



## HAVENS COVE

Havens Cove is preserved land that is part of the Ocean County Natural Lands Trust. It is located north of Baywood, abutting the residential streets, and adjacent to the Forsythe National Refuge. There is a small access footpath on Burlington Drive.



Figure 52: Entrance to Havens Cove on Burlington Drive  
(Google Streetview)



Figure 53: Detail from open space map around Baywood  
with Havens Cove identified to the north

## OTHER NEIGHBORHOOD DESTINATIONS

The Shore Acres neighborhood has several other destinations, primarily of private commercial nature, in addition to the parks and conservation/preservation spaces listed above, although very limited. There are very few neighborhood businesses, in particular, that offer necessary services. Marinas and marine-related businesses are most prominent in Shore Acres, which is a testament to the importance of the bayside location of the neighborhood. Marinas occupy a unique category bordering recreational and commercial.

In addition to the commercial destinations immediately within the borders of the Shore Acres sub-neighborhoods, there are many commercial, professional, and institutional destinations in the surrounding vicinity, particularly along Drum Point Road to the west. These include various restaurants, convenience stores, a pharmacy, a church, an elementary school, fire department, and parks, among other community and regional destinations.

The following neighborhood destinations in Shore Acres are listed by their location within a sub-neighborhood, but are not necessarily restricted to residents of that sub-neighborhood.



## BAYWOOD

1. Drum Point Marina Repair & Service at 500 Drum Point Road
2. Cemetary at Birch Drive (north)
3. Professional Exteriors, Inc. at 513 Drum Point Road
4. Sand Dollar Crumb Cake at 515 Drum Point Road
5. Baywood Marina at 63 Pilot Drive



Figure 54



Figure 55

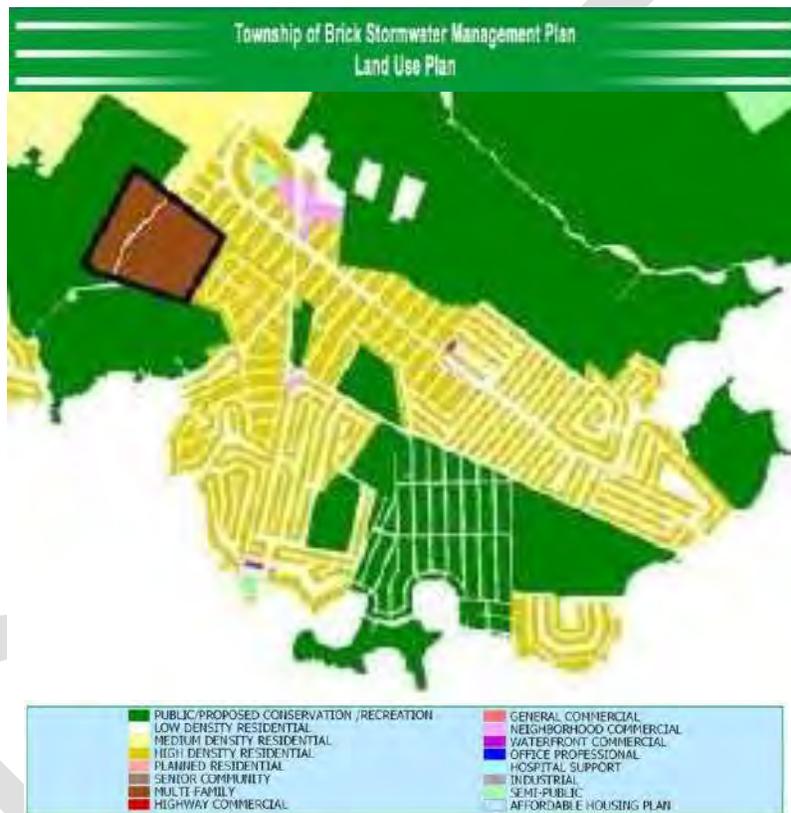
## SHORE ACRES

1. Bayside Auto Services at 622 Drum Point Road
2. Shore Acres Club at 159 Shore Drive (restricted to members/neighborhood)
3. Shore Acres Yacht Club at 800 Drum Point Road (restricted to members/neighborhood)
4. Drum Point Marina at 770 Drum Point Road



## ZONING ANALYSIS

The majority of the neighborhood falls within a High Density Residential area or Public/Proposed Conservation/Recreation areas. However, the developed part of Waterside Gardens is Multi-Family, and there are a few small areas with Semi-Public parcels, Waterfront Commercial, and Neighborhood Commercial properties, as shown in the Township Land Use Plan on [Map 25](#) below.



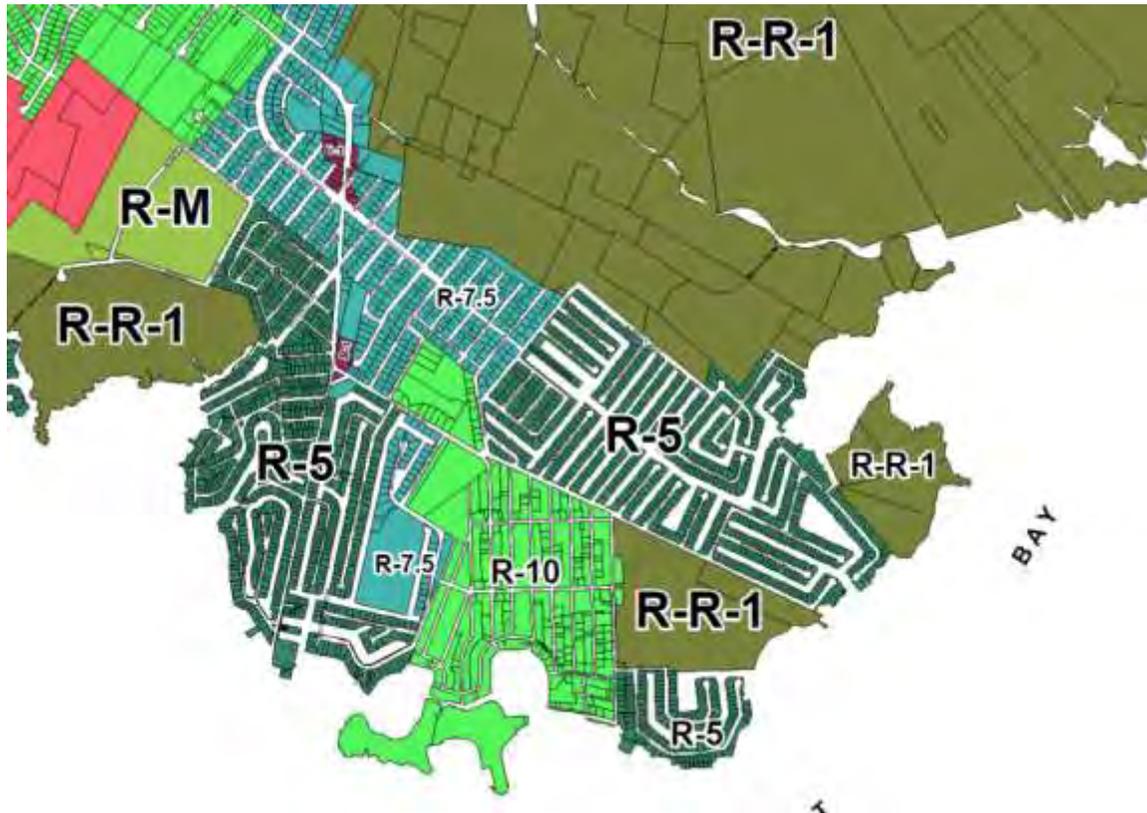
Map 25: Land Use Plan for Shore Acres

The Township Zoning Map breaks down the land uses further to better define what types of uses are permitted in each area. As shown on [Map 26](#), there are six different zones in the Shore Acres neighborhood – three of which constitute “High Density Residential”. These zones are divided in a similar way to the distinct sub-neighborhoods, following nearly the same boundaries.

The R-5 and R-7.5 Residential Zones cover much of the developed area of the neighborhood and includes the majority of Baywood, Shore Acres, and Seawood Harbor. The other zones include R-10 (Single-Family Residential Zone), R-M (Multifamily Residential Zone), R-R-1 (Rural Residential Zone), and B-1



(Neighborhood Business Zone) and are all described further in this section, referring to Chapter 245: Land Use in the Township Code. R-5, R-7.5, and R-10 have the same permitted uses. This Neighborhood Plan focuses on design standards and some suggested alterations to the uses and zoning map of the neighborhood.



Map 26: Shore Acres Zoning Map

#### B-1 (NEIGHBORHOOD BUSINESS ZONE)

The following are permitted uses in the B-1 Zone:

- A. Retail business and personal service establishments which are clearly of a neighborhood service character, such as the following:
  1. Stores selling groceries, meats, baked goods and other such food items.
  2. Drugstores and pharmaceutical stores.
  3. Hardware, household supply and electrical appliance stores.
  4. Package liquor stores.
  5. Stationery, tobacco and newspaper stores.
  6. Luncheonettes, restaurants and confectionery stores.
  7. Barber- and beauty shops.



- 8. Shoe repair shops.
- 9. Tailor shops, dry-cleaning pickup stores and self-service laundries, provided that public sewerage facilities are available.
- 10. Professional offices, banks and fiduciary institutions.
- B. Municipal buildings, volunteer first aid buildings and firehouses.
- C. Public libraries.

Permitted accessory uses shall be accessory uses as defined in Part 1 of this chapter.

The following uses are defined as conditional uses and may be permitted subject to the requirements as set forth in Article XXXII, § 245-279 et seq.:

- A. Utility installations provided that the requirements of Article XXXII are met.
- B. Commercial recreation, as follows, provided that the requirements of § 245-286 are met.
  - 1. Game rooms and amusement centers.
- C. Places of assembly, parish houses, convents and cemeteries.
- D. Scattered-site affordable housing units.

**Table 5: Schedule of Area, Yard and Building Requirements for Zone B-1 (from Township of Brick §245 Attachment 5)**

Zone		B-1	
Minimum Lot Size	Interior Lots	Area (sf)	10,000
		Width (ft)	100
		Depth (ft)	90
	Corner Lots	Area (sf)	12,500
		Width (ft)	100
		Depth (ft)	125
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	30
		Side Yard, Each (ft)	10
		Aggregate Side (ft)	-
		Rear Yard (ft)	20
	Accessory	Side Yard (ft)	10
		Rear Yard (ft)	20
Maximum Lot Coverage by Building		30%*	
Maximum Building Height	Stories	2	
	Eaves (ft)	-	
	Feet	35	
	Ridge (ft)	38.5	
Minimum Floor/Building Area (square feet) 2 stories/1 story		1,000	
Maximum Allowable Impervious Coverage		60%	

\*The maximum lot coverage shall refer only to that percentage of an affected lot which is suitable for building.



Figure 56: Typical business property in Shore Acres B-1 Zone, Mandalay Road/Drum Point Road (Google Streetview)

## R-M (MULTIFAMILY RESIDENTIAL ZONE)

The following are permitted uses in the R-M Zone:

- A. Garden apartments and/or condominiums. Garden apartment developments may be permitted in the R-M Zone, provided that the following standards and conditions are complied with:
  1. The buildings shall be evenly distributed over the entire property, maintaining the maximum possible separation. No structure shall be so designed or so located in the development that the distance from any window of any room used for human habitation shall be less than 100 feet from the wall of any structure on the site. Such distance may be reduced to not less than 50 feet for one exposure where a room has two exposures or where the room is a bathroom or laundry or utility room or is used as a community or group meeting room or for a similar purpose. No separate freestanding building shall be closer than 100 feet to any other building on the site.
  2. No portion of any dwelling unit shall be lower than the outside finished grade. No depressed siting shall be permitted.
  3. The total number of dwelling units in the project shall not exceed an average of six units per acre of usable lot area.
  4. Not more than 25% of the gross area, if said area is ponds or lakes with a mean depth equal to or greater than four feet, is to be utilized for recreational or aesthetic purposes. Ponds and lakes of depths of less than four feet shall not be utilized in computation of recreation or aesthetic purposes.
- B. Municipal buildings, volunteer first aid buildings and firehouses.
- C. Public libraries.

The following are permitted as accessory uses:

- A. Private garage space for the storage of motor vehicles.
- B. A deck/patio enclosure as defined in § 245-3, provided it satisfies the outlined conditions.



C. Accessory uses as defined in Part 1 of this chapter.

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Conversion of nonresidential areas in an existing multifamily residential development to inclusionary multifamily residential units.
- B. Places of assembly, parish houses, convents and cemeteries.

**Table 6: Schedule of Area, Yard and Building Requirements for Zone R-M (from Township of Brick §245 Attachment 5)**

Zone		R-M	
Minimum Lot Size	Interior Lots	Area (sf)	25 acres
		Width (ft)	350
		Depth (ft)	200
	Corner Lots	Area (sf)	-
		Width (ft)	-
		Depth (ft)	-
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	50
		Side Yard, Each (ft)	50
		Aggregate Side (ft)	-
		Rear Yard (ft)	30
	Accessory	Side Yard (ft)	30
		Rear Yard (ft)	30
Maximum Lot Coverage by Building		20%	
Maximum Building Height	Stories	-	
	Eaves (ft)	26	
	Feet	35	
	Ridge (ft)	38.5	
Minimum Floor/Building Area (square feet) 2 stories/1 story		-	
Maximum Allowable Impervious Coverage		65%	

**R-R-1 (RURAL RESIDENTIAL ZONE)**

The following are permitted uses in the R-R-1 Zone:

- A. Customary and conventional farming operations.
- B. One-family dwellings.
- C. Public and accredited private schools and institutions which may be conducted as a business.



- D. Municipal parks, playgrounds and other such municipally owned buildings and uses as are deemed appropriate and necessary by the Township Council of the Township of Brick.
- E. Municipal buildings, volunteer first aid buildings and firehouses.
- F. Public libraries.

The following are permitted as accessory uses:

- A. Customary farm buildings for the storage of products or equipment or for the processing of farm products and which are located on the same parcel as the principal use.
- B. Accessory uses as defined in Part 1 of this chapter of the Code of the Township of Brick.

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Public utility installation.
- B. Public and quasi-public philanthropic and charitable uses.
- C. Quasi-public buildings and recreation areas.
- D. Golf courses.
- E. Places of assembly, parish houses, convents and cemeteries.

**Table 7: Schedule of Area, Yard and Building Requirements for Zone R-R-1 (from Township of Brick §245 Attachment 5)**

Zone		R-R-1	
Minimum Lot Size	Interior Lots	Area (sf)	40,000
		Width (ft)	150
		Depth (ft)	150
	Corner Lots	Area (sf)	40,000
		Width (ft)	150
		Depth (ft)	150
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	50
		Side Yard, Each (ft)	50
		Aggregate Side (ft)	-
		Rear Yard (ft)	50
	Accessory	Side Yard (ft)	25
		Rear Yard (ft)	25
Maximum Lot Coverage by Building		25%	
Maximum Building Height		Stories	-
		Eaves (ft)	26
		Feet	-
		Ridge (ft)	-



**R-10 (SINGLE-FAMILY RESIDENTIAL ZONE)**

Permitted uses in the R-10 zone are the same as those zoned for the R-20 Residential zone (§245-112). The permitted uses are as follows:

- A. One-family dwellings
- B. Municipal parks, playgrounds, and other municipal buildings and uses as are deemed appropriate and established by the Township Council. The minimum land area shall not be less than 1/2 acre.
- C. Other public buildings of a governmental or cultural nature.
- D. Volunteer first aid buildings and firehouses.
- E. Public libraries.

The following are permitted as accessory uses (as per R-20 zone):

- A. Private garage space for the storage of motor vehicles.
- B. Accessory uses as defined in Part 1 of this chapter

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Scattered-site single-family detached affordable housing units.
- B. Public schools and private schools which are not conducted as a business shall be permitted as a conditional use, subject to the conditions and procedures in § 245-298.2.
- C. Places of assembly, parish houses, convents and cemeteries.

**Table 8: Schedule of Area, Yard and Building Requirements for Zone R-10 (from Township of Brick §245 Attachment 5)**

Zone		R-10	
Minimum Lot Size	Interior Lots	Area (sf)	10,000
		Width (ft)	90
		Depth (ft)	100
	Corner Lots	Area (sf)	10,500
		Width (ft)	100
		Depth (ft)	100
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	30
		Side Yard, Each (ft)	6
		Aggregate Side (ft)	20
		Rear Yard (ft)	20
	Accessory	Side Yard (ft)	5
		Rear Yard (ft)	5
Maximum Lot Coverage by Building		30%	
Maximum Building Height	Stories	-	
	Eaves (ft)	26	
	Feet	35	
	Ridge (ft)	38.5	



## R-5 & R-7.5 (SINGLE-FAMILY RESIDENTIAL ZONES)

Permitted uses in the R-5 and R-7.5 zones are the same as those zoned for the R-20 Residential zone (§245-112). The permitted uses are as follows:

- A. One-family dwellings
- B. Municipal parks, playgrounds, and other municipal buildings and uses as are deemed appropriate and established by the Township Council. The minimum land area shall not be less than 1/2 acre.
- C. Other public buildings of a governmental or cultural nature.
- D. Volunteer first aid buildings and firehouses.
- E. Public libraries.

The following are permitted as accessory uses (as per R-20 zone):

- C. Private garage space for the storage of motor vehicles.
- D. Accessory uses as defined in Part 1 of this chapter

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Scattered-site single-family detached affordable housing units
- B. Public schools and private schools which are not conducted as a business
- C. Places of assembly, parish houses, convents and cemeteries
- D. Creation of beach cottage community conditional use for structural alteration or rebuilding of these residential buildings only on the following properties; Block 25, Lot 4, Block 26, Lot 4, and Block 36, Lots 12, 13, 24, and 28.

The bulk standards for both zones are very similar because they are high density, although the minimums for the R-5 zone are slightly less than those in the R-7.5 zone. The biggest difference is seen in the lot size, where it is 5,000 square feet in R-5, whereas it is 7,500 square feet in the R-7.5 zone. Additionally, the minimum width is 50 feet for R-5 and 75 feet for R-7.5 and the minimum depth is 75 feet for R-5 and 90 feet for R-7.5. The percent lot coverage is slightly more for the R-5 zone than the R-7.5 zone, but the maximum building heights are the same for both zones.

The present bulk standards for the R-5 and R-7.5 Zones are outlined in Table 5 below:

**Table 9: Schedule of Area, Yard and Building Requirements for Zones R-5 & R-7.5 (from Township of Brick §245 Attachment 5)**

Zone		R-5	R-7.5
Minimum Lot Size	Interior Lots	Area (sf)	5,000
		Width (ft)	50
		Depth (ft)	75
	Corner Lots	Area (sf)	6,000
		Width (ft)	50
		Depth (ft)	75
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	20
		Side Yard, Each (ft)	5
		Aggregate Side (ft)	12
		Rear Yard (ft)	15
	Accessory	Side Yard (ft)	5
		Rear Yard (ft)	5
Maximum Lot Coverage by Building		35%	30%
Maximum Building Height	Stories	-	-
	Eaves (ft)	26	26
	Feet	35	35
	Ridge (ft)	38.5	38.5

Despite the above standards, lots vary in size, particularly in the older neighborhoods, which may have been established before the current zoning. Undersized lots (either in width or depth) cannot meet the setback requirements of the ordinance. These issues will only be exacerbated when a homeowner tries to raise their home to avoid the Post-Sandy flood insurance premiums.

When dealing with raising a home to meet the established Base Flood Elevations (“BFEs”), residents typically run into issues with building height, coverage and setbacks. Most towns affected by Sandy amended their zoning standards for height to allow homes to be elevated without height variances. However, on undersized lots the tendency was for applications for relief from yard requirements, mainly because the new



Figure 57: Typical neighborhood residential on Paul Jones Dr., Shore Acres in the R-5 Zone (Google Streetview)

construction was a larger home than what was on the lot pre-Sandy. In Toms River Township, the governing body responded to the trend of over-building by adopting an ordinance that established a

maximum “Floor Area Ratio” for single family homes, which linked the maximum size of the home to the size of the lot and elevated any variance relief to that under NJSA 40:55D-70-d, thereby requiring five affirmative votes of the Board rather than a simple majority. Since that ordinance amendment the trend has reportedly subsided. While the lots in Shore Acres are generally larger than those in comparable neighborhoods in Ortley Beach and the Brick Barrier Island Neighborhoods, there were isolated examples of overbuilding which suggest that a similar approach to regulating FAR might be appropriate for the Brick mainland lagoon neighborhoods.

While some residents do not perceive the size of new homes as a Township issue, many residents and Township officials have criticized that overbuilding is changing the character of the neighborhoods and is out of scale with existing homes. In many locations, newly constructed homes are twice the height of older homes and are often much larger in area.



Figure 58: Examples of large-scale and raised new construction homes next to smaller original homes in Shore Acres (Google Streetview)



Figure 59: Examples of large-scale and raised new construction homes next to smaller original homes in Shore Acres (Google Streetview)



Figure 60: Example of a single property after Superstorm Sandy and rebuilt a couple of years later (Google Streetview)

Another issue that confronts property owners when elevating or reconstructing their homes is the conventional regulations regarding “yards” when the entrances to the homes are a story or more above grade, requiring additional stairs in mostly confined yard areas. Most zoning ordinances define a “yard” as a required open space on a lot between a lot line and building or structure, which is unoccupied and unobstructed from grade to sky. There are a variety of stairway designs to transition from the finished grade of an elevated or reconstructed house to the entrance doors, which are often more than 10 feet above the ground. It would require about 17 steps to cover a rise of 10 feet based on the diagram in

Figure below, which would require about 14 feet of run. Straight run of steps to the front door would then frequently require front yard variance relief.

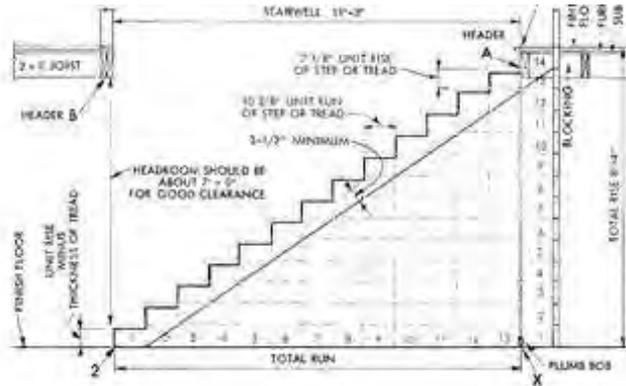


Figure 61: Typical riser and tread dimensions to cover a height of 8.33 feet.

Breaking up the run of entry stairways to elevated homes with one or more landings provides for a more attractive transition, but also requires more space, which often forces stairways into required yards and can generate applications for variance relief to the Zoning Board of Adjustment.



Figure 62: Examples of homes in Shore Acres with various types of entry stairways (Google Streetview)

To facilitate such landings, the Township amended its zoning regulations in §245-Part 2: Article XXXVIII A “Supplemental Land Use and Zoning Regulations in Special Flood Hazard Areas”. The purpose of which is to recognize limitations associated with federal and state construction and reconstruction requirements in special flood hazard areas, and encourage the restoration and reconstruction of existing



neighborhoods within the Township of Brick in compliance with Chapter 196, special flood hazard areas, and the Uniform Construction Code. §245-330.4 “Permitted Yard Encroachments” permits:

- A. An access staircase and entry stoop, not to exceed 100 square feet in area, may project no further than 10 feet into a required front yard setback area. The previously referenced entry stoop may be covered or uncovered.
- B. An access staircase and entry stoop, not to exceed 50 square feet in area, may project no further than five feet into a required rear yard setback area. The previously referenced entry stoop may be covered or uncovered.
- C. An access staircase and entry stoop shall maintain a one-foot minimum side yard setback, provided that unobstructed access to the rear of the building is provided on a minimum of one side of the building.
- D. Elevated platforms for mechanical devices serving a building shall maintain a one-foot minimum side yard setback, provided that unobstructed access to the rear of the building is provided on a minimum of one side of the building.
- E. The permitted yard encroachments noted in this section are applicable to all existing and proposed buildings on any parcel of land that is designated to be in a special flood hazard area.

Additional consideration for dealing with transitioning to elevated entrances similar to the provisions made in the current ordinance for handicapped ramps could help to simplify the recovery process for property owners.

The ordinance also provides requirements for “Façade Treatments for Enclosed Spaces” (§245-330.5), as follows:

- A. A building façade with an enclosed ground level must be treated to conceal the block face.
- B. Ground level areas that are below the base flood elevation, enclosed or exposed, are uninhabitable spaces.
- C. An exposed façade area shall be screened from public view. A minimum of 30% of an exposed façade area shall be screened with landscaping, siding, venire, faux window treatments, doors, etc., to visually break up the solid wall.

These changes in the ordinance could work to help homeowners who are trying to raise their home. However, the Design Standards section of this Plan offers additional bulk standard recommendations for consideration by the Township as well as design guidelines.



## RECOMMENDATIONS

The initial assessment for the Neighborhood Plan involved site visits of the area with local representatives, gathering feedback from residents, and an analysis of the information from investigations, census data, and historic documents assembled by Township Planners and consultants. From this baseline information, the following ideas emerged:

### CONNECTIVITY AND STREETScape RECOMMENDATIONS

As demonstrated in previous sections of this Plan, there is a major lack of public pedestrian infrastructure within and between the sub-neighborhoods of Shore Acres, as well as any connectivity to other neighborhoods in the region. Although there has clearly been some effort with private developers (i.e. Waterside Gardens) and newer developments to implement sidewalks, they are few and far between and often found in subpar condition.

The Township has recently demonstrated a commitment to apply for grant funding to improve circulation for increased bicycle access throughout Brick. The bicycle path along St. Lawrence Boulevard between Baywood and Seawood Harbor has been completed and is one small step towards better connectivity. However, overall this has been slow to manifest and bicycle infrastructure and circulation is still at a minimum throughout the neighborhood and the Township.

Additionally, intra- and inter-neighborhood public transportation options are non-existent. There are several public bus routes which run along major corridors, such as Brick Boulevard, but do not reach the majority of populations in isolated, but dense neighborhoods, such as Shore Acres.

Based upon the analysis of existing conditions the following could be further investigated:

1. The Township should continue to pursue grants for pedestrian and bicycle safety and mobility through all sources, particularly the New Jersey State Department of Transportation (NJDOT) and federal grants.
2. The Township should coordinate pedestrian and bicycle mobility enhancements with improvements made by the County of Ocean on County roads. Opportunities include:
  - a. Enhancing berms along the road with street trees where space permits;
  - b. Extending or connecting existing sidewalks to serve all high traffic areas;
  - c. Coordinating bicycle routes along streets that improve safety and connectivity for bicyclists;
  - d. Adding additional crosswalks to facilitate pedestrian crossing, with priority for pedestrians, and particularly in areas not currently served by crosswalks or traffic lights, that have heavy seasonal traffic, and that have desirable amenities (i.e. public parks, marinas, beaches, restaurants, etc.).



3. Observe pedestrian and cyclist treatments in neighboring towns where mobility is a focus in order to get a better idea of the potential to implement such treatments in this neighborhood. Explore the potential for traffic calming methods to improve roadway safety and increase pedestrian and cyclist mobility options. As a largely residential and recreational neighborhood, it is important that the roadways serve these uses. A traffic and speed study should be conducted, with a focus on Drum Point Road as the primary connector road and access to public space.
4. Develop a comprehensive network of sidewalks and crosswalks throughout the neighborhood that connect and, particularly, that allow safe and efficient pedestrian traffic along Drum Point Road and to major points of interest. Map 27 shows possible sidewalk connections in red that should be priority areas when new sidewalks are installed, with general indication to sides of the street, although a study should be conducted to determine proper location. In the process of making sidewalk and crosswalk recommendations, consideration was given to: the probable traffic level of vehicles and pedestrians; existing sidewalks and crosswalks for potential extensions; difficult intersections; creating the shortest distance between points and fewest road crossings; focusing growth in areas least compromised by the effects of climate change; and moving pedestrians to various points of interest, which are also indicated on the map. Maps 26 through 29 show the neighborhoods in detail.

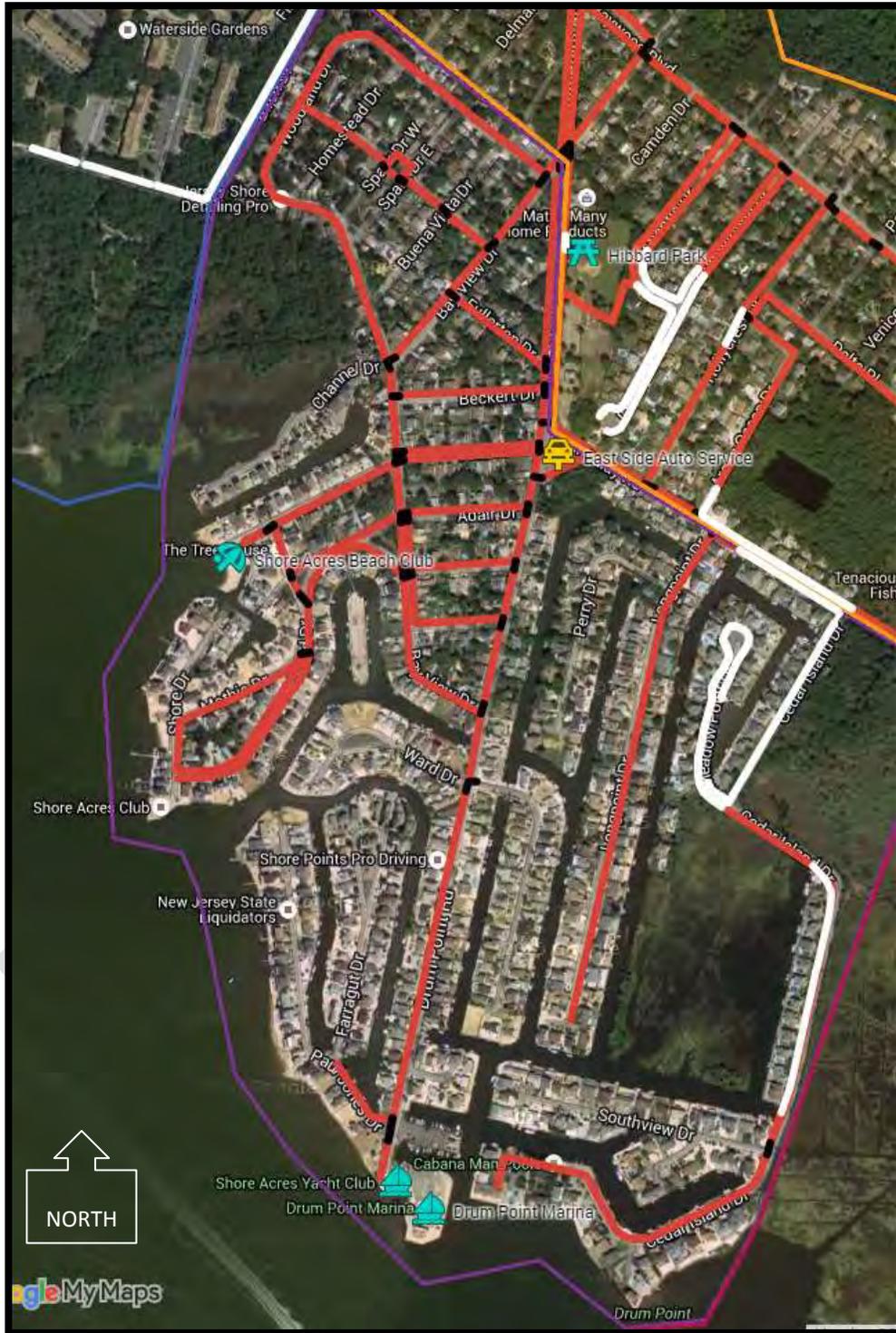
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Map 27: Shore Acres neighborhood map with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black), and points of interest



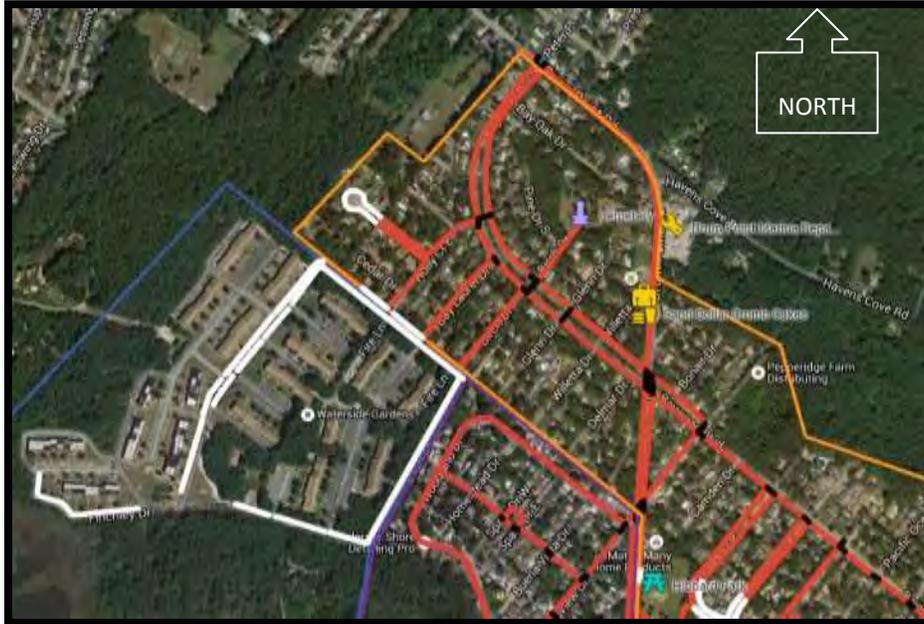
THE TOWNSHIP OF  
**BRICK, NJ**



Map 28: Detail of Shore Acres sub-neighborhood map with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black)



THE TOWNSHIP OF  
**BRICK, NJ**



Map 29: Detail of Waterside Gardens and Baywood sub-neighborhoods with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black)

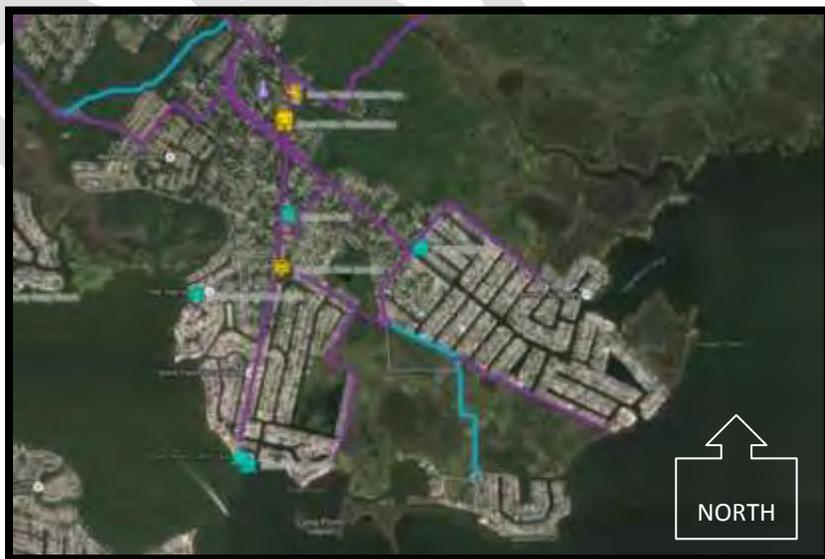


Map 30: Detail of central Baywood sub-neighborhood with existing (white) and recommended (red) sidewalks and recommended crosswalks (black)



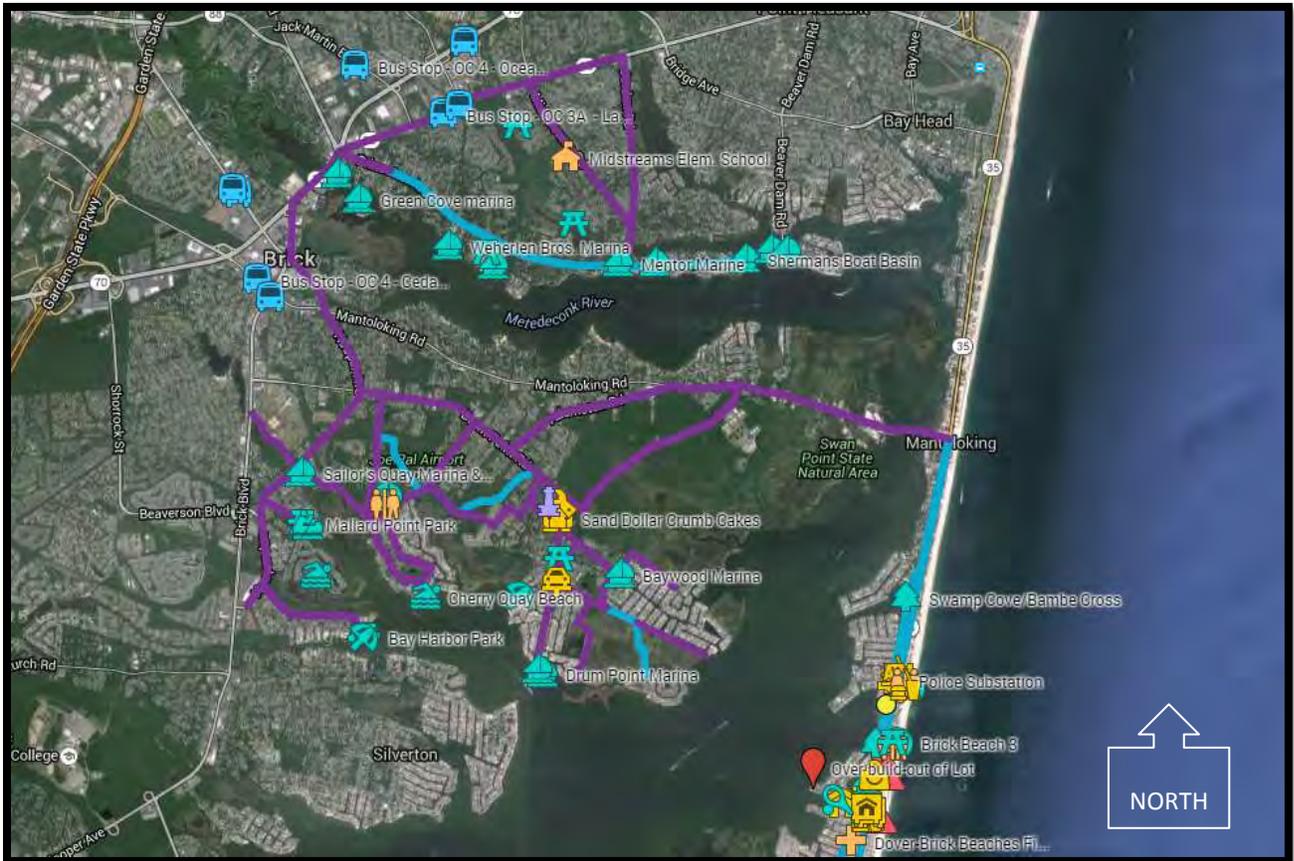
Map 31: Detail of southern Baywood and Mandalay Park sub-neighborhoods with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black)

5. Crosswalks should be placed at minimum at all east to west crossings on Drum Point Road, and other major roads and connections between neighborhoods, parks, and destinations, and at least every half-mile (see Maps 25 through 29 above).
6. Designate “Bicycle Friendly” routes within the Shore Acres neighborhood and continue to build a network of bicycle lanes, shared lanes, and paths between the various neighborhoods and from the Bay to the beaches and to major destinations. Many of the primary and secondary roads in Shore Acres are slow and wide enough to accommodate sidewalks and/or shared bicycle lanes.



Map 32: Shore Acres neighborhood with existing bicycle paths (blue) and recommended (shared) lanes or paths (purple)

We envision a much larger, comprehensive network of bicycle lanes and paths throughout the Township and County in the future that might develop to look similar to that which is pictured in Map 33 below. However, a further study must be conducted to determine precisely the needs and design of a bicycle network. These recommendations have been made based on mapping of existing bicycle lanes, most heavily trafficked roads, destinations, and Master Plan goals.



Map 33: Bicycle Circulation Plan connecting four Brick neighborhoods with existing bicycle paths (blue) and recommended (shared) lanes or paths (purple)

7. At minimum, a Circulation Plan with a wayfinding system should be further developed and implemented for bicyclists and pedestrians and educational outreach targeted toward children to reduce the risk of accidents.
8. Explore the possibility of extending a bus line into or near Shore Acres and Cherry Quay along Drum Point Road. In coordination with Ocean County Department of Transportation (Ocean Ride), a neighborhood bus stop could be executed. According to the 2010-2014 U.S. Census ACS data, 33.2% of 25 to 44 year-olds and 41.8% of 45 to 54 year-old workers in Brick Township use public transportation. This is an important demographic of workers to cater to due to the size of the population, although younger populations should be encouraged to use public transportation and curb individual automobile use, as well.

9. Sidewalk and curb treatments should be standardized with one pattern for the entire neighborhood, whether a Township standard or unique for the neighborhood, that can be modified to fit various applications. For example, slight variations could be used for smaller and broader crossing streets.
10. Where feasible, raise the street levels in areas that are most prone to flooding and especially those that serve as coastal evacuation routes for sub-neighborhoods, including:
  - a. Seawood Harbor – Rochester Drive; Toronto Drive
  - b. Mandalay Park – Knoll Crest Avenue/Nokomis Drive/Holly Avenue/Pilot Drive/Mandalay Road
  - c. Shore Acres – Drum Point Road (identified evacuation route); Vanard Drive; Shore Drive; Waterway Court/Adair Drive
  - d. Baywood – St. Lawrence Boulevard to Cadiz Drive; Cadiz Drive; Valencia Drive; Alhama Drive; Cartagena Drive; Toledo Drive; Seville Drive; East Granada Drive; West Granada Drive; Alameda Drive to Pilot Drive.
11. Upgrade storm drains along streets to allow more efficient outflow of flood water without “reverse flooding” (water entering through storm drains), to allow emergency access/evacuation.
  - a. Flooding was noted as a severe issue in Seawood Harbor and Mandalay Park (Rochester Drive, Toronto Drive, and Knoll Crest Avenue), according to residents, and that the neighborhoods are often cut off from major roads and emergency services during regular high tide events.
12. Explore the possibility of (re)connecting the street grid between Shore Acres and Baywood, if the opportunity arises. Alternatively, consider public right-of-ways for pedestrian paths between the streets. This will allow a higher density of development without adverse effect on traffic on the two thru-streets, and will increase accessibility to various parts of the neighborhood.



Figure 63: Possible street connections (red lines)



## IDENTIFICATION & WAYFINDING SIGNAGE

Overall, the Shore Acres neighborhood has an identity as a relaxed year-round and summer coastal lagoon community surrounded by the nature of the Barnegat Bay and wetlands. Unlike some other neighborhoods in the Township, it is relatively easy to see the distinctions when one is in Shore Acres versus other neighborhoods in Brick Township. The sub-neighborhoods are separated physically by various types of divisions, such as wetlands and main traffic corridors, and each has their own monument sign at a minimum of one location.

However, Shore Acres as a whole (including all sub-neighborhoods) does not have an identity that is recognizable as a brand. The individual signage for the separate sub-neighborhoods simultaneously identify their location, but also create misperception about the connectivity of the neighborhood and whether one has left Shore Acres altogether.

Despite the physical divisions, lack of connectivity, and a handful of signage for the sub-neighborhoods, they are still mostly indistinguishable from one another in built form. This can be viewed as an advantage which can be exploited to make the neighborhood appear more cohesive, if an effort is made to coordinate the overall branding and signage in the neighborhood. This Neighborhood Plan recommends that there be some consistency in the identification message.

A common design theme and graphics for signage should be chosen that also reflects the local character of the neighborhood. A blend of existing Township and neighborhood color schemes, along with the consistent use of a font type and a recognizable, uniform name, discreetly shows relationships and hierarchy among places. As one of the most prominent and familiar sub-neighborhoods in this Plan area, "Shore Acres" could continue to be used to refer to the entirety of the neighborhood. This name identifies the neighborhood by two of its most important attributes, the "Shore" and "Acres" (equating to open space), and is unique and succinct.

Below is a graphic example of unified branding message for new identification and gateway signage, blending typical colors found in Brick Township and within Shore Acres.





Additional signage could be altered slightly for each sub-neighborhood, but might appear like the following:



Wayfinding signage was also identified as a way to navigate to different sub-neighborhoods, businesses, parks, and other destinations, which currently proves to be challenging. One of the challenges is the successive dead-end streets in the lagoon communities. A system of pedestrian-scale wayfinding signage should be coordinated with the gateway signage referenced above in order to reinforce the cohesiveness of the community, as well as to help residents, visitors, and customers find existing and future services, especially during the summer tourism season. Wayfinding signage could also be coordinated on Township-wide level. An example of such a system is shown below in Figure .

The following points of interest should be linked by wayfinding signage:

- Sub-Neighborhoods
- Parks
- Beaches
- Business Districts
- Marinas
- Trail Heads
- Other Brick Neighborhoods

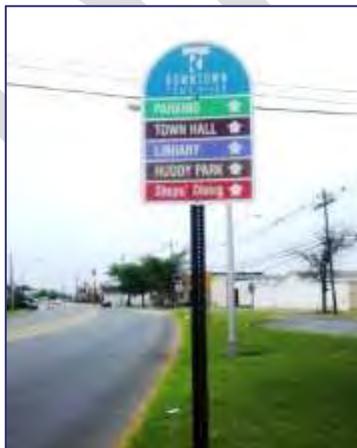
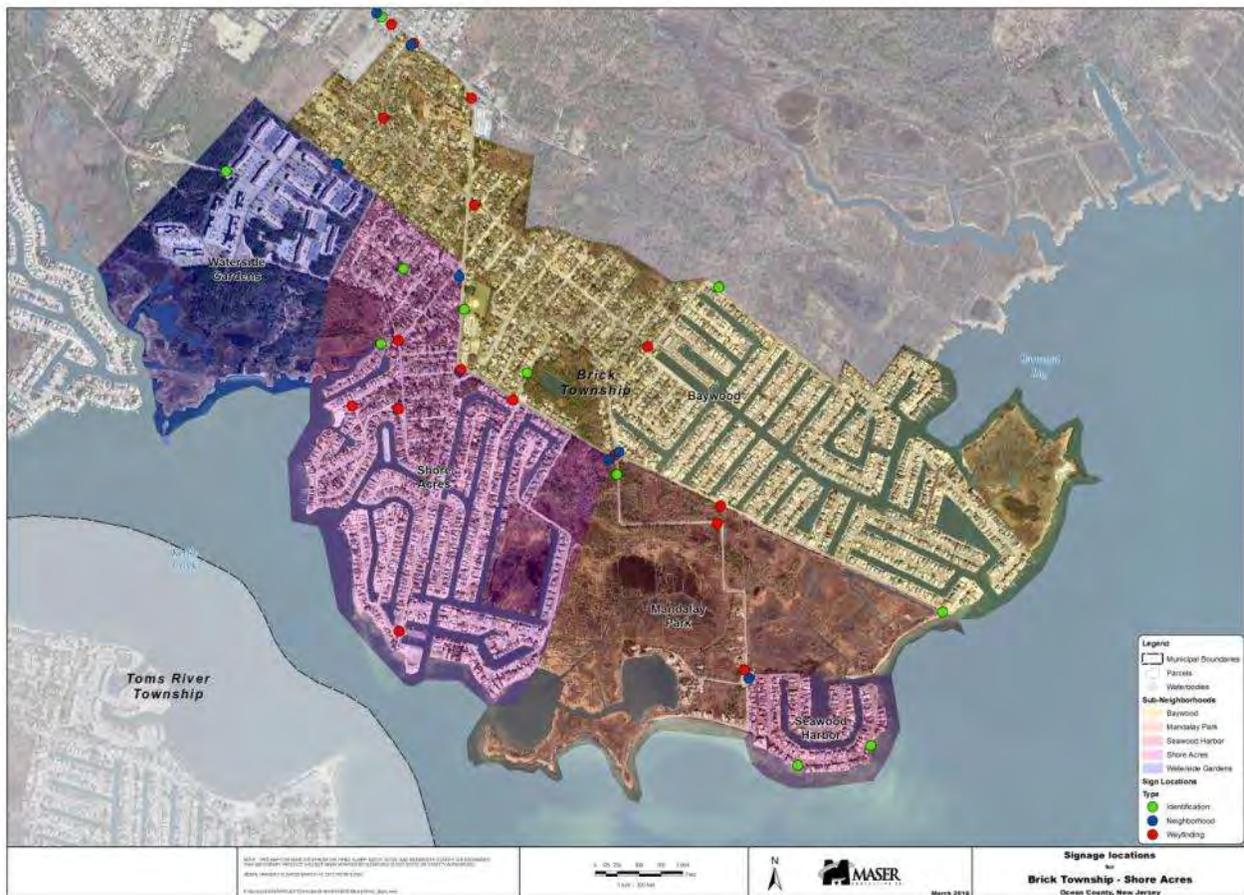


Figure 64: Wayfinding signage is used in downtown Toms River to direct motorists to primary destinations (left). The image to the right was taken in Nantucket, MA (June 2015) and shows a system of wayfinding using plaques purchased by businesses mounted into slots on a standard that matches the antique style of the pedestrian lighting on Main Street and points in the direction of the business.

Signage that clearly identifies destinations should be provided in visible and convenient areas throughout the neighborhood at a distance and orientation which is readable for both pedestrians and vehicles from the road. These would preferably be located at major intersections, crossroads, and destinations. Finally, a color or theme-coded system relating each to a subcategory of places allows for quick and easy dissemination of place descriptors and directions. For example:

- Yellow for sub-neighborhoods
- Green for parks/open space
- Blue for water-related uses
- Red for businesses
- Brown for government/municipal services and buildings

Finally, informational signage could be provided for the neighborhood, landmarks, natural conservation areas, and parks with various facts about local history, important dates, names, ecology, and contact information.



Map 34: Signage should be considered, replaced, or maintained in the following locations of the recommend types (Red refers to Wayfinding signage; Blue refers to neighborhood monument signs; Green refers to identification or information signs, which would be placed at parks, trailheads, and other relevant public spaces)



## ZONING RECOMMENDATIONS

Upon consideration of the existing zoning throughout the neighborhood, along with the physical challenges currently faced by the community and future predictions of storms and sea level rise, the following recommendations have been made to maintain and improve the built quality of the neighborhood:

### BULK RECOMMENDATIONS

After reviewing the bulk standards, this Neighborhood Plan recommends the following be considered by the Township for the Shore Acres neighborhood:

#### **Flexible Front Yard Setbacks**

Homes are presently required to have a 20 foot front yard and 15 foot rear yard in the R-5 zone, while the R-7.5 zone requires a 25 foot front yard and 15 foot rear yard. However, lot depth varies within the two neighborhood zones, with some well over 200 feet in depth and others as small as 50 feet. Therefore, a lot that is only 50 feet deep cannot meet the rear or front yard setback requirement. In fact, a lot that is 50 feet deep would only be able to construct a house that is 15 feet deep, which is impractical. Many properties do not meet the required yards, which is perhaps a pre-existing condition, allowing the homes to be larger. Some homes and their garages are less than 20 feet from the streetline. Additionally, there are many odd- or triangular-shaped lots which prevent the same kind of build-out. Coupled with the need to elevate homes and add exterior staircases for entrances, the required yard depths can pose significant limitations on density, although the Township has made some strides towards rectifying this issue.

To this end, the Township should amend the front yard setback reducing the minimum requirement for the front yard from 20 feet to the prevailing front setback but in any event the front setback shall be a minimum of two feet, to provide homeowners more flexibility.

#### **Flexible Side Yard Setbacks**

Lot widths vary greatly within Shore Acres, with the smallest lots in the Shore Acres sub-neighborhood, which is the oldest and most dense neighborhood. Presently, the code requires one yard to be 5 feet wide and with the combined yards not less than 12 feet in the R-5 zone. In the R-7.5 zone, one side yard is required to be at least 6 feet and have combined side yards of at least 15 feet. A lot that is 40 feet in width would be restricted to a home that is only 28 feet wide in the R-5 zone and 25 feet wide in the R-7.5 zone, which is not practical or desired in today's residential designs.

Two short-term options are presented for the Township’s consideration. The first is reducing the side yard setbacks for lots with a width less than 40 feet. A sliding scale could be provided to offer homeowners looking to rebuild with variance-free options. Lots between 31 and 39.9 feet (in width) could be permitted side yard setbacks of 4 feet each, for a total of 8 feet. Lots between 20 and 30.9 feet, if any, could be permitted a side yard setback of 0 and 3 feet, for a total of 3 feet.

The second option for the Township’s consideration is a development concept called “zero-lot line”. A zero-lot line home essentially places the home on one side yard line, allowing for a generous side yard on the other side that functions as the home’s outdoor space in conjunction with the rear yard. On lots narrower than 40 feet, the zero-lot line concept provides one useable side yard instead of two unutilized side yards. As shown in Figure , the homes are located along one property line. This alternative would provide more flexibility to owners of undersized lots (less than 40 feet wide) and produce usable side yards instead of useless slivers.

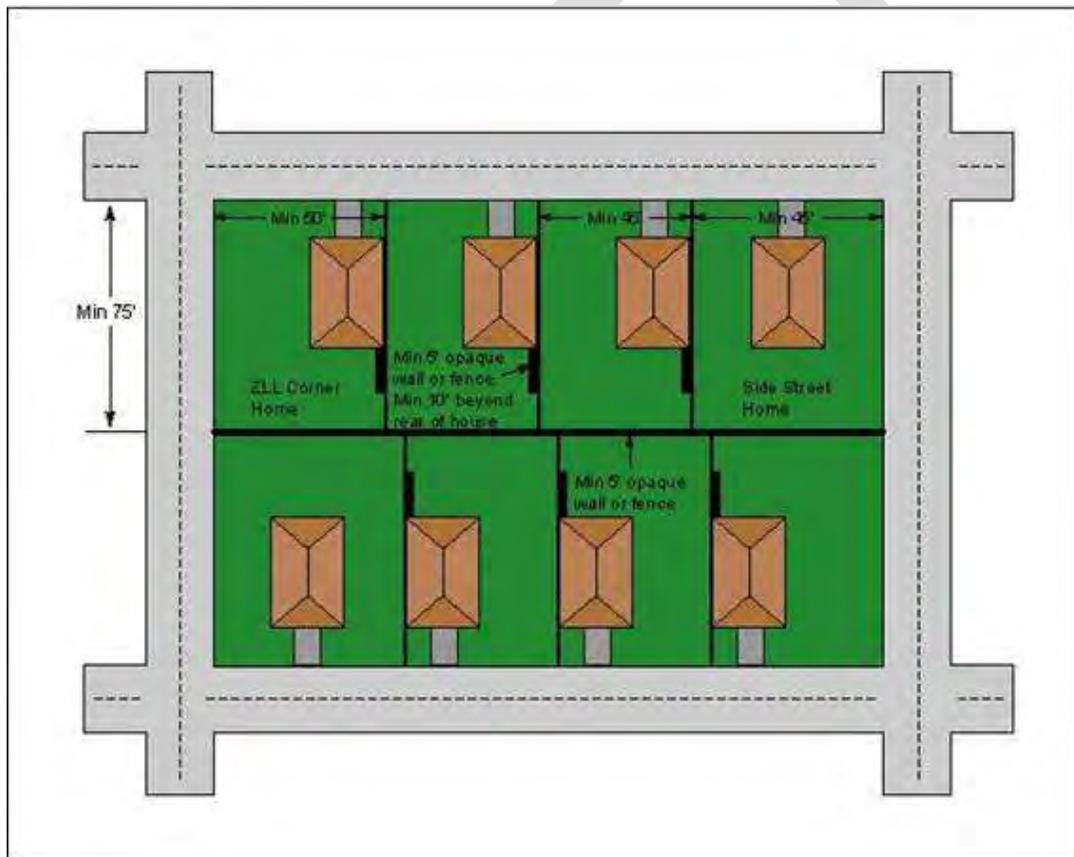


Figure 65: Illustration of Zero-Lot Line Homes



For both zones, the potential amendments to the side yard parameters could include:

**Table 10: Amendments to Side Yard Setbacks**

Lot Width (ft)	One Side Yard (ft)	Combined Side Yards (Both) (ft)
20 – 30.9 feet	0 and 5	5
31 – 39.9 feet	0 and 8	8
40 – 49.9 feet	0 and 12	12
50 – 50.9 feet	0 and 16	16

Lots that are 60 feet and greater in width could maintain the existing side yard setback requirements with two yards, so that larger homes do not overpower adjacent smaller lots.

**Flexible principal building coverage**

There are some lots within the neighborhood, particularly in Shore Acres, which, when applying the 35% maximum principal building coverage to the lot, significantly restricts the footprint of the home. Existing on-the-ground conditions reveal that undersized lots contain homes that cover much more than 35% of the lot area.

It is recommended that the Township consider allowing lots under a certain size (perhaps lots less than 3,000 square feet) to have a larger maximum principal building coverage, for example, 50% or 55%. This would allow a lot that is 30 feet by 50 feet to construct a home that has a first floor with 750 or 825 square feet.

On the other hand, many homes that occupy larger lots or double lots are oversized and sometimes have a principal building coverage greater than 35% or even greater than 50%. This kind of overbuilding on lots that already meet the zoning requirements should be restricted to prevent unwanted growth and reduce impervious surfaces.

In addition to some of the strides that have already been taken to assist homeowners who are rebuilding, the Township has identified the need to update and amend its Land Use and Development Regulations to address many of these issues and is currently developing recommendations for zoning amendments as one of its Phase II Post Sandy Recovery Planning projects.

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**ZONING MAP CHANGES**

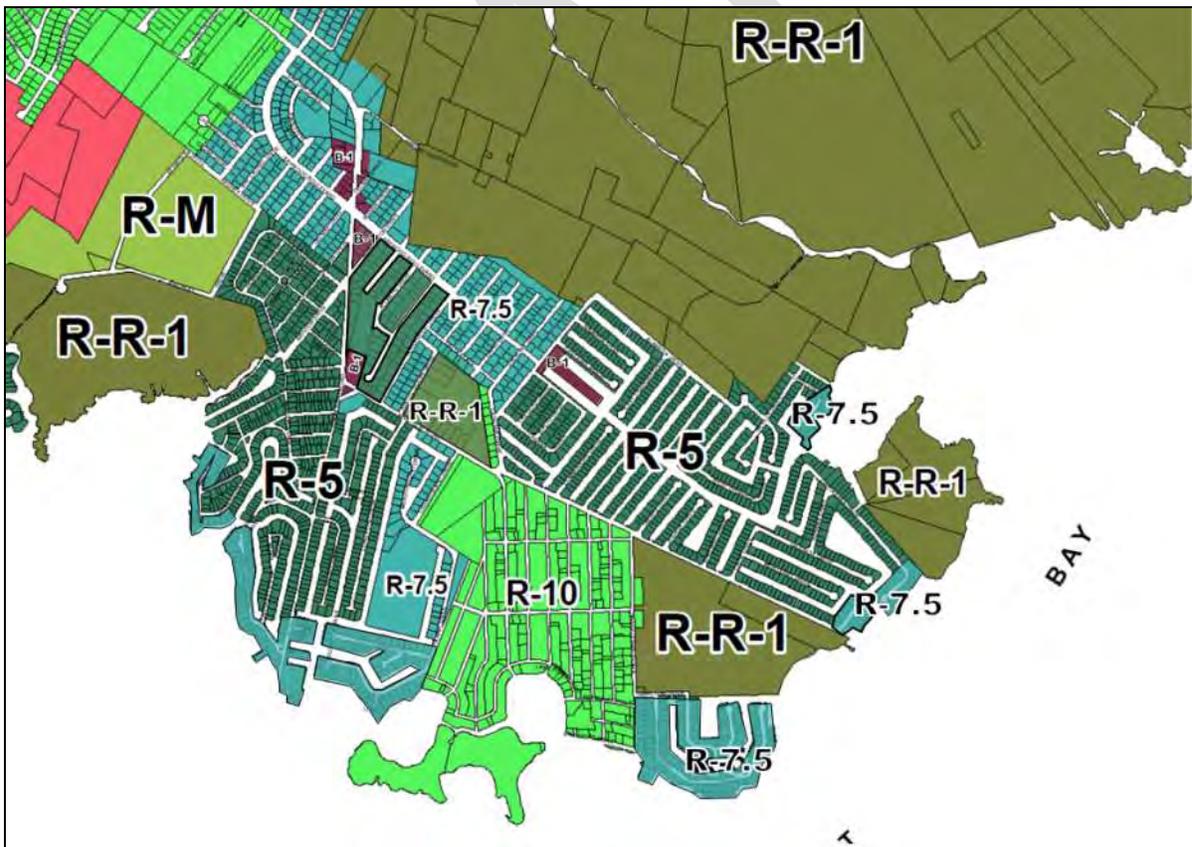
It is recommended that the Township investigate the potential for changes to existing zoning areas, as shown on the Zoning Map, Map 35 (see [Map 26](#) for comparison). While the R-5 zone involves more undersized lots, consideration of whether a substantial number of them are undeveloped could lead to a possible downzoning to R-7.5 bulk standards or greater to prevent overbuilding and to allow larger yards



that will help to reduce impervious surfaces and create greater area for water retention. Lots will be slightly larger (7,500 square feet rather than 5,000 square feet) and reduce the number of properties impacted by flooding. Many of the properties already occupy more than one lot. This approach might trigger applications for lot area variances, but we think its exploration has merit.

The upzoning of the area around Hibbard Park from R-7.5 to R-5 will maintain the overall neighborhood character, while allowing for marginally more dense development in an area that has public amenities, a walkable street grid, and neighborhood businesses, in addition to being slightly more elevated. Additional parcels along Drum Point Road in proximity to the park should be considered for Neighborhood Commercial (B-1) zoning, as well as rezoning of marinas, which might include shops and restaurants.

Finally, areas around catch basins, such as the one behind Mandalay Road and Arctic Ocean Drive, should be considered for downzoning to the Rural Residential (R-R-1) Zone in order to allow for more absorption of flood water in the basin without affecting private properties and to provide additional public open space with access to the water.



Map 35: Shore Acres Zoning Map with Recommended Changes



## FUTURE NEIGHBORHOOD GROWTH

Consistent with the recommended zoning map changes, bulk recommendations, and predicted impacts of flooding, all future neighborhood growth should be concentrated accordingly.

The R-5, R-7.5, and R-M zones will continue to have the densest residential properties; however, growth should be emphasized in areas of higher elevation away from the coastline to the northwest of Shore Acres. Higher density growth should be encouraged particularly in areas with a primary traffic corridor with a street grid, areas around parks, and areas surrounding commercial zones. This density should promote better accessibility to services and recreation, while removing the largest populations from areas that may sustain the most environmental damage. Similarly, lower density development and conservation areas that can better absorb floodwater should be encouraged along the Barnegat Bay and Kettle Creek coastal areas.

Commercial properties that are not marine-related should be emphasized in the higher density inland areas to better serve the larger population. Currently, businesses occupying B-1 zoned lots in Shore Acres generally do not comply with the permitted uses of that zone. Additional neighborhood commercial businesses that fall within the permitted uses should be encouraged in the B-1 Zones to make the community more inclusive and mixed-use.

## DESIGN GUIDELINES

Providing greater resiliency against flooding, storm damage, and demographic shifts in the future greatly depends on the development and design guidelines and planning practices that occur during the post-Sandy recovery process. In particular, the elevation of existing residential buildings as a result of recovery grant programs, as well as the elevation of new construction based on compliance with Flood Damage Prevention, will be significant factors. The following design guidelines are intended to integrate elevated buildings with existing non-elevated residences to soften the visual impact on the neighborhood. Additionally, there are numerous opportunities to introduce new landscaping and street treatments in certain areas that permit more pervious surfaces and stormwater management.

## ELEVATION OF BUILDINGS

The raising of residential homes is usually accomplished by either the use pilings or by increasing the height of foundations and crawl spaces by adding courses of masonry block. To the extent that property owners determine to increase the elevation of the lowest habitable floor to the "Design Base Flood Elevation" in the Flood Damage Prevention Ordinance (usually the "Advisory" or "Preliminary" Base Flood Elevation plus freeboard), the height difference between the grade and the first floor can be considerable, causing a design challenge to access the elevated building. Many residents are choosing to upgrade and raise their homes, although there is somewhat of a consensus that new homes are too large for the neighborhood and that the height makes getting inside difficult for emergency purposes and for



elderly or disabled persons. However, residents were not as accepting of having the designs of their homes regulated.



Depending on the size of the lot and the density of the building pattern in the neighborhood, the solutions to the challenge of providing access varies from a straight run of stairs to a progression of porches or landings (see [Figure](#)).



Figure 66: Illustrations of various ways to design access to elevated first living floors of residential buildings, some which frame the piles and others that partially or completely "skirt" or wrap the piles for garage/storage space or use raised foundations.

As stated in the 2015 Hazard Mitigation Plan Element:

*"Identifying strategies to support additional home elevations is a key opportunity for improved safety and resilience. However new home elevations also come with additional potential risks that must be planned for*



*and addressed. Ensuring that spaces below elevated homes are used only as storage or garages, and not livable space, is essential to protecting public safety. If illegally converted into bedrooms or living space, these low areas become extremely dangerous during flood events. Newly elevated homes can also sometimes negatively impact the views and other aesthetic considerations for neighboring properties. Design and regulatory measures are currently in place and other controls are being explored that can help maximize the flood safety benefits of home elevations while finding creative solutions that reduce any negative impacts for neighboring properties.”<sup>12</sup>*

Additionally, elevated buildings can pose a hindrance and hazard for disabled and elderly persons, as well as emergency services attempting to access persons in the house. For most physically impaired persons, the design guidelines and height requirements limit access almost entirely. Elevators from the ground floor to the first elevated floor, in addition to stairs, are ideal, although restrictive for many due to the high cost. Ramps are also ideal, but generally impractical for most houses that are being lifted to the maximum height, due to the space that they require, where most lots are quite small. However, for outdoor stairways it is recommended that they are not a straight run, but, rather, provide landings and, preferably, with turns in the stairway to allow for resting spots.

The desirability of requiring such design standards as concealing exposed piles with framing or skirting, avoiding straight run stairs without a landing every so many steps will need to be balanced with the eligible costs of elevating homes covered under the various disaster relief programs so that they do not become a financial burden on property owners. If such aesthetic improvements are not covered by insurance or relief funding, the Township would need to seek other grant assistance to supplement the costs.

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## LANDSCAPING

Another approach to softening the visual impact of newly elevated buildings is to mask the exposed areas around the piles with landscaping. However, the present conditions caused by the elevation of housing and smaller setbacks will require that the installed landscaping not only be able to survive within the seashore environment, but may need to be compact and columnar in nature when used with narrow lot configurations. This may restrict the plant palette that can be used.

It is also recommended that local plant species and xeriscaping techniques (landscaping that reduces or eliminates the need for supplemental water) be used to reduce water and fertilizer needs. Plant beds should be tolerant to the wind, sea salt, water, and overall variable conditions of the Barnegat Bay and estuaries, while also being able to aid in absorption of additional rain or flood waters.

The following are some selections that may work well, but any planting directly in line of prevailing winds will struggle.

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<sup>12</sup> *Hazard Mitigation Plan Element (Draft)*. Page 27. Township of Brick. Prepared by TetraTech & Maser Consulting, P.A. November, 2015.



**Table 11: Plant Species for Waterfront Neighborhoods**

<b>Plant Type</b>	<b>Species</b>
<b>Small Trees</b>	Red Maple ( <i>Acer Rubrum</i> )
	Allegheny service-berry ( <i>Amelanchier laevis</i> )
	Pawpaw ( <i>Asimina triloba</i> )
	Black Cherry ( <i>Prunus serotina</i> )
	American mountain ash ( <i>Sorbus americana</i> )
<b>Large Shrubs</b>	Indigo bush ( <i>Amorpha fruticosa</i> )
	Coastal sweet pepperbush ( <i>Clethra alnifolia</i> )
	Bigleaf Hydrangea ( <i>Hydrangea macrophylla</i> )
	Northern bayberry ( <i>Morella pensylvanica</i> )
	Beach Plum ( <i>Prunus maritima</i> )
<b>Evergreens (for screening)</b>	Atlantic White Cedar ( <i>Chamaecyparis thyoides</i> )
	American Holly ( <i>Ilex opaca</i> )
	Eastern Red Cedar ( <i>Juniperus virginiana</i> )
<b>Perennials (for decorative filler planting)</b>	Yarrow ( <i>Achillea</i> )
	Coreopsis
	Daylily ( <i>Hemerocallis</i> )
	Lavender ( <i>Lavandula</i> )
	Foxglove ( <i>Digitalis</i> )
	Summer Phlox ( <i>Phlox paniculata</i> )
<b>Ornamental Grasses (for filler and accent)</b>	Stoncrop ( <i>Sedum spurium</i> )
	Fescue Grass ( <i>Festuca</i> )
	Panicum (Switch Grass)
	Pennisetum (Fountain Grass)

## PUBLIC SPACES & STREETScape DESIGN

The plant materials recommended above can also be used in plantings within public spaces such as road medians, tree lawns (the space between the curb and sidewalk or between the sidewalk and a parking lot or front property line), passive park spaces, and similar spaces that are identified as often being overgrown with weeds and unsightly in appearance.

Bioswales are a good design option that can be used in public spaces, especially along streets to function similarly to a rain garden, which absorb water from heavy rains and flooding, while also removing pollution and silt from surface runoff water, providing a buffer from the street, and enhancing the streetscape visually. Bioswales are built with gently sloping sides that are concave toward an area of drainage and gravel and the slopes are vegetated with flood-tolerant plants.



Figure 67: Example of a streetside bioswale ([www.kwalliance.org](http://www.kwalliance.org))

The use of the softer palette of plantings such as ornamental grasses and perennials, combined with the use of stone groundcover can help to enhance the coastal theme for these spaces in the sub-neighborhoods and could be relatively easily maintained by individual neighborhood associations or the Township. Private properties could also be encouraged to use similar groundcover, rather than traditional grass lawns. The images that follow are representations of various designs using these plant materials.



Figure 68: Grasses and perennials used with gravel to provide color and definition to public spaces.



Figure 69: Grasses and groundcovers can be used to soften roadside spaces and add visual interest to the public spaces such as medians.



Figure 70: Where space permits, perennials and ornamental grasses can be combined with conventional shade trees and shrubs to enhance commercial streetscapes.

## GENERAL APPEARANCE FROM STREET

Within the residential blocks, every effort should be made to provide designs for the newly elevated homes that will work within the context of the existing lot lines and setbacks to enhance the overall character of the neighborhood. A number of visual ideas are provided below to act as representative examples of what can be done. There have been some examples constructed within the neighborhood as part of the Sandy recovery which embody these ideas.



Figure 71: Upper set of illustrations shows potential streetscape treatment of narrow and deep lots using trees with vase shaped or columnar habit, while lower pair shows wider lots with street trees of spreading habit in larger spaces and narrower habit in more confined spaces between houses. Homes are shown as representative for the size of lots as elevated for flood resiliency.

Residents worry that properties on small lots will look overcrowded and unappealing. Simultaneously, many small homes on small lots are directly adjacent to new homes nearly three times their size. The Township should look at various models that work well in other municipalities and provide guidelines that are appropriate for each neighborhood. Allowing for some variations in the designs for proper entrances and yard space, but maintaining some setbacks and some of the current bulk standards should prevent overcrowding while providing the necessary space to adapt to new regulations.

#### ABANDONED BUILDINGS AND EMPTY LOTS

Following Superstorm Sandy, many property owners who endured major damage to their homes and/or could not afford the pursuant repairs and insurance were forced to leave their properties behind or have been unable to make improvements. Several years later, there are some properties with homes that remain abandoned, have not been demolished and continue to deteriorate, or that sit empty and have not been rebuilt. These properties rest in a state of limbo because the property owners will not or cannot take responsibility and the Township has not established the necessary conduits for acquiring or selling such properties nor holding the owners accountable. Below are some recommendations for properties and buildings that have remained abandoned or in disrepair for a long period of time, in response to concerns raised by residents.

1. Many homes sit abandoned, such as the property shown in Figure . The Township needs to be more aggressive in taking action and holding property owners accountable.

2. The Township should look into the possibility of acquiring properties when they cannot hold property owners accountable or when property owners are unable to rebuild. Certain properties, particularly repetitive losses, should be strategically held for water retention areas, doubling as public open space, while others that are less strategic could be resold.



Figure 72: Examples of vacant lots in Shore Acres (Google Streetview)

## PUBLIC PARKS, OPEN SPACE, AND CONSERVATION LANDS

All parks, open spaces, and conservation lands within the neighborhood should be considered for their dual role as wetlands to manage stormwater and to provide public amenities and recreation opportunities.

To the extent possible, pervious surfaces and vegetation or plant beds should be used to allow for the absorption of stormwater or flooding. The neighborhood was built on former wetlands between Barnegat Bay, Kettle Creek, and Reedy Creek. Without adequate elevation and building and road height, the neighborhood is very prone to flooding. Asphalt and concrete should be avoided where pervious pavers, gravel, or grass could be used.

The Township should work with the various neighborhood associations to act on opportunities to provide new open public spaces or areas for stormwater management within the neighborhood. If properties are abandoned or deeded to the Township, such lots could be restored to a more natural state or active or passive recreation facilities could be installed for the public to use. If located on the bayside, the property should include new wetlands, whereas if it is on the ocean side, sand dunes should be placed along the beachfront. Such facilities should permit and encourage users from various sub-neighborhoods. Where open space is not practical, other public services could be placed.

It is recommended that the Township develop a comprehensive connectivity plan for sidewalks, crosswalks, and bicycle lanes in the neighborhood, while strategizing how to best move people to various destinations around the island, including public parks and opens spaces. A connectivity plan should serve the neighborhood at its time of peak population and use, which is during the summer.



## EXISTING PARKS AND OPEN SPACE

All existing parks, open space, and conservation lands/wetlands with pervious or natural cover are a great way to absorb the impact of future flooding events, as well as providing recreational opportunities for the public. The Joe Pal Airport Tract surrounding Waterside Gardens already functions as a buffer between Kettle Creek and the residential developments, as well as a filter and natural absorption because of the undisturbed wetlands.

Hibbard Park, while not often directly impacted, lies in proximity to the Shore Acres lagoons and the catch basin in Baywood and should be retrofitted to control and retain stormwater when necessary. These two areas, on the other hand, are often overwhelmed by flood water and the catch basin is unable to drain easily. As the park is being renovated, consideration should be given to the transfer of water from other overwhelmed areas into the park and upland areas through pipes or natural streams, as shown in the diagram below. It appears from the Township's tax maps that a drainage easement already exists part way between the pond/drainage basin and Hibbard Park (see [Map 36](#)). However, the easement is missing on Block 210.04, it is unclear whether the drainage currently exists, and if it does, it is likely that it drains in reverse from Hibbard Park to the pond.

The diagram shows abstractly how storm surge and, therefore, floodwater is pushed through the lagoons toward the inner neighborhood without an outlet. Additionally, the catch basin (shown in blue) may fill with rain and floodwater very quickly, encroaching on and posing a risk to the surrounding homes. If a combination of piping and a natural stream were placed between the catch basin, Hibbard Park, and surrounding wetlands (as shown by red arrows), stormwater could be distributed more equally and prevent flooding in certain areas, while also retaining water for later use for the Park.

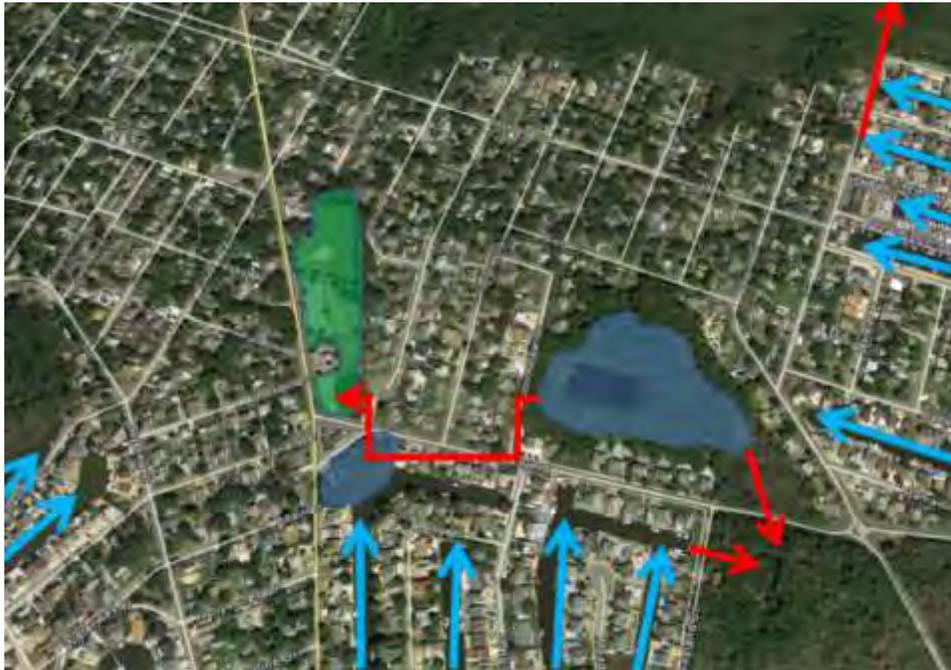


Figure 73: Diagram displaying how floodwater is pushed into the neighborhood (blue arrows) and is stored (blue) and how water can be redirected to Hibbard Park (green) and surrounding wetlands



Map 36: Township Tax Map showing drainage easement outlined in red between the park and pond

In addition to stormwater management, the two existing parks can provide an opportunity for better connectivity throughout the neighborhood for pedestrians and cyclists. In particular, designated bicycle paths or lanes should pass by or through the parks. A pedestrian path should be placed from Atlantic Drive to the east into and through Hibbard Park to meet Drum Point Road to the west. This connection will greatly improve access for the Baywood neighborhood immediately east of the park. Although the Cumberland Drive street-end is currently occupied by private ownership, the Township should work out

an agreement with the private owners to allow a public pedestrian/bicycle right-of-way between Cumberland Drive, Hibbard Park, and Drum Point Road/Mandalay Road.

The Township already plans to expand the bicycle trail in the Joe Pal Airport Tract. However, greater effort should be made to connect the bicycle trail to the street network in Shore Acres, to Hibbard Park, and eventually to meet the bicycle path on St. Lawrence Boulevard. This will allow for more and diversified access to public parks, open space, and significant natural vistas.

There are also opportunities to better connect Shore Acres and Waterside Gardens to the Airport Tract and, sequentially, to Cherry Quay. Block 299, Lot 45 at 128 Woodland Drive and the area along the north side of Channel Drive are part of the Airport Tract and are in the ROSI database. The parcels are owned by Ocean County and are tax-exempt. Although signs and chains have been put up in these locations to keep the public out, the Township could coordinate with the County to create trailheads in either of these locations. A public trailhead could also be opened at the western side of Waterside Gardens (identified on Figure ), where a path already exists, in coordination with both the County and property owner. Signs should also be included to identify the public access and whether parking is available.

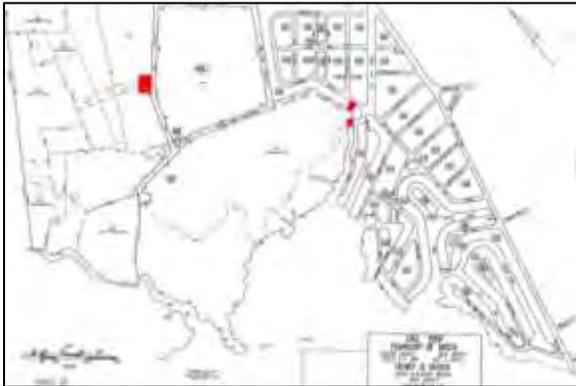


Figure 74: Approximate locations for potential new pathways (Township Tax Map)



Figure 75: Detail of Ocean County properties with access to Airport Tract in Shore Acres (Township Tax Map)

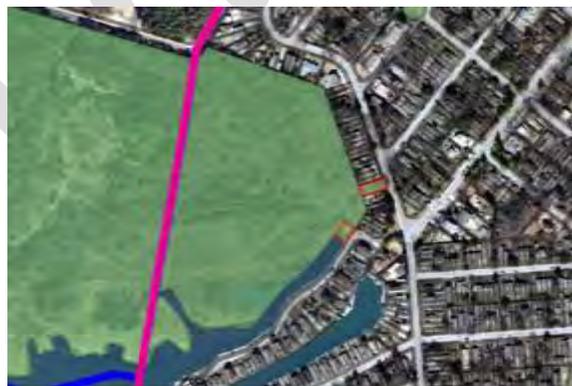


Figure 76: Two Shore Acres access locations to Airport Tract outlined in red on aerial map



Figure 77: Block 299, Lot 45 on Woodland Drive, Shore Acres (Google Streetview)



Figure 78: Potential public access point to Airport Tract on Channel Drive (Google Streetview)

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## RECOMMENDED PARKS AND OPEN SPACE

There are several parcels or pieces of land in Township or County property in Shore Acres that currently do not have any designated use or any improvements, but that provide optimal opportunity for both additional public open space and for water retention. The larger wooded areas to the north of Baywood and within Mandalay Park may also offer space for more active or passive recreation, if sensitive to the surrounding wetlands and coordinated with various County, State, and Federal agencies. A Municipal Public Access Plan for the Township could help to further determine the needs and possibilities available to the community for expanded public access, particularly to the water. Some smaller and more feasible opportunities are:

In the northern inland section of the Shore Acres sub-neighborhood there is an unnamed square at the intersection of Coast Drive, Spark Drive East, and Spark Drive West. The square is located on Block 293, Lot 1 and is approximately 0.0051 acres, or 222 square feet. Although this square is very small, it may function as a focal point of an improved neighborhood area and provide additional designated recreational opportunities for the surrounding community. For example, a sidewalk, benches, a playground, and/or a landscaped or community garden are small improvements to make the space more attractive and better utilized.



THE TOWNSHIP OF  
**BRICK, NJ**



Figure 79: Unnamed square in northern Shore Acres  
(Google Streetview)



Figure 80: Square outlined in red in Shore Acres subsection  
(Google Maps)



Map 37: Block 293, Lot 1 outlined in red on Township Tax Map

Another possibility for a neighborhood park and public recreation is the land surrounding the pond on Block 210.01, Lot 5.02. In addition to the improvements to the drainage between the pond, wetlands, and Hibbard Park, an improved permeable crushed gravel or dirt walking trail could be provided from Arctic Ocean Drive around the Brick Township-owned side of the pond, as shown on the tax map on [Map 38](#). There is an existing path leading from Arctic Ocean Drive into the wooded area, which could be opened up to be more visible from the road and expanded.



Figure 81: Existing path from Arctic Ocean Drive onto Lot 5.02 (Google Streetview)



Figure 82: Approximate lot lines of Lot 5.02 on aerial map  
(Google Maps)



Map 38: Block 210.01, Lot 5.02 outlined in red on Township  
Tax Map

## STREET-ENDS, BULKHEADS, AND RIGHT-OF-WAYS

Bulkheads, like jetties and other manmade barriers, can often exacerbate erosion and push floodwater elsewhere rather than absorb the water. Living shorelines, on the other hand, which include natural wetlands, are a better long-term alternative to impermeable barriers that allows the land and water to coexist while averting major damage during flooding events. Living shorelines use gentle slopes with sediment, sand, and small rocks, anchored by native coastal vegetation.

The Township could experiment by removing bulkheads that are not directly protecting improved properties in strategic locations and replacing them with a natural living shoreline with native vegetation. This should be attempted where it does not interfere with neighboring properties, boat traffic, or boat launching.



Figure 83: Example of “Living Shoreline” (courtesy: Virginia Institute of Marine Science, College of William & Mary, 2016)

Small lots, street-ends, and land adjacent to bulkheads that is insufficient to build on, and especially those already owned by the Township, provide an exceptional opportunity to add living shorelines and passive public recreational space. The example below shows various parcels on Rochester Drive in Seawood Harbor that are owned by Brick Township. Block 211.02, Lots 7 and 8 (shown in the image to the left in Figure 70) could be planted, landscaped, and have benches for sitting, whereas the street-end bulkhead could also be planted and have benches, but might be suitable for fishing.



Map 39: Small lots or street-ends on Rochester Drive, Seawood Harbor, owned by Brick Township



Figure 84: Images corresponding with lots/street-ends on Rochester Drive, Seawood Harbor shown above from west to east (Google Streetview)

Right-of-way areas along the sides of streets abutting wetlands, lagoons, or the Bay, should also be preserved for public use and enjoyment, as well as protection against flooding in the roads. Raised sidewalks, bike paths, or other types of trails with permeable materials along the road will allow or maintain vistas, public access to recreation, and buffers between the wetlands and the existing road. The examples shown below include Hamilton Drive in Seawood Harbor (left) and St. Lawrence Boulevard in Baywood (right), which both have views that could be further promoted or enhanced by allowing public pedestrian or bicycle amenities.



Figure 85: Views of wetlands from Hamilton Drive (left) and St. Lawrence Blvd. (right) (Google Streetview)

## FUTURE STORM AND DISASTER PREPAREDNESS

After speaking with several representatives and residents and from public feedback, there was a theme of there being a lack of proper communication channels throughout all stages of Superstorm Sandy's destruction – before, during, and in the wake of the storm. In addition to a well-designed built environment that can mitigate the effects of storms and provide physical connections for people, powered and effective communication services are critical to disaster preparedness and relief. Many times, a lack of or poor communication can lead to even more serious and costly consequences than the storm itself.

In addition to measures found in the Hazard Mitigation Plan Element, we recommend that the Township continue to take measures to inform all residents of potential storms and disasters that may affect them, as well to inform them of what steps to take beforehand, and what to do during emergencies. This will require some, if not all, of the following steps:

1. Maintain a database of resident and property owner contact information for reverse emergency warnings. Provide a means for all, including visitors to the extent possible, to give their contact information voluntarily in order to stay informed.
2. Coordinate with all neighborhood and condominium associations, as well as fire, police, and ambulatory services, to establish and inform residents of the best safety practices, evacuation routes, and emergency care and lodging centers.



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3. Obtain funding for backup generators and improvements for all communication outlets in case of disaster to prevent power failures.
4. Ensure that neighborhoods are not cut off and that there are central emergency locations that are well-stocked with supplies for all residents, preferably within less than a half-mile.

The Township should also find ways in which to coordinate efforts with adjacent communities, including Toms River Township and Mantoloking Borough, in order to provide essential services and aid to those in need during disasters. Preparedness Plans and strategies for protecting properties and utilities could also be shared among municipalities.

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## SUSTAINABLE RECOVERY: LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN

Leadership in Energy and Environmental Design (“LEED”) is a recognized green building certification rating system. LEED provides third-party verification that a new or renovated building was designed and built using strategies and materials to lower a building’s carbon footprint. LEED was developed by the U.S. Green Building Council and is a “voluntary rating system that encourages buildings to do better, but does not add significant cost”.<sup>13</sup> LEED has five rating systems for multiple project types that want to achieve LEED certification. The rating systems are:

- Building Design and Construction
- Interior Design and Construction
- Buildings Operations and Maintenance
- Neighborhood Development
- Homes

Within each rating systems there are eight main credit categories:

- Location and transportation
- Sustainable sites
- Water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality
- Innovation
- Regional priority

LEED “provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions”.<sup>14</sup> Furthermore, LEED has been constantly improving its manuals and guidelines to keep up with technology and trends. Presently, there are four levels of LEED certification – certified, silver, gold and platinum.

This Neighborhood Plan focuses on two of the rating systems that could apply – LEED for Homes (LEED-Homes) and LEED for Neighborhood Development (LEED-ND).

### LEED FOR HOMES

LEED for Homes is the certification program for single-family home design and construction. LEED-designed homes provide clean indoor air and use less energy and water, which translates to lower utility bills. Homeowners looking to rehabilitate or redevelop their damaged home can use the LEED for Homes

<sup>13</sup> <http://www.usgbc.org/articles/leed-facts>

<sup>14</sup> <http://www.usgbc.org/articles/about-leed>



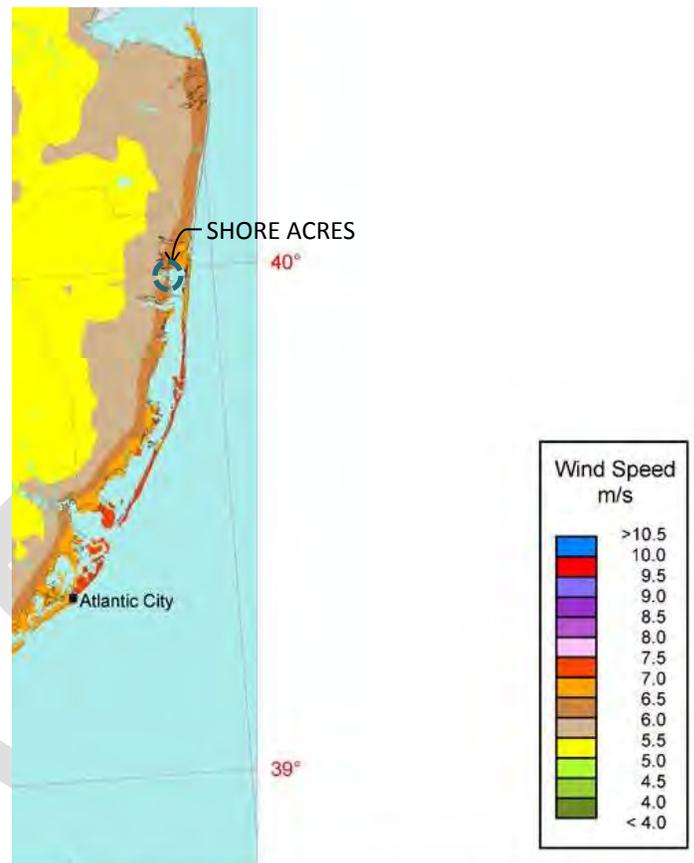
credit system to make smart choices when it comes to water efficiency, energy usage, material selection, air quality and even rainwater management. LEED for Homes is an excellent resource for homeowners, even if they are not seeking LEED Certification.

Credits that are worth noting, and that which could be utilized by the residents of the Brick Beach Neighborhood during rehabilitation and new home construction include:

- Rainwater management
  - Certain sections flood after a hard rain storm, let alone a hurricane. Reducing rainwater runoff is imperative.
  - LEED for Homes recommends the following actions to manage rainwater:
    - Planting areas with native or adapted plant material (e.g. trees shrubs)
    - Installing a vegetated roof
    - Using permeable paving
    - Installing permanent infiltration or collection features (e.g., vegetated swale, rain garden, rainwater cistern or rain barrels to capture roof runoff)
- Low-emitting materials
  - The intent of this LEED credit is to reduce concentrations of chemical contaminants that can impact air quality.
  - The requirement includes the use of low volatile organic compound (“VOC”) paints, floor materials and insulation.
- Quality views
  - Part of the appeal of the Brick Beach Neighborhood is that it is surrounded by waterfront views of both Barnegat Bay and the Atlantic Ocean. The purpose of this LEED credit is to give building occupants a connection to the natural outdoor environment providing quality views.
  - The requirement is to achieve a direct line of sight to the outdoors with glazing (e.g. windows and doors) for 75% of the regularly occupied floor area of the home.
- Green power and carbon offsets
  - LEED for Homes encourages homeowner to reduce their greenhouse gas emissions through the use of grid-source, renewable energy technologies.
  - In order to qualify for the credits, a homeowner must engage in a contract for a minimum of five years, which provides between 50% and 100% of the home’s energy from green power or renewable energy certificates.
- Renewable energy production



- In order to offset the rising costs of homeownership, this LEED credit relies on the sun to power homes. Shore Acres is ideally situated for both solar and wind systems, as the nature of the sea air and high wind levels limits large vegetation in what is largely a grassland (salt marsh/wetlands) ecosystem. Streets are generally oriented so that they run east and west (Shore Acres) or long portions of the blocks face south (Baywood). Optimal solar orientation for temperate climate zones is 17.5 degrees east of due south.<sup>15</sup> LEED-ND Credit 10 under Green Infrastructure and Building (GIB C-10) provides for credit when the long side of the street block is 15 degrees or less east or west of due south, or if the long axis of 75% or more of the buildings are 15 degrees or less east or west of due south. The Shore Acres and Baywood street grids would provide opportunities for optimizing passive solar exposure on new or rehabilitated homes.



Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: <http://www.windnavigator.com> | <http://www.awstruepower.com>. Spatial resolution of wind resource data: 2.5 km. Projection: UTM Zone 17 WGS84.

- Areas with annual average wind speeds around 6.5 meters per second and greater at an 80-m height are generally considered to have a wind resource suitable for wind development. The Wind Speed Map indicates that the neighborhood is between 6.5 and 7.0 meters per second.
  - This credit is offered to homeowners if they meet the parameters for solar energy.
- Indoor water use reduction
  - The intent of this LEED credit is to reduce indoor water consumption.
  - Homeowners can receive up to six points for this line item depending on how much they reduce their water usage.
- Daylight
  - Daylighting is important in connecting building occupants to the outdoors, reinforcing circadian rhythms and reducing the use of electrical lighting.

<sup>15</sup> Design With Climate, by Victor Olgyay, Princeton University Press, 1973, page 61.



- The requirement is to achieve at least 55% daylighting for the regularly occupied floor area of the home.
- Outdoor water use reduction
  - The intent of this LEED credit is to reduce outdoor water consumption.
  - Homeowners receive credit if they reduce exterior irrigation between 50% and 100% by installing plants that require no irrigation (e.g. native species) or an efficient irrigation system with a water sense feature.

## LEED FOR NEIGHBORHOOD DEVELOPMENT

LEED for Neighborhood Development or LEED-ND is a certification system for a neighborhood-scale project, such as the entire Brick Beach area. LEED-ND incorporates the principles of smart growth, urbanism and green building into a system for neighborhood design, which can be applied to entire neighborhoods, portions of neighborhoods or multiple neighborhoods.

There are five credit categories for LEED-ND:

1. Smart location and linkage
2. Neighborhood pattern and design
3. Green infrastructure and buildings
4. Innovation and design process
5. Regional priority credit



LEED v4 for Neighborhood Development Plan Project Checklist				Project Name: Date:			
No.	Y	No.	Points	No.	Y	No.	Points
<b>Smart Location &amp; Linkage</b> 28				<b>Green Infrastructure &amp; Buildings</b> 31			
Prereq		Smart Location	Required	Prereq		Certified Green Building	Required
Prereq		Impervious Surfaces and Ecological Communities	Required	Prereq		Minimum Building Energy Performance	Required
Prereq		Wetland and State-Designated Conservation	Required	Prereq		Indoor Water Use Reduction	Required
Prereq		Agricultural Land Conservation	Required	Prereq		Construction Activity Pollution Prevention	Required
Prereq		Floodplain Avoidance	Required	Credit		Certified Green Buildings	6
Credit		Preferred Locations	10	Credit		Optimize Building Energy Performance	2
Credit		Smartified Remediation	2	Credit		Indoor Water Use Reduction	1
Credit		Access to Quality Transit	7	Credit		Outdoor Water Use Reduction	2
Credit		Bicycle Facilities	2	Credit		Building Reuse	1
Credit		Housing and Jobs Proximity	3	Credit		Historic Resource Preservation and Adaptive Reuse	3
Credit		Stair Steps Protection	1	Credit		Minimized Site Disturbance	1
Credit		Site Design for Habitat of Wetland and Water Body Conservation	1	Credit		Wastewater Management	4
Credit		Restoration of Habitat or Wetlands and Water Bodies	1	Credit		Heat Island Reduction	1
Credit		Long-Term Conservation Management of Habitat of Wetlands and Water Bodies	1	Credit		Solar Orientation	1
<b>Neighborhood Pattern &amp; Design</b> 41				<b>Innovation &amp; Design Process</b> 6			
Prereq		Walkable Streets	Required	Credit		Innovation	3
Prereq		Compact Development	Required	Credit		LEED <sup>®</sup> Accredited Professional	3
Prereq		Connected and Open Community	Required	<b>Regional Priority Credits</b> 4			
Credit		Walkable Streets	8	Credit		Regional Priority Credit: Region Defined	1
Credit		Compact Development	8	Credit		Regional Priority Credit: Region Defined	1
Credit		Mixed-Use Neighborhoods	4	Credit		Regional Priority Credit: Region Defined	1
Credit		Housing Types and Affordability	3	Credit		Regional Priority Credit: Region Defined	1
Credit		Reduced Parking Footprint	2	<b>PROJECT TOTALS (Certification estimates)</b> 110			
Credit		Connected and Open Community	3	Certified: 40-49 points; Silver: 50-59 points; Gold: 60-79 points; Platinum: 80+ points.			
Credit		Tenant Facilities	3				
Credit		Transportation Demand Management	2				
Credit		Access to Civic & Public Space	1				
Credit		Access to Recreation Facilities	1				
Credit		Visibility and Universal Design	1				
Credit		Community Outreach and Involvement	1				
Credit		Local Food Production	2				
Credit		Tree-Lined and Shaded Streetscape	2				
Credit		Neighborhood Schools	1				

Figure 14: LEED-ND Checklist Chart

Within the five categories there are a total of 12 prerequisites that are required to gain certification. Shore Acres potentially meets some of these requirements, but would likely need to improve in several areas, such as “smart location and linkage”, mixed-use neighborhoods, connected and open community, transportation, renewable energy production, and a central business area. The neighborhood already has conservation areas, bicycle facilities, and compact development, among other items.

Shore Acres is predominantly residential in land use and contains housing types of several densities and types. However, there are also some business uses along Drum Point Road and marinas within the lagoons, although they are generally not essential services to residents or visitors, but which could be expanded upon.

Public transit does not currently service Shore Acres, but there is ample potential for water-based/ferry transportation to provide public access across the Bay connecting to the Brick beaches and for bus service to be extended into Shore Acres from Hooper Avenue and Brick Boulevard to the west. The Township should focus on ways to make the neighborhood more “compact”, “connected”, and “complete”. Bicycle access is already provided to a minimal degree, but is being extended through various grants that the Township receives.

These sustainability principles can also be combined with efforts to make the neighborhood more resilient to storm and flood events in the future by elevating buildings and selected streets, as well as investigating longer term solutions to flood mitigation through the use of stormwater management



practices. Using the adjacent salt marshes as a potential for managed wetlands for stormwater management is consistent with LEED-ND.

In addition to the overall consistency with LEED-ND, homeowners can also advance the principles of LEED-ND by:

- Improving home energy performance by 5% for new homes or 3% for major building renovations.
- Reduce indoor water usage by 20% with water efficient toilets, faucets and showerheads.
- Reduce outdoor water use through the installation of native plants or smart irrigation systems.
- Reduce rainwater runoff.
- Design and orient new homes for maximum solar orientation.
- Utilize solar power, such as solar panels.

For more information on LEED-ND, go to <http://www.usgbc.org/articles/getting-started-nd>.

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## SEA LEVEL RISE AND THE FUTURE OF INFRASTRUCTURE

### Sea Level Rise

This Neighborhood Plan for Shore Acres has been developed to deal with the immediate recovery needs of the neighborhood, as well as to anticipate measures for improving the resiliency of existing and future development to future storm events. However, it is important to recognize that the evidence for the phenomenon of sea level rise is compelling and that Superstorm Sandy may have been a precursor of more frequent and possibly more severe storm events to come in the future, which coupled with a rising sea level could threaten a repeat of the flooding that occurred during Sandy.

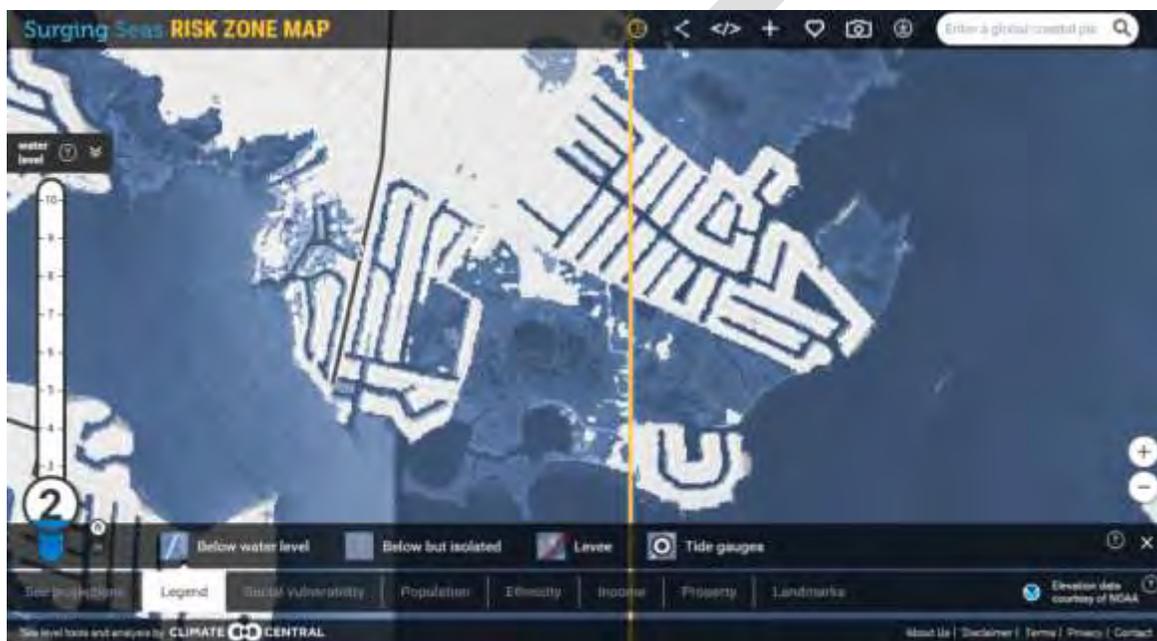


Figure 15: Graphic from [www.climatecentral.org](http://www.climatecentral.org) Risk Zone Map showing the increase in flood risk due to sea level rise.

The map above estimates the portion of Shore Acres that would be flooded by a 1% storm event based on seal level rise of 2 ft.

Given the above, we believe the emphasis of this Neighborhood Plan on taking actions to elevate buildings, especially residential buildings, and to protect major community facilities and utilities (where applicable) would be consistent with a shorter range strategy, while elevating roads and improving stormwater management facilities would be consistent with a mid-range strategy. The key to protecting all of the mainland neighborhoods of Brick Township, as well as the Barrier Island, will be the coordination of beach dune construction and beach replenishment by the Army Corps of Engineers as soon as possible. This was a major concern of property owners and echoed by residents on both sides of Barnegat Bay during the neighborhood outreach in 2015.



**ACTION PLAN**

There are a number of relatively low cost actions that can be undertaken through a partnership between the neighborhood associations, private owners, Brick Township, and Ocean County and coordinated with the State of New Jersey Department of Transportation and Department of Environmental Protection and FEMA. The identified actions are also prioritized into high, moderate, and low. The Township should plan to address all high priority projects first, followed by those that are lowest cost and easiest to implement. They are summarized in the table below.

**Table 12: Shore Acres Neighborhood Plan – Action Plan**

	Project	Responsible Entity	Begin	Estimated Cost			Priority		
				Low	Mod	High	Low	Mod	High
1.	Gateway Signage	Neighborhood associations & Township	Immediate to 1 year	X			X		
2.	Landscape Treatments, including water retention areas	Neighborhood associations with cooperation from Township & County	Immediate to 1 year	X				X	
3.	Update Zoning Map & Regulations	Township Zoning Board	Within 1 year	X				X	
4.	Develop and implement an Impervious Surface Ordinance	Township Planning Board	Within 1 year	X			X		
5.	Wayfinding Signage	Township, NJDOT Grant	Within 2 years	X				X	
6.	Elevate roads for emergency access and evacuation	Brick Township and FEMA with cooperation from Ocean County & NJDOT	Within 2 years			X			
7.	Elevate residential buildings and utility buildings impacted by predicted flooding	Brick Township, FEMA	Within 2 years			X			X
8.	Strategic Plan for acquisition or sale of abandoned properties	Township, State of NJ	Within 2 years	X					X
9.	Conduct study to extend public bus route into or near Shore Acres	Township & Ocean County DOT	Within 2 years	X			X		
10.	Conversion of identified strategic abandoned properties to natural & public space and water retention areas	Township, NJDEP, FEMA	Within 3 years		X			X	
11.	Extension of sidewalk network & pedestrian improvements, including crosswalks (beginning with areas along Drum Point Road and Mandalay Road where some currently exist)	Township & NJDOT Grant	Within 3 years			X		X	
12.	Bike Path network (Lane markings and/or signage on Township roads) to link to bike paths on St. Lawrence Boulevard and Joe Pal Airport Tract.	Township & NJDOT Grant	Within 3 years			X		X	



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13.	Expand/Enhance public space and public access opportunities through the development of a Municipal Public Access Plan	Township & NJDEP	Within 5 years		✕			✕	
14.	Capital Improvements to stormwater management infrastructure	Township, FEMA Grants	Within 5 years			✕			✕

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## APPENDIX I

### NOTES FROM THE SHORE ACRES PUBLIC MEETING

The observations and ideas summarized above were discussed with the Township professional staff and members of Shore Acres in a public meeting at Drum Point Elementary School on June 16, 2015. The following synthesized comments were brought up during the meeting by the Township professionals and the public:

- “Raise the road along the bike path (Shake Road aka Mandalay) into Seawood Harbor section – that road always floods, hard to get in and out of our development.”
- “Catch basins are needed at Rochester Drive flood.”
- Other general comments:
  - Barrier Island is the problem with all of the major flooding in Shore Acres/Cherry Quay – Barrier Island needs to be fixed first.
  - Shore Acres is a nice neighborhood, but known to flood – usually 6 inches in the street, not 6 feet. That was because of the Barrier Island breach during Sandy. The Bay hardly floods the houses – it’s the water that comes up through the storm drains.
  - Storm drains used to have bevels so water would go out drains and not back in through them – not there anymore.
  - Houses sitting empty for years – damaged badly and moldy – health and safety hazard to the whole neighborhood. Need to do something about it at some point soon, whether it’s the owner or the Township (in Shore Acres).