.** Provide water access and visibility to Kill Van Kull from Richmond Terrace. Access points will provide visual and physical connection to the water and should be on public land to encourage use by residents and employees in a passive way.
- **Encourage Maritime Uses.** Engage in a multi-agency discussion to provide unified

improvements to the bulkhead on the North Shore. If addressed as a unified collaboration between the Office of Environmental Remediation and State Department of Environmental Conservation, it can provide an economic draw for the highest and best use of the waterfront. This includes more maritime uses and clean tech industries. The effort should forgive any current environmental conditions in light of Hurricane Sandy and the damage caused to the existing bulkhead.

- **Site Plan Review.** Implement a site plan review process and standards that are reviewed between zoning and building permit approvals for projects on Richmond Terrace. This will ensure that future development is constructed outside of the road right-of-way, and ensure that parcel orientation and building facades are enhancing the character of Richmond Terrace.

Manufacturing District Floor Area Ratios			
	Manufacturing FAR	Commercial FAR	Community Facility FAR ¹
M1-1 ¹	1.0	1.0	2.4
M1-2 ¹	2.0	2.0	4.8
M1-3 ¹	5.0	5.0	6.5
M1-4 ¹	2.0	2.0	6.5
M1-5 ¹	5.0	5.0	6.5
M1-5A	5.0	5.0	6.5
M1-5B	5.0	5.0	6.5
M1-5M	5.0	5.0	6.5
M1-6 ¹	10.0 ²	10.0 ²	10.0 ²
M1-6M	10.0 ²	10.0 ²	10.0 ²
M2-1	2.0	2.0	-
M2-2	5.0	5.0	-
M2-3	2.0	2.0	-
M2-4	5.0	5.0	-
M3-1	2.0	2.0	-
M3-2	2.0	2.0	-

New York City



Potential adaptive reuse opportunity

ECONOMIC DIVERSITY AND RESILIENCY

Recommendation 2

LEED-ND encourages a balanced community with diverse land uses and employment opportunities. The existing land use pattern of residential across the street from industrial jobs reflects the very intent represented in the Housing and Job Proximity credit in LEED-ND. The modern-day reality, however, is that residents living on Richmond Terrace no longer work at the industrial businesses across the street. Despite the changing economy, the team believes it is a benefit to retain, and grow, the light industrial job base within the North Shore of Staten Island. There are also opportunities to increase economic diversity by targeting other job sectors in other area.

In addition, the realities of having industrial employment opportunities along a waterfront prove to be challenging in the face of sea levels rise, and increasing frequency and intensity of extreme weather events. The role of the Staten Island Economic Development Corporation (SIEDC) is now more important than ever in light of these

economic and environmental threats. The businesses on Richmond Terrace and SIEDC may need to adapt their work to the changing climate. The team sees SIEDC as the organized, member based organization needed to disseminate information, provide training, and collectively bargain from more resilient business practices both environmentally and economically.

The following action items are a mix of programmatic opportunities and economically based strategies that will determine the overall viability of businesses on Richmond Terrace. The main focus of SIEDC with regards to economic and environmental resilience is to be proactive, issue based, and solution oriented. This included tackling rising tolls by increased water-way use, and building a coalition across agencies to address the need for unified improvement to the bulkhead to ensure the long term integrity of the maritime job base on Richmond Terrace.

Many structures in the study area are overgrown or underused, but carry significant potential for adaptive reuse



**RESPONSIBLE
DEPARTMENTS**
Staten Island Economic
Development
Corporation

ECONOMIC DIVERSITY AND RESILIENCY

2

Action Items:

- **Resiliency.** SIEDC should provide guidance on how to protect assets and prepare for future storm events. Examples include elevating equipment to higher ground.
- **Container Terminal.** Coordinate the increased use of the container terminal to avoid the burden of high tolls and to return the focus back to waterborne uses along Kill Van Kull.
- **Business Attraction.** SIEDC should recruit cleaner light manufacturing, and artisan businesses to locate on Richmond Terrace in order to lessen potential environmental impacts on the surrounding neighborhood and increase economic diversity on the Island.
- **Coalition Building.** SIEDC should address the regulatory barriers to creating comprehensive improvements to the bulkhead by creating a coalition of agencies, business owners, and local representatives to express the current challenge standing in the way of improved business productivity. This issue can only be solved in a unified and comprehensive approach rather than by individual business or land owners and is critical to improving the overall value of waterfront land on the North Shore.



Existing industrial and manufacturing uses in Richmond Terrace

NEIGHBORHOOD IMPROVEMENTS

Recommendation 3

LEED-ND metrics within the Neighborhood Pattern and Design credit category address the urban form and design within a community. Many of the metrics in the rating system are aimed at improving the pedestrian experience within the public realm. For example, credits related to civic and recreational open spaces are intended to improve the physical and mental health of visitors, along with social capital. By providing a variety of open spaces close to work and home, civic and open spaces can facilitate social networking, civic engagement, physical activity and time spent outdoors. Within Richmond Terrace there is a need for more civic and public open space. In order to meet LEED-ND standard there should be a park or open space at least 1/6 of an acre, existing or planned, within a quarter mile walk distance of 90% of existing or planned dwelling units and nonresidential buildings

within a defined geography. The team recommends focusing future planning processes on creating both passive and active open space in an effort to improve the connection between residents and employees to the outdoors. Ideally, these improvements would build on existing assets in the neighborhood. In the case of the North Shore, these assets include the waterfront, exiting institutions, and residual land adjacent to existing infrastructure within the community. Consider the image on the facing page of Birmingham Alabama, or Minneapolis, Minnesota, where a rails to trails system has built on the underutilized land adjacent to train tracks in order to create a green belt. The following recommendations address physical improvements, planning opportunities, and community engagement efforts needed to improvement the residents experience of Richmond Terrace.



Existing conditions on Richmond Terrace showing the visual impacts of streetscape improvements

Existing conditions on Richmond Terrace showing the need for continued street improvement efforts



RESPONSIBLE DEPARTMENTS

Planning Department,
Parks and Recreation,
and Metropolitan
Transit Authority

NEIGHBORHOOD IMPROVEMENTS

3

Action Items:

- **Park Access.** Provide civic and recreational park space within the neighborhood south of Richmond Terrace. Identify potential park spaces that are at least 1/6 of an acre in size during the Brownfield Opportunity Area (BOA) process.
- **Community Ownership.** Identify a neighborhood association or community group that is invested in the area. Draft a Memorandum of Understanding with the Parks Department or Department of Environmental Protection to provide maintenance of new civic and/or open spaces if the Department is unable to provide maintenance for new facilities.
- **Transit Shelters.** Work with the MTA to install bus shelters at five to seven bus stops between South Avenue and Newark Avenue. Shelters should be covered and face away from Richmond Terrace to provide some buffer from truck traffic, rain, and snow. The shelters should also have seating, lighting, and posted bus schedules.
- **Joint Use Agreement.** Work with Port Richmond High School to formalize a joint use agreement between a active community group with a need for facilities; athletic fields, playgrounds, and/or multipurpose spaces. These amenities could be made available to the community for use after school hours.
- **BOA Process.** Concentrate neighborhood and residential amenities southward towards the rail line so there is less interaction between pedestrians and Richmond Terrace's Truck



Aerial image of park with amphitheater by Kennedy Violich Architecture in Birmingham Alabama



Richmond Terrace study area highlighting potential opportunities for linkages and access to green space

SUSTAINABILITY ASSESSMENT

LEED-ND Checklist

The Sustainable Neighborhood Assessment tool includes an annotated LEED-ND checklist created by Global Green. It is a key component of the process used to document and compare the assessment area against the LEED-ND prerequisites and credits. Each credit within the three credit categories (Smart Location & Linkage, Neighborhood Pattern & Design, and Green Infrastructure & Building) is marked as "achieved," "not achieved," "unknown," or "not applicable" under baseline conditions. Additional analysis has been done based on local planning policy, regulatory support, technical feasibility, market support and stakeholder input. The preliminary checklist analysis was edited after the site visit, stakeholder meetings, and conversations with business owners along Richmond Terrace. This information was then translated into an overall assessment of sustainable neighborhood

LEED for Neighborhood Development: Project Assessment Checklist RICHMOND TERRACE STATEN ISLAND, NEW YORK

Baseline Conditions	Local/Regional Planning Priority	Regulatory Support	Technical feasibility	Market Support	Neighborhood Need/ Stakeholder Input
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Legend	
✓	Achieved
?	Unkown
X	Not Achieved
-	Does not exist/ NA
■ (Green)	Explicit support/ no technical issues
■ (Yellow)	Lack of explicit support/ minor technical issues
■ (Red)	Opposition/ significant technical issues
■ (Grey)	Not Applicable

Smart Location and Linkage

✓	■	■	■	■	P 1 Smart Location
?	■	■	■	■	P 2 Imperiled Species and Ecological Communities
X	■ (Red)	■ (Red)	■ (Yellow)	■ (Grey)	P 3 Wetland and Water Body Conservation
✓	■	■	■	■	P 4 Agricultural Land Conservation
✓	■ (Yellow)	■ (Red)	■ (Yellow)	■ (Red)	P 5 Floodplain Avoidance
X	■	■ (Yellow)	■ (Yellow)	■ (Yellow)	C 1 Preferred Locations
✓	■ (Green)	■ (Yellow)	■ (Red)	■ (Green)	C 2 Brownfield Redevelopment
X	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Yellow)	C 3 Locations with Reduced Automobile Dependence
X	■ (Green)	■ (Yellow)	■ (Green)	■ (Yellow)	C 4 Bicycle Network
X	■ (Green)	■ (Yellow)	■ (Green)	■ (Yellow)	C 4 Bicycle Storage
✓	■ (Green)	■ (Green)	■ (Green)	■ (Yellow)	C 5 Housing and Jobs Proximity
✓	■	■	■	■	C 6 Steep Slope Protection
✓	■ (Green)	■ (Yellow)	■ (Green)	■	C 7 Site Design for Habitat or Wetland and Water Body Conservation
-	■	■	■	■	C 8 Restoration of Habitat or Wetlands and Water Bodies
-	■	■	■	■	C 9 Long-Term Conservation Management of Habitat or Wetlands an

SUSTAINABILITY ASSESSMENT

LEED-ND Checklist

LEED for Neighborhood Development: Project Assessment Checklist

RICHMOND TERRACE STATEN ISLAND, NEW YORK

Baseline Conditions	Local/Regional Planning Priority	Regulatory Support	Technical feasibility	Market Support	Neighborhood Need/ Stakeholder Input
---------------------	----------------------------------	--------------------	-----------------------	----------------	--------------------------------------

Legend	
✓	Achieved
?	Unkown
X	Not Achieved
-	Does not exist/ NA
■ (Green)	Explicit support/ no technical issues
■ (Yellow)	Lack of explicit support/ minor technical issues
■ (Red)	Opposition/ significant technical issues
■ (Grey)	Not Applicable

Neighborhood Pattern and Design

✓	■ (Yellow)	■ (Green)	■ (Green)	■ (Green)	■ (Green)	■ (Green)	P 1 Walkable Streets- Principal Entries
✓	■ (Yellow)	■ (Green)	■ (Green)	■ (Green)	■ (Green)	■ (Green)	P 1 Walkable Streets- Building Height to Street Width Ratio
X	■ (Yellow)	■ (Green)	■ (Green)	■ (Yellow)	■ (Yellow)	■ (Yellow)	P 1 Walkable Streets-Continuous Sidewalks
X	■ (Yellow)	■ (Green)	■ (Green)	■ (Red)	■ (Grey)	■ (Grey)	P 1 Walkable Streets-Garage and Service Bays
✓	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Green)	■ (Green)	P 2 Compact Development
✓	■ (Yellow)	■ (Green)	■ (Green)	■ (Yellow)	■ (Green)	■ (Green)	P 3 Connected and Open Community
✓	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Yellow)	C 1a Walkable Streets : Facades and Entries
X	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Red)	■ (Yellow)	■ (Yellow)	C 1b Walkable Streets: Ground-Level Use and Parking
X	■ (Green)	■ (Yellow)	■ (Green)	■ (Red)	■ (Yellow)	■ (Yellow)	C 1c Walkable Streets:Design Speed for Safe Ped and Bike Travel
X	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Red)	■ (Grey)	■ (Grey)	C 1d Walkable Streets: Sidewalk Intrusions
✓	■ (Green)	■ (Yellow)	■ (Green)	■ (Green)	■ (Yellow)	■ (Yellow)	C 2 Compact Development
X	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Green)	C 3 Mixed-Use Neighborhood Centers
X	■ (Yellow)	■ (Red)	■ (Green)	■ (Yellow)	■ (Yellow)	■ (Yellow)	C 4 Mixed-Income
X	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Yellow)	■ (Grey)	■ (Grey)	C 4 Diverse Communities
X	■ (Yellow)	■ (Yellow)	■ (Yellow)	■ (Red)	■ (Green)	■ (Green)	C 5 Reduced Parking Footprint
✓	■ (Yellow)	■ (Red)	■ (Red)	■ (Red)	■ (Green)	■ (Green)	C 6 Street Network
X	■ (Green)	■ (Yellow)	■ (Green)	■ (Yellow)	■ (Green)	■ (Green)	C 7 Transit Facilities
-	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	C 8 Transportation Demand Management
X	■ (Green)	■ (Yellow)	■ (Yellow)	■ (Red)	■ (Green)	■ (Green)	C 9 Access to Civic and Public Spaces
X	■ (Green)	■ (Yellow)	■ (Green)	■ (Yellow)	■ (Green)	■ (Green)	C 10 Access to Recreation Facilities
-	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	C 11 Visitability and Universal Design
X	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Yellow)	■ (Green)	■ (Green)	C 12 Community Outreach and Involvement
X	■ (Green)	■ (Green)	■ (Green)	■ (Yellow)	■ (Grey)	■ (Grey)	C 13 Local Food Production
X	■ (Green)	■ (Green)	■ (Green)	■ (Yellow)	■ (Grey)	■ (Grey)	C 14 Tree-Lined and Shaded Streets
X	■ (Yellow)	■ (Red)	■ (Yellow)	■ (Yellow)	■ (Green)	■ (Green)	C 15 Neighborhood Schools

SUSTAINABILITY ASSESSMENT

LEED-ND Checklist

LEED for Neighborhood Development: Project Assessment Checklist

RICHMOND TERRACE STATEN ISLAND, NEW YORK

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical feasibility
Market Support
Neighborhood Need/ Stakeholder Input

Legend	
✓	Achieved
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Green	Explicit support/ no technical issues
Yellow	Lack of explicit support/ minor technical issues
Red	Opposition/ significant technical issues
Grey	Not Applicable

Green Infrastructure and Buildings

X	Yellow	Green	Yellow	Yellow	Yellow	P 1	Certified Green Building
✓	Yellow	Green	Green	Yellow	Yellow	P 2	Minimum Building Energy Efficiency
✓	Yellow	Green	Green	Yellow	Yellow	P 3	Minimum Building Water Efficiency
✓	Green	Green	Green	Yellow	Grey	P 4	Construction Activity Pollution Prevention
X	Yellow	Yellow	Green	Yellow	Yellow	C 1	Certified Green Buildings
✓	Yellow	Green	Green	Yellow	Yellow	C 2	Building Energy Efficiency
X	Yellow	Yellow	Yellow	Yellow	Yellow	C 3	Building Water Efficiency
X	Green	Yellow	Green	Yellow	Grey	C 4	Water-Efficient Landscaping
✓	Green	Yellow	Yellow	Green	Yellow	C 5	Existing Building Use
X	Green	Yellow	Yellow	Yellow	Yellow	C 6	Historic Resource Preservation and Adaptive Reuse
-	Grey	Grey	Grey	Grey	Grey	C 7	Minimized Site Disturbance in Design and Construction
X	Green	Green	Yellow	Grey	Yellow	C 8	Stormwater Management
✓	Green	Green	Green	Yellow	Grey	C 9	Heat Island Reduction
X	Yellow	Yellow	Yellow	Yellow	Grey	C 10	Solar Orientation
X	Green	Green	Green	Yellow	Yellow	C 11	On-Site Renewable Energy Sources
X	Red	Red	Yellow	Yellow	Grey	C 12	District Heating and Cooling
X	Green	Yellow	Green	Grey	Grey	C 13	Infrastructure Energy Efficiency
-	Red	Red	Yellow	Red	Grey	C 14	Wastewater Management
✓	Green	Yellow	Green	Grey	Yellow	C 15	Recycled Content in Infrastructure
X	Green	Yellow	Yellow	Yellow	Grey	C 16	Solid Waste Management Infrastructure
X	Yellow	Yellow	Green	Yellow	Grey	C 17	Light Pollution Reduction

Staten Island, NY

3

9/12/2013

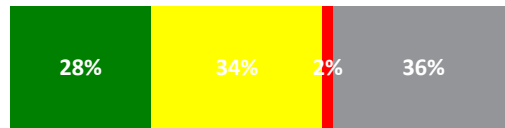
SUSTAINABILITY ASSESSMENT

LEED-ND Score

Based on in-field assessment, planning document review, various stakeholder meetings, and the community workshop, the Global Green team estimated which LEED-ND credits were “Likely,” “Possible with Effort,” “Unlikely” to be achieved, or “Not Applicable,” considering existing conditions, technical feasibility, policy readiness, financial burden, and applicability to neighborhood conditions. The bar graph below identifies the overall level of sustainable neighborhood performance for Richmond Terrace. Traditionally, LEED-ND standards are best suited for new neighborhoods where the layout and design can be influenced, however existing neighborhoods that are well-sited and dedicated to social, physical, and environmental resiliency still have the ability to be sustainable. To that end, in all three of the LEED-ND credit categories, a certain percentage of credits fall into the “Likely” category, which affirms the team’s perception that the area has existing attributes of sustainability, some of which can be identified as opportunities for increased resiliency. Of the remaining credits, many fall in the “Possible with Effort” category, which shows the large potential for improving the neighborhood’s level of sustainability specifically by pursuing the high-priority recommendations described in this report.

The summary table below shows the numeric values extrapolated from the percentage of credits identified as “Likely” below. While these values do not correlate exactly to specific LEED-ND points, they provide an estimate of the neighborhood’s potential level of future achievement. It should be noted that this is a rough measure of performance and not an exact representation of the project’s level of possible certification. It should also be noted that all the prerequisites need to be achieved if certification will be pursued.

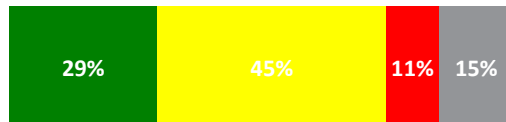
Smart Location and Linkages



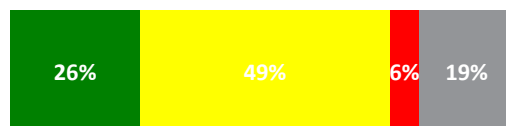
Legend

- “Likely”
- “Possible with Effort”
- “Unlikely”
- “Not Applicable”

Neighborhood Pattern and Design



Green Infrastructure and Building



Point Requirements for LEED-ND Certification

Certified:	40-49
Silver:	50-59
Gold:	60-79
Platinum:	80+

Richmond Terrace

LEED for Neighborhood Development

	Total	Achievable	Possible
Smart Location and Linkage	27	8	9
Neighborhood Pattern and Design	44	13	20
Green Building and Infrastructure	29	8	14
	100	28	43

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**Sustainable
Neighborhood
Assessment Team**

**Global Green
USA**

Walker Wells
Hagu Solomon

Jeff Loveshin

**US Green
Building Council**

Casey Studhalter

**Green
urbanism program**

2218 Main Street
Second Floor
Santa Monica, CA 90405
310.581.2700 ph
310.581.2702 fax
www.globalgreen.org

