



# 2015 Master Plan Reexamination Report & Amendments

Borough of Keansburg  
Monmouth County, New Jersey

# 2015 Master Plan Reexamination Report & Amendments

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**Prepared for:**



The Borough of Keansburg  
Monmouth County, New Jersey

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*The original of this document was signed  
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## **I. Introduction**

The New Jersey Municipal Land Use Law (MLUL) requires that each municipality in New Jersey undertake a periodic review and reexamination of its local Master Plan. The purpose of the Reexamination Report is to review and evaluate the master plan and municipal development regulations on a regular basis in order to determine the need for update and revisions. In addition, the preparation of a statutorily compliant Reexamination Report provides a presumption of validity of the Borough zoning ordinance under the law. The report constitutes the Master Plan Reexamination Report for the Borough of Keansburg as required by the Municipal Land Use Law at N.J.S.A. (40:55D-89).

The Borough of Keansburg adopted its last comprehensive Master Plan in 1988. The Borough has subsequently adopted Reexamination Reports in 2003 and 2012. The current document (hereinafter referred to as the 2015 Master Plan Reexamination Report) serves as a reexamination of the 1988 Master Plan, as supplemented by the 2003 and 2012 Master Plan Reexamination Reports.

While the 2015 Master Plan Reexamination Report is broad in scope, it has been prepared in light of the experience of Hurricane Sandy. It, therefore, places special emphasis on facilitating recovery from Hurricane Sandy's impacts, as well as promoting resiliency to future storm impacts and other potential natural hazards. To achieve this, the 2015 Master Plan Reexamination Report recommends a number of updates and revisions to the 1988 Master Plan. These changes have been compiled into a master plan amendment, which is appended to this document.



## II. Requirements of the Periodic Reexamination Report

The Municipal Land Use Law requires that the Borough of Keansburg provide for the reexamination of the municipal master plan and development regulations at least once every ten years. The purpose of the reexamination is to review the progress of the Borough in achieving its planning objectives, and to consider the need for changes in order to ensure that the municipal plan is current and meets the needs of the Borough. The Planning Board of the Borough of Keansburg is responsible for completing the reexamination, and preparing and adopting by resolution a report on its findings.

The Municipal Land Use Law requires that the reexamination report describe the following:

- The major problems and objectives relating to land development in the municipality at the time of the adoption of the last reexamination report.
- The extent to which such problems and objectives have been reduced or have increased subsequent to such date.
- The extent to which there have been significant changes in assumptions, policies, and objectives forming the basis for the master plan or development regulations as last revised, with particular regard to the density and distribution of population and land uses, housing conditions, circulation, conservation of natural resources, energy conservation, collection, disposition, and recycling of designated recyclable materials, and changes in State, county and municipal policies and objectives.
- The specific changes recommended for the master plan or development regulations, if any, including underlying objectives, policies and standards, or whether a new plan or regulation should be prepared.
- The recommendations of the planning board concerning the incorporation of redevelopment plans adopted pursuant to the "Local Redevelopment and Housing Law," P.L.1992, c. 79 (C.40A:12A-1 et seq.) into the land use plan element of the municipal master plan, and recommended changes, if any, in the local development regulations necessary to effectuate the redevelopment plans of the municipality.

The 2015 Master Plan Reexamination Report addresses each of these statutory requirements.

### **III. The Major Problems and Objectives Relating to Land Development in the Borough of Keansburg at the Time of the Adoption of the Last Reexamination Report**

#### **Master Plan Objectives**

The 1988 Master Plan included the following land use plan objectives:

1. Secure public safety from fire, flood, panic, and other natural and man-made disasters with particular emphasis on preserving and maintaining the integrity and protective features of the Borough beach-dune system.
2. Develop and maintain a satisfactory level of public facilities and services.
3. Encourage the most appropriate use of land consistent with its suitability for development.
4. Establish appropriate population densities and control the intensity of development to ensure neighborhood, community, and regional well-being and to preserve the natural environment.
5. Ensure that the Borough's development does not conflict with development and general welfare of neighboring municipalities, the County, and the State as a whole.
6. Coordinate public development with land use policies to encourage the appropriate and efficient expenditure of public funds.
7. Provide sufficient space in appropriate locations for residential, recreational, commercial, and open space use.
8. Locate and design transportation routes to promote the free flow of traffic while discouraging congestion or blight.
9. Promote a desirable visual environment.
10. Conserve historic sites and districts.
11. Protect wetlands and areas with scenic, cultural, and recreational values.
12. Promote the recovery of recycling materials from municipal solid waste and encourage conservation of energy.
13. Encourage development that contributes to the revitalization of the community.
14. Improve and maintain residential neighborhoods by encouraging rehabilitation of existing dwellings and residential construction at suitable densities.
15. Maintain and attract beneficial commercial uses.
16. Improve and revitalize the Main Street / Church Street commercial district.
17. Guide waterfront development to maintain visual and pedestrian access to the Bayshore for the general public while encouraging development that is suitably

scaled, compatible with public facilities and services, and appropriate to a waterfront location.

18. Maintain a continuous planning process, which will coordinate capital expenditures with the Master Plan and provide for development reviews to assure that the policies and standards promoted by the Master Plan are adhered to.
19. Utilize available funding sources at the Federal, State, and County level to revitalize the community.

### Master Plan Policy Statements

The 1988 Master Plan outlines five general policies upon which the Borough's development is based. The policies focus on the need to identify and take advantage of revitalization opportunities and to assure that development provides long-term benefit to the community. The general policy statements are as follows:

1. **Housing and Neighborhood Improvement:** In order to maintain and improve residential areas, the Borough should encourage rehabilitation of the existing housing stock with new construction at appropriate densities. The use of code enforcement to maintain properties should be aggressively pursued. Public action should be designed to improve the livability of residential areas. The Borough should seek public funding and explore innovative mechanisms and incentives for housing and neighborhood improvement.
2. **Economic Development:** Development and redevelopment that contributes to the long-term economic health of the community should be encouraged. Municipal action to broaden the community's economic base should include participation in government programs to attract development, create employment opportunity, utilize the community's resources, and be compatible with the need to maintain facilities and services for the Borough's residents.
3. **Bayfront Development:** Guide waterfront development, which protects the public need for shore protection and flood control, visual and pedestrian access to the waterfront, recreation and open space, and economic development. The Borough should encourage appropriate use of waterfront locations and coordinate its efforts with the County's plan to improve waterfront access along the Raritan Bayshore.
4. **Main Street / Church Street Revitalization:** The Borough should work toward improving the district's visual appearance by establishing standards to guide development that will enhance this commercial area. Municipal action to stimulate

revitalization through streetscape improvements and incentives for private sector participation should be undertaken.

5. **Planning and Administration:** The recommendations of the Master Plan need to be a part of the day-to-day management of the municipal government. The progress of the Master Plan's objectives should be monitored and the plan itself should be reviewed periodically and revised to meet changing conditions.

## IV. Extent to Which Such Problems and Objectives Have Been Reduced or Increased

### Status of 2012 Objectives

The 2012 Master Plan Reexamination Report reiterated the objectives of the 1988 Master Plan and provided commentary as to their status and relevancy in 2012. The 2015 Master Plan Reexamination Report also reiterates the same objectives and provides commentary concerning the extent that the objective has been reduced or increased since 2012. The commentary is in italic text.

1. Secure public safety from fire, flood, panic, and other natural and man-made disasters with particular emphasis on preserving and maintaining the integrity and protective features of the Borough beach-dune system.  
*Revised to read as follows: "Secure public safety from fire, flood, panic, and other natural and man-made disasters with particular emphasis on preserving and maintaining the integrity and protective features of the Borough beach-dune system. Adapt efforts accordingly to reflect updated flood levels and data from the Federal Emergency Management Agency (FEMA) and the National Oceanic and Atmospheric Administration (NOAA)."*
2. Develop and maintain a satisfactory level of public facilities and services.  
*This objective is still valid.*
3. Encourage the most appropriate use of land consistent with its suitability for development.  
*The Borough continues to maintain appropriate population and development intensities through its land use plan, zone plan, zoning regulations, and periodic reexamination reports.*
4. Establish appropriate population densities and control the intensity of development to ensure neighborhood, community, and regional well-being and to preserve the natural environment.  
*This objective is still valid.*
5. Ensure that the Borough's development does not conflict with development and general welfare of neighboring municipalities, the County, and the State as a whole.  
*The Borough's development is consistent with neighboring municipalities, Monmouth County, and the region. Keansburg participated in the outreach process of the Monmouth*



*County Multi-Jurisdictional All-Hazards Mitigation Plan to address regional and municipal hazard mitigation and planning issues.*

6. Coordinate public development with land use policies to encourage the appropriate and efficient expenditure of public funds.

*A Capital Improvement Plan is being prepared in order to address the use of public funds for development, being prepared concurrent with this Reexamination Report as part of the Borough's participation in the Post Sandy Planning Assistance Grant Program (PSPAGP).*

7. Provide sufficient space in appropriate locations for residential, recreational, commercial, and open space use.

*This objective is addressed through Keansburg's Land Use Plan, zoning regulations, and periodic reexamination reports. In addition, there are two redevelopment plans for locations throughout the Borough identifying opportunity for various uses. Furthermore, a Route 36 to Bayfront Corridor Resiliency Plan has been adopted as part as an element of the Borough's Master Plan. This serves as an example of the Borough's post-Sandy planning efforts to allocate appropriate space for needs of the Borough.*

8. Locate and design transportation routes to promote the free flow of traffic while discouraging congestion or blight.

*As mentioned above, the Route 36 to Bayfront Corridor Resiliency Plan has been adopted as an element of the Borough's Master Plan. The Route 36 to Bayfront Corridor Resiliency Plan is part of the Borough's post-Sandy planning efforts to facilitate movement among all modes of transportation throughout the Borough to promote resiliency and mitigate future congestion and blight.*

9. Promote a desirable visual environment.

*The Borough was awarded a NJ Economic Development Authority grant to improve facades along Main Street. The Route 36 to Bayfront Corridor Resiliency Plan addresses design standards for the commercial corridors within the Borough.*

10. Conserve historic sites and districts.

*The Keansburg Historical Society has been closed until further notice due to damages from Hurricane Sandy. While the facility itself has been closed, the Borough remains invested in the conservation of its history and is investigating appropriate sites for the Historical Society's relocation.*

11. Protect wetlands and areas with scenic, cultural, and recreational values.

*The impact of Hurricane Sandy have highlighted the importance of this objective, as the Borough continues to recover and promote resiliency.*

12. Promote the recovery of recycling materials from municipal solid waste and encourage conservation of energy.  
*An amendment to the Master Plan is being prepared concurrent with this reexamination report to establish green building and sustainability standards and techniques in order to promote protecting the environment and conservation of energy.*
13. Encourage development that contributes to the revitalization of the community.  
*The Route 36 to Bayfront Corridor Resiliency Plan provides recommendations for targeted development along the commercial corridors in support of revitalization of the Borough as a whole.*
14. Improve and maintain residential neighborhoods by encouraging rehabilitation of existing dwellings and residential construction at suitable densities.  
*Hurricane Sandy resulted in the need to rehabilitate, reconstruct, and elevate a large number of residential units in the Borough.*
15. Maintain and attract beneficial commercial uses.  
*This objective is also addressed in the Route 36 to Bayfront Corridor Resiliency Plan.*
16. Improve and revitalize the Main Street / Church Street commercial district.  
*This objective is also addressed in the Route 36 to Bayfront Corridor Resiliency Plan.*
17. Guide waterfront development to maintain visual and pedestrian access to the Bayshore for the general public while encouraging development that is suitably scaled, compatible with public facilities and services, and appropriate to a waterfront location.  
*The Borough remains invested in making the best use of its vicinity to waterfront views and beach areas.*
18. Maintain a continuous planning process, which will coordinate capital expenditures with the Master Plan and provide for development reviews to assure that the policies and standards promoted by the Master Plan are adhered to.  
*In 2005 and 2006 the Borough Council adopted a Redevelopment Plan for the Beachway Avenue Waterfront Redevelopment District and the "Borough-wide" Redevelopment Plan. These plans are in the process of being reviewed and updated for relevancy.*
19. Utilize available funding sources at the Federal, State, and County level to revitalize the community.  
*The NJ DCA Post-Sandy Planning Assistance Grant Program has funded \$200,000 to the Borough for planning studies for improving response to, recovery from, and resiliency to future storm events.*

## Status of Policy Statements

This section reviews and updates the policy statements outlined in the 1988 Master Plan, considering the extent that the policy has been reduced or increased. All revisions are provided in italic text.

- **Housing and Neighborhood Improvement** In order to maintain and improve residential areas, the Borough should encourage rehabilitation of the existing housing stock with new construction at appropriate densities. The use of code enforcement to maintain properties should be aggressively pursued. Public action should be designed to improve the livability of residential areas. The Borough should seek public funding and explore innovative mechanisms and incentives for housing and neighborhood improvement.

*Revised to read as follows: "In order to maintain and improve residential areas, the Borough should encourage rehabilitation of the existing housing stock with new construction at appropriate densities, elevations and other relevant design standards. The enforcement of building and land use codes, as well as FEMA flood mapping, to protect and maintain properties should be aggressively pursued. Municipal action should facilitate the improvement of the livability of residential areas. The Borough should continue to seek public funding and explore innovative mechanisms and incentives for housing and neighborhood improvement."*

- **Economic Development:** Development and redevelopment that contributes to the long-term economic health of the community should be encouraged. Municipal action to broaden the community's economic base should include participation in government programs to attract development, create employment opportunity, utilize the community's resources, and be compatible with the need to maintain facilities and services for the Borough's residents.

*This policy statement is reaffirmed.*

- **Bayfront Development:** Guide waterfront development, which protects the public need for shore protection and flood control, visual and pedestrian access to the waterfront, recreation and open space, and economic development. The Borough should encourage appropriate use of waterfront locations and coordinate its efforts with the County's plan to improve waterfront access along the Raritan Bayshore.

*Revised to read as follows: "Guide waterfront development to provide shore protection and flood control. Waterfront development should also maintain and enhance visual and pedestrian access, recreation and open space, and economic development. The Borough*

*should encourage appropriate use of and access to the Raritan Bayshore through coordination with Monmouth County's planning efforts."*

- **Main Street / Church Street Revitalization:** The Borough should work toward improving the district's visual appearance by establishing standards to guide development that will enhance this commercial area. Municipal action to stimulate revitalization through streetscape improvements and incentives for private sector participation should be undertaken.

*Revised to read as follows: "**Commercial Corridor Revitalization:** The Borough should work toward improving and enhancing the visual appearance of commercial corridors in the Borough (Main Street, Church Street, Carr Avenue, Beachway Avenue, and Route 36) by establishing standards to guide development. Additionally, municipal actions to stimulate revitalization through streetscape improvements and incentives for private sector participation should be emphasized."*

- **Planning and Administration:** The recommendations of the Master Plan need to be a part of the day-to-day management of the municipal government. The progress of the Master Plan's objectives should be monitored and the plan itself should be reviewed periodically and revised to meet changing conditions.

*This policy statement is reaffirmed.*

## Recommendations of the 2012 Reexamination Report

The 2012 Reexamination Report recommended a number of changes to the Master Plan, Zoning Map, Development Regulations, and other capital projects. An updated Summary of Recommendations of the 2012 Reexamination Report with the 2015 Planning Board's recommendations to bring those recommendations up to date is provided below:

### Master Plan

1. Creation of new a Master Plan: It would be appropriate for the next reexamination of the Master Plan to be a comprehensive review to address all of the changes in land use, housing, circulation, and community facilities since the last comprehensive Master Plan prepared in 1988.

*This recommendation is still valid.*

2. Land Use Plan Amendment: An amendment to the Land Use Plan Element is recommended to address the adoption of the two redevelopment plans in 2005 and 2006.

*This recommendation is still valid.*

3. Green Element of the Master Plan: The Planning Board should consider the preparation of a green element prior to or during the next comprehensive update of the Master Plan.

*This recommendation is still valid.*

4. Gateways: The Bayshore Region Strategic Plan recommended that the Borough develop gateway design concepts for the key intersections to the Borough at Route 36, Henry Hudson Trail, and Main Street. The gateways will increase recognition for the Borough and encourage interest in the commercial areas. The Planning Board should review the concept and incorporate such recommendations, if appropriate.

*This recommendation is addressed in the Route 36 to Bayfront Corridor Resiliency Plan.*

### **Zoning Map and Development Regulations**

1. NJ Residential Site and Improvement Standards (RSIS): The Borough development regulations should be reviewed for consistency with the statewide NJ RSIS and revised as necessary.

*This is recommendation is still valid.*

2. Zoning Map: The boundary line between the B-2 zone and the CR Conservation Recreation zone on the northwest side of the Borough near Block 184 does not follow the lot line or the mean high water line. The reason for the zone boundary should be revisited and adjusted if appropriate.

*This is still valid and should be addressed.*

3. Land Use Board: The Borough consolidated the functions of the Planning Board and Zoning Board into one "Land Use Board" as allowed by stated statute. However, the current zoning ordinance contains numerous references related to the Zoning Board. The Borough Ordinance should be modified to reflect the current Land Use Board process.

*This has not yet been addressed, and the recommendation is still valid.*

4. Zoning of St. Ann's Church and School and the Francis Place Elementary School: The Planning Board may wish to be proactive as to the land use designation of this large tract in a future Land Use Plan Element of the Master Plan. An analysis can consider affirmation of the current zoning, another designation based on a planning rationale, or consider the Borough open space and recreation needs.



*Revised to read as follows: "The Planning Board may wish to be proactive as to the land use designation of this large tract in a future Land Use Plan Element of the Master Plan. An analysis can consider affirmation of the current zoning or another designation based on a planning rationale."*

5. Redevelopment Areas: The Borough adopted the Beachway Avenue Waterfront Redevelopment Plan (Ordinance #1403) in December 2005 and the "Borough-Wide" Redevelopment Plan (Ordinance #1415) in July 2006. These Redevelopment Plans should be incorporated into the Land Use Plan Element of the Master Plan, and the Borough's Zoning Map should be amended accordingly.

*This recommendation has not yet been addressed and is still valid.*

6. Floor Area Ratio: The Borough should investigate floor area ratio (FAR) limits for single family residential lots, as a tool to better regulate the bulk of new single family residences and their resultant impact on the neighborhood. Some care should be taken in establishing a proper FAR figure for each of the residential zone districts and the portions of the residential dwelling that will be included or excluded in the FAR limit.

*This recommendation has not yet been addressed and is still valid.*

7. Permitted Uses in Commercial Areas: In order to maximize flexibility and keep pace with new types of businesses in the commercial zones, the Zoning Officer should be authorized to allow a use, not specifically permitted, if the proposed use is classified by the industrial classification system under the same two digit code as the permitted use. [Please note that the SIC or Standard Industrial Code has been replaced by the North American Industry Classification System (NAICS)].

*Revised to read as follows: "In order to maximize flexibility and keep pace with new types of businesses in the commercial zones, the Zoning Officer should be authorized to allow a use, not specifically permitted, if the proposed use is classified by the North American Industry Classification System (NAICS) under the same code as the permitted use."*

## **Other Recommendations**

1. Drainage Improvements: The Planning Board recommends that the Borough continue to minimize the impacts to property caused by flooding through improvements to the stormwater management system such as the replacement of the storm drainage outfall pipes and gate valve structures.

*This recommendation is still valid. Low impact development methods should be recommended to further promote drainage improvements.*

2. Streetscape Improvements: The Borough has constructed a number of improvements to the streetscape along Main Street such as crosswalks. To encourage further revitalization of the commercial areas and effectuate the redevelopment areas, the Planning Board recommends that such improvements be continued as and where appropriate.

*Revise to read as follows: "Continue to provide and maintain streetscape improvements along the Main Street, Church Street, Carr Avenue, and Beachway Avenue corridors, as addressed in the Route 36 to Bayfront Corridor Resiliency Plan."*

3. Grants and Loans for Infrastructure: Investment in the infrastructure (roads, drainage, etc.) and quality of life improvements such as parks and recreation must continue to strengthen the Borough's neighborhoods. Aggressive pursuit of grants and loans through federal, state, and lower and county agencies, as well as foundations should be continued and increased.

*This recommendation is still valid.*

4. Elevation of Residences: The Borough should continue to coordinate with homeowners in order to elevate structures above the base flood elevation.

*This recommendation is still valid.*

5. Participation in FEMA's Community Rating System (CRS): To help offset the flood insurance costs to homeowners, the Borough can undertake certain activities that FEMA has recognized that reduce flood damage costs in the long run.

*This recommendation is still valid.*

6. Bikeways: The Borough should investigate the feasibility of identifying shared road bikeways that link the Henry Hudson Trail to the beach and amusement area and other important bike destinations in the Borough.

*This recommendation is still valid, and is addressed in the Route 36 to Bayfront Corridor Resiliency Plan.*

## **V. Extent to Which There Have Been Significant Changes in the Assumptions, Policies, and Objectives**

The Planning Board continues to find that the overall assumptions, policies, and objectives of the 1988 Master Plan are consistent with and reflect the current assumptions, policies, and objectives of the Planning Board in terms of future development to the Borough.

The following significant changes in the assumptions, policies, and objectives relating to land development in the Borough of Keansburg have taken place since 2012:

### **Changes at the Local Level**

As indicated in the following subsections, there have been considerable changes at the local level since the adoption of the 2012 Master Plan Reexamination Report.

#### **Impacts of Hurricane Sandy**

Hurricane Sandy struck the coast of New Jersey on October 29, 2012, and caused extensive damage to the Borough of Keansburg from both storm surge and wind damage. Protective dunes were breached by storm waters at four separate locations, and 2.6 miles of dunes were substantially damaged or washed away. Flood waters ranging from two to six feet in depth inundated approximately 50 percent of the structures in the Borough. Five (5) homes were destroyed by Hurricane Sandy and 347 were substantially damaged. Approximately 40,400 cubic yards of storm damage debris littered the Borough. Trees and power lines throughout the Borough fell. The Borough also faced power outages for up to 14 days. This list of impacts is not exhaustive.

Despite the extent of damages the Borough of Keansburg sustained from Hurricane Sandy, existing land use patterns and prevailing land uses are not anticipated to substantially change. The long-term impacts of Hurricane Sandy have yet to be seen, but will be affected by a variety of factors including insurance payouts, flood insurance regulations, as well as the ability of residents, businesses, and the Borough to rebuild.

With the impacts of Hurricane Sandy so great, the Borough of Keansburg has significant concern and reason for promoting not only recovery from Sandy, but also building resiliency to future storm impacts and other potential natural hazards.

In addition, new FEMA flood insurance maps are in the process of being adopted. These maps increase the flood zone and base flood elevations for some coastal areas of the Borough. Property owners will need to take preventative measures to ensure they are in compliance with the new regulations.

While the current 2015 Master Plan Reexamination Report is broad in scope, the experience of Hurricane Sandy and the need to build resiliency has influenced and informed its development.

### **Strategic Recovery Planning Report**

As a response to Hurricane Sandy, the Borough of Keansburg adopted a Strategic Recovery Planning Report in 2015. The purpose of the Strategic Recovery Planning Report is to outline a recommended set of actions to guide the Borough in promoting recovery from the impacts of Hurricane Sandy and resiliency to future storms.

The actions recommended by the Strategic Recovery Planning Report are as follows:

- Reexamining the Borough's Master Plan Elements and prepare a sustainability element to address post-Sandy strategies and policies related to hazard mitigation, community resiliency, and forecasted sea level rise and its impacts;
- Automating and upgrading the zoning and construction permit program;
- Renewing efforts to make the Route 36 Corridor redevelopment area a priority;
- Permanently relocating Keansburg's Police Department activity out of the temporary site, and redeveloping the former site, which is in a flood prone area;
- Finish demolishing the damaged homes that remain standing, vacant, and serve as a hazard to public health and safety;
- Entering FEMA's CRS program;
- Amending flood zone lines in flood maps to more accurately depict which properties are truly at risk to flooding;
- Installing a town-wide Supervisory Control and Data Acquisition (SCADA) system to communicate critical alarms to a central location/operational personnel;
- Providing backup power at key community facilities; including at Borough Hall, the future permanent Police Department site, fire stations and EMS locations, pump stations, and at the water treatment plant;
- Contracting a construction company for sand and debris removal after natural disasters;
- Preparing a Capital Improvement Plan identifying needed capital improvements to improve local resiliency;
- Developing a GIS database/inventory of Borough-owned infrastructure;
- Increasing and updating signage on streets and on empty lots.

Implementation of the recommendations that have been listed above will promote recovery from Hurricane Sandy and increased resiliency to future storms. Where relevant, individual actions are discussed elsewhere in this report.

### Building Height and Base Flood Elevations

Also as a response to Hurricane Sandy, the Borough of Keansburg adopted Ordinance #1535 in May 2013 to reflect FEMA's Advisory Base Flood Elevations and map dated December 2012. This required new residential construction and substantially damaged homes to comply with municipal flood hazard rules in which the lowest habitable floor must be above the base flood elevation.

### New Housing Construction

While new housing construction has dropped substantially on a county-wide basis, the pace of new residential construction in the Borough of Keansburg has only slowed moderately. Table #1 below depicts housing units authorized by building permits for new construction in the Borough from 2004 to 2014, as tabulated by the New Jersey Department of Community Affairs.

*Table #1*  
*Housing Units Authorized by Building Permits for New Construction*  
*Borough of Keansburg, 2004-2014*

<i>Year</i>	<i>1 &amp; 2 Family</i>	<i>Multi- family</i>	<i>Mixed Use</i>	<i>Total</i>
2004	6	27	0	33
2005	7	14	0	21
2006	5	0	0	5
2007	1	16	0	17
2008	5	0	0	5
2009	1	0	0	1
2010	1	0	0	1
2011	3	0	0	3
2012	2	5	0	7
2013	7	0	0	7
2014	18	0	3	21
<i>Total</i>	56	62	3	121
<i>Average</i>	5.1	5.6	0.3	11

Source: NJ Department of Community Affairs, Construction Reporter

### Demographic Changes

The Borough of Keansburg adopted its last Master Plan Reexamination Report in 2012, which already incorporated the latest US Census Bureau population estimates. The



overall population density, distribution of population, and land use patterns within the Borough have not changed substantially since the last reexamination in 2012. Nonetheless, it is noted that the total population of the Borough as of the US Census in 2010 was 10,105, and decreased to 10,097 in 2012 (according to the 2012 American Community Survey estimates). These estimates do not take into consideration changes in population as a result of Hurricane Sandy.

### **Annexation of Land**

In 2012 the Borough of Keansburg annexed land from Middletown Township in the vicinity of the Joseph R. Bolger Middle School and the Keansburg High School. Borough records indicate this area is zoned R-7 Single Family Residential, but is not shown on the current Zoning Map.

### **Floodplain Management Plan**

On October 19, 2015, the Borough of Keansburg Planning Board adopted a Floodplain Management Plan (FMP). The FMP identifies and assesses flood hazards within the Borough, establishes goals and objectives for floodplain management in Keansburg, and presents a series of actions designed to mitigate the impacts from flooding in the future. The FMP also evaluates the need and potential options for wetland restoration and maintenance and/or other engineering coastal measures to mitigate potential storm surge in those areas of the Borough that may be vulnerable. The FMP includes recommendations to revise the Borough's current Flood Damage Prevention Ordinance.

### **Changes at the County/ Regional Level**

Since the adoption of the 2012 Master Plan Reexamination Report, there have been several changes at the county and regional level, including the adoption of the Monmouth County Water Quality Management Plan and the Monmouth County Multi-Jurisdictional Natural Hazards Mitigation Plan. In addition, the County is undergoing the process of updating its Master Plan.

### **Monmouth County Water Quality Management Plan**

In accordance with the Statewide Water Quality Management Planning rules (N.J.A.C. 7:15-3.4), a public notice for a Proposed Amendment to the Monmouth County Water Quality Management (WQM) Plan was published on January 7<sup>th</sup>, 2013 in the New Jersey Register and the Asbury Park Press. This amendment proposal would provide for a Future Wastewater Service Area (FWSA) for Monmouth County.

Nearly all of the Borough of Keansburg is located in the proposed sewer service area, so the adoption of the WQM Plan will have no impact on the development of the Borough.

Borough officials were consulted by the County Planning Board on the sewer service area proposed for Keansburg and input provided by the Borough was accepted by the County.

### **Monmouth County Master Plan**

The Monmouth County Master Plan is currently in the process of being updated. In the summer and fall of 2014, Monmouth County was involved in working group meetings for each master plan element, including: Natural Resources; Open Space; Farmland Preservation; Arts, Cultural, and Historic Resources; Utilities; Community and Educational Facilities; Transportation and Mobility; Agricultural and Economic Development; Community Development and Housing; Community Resiliency; Community Sustainability; and Healthy Communities.

### **Monmouth County Multi-Jurisdictional Natural Hazard Mitigation Plan**

The Monmouth County Multi-Jurisdictional Natural Hazard Mitigation Plan (HMP) identifies natural hazards that could affect the County's jurisdictions, evaluates the risks associated with these hazards, identifies the mitigation actions to lessen the impacts of a disaster on Monmouth County communities, and prioritizes them based on the municipal master plans and other planning documents. Monmouth County employed a multi-jurisdictional approach to develop the plan, and every municipality in the County was invited to participate as an equal partner with the County.

As part of its participation in the HMP outreach process, the Borough of Keansburg has identified that in the aftermath of Hurricane Sandy, the Borough is concerned with the following recovery actions:

1. Hazard Zoning Ordinances: Develop and enact hazard zoning ordinances to better protect the Borough from natural disasters.
2. Develop a plan in which variances are specifically allowed on foundations of newly built structures.
3. Develop mitigation steps to reduce damage and losses due to flooding, through the control of water flow and a more efficient drainage system.
4. Outreach Program: Create an outreach program to help residents prepare for disasters and to stay informed on potential low-cost, small-scale mitigation activities.
5. Emergency Backup Power: Develop a plan and seek funding for emergency backup electricity in critical care facilities.
6. Stormwater Pump Stations: Install three new flood-proofed stormwater pump stations in the Borough with a permanent backup power generator at each and to flood proof two existing pump stations and install a backup generator at each

station. This should also include removing and replacing the existing deteriorated stormwater collections infrastructure.

7. Police Department Relocation: Relocate the police headquarters and emergency operation center from 179 Carr Avenue to a vacant property in the Borough.
8. Flood Proofing: Extend the bulkhead for the entire length of Waackaack Creek as well as dredge the creek to increase its stormwater storage capacity.
9. Improved Shoreline and Dunes: Improve 2.6 miles of beach that is 200 feet wide that was substantially damaged due to Hurricane Sandy by increasing the height and width of the dunes to the 100-year storm elevation. Also included in this project is dune maintenance, which involves planting dune grass and maintaining beach access points.
10. Home Elevation: Elevation of approximately 3,843 homes to reflect new FEMA FIRM maps.
11. Tree Maintenance: Tree trimming and pruning of shade trees along streets in the community to prevent downed power lines; increase effectiveness of Public Works to clear trees in the event of a storm.
12. Purchasing of vacant homes throughout the Borough for flood mitigation.

Since adoption of the 2009 HMP and during the aftermath of Hurricane Sandy, the County underwent an extensive process of updating the HMP to incorporate post Hurricane Sandy elements of mitigation planning. A draft plan was released for review in October 2014, which was subsequently approved the Borough of Keansburg via Resolution #15-037 on March 25, 2015, and by FEMA on April 14, 2015.

### **Changes at the State Level**

As indicated in the following subsections, there have been considerable changes at the state level since the adoption of the 2012 Master Plan Reexamination Report.

#### **Green Buildings and Environmental Sustainability Element**

Many New Jersey municipalities have endorsed efforts to reduce their carbon footprint, decrease greenhouse gas emissions, encourage the use of renewable energy sources, conserve energy, and minimize the use of natural resources. Federal and state programs have been established to assist municipalities to address these goals. In the private sector, the US Green Building Council, a private organization, has established the Leadership for Energy and Environmental Design (LEED) certification programs to encourage and standardize the certification of buildings which are energy efficient and incorporate sustainable environmental design concepts.

Recognizing the importance of green building and sustainability, the Legislature amended the Municipal Land Use Law (MLUL) in 2008 to add the “Green Building and Environmental Sustainability Plan Element” to the list of optional elements of municipal master plans. The scope of the new element is as follows:

“A green buildings and environmental sustainability plan element, which shall provide for, encourage and promote the efficient use of natural resources and the installation and usage of renewable energy systems, consider the impact of buildings on the local, regional, and global environment; allow ecosystems to function naturally; conserve and reuse water; treat storm water on site; and optimize climatic conditions through site orientation and design.”

### **Complete Streets**

In late 2009 the New Jersey Department of Transportation (NJDOT) adopted a Complete Streets Policy. A “complete street” is defined by the NJDOT as a “means to provide safe access for all users by designing and operating a comprehensive, integrated, connected multi-modal network of transportation options.” Seven (7) counties and 122 municipalities (as of October 2015) have adopted complete streets policies. The intent of the policy is to provide streets to meet the needs of all types of users and all modes of circulation- walking, bikes, cars, trucks, and buses.

### **State Strategic Plan**

The NJ State Planning Commission is now staffed by the Office of Planning Advocacy (OPA) which is within the Department of State. The OPA has released a draft State Strategic Plan to supersede the current State Development and Redevelopment Plan. Public Hearings were held in February, March, and September of 2012. The draft State Strategic Plan is based upon a criteria-based system rather than a geographic planning area. The draft State Strategic Plan has not been adopted by the State Planning Commission at this time and was put on hold following Hurricane Sandy.

The Borough of Keansburg should continue to monitor the progress of the new plan and its implication for future planning in the Borough.

### **Redevelopment Case Law**

There have been a number of recent court decisions concerning the use of criteria for determining an area “in need of redevelopment” pursuant to the Local Redevelopment and Housing Law (LRHL). The most significant of these decisions is the NJ Supreme Court’s decision in Gallenthin vs. Paulsboro, which reevaluated and set guidelines for the use of the statutory criteria for determining an area in need of redevelopment. The

New Jersey Legislature also held hearings in 2010 on legislation to update the NJ Redevelopment and Housing Law. In 2013 Assembly Bill 3615 became law and is intended to protect property owners by limiting the redevelopment powers of municipalities under the LRHL. This amendment raises the standard for a blight finding to one in which the property must be unproductive.

### **New Jersey Council on Affordable Housing (COAH)**

COAH originally adopted affordable housing rules for the third round period in 2004. However, an Appellate Division decision in 2007 stayed COAH from reviewing any plans as part of a petition for substantive certification, and resulted in a remand of the 2004 rules back to COAH to revise them consistent with the Appellate Division decision. COAH subsequently adopted revised third round rules in 2008.

In 2010, the Appellate Division invalidated COAH's 2008 third round rules, and the "growth share" methodology upon which they were based. In 2013, the New Jersey Supreme Court upheld and modified the Appellate Division's 2010 decision that invalidated COAH's third round rules. As a result, COAH was then charged with the task of adopting new affordable housing rules.

COAH has since failed twice to adopt new affordable housing rules for the third round period. Due to COAH's failure to adopt such rules, the New Jersey Supreme Court concluded on March 10, 2015 that there no longer exists a legitimate basis to block access to the courts, which was the original intent of the COAH process. The New Jersey Supreme Court's March 10 decision notes that: "parties concerned about municipal compliance with constitutional affordable housing obligations are [now] entitled to such access, and municipalities that believe they are constitutionally compliant[,] or that are ready and willing to demonstrate ... compliance [with such obligations,] should be able to secure declarations that their housing plans and implementing ordinances are presumptively valid in the event they ... must defend [themselves] against exclusionary zoning litigation."

In its March 10 decision, the New Jersey Supreme Court established a transitional process to not immediately allow exclusionary zoning actions to proceed in court. The decision notes that: "[d]uring the first thirty days following [June 8, 2015] ..., the only actions that will be entertained by the courts will be declaratory judgment actions filed by any [municipality] ... that either (1) had achieved substantive certification from COAH under prior iterations of Third Round Rules before they were invalidated, or (2) had "participating" status before COAH. Assuming [that] any such [municipality] ... waits and does not file a declaratory judgment action during [the] ... thirty-day period, an



action may thereafter be brought by a party against [the municipality] ..., provided the action's sole focus is on whether the [municipality's] ... housing plan meets its Mount Laurel obligations (a constitutional compliance challenge). The court's evaluation of a [municipality's] ... plan that had received substantive certification, or that will be submitted to the court as proof of constitutional compliance, may result in the [municipality's] ... receipt of the judicial equivalent of substantive certification and accompanying protection as provided under the [Fair Housing Act] ...."

The Borough of Keansburg does not fall into criteria 1 or 2 outlined in the transitional process described above. As a result, the Borough was not eligible to file a declaratory judgment action prior to July 8, 2015. Moving forward, the Borough should review and evaluate its affordable housing obligation and the extent to which it has already addressed this obligation to determine the appropriate course of action for the Borough, including preparing an update to its current Housing Plan Element.

## **Changes at the Federal Level**

### **Executive Order Establishing a Federal Flood Risk Management Standard**

In 2013, the President's Hurricane Sandy Rebuilding Task Force adopted a higher flood standard for the Sandy-affected region to ensure that federally funded buildings, roads, and other projects were rebuilt stronger to withstand future storms. The Sandy Task Force also recommended that the Federal Government create a national flood risk standard for federally funded projects beyond the Sandy-affected region. The new standard gives the flexibility to select one of three approaches for establishing the flood elevation and hazard area they use in siting, design, and construction. They can:

- Use data and methods informed by best-available, actionable climate science;
- Build two-feet above the 100-year (1% annual-chance) flood elevation for standard projects, and three feet above for critical buildings like hospitals and evacuation centers; or
- Build to the 500-year (0.2%-annual-chance) flood elevation.

The new flood standard will apply when Federal funds are used to build, or significantly retrofit or repair, structures and facilities in and around floodplains to ensure that those structures are resilient, safer, and long-lasting. It will not affect the standards or rates of the National Flood Insurance Program. Each agency will carefully consider how to appropriately apply this standard, and consider robust public input before deciding how to implement it.

## **VI. Specific Changes Recommended for the Master Plan and Development Regulations**

Given the extent to which there have been significant changes in assumptions, policies, and objectives at the local, county, and state levels, the 2015 Master Plan Reexamination Report recommends a number of changes to the Borough's municipal master plan and development regulations. These are discussed in the following subsections.

### **Changes to the Master Plan**

#### **1. Creation of a New Master Plan**

It would be appropriate for the next reexamination of the Master Plan to be a comprehensive review to address all of the changes in land use, housing, circulation, and community facilities since the last comprehensive Master Plan prepared in 1988.

#### **2. Changes to the Land Use Plan Element**

An amendment to the Land Use Plan Element is recommended to address the adoption of the two redevelopment plans in 2005 and 2006.

Additionally, the Master Plan and Land Use Plan Element should be amended to facilitate increased sustainability and promote resilience through the use of green building and infrastructure techniques; and indicate the need for current existing land use mapping.

#### **3. Green Buildings and Environmental Sustainability Plan Element**

The Borough should prepare a green buildings and environmental sustainability element, which, concurrent with Municipal Land Use Law, can provide for, encourage, and promote the efficient use of natural resources and the installation and usage of renewable energy systems, consider the impact of building on the local, regional, and global environment; allow ecosystems to function naturally; conserve and reuse water; treat storm water on site; and optimize climatic conditions through site orientation and design.

#### **4. Circulation Plan Element**

The Circulation Plan Element was prepared as part of the 1988 Master Plan and has not been updated since. The entire Circulation Plan Element should be updated to address circulation, connectivity and mobility in the Borough as a whole. The connectivity of local streets to each other and to collector streets should be addressed, along with identification of County routes, evacuation routes, and

public transit. The Circulation Plan Element should also promote the development of bicycle and pedestrian connections.

**5. Capital Improvement Plan**

The Borough should prepare a Capital Improvement Plan that identifies needed capital improvements to improve local resiliency.

**6. Stormwater Management Plan**

The Borough should consider amending the Stormwater Management Plan to address green infrastructure techniques to promote resiliency in the Borough, while keeping in mind hazard mitigation, community resiliency, and sea level rise.

**7. Housing Element and Fair Share Plan**

The Borough's Housing Element and Fair Share Plan should be updated to address the Borough's fair share affordable housing obligation in accordance with the applicable COAH regulations.

**Development Regulations**

**1. Zoning Map Updates**

The Borough's Zoning Map (as shown in Appendix A) should be amended to incorporate updates and rectify inconsistencies as follows:

- **Redevelopment Areas:** There are two Redevelopment Plans within the Borough of Keansburg. The first is the Beachway Avenue Waterfront Redevelopment Plan, which was adopted in December 2005 via Ordinance #1403. The second is the "Borough-Wide" Redevelopment Plan, adopted in July 2006 via Ordinance #1415, and subsequently amended via Ordinances #1462 and #1472). Both Redevelopment Plans serve as overlays to the underlying zoning. At the time of the adoption/amendment of these two Redevelopment Plans, the Zoning Map was never amended to reflect these Redevelopment Areas. These Redevelopment Plans should be incorporated into both the Borough's Zoning Map and the Land Use Plan Element of the Master Plan.

In addition, a Redevelopment Plan for the former location of the Police Headquarters on Carr Avenue is being prepared concurrent with this Reexamination Report. The Borough's Zoning Map should be amended to incorporate this Redevelopment Area following adoption of the Redevelopment Plan.

- **Borough Ordinances:** The Borough Council ordinances which have amended the Borough's Zoning Map should be listed on the amended

Zoning Map. These ordinances include: #55, #487, #654, #797, #1045, #1403, and #1415, as well as any subsequent ordinances.

- **Conservation Recreation Zone:** Throughout the Borough's Development Regulations, this zone is inconsistently referred to as both a zone district and an overlay district. However, the Borough's Zoning Map references this area as the "Conservation Recreation Zone District," not as an overlay. There also does not exist any underlying zoning district. Any reference to this zone district as an overlay should be removed from the Development Regulations.

Additionally, the boundary line between the B-2 zone and the CR Conservation Recreation zone on the northwest side of the Borough near Block 184 does not follow the lot line or the mean high water line. This is inconsistent with Section 22-5.13a of the Borough's Development Regulations, which reads as follows:

"The boundary of the CR Zone District shall be interpreted to include all areas of the Borough along the bayfront which extend from the mean high water line landward to a line one hundred twenty-five (125') feet landward of the top of the dune construction alignment line defined by and shown on the U.S. Army Corps of Engineers Construction Drawings entitled "Raritan Bay and Sandy Hook Bay Beach Erosion and Hurricane Project dated February 15, 1966 drawings CC-RS-501 through CC-RS-527." The CR Zone District shall include all wetlands regulated under the Wetlands Act of 1970 and as delineated on official maps as listed at N.J.A.C. 7:7-2.2."

In order to adjust this inconsistency, the reason for the zone boundary should be revisited and adjusted if appropriate. Any adjustments should be reflected on the Zoning Map.

- **Annexed Land:** In 2012 the Borough of Keansburg annexed land from Middletown Township in the vicinity of the Joseph R. Bolger Middle School and the Keansburg High School. Borough records indicate this area is zoned R-7 Single Family Residential, but is not shown on the current Zoning Map. The zoning of this land should be verified, and the Zoning Map should be amended to reflect this land annexation.

**2. Planning Board**

The Borough consolidated the functions of the Planning Board and Zoning Board into the Keansburg “Planning Board of Adjustment” as allowed by stated statute. However, the current zoning ordinance contains numerous references related to the Zoning Board. The Borough Ordinance should be modified to reflect the current Planning Board process.

**3. Zoning of St. Ann’s Church and School and the Francis Place Elementary School**

The Planning Board may wish to be proactive as to the land use designation of this large tract in a future Land Use Plan Element of the Master Plan. An analysis can consider affirmation of the current zoning or another designation based on a planning rationale.

**4. Floor Area Ratio**

The Borough should investigate floor area ratio (FAR) limits for single family residential lots, as a tool to better regulate the bulk of new single family residences and their resultant impact on the neighborhood. Some care should be taken in establishing a proper FAR figure for each of the residential zone districts and the portions of the residential dwelling that will be included or excluded in the FAR limit.

**5. Permitted Uses in Commercial/Industrial Areas**

- The lists of permitted uses in the General Commercial (B-1), Highway Commercial (B-3), and Light Industrial (LI) zone districts include reference to the Standard Industrial Classification (SIC) Codes, which were used to by the U.S. government to identify the primary business of commercial establishments. The SIC system was replaced by North American Industry Classification System (NAICS) codes in 1997, but the Borough’s Development Regulations continue to reference the SIC codes. The list of permitted uses in the B-1, B-3, and LI zone districts should be updated to reflect the NAICS codes.
- In order to maximize flexibility and keep pace with new types of businesses in the commercial zones, the Zoning Officer should be authorized to allow a use, not specifically permitted, if the proposed use is classified by the North American Industry Classification System (NAICS) under the same code as the permitted use.

**6. Conservation Recreation**

The Borough should consider investigating the beach-dune area of the CR Conservation Recreation zone in order to determine if more suitable recreation development, design standards, and setback guidelines should be required in this area.

**7. NJ Residential Site and Improvement Standards (RSIS)**

The Borough development regulations should be continually reviewed for consistency with the statewide NJ RSIS and revised as necessary.

**8. Building Height**

In order to reflect changing conditions in advisory base flood elevations in the Borough, the definition of “building height” in the Borough’s Revised General Ordinances should be revised to read as follows:

*Building height* shall mean the vertical dimension measured from the original lot grade or any revised lot grade shown on a site plan, subdivision plan, or plot plan approved by the appropriate municipal agency. Such revised lot grade shall not include mounding, terracing, or other devices designed to allow increased building height. Building height for all structures located in the area of special flood hazards as set forth on the National Flood Insurance Rate Maps (FIRMs) shall be measured from the base flood elevation or the advisory base flood elevation, whichever is greater.

**9. Schedule of Zoning District Regulations**

The current schedule of zoning district regulations available with the Borough’s codified Revised General Ordinances currently depicts a tabulation error in which values for minimum requirements in the B-3 Highway Commercial zone are incorrectly aligned. This tabulation error should be corrected to avoid confusion.

**Other Recommendations**

**1. Zoning and Construction Permit Process Automation and Updates**

The Borough should automate and update its system for processing zoning and construction permits. An upgraded permit program in which inspectors receive and manage permits on laptops and electronic tablets using state of the art technology will significantly increase the Borough’s efficiency in this task and in recovering from future storm events. This project is being prepared concurrent to this Master Plan Reexamination Report, and funding is provided through the PSPAGP.



**2. Develop a Geographic Information System (GIS) to Increase Resiliency**

The Borough should develop a GIS database and inventory of Borough-owned infrastructure to support future planning efforts. The components of the GIS would support facilities and public works infrastructure, land information, and floodplain management-related data layers and applications. This project is being prepared concurrent to this Master Plan Reexamination Report, and funding is provided through the PSPAGP.

**3. Relocate the Police Department**

The Keansburg Police Department was previously located at 179 Carr Avenue, and then temporarily moved to the back building of the United Methodist Church at 23 Church Street after Hurricane Sandy. The Borough is coordinating with FEMA in order to obtain “Alternate Site Approval.” The Borough should continue to coordinate with FEMA to permanently relocate Police Department activity out of the temporary site. This should include redevelopment of the former site, which is in a flood prone area.

**4. Drainage Improvements**

The Borough should continue to minimize the impacts to property caused by flooding through improvements to the stormwater management system such as the replacement of the storm drainage outfall pipes and gate valve structures. Low impact development methods should be recommended to further promote drainage improvements.

**5. Streetscape Improvements**

Continue to provide and maintain streetscape improvements along the Main Street, Church Street, Carr Avenue, and Beachway Avenue corridors, as addressed in the Route 36 to Bayfront Corridor Resiliency Plan.

**6. Grants and Loans for Infrastructure**

Investment in the infrastructure (roads, drainage, etc.) and quality of life improvements such as parks and recreation must continue to strengthen the Borough’s neighborhoods. Aggressive pursuit of grants and loans through federal, state, and lower and county agencies, as well as foundations, should be continued and increased.

**7. Participation in FEMA’s Community Rating System (CRS)**

The Borough should consider increasing participation in the CRS, where appropriate. The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the

minimum National Flood Insurance Program (NFIP) requirements. The NFIP administers the CRS which scores towns on their effectiveness in dealing with the mitigation of flood hazard events. As a result of earning CRS points, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

- Reduce flood damage to insurable property;
- Strengthen and support the insurance aspects of the NFIP; and
- Encourage a comprehensive approach to floodplain management.

To help offset the flood insurance costs to homeowners, the Borough can undertake certain CRS activities that FEMA has recognized that reduce flood damage costs in the long run.

#### **8. Bikeways**

The Borough should investigate the feasibility of identifying shared road bikeways that link the Henry Hudson Trail to the beach and amusement area and other important bike destinations in the Borough. This recommendation is addressed in the Route 36 to Bayfront Corridor Resiliency Plan.

#### **9. Gateways**

The Bayshore Region Strategic Plan and the Route 36 to Bayfront Corridor Resiliency Plan recommend that the Borough develop gateway design concepts for the key intersections to the Borough at Route 36, Henry Hudson Trail, and Main Street. The gateways will increase recognition for the Borough and encourage interest in the commercial areas. The Planning Board should review concepts and incorporate such recommendations, if appropriate.

#### **10. Mixed Use – Commercial and Residential**

Land use along the Borough's mixed use commercial residential area (extending along Beachway from Raritan Avenue to the Waackaack Creek) should encourage major redevelopment that provides for a mix of uses designed according to an overall plan that enhances public access to the waterfront, protects beaches and dunes, and contributes substantially to Keansburg's economic well-being.

#### **11. General Commercial and Highway Commercial**

There are four locations within the Borough which commercial activity should remain concentrated: The Main Street – Church Street Area; two small areas north of the intersection of Main Street and Center Avenue and along Carr Avenue and Oak Street; and State Highway 36. Conversion of dwellings located within this

area should be permitted only when such conversion results in properties that meet the standards for commercial development.

#### **12. Residential Development**

As an incentive to replace pockets of substandard housing not suited for rehabilitation, other dwelling types at increased densities should be permitted in targeted locations. In order to improve the quality of the Borough's housing stock, the Borough of Keansburg should consider incentives to replace substandard housing with attached single family, townhouse units, or other alternative and innovative building types.

#### **13. Flood Hazard Areas**

Any structures located within a flood hazard area must satisfy flood-proofing and construction requirements as well as underlying zoning district and land use requirements.

#### **14. Recreation and Open Space Enhancement**

In addition to beach access and dune protection, the bayfront should be enhanced both as open space and as a recreation area. The waterfront should be treated as a linear park with recreation areas at major access points to the beach. These locations should be developed with picnic tables, a jogging trail, bike lanes, exercise stations, and tot lots.

#### **15. Beach Cleanup**

During the spring, summer, and fall months, Keansburg hosts a beach cleanup event, encouraging public participation. The Borough should continue its program of cleaning and maintenance of the beach area, and enhance this program where necessary.

#### **16. Plan Endorsement and Center Designation**

A petition should be submitted to the State Planning Commission for plan endorsement and Center designation.

#### **17. Install Emergency Power**

Provide backup power at key community facilities, including at Borough Hall, the future permanent Police Department site, fire stations and EMS locations, pump stations, and at the water treatment plant. This should include considering alternative forms of backup power such as diesel generators when gas is shut off. Funding opportunities for this action should be investigated as necessary.

**18. Debris Removal**

Contract a construction company for sand and debris removal after natural disasters.

**19. Signage**

Increase and update signage on streets and on empty lots.

**20. Stormwater Pump Stations**

Install three new flood-proofed stormwater pump stations in the Borough with a permanent backup power generator at each; flood proof two existing pump stations and install a backup generator at each station. This should also include removing and replacing the existing deteriorated stormwater collections infrastructure.

Funding for emergency backup generators at Raritan Avenue and Beaconlight pump stations has already been applied for under the Hazard Mitigation Grant Program. Additionally, remote alarm dialers have been installed at the Raritan Avenue and Bayview Avenue pump stations in order to expedite response time and identification of issues as they arise.

**21. Elevation of Residential Structures**

Counsel and encourage owners of flood prone residential structures in their efforts to elevate their homes to reflect FEMA flood mapping. The Borough supports homeowners moving forward and has assisted in expediting applicable permits.

**22. Tree Maintenance**

It is recommended that the Borough perform tree maintenance as necessary, including tree trimming and pruning of shade trees along streets in the community to prevent downed power lines. This should also involve emphasizing the importance of the Public Works Department clearing downed trees in the event of a storm, as well as coordination with utility companies.

**23. Vacant Homes**

Purchase vacant homes throughout the Borough that are repeatedly devastated by storms to convert to their natural state and for flood mitigation. As a preliminary effort in this action item, in November 2014 the Borough adopted Ordinance # 1560 which amended and supplemented Chapter XI (Building and Housing) of the Borough's Development Ordinance. These revisions set in place a vacant property registration fee schedule, which requires owners of vacant residential properties to register their properties within 90 days after it becomes vacant.

**24. Water Use Restriction Ordinance**

Develop water use restriction ordinances to restrict landscaping water usage in times of drought.

**25. Community Outreach Program**

Create an outreach program to help residents prepare for disasters and to stay informed on potential low-cost, small-scale mitigation activities.

**Main Street – Church Street Component**

The Main Street – Church Street commercial area extends along Main Street from approximately Port Monmouth Road to Lawrence Street and along Church Street from the Henry Hudson Trail to Main Street. This area's role as the Borough's primary retail, service, and civic activity should be promoted and reinforced through municipal land use controls, through capital expenditures to improve the streetscape and business district environment, and through public programs which provide an incentive for private investment.

**1. Streetscape Recommendations**

Improve the area's visual image and achieve a cohesive appearance of this commercial area by incorporating the following recommendations:

- Replace pavement, curb, and sidewalk. Use a consistent design of paving material such as brick, concrete pavers, etc. on sidewalks to unify the business district.
- Plant more shade trees throughout this area.
- Add "street furniture" such as more benches, uniform trash receptacles, kiosks for community announcements, etc.
- Create small pocket parks in vacant areas between buildings.
- Incorporate the Borough's new logo (as of summer 2015) into design elements such as flags and banners throughout the commercial area to give the Borough a better sense of identity.

**2. Parking Recommendations**

The following should be done to improve parking arrangements in this commercial area.

- Remove on-street parking and expand sidewalk areas for pedestrian traffic in appropriate locations.
- Provide better identification of existing parking lots and create new lots on vacant property to meet parking needs.
- Require new construction and expanded uses to supply and improve adequate off-street parking and loading areas.

- Require cross connection and cross easements among properties to allow for ease of pedestrian and vehicular traffic.

### **3. Façade Improvements**

Where necessary, the Borough should encourage the improvement and renovation of signage and building exteriors in the commercial area. Design guidelines should be developed for storefronts to follow in terms of setbacks, height, width, roof line, materials, colors, and signage.

### **4. Economic Incentives**

The Borough should encourage development that contributes to the long-term stability and revitalization of the commercial district by investigating in the following:

- The feasibility of developing the Borough as an Urban Enterprise Zone.
- The feasibility of creating a Downtown Business Improvement zone.
- The use of property tax exemptions or abatements for improvement or expansion of commercial buildings.



## VII. Recommendations Concerning the Incorporation of Redevelopment Plans

In July 2005 the entire Borough of Keansburg was designated as an “Area in Need of Rehabilitation” pursuant to the NJ Local Housing and Redevelopment Law. The designation is based upon the age of the housing stock in the municipality and the age of the water and sewer infrastructure. As a result of this designation, the Borough may establish plans (zoning and building standards) for the redevelopment of areas within the Borough. In addition, the Borough may adopt limited five-year tax abatement programs for homeowners to assist in revitalization efforts.

The Borough of Keansburg has adopted the following Redevelopment Plans and implementing ordinance provisions in accordance with the “Local Redevelopment and Housing Law,” P.L. 1992, c. 79 (C.40A:12A-1, et al.), both of which constitute as an overlay to the underling zoning regulations:

- **Beachway Avenue Waterfront Redevelopment Plan:** The Beachway Avenue Waterfront Redevelopment Area is located along Raritan Bay to the west of the amusement park, roughly between Laurel and Bay Avenues. The Governing Body adopted the Redevelopment Plan via Ordinance #1403 in December 2005.
- **“Borough-Wide” Redevelopment Plan:** In July 2006 the Governing Body adopted the Redevelopment Plan via Ordinance #1415. This Redevelopment Plan includes four redevelopment subareas throughout the Borough as follows:
  - Subarea 1: Main Street Commercial Node – 19 acres, along Main Street between Randolph Place and the Henry Hudson Trail.
  - Subarea 2: Main/Beachway Node – 5 acres along Main Street near Beachway Avenue.
  - Subarea 3: Carr/Raritan – 18 acres with boundaries of Beachway Avenue to the north, Highland Avenue to the west, Center Avenue to the south, and Raritan Avenue to the east.
  - Subarea 4: Route 36 Gateway – one two-acre lot on Route 36.

These Redevelopment Plans have been incorporated into the Borough development regulations by description and reference at Sections 22-14.1 and 22-14.2, respectively. These Redevelopment Plans should be incorporated into the Land Use Plan Element of the Master Plan, and the Borough’s Zoning Map should be amended accordingly.

Additionally, a study should be considered to explore the possibilities of designating other areas of the Borough as redevelopment areas with special attention on the waterfront.

# Master Plan Amendment

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## Introduction

The purpose of this Master Plan amendment is to incorporate the recommendations and changes that have been outlined in the 2015 Reexamination Report into the Borough's Master Plan, or to establish the basis for future actions through the definition of new goals and objectives. This Master Plan amendment: updates and adds to the Master Plan objectives, problems, and assumptions; updates the Land Use Plan Element with updated existing land use mapping and a discussion on building resiliency; and includes an update to the community facilities plan element to promote resiliency and include current mapping of community facilities and critical infrastructure.

Hurricane Sandy struck the coast of New Jersey on October 29, 2012, and its storm surge and winds caused extensive damage to the Borough of Keansburg's roadways, critical infrastructure, utility services, and to buildings and homes. This document is the Borough's response to Hurricane Sandy's impacts, and offers new opportunities for examining community resiliency and ensuring that recovery efforts address the Borough's needs for the future.

## Master Plan Objectives and Policy Statements

Given the experience of Hurricane Sandy, it is important that the Master Plan objectives promote sustainability and resiliency, as well as the local-level implementation of the Monmouth County Multi-Jurisdictional Hazard Mitigation Plan Draft Update and the recommendations of the 2014 Strategic Recovery Planning Report. The Master Plan is, therefore, amended to include new resiliency objectives, provided below. In addition, the existing objectives and policy statements that underpin Borough planning are: reproduced to promote clarity and centrality of information; and, updated to the extent necessary in order to adequately reflect conditions as of 2015.

### Planning Objectives

1. Secure public safety from fire, flood, panic, and other natural and man-made disasters with particular emphasis on preserving and maintaining the integrity and protective features of the Borough beach-dune system. Adapt efforts accordingly to reflect updated flood levels and data from the Federal Emergency Management Agency (FEMA) and the National Oceanic and Atmospheric Administration (NOAA).
2. Develop and maintain a satisfactory level of public facilities and services.
3. Encourage the most appropriate use of land consistent with its suitability for development.
4. Establish appropriate population densities and control the intensity of development to ensure neighborhood, community, and regional well-being and to preserve the natural environment.
5. Ensure that the Borough's development does not conflict with development and general welfare of neighboring municipalities, the County, and the State as a whole.
6. Coordinate public development with land use policies to encourage the appropriate and efficient expenditure of public funds.
7. Provide sufficient space in appropriate locations for residential, recreational, commercial, and open space use.
8. Locate and design transportation routes to promote the free flow of traffic while discouraging congestion or blight.
9. Promote a desirable visual environment.
10. Conserve historic sites and districts.
11. Protect wetlands and areas with scenic, cultural, and recreational values.
12. Promote the recovery of recycling materials from municipal solid waste and encourage conservation of energy.

13. Encourage development that contributes to the revitalization of the community.
14. Improve and maintain residential neighborhoods by encouraging rehabilitation of existing dwellings and residential construction at suitable densities.
15. Maintain and attract beneficial commercial uses.
16. Improve and revitalize the Main Street / Church Street commercial district.
17. Guide waterfront development to maintain visual and pedestrian access to the Bayshore for the general public while encouraging development that is suitably scaled, compatible with public facilities and services, and appropriate to a waterfront location.
18. Maintain a continuous planning process, which will coordinate capital expenditures with the Master Plan and provide for development reviews to assure that the policies and standards promoted by the Master Plan are adhered to.
19. Utilize available funding sources at the Federal, State, and County level to revitalize the community.

### **Resiliency Objectives**

1. Planning new development to minimize risk from natural hazards.
2. Promote public awareness of hazard mitigation and resiliency issues.
3. Focus public agencies on community vulnerabilities to hazards such as flooding.
4. Encourage future capital projects to locate outside flood hazard areas.
5. Encourage renovations and modifications that are resilient to flood- and storm-related impacts.
6. Encourage municipal efforts and initiatives in FEMA's Community Rating System (CRS).

### **Policy Statements**

- **Housing and Neighborhood Improvement**

In order to maintain and improve residential areas, the Borough should encourage rehabilitation of the existing housing stock with new construction at appropriate densities, elevations and other relevant design standards. The enforcement of building and land use codes, as well as FEMA flood mapping, to protect and maintain properties should be aggressively pursued. Municipal action should facilitate the improvement of the livability of residential areas. The Borough should continue to seek public funding and explore innovative mechanisms and incentives for housing and neighborhood improvement.

- **Economic Development**

Development and redevelopment that contributes to the long-term economic health of the community should be encouraged. Municipal action to broaden the community's economic base should include participation in government programs to attract development, create employment opportunity, utilize the community's resources, and be compatible with the need to maintain facilities and services for the Borough's residents.

- **Bayfront Development**

Guide waterfront development to provide shore protection and flood control. Waterfront development should also maintain and enhance visual and pedestrian access, recreation and open space, and economic development. The Borough should encourage appropriate use of and access to the Raritan Bayshore through coordination with Monmouth County's planning efforts.

- **Commercial Corridor Revitalization**

The Borough should work toward improving and enhancing the visual appearance of commercial corridors in the Borough (Main Street, Church Street, Carr Avenue, Beachway Avenue, and Route 36) by establishing standards to guide development. Additionally, municipal action to stimulate revitalization through streetscape improvements and incentives for private sector participation should be undertaken.

- **Planning and Administration**

The recommendations of the Master Plan need to be a part of the day-to-day management of the municipal government. The progress of the Master Plan's objectives should be monitored and the plan itself should be reviewed periodically and revised to meet changing conditions.

## **Land Use Plan Element**

As has been previously noted, the 2015 Master Plan Reexamination Report recommends that the Land Use Plan Element be amended to facilitate increased sustainability and promote resiliency through the use of green building and infrastructure techniques. The 2015 Master Plan Reexamination Report also recommends that the Land Use Element be amended to include current existing land use mapping. This is achieved below.

### **Current Land Use Mapping**

The Land Use Element is updated to include the following mapping presented in Appendices B and C of this document:

- Current land use mapping that is presented in Appendix B; and
- Critical environmental areas that are presented in Appendix C.

### **Building Resiliency through Development Regulations**

Given the experience of Hurricane Sandy and the potential for future storms, there is a compelling need to build resiliency in the Borough of Keansburg. The Land Use Plan Element, therefore, recommends that the Borough's development regulations be designed to build resiliency throughout the Borough. This should be done through the promotion of green building and infrastructure techniques. This section of the Land Use Plan Element overviews green building and infrastructure techniques, and is meant to inform the future development of municipal development regulations.

### **Green Building and Infrastructure Techniques**

Green building and infrastructure techniques are an important tool for promoting resiliency in the Borough of Keansburg. They use permeable surfaces (e.g., porous concrete, gravel, mulch, etc.), landscape formations (e.g., channels, depressions), plant material, or other technologies to reduce stormwater runoff by promoting natural infiltration. Their use can promote resiliency by mitigating flooding (i.e., reducing the risk and impacts of flooding) and helping the Borough to quickly recover from storms. In addition, they provide numerous co-benefits, not the least of which are: reducing long-term maintenance and operation costs of stormwater infrastructure; and, capturing runoff pollution (e.g., particular matter, heavy metals) and preventing their entry into sensitive terrestrial waterways.



The Land Use Plan Element recommends the incorporation of green building and infrastructure techniques in the Borough's development regulations. Recommended green building and infrastructure techniques are described in the following subsections.

### ***Downspout Disconnection***

Downspout disconnection refers to the rerouting of rooftop drainage pipes to specialized containment devices (e.g., rain barrels, cisterns) and permeable areas, instead of traditional stormwater drainage systems. This allows stormwater runoff from building roofs not only to infiltrate soil, but also to be collected for later use (e.g., watering lawns and gardens), which reduces demand on public water supplies.



**Figure 1: Downspout Disconnection (Source: EPA)**

### ***Rain Gardens***

Rain gardens are shallow, vegetated basins that absorb stormwater runoff from impervious surfaces (e.g., rooftops, sidewalks, and streets). Runoff is channeled into rain gardens, and is then used by plants, infiltrated into the ground, and evaporated. They may be installed in a variety of locations, and can be an attractive element of site design. In addition, it is important to note that rain gardens can be installed in a variety of locations. Indeed, they may be installed in any properly graded unpaved space, and in parking lots and paved areas through the construction of specialized planter boxes that collect and absorb runoff.



**Figure 2: Rain Gardens (Source: EPA)**

### ***Bioswales***

Bioswales are open, linear channels with vegetation, mulching, or xeriscaping that slow stormwater runoff and attenuate flooding potential while conveying stormwater runoff



**Figure 3: Bioswales (Source: EPA)**

away from critical infrastructure. While they convey stormwater runoff away from critical infrastructure, their permeable surface permits the natural infiltration of stormwater. They are often used as an alternative to, or enhancement of, traditional stormwater drainage systems.

### **Permeable Pavements**

Permeable pavements help to reduce stormwater runoff, which helps to improve the quality of terrestrial waters and mitigate flooding. With traditional (i.e., impervious) pavement, stormwater runs into drains and inlets, which places a burden on such infrastructure, and may result in the discharge of pollutants (e.g., sediment, oil residue, etc.) into terrestrial waters. Permeable pavements, however, infiltrate, treat, or store rainwater where it falls. Key examples of permeable pavements include pervious concrete, porous asphalt, and permeable interlocking pavers.



Figure 4: Permeable Pavements (Source: EPA)

### **Green Roofs**

Green roofs are roofs that are covered with substrate and vegetation that enable the infiltration of rainwater. This not only minimizes stormwater runoff, but leads to reduced building operating costs and energy consumption by providing improved insulation of the roof surface, and absorbing less heat on the roof surface (i.e., increasing the roof surface albedo over traditional roof surfaces). Flat and low-pitched roofs are most suited to green roof development and retrofitting therewith.



Figure 5: Green Roofs (Source: EPA)

### **Tree Cover**

Increased tree cover in developed areas is an important example of green infrastructure. Trees reduce and slow stormwater by intercepting precipitation in their leaves and branches. In addition, their root systems help to aerate soil, which facilitates natural infiltration of stormwater and reduces runoff.



Figure 6: Tree Cover (Source: EPA)



Trees also purify the air, and can help to cool developed areas by providing shade, and through evaporative cooling and increased latent heat flux (i.e., the dissipation of sensible heat).

### ***Living Shorelines***

Living shorelines are an approach to shoreline stabilization that uses wetland plants, submerged aquatic plants, oyster reefs, coir fiber logs, sand fill, and stone to provide shoreline protection and maintain important habitat areas. They offer numerous benefits over hardened structures (e.g., bulkheads and concrete walls), including protection of the riparian and intertidal environments, improvement of water quality via filtration of upland runoff; and creation of habitat for aquatic and terrestrial species.

### ***Open Space Preservation***

Preservation of open space areas within and adjacent to developed areas can help to mitigate the water quality and flooding impacts of stormwater. Indeed, natural open space areas promote increased groundwater recharge, lower stormwater runoff, and reduced levels of nutrients and sediment in terrestrial waters. They also help to cool developed areas through evaporative cooling and increased latent heat flux. The use of building coverage and impervious surface limits, tree-save requirements, and noncontiguous clustering are key ways to promote open space preservation through development regulation.



Figure 7: Open Space Preservation (Source: EPA)

### ***Changes to Development Regulations***

The zoning ordinance should be amended to require lot grading plans for new construction and additions to mitigate the problems resulting from the increase in new impervious coverage and changes in grading. Construction and reconstruction as part of the recovery from Hurricane Sandy has increased residential building activity. The construction has increased concerns regarding stormwater runoff on to adjoining properties.

## **Community Facilities and Resiliency Plan Element**

The Community Facilities Plan Element should be updated to include updated mapping of community facilities and critical infrastructure, and to promote resiliency at community facility and critical infrastructure sites. This is achieved in the following subsections.

### **Promoting Resiliency**

The following section on promoting resiliency should be added to the Community Facilities and Resiliency Plan Element:

Hurricane Sandy's storm surge and winds caused extensive damage to community facilities and other critical infrastructure in the Borough of Keansburg. Protective dunes were breached by storm waters at four separate locations, and 2.6 miles of dunes were substantially damaged or washed away. Flood waters ranging from two to six feet in depth inundated approximately 50 percent of the structures in the Borough. Five (5) homes were destroyed by Hurricane Sandy and 347 were substantially damaged. Approximately 40,400 cubic yards of storms damage debris littered the Borough. Trees and power lines throughout the Borough fell, in many cases damaging buildings and homes. The Borough also faced power outages for up to 14 days.

Given the experience of Hurricane Sandy and the potential for similar storms in the future, it is important that the Borough promote the resiliency of its community facilities and critical infrastructure. This can be done through the application of green building and infrastructure techniques, which are discussed in the Land Use Element of this Master Plan. It can also be achieved through physical flood control and related devices, elevation of facilities above the advisory base flood elevation, careful site selection for new facilities, or other means. In addition, resiliency can be promoted by providing new and upgraded emergency power generation facilities at important sites, such as municipal buildings, police station, schools, and pump stations, which will help the Borough to function in times of crisis. By promoting the resiliency of community facilities and critical infrastructure, the Borough is not only protecting its investment, but may also set an important example for others to follow and thereby increase the overall sustainability and resiliency of the Borough.

Furthermore, this Community Facilities and Resiliency Plan Element is updated to include current public facilities and critical infrastructure mapping that is presented in Appendix D of this document. Note that this mapping shows the relation of these features to mapped flood hazard areas.

## **Circulation Plan Element**

As has been recommended in the 2015 Master Plan Reexamination Report, the Circulation Plan Element is hereby updated to include recommendations for the development of emergency evacuation routes and promote the development of bicycle and pedestrian connections. The following subsections describe the amendments to the Circulation Plan Element.

### **Emergency Evacuation Routes**

The Borough of Keansburg's location on waterways and the potential for additional hurricanes and storms in the future make it necessary to plan for emergency evacuation routes to move people and equipment in times of emergency, and provide safe, efficient routes to emergency shelters and similar facilities within the region. This is particularly important for flood-prone areas of the Borough.

Key aspects of emergency evacuation route planning include identification of potential routes, completing necessary modernization and upgrading, ensuring that routes are properly maintained and marked through signage, and informing the public about the presence of such routes. To elaborate, it is noted that potential routes should provide regional connections. Modernizing and upgrading roadways to be used as emergency evacuation routes will improve mobility and facilitate the evacuation of the Borough in times of crisis.

In addition to the above, it is noted that the planning of emergency evacuation routes should be coordinated with the New Jersey Department of Transportation, Monmouth County, and neighboring municipalities. This is important not only because evacuation routes would provide connections to the broader region, but also because roadways used as potential evacuation routes may fall under state, county, or municipal jurisdictions.

### **Bicycle and Pedestrian Connections**

Bicycle and pedestrian connections are encouraged and should be provided to the maximum extent possible in all areas of the Borough, and particularly between parks, recreation, and open space areas, and important population centers. Providing such connections will not only help to make the Borough of Keansburg more sustainable by promoting non-motorized transportation, but also greatly improve the quality of life for Borough residents. While sidewalks are an important pedestrian facility, the focus of this Circulation Plan Element is on dedicated and shared bicycle lanes, greenways, and multipurpose trails.

To maximize the provision of bicycle and pedestrian linkages, this Circulation Plan Element does not specify the exact locations where they should be provided, but rather establishes a vision, discusses key principles of the design and maintenance of bicycle and pedestrian facilities, and outlines important goals and objectives for their provision.

### **Vision for Bicycle and Pedestrian Linkages**

The Circulation Plan Element's vision is to develop the Borough's network of bicycle and pedestrian linkages and secure the recreation and transportation benefits of bicycling and walking for Borough residents. The Circulation Plan Element envisions a network of bicycle and pedestrian linkages that connects the Borough's population centers with: open space and recreation areas; schools; commercial nodes; and other key destinations in the Borough of Keansburg and neighboring municipalities.

The Circulation Plan Element also envisions that linkages will be provided in the form of: on-road bicycle lanes, lanes shared between bicycles and vehicles, where appropriate; greenways; and protected multipurpose trails. In all variations, bicyclists and pedestrians will be able to travel in a safe and efficient manner throughout the network, which will boost bicycling and walking for recreation, and increase their use as a means of transport.

### **Facility Design and Maintenance**

When planning bicycle and pedestrian linkages, it is important to pay attention to the needs and expectations of users, the facility's visual appeal and design, and its upkeep. The following subsections provide an overview of basic concepts to guide the planning and development of bicycle and pedestrian facilities within the Borough of Keansburg.

#### ***High Quality Experience***

As a starting point, it is important to consider the elements that lead to a high quality experience. Examples of such elements include: visual appeal; pleasantness and convenience of location; presence of interconnections, residential areas, and community facilities; sufficient length, accessibility for users with limited mobility; and the availability of special features, such as educational opportunities, benches, shelters, and similar amenities. When planning bicycle and pedestrian facilities, it is important to maximize the availability of these elements in order to provide a high quality experience.

#### ***User Needs***

It is also important to consider the needs and physical ability of the user. For example, the elderly and disabled will typically have different levels of ability than the remainder of the population. By giving consideration to the needs and physical ability of all users,



use and success of the network will be maximized. Accommodating a broad cross section of users of all ages and abilities will help to maximize the use and success of the network.

### **Connectivity**

Connectivity refers to the linkages a network provides from a given point to another. When planning bicycle and pedestrian facilities, it is important to consider possible connections between neighborhoods, business districts, parks, community facilities, and natural environments. By providing such connections, bicycle and pedestrian facilities can provide a viable route to a destination.

### **Facility Type**

Facility type will affect its design. The basic types of bicycle and pedestrian facilities are: on-road bicycle lanes; shared lanes; greenways; and multipurpose trails.

- **Dedicated, On-Road Bicycle Lanes:** On-road bicycle lanes provide dedicated space for cyclists where motorists are not allowed to park, stand, or drive. They are designated with striping, signage, and pavement markings, and make the movements of motorists and cyclists more predictable, thereby increasing safety. They are generally unidirectional, and travel in the same direction as the adjacent vehicle travel lanes. They are located on the right side of the roadway (i.e., along the curb), and when on-street parking is available they are generally situated between vehicle travel and parking lanes. According to guidelines of the American Association of State Highway and Transportation Officials, the minimum recommended width of an on-road bicycle lane is four feet. However, six feet is the preferred width recommended by this Circulation Plan Element. The additional width provides a greater degree of separation between bicycles and motor vehicles. Standards of the American Association of State Highway and Transportation Officials indicate that striping to separate on-road bicycle lanes from vehicle travel lanes should be six inches in width. Striping to separate on-road bicycle lanes from parking lanes should be four inches.
- **Shared Lanes:** Bicycle facilities may be provided in lanes shared between bicycles and motor vehicles. Shared lanes may be suitable on roadways with low traffic volumes or wide roadway shoulders, and are generally a low-cost solution because they can be provided without the requirement for physical changes to the roadway. Indeed, shared lanes only require bikeway network signage; they can, however, be supplemented with pavement markings. The width of a shared lane should ideally be 15 feet to allow for enough clearance between bicycles and large vehicles.

- **Greenways:** Greenways are long, linear open spaces that provide a setting for nature conservation and recreation. They often contain trails and link parks. The corridors of streams and rivers, and utility easements lend themselves to greenway development. Greenways are often the location of bicycle and pedestrian facilities.
- **Multipurpose Trails:** Multipurpose trails facilitate connections within the community. They provide for safe, non-motorized passage between residential and commercial areas, parks and open space areas, and other community features. A width of eight to ten feet is appropriate for multipurpose trails. In certain high-traffic areas, however, a width of ten to twelve feet may be appropriate. In all cases, the width should be enough to accommodate bidirectional passage. Multipurpose trails may be provided in roadway rights-of-way, but when they are provide in such areas, they are physically separated from motor vehicle traffic by open space or some other type of physical barrier (e.g., guard rail, curbing, etc.).
- **Signage:** Signage serves a number of important functions. Most importantly, it helps a user to identify his or her location and conveys information about facility characteristics. As such, proper signage is an important part of bicycle and pedestrian facility design.

Signage at the trailhead should include: the name of the facility; a large-format map; length; permitted activities; and information on connections. Signage should contain a minimal amount of text by making extensive use of icons and pictograms. Locational markers placed at regular intervals along the route should supplement this information. Additionally, interpretative signage should be provided where significant natural or cultural features are present. All signage should be made of durable materials that resist fading, water damage, and vandalism.

With regard to traffic signage, it is noted that the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) provides standards for all traffic control devices nationwide, including signs for bicycle facilities. All traffic control devices nationwide must conform to its standards. It is, therefore, the recommendation of the Circulation Plan Element that the current MUTCD be consulted when planning traffic control signage.

- **Amenities:** When planning bicycle and pedestrian facilities, it is important to provide appropriate amenities. The appropriateness of a particular amenity will be determined by the function, type, and anticipated users of the facility.

Amenities have a significant impact on a user's overall experience, and may include: bicycle racks; resting areas; benches; picnic areas; drinking fountains; animal-proof refuse containers; observation areas; and shelters, among others.

- **Maintenance:** The proper maintenance and upkeep of the Borough of Keansburg's bicycle and pedestrian facilities will ensure the public's continued use, safety, and enjoyment. As such, maintenance is an integral part of the bicycle and pedestrian facility planning process.

The maintenance required for a specific facility will be determined by type, surface, and amenities. Consequently, it is the recommendation of this Circulation Plan Element that a maintenance plan be written for the bicycle and pedestrian network in the Borough of Keansburg.

A facility's future maintenance needs must also be considered during the design process. For instance, off-road facilities should be designed to be accessible to maintenance vehicles. Additionally, benches and other amenities should be designed to be low maintenance. By giving forethought to maintenance in the design process, a facility's future maintenance requirements can be simplified.

### Goals for Bicycle and Pedestrian Linkages

The Borough's goals for bicycle and pedestrian linkages are as follows:

- Provide bicycle and pedestrian linkages between neighborhoods and key destinations within the Borough, and to neighboring municipalities.
- Establish a permanent advisory committee for bicycle and pedestrian facilities.
- To the greatest extent possible, develop bicycle and pedestrian linkages between dead-end streets and cul-de-sacs.
- Provide identification and guide signs for bicyclists and pedestrians.
- Provide safe and adequate bicycle parking options at key destinations, and in all public parks.
- Work with Monmouth County to provide signage that alerts motorists of the presence of bicyclists along county roadways.
- Provide only bicycle-safe sewer grates in all areas of the Borough.
- Provide adequate lighting to ensure safety for bicyclists and pedestrians.
- Ensure that all bicycle projects comply with recognized design standards, such as the *Guide for the Development of Bicycling Facilities* prepared by the American Association of State Highway and Transportation Officials.
- Investigate potential funding mechanisms for bicycle and pedestrian facilities, including grants and open space trust funds.

- Coordinate bicycle planning with adjoining municipalities, Monmouth County, and the State of New Jersey.
- Develop a borough-wide bicycle and pedestrian facility map that is displayed at parks and other major destinations.
- Provide traffic calming at key locations to improve bicycle and pedestrian safety and encourage use of facilities.

Furthermore, this Circulation Plan Element is updated to include the public facilities and critical infrastructure mapping that is discussed in the Community Facilities and Resiliency Plan Element, as shown in Appendix D of this document. Note that this mapping shows the relation of these features to mapped flood hazard areas.

## **Stormwater Management Plan Element**

As noted in the 2015 Master Plan Reexamination Report, the Stormwater Management Plan Element is hereby amended to incorporate both the Borough's Hazard Mitigation Plan action items identified in the 2015 Master Plan Reexamination Report and also the green building and infrastructure techniques outlined in the 2015 Land Use Plan Amendment.

## Housing Plan Element

The Borough's Housing Plan Element and Fair Share Plan was last prepared as part of the 1988 Master Plan, upon the requirements of the Fair Housing Act of 1985. As recommended in the 2015 Master Plan Reexamination Report, The Housing Element and Fair Share Plan should be amended at such time as the Council on Affordable Housing (COAH) enacts regulations that define the future affordable housing obligation of the Borough. The housing element should address the Borough's fair share affordable housing obligation in accordance with the applicable COAH regulations.

While it is not the intent for this Housing Plan Element to make any changes to the Borough's Housing Element and Fair Share Plan at this time, the Housing Plan Element is hereby amended to address the following:

- The Borough encourages homeowners of single-family structures to elevate their homes to make them more resilient to future Sandy-type storms.
- It should be the Borough's policy that affordable housing should not be located within the flood hazard areas.

# Appendices

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Appendix A: Existing Zoning

Appendix B: Current Land Use

Appendix C: Critical Environmental Areas

Appendix D: Community Facilities



## **Appendix A: Current Zoning**

Current Zoning  
Master Plan Reexamination Report  
Borough of Keansburg  
Monmouth County, New Jersey

- Municipal Boundary
- Zoning Boundary
- Parcel Boundary
- Beachway Avenue Waterfront  
Redevelopment Area Overlay
- "Borough-Wide" Redevelopment  
Area Overlay



0 250 500 1,000 1,500 2,000 Feet

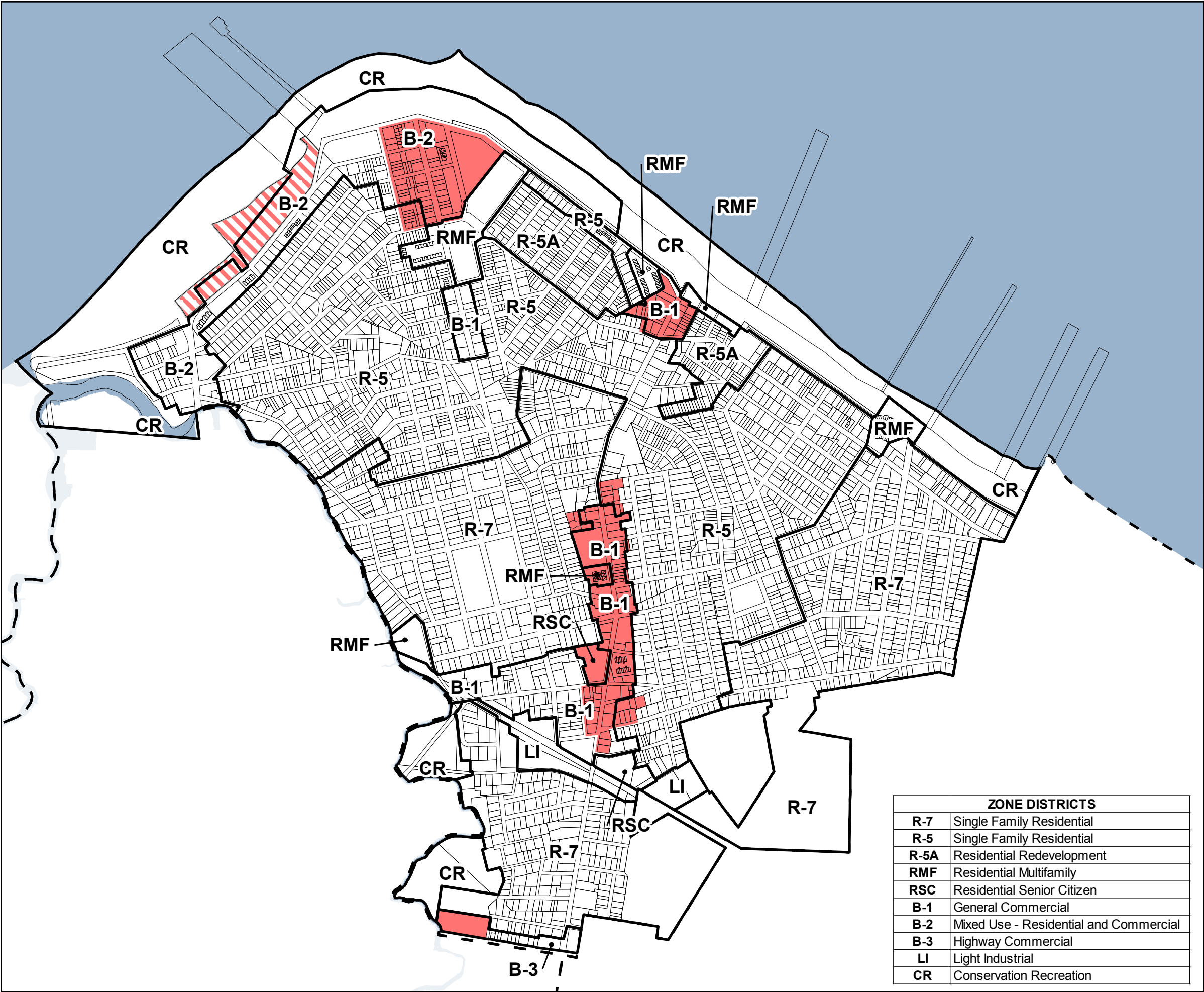


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Prepared by: JAC, 9/21/2015  
Source: NJDEP; NJDOT; NJGIN; FEMA;  
Monmouth County; Borough of Keansburg  
H:\KNBG\01251\GIS\Projects\  
Current Zoning 08.2015.mxd

NOTE: This map was developed using New Jersey  
Department of Environmental Protection Geographic  
Information System digital data, but this secondary product  
has not been verified by NJDEP and is not State-authorized.


ZONE DISTRICTS	
R-7	Single Family Residential
R-5	Single Family Residential
R-5A	Residential Redevelopment
RMF	Residential Multifamily
RSC	Residential Senior Citizen
B-1	General Commercial
B-2	Mixed Use - Residential and Commercial
B-3	Highway Commercial
LI	Light Industrial
CR	Conservation Recreation




## **Appendix B: Land Use**





**Existing Land Use  
Master Plan Reexamination Report  
Borough of Keansburg  
Monmouth County, New Jersey**


-  Municipal Boundary


 Parcel Boundary


**Roadways**


 US or State Route


 County Route


 Local Road


 Ramp
- Land Use\***


 Residential


 Apartment


 Commercial

 Industrial

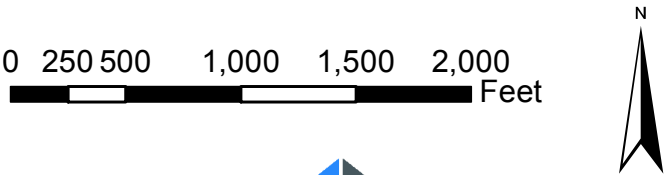
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 Church / Charitable / Cemetery

 Other Exempt

 Vacant

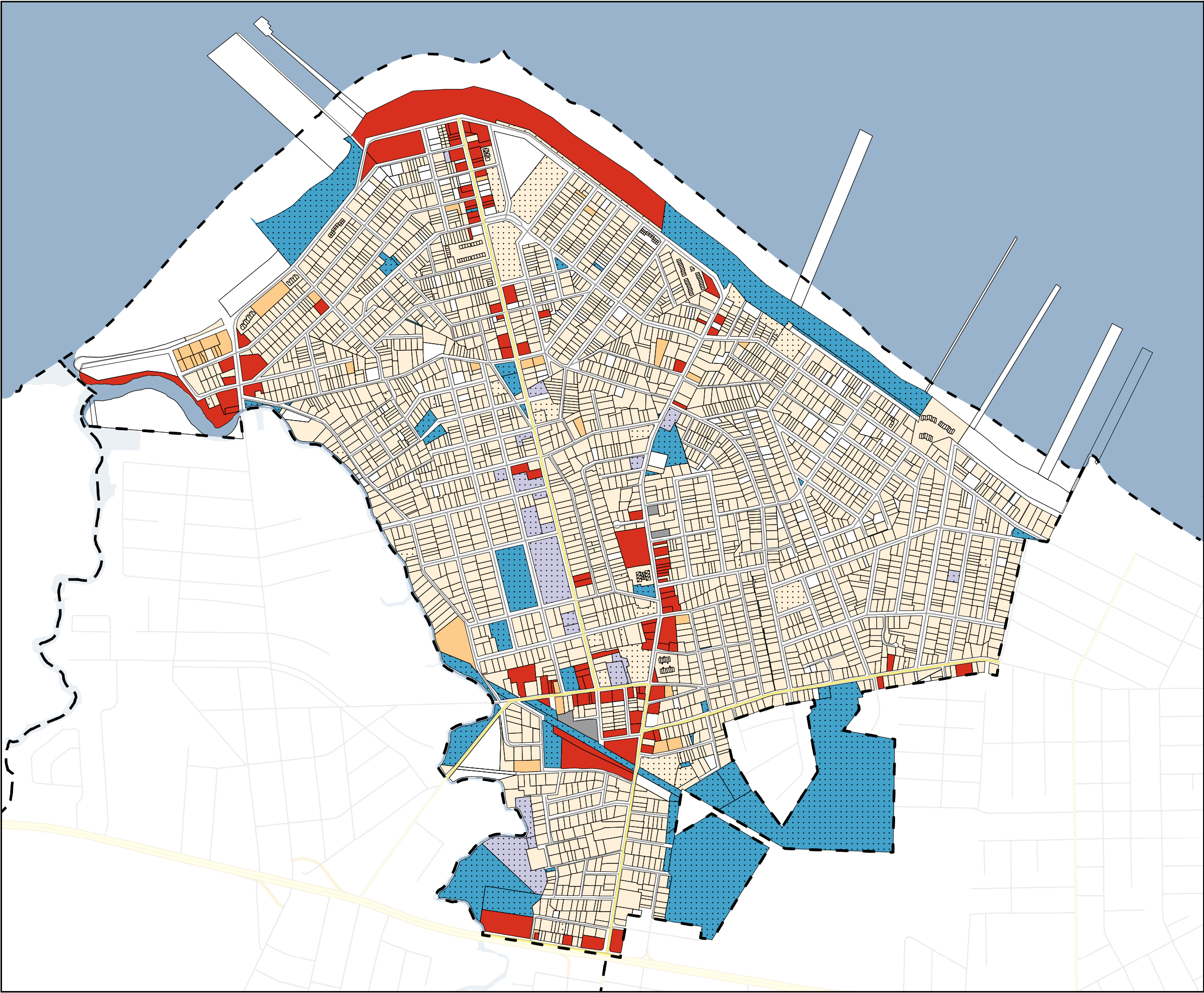
\*Land uses reflect New Jersey MOD-IV  
Land use tax classifications for 2014.



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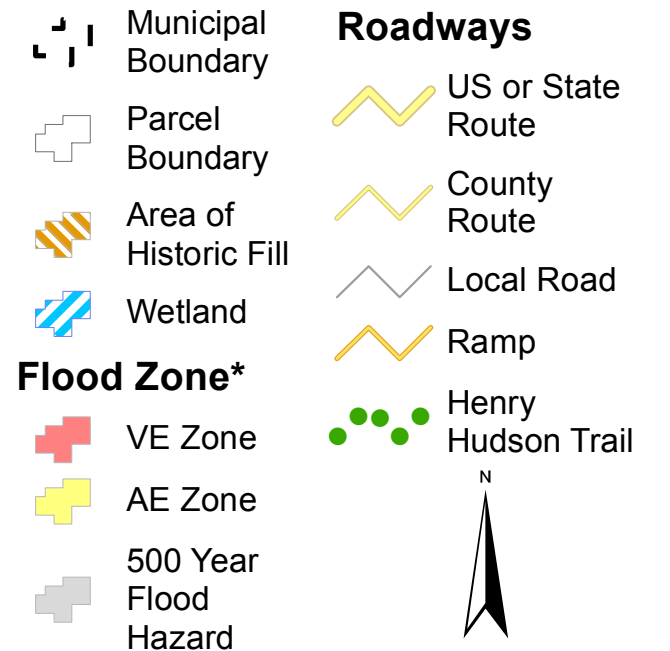
*NOTE: This map was developed using New Jersey  
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has not been verified by NJDEP and is not State-authorized.*



## **Appendix C: Critical Environmental Areas**



# Critical Environmental Areas Master Plan Reexamination Report Borough of Keansburg Monmouth County, New Jersey



\*Flood Hazard Areas are based on FEMA's Preliminary Flood Insurance Rate Maps (P-FIRMs) Panel # 34025C00 -34G, -42G, and -55G dated 01/31/2014.

0 250 500 1,000 1,500 2,000 Feet



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Monmouth County; Borough of Keansburg  
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Critical Environmental Areas 08.2015.mxd

*NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.*

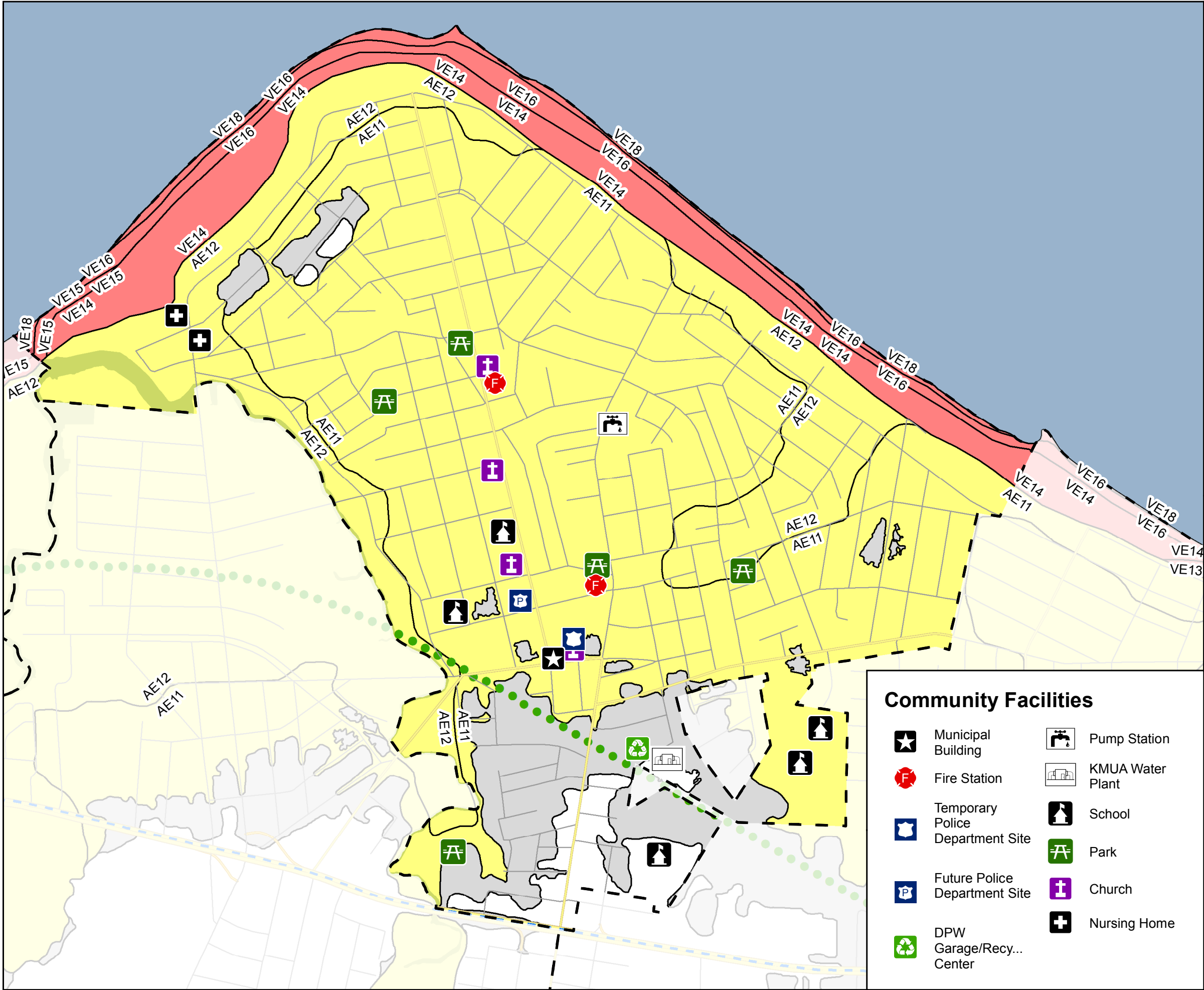
## Known Contaminated Sites

- ① Raritan Bay Marina
- ② SS Classics Inc.
- ③ C&A Auto Body Shop
- ④ Bayshore Oil Company
- ⑤ Keansburg Pump Station
- ⑥ St. Ann's Church
- ⑦ HH Service Center
- ⑧ Rt 36 Gas & Go Corp
- ⑨ Keansburg Exxon

## **Appendix D: Community Facilities**

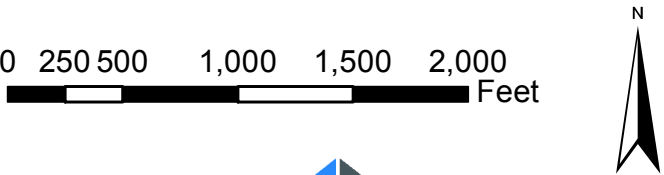


Community Facilities  
Master Plan Reexamination Report  
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Monmouth County, New Jersey



- Flood Zone\***
- VE Zone
  - AE Zone
  - 500 Year Flood Hazard
  - Flood Hazard Area Boundary
- Roadways**
- US or State Route
  - County Route
  - Local Road
  - Ramp
  - Designated Evacuation Route
  - Henry Hudson Trail

\*Flood Hazard Areas are based on FEMA's Preliminary Flood Insurance Rate Maps (P-FIRMs) Panel # 34025C00 -34G, -42G, and -55G dated 01/31/2014.



Community Facilities

- Municipal Building
- Fire Station
- Temporary Police Department Site
- Future Police Department Site
- DPW Garage/Recy... Center
- Pump Station
- KMUA Water Plant
- School
- Park
- Church
- Nursing Home



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Source: NJDEP; NJDOT; NJGIN; FEMA;  
Monmouth County; Borough of Keansburg  
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