DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

THE UPLANDS at ST. JOHNLAND

Change of Zone Application

&

DRAFT CCRC ORDINANCE REVIEW

Hamlet of Kings Park, Town of Smithtown

Property owner: The Society of St. Johnland
395 Sunken Meadow Road
Kings Park, New York 11754
Contact: Mary Jean Weber
(631) 269-5800

Prepared for and Submission to: Town of Smithtown
Town Board
99 West Main Street
Smithtown, New York 11787
Contact: Russell K. Barnett, Environmental Protection Director
(631) 360-7514

Prepared by: Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747
Contact: Charles Voorhis; CEP, AICP
(631) 427-5665
NPV# 95124

October 2012

DRAFT ENVIRONMENTAL IMPACT STATEMENT

For

THE UPLANDS AT ST. JOHNLAND

Change of Zone Application

&

DRAFT CCRC ORDINANCE REVIEW

Hamlet of Kings Park, Town of Smithtown

Suffolk County, New York

Property owner:	The Society of St. Johnland 395 Sunken Meadow Road Kings Park, New York 11754 Contact: Mary Jean Weber (631) 269-5800
Prepared for and Submission to:	Town of Smithtown Town Board 99 West Main Street Smithtown NY, 11787 Contact: Russell K. Barnett, Environmental Protection Director (631) 360-7514
Prepared by:	Nelson, Pope & Voorhis, LLC *(environment/planning)* 572 Walt Whitman Road Melville, New York 11747 Contact: Charles Voorhis; CEP, AICP (631) 427-5665

October 2012

Date of Acceptance by Lead Agency: ***October 2, 2012***

Comments to the Lead Agency are to be submitted by: ***December 10, 2012***

Copyright © 2012 by Nelson, Pope & Voorhis, LLC

NELSON POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

TABLE OF CONTENTS

			Page
COVERSHEET			i
TABLE OF CONTENTS			ii
SUMMARY			
	Introduction		S-1
	Description of the Proposed Project		S-1
	Anticipated Impacts and Proposed Mitigation		S-1
	Anticipated Cumulative Impacts		S-10
	Alternatives Considered		S-12
1.0	**OVERVIEW OF THE PROPOSED PROJECTS**		1-1
1.1	**Project Background, Need, Objectives and Benefits**		1-3
	1.1.1	Project Background	1-3
	1.1.2	Public Need and Municipality Objectives	1-4
	1.1.3	Benefits of the Projects	1-7
	1.1.4	Longevity of the CCRC Use	1-9
1.2	**CCRC Ordinance Review**		1-11
	1.2.1	Proposed Code Revisions	1-11
	1.2.2	Review of Other Codes	1-11
	1.2.3	Recommendations	1-13
1.3	**CCRC Zone Parcel Identification and Cumulative Impact Analysis**		1-14
	1.3.1	Background	1-14
	1.3.2	Purpose	1-15
	1.3.3	General Parcel Identification	1-15
	1.3.4	Topics of Cumulative Analysis	1-15
	1.3.5	Detailed Identification of Potential Sites	1-16
		1.3.5.1 Methodology	1-16
		1.3.5.2 Site Descriptions	1-16
	1.3.6	Existing Environmental Resources and Planning Considerations	1-19
		1.3.6.1 Existing Environmental Resources	1-19
		1.3.6.2 Existing Human Resources	1-22
	1.3.7	Assessment of Potential Environmental Impacts	1-24
	1.3.8	Potential Cumulative Impacts and Findings	1-30
2.0	**DESCRIPTION OF THE SITE SPECIFIC CHANGE OF ZONE PROJECT**		2-1
2.1	**Location**		2-1
2.2	**Project Design and Layout**		2-2
	2.2.1	Overall Site Layout	2-2
	2.2.2	Grading and Drainage	2-10
	2.2.3	Access, Road System and Parking	2-13
	2.2.4	Sanitary Disposal and Water Supply	2-13
	2.2.5	Site Landscaping and Lighting	2-16
2.3	**Construction Schedule and Operations**		2-16
2.4	**Permits and Approvals Required**		2-18

3.0 NATURAL ENVIRONMENTAL RESOURCES 3-1
3.1 Geology 3-1
3.1.1 Existing Conditions 3-1
3.1.2 Anticipated Impacts 3-3
3.1.3 Proposed Mitigation 3-4
3.2 Surface Soils 3-4
3.2.1 Existing Conditions 3-4
3.2.2 Anticipated Impacts 3-8
3.2.3 Proposed Mitigation 3-10
3.3 Topography 3-10
3.3.1 Existing Conditions 3-10
3.3.2 Anticipated Impacts 3-10
3.3.3 Proposed Mitigation 3-13
3.4 Vegetation and Wildlife 3-13
3.4.1 Existing Conditions 3-13
3.4.2 Anticipated Impacts 3-27
3.4.3 Proposed Mitigation 3-31
3.5 Groundwater and Surface Water Resources 3-31
3.5.1 Existing Conditions 3-31
3.5.2 Anticipated Impacts 3-36
3.5.3 Proposed Mitigation 3-41

4.0 HUMAN ENVIRONMENTAL RESOURCES
4.1 Transportation 4-1
4.1.1 Existing Conditions 4-1
4.1.2 Anticipated Impacts 4-3
4.1.3 Proposed Mitigation 4-7
4.2 Community Services 4-7
4.2.1 Existing Conditions 4-7
4.2.2 Anticipated Impacts 4-11
4.2.3 Proposed Mitigation 4-15
4.3 Economic Impacts 4-16
4.3.1 Existing Conditions 4-16
4.3.2 Anticipated Impacts 4-16
4.3.3 Proposed Mitigation 4-23
4.4 Land Use, Zoning and Town Plan Update 4-23
4.4.1 Existing Conditions 4-23
4.4.2 Anticipated Impacts 4-27
4.4.3 Proposed Mitigation 4-36
4.5 Air Quality and Noise 4-36
4.5.1 Existing Conditions 4-36
4.5.2 Anticipated Impacts 4-45
4.5.3 Proposed Mitigation 4-46
4.6 Visual Resources 4-46
4.6.1 Existing Conditions 4-46
4.6.2 Anticipated Impacts 4-47
4.6.3 Proposed Mitigation 4-49
4.7 Cultural Resources 4-50
4.7.1 Existing Conditions 4-50
4.7.2 Anticipated Impacts 4-53

4.7.3 Proposed Mitigation 4-54

5.0 OTHER IMPACTS EVALUATED 5-1
5.1 Cumulative Impacts 5-1
5.2 Adverse Impacts that Cannot Be Avoided 5-2
5.3 Irreversible and Irretrievable Commitment of Resources 5-3
5.4 Growth-Inducing Aspects 5-3
5.5 Effects on the Use and Conservation of Energy Resources 5-5

6.0 ALTERNATIVES 6-1
6.1 Alternative 1: No Action 6-3
6.2 Alternative 2: As of Right Development at Existing Zoning 6-3
6.3 Alternative 3: Development Conforming to Continuing Care Retirement Community Special Exception Requirements 6-5
6.4 Alternative 4: Development Per the Retirement Community District 6-8
6.5 Alternative 5: Proposed Project, with Alternative Wastewater Treatment 6-10

7.0 REFERENCES 7-1

LIST OF ACRONYMS

TABLES

1-1 CCRC Dimensional Requirements 1-11
1-2 Study Parcel Zoning 1-23
1-3 Study Parcel Resource Matrix 1-26
2-1a Unit Breakdown & Gross Floor Area 2-5
2-1b Amenities Breakdown 2-6
2-2 Site and Project Characteristics- Existing Conditions and Proposed Project 2-9
2-3 Anticipated Clearing 2-11
2-4 Water Use and Sanitary Wastewater Flows 2-15
2-5 Permits and Approvals Required 2-19
3-1 Soil Limitations 3-6
3-2a Habitat Quantities- Site, Existing Conditions 3-15
3-2b Habitat Quantities- ±5-Acre Parcel, Existing Conditions 3-15
3-3 Vegetation Species 3-17
3-4 Bird Species 3-21
3-5 Mammal Species 3-23
3-6 Reptile and Amphibian Species 3-24
3-7a Habitat Quantities- Site, Existing and Proposed Conditions 3-28
3-7b Habitat Quantities- ±5-Acre Parcel, Existing and Proposed Conditions 3-28
3-8 Stormwater Impacts from Land Use, NURP Study, Medium-Density Residential Sites 3-40
4-1 Trip Generation- CCRC 4-4
4-2 Existing Tax Rates, 2010-11 4-8
4-3 Anticipated Tax Revenue Generation 4-12
4-4 Summary of Key Economic Findings 4-23
4-5 Land Use 4-24
4-6 Zoning 4-25
4-7 Dimensional Requirements, Existing Zoning, R-43 District 4-25

4-8	Dimensional Requirements, Proposed Project, CCRC Amendments	4-29
4-9	Wind Direction	4-37
4-10	Wind Speed and Gustiness	4-38
4-11	National Ambient Air Quality Standards	4-39
4-12	Average Ability to Perceive Changes in Noise Levels	4-41
4-13	Common Noise Levels and Reactions	4-43
4-14	Permissible A-Weighted Sound Pressure Levels by Receiving Property Category, In dBA	4-44
4-15	Sound Level Measurement Results	4-45
4-16	Prehistoric Potential	4-51
4-17	Historic Potential	4-52
6-1	Comparison of Alternatives, Site and Scenario Characteristics	6-2

FIGURES

(following Section 7.0)

1-1 Location Map
1-2 Potentially Eligible Properties 25+ Acres
1-3 Aerial Photograph
1-4 Property Ownership and Property Size
1-5 Public Land
1-6 Aerial Photo- Parcels 1-4
1-7 Aerial Photo- Parcels 5-6
1-8 Aerial Photo- Parcels 7-8
1-9 Aerial Photo- Parcel 9
1-10 Aerial Photo- Parcel 10
1-11 Aerial Photo- Parcels 11-13
1-12 Aerial Photo- Parcels 14-15
1-13 LiDAR Topography- 10 Foot Contours
1-14 General Soil Association
1-15 Ground Water Management Zones
1-16 Groundwater Contours
1-17 NYSDEC Freshwater Wetlands Map
1-18 Surface Watershed Boundaries
1-19 Wild, Scenic, and Recreational Rivers
1-20 Zoning
1-21 School Districts
1-22 Fire Districts and Ambulance Services
1-23 Town of Smithtown Local Waterfront Revitalization Program
2-1 Aerial Photograph
2-2 Wild Scenic and Recreational Rivers
2-3 Site Plan Aerial Overlay
2-4 SCWA Distribution Map
2-5 SCDPW Land Dedication Area
3-1 Geologic Cross Section
3-2 Soils Map
3-3 Habitat Map
3-4 Water Table Contour Map
4-1 Educational Resources
4-2 Public Safety
4-3 Land Use Map

4-4 Public Open Spaces in Town
4-5 Zoning Map
4-6 Town of Smithtown Local Waterfront Revitalization Program
4-7 Archaeosensitive Areas Map

APPENDICES:

A SEQRA-Related Documents
A-1 Positive Declaration (St. Johnland Change of Zone), Town Board, December 18, 2007
A-2 Positive Declaration (CCRC Ordinance), Town Board, February 28, 2008
A-3 Change of Zone Application, March 2007
B Residential Market Analysis
C CCRC Ordinance Review
C-1 Draft CCRC Ordinance
C-2 CCRC Code Comparison
C-3 Long Island CCRC Developments- Zoning Codes
C-4 Long Island CCRC Development Comparison Matrix
D Historic Aerial Series
E Building Height Analysis
E-1 The Uplands at St. Johnland IL Building Cross Sections, EGA Architects, January 9, 2012
E-2 The Uplands at St. Johnland Building Height Diagram, EGA Architects, January 9, 2012
F CCRC Supporting Documentation
F-1 Laws of New York, Article 46 Continuing Care Retirement Communities (applicable sections)
F-2 Greenbrier Development Correspondence, January 9, 2012
G Geology and Water-Related Documents
G-1 Geologic Cross Sections
G-2 SCDPW Soil Boring Test Log and Location Map (Nursing Home Property)
G-3 SCDPW Correspondence
H Soil Resources
H-1 Phase I Environmental Site Assessment
H-2 Phase II Environmental Site Assessment
H-3 Remedial Action Report
I Ecology-Related Documents
I-1 NPV Staff Qualifications
I-2 NYSDEC Breeding Bird Survey
I-3 Projection of Wildlife Ecological Response (POWER) Model Results
I-4 Ecology-Related Correspondence
I-5 Suffolk County Legislature Resolution 614-2007
J SONIR Computer Model Documents
J-1 Model User's Guide
J-2 Existing Conditions/Alternative 1
J-3 Proposed Project
J-4 Alternatives 2 - 5
K Applicable Nationwide Urban Runoff Program (NURP) Study Sections
L Traffic Impact Study
M Community Service Correspondence

N Air Quality Data
O Noise Survey Data
P Community Character
P-1 Photographs of Site and Vicinity
P-2 Photo Simulations
Q Historic/Archeological Documents
Q-1 Phase I Archaeological Investigation
Q-2 NYS SHPO Correspondence
R Alternative Plans
R-1 Site Plan Conforming to CCRC Requirements
R-2 STP Layout with Leaching Pools, Michael P Chiarelli Engineer P.C., January 2012

In pouches at rear:

Master Development Plan, VHB (revised 8.15.12)
Map of Property, VHB (3.14.07)
Preliminary Grading & Drainage Plan, VHB (revised 03.27.12)
Yield Map Site Plan, VHB (5.04.11)
Soil Mechanics Subsurface Investigation (5.26.10)
Soil Mechanics Subsurface Investigation (10.19.10)

SUMMARY

SUMMARY

Introduction

This document is a Draft Environmental Impact Statement (DEIS) for a proposed zoning amendment within the Town of Smithtown's Zoning Ordinance to create a new Special Exception for Continuing Care Retirement Community (CCRC) within the Town Zoning Code Retirement Community (RC) zone, as well as a proposed change of zone application to place a specific project site, known as **The Uplands at St. Johnland**, within the RC zone so that a Special Exception for Continuing Care Retirement Community (CCRC) can be considered for development of The Uplands at St. Johnland property (hereafter, the "proposed project"). The Draft Environmental Impact Statement (DEIS) will assess the potential environmental impacts of the proposed zoning amendment, as well as the site specific change of zone request for The Uplands at St. Johnland property.

This Draft Environmental Impact Statement (DEIS) describes the proposed project site, catalogues the proposed project site and area resources, discusses potential environmental impacts of the zoning amendment and proposed development for the site specific change of zone application, including use of ±5-acres of the nursing home property for discharge capacity for the Kings Park Sewage Treatment Plant (STP), presents measures to mitigate adverse impacts, and examines alternatives to the proposed site specific Uplands at St. Johnland project.

Description of the Proposed Development Project

The Uplands at St. Johnland site specific change of zone application is located at the southwestern corner of the intersection of St. Johnland Road and Old Dock Road, Kings Park, Town of Smithtown, County of Suffolk, New York (hereafter "proposed project site" or "subject property"). The proposed project site occupies 49.69 acres of vacant land south of the St. Johnland Nursing Center. The application also considers the partitioning of a ±5-acre portion of the St. Johnland Nursing Center property (located northwest of the proposed project site) to allow for the transfer of this five acres to the Suffolk County Department of Public Works (SCDPW) for the purpose of discharging treated sanitary effluent from the Kings Park Sewage Treatment Plant (STP). According to a letter from the Suffolk County Department of Public Works (SCDPW), the use of ±5-acre parcel will allow the Kings Park Sewage Treatment Plant (STP) to process the full treatment capacity of the plant, while maintaining compliance with the permit restrictions set forth by the Long Island Sound Study. The Kings Park Sewage Treatment Plant (STP) currently serves projects in the area (including the St. Johnland Nursing Center) and discharges treated effluent to the Long Island Sound. The transfer of the five acres will allow the Kings Park Sewage Treatment Plant (STP) to divert their current surface water discharge to an inland groundwater recharge system on the ±5-acre parcel, and will provide availability for the proposed Uplands at St. Johnland Continuing Care Retirement Community project to connect to the Kings Park Sewage Treatment Plant (STP). A change of zone is not needed or requested for the ±5-acre parcel.

Anticipated Impacts and Proposed Mitigation

Geology Impacts

- Review of the test hole boring logs for borings installed on the proposed project site show that subsoils are variable beneath the site and include locations where intermittent underlying clay is prevalent, as well as areas that provide suitable subsoils for leaching. A number of locations do not exhibit clay and therefore would provide locations for drainage recharge.
- Drainage systems will be designed based on the subsurface soil information and will be located to take advantage of suitable quality leaching soils.

- It is expected that a combination of surface detention and subsurface recharge to areas with suitable soils will provide the necessary elements of the drainage system to ensure conformance with Town of Smithtown requirements.

Geology Impacts Mitigation

- Additional test holes may be required prior to any site plan approvals from the Town Board or Suffolk County Department of Health Services (SCDHS) (if the on-site sewage treatment plant alternative is selected). This will permit evaluation of soils in conjunction with detailed grading, drainage and sanitary system final design.
- Unsuitable material, if encountered, will be removed and backfilled with clean material to promote proper leaching of stormwater and sanitary effluent.
- Short-term impacts will be mitigated by proper grading, erosion control, construction management and site stabilization techniques.

Subsurface Soils Impacts

- It is anticipated that 18.47 acres of the proposed project site would be cleared and graded.
- Six (6) of the soils (CpA, CpE, PlA, PlB, Su and RdB) found on the subject site pose "severe" to "moderate" limitation to development due to seasonal high water table at depth of 0.5 to 1.5 feet, sandy surface layer and/or slopes.
- These limitations relate to several project features, which include sewage disposal fields (which require leaching soils similar to stormwater drainage facilities), streets and parking areas, lawns and landscaping, paths and trails and play areas. Of these soils, only Su and RdB are in areas of the site proposed for development and may be present in areas of buildings, paved areas and landscaping.
- An estimated 62.63% of the overall site (31.12 acres) will remain in natural state and includes the periphery buffer area, wetlands area and 100 ft. wetland buffer setback area and most areas of high groundwater. As a result, disturbance will occur within the internal portions of the property, and site plan engineering will be used to ensure suitable grade transitions and protection of natural soils on site.
- Measures anticipated to be taken during the construction period which will minimize the potential for erosion include, but are not limited to 1) use of groundcovers; 2) minimize the time span that denuded soil is exposed to erosive elements; 3) use of drainage diversions; 4) use of soil traps; and 5) use of retaining walls which reduce the area required for grading. As a result of these measures, it is not anticipated that soil erosion will constitute a significant impact.

Subsurface Soils Mitigation

- Ensure proper grading plans, erosion control plans and Stormwater Pollution Prevention Plans (SWPPPs) to address identified slope limitations associated with some on-site soils.
- Convey sanitary waste to Kings Park Sewage Treatment Plant (STP) and discharge effluent to the 5-acre parcel on the St. Johnland Nursing Center property leaching field to mitigate high seasonal water table limitation with respect to sewage disposal.
- Conduct additional test borings if necessary to locate appropriate soils for stormwater recharge, detention and related leaching systems to mitigate potential impact with regard to high seasonal water table and slopes with respect to stormwater handling.

Topography Impacts

- Earthwork estimates indicate that import of soil will be necessary to achieve the proposed development. The objective of the grading plan will be that any excess soil will be retained on-

site and reused as fill. Based on preliminary grading design, it is anticipated that approximately 66,000 cubic yards (CY) of soil will be required as fill material for grading operations. Of this total 61,000 CY will be obtained from on-site cut generated from excavation of the subject property (for building foundations, drainage structures, rough grading, etc.) and approximately 5,000 CY of fill will be required to be imported to the site to provide adequate surface areas and grade transitions for development. In addition, it should be noted that 55,000 CY of top soil will be excavated from the property. Of this total, 15,000 CY will be reused within planned landscaped areas and the excess 40,000 CY will be removed from the property.

- The Suffolk County Department of Public Works (SCDPW) intends to utilize ±5-acres of the St. Johnland Nursing Center property as a recharge area for treated effluent from the Kings Park Sewage Treatment Plant (STP). Grading and excavation of this parcel will be required for the creation of this leaching field. The land of this parcel will be mostly cleared and replanted with lawn, with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer which will provide screening of the property.
- It is expected that 20% of the steep slope areas (0.64 acres) of the subject property will be subject to grading activities. As per Section 322-12, a variance is required for alterations of slopes of 15% or greater. As a result, the applicant will request a variance from the Town's Board of Zoning Appeals to facilitate the required grading.
- Applicable erosion and sedimentation control guidelines will be observed during construction of the proposed project in order to minimize impacts. In accordance with the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) Program, coverage under the General Permit for Stormwater Discharges from Construction Activities (NYSDEC Permit No. GP-0-010-001) will be obtained prior to the initiation of construction activities. Prior to filing for coverage under the General Permit, the New York State Department of Environmental Conservation (NYSDEC) requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the parcel, including a detailed erosion and sediment control plan, to manage stormwater generated on-site during construction activities, and for post-construction stormwater management.

<u>Topography Mitigation</u>

- Required fill will be generated from site grading activities to the maximum extent possible, to reduce import of soil to the site.
- Construction access areas will be stabilized with stone and installed with rumble strips to knock off dirt before trucks enter adjoining roadways.
- A water truck will be available on-site when needed during construction activities to wet excessively dry soils.
- Site grading of exposed soil surfaces will not occur during time periods when winds exceed 20 miles per hour.
- Measures to be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) and anticipated to be taken during the construction period which will minimize the potential for erosion include, but are not limited to 1) use of groundcovers; 2) minimize the time span that denuded soil is exposed to erosive elements; 3) use of drainage diversions; 4) use of soil traps; and 5) drainage structure inlet protection.

<u>Vegetation and Wildlife Impacts</u>

- A total of 30.34 acres of natural vegetation are proposed to be retained, which will include 21.68 acres of Successional Southern Hardwood forest, 1.33 acres of Red Maple Hardwood Swamp and 7.33 acres of Coastal Oak-Hickory forest.

- The site will continue to provide some natural habitat for wildlife, though the removal of the existing woodland vegetation on the property is expected to result in a change in the characteristics of site habitat.
- It is anticipated that the entirety of the ±5-acre site will be cleared for the installation of the leaching field and as a result the existing Successional Southern Hardwood forest on this parcel (±4.43 acres) will be removed. Once all the effluent leaching pools are installed, the area will be re-seeded with a native, low maintenance seed mix.
- Any improvements proposed within 100 feet of a New York State Department of Environmental Conservation (NYSDEC) regulated freshwater wetland boundary will require a permit prior to development activities.
- In the short term, lands adjacent to the property will experience an increase in the abundance of some wildlife populations due to displacement of individuals by the construction phase of the proposed project. Mobile species and particularly large mammals such as fox and deer would be expected to find suitable habitat south of the site where larger areas of natural open space currently remain. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding lands would be expected to result in a net decrease in population size for most species. While a significant portion (62.63%) of the existing habitat will remain, site specific populations may decrease from the loss of interior woodland habitat/fragmentation of large contiguous areas which certain species prefer. It is anticipated that species that prefer edge habitats will be prevalent within the proposed development.
- No rare or endangered wildlife species are expected on the site given the habitats present. The coopers hawk, sharp-shinned hawk, marbled salamander, Eastern box turtle, and eastern spadefoot toad are the only species potentially expected on site which are listed as special concern species. Although there is documented concern about their welfare in New York State, these species receive no additional legal protection under Environmental Conservation Law (ECL) Section 11-0535.

<u>Vegetation and Wildlife Mitigation</u>

- Native plant species that provide food and shelter to wildlife will be utilized in some of the landscaped areas.
- Disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- The ±5-acre effluent leaching parcel will be re-seeded with a native grasses mix once installation of the leaching field is complete. Fertilizers will not be utilized within the re-seeded ±5-acre effluent leaching parcel.
- No known invasive plant species will be utilized, including those species specifically listed in Resolution 614-2007 enacted by the Suffolk County Legislature.

<u>Groundwater and Surface Water Resource Impacts</u>

- Based on the site quantities presented for the proposed project it is anticipated that a total of 46.64 MGY of water will be recharged on the subject site. This represents a 70.91% increase in recharge generated on the property, as compared with the existing recharge volume.
- Stormwater will be handled by a drainage system that will recharge at point of generation as well as provide pickup systems to convey stormwater to a leaching pool network placed across the property, outside required buffer areas.
- Sanitary effluent will be conveyed to the Kings Park Sewage Treatment Plant for treatment and treated effluent is proposed to be recharged on the 5-acre parcel proposed for transfer to Suffolk County Department of Public Works.

- The proposed project will utilize an on-site drainage system that will be designed to collect all stormwater runoff originating on developed surfaces and convey excess recharge to the subsurface for disposal. The overall system will be capable of accommodating a minimum 3-inch rain storm event, as identified in the "site plan requirements for commercial and industrial sites" included in the Board of Site Plan Review Application Checklist.

Groundwater and Surface Water Resource Mitigation

- Use of the existing Kings Park Sewage Treatment Plant (STP), which will be subject to the review and approval of the Suffolk County Department of Health Services (SCDHS), Suffolk County Department of Public Works (SCDPW), Suffolk County Sewer Agency (SCSA) and New York State Department of Environmental Conservation (NYSDEC), will ensure that groundwater quality will be protected from impact via treated sanitary effluent recharge; nitrogen in effluent from the sewage treatment plant will be limited to 10 mg/l or less.
- Potential groundwater quality impacts from nitrogen-bearing fertilizers will be minimized by limiting both the rate of fertilizer use and the acreage of fertilizer-dependent landscaping.
- It should be further noted that a subsurface parking garage is proposed in an area where perched water is noted to be present at approximately 10 feet below ground surface. To mitigate concerns related to water intrusion, a perimeter foundation drain will be provided in the parking garage to alleviate potential infiltration issues related to perched water and foundation walls will be appropriately water proofed using acceptable methods and techniques. Further drainage details will be completed during the design phase of the project and will be subject to appropriate agency review and approval.
- The on-site drainage system will be designed to ensure that overland flow of runoff from newly developed areas to on-site wetlands located on the property will not occur. In addition, the extensive buffer areas around this wetland will allow it to continue to receive runoff from natural lands within its contributing area, maintaining the current hydrologic properties of this system.
- Adherence to the proposed Stormwater Pollution Prevention Plan (SWPPP) (to be prepared for the State Pollution Discharge Elimination System (SPDES) GP-0-10-001 permit, and which would include an erosion control plan) would ensure that stormwater generated during the construction period is controlled, and that erosion and its associated impacts is minimized.
- There are an estimated 10 to 48 feet of vertical separation between the surface and true underlying water table. This distance is expected to be more than sufficient to ensure adequate levels of attenuation and decay of contaminants in stormwater runoff, which would protect groundwater quality.
- The wetland does not reflect the elevation of the regional water table, but is the result of accumulated silts and organic material, as well as the underlying sudbury soil type. The recharge on the remainder of the site will percolate vertically downward, to the regional groundwater table. Specifically, the remaining natural areas of the overall site, comprising a total of 31.12 acres (or 62.63%) will continue to act as natural drainage areas recharging and evapotranspiring precipitation. As a result the proposed project is not expected to adversely impact surface water or drainage resources associated with the project site.
- The use of a road deicer other than chloride (road salt) can mitigate groundwater impacts, and subsequent impacts to surface water quality, in the on-site pond. One such type of product contains calcium magnesium acetate (CMA), and is considered far less corrosive than conventional road deicers. Calcium magnesium acetate (CMA)-based deicers are used by a number of state and local transportation agencies throughout North America. Use of other deicer products would be considered by the applicant to compare the effectiveness and cost before a final determination is made.

Transportation Impacts

- The proposed Continuing Care Retirement Community (CCRC) development is projected to generate 49 trips during the AM peak hour (32 entering, 17 exiting), 58 trips during the PM peak hour (28 entering, 30 exiting) and 78 trips during the Saturday midday peak hour (42 entering, 36 exiting).
- The permitted use (21 single family homes) under the current zoning is projected to generate 24 trips during the AM peak hour (6 entering, 18 exiting), 26 trips during the PM peak hour (16 entering, 10 exiting) and 28 trips during the Saturday midday peak hour (15 entering, 13 exiting).
- The results of the capacity analyses showed that during the No Build Conditions all the signalized intersections studied operate at overall LOS C or better during the weekday AM, weekday PM and Saturday midday peak hours with all the movements operating at LOS D or better except for the westbound left turn movement at the intersection of NYS Route 25A and Pulaski Road that operates at LOS E during the Saturday midday peak hour. With the construction of the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1), the signalized intersections are expected to continue to operate at No Build conditions with minor or no increases in delay. Therefore, the construction of the proposed Continuing Care Retirement Community (CCRC) development is not expected to significantly impact the operation of the signalized intersections and roadways in the study area. The results of the analyses conducted for permitted use under current zoning (21 single family homes) are similar to those of the proposed Continuing Care Retirement Community (CCRC).
- The results of the capacity analyses showed that during the No Build Conditions all the unsignalized intersections studied operate at LOS B or better during the weekday AM, weekday PM and Saturday midday peak hours. With the construction of the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1), the unsignalized intersections including the proposed site driveways are expected to continue to operate at LOS B or better. Therefore, the construction of the proposed Continuing Care Retirement Community (CCRC) development is not expected to significantly impact the operation of the intersections and roadways in the study area. The results of the analyses conducted for permitted use under current zoning (21 single family homes) are similar to those of the proposed Continuing Care Retirement Community (CCRC).

Transportation Mitigation

- The Traffic Impact Study did not identify any significant impacts associated with the proposed project. Accordingly, no mitigation is proposed.

Community Services Impacts

- The proposed project involves the development of a Continuing Care Retirement Community (CCRC). Such a community is age-restricted, and will not create additional school-aged children to the Kings Park Central School District (CSD).
- The proposed project will incrementally increase the potential need for the protective services of the Suffolk County Police Department (SCPD) for the subject site. However, based on the size, experience level and staffing of its facilities, this increase in the potential need for services is not anticipated to be to a level which would cause a significant impact on the ability of the Suffolk County Police Department (SCPD) to provide such services.
- Correspondence from the Fire District requests the opportunity to review all site and building plans prior to approval in order to have their requirements, such as vehicle access, turning ratio of apparatus, type of building construction, fire protection systems, complex access, fire alarm

control panel locations and functionality, smoke detection and carbon monoxide detection, included in the development.

- It is anticipated that the 287 residents would generate a total of 1,004.5 lbs/day of solid waste based on an average of 3.5 lb/day per capita.
- The project will utilize public water to be supplied by the Suffolk County Water Authority (SCWA) via an extension to the existing 12-inch water main beneath St. Johnland Road. The total water requirement of the project of approximately 41,519 gpd is not anticipated to impact the ability of the Suffolk County Water Authority (SCWA) to serve the subject site and existing customers.
- The proposed project provides on-site recreational amenities for the residents that will occupy the site. It is also noted that there are many active and passive recreational opportunities throughout the area of the subject site including: State Lands associated with Nissequogue River State Park, Sunken Meadow State Park (and golf course), Harrison Pond Town Park, Landing Avenue Park and Arthur H. Kunz County Park.

<u>Community Services Mitigation</u>

- Adherence to the New York State Fire and Building Codes will increase the level of safety from fires. In addition, use of fire/smoke alarms will assist in minimizing the incremental increase in the potential need for fire protective services.
- Streets, sidewalk, recreation and common areas will be maintained privately.
- Water and energy resources will be conserved through water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.
- Significant amenities will reduce reliance on public recreational amenities.

<u>Economic Impacts</u>

- The construction period is projected to represent a total of approximately $103.6 million in investment.
- The $103.6 million in direct output is projected to generate an indirect impact of approximately $31.4 million, and an induced impact of over $41.2 million, bringing the total economic impact on output to over $176.2 million during the construction period. This represents the entire economic benefit to the community, resulting from construction output.
- During the construction period, direct employment refers to the number of short-term jobs necessary to build the Continuing Care Retirement Community (CCRC). It is projected that the construction period will necessitate 456.1 full time equivalent (FTE) employees.
- Direct employment creates additional opportunities for job creation throughout other sectors of the economy through expenditures derived from labor income and output. The 456.1 FTE jobs created during the construction period will have an indirect impact of 231.1 FTE employees and an induced impact of 295.5 FTE employees in other industry sectors, bringing the total impact of construction to 982.8 FTE jobs during the construction period. This represents the entire economic benefit to the community, resulting from construction employment.

<u>Economic Mitigation</u>

- Neither the economic impact analysis nor the Residential Market Analysis identified any impacts associated with the proposed project. Accordingly, no mitigation is proposed.

Land Use, Zoning and Town Plan Update Impacts

- The proposed project will change the land use classification of the site from its current vacant status to senior residential use. However, in consideration of the existing mix, presence and pattern of institutional, public recreational, residential and commercial uses in the area (particularly with respect to the proximity of the adjacent nursing home use, which is complementary to that of the proposed project), and commercial uses are found to the south along the NYS Route 25A corridor in Kings Park hamlet center, this change would not necessarily represent a significant or adverse land use impact.
- The proposed project would change the zoning of the site, from R-43 to RC-Retirement Community. As the Town Zoning Code would be amended at the same time to provide for the Continuing Care Retirement Community (CCRC) use (as a Special Exception in the RC-Retirement Community district), the project would represent the first use of this amendment in the Town. In this respect, the project will result in an impact to zoning with respect to the pattern of zoning in the area as well as from the implementation of the CCRC amendment.
- The proposed project will generally conform to the Continuing Care Retirement Community (CCRC) dimensional requirements though six variances would be required.
- The proposed project does not include a nursing home; such a facility is found on the north side of St. Johnland Road, opposite the subject site and under the same ownership. As required by NYS law, the types of senior residential facility included in the proposed project must be associated with and proximate to a nursing home. As experience indicates that nursing homes are popular in the Town, it is expected that the proposed project would be well-occupied.
- The project will address the insufficiency of diverse housing types, by providing three types of senior residential development: townhouses, independent living units and assisted living units. This would have the effect of alleviating the paucity of such housing opportunities as well as the associated out-migration of seniors due to this absence of desired housing.

Land Use, Zoning and Town Plan Update Mitigation

- The proposed project represents a use that would complement the nursing home use located opposite, on the north side of St. Johnland Road, as well as the public recreational and vacant institutional uses that dominate the area (i.e., Sunken Meadow State Park, Nissequogue River State Park, the Town Parks and Kings Park Psychiatric Hospital).
- The nature of the project would provide a substantial number of seniors having a continuum of consumer needs that would increase the customer bases of the commercial sites in the Kings Park hamlet center.
- The project will not impact the freshwater wetland/buffer area that occupies 2.11 acres of the property's north-central area.
- The project will permanently preserve and protect an additional 29.01 acres of wooded land on the site.
- The project would conform to the applicable aspects of the Town Plan Update.
- The project would help mitigate the unfulfilled need for a variety of housing options in the Town, which is a goal of the Town Plan Update.

Air Quality and Noise Impacts

- A short-term increase in noise level and dust can be expected as a result of dust in the area. Potential adverse air quality impacts during construction may occur due to dust raised by truck movement, clearing/grading operations and from truck and construction equipment emissions. During this period, dust and particulate matter from the project site may be released into the air and carried off-site by wind. These increases in construction-related dust will be temporary.

- Noise is regulated by Chapter 207 of the Town Code. Pursuant to the Town Code, the sound levels generated by a commercial property as received by a residential property may not exceed 55 dBA between 7 AM and 10 PM and 45 dBA between 10 PM and 7 AM.
- Potential sources of noise that may be associated with the proposed development include short term construction noise and long term noise related to on-site vehicle use, additional traffic on area roadways, sound generated by residents, employees and visitors, maintenance of property (snow removal, landscape maintenance), and truck traffic (solid waste removal and deliveries).
- The project design provides significant buffers, separating the proposed development from existing residences and roads. A 200 foot buffer is proposed around the north, east, and west sides of the property. To the south along Old Dock Road a buffer of 100 feet is proposed.

Air Quality and Noise Mitigation

- Potential noise impacts will be mitigated by ensuring that construction and operation comply with the Town of Smithtown noise code which specifies maximum permissible sound pressure levels.
- Construction activities will be limited to weekdays between the hours of 7 AM and 6 PM on weekdays (not on legal holidays) to minimize the impacts of construction noise.
- Noise dampening practices will be utilized during construction to minimize the impact on surrounding areas including keeping all mechanical construction equipment maintained in good working order to minimize noise levels.
- Long-term impacts related to noise will predominantly result from the residential activities on the site that occur periodically and are a factor of any development, such as garbage removal, which typically occurs in early morning.

Visual Resource Impacts

- As depicted in photographic simulations prepared for the proposed development, existing views from Location 1 are comprised of vacant wooded land and a cleared area associated with the former internal roadway. The simulated view of the proposed project from Location 1 illustrates an increase in clearing within the subject site, and the visibility of the proposed structures and landscaping within the site. The proposed access roadway is the most prominent feature in this view, as it is located closest to Old Dock Road. Although the proposed structures will be visible from this vantage point, they will be partially screened by existing natural vegetation to remain on the subject site (minimum of 100 feet along Old Dock Road) and landscaping proposed around the proposed structures.
- Similar to views from Location 1, existing views from Location 2 are comprised of vacant wooded land. The simulated view from this location depicts the proposed site access point from St. Johnland Road as the most prominent feature, and the proposed structures within the site visible in the background. As with the simulated views from Location 1, views of the proposed structures from Location 2 will be partially screened by existing natural vegetation to remain (minimum of 200 feet along St. Johnland Road).
- The most prominent features in views from Location 3 are the existing single family residential structures. As illustrated in the simulated view, the single family residences will remain the most prominent feature from this Location, with the proposed structures visible in the background. As with views from Locations 1 and 2, the majority of the proposed structures will be screened from view as a result of the intervening vegetation to remain on site (minimum of 200 feet along the western property boundary). It is anticipated that the structures will be minimally visible from all three Locations during the summer months when all vegetation is in full bloom.
- In general, the impact of the project on the visual resources of the site will be an increase in the visibility of the proposed buildings located in the interior portion of the site, primarily for

observers traversing Old Dock Road and St. Johnland Road. Viewers from the residential development to the west will have views of the proposed development, although these views will be limited. As the majority of the proposed development is located within the interior portion of the site, and significant areas of existing vegetation will remain around the perimeter of the proposed development, it is anticipated that very limited views of the proposed development will be visible during the summer months. During winter months, the buildings will be more visible through the unvegetated trees. As noted, the buildings are "set back" within the site, thus reducing mass and apparent size.

- The proposed use is not in stark contrast with uses in the area including the existing nursing home, Kings Park Psychiatric Center buildings and residences. The site does contain open space associated with Nissequogue River State Park and holdings of New York State as well as public lands in the Nissequogue River corridor. These public lands will remain. The proposed project provides a transitional use between the nursing home to the north and single family homes to the west, and in part adjoins significant building structures associated with Kings Park Psychiatric Center. The project represents a change in the visual character of the area, but not necessarily a significant adverse change that would cause visual impacts. As a result, visual impacts due to the proposed development are anticipated to be minimal.

<u>Visual Resource Mitigation</u>

- Visibility of the site from all vantage points will be mitigated through the provision of a wooded vegetative buffer along the perimeter of the property (with the exception of the proposed site access locations).
- On site landscaping will serve to enhance the views of the proposed development and will provide some screening of the proposed structures.

<u>Cultural Resource Impacts</u>

- The Phase I Archeological Survey has revealed that the study area had a higher than average potential for the recovery of prehistoric sites and for historic sites. This was based upon environmental characteristics, proximity to prehistoric and historic sites, Indian trails, and European-American structures. The field testing included the excavation of 432 shovel tests. No prehistoric artifacts or features were encountered. No historic artifacts or features were encountered. Twentieth century debris, slate platformlike structure and associated building depressions and roads were encountered. No further work is recommended.
- A Letter of No Impact was received from State Historic Preservation Office dated May 3, 2011 which indicates that the proposed project will have no impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places.

<u>Cultural Resource Mitigation</u>

- The Phase I Archaeological Survey on the site recommends that no further work be performed and, therefore, no impact to such resources will occur. Accordingly, no mitigation is proposed.

Anticipated Cumulative Impacts

A cumulative impact analysis of the proposed zoning amendment within the Town of Smithtown's Zoning Ordinance to include Continuing Care Retirement Community (CCRC) as a Special Exception use was conducted. The analysis identified several sites out of the total of seventeen (17) potentially eligible sites that may be suitable for Continuing Care Retirement Community (CCRC) use. These are listed and summarized in terms of their potential for Continuing Care Retirement Community (CCRC) use as follows:

- ID No. 4 – golf driving range, area of fill, potentially compatible for CCRC development
- ID No. 6 – Kings Park Psychiatric Center, will be subject to community input; proximate to St. Johnland, potential for CCRC development but not likely
- ID No. 7 – adjoins St. Catherine of Siena Medical Center, potentially compatible for CCRC development but not likely
- ID No. 9 – Borella's nursery since 1954, potentially compatible for CCRC development but not likely
- ID No. 10 – Gyrodyne/Flowerfield, existing businesses, potentially compatible for CCRC development but not pursued
- ID No. 15a – vacant site with natural and human resource constraints and not compatible for CCRC development; CCRC development not likely
- ID No. 15b – vacant site with prior RC zoning approval, potentially compatible for CCRC development

The analysis provides a basis for the following findings:

- Out of seventeen (17) potentially eligible sites Town-wide, there appear to be at most seven (7) sites that could potentially be used for Continuing Care Retirement Community (CCRC); however, of these, five (5) are not likely or not pursued in connection with prior land use plans.
- Land use conversion of an existing use could take place; however, if land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources.
- Any future use would be subject to change of zone to Retirement Community (RC) and review by the Town Board.
- Any future use would be subject to Continuing Care Retirement Community (CCRC) Special Exception review by the Town Board and would have to meet the criteria and dimensional requirements or obtain relief.
- Any future use would be subject to the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues.
- Any future use would be subject to Town Code Chapter 322, §322-19, Environmentally Sensitive Lands and protection of site resources as well as Chapter 153 for stormwater management.

The analysis demonstrates that the St. Johnland site is not the only eligible site for Retirement Community (RC) zoning and Continuing Care Retirement Community (CCRC) use in the Town of Smithtown. The analysis shows that there are very limited cumulative impacts associated with the creation of the Continuing Care Retirement Community (CCRC) Special Exception under the Retirement Community (RC) zone, based on the criteria contained in the proposed Code revision, the dispersed and limited nature of potentially eligible sites, the preliminary environmental resource analysis of potentially eligible sites contained herein, the State Environmental Quality Review Act (SEQRA) process and conformance to land use and environmental regulations that would be required for use of one of these sites as a Continuing Care Retirement Community (CCRC). The analysis further supports a finding that environmental review would address social, environmental and economic factors, and would ensure balanced decision-making with respect to any potential Continuing Care Retirement Community (CCRC) use in the Town.

Alternatives Considered

- Alternative 1: No Action - assumes that the subject site and the ±5-acre Nursing Center site remain in their current uses and conditions.
- Alternative 2: As-of-Right Development at Existing Zoning - this scenario assumes that the subject site is developed according to its current Residence-43 zoning; sanitary wastewater would be handled in individual on-lot septic systems. The ±5-acre Nursing Center site would remain in its present use and condition.
- Alternative 3: Development Conforming to Continuing Care Retirement Community Special Exception Requirements (assumes no height or gross floor area variances are requested, and all parking is at grade). This Alternative would require two variances for minor disturbances of environmentally sensitive lands. Sanitary wastewater would be conveyed to the Kings Park Sewage Treatment Plant, and treated effluent would be discharged to the ±5-acre Nursing Center site to be transferred to the Suffolk County Department of Public Works.
- Alternative 4: Development per the Retirement Community District - assumes the subject site is rezoned to the Retirement Community district without the Continuing Care Retirement Community Special Exception, and is developed with age restricted apartments. Sanitary wastewater would be conveyed to the Kings Park Sewage Treatment Plant, and treated effluent would be discharged to the ±5-acre Nursing Center site to be transferred to the Suffolk County Department of Public Works.
- Alternative 5: Proposed Project, with Alternative Wastewater Treatment - assumes development of the proposed project, but utilizing a new sewage treatment plant, to be built on the adjacent ±5-acre St. Johnland Nursing Center property to the north, which is also owned by the applicant.

SECTION 1.0

OVERVIEW OF THE PROPOSED PROJECTS

1.0 OVERVIEW OF THE PROPOSED PROJECTS

This document is a Draft Environmental Impact Statement (DEIS) for a proposed zoning amendment within the Town of Smithtown's Zoning Ordinance to create a new Special Exception for Continuing Care Retirement Community (CCRC) within the Town Zoning Code Retirement Community (RC) zone, as well as a proposed change of zone application to place a specific project site, known as **The Uplands at St. Johnland**, within the RC zone so that a Special Exception for Continuing Care Retirement Community (CCRC) can be considered for development of The Uplands at St. Johnland property (hereafter, the "proposed project"). The Draft Environmental Impact Statement (DEIS) will assess the potential environmental impacts of the proposed zoning amendment, as well as the site specific change of zone request for The Uplands at St. Johnland property.

The Uplands at St. Johnland site specific change of zone application is located at the southwestern corner of the intersection of St. Johnland Road and Old Dock Road, Kings Park, Town of Smithtown, County of Suffolk, New York (hereafter "proposed project site" or "subject property"). The proposed project site occupies 49.69 acres of vacant land south of the St. Johnland Nursing Center. The application also considers the partitioning of a ±5-acre portion of the St. Johnland Nursing Center property (located northwest of the proposed project site) to allow for the transfer of this five acres to the Suffolk County Department of Public Works (SCDPW) for the purpose of discharging treated sanitary effluent from the Kings Park Sewage Treatment Plant (STP). According to a letter from the Suffolk County Department of Public Works (SCDPW) (see **Appendix G-3**), the use of ±5-acre parcel will allow the Kings Park Sewage Treatment Plant (STP) to process the full treatment capacity of the plant, while maintaining compliance with the permit restrictions set forth by the Long Island Sound Study. The Kings Park Sewage Treatment Plant (STP) currently serves projects in the area (including the St. Johnland Nursing Center) and discharges treated effluent to the Long Island Sound. The transfer of the five acres will allow the Kings Park Sewage Treatment Plant (STP) to divert their current surface water discharge to an inland groundwater recharge system on the ±5-acre parcel, and will provide availability for the proposed Uplands at St. Johnland Continuing Care Retirement Community project to connect to the Kings Park Sewage Treatment Plant (STP) (see Suffolk County Department of Public Works letter in **Appendix G-3**). A change of zone is not needed or requested for the ±5-acre parcel.

This Draft Environmental Impact Statement (DEIS) describes the proposed project site, catalogues the proposed project site and area resources, discusses potential environmental impacts of the zoning amendment and proposed development for the site specific change of zone application, including use of ±5-acres of the nursing home property for discharge capacity for the Kings Park Sewage Treatment Plant (STP), presents measures to mitigate adverse impacts, and examines alternatives to the proposed site specific Uplands at St. Johnland project. **Figure 1-1** provides a location map of the proposed project site in relation to adjacent and local roadways *(all figures are located in the section following the main text of this document. It should be noted that all applicable figures related to the site specific change of zone application illustrate the location of the 49.69-acre proposed project site as well as the ±5-acre property proposed for transfer to the Suffolk County Department of Public Works (SCDPW)).* The **Master Development Plan,** prepared by VHB Engineering, Surveying & Landscape Architecture, PC,

(attached hereto in a pouch at the end of this document) presents the proposed development plan for the site specific change of zone application for the 49.69 acre proposed project site. The applicant is the Society of St. Johnland. A petition for the Change of Zone was submitted to the Town of Smithtown ("Town") Town Board in 2007 (see **Appendix A-3**). The analysis of potential significant environmental impacts of the site specific change of zone application for The Uplands at St. Johnland is provided in **Sections 2.0 through 6.0** of this document.

The change of zone request for the 49.69 acre proposed project site involves changing the existing Residence R-43 zoning to Retirement Community (RC) zoning and the authorization of a Special Exception use to allow for the development of a 199-unit Continuing Care Retirement Community (CCRC) consisting of 22 townhouse units, 153 independent living units and 24 assisted living units. The proposed Continuing Care Retirement Community (CCRC) development will provide housing and health care for residents 55 and older, in the form of a congregate housing community that maintains a program of health care and provides ancillary support and services designed to maximize the independence of residents as their age advances. As defined by the New York State Office for the Aging, New York State (NYS)-approved Continuing Care Retirement Communities (CCRCs) are defined as "housing and care complex restricted to seniors. It includes independent living units (apartments and/or cottages), social activities, meals, supportive assistance and personal care all on one campus. Nursing home care is also included and may be provided on or off-campus. Residents' housing and healthcare are covered under a life-care contract or under a long-term housing and health care contract. The Community's health-related and nursing care are licensed and regulated by the New York State Health Department, and the Community's financial status and pricing structure are overseen by the New York State Insurance Department.

This document will assist the Town Board (as lead agency under the NYS Environmental Quality Review Act, SEQRA) in rendering an informed decision on the amendment within the Town of Smithtown's Zoning Ordinance to create a new Special Exception for Continuing Care Retirement Community (CCRC) within the Town Zoning Code Retirement Community (RC) zone as well as The Uplands at St. Johnland application. Part 617, Title 6 of the New York Code of Rules and Regulations (6 NYCRR Part 617) regulates the review of environmental consequences of an action as promulgated under the State Environmental Quality Review Act (SEQRA). The Town Board is the Lead Agency for the proposed project, as the zoning amendment and change of zone application triggers the State Environmental Quality Review Act (SEQRA) process. The Town Board has determined that the proposed Uplands at St. Johnland project is a Type I Action pursuant to Chapter 151 of the Town Zoning Code and State Environmental Quality Review Act (SEQRA) Part 617. After assuming lead agency status, the Town Board issued a Positive Declaration on December 18, 2007 for the proposed Uplands at St. Johnland project, requiring the preparation of this Draft Environmental Impact Statement (DEIS) (see **Appendix A-1**). Furthermore, the Town Board issued a Positive Declaration on February 28, 2008 for the proposed Continuing Care Retirement Community (CCRC) zoning ordinance (see **Appendix A-2**).

The contents of this Draft Environmental Impact Statement (DEIS) addresses the items specified in both Positive Declarations, and has been prepared by Nelson, Pope & Voorhis, LLC on behalf of the Town Board of the Town of Smithtown to fully disclose potential impacts and mitigation

measures of the proposed development project and change to the zoning ordinance. Future stages of this review include: circulation of the document to involved agencies, parties of interest and the public during the review period; a public hearing on the Draft Environmental Impact Statement (DEIS); preparation of a Final Environmental Impact Statement (FEIS), which responds to agency and public comments received during the Draft Environmental Impact Statement (DEIS) review period; preparation and acceptance of the Findings Statement by the Lead Agency (including issues addressed by involved agencies), and the Town Board decision on the creation of the Continuing Care Retirement Community (CCRC) Special Exception zoning amendment and the Uplands at St. Johnland project site change of zone to Retirement Community (RC) and Special Exception.

1.1 Project Background, Need, Objectives and Benefits

1.1.1 Project Background

The Society of St. Johnland approached the Town of Smithtown to discuss the construction of a Continuing Care Retirement Community (CCRC) on the vacant parcel of land south of the existing St. Johnland Nursing Center. Currently, the Zoning Code of the Town of Smithtown includes Article VII, Retirement Community (RC) District, which permits limited uses intended to serve the elderly of the community. However, in response to the Society of St. Johnland's request as well as recognizing the need for continuing care for senior citizens, the Town has drafted a zoning amendment to revise the Code to permit Continuing Care Retirement Community (CCRC) as a Special Exception use in the Retirement Community (RC) District. As a result, the proposed development project as well as the zoning Code revisions will be reviewed simultaneously in this document. Further analysis of the proposed Code revision is provided in **Sections 1.2 and 1.3**, below (see pages 1-11 and 1-14, respectively).

The applicant for the site specific proposed project is the Society of St. Johnland. The St. Johnland Nursing Center is located north of the proposed project site, across St. Johnland Road. The St. Johnland community began 140 years ago by Dr. Muhlenberg, founder of St. Luke's Hospital in New York City. A community was created which consisted of industry and farming while supporting, educating and rehabilitating the young, old and in-need. The community was located on 500 acres in what is now Kings Park. In the 1950's, the leaders of the Society of St. Johnland began specializing in caring for the elderly and in 1979 the St. Johnland Nursing Center was built to provide services to seniors. St. Johnland has responded to the community's changing needs by adding services such as Alzheimer's and dementia care, a head trauma component, adult day care services and in-home services to serve the needs of the community at-large. Currently the St. Johnland Nursing Center employs more than 400 people and has maintained a consistent 100% occupancy. In 2007, the applicant submitted a Change of Zone application to the Town to establish a Continuing Care Retirement Community (CCRC) to further expand options for continuing care for the growing senior citizen population.

The zoning amendment within the Town of Smithtown's Zoning Ordinance as well as the Master Development Plan for a proposed change of zone application are the subject of this Draft Environmental Impact Statement (DEIS).

1.1.2 Public Need and Municipality Objectives

The proposed zoning amendment and site specific change of zone application are intended to assist in fulfilling a need for housing and continuing care for people over the age of 55. Continuing Care Retirement Communities provide individuals with various levels of care together on one campus-like setting so that residents can stay in the same community as their needs change.

Significant demand has been identified for senior housing, both nationally and on Long Island. Five trends fueling the demand for active adult housing include the following[1]:

1. the growth of seniors market in general;
2. the increased affluence of the youngest seniors;
3. the substantial equity built up by long-term homeowners;
4. the changing needs, tastes and lifestyles of an aging population, particularly the baby boom generation; and
5. the limited range of housing options available to this segment in the suburban communities where most live.

The need to preserve and create housing for older adults is becoming more important. High land prices, as well as older adults' declining mobility, health and resources have made it more difficult for many seniors to find housing that meets their various needs. Since the vast majority of older adults wish to remain in or near their current homes, added attention must be given to the housing stock so that people can age in-place[2].

This is recognized in the Town Code (§322-49), Declaration of Policy:

> The Town Board hereby finds that there is an increasing need by persons of or nearing retirement age for reasonably priced dwelling accommodations in planned separate residential areas which will be inhabited by persons similarly circumstanced and which have been specially designed and developed for such age group, located in close proximity to centralized activity centers, community facilities or medical centers. Dwellings designed for this age group shall be made available at a cost to the tenants below prevailing rental costs in the Town of Smithtown at the time of occupancy, which cost shall reflect any applicable government subsidy. At all times, first priority for occupancy shall be given to elderly residents of the Town of Smithtown and their families.

The site specific change of zone application (The Uplands at St. Johnland) was developed to provide a permanent integrated land use within the hamlet of Kings Park through the construction of 199 units of Continuing Care Retirement Community (CCRC) housing and services, including 22 townhouse units, 153 independent living units and 24 assisted living units. The proposed project will provide care facilities and residences that will afford current area residents opportunities to remain in the community (in proximity to family, friends and accustomed neighborhoods) that will be attractive to seniors. It is the applicant's objective to provide high quality housing to assist in meeting the demand for an aging population which allows residents to age in-place and provide adequate services as residents' needs change.

---

[1] Citizens' Housing and Planning Association, "Age Restricted Active Adult Housing in Massachusetts", June 2005.
[2] Howard County Senior Housing Master Plan, December 2004.

Three Continuing Care Retirement Communities (CCRCs) currently exist on Long Island: Peconic Landing in Greenport (249 units), Jefferson's Ferry in South Setauket (248 units), and the Amsterdam at Harborside which recently opened in Port Washington (229 units). Occupancy rates are high at the established communities, with 95% occupancy at Peconic Landing and 97% at Jefferson's Ferry.

A Residential Market Analysis was completed for The Uplands at St. Johnland project (see **Appendix B**). Key findings are noted below:

Target Market Area

- A target market area represents the current and future population residing within the community that would likely support a Continuing Care Retirement Community (CCRC) in Kings Park.
- For the purpose of this analysis, and since Continuing Care Retirement Communities (CCRCs) tend to be quite local in nature, the primary market area was identified as the five (5) western towns in Suffolk County, New York. This includes the towns of Babylon, Brookhaven, Huntington, Islip and Smithtown.
- The secondary market area is comprised of the five (5) eastern towns in Suffolk County, including the towns of East Hampton, Riverhead, Shelter Island, Southampton and Southold. In addition, the secondary market area includes Nassau, Bronx, Kings, New York, Queens, Richmond and Westchester counties in New York.
- The tertiary market area includes those residing beyond the metropolitan New York region that may move to Suffolk County for other reasons, including proximity to family and loved ones, relocation, and/or the excellent quality of life, among others, should a Continuing Care Retirement Community (CCRC) become available in Smithtown. This market segment includes Los Angeles County, California; Fairfield County, Connecticut; Broward, Miami-Dade, Orange and Palm Beach counties in Florida; and Bergen and Hudson counties in New Jersey.
- The secondary market area and tertiary market area were identified based upon an analysis of migration patterns as will be documented in greater detail in Section 4.0 [of the Residential Market Study].

Market Demand

- The population within the target market area has increased considerably since 1990. Current estimates and projections suggest continued growth, yet at a slower pace, through 2015.
- Reflective of the population trends, the number of households within the target market area has also increased significantly since 1990, and is projected to continue to increase slightly through 2015. The substantial growth indicates that additional residential development can likely be supported; as growth continues over the coming years, demand will further increase.
- There exists a substantial population aged 55 years and older in each market area.
- Seniors aged 55-64 years comprise the greatest portion of senior residents in each of the market areas. It is important to note that while the majority of persons aged 55-64 years may not currently consider moving into a Continuing Care Retirement Community (CCRC), it is likely that such housing may be demanded in the near future, as they begin to age over the coming years.
- The target market area has experienced a significant shift in population between 1990 and 2015, with the number of persons aged 55 years and older projected to increase significantly within each market segment. This is indicative of the aging of the population, which will continue to influence the type of housing demanded within the community.
- The median age within each market area has increased considerably between 2000 and 2010, and

on the whole, the median age is projected to continue to increase through 2015.

- When adjusted for annual inflation to represent 2010 dollars, median household incomes among households aged 55 years and older within the target market area have increased by 28.7% over the past ten years; it is projected that this trend will continue into 2015.
- There exist a substantial number of households within each market segment that constitute net worth of $500,000 or more.
- There are substantial differences between the median and the average values of net worth within the target market area. Such disparities between the median and average net worth indicates the likelihood of an income gap within the target market area, with a substantial number of households with greater levels of net worth.

Market Supply

- A total of three (3) Continuing Care Retirement Communities (CCRCs) have been identified as comparable senior housing communities that may serve as direct competition within the primary market area and throughout other parts of Long Island: Jefferson's Ferry (12 miles away), The Amsterdam at Harborside (27 miles away), and Peconic Landing (58 miles away).
- Combined, the three (3) communities are home to more than 700 residents.
- None of the existing comparable communities are located in the Town of Smithtown. Likewise, there are no comparable communities located in the nearby towns of Babylon, Huntington, nor Islip. This indicates that a Continuing Care Retirement Community (CCRC) in Kings Park would likely fulfill the unmet demand for those residing within the local community.
- All three (3) comparable communities were established over the past ten (10) years, with Jefferson's Ferry opening in 2001 and Peconic Landing in 2002. The Amsterdam at Harborside is the newest of the three (3) communities, having opened in 2010. The relative newness of these communities indicates the recent rise in demand for such senior housing alternatives in the Long Island market.
- On average, occupancy is very strong, with all of the comparable communities reporting little or no vacancy. Minimal vacancies within the target market area are an indication of a strong market for additional assisted living communities.
- Reflective of varying types and sizes of units, as well as the location of each community, entrance fees, monthly fees, and second person fees among comparable senior communities vary.
- All of the comparable Continuing Care Retirement Communities (CCRCs) have similar traits and characteristics, which are reflected in the provision of amenities, services and programs to residents.

Market Absorption

- A total of over 1.3 million households in the target market area are age- and income-qualified, with net worth of $500,000 or more. This equates to a total of approximately 2.3 million age- and income-qualified persons in the target market area.
- When the (approximate) 700 residents of the existing CCRCs in the local market are examined, this narrows the potential pool of residents of a new Continuing Care Retirement Community (CCRC) to 2,288,822 persons within the target market area.
- Approximately 0.97% of persons aged 55 years and older demand residency within Continuing Care Retirement Communities (CCRCs) in the United States. When applying the 0.97% capture rate to the number of qualified persons within each market area, this equates to 1,596 qualified persons in the primary market area, 8,636 persons in the secondary market area, and 11,969 persons in the tertiary market area. This results in a total number of qualified persons who are likely to demand residency within a Continuing Care Retirement Community (CCRC) to 22,202 persons.
- Approximately 67.6% of qualified residents would be drawn from the primary market area,

30.6% of residents would be drawn from the secondary market area, and 1.8% would come from the tertiary market area. This results in a potential pool of 2,360 residents for a Continuing Care Retirement Community (CCRC) in Kings Park.

- A conservative estimate assumes that a new Continuing Care Retirement Community (CCRC) will be able to capture between 15 and 20% of the demand, which results in between 354 and 472 residents.
- A Continuing Care Retirement Community (CCRC) in Kings Park has the opportunity to serve a documented need by providing housing and services to a growing segment of the Town's population.
- The primary market area and specifically this part of the Town of Smithtown can support a Continuing Care Retirement Community (CCRC) as intended. Moreover, there remains significant excess demand that could be absorbed in the surrounding communities and throughout Suffolk County.
- Such excess demand has the potential to be fulfilled within other sites in Smithtown that have been deemed as potentially developable and suitable for additional Continuing Care Retirement Communities (CCRCs) within the Town, as identified in the Supplemental Cumulative Impact Analysis, in **Section 1.3** (see page 1-14).

1.1.3 Benefits of the Projects

The adoption of the Continuing Care Retirement Community (CCRC) Special Exception addition to the Retirement Community (RC) section of the Zoning Code will create a zoning mechanism that would permit Continuing Care Retirement Communities (CCRCs) to be established in locations which meet the criteria, subject to the Special Exception. This addresses a documented need as established in the previous section. Potential Town-wide and cumulative impacts related to the addition of this provision to the Town Zoning Code are addressed in **Section 1.3** (see page 1-14), which provides an analysis of other locations in the Town that meet the 25-acre minimum lot size criterion of the Continuing Care Retirement Community (CCRC) Special Exception.

The proposed Continuing Care Retirement Community zoning will introduce a new type of use to the Town of Smithtown and will provide both the local community as well as Long Island as a whole, with a type of use that is both in high demand and in low supply. As determined in the Residential Market Analysis previously mentioned, the established Continuing Care Retirement Communities (CCRCs) on Long Island experience consistently high occupancy rates.

The benefits of the proposed site specific change of zone application (The Uplands at St. Johnland) include establishing the Town's first Continuing Care Retirement Community on a property that is adequately sized to ensure the retention of significant natural buffers. Two-hundred foot buffers are provided along the north, west and east property boundaries and a 100-foot buffer is provided along the southern property boundary (adjacent to the Kings Park Psychiatric Center). The planned development intends to ultimately provide approximately 62.63% of naturally vegetated and pond area which is part of the overall pond/wetland area designated SJ-18 by the New York State Department of Environmental Conservation (NYSDEC). The project will be privately owned and maintained with security services, and will

be built in conformance with modern building construction standards, thereby minimizing impact to other service providers.

The proposed development project is projected to generate 287 residents made up of an estimated 1.5 persons per unit for the townhouse and independent living units and one person per unit for the assisted living units. Comparatively, the industry standard for planning purposes for Continuing Care Retirement Communities (CCRCs) is 1.35 for dual occupancy apartments. Actual occupancy for similar Continuing Care Retirement Community (CCRC) developments include 1.22 persons per unit at Canterbury Woods in Williamsville, NY and 1.31 persons per unit at Peconic Landing in Greenport, NY. Developers of these types of uses find that second bedrooms are often purchased by single occupants as an office, spare bedroom for visiting family members or for a caregiver when required, or simply for additional living space by the occupant[3]. The types of residences proposed would not have an impact on the Kings Park Central School District (CSD), as there would be no school-age children present and no increase in school district expenditures.

Based on analysis contained in **Section 4.2** (see page 4-7), according to the Town of Smithtown Receiver of Taxes and the Town of Smithtown Assessor's Office, the subject property is currently owned by a healthcare facility, and is exempt from paying property taxes. However, upon full build-out of the proposed project, the Town Assessor's Office assumes that the property will yield property taxes of approximately $1.29 million. A communication from the Town of Smithtown Assessor regarding the Town's assessment assumptions is provided in **Appendix M**.

The proposed project will generate both immediate and permanent employment opportunities for Town of Smithtown and area residents. During the construction period, opportunities for employment will offer both direct and indirect benefits for residents of the Town of Smithtown as well as for those residing throughout the region. It is projected that the 20-month construction period will generate 456 full-time equivalent (FTE[4]) employees during construction. During the operation of the development, long-term jobs will also offer both direct and indirect benefits to the hamlet of Kings Park, the Town of Smithtown, Suffolk County and the region as a whole. The proposed development is anticipated to generate 73.6 FTE employees during annual operations. The analysis of economic impacts is presented in **Section 4.3.2** (see page 4-16).

---

[3] Personal Communication interviews with respective development Chief Financial Officers (CFOs) (James Juliano, Canterbury Woods and Steve Carroll, Peconic Landing). Information provided in email dated November 2, 2011 from Dennis Wilhelm, Orion Development Advisors, LLC.

[4] According to the Bureau of Economic Analysis, "full-time equivalent (or FTE) employees equal the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis." The designation of FTE is an industry standard means to standardize the number of part-time and full-time employees so that they can be compared across the board. For example, an FTE of one (1) means that an employee works a total of 40 hours per week (or whatever the standard number of hours per work-week in a given occupation). If a company employs ten (10) part-time persons who each work 20 hours per week, this equates to five (5) FTE. This conversion allows for an accurate and clear projection as to the number of employees within a given location, and a benchmark in which to measure employment in other uses and/or locations.

A summary of benefits is provided as follows:

- The Uplands at St. Johnland is designed to provide an attractive, residential community for the senior population, addressing senior needs now and for the future, thereby providing additional housing and level of care options for the Town's seniors.
- The proposed project will provide 24 assisted living units for occupancy by aged persons as well as 153 independent living units and 22 townhome units for senior residents, all of which are desired uses in the Town and region.
- Since the proposed project is age-restricted, it will not generate any school-aged children. Therefore, the proposed project will not impact the Kings Park Central School District (CSD) in terms of an increased enrollment.
- There is no anticipated impact on maintenance services as the site will be privately maintained, and minimal community service impacts are expected given the levels of health care provided by the proposed project and the existing St. Johnland Nursing Center.
- The proposed project will generate approximately $1.29 million in property tax revenues, to be distributed to the Town, County, School District, and other local taxing jurisdictions.
- Little to no traffic impact, as seniors travel off-peak and less frequently (see **Section 4.1.2**, page 4-3).
- Strong employment opportunities, including:
    - Estimated at 73.6 FTEs will be needed to assist in the operations of the community
    - A total of approximately 100 full-time and part-time positions
- The project will generate construction jobs and maintenance and operation jobs, thus providing a more immediate employment benefit to the community.

1.1.4 Longevity of the Continuing Care Retirement Community Use

Continuing Care Retirement Communities (CCRCs) in the State of New York are regulated by the State Department of Health, the Insurance Department and the Continuing Care Retirement Community Council under the provisions of Article 46 of the Public Health Law of the State of New York and Insurance Department regulations and, in the case of cooperatives, by the State Attorney General's Office under the provision of the Martin Act of the General Business Law. Applicable regulations from Article 46, including Sections 4605 Certificate of authority, and 4606 Initial disclosure statement, are provided in **Appendix F-1**. Prior to a Continuing Care Retirement Community (CCRC) being built, Article 46 requires a Certificate of Authority which requires the examination of financial and market feasibility, resident contracts, actuarial study and other project information. New York State recently adopted regulations affording protection to prospective occupants of senior residential communities. The regulations apply to senior residential communities organized as co-ops or condominiums and to those which require payment of substantial entry fees. These regulations require the filing of an offering plan with detailed disclosure of significant aspects of a senior residential community before the developer can market it to the public. The regulations aim to maintain and enhance the integrity of the industry by allowing senior citizens to make investment decisions armed with the necessary information, while facilitating the development of senior residential communities.

The New York State Department of Health has oversight responsibility for the certification and operation of both continuing care retirement communities and fee-for-service continuing care

retirement communities. According to the New York State Department of Health website[5], the following mechanisms have been established to keep continuing care retirement communities operational:

- Department of Health approval is required prior to any marketing of a proposed community. The Department reviews the character and competence of the sponsor, and monitors the programmatic and legal requirements for the Continuing Care Retirement Community (CCRC), including all organizational documents and resident contracts;
- Entrance fee deposits must be maintained in an escrow account in the resident's name;
- Construction of a Continuing Care Retirement Community (CCRC) cannot begin until at least 50% of the units have been pre-sold; occupancy of Continuing Care Retirement Community (CCRC) housing or other facilities cannot begin until at least 50% of the residential units have been pre-sold;
- Any changes in the Continuing Care Retirement Community (CCRC) that may affect residents, such as a change in the services offered by the community or a change in the community's operator, require Department of Health approval;
- The financial feasibility of a proposed Continuing Care Retirement Community (CCRC) is reviewed by the Department of Health;
- Continuing Care Retirement Communities (CCRC) that are based on an equity or cooperative model are also reviewed and monitored by the New York State Office of the Attorney General.

Because CCRC resident contracts include a health care guarantee, the New York State Department of Insurance plays a major role in the approval and on-going oversight of these communities.

- The Insurance Department must review and approve the proposed Disclosure Statement and Residency Agreement;
- The Insurance Department evaluates the financial feasibility of the proposed Continuing Care Retirement Community (CCRC);
- The Continuing Care Retirement Community (CCRC) must maintain financial reserves consistent with Insurance Department requirements;
- The Departments of Health and Insurance conduct joint periodic operational and financial reviews of the Continuing Care Retirement Community (CCRC).

In addition, Article 46 regulates ongoing operations after the community is open requiring the following:

- Annual Statement, including audited financial statements, prepared by an independent certified public accountant
- Minimum cash reserves of principal and interest payments and payment for taxes and insurance for 12 months, total estimated operating costs for up to 6 months, quantitative and qualitative standards set forth in regulations issued by the superintendent.

Underwriting requirements and covenants are generally set much higher than the state minimums. Underwriters require a significant amount of liquid reserves including working capital reserve fund, construction contingency, project contingency, operating reserve and debt

[5] http://www.health.ny.gov/facilities/long_term_care/retirement_communities/continuing_care/

service reserve fund. The level of regulation and reserves required for Continuing Care Retirement Communities (CCRCs) have been designed to ensure these facilities stay operational, making it unlikely the project would be converted to an alternative use. Supporting correspondence from Greenbrier Development, a leading developer of Continuing Care Retirement Communities (CCRCs) across the country, is provided in **Appendix F-2**.

1.2 CCRC Ordinance Review

1.2.1 Proposed Code Revisions

The Town of Smithtown is considering amending the Zoning Ordinance to introduce a Continuing Care Retirement Community (CCRC) as a Special Exception use under the existing Retirement Community (RC) zoning district. The proposed revisions define a Continuing Care Retirement Community (CCRC) as "a combination residential and institutional development for the elderly duly licensed by New York State as a continuing care retirement community." The proposed dimensional requirements in the draft code are as follows:

Table 1-1
CCRC DIMENSIONAL REQUIREMENTS

	Proposed Requirement
Minimum lot area	25 acres
Maximum building coverage	10%
Maximum gross floor area (GFA)	20%
Minimum buffer	200 feet
Maximum permitted density	5 dwelling units per acre [1]
Minimum building setback	200 feet
Maximum building height	35 feet, may increase to 50 feet with additional setback [2]
Parking requirement	2.5 spaces per dwelling unit

1. The Town Board may increase the density by 1 dwelling unit for every 4,000 SF of site preserved in its natural state in addition to the 200 foot buffer, up to a maximum of 6 dwelling units/acre.
2. For every 2 feet of additional setback, may increase building height by 1 foot, to a maximum height of 50 feet.

The Retirement Community (RC) zoning district has minimum requirements and design standards; however, the requirements of the Continuing Care Retirement Community (CCRC) use as a Special Exception would supersede the provisions in the Retirement Community (RC) district. A copy of the draft Code amendment is provided in **Appendix C-1**.

1.2.2 Review of Other Codes

Twelve Continuing Care Retirement Communities (CCRCs) are located in the State of New York. The municipal Zoning Codes for each respective Town containing a Continuing Care Retirement Community (CCRC) were reviewed to determine if there were any with Continuing

Care Retirement Community (CCRC)-specific zoning legislation; however, none of the municipalities in New York contained such legislation. In the absence of such resource, a more broad-ranging review was done to include the Town of Greenwich, CT; the City of Worcester, MA; the City of Snelville, GA and the Township of Princeton, NJ. This review of Continuing Care Retirement Community (CCRC)-specific municipal codes was conducted to determine other potential development controls for consideration and/or inclusion in the Town's draft ordinance. Four codes were selected as model ordinances, referred to as Sample 1 (CCRC Overlay Zone), Sample 2 (CCRC), Sample 3 (Continuous Care Campus District) and Sample 4 (CCRC). A table comparing dimensional requirements and design standards for the four sample codes to the draft ordinance is provided in **Appendix C-2**.

A summary of the findings of the comparison is provided herein. The different requirement categories vary between the examples as noted below:

1. Minimum Lot size: The sample codes vary between 5 acres and 50 acres, but average 28.75 acres, which is comparable to the draft minimum lot size requirement of 25 acres.
2. Density: Permitted density ranges greatly, including 5 units/acre, 10 units/acre and 35 units/acre. One of the sample codes provides an equation to determine the allowable density based on lot size and the minimum lot size permitted in the respective zoning district. The draft density of 5 units/acre (up to 6 units/acre if adequate natural area is preserved) fits within this range. Furthermore, the Smithtown proposed Continuing Care Retirement Community (CCRC) density appears to be appropriate for the Town of Smithtown based on the types of development and densities that currently exist within the Town.
3. Height: Permitted height in the sample codes range from 35 feet/3 stories to a maximum height of 5 stories. The draft maximum height of 35 feet/2½ stories up to a maximum of 50 feet if adequate buffer is provided appears to be appropriate and allows flexibility in design.
4. Setbacks: Required setbacks provided in the sample codes range greatly. The setbacks drafted for the Continuing Care Retirement Community (CCRC) use are appropriate in context with the intensity of a Continuing Care Retirement Community (CCRC) use, as well as the existing Retirement Community (RC) zoning district, and the other zoning districts that currently exist within the Town of Smithtown.
5. Coverage: Coverage requirements in the sample codes are comparable to the draft Continuing Care Retirement Community (CCRC) ordinance, and appear to be appropriate.
6. Parking: The sample codes require significantly less parking for a Continuing Care Retirement Community (CCRC) use than the Smithtown proposed Continuing Care Retirement Community (CCRC). The four sample codes require approximately one space per dwelling unit (1.1 spaces for Sample 3 and 1.4 spaces for Sample 4 for independent living units); however, Sample 4 also decreases the parking requirement as the type of dwelling unit gets more restrictive to the independence of its inhabitant, down to 0.35 spaces for nursing beds. In addition to required parking spaces per dwelling unit, Sample 4 has an additional parking requirement based on employees for maximum shift.
7. Age Requirements: The sample codes require a minimum age of 55 years or 62 years. The Retirement Community (RC) district requirement of 55 years of age or older (or 62 years of age if bonus density for affordable housing units in retirement communities is used) appears to be appropriate.
8. Recreation/Open Space: Two sample codes require a minimum area of open space for recreation. Sample 1 requires that 20% of the lot provide useable recreation area and Sample 2 requires a minimum of 25% of the site to be preserved as open space (of which 75% of the required open space must be maintained as natural vegetation).

9. Design Standards: Design standards allow the municipality in which the Continuing Care Retirement Community (CCRC) is located the flexibility to ensure that the use operates consistent with the intent and fits within the context of the surrounding area. The Smithtown draft Continuing Care Retirement Community (CCRC) does not identify any specific design standards. The Retirement Community (RC) district includes design standards; however, they may not apply to a Continuing Care Retirement Community (CCRC) Special Exception use.

As previously mentioned, three Continuing Care Retirement Communities (CCRCs) currently exist on Long Island: Peconic Landing in Greenport, Jefferson's Ferry in South Setauket, and the Amsterdam at Harborside which recently opened in Port Washington. The three Continuing Care Retirement Community (CCRC) developments are zoned Hamlet Density (HD) Residential in Southold, Planned Retirement Community (PRC) in Brookhaven and Residence AAA in North Hempstead, respectively. Copies of these zoning codes are included in **Appendix C-3**. A matrix comparing density, unit breakdown and other applicable development information for the three Long Island Continuing Care Retirement Communities (CCRCs) is provided in **Appendix C-4**.

1.2.3 Recommendations

The inclusion of the draft Continuing Care Retirement Community (CCRC) ordinance is beneficial to the Town and its residents. Some additions and/or revisions may assist in ensuring that potential Continuing Care Retirement Community (CCRC) developments are designed, built and function to the highest standards, as well as ensuring that such use fits appropriately within the context of the surrounding community. The Town may wish to consider decreasing the parking requirement or tailoring the parking requirement to vary for different units (i.e. more spaces for independent living units and fewer spaces for assisted living units) and/or require additional parking for staff. Review of other codes indicates the draft requirement of 2.5 spaces per unit is high and may result in an overdevelopment of impervious parking areas that would be better suited as open space.

The Town may also wish to consider adding specific design standards to the draft Continuing Care Retirement Community (CCRC) ordinance such as: a requirement for indoor common facilities (as well as size and type of facilities); requiring connectivity to public or private transportation to ensure that residents needs are met and are able to maintain independence for a longer period of time; and/or, a requirement for distribution of unit types (i.e. maximum number of townhouse independent living units, etc.) so as to make sure adequate units are available as residents' needs change. Providing design standards specific to a Continuing Care Retirement Community (CCRC) use is appropriate to ensure development that complies with the Town's goals and objectives of revising the zoning ordinance to include a Continuing Care Retirement Community (CCRC) use.

As currently drafted, there is ambiguity as to whether or not the minimum requirements and design standards in the Retirement Community (RC) district would apply to a Continuing Care Retirement Community (CCRC) development. For example, it may be prudent to specify the base height of 2½ stories or 35 feet, with the potential to go to 3 stories or 50 feet upon approval of the Town Board in consideration of community/neighborhood character, visual resources, fire

district equipment, site topography, environmental resources and site design. This would provide clarity and design flexibility in cases where it is appropriate. If it is the intent that the minimum requirements and design standards in the Retirement Community (RC) district would not apply to the Continuing Care Retirement Community (CCRC) Special Exception use, then it is suggested that language be added to the draft Code which explicitly states this. In conjunction with this revision, a minimum age requirement specific for a Continuing Care Retirement Community (CCRC) use could be added to the Continuing Care Retirement Community (CCRC) Special Exception section of the draft Code.

1.3 CCRC Zone Parcel Identification and Cumulative Impact Analysis

The potential cumulative impacts of the proposed addition of a Special Exception provision to the Retirement Community (RC) zone to allow for development of Continuing Care Retirement Community use are examined in the subsections below. The enactment of this zoning could have potential impacts with respect to other parcels in the Town which meet the size criteria, and therefore could be developed for Continuing Care Retirement Community (CCRC) under the Special Exception provision. The Town-wide implications of the proposed zoning amendment need to be understood to ensure that proper land use controls are incorporated into the proposed code amendment and that the new provision will not cause a significant adverse impact on a Town-wide basis by creating a precedent or facilitating the local/regional expansion of such facilities such that cumulative impacts could result. This section provides mapping and analysis of potentially eligible parcels, and considers their potential for Continuing Care Retirement Community (CCRC) development, and the potential adverse environmental impacts that could result if proposed for such use.

1.3.1 Background

Senior residents have numerous housing alternatives to choose from when deciding their future, including those targeted to active adults, independence, continuing care, assistance, continuing care and nursing care. Continuing Care Retirement Community, or CCRCs, have recently become a preferred option among senior populations, allowing them the distinct opportunity to age in place, despite their changing lifestyles and needs over time. Long Island is home to three Continuing Care Retirement Communities (CCRCs) as presented in other sections of this Draft Environmental Impact Statement (DEIS). The Town of Smithtown has the potential to capture these increasing demands of seniors, allowing residents to remain in Smithtown, near their families and loved ones, with the comfort and security of aging in place. Recognizing the possible need for this type of housing alternative, the Town is considering a code amendment to the uses permitted by Special Exception in the RC zoning district to allow for a Continuing Care Retirement Community (CCRC). This overall Draft Environmental Impact Statement (DEIS) provides an analysis of the potential impacts of the modification to the Retirement Community (RC) zone to allow Continuing Care Retirement Community (CCRC) under a Special Exception, as well as evaluates the potential impacts of the site specific proposed St. Johnland Continuing Care Retirement Community (CCRC) application.

1.3.2 Purpose

Included herein is a Geographic Information System (GIS) based analysis of potentially developable parcels based on the parameters established in the Town's pending Continuing Care Retirement Community (CCRC) ordinance. The primary criterion for study parcel identification is the mapping of parcels at least 25 acres in size. Using Suffolk County Tax Map data, parcels of at least 25 acres in size within the Town were identified. These parcels are described in terms of their characteristics, and analyzed with respect to environmental and planning resources. This information is assessed to provide findings with respect to development potential and potential for cumulative impacts.

1.3.3 General Parcel Identification

A total of seventeen (17) sites were identified in the analysis, as will be described in greater detail in **Section 1.3.5**. Geographic Information System (GIS) resources were used to provide general parcel identification information and mapping. **Figure 1-2** provides a location map (at a scale of 1"=5,000') of the 17-sites illustrating planimetric information relating to roads, Town boundaries and geographic features such as surface water, parks, the Long Island Railroad (LIRR) and basic geographic features. The parcels are all given a unique Identification Number (ID No.) for the purpose of further assessment. **Figure 1-3** provides a Town-wide aerial photograph illustrating regional context of each parcel (also at 1"=5,000' scale). It is noted that the Uplands at St. Johnland parcel including other lands of St. Johnland Nursing Center are identified as ID No. 5. The 50± acre parcel meets the size criterion and is the subject of the full Draft EIS analysis. The parcel depicted as ID No. 6 is the Kings Park Psychiatric Center, which is owned by the State of New York and will be described further in **Section 1.5**. An additional Town-wide parcel identification map, provided as **Figure 1-4**, identifies the size of each parcel and the ownership according to tax records. **Figure 1-5** identifies the parcels in relation to public lands.

1.3.4 Topics of Cumulative Analysis

This report further identifies the methods of analysis, the characteristics of each parcel, environmental resource sensitivity, planning resource considerations, potential for re-development for Continuing Care Retirement Community (CCRC) use, and potential impacts in consideration of cumulative factors. The 17-parcels, their location, current status of use (i.e., vacant, partially, or fully developed), general type of use and basic characteristics are identified in **Section 1.3.5**. **Section 1.3.6** includes an assessment of environmental resources associated with identified parcels. Geographic Information System (GIS) and resource mapping was used to determine a variety of natural resource and human resource qualities of the sites. **Section 1.3.7** provides an assessment of the potential impact of use of the various parcels on the identified natural and human environmental resources. **Section 1.3.8** identifies the findings of the evaluation in the context of cumulative impact analysis.

1.3.5 Detailed Identification of Potential Sites

1.3.5.1 Methodology

In order to determine potential for precedent and cumulative impacts throughout the Town, a sieve analysis was performed to identify all parcels that could be eligible for Special Exception approval under the new Continuing Care Retirement Community (CCRC) use. The proposed code contains minimum area criteria of 25 acres to qualify for the use. Geographic Information System software (ESRI ArcMap 10.0) and the Suffolk County Real Property tax parcel database was used to spatially identify properties of 25 acres in size or more (including adjacent parcels under the same ownership whose sum met the acreage requirement). Then, all publicly owned properties were removed from the spatial database (except Kings Park Psychiatric Center as noted below). This included Town, County, and State properties, as well as schools and the Long Island Railroad right of way. The Kings Park Psychiatric Center property is included in the analysis as this property may be offered for sale by New York State and could become the subject of a redevelopment proposal (which could potentially include continuing care uses).

1.3.5.2 Site Descriptions

A total of seventeen (17) sites were identified as meeting the size criterion of 25 acres. These sites are dispersed widely across the Town. Identified parcels were further mapped for the purpose of assessing their basic characteristics. A series of aerial photographs were prepared at a scale of 1”=1,000’, and annotated with the parcel boundaries. These are identified as **Figures 1-6** through **1-12**. A locator map is provided with each larger scale air photo, so that the general location within the Town can be identified. The parcels are described based on visual observations and review of aerial photography. The parcels sizes are according to tax map records.

ID No. 1 – This parcel is a series of three nearly contiguous parcels located on the south side of the LIRR that gain access from Old Northport Road just west of Sunken Meadow Parkway. The area has historically been used for industrial purposes, and is currently occupied by Pioneer Asphalt, contractor yards, storage and maintenance buildings and vacant, mostly disturbed land. The parcels are approximately 59.47 acres in size.

ID No. 2 – This parcel is located on the north side of Old Northport Road, approximately 2,000 feet east of Sunken Meadow Parkway. The land is currently vacant and vegetated with evidence of fill, storage and dirt access roads. The parcel is approximately 25.43 acres in size.

ID No. 3 – This parcel is located immediately adjacent to the east side of ID No. 2, and is accessed from a parcel to the east that has access to Old Northport Road, and

potentially from several tap roads (5th and 8th Avenues) to the north of this site. The parcel is mostly disturbed and appears to have been filled. This parcel is approximately 29.67 acres in size.

ID No. 4 – This parcel is located north of Old Northport Road just west of Indian Head Road. The parcel is the location of Indian Head Golf, and is currently occupied by a golf driving range. The parcel is mostly disturbed; however, the western part of the property is re-vegetating. The parcel is known to have been used for fill. This parcel is approximately 25.79 acres in size.

ID No. 5 – This is the proposed project site owned by the Society of St. Johnland and proposed for the Continuing Care Retirement Community (CCRC) that is also the subject of this Draft EIS. The parcel that is the subject of the Continuing Care Retirement Community (CCRC) proposal is 49.69 acres in size and the proposal includes an additional ±5-acres on the north side of St. Johnland Road which is proposed to be transferred to Suffolk County Department of Public Works for sanitary effluent disposal. The ±5-acres is part of a 36.24 acre parcel that is occupied by the St. Johnland Nursing Center. The Society of St. Johnland also owns an additional 12.73 acre parcel to the northeast of the proposed Uplands at St. Johnland site. Both the 31.24 acre part of the Nursing Home site, and the 12.73 acres are located within the Nissequogue River Wild, Scenic and Recreational Rivers (WSRR) corridor and therefore would remain as they current exist (St. Johnland Nursing Center and vacant). The WSRR and related site constraints are discussed in greater detail in **Sections 1.3.6** and **1.3.7**.

ID No. 6 - The Kings Park Psychiatric Center has been the subject of a variety of land use proposals, none of which have been implemented. The property was transferred to the New York State Office of Parks, Recreation & Historic Preservation (OPRHP) in 2003 and is now referred to as Nissequogue River State Park. Though various plans have been prepared over time, the future use of this land remains uncertain though any use will be limited based on the current ownership and degree of public interest in this parcel. The overall Kings Park Psychiatric Center is approximately 554.32 acres in size, of which, the northern 1/3± is now Nissequogue River State Park, which will not be available for private development and will remain park.

ID No. 7 – This parcel is located on the west side of St. Johnland Road, adjacent to the St. Catherine of Siena Medical Center. The parcel has limited access frontage on St Johnland Road, and spans west to the Long Island Railroad. The site is mostly vacant and wooded; however, there is a structure on the central of part of site. The parcel appears to be used for parking for St. Catherine of Siena Medical Center. This parcel is approximately 36.73 acres in size.

ID No. 8a – This parcel is located on the west side of St. Johnland Road and is occupied by the St. Catherine of Sienna Medical Center and the Nursing Rehabilitation and Care Center. This facility includes a 558-bed not-for-profit community hospital; a

298-unit senior housing facility; and a medical office building. The parcel is approximately 37.72 acres in size.

ID No. 8b – This parcel is located immediate south of and adjoining the St. Catherine of Siena Medical Center parcel. The parcel has a driveway directly to St. Johnland Road and is occupied by the St. Catherine of Siena senior residence community which provides an independent living function to the overall Nursing Rehabilitation and Care Center. This parcel is approximately 30.09 acres in size.

ID No. 9 – This parcel is located on the north side of Edgewood Avenue between Glenrich Drive and Harness Road and immediately west of the Smithtown Jr. High School. The parcel is occupied by a roadside nursery stand (Borella's), open farmland and partial wooded areas. This parcel is approximately 35.63 acres in size.

ID No. 10 – This parcel is located on the south side of Route 25A, east of Mills Pond Road and north of the Long Island Railroad, with additional land located south of the Long Island Railroad and east to the Smithtown Town line with Brookhaven. This parcel is owned by Gyrodyne Company of America, Inc. and was once a manufacturing and testing facility for drone aircraft. The site includes industrial and other buildings, referred to as Flowerfield, St. James, and is currently leased for office, manufacturing and warehouse use. One building nearest Route 25A and Mills Pond Lane is used as a catering facility. The site is currently comprised of 62.33 acres; an additional 245 acres was purchased by New York State. The 62.33 acres has been the subject of land use proposals in the past, the most recent (2007) included: a community of 39 single-family homes, 60 townhouses and 210 condominiums; planned removal of the industrial buildings and retention of approximately 40 acres of open space.[6]

ID No. 11 – This parcel is located on the south side of Route 25, east of Sunken Meadow Parkway and Walter Court and west of Mayfair Terrace. The site is occupied by the Mayfair Shopping Center, which includes multiple retail buildings occupied by retail stores and restaurants. This parcel is approximately 25.21 acres in size.

ID No. 12 – This parcel is located on the east side of Commack Road south of Delaware Avenue and north of Northern State Parkway and opposite the Hamlet Commack Golf and Country Club. The site is primarily occupied by a large industrial building (Forest Laboratories) and parking area, with some wooded land on the north side of the site and a recharge area on the northeast part of the site. This parcel is approximately 29.79 acres in size.

ID No. 13 – This parcel is located on the east side of Commack Road, south of Vanderbilt Motor Parkway and west of Sunken Meadow Parkway. The site is occupied by three

[6] http://markets.hpcwire.com/taborcomm.hpcwire/news/read?GUID=829656; PR Newswire-First Call; January 8, 2007; Titled: Proposed Project Aims to Eliminate Industrial Usage, Meet Age-Restricted Housing Demand, Reduce Traffic and Increase Local Tax Revenues

large retail buildings including national retailers and department store uses, specifically, Wal-Mart, Home Depot and Kohls. This parcel is approximately 39.78 acres in size.

ID No. 14 – This parcel is located on the north side of Route 25, east of Alexander Avenue, and includes part of the Smith Haven Mall. The Smithtown portion of this parcel is approximately 45.52 acres in size.

ID No. 15a – This parcel is located on the west side of Gibbs Pond Road, south of the terminus of Wood View Drive and east of Nichols Road. The parcel is wooded and is approximately 35.89 acres in size.

ID No. 15b – This parcel is located on the north side of Smithtown Boulevard immediately south of Parcel 15a. The site is currently vacant but was previously approved for a retirement community known as Story Book Meadows in the early 1990's. Some roads and interior site areas were cleared; however, the development was never constructed and the site remains vacant. The parcel is approximately 23.98 acres in size.

These seventeen (17) sites (15 designated parcels with related sites 8a/8b and 15a/15b) will be the subject of further evaluation in the following sections.

1.3.6 Existing Environmental Resources and Planning Considerations

Certain environmental resources (including planning district resources) are able to be mapped in a manner that will assist with evaluation of potential impacts on various resources. Environmental and planning resource information was researched and mapped using available GIS data, digitized information maintained in the Nelson, Pope & Voorhis Geographic Information Systems (GIS) library and scanned reference material. Data sources are referenced on the individual figures provided as a basis for description of environmental conditions.

1.3.6.1 Existing Environmental Resources

The various regional environmental resource categories include geology (topography and soils), water resources (groundwater and surface water) and ecological resources (wetlands). Information relating to these resources is described herein:

Topography – The north part of Smithtown is located in the Harbor Hills glacial terminal moraine, and the southwest area of Smithtown is in the Ronkonkoma terminal moraine, representing two (2) periods of glacial advance. The areas between these moraines are the outwash plains formed as meltwater carried and deposited sediments. The Town is bisected by the Nissequogue River basin, which is a glacial meltwater feature formed during glacial retreat, and the northeast part of the Town includes Stony Brook Harbor, a feature carved by glacial activity. **Figure 1-13** depicts these features in a topographic map that illustrates lines of equal elevation in

10-foot contours, with relief associated with the morainal features in brown, outwash plains in yellow, and coastal riverine and harbor features in green. The parcels are distributed widely across the Harbor Hills moraine (ID No. 1-6 and 10), outwash plains (ID No. 7-9, 11, 14 and 15a/15b), coastal/riverine areas (ID No. 5) and the Ronkonkoma terminal moraine (ID No. 12 and 13).

Soils – Available soil mapping includes General Soil Associations and Soil Types. Soil types relate to the geologic history which resulted in the topographic features described above. **Figure 1-14** provides a map of the General Soil Associations of each of the 17-sites. Parcel locations vary widely in terms of soil associations with ID No. 1, most of 5, p/o 6, p/o 9 and 13 located in Soil Association 1 (Carver-Plymouth-Riverhead association). These soils are deep, rolling, excessively drained and well-drained, coarse textured and moderately coarse textured soils on moraines. Soil Association 2 (Haven-Riverhead association) includes ID No. 2, 3, 7, p/o 9, p/o 11, 10, 12 and p/o 14. Haven-Riverhead association soils are deep, nearly level to gently sloping, well-drained, medium-textured and moderately coarse textured soils associated with outwash plains. Soil Association 3 (Plymouth-Carver association) includes 4, 8a/8b, p/o 11 and 15a/15b. Plymouth-Carver Association soils are generally rolling and hilly, deep excessively drained, coarse-textured soils on moraines. None of the soil associations appear to pose a regional constraint; however, localized conditions would require further evaluation in connection with land use applications.

Groundwater – Groundwater management zones (GMZs) in the area of the identified parcels helps to understand basic hydrology and regulatory parameters for wastewater management. **Figure 1-15** depicts the Groundwater management zones (GMZs) as mapped by SCDHS. Groundwater management zone VIII is a shallow flow zone that contributes to Long Island Sound and north shore rivers and embayments. Groundwater management zone (GMZ) I is a deep flow recharge area that is used for local water supply. ID No. 1-4 and 11-15a/15b are all located in Groundwater management zone (GMZ) I, while ID No. 5-10 are located in Groundwater management zone (GMZ) VIII. Both zones allow an on-site conventional wastewater disposal volume of 600 gallons per day per acre (gpd/ac), provided public water is provided, pursuant to Article 6 of the Suffolk County Sanitary Code (SCSC), which is administered by Suffolk County Department of Health Services (SCDHS). Discharges in excess of 600 gpd/acre require sewage treatment. The majority of the Town is served by the water main distribution system of the Suffolk County Water Authority.

Groundwater elevation contours are mapped by the United States Geological Survey (USGS); groundwater contours can assist in determining the direction of groundwater flow and water resources constraints. **Figure 1-16** identifies the groundwater contours in the Town of Smithtown and adjoining areas including the 17-parcels. ID No. 1-4 are located in areas with groundwater elevations ranging roughly from 45-55 feet above mean sea-level (msl). ID No. 5 is in the range of 10-25 feet above msl, while ID No. 6 spans from 0 to nearly 40 feet above msl. ID Nos. 7-8a/8b are in the

range of 40-45 feet above msl, ID No. 9 is between 25-30 feet above msl and ID No. 10 is in the range of 30-35 feet above msl. ID No. 11 straddles the 60 foot contour, and ID No. 12-13 are in the range of 65-70 feet above msl. ID No. 14 is in the area of the highest groundwater elevation in Smithtown straddling the 70 foot contour, and ID No. 15a/15b straddle the 60 foot contour. Depth to groundwater is not a significant issue for any of the parcels except for the northern parts of ID No. 6 which lies near the Nissequogue River, and ID No. 15a/15b which lies near Lake Ronkonkoma where groundwater is near the land surface.

Overall, groundwater generally flows toward the north in a direction parallel to the contours; however, the Nissequogue River exerts a "de-watering" influence on the water table inducing water toward the flow of the river. This causes groundwater to have an east and west component of flow in the central parts of the Town. Groundwater flows north to Long Island Sound from ID No. 1-6; east toward the Nissequogue River from ID No. 7, 8a/8b, 12 and 13; west toward the Nissequogue River from ID No. 9; northwest toward Stony Brook Harbor from ID No. 10; north, with a significant downward, vertical recharge component from ID No. 14 and southwest with a significant downward, vertical recharge component from ID No. 15a/15b.

Groundwater is an important resource to consider on a site-specific basis. Projects must conform to Article 6 density limitations or seek connection to, or construction of, an STP. These measures provide for protection of groundwater resources.

Surface Water and Wetlands – Several parcels contain wetlands and/or surface water. The subject parcel (ID No. 5) contains a freshwater pond and associated wetlands. It is noted that the northeast corner of ID No. 6 (the Kings Park Psychiatric Center), adjoins the Nissequogue River; however, this portion of the property is also within the Wild, Scenic and Recreational Rivers boundary and therefore significantly restricted. The Gyrodyne parcel (ID No. 10) also contains freshwater wetlands. It is noted that Spectacle Pond lies southeast of ID No. 15a/15b, and across Gibbs Pond Road. The separation and intervening road would indicate a low probability of direct impact between ID No. 15 and Spectacle Pond.

Figure 1-17 provides a map of the New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands in the Town of Smithtown. The proposed project site (ID No. 5) contains wetland system SJ-18; this wetland is considered and potential impacts intended to be mitigated through site-specific design which includes retaining a 100 foot buffer around this feature. ID No. 6, the Kings Park Psychiatric Center, adjoins the Nissequogue River and associated wetlands; however, this portion of the property is also within the Wild Scenic and Recreational Rivers (WSRR) boundary and therefore significantly restricted. The wetlands associated with Gyrodyne (ID No. 10) are identified as wetland system SJ-6. No other parcels contain known or mapped freshwater wetlands, nor are there are any mapped wetlands adjoining the study parcels.

Figure 1-18 is a map of Surface Watershed Boundaries. These boundaries are mapped based on surface topography, and illustrate the location of these parcels with respect to various land areas that ultimately contribute to surface waters. ID No. 1, 5 and 6 are in a larger watershed that locally contributes toward Sunken Meadow Creek and the northern reaches of the Nissequogue River. ID No. 7, 8a/8b and 9 are in the same watershed, but farther south and in an area that contributes toward the Nissequogue River. ID No. 10 is in a watershed that contributes toward Stony Brook Harbor. There is a large inland watershed in the Town of Smithtown that wraps around the Nissequogue River basin and extends west into Huntington Town and east into Brookhaven Town. The part of this watershed west of the Nissequogue River includes ID No. 2, 3, 4, 11, 12 and 13. The part of this watershed east of the Nissequogue River includes ID No. 14 and 15a/15b. This is an inland watershed that is independent of direct surface water, watersheds and recharges groundwater. The various parcels are not in any one watershed that contributes to a single body of water. As noted, surface watersheds include the Sunken Meadow Creek and Nissequogue River watershed, the Stony Brook Harbor watershed, and the inland watershed that recharges groundwater.

Figure 1-19 illustrates the Wild, Scenic and Recreational Rivers (WSRR) boundary. This map illustrates that the north sections of ID No. 5 (St. Johnland Properties) and the north part of ID No. 6 (Kings Park Psychiatric Center) are primarily within the Recreational portion of the part of the Wild, Scenic and Recreational Rivers (WSRR) boundary. This area is heavily restricted in terms of permitted land use, and as a result, the portions of the two (2) sites located in this area are only considered usable for a Continuing Care Retirement Community (CCRC) type development, if most of the development can be situated outside of the Wild, Scenic and Recreational Rivers (WSRR) boundary. The development portion of ID No. 5 is appropriate for this concept, and the south part of the Kings Park Psychiatric Center may also be able to be used in this manner. The northern parcels associated with ID No. 5 would not provide for suitable development areas for a Continuing Care Retirement Community (CCRC) given these constraints.

1.3.6.2 Existing Human Resources

The various regional human resources are more oriented toward planning considerations and include zoning and community services such as school districts, fire and ambulance districts. Information relating to these resources is described herein:

Zoning – The various zoning districts of the Town of Smithtown are illustrated in **Figure 1-20**. The zonings of the study parcels are identified in **Table 1-2**.

TABLE 1-2
STUDY PARCEL ZONING

ID No.	Parcel Zoning	Surrounding Zoning
1	Heavy Industrial; Light Industrial	Primarily industrial with some R10, R21 to north
2	Heavy Industrial; Light Industrial	Industrial to south with some R21 to west and R10 to north
3	Light Industrial	Industrial to south and east; R10 to north
4	Light Industrial	Industrial to west and east and p/o north; R21 to south and R6 to north
5	R43 Residential	R43 to north, east and south, NB also to south; R15 to west
6	R43 Residential	R43 to north and south; R10 to east and west; R15 also to west
7	Light Industrial	R15 to north; RC to south; LI to east (some R15); R21 to west
8a	Light Industrial; R15 [1]	LI to north; RC to south; R15, R21 to east; LI, RC to west
8b	Retirement Community	R21CL to west; RMGA to south; LI to north and east
9	R21 Residential	R43CL to north; R21 to south; R21 to east; R43CL to west
10	Light Industrial	VOH and R43 to north; R43 to south; TOB to east; R43 to west
11	Commercial Business	RMGA to north; R10 to south; R10 to east; R10 to west
12	Light Industrial	R10 to north; highway to south and east; TOH to west
13	Shopping Center Business	NB to north; R10 to south; SCB and highway to east; NB, OB, R10 to west
14	Shopping Center Business	SCB to north; SCB, WSI to south; TOB, VOLG to east; SCB, R10 to west
15a	R15 Residential	R15 to north; R15 to south; R10 to east; R15 to west
15b	Retirement Community	R15 to north, east and west; NB and R10 to south

Notes: 1. Current use is St. Catherine of Siena Medical Center
VOH – Village of Head of the Harbor
TOB – Town of Brookhaven
VOLG – Village of Lake Grove
Town Zoning per Code – NB=Neighborhood Business; SCB=Shopping Center Business; OB=Office Business

The study parcels are distributed across a wide variety of zoning districts including industrial, residential and commercial categories. The surrounding zoning is also widely distributed across various Town zoning districts; however, ID No. 1-4 are primarily surrounding by industrial zoning.

Educational Resources – **Figure 1-21** illustrates the various school districts in the Town of Smithtown including:

- the Kings Park Central School District (CSD) which includes ID No. 1-6;
- the Smithtown Central School District (CSD) which includes ID No. 7-10 and 14-15a/15b; and
- the Commack Union Free School District (UFSD) which includes 11-13.

As noted the study parcels are distributed across three (3) separate school districts within the Town.

Fire Districts – **Figure 1-22** illustrates the various fire districts in the Town of Smithtown and also shows the location of ambulance/Emergency Medical Service (EMS) locations. Fire districts in the Town and the parcels within them are listed as follows:

- the Kings Park Fire District (FD) which includes ID No. 1-6;

- the Smithtown FD which includes ID No. 7-9;
- the St. James FD which includes ID No. 10;
- the Commack FD which includes ID No. 11-13; and
- the Nesconset FD which includes ID No. 14-15a/15b.

As noted the study parcels are distributed across five (5) separate fire districts within the Town.

Local Waterfront Revitalization Program – **Figure 1-23** illustrates the Town's Local Waterfront Revitalization Area (LWRP) boundary. This boundary is primarily related to the Nissequogue River corridor. The northern portion of ID No. 5 (i.e. the 36.24 acre northwest parcel and the 12.73 acre northeast parcel) is located within the Local Waterfront Revitalization Area (LWRP); it is noted that most of the 36.24 acre parcel and all of the 12.73 acre parcel are also located in the Wild, Scenic and Recreational Rivers (WSRR) boundary (see **Figure 1-19**) which would further restrict potential future use. ID No. 6 (part of Kings Park Psychiatric Center) is also within the Local Waterfront Revitalization Area (LWRP); it is noted that part of ID No. 6 is also within the Wild, Scenic and Recreational Rivers (WSRR) boundary **(Figure 1-19)** and is designated as state public property (see **Figure 1-5**). All other parcels are outside of the Local Waterfront Revitalization Area (LWRP) boundary. Any use within the Local Waterfront Revitalization Area (LWRP) boundary would need to be reviewed for conformance with the land use guidelines and requirements of the Local Waterfront Revitalization Program (LWRP).

The mapping of these resources with respect to each of the study parcels assists with the assessment of potential environmental impacts associated with the seventeen (17) identified sites.

1.3.7 Assessment of Potential Environmental Impacts

This assessment considers the various site resources and potential impacts related to potential land use on the seventeen (17) study parcels. A matrix has been prepared to combine some of the key natural and human resource categories for easy comparison and assessment. **Table 1-3** includes a detailed matrix of project characteristics of each of the seventeen (17) sites, including: use/character; topography/moraine; soil associations; groundwater management zones; surface water/wetlands; surface watershed; Wild, Scenic and Recreational Rivers; zoning; school districts; fire districts, and the Local Waterfront Revitalization Program (LWRP) boundary.

In terms of natural resources, there are no significant constraints with respect to land use associated with the seventeen (17) parcels. The following discussions relate to land use and potential impacts for natural resource categories.

Use/Character – Of the seventeen (17) sites subject to this evaluation, six (6) are primarily industrial (ID No. 1-4, 10 and 12); three (3) are in commercial use (ID No. 11, 13 and 14); one (1) is agricultural (ID No. 9); one (1) is a State-owned Facility and park (ID No. 6); one

(1) is a medical and nursing rehabilitation center (ID No. 8a); one is a retirement community (ID No. 8b); and, four (4) are vacant or primarily vacant (ID No. 5, 7, 15a and 15b). Consequently, most of the sites are disturbed and/or established in other major land use types. Only four (4) of seventeen (17) sites are vacant or primarily vacant.

Topography/Moraine (Geology) – Topography is a site-specific resource that must be addressed in connection with a specific land use project. The Town of Smithtown protects environmentally sensitive lands which includes slopes in excess of 15 percent under Town of Smithtown Town Code Chapter 322, §322-19. Any site subject to a land use application must map steep slope areas and ensure protection to the maximum extent practicable. In addition, the Town implements GP 0-10-001 requirements for site stormwater permits (State Pollutant Discharge Elimination System) and Chapter 153 of the Town Code, including preparation of erosion control plans and Stormwater Pollution Prevention Plans, which assist in ensuring that slopes are properly managed. Individual site use, design, use of retaining walls, grade transitions, amount of grading and disturbance and appropriate mitigation assists in addressing potential topographic impacts in connection with proposed use of land.

Soil Associations (Surface and Subsurface Soils) – Similar to topography, site soils must be evaluated for each individual site to determine constraints with respect to surface and subsurface soils. The Soil Types are mapped and would be assessed in terms of constraints. Soil borings would be completed to ensure adequate leaching soils for sanitary and/or drainage on a given site. Each individual site and use would be evaluated and designed in consideration of soil constraints to ensure that no significant adverse impacts would occur. In addition, the Town of Smithtown protects environmentally sensitive lands which includes poorly-drained soils, as defined by the United States Soil Conservation Service pursuant to Town of Smithtown Town Code Chapter 322, §322-19. Any site subject to a land use application must identify constrained soils and avoidance to the maximum extent practicable.

Table 1-3
STUDY PARCEL RESOURCE MATRIX

ID No.	Use/ Character	Topo/ Moraine	Soil Associations	GMZ	Surface Water/ Wetlands	Surface Watershed	WSRR * Boundary	Parcel Zoning	School District	Fire District
1	Industrial/ Asphalt	Harbor Hills	C-P-R	Zone I	None	Nissequogue/ SM Creek	No	Heavy Industrial; Light Industrial	Kings Park CSD	Kings Park FD
2	Industrial/ Vacant Fill	Harbor Hills	H-R	Zone I	None	Inland Recharge	No	Heavy Industrial; Light Industrial	Kings Park CSD	Kings Park FD
3	Industrial/ Solid Waste	Harbor Hills	H-R	Zone I	None	Inland Recharge	No	Light Industrial	Kings Park CSD	Kings Park FD
4	Industrial/ Driving Range	Harbor Hills	P-C	Zone I	None	Inland Recharge	No	Light Industrial	Kings Park CSD	Kings Park FD
5	Vacant/ Wooded	Coastal Riverine	C-P-R/ H-R	Zone VIII	None	Nissequogue/ SM Creek	Partial *	R43 Residential	Kings Park CSD	Kings Park FD
6	Kings Park Psych Ctr	Harbor Hills	C-P-R/ H-R	Zone VIII	None	Nissequogue/ SM Creek	Partial *	R43 Residential	Kings Park CSD	Kings Park FD
7	Mostly Vacant/ Wooded	Outwash Plain	H-R	Zone VIII	None	Nissequogue River	No	Light Industrial	Smithtown CSD	Smithtown FD
8a	Medical Center, Nursing & Rehab Center	Outwash Plain	P-C	Zone VIII	None	Nissequogue River	No	Light Industrial; R15	Smithtown CSD	Smithtown FD
8b	Retirement Community	Outwash Plain	P-C	Zone VIII	None	Nissequogue River	No	Retirement Community	Smithtown CSD	Smithtown FD
9	Agricultural/ Farm Stand	Outwash Plain	C-P-R/ H-R	Zone VIII	None	Nissequogue River	No	R21 Residential	Smithtown CSD	Smithtown FD
10	Industrial/ Commercial	Harbor Hills	C-P-R	Zone VIII	None	Stony Brook Harbor	No	Light Industrial	Smithtown CSD	St. James FD
11	Shopping Center	Outwash Plain	H-R/ P-C	Zone I	None	Inland Recharge	No	Commercial Business	Commack UFSD	Commack FD
12	Industrial Use Building	Ronkonk-oma	H-R	Zone I	None	Inland Recharge	No	Light Industrial	Commack UFSD	Commack FD
13	Large Box Shopping Ctr	Ronkonk-oma	C-P-R	Zone I	None	Inland Recharge	No	Shopping Center Business	Commack UFSD	Commack FD
14	Mall Shopping Center	Outwash Plain	H-R/ P-C	Zone I	None	Inland Recharge	No	Shopping Center Business	Smithtown CSD	Nesconset FD
15a	Vacant/ Wooded	Outwash Plain	P-C	Zone I	None	Inland Recharge	No	R15 Residential	Smithtown CSD	Nesconset FD
15b	Vacant/ Wooded	Outwash Plain	P-C	Zone I	None	Inland Recharge	No	Retirement Community	Smithtown CSD	Nesconset FD

Notes: Soil Associations: C-P-R=Carver-Plymouth-Riverhead; P-C=Plymouth Carver; H-R=Haven-Riverhead.
***ID No. 5 and 6 are also partially within the LWRP boundary.**

Groundwater Management Zones (Groundwater) – All sites in the Town are subject to a 600 gpd/ac on-site sanitary discharge limit, provided public water is available (most of the Town is served by public water). If discharge of greater than 600 gpd/ac is proposed, a sewage treatment plant (STP) is required. These limitations are established under Article 6 of the Suffolk County Sanitary Code (SCSC) for best groundwater management practice.

Conformance with Article 6 assists in addressing potential groundwater impacts as a result of sanitary wastewater discharge. Depth to groundwater is assessed on a project specific basis using test holes to determine the elevation of water beneath a site. The Town of Smithtown protects environmentally sensitive lands which includes lands where the depth to groundwater is less than 10 feet under Town of Smithtown Town Code Chapter 322, §322-19. Each individual site and use would be evaluated and designed in consideration of depth to groundwater, specific proposed use and potential groundwater impacts, to ensure that no significant adverse impacts would occur.

Surface Water/Wetlands (Ecology) – As noted, only four (4) sites are vacant or near vacant and vegetated. The majority of sites have disturbance including industrial, commercial and other activity. No significant ecological resources are identified on a regional basis. There are mapped wetlands the St. Johnland site (ID No. 5), the Kings Park Psychiatric Center site (ID No. 6), and the Gyrodyne site (ID No. 10); it is noted that wetlands and wetlands buffer protection would be addressed through site-specific design and protection mechanisms. The remaining fourteen (14) sites do not contain wetlands. It is also noted that the Town of Smithtown protects environmentally sensitive lands which includes a habitat for protected, threatened or endangered species under Town of Smithtown Town Code Chapter 322, §322-19. Each individual site and use would be evaluated and designed in consideration of habitats and ecological resources as appropriate, to ensure that no significant adverse impacts would occur.

Surface Watersheds – It is noted that the various parcels are separated across several watersheds; as a result, no single surface watershed would be impacted should these sites be developed or re-developed. Watersheds can be impacted by improper handling of stormwater runoff, and/or land use activities that degrade the aquifer which discharges to a surface water feature. Any newly proposed site uses would be required to retain stormwater on site. In addition, the Town implements GP 0-10-001 and Town Code Chapter 153 requirements for site stormwater permits (State Pollutant Discharge Elimination Systems) including preparation of erosion control plans and a Stormwater Pollution Prevention Plan, which assists in ensuring that stormwater is properly managed on a given site. Groundwater protection measures noted above further ensure that surface watersheds are protected. In addition, since thirteen (13) of the sites are developed, any change in use resulting in re-development would be subject to updated stormwater handling requirements.

Wild, Scenic and Recreational Rivers – The only sites in or near the Nissequogue Wild, Scenic and Recreational Rivers (WSRR) boundary are ID No. 5 and 6. ID No. 5 is the St. Johnland parcel and other holdings. The proposed Uplands at St. Johnland is designed to conform to the very stringent Wild, Scenic and Recreational Rivers (WSRR) requirements. The other parcels are dominated by Wild, Scenic and Recreational Rivers (WSRR) lands and would not

be appropriate for a Continuing Care Retirement Community (CCRC) use. ID No. 6 is the Kings Park Psychiatric Center; the State holdings include land in the Wild, Scenic and Recreational Rivers (WSRR). It is expected that any State land in the Wild, Scenic and Recreational Rivers (WSRR) would not be part of a future land use proposal as these lands are part of the Nissequogue River State Park. No impact to the Nissequogue Wild, Scenic and Recreational Rivers (WSRR) is expected.

Zoning – The study parcels fall into a variety of zoning districts including industrial (heavy and light), commercial (shopping center and commercial business), retirement community and residential (R15, R21 and R43 districts). The existing zoning is what determines the allowable land use on a given parcel.

Currently, two (2) of the parcels are zoned RC, and therefore would be able to apply for a Continuing Care Retirement Community (CCRC) Special Exception, if the new Code were adopted. Of these parcels, one is developed as a retirement community (ID No. 8b), and the other is vacant (ID No. 15b). ID No. 8b is associated with the St. Catherine of Siena facilities, and would be appropriate for independent living in connection with an overall Continuing Care Retirement Community (CCRC) use, given its current use. ID No. 15b adjoins other lands owned by the same entity and could potentially be used for a Continuing Care Retirement Community (CCRC) on its own or in combination with other lands. Use of either of these sites for Continuing Care Retirement Community (CCRC) would require approval of the Continuing Care Retirement Community (CCRC) Special Exception and site/use specific State Environmental Quality Review Act (SEQRA) review and site plan approval.

Of the remaining fifteen (15) sites, any potential use for a Continuing Care Retirement Community (CCRC) would require a discretionary action by the Town Board to change the zoning to Retirement Community (RC), and a further decision to grant a Continuing Care Retirement Community (CCRC) Special Exception, if the Board found that a proposed use was consistent with the requirements of the zoning district/Special Exception provisions. As a result, the proposed adoption of the change to the Code to permit a Continuing Care Retirement Community (CCRC) by Special Exception in the Retirement Community (RC) zone, is not expected to have a significant adverse impact with respect to zoning, and would require several decisions before such a use could be established.

School Districts (Education) – It is noted that the various parcels are separated across three (3) school districts; as a result, no single school district would be impacted. Continuing Care Retirement Community (CCRC) uses do not involve generation of school-aged children, and therefore, would not impact educational resources. Private facilities other than non-profit operators would generate tax revenue that would accrue to the school district to increase the tax base and provide benefit, but regardless, since no school age children are generated, no impact is expected.

Fire Districts (Ambulance and Community Services) - It is noted that the various parcels are separated across five (5) fire districts; as a result, no single fire district would be impacted. A Continuing Care Retirement Community (CCRC) on any of the study parcels would require

new construction. This construction would conform to current building and fire code, and would incorporate provisions for fire protection. In addition, the Fire Marshal will review any proposed site plan and the local fire district would have input. Any proposed use would incorporate this input, and would provide fire hydrants within or proximate to the site and sprinklers as well as other protection measures consistent with up-to-date codes, Town Fire Marshal and fire district input. The Draft Environmental Impact Statement (DEIS) Code Review/Recommendations **(Section 1.2.3)** suggests that three stories with a potential for increase up to 50 feet be considered as a waiver from the Town Board where community, visual, fire district and other factors warrant it to provide design flexibility. A 50 foot height is typical for industrial zoning districts, and would not be expected to cause an undue burden on fire district response; however, as noted, the Town Board would consider this if the Continuing Care Retirement Community (CCRC) Special Exception includes this provision. It is expected that the Continuing Care Retirement Community (CCRC) Special Exception would not result in significant adverse impact to fire districts given the specific considerations noted above.

With respect to ambulance services, **Figure 1-22** does illustrate ambulance and Emergency Medical Stations throughout the Town in most cases within several miles of any study parcel. Ambulance services are needed for all age cohorts; however, response to older age residents may be more prevalent. It is noted that the Continuing Care Retirement Community (CCRC) would include various levels of care from active seniors in independent housing to assisted living with greater levels of care. Residents are monitored for health conditions and limited nursing care would be available on site. Older residents reside throughout the Town and would seek ambulance assistance if necessary. The location of a Continuing Care Retirement Community (CCRC) would ensure that local ambulance services are aware of the facility and could plan accordingly to respond if called. Any proposed Continuing Care Retirement Community (CCRC) would require review of adequacy of community services at which time more specific needs could be addressed based on the location, existing ambulance/Emergency Medical Service facilities and the proposed use. As a result, it is not expected that the adoption of a Continuing Care Retirement Community (CCRC) Special Exception provision would result in significant adverse impacts to ambulance/EMS services.

Impact on other community services would be limited given the private operation and maintenance of any proposed Continuing Care Retirement Community (CCRC). On-site roads, amenities, infrastructure and maintenance would all ensure that a proposed facility would not be a burden on local community services.

LWRP – Only ID Nos. 5 and 6 are within or partially within the Local Waterfront Revitalization Program (LWRP) boundary. For ID No. 5, most of the 36.24 acre parcel and the entire 12.73 acre parcel are also located in the Wild, Scenic and Recreational Rivers (WSRR) boundary which would further restrict potential future use. For ID No. 6, the northern part of this parcel is also within the Wild, Scenic and Recreational Rivers (WSRR) boundary and is designated as state public property. All other parcels are outside of the Local Waterfront Revitalization Program (LWRP) boundary. Any use within the Local Waterfront Revitalization Program (LWRP) boundary would need to be reviewed for conformance with

the land use guidelines and requirements of the Local Waterfront Revitalization Program (LWRP).

This section includes an assessment of Town-wide implications of the adoption of a Continuing Care Retirement Community (CCRC) Special Exception as part of the Retirement Community (RC) district with respect to natural and human environmental resource categories and further supplements the information contained in **Section 1.3.6**.

1.3.8 Potential Cumulative Impacts and Findings

The potential cumulative impacts are limited by the actual development potential, development controls and constraints/resources noted in the preceding sections. A brief discussion of each parcel is presented herein, in order to provide a basis for the findings of this study.

ID No. 1 – This parcel is believed to be in an area that would not be suitable for a Continuing Care Retirement Community (CCRC) use. Based on the site location, description, zoning, existing and surrounding uses, it is extremely unlikely that this industrialized area would be suitable for Continuing Care Retirement Community (CCRC) occupancy. The parcel is currently occupied by an asphalt business that appears to be successful. Surrounding uses would be incompatible with a Continuing Care Retirement Community (CCRC) use.

ID No. 2 – This parcel is believed to be in an area that would not be suitable for a Continuing Care Retirement Community (CCRC) use. Based on the site location, description, zoning, existing and surrounding uses, it is extremely unlikely that this industrialized area would be suitable for Continuing Care Retirement Community (CCRC) occupancy. The parcel is currently vacant but is in an area of general industrial use and it would appear that surrounding uses would be incompatible with a Continuing Care Retirement Community (CCRC) use.

ID No. 3 – This parcel is believed to be in an area that would not be suitable for a Continuing Care Retirement Community (CCRC) use. Based on the site location, description, zoning, existing and surrounding uses, it is extremely unlikely that this industrialized area would be suitable for Continuing Care Retirement Community (CCRC) occupancy. The parcel is currently barren land that has been used for fill and it would appear that surrounding uses would be incompatible with a Continuing Care Retirement Community (CCRC) use.

ID No. 4 – This parcel is in an area that does include industrial uses to the west; however, multifamily housing is located to the north and there is convenient access to CR 14. The site could potentially be suitable for a Continuing Care Retirement Community (CCRC) use, but would be subject to further analysis based on specific site considerations, the zone change process, the Special Exception process and the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest.

ID No. 5 –This is the proposed project site owned by the Society of St. Johnland and proposed for the Continuing Care Retirement Community (CCRC) which is the subject of the Draft Environmental Impact Statement (DEIS). The remaining parcels to the north are not suitable for a Continuing Care Retirement Community (CCRC) given the location within the Wild, Scenic and Recreational Rivers (WSRR), the Local Waterfront Revitalization Program (LWRP) boundary and site constraints. The applicant has determined to pursue the use of the 49.69 acre[7] parcel for Continuing Care Retirement Community (CCRC). In addition, Suffolk County Department of Public Works is seeking to use ±5-acres of the 36.24 acre parcel to the north for sanitary effluent recharge from the Kings Park Sewage Treatment Plant. This would enable the Uplands at St. Johnland to connect to the Kings Point Sewage Treatment Plant (STP) for waste treatment. The Continuing Care Retirement Community (CCRC) would complement the St. Johnland Nursing Center on the balance of the 36.24 acre site. This scenario is the proposed project and is analyzed in detail in other sections of this Draft Environmental Impact Statement (DEIS).

ID No. 6 –The Kings Park Psychiatric Center could potentially be used for Continuing Care Retirement Community (CCRC); however, there are no plans for any private use of the site and the land would have to be declared surplus by New York State for any such use. The use of this site will be limited based on the current State ownership and degree of public interest in this parcel as well as the State Environmental Quality Review Act (SEQRA) process and Town input. It is not likely that this site would be proposed for a Continuing Care Retirement Community (CCRC) given the pending Uplands at St. Johnland proposal, which is under control of the Society of St. Johnland. Future use of the Kings Park Psychiatric Center could be complementary to the St. Johnland site, depending on what is ultimately decided as appropriate for parcel ID No. 5.

ID No. 7 – This parcel adjoins the St. Catherine of Siena Medical Center. The use of this site for Continuing Care Retirement Community (CCRC) could potentially be compatible if properly designed and if found to be supportive of the medical use. The application of buffers and requirements of the Continuing Care Retirement Community (CCRC) Special Exception would apply, as would other Town requirements including; protection of steep slopes, Chapter 153 and Stormwater Pollution Prevention Program (SWPPP) requirements for stormwater management, and the State Environmental Quality Review Act (SEQRA) process. Further analysis based on specific site considerations, the zone change process, the Special Exception process and the Environmental Impact Statement (EIS) process which would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest. The site is currently used for overflow parking by the St. Catherine of Siena Medical Center and the Nursing Rehabilitation and Care Center. It is more likely that this site will ultimately be used for further expansion of medical facilities complementary to the St. Catherine facilities.

[7] The surveyed acreage of the primary Uplands at St. Johnland parcel is 49.69 acres; the parcel is identified as being 49.40 acres in the tax map records.

ID No. 8a – This parcel is the St. Catherine of Siena Medical Center and the Nursing Rehabilitation and Care Center. The facility is active and successful and there is no reason to believe that this use will change from its current ongoing service facility.

ID No. 8b – This parcel is the St. Catherine of Siena residential retirement community. The facility is occupied and there is no reason to believe that this use will change from its current ongoing residential retirement community.

ID No. 9 – The Borella nursery stand has been on the site since 1954[8], and agricultural land to the north and west support the retail portion of this use. The site is adjacent to an institutional use (school) to the east, and single-family homes to the west. The site is not an ideal configuration for a Continuing Care Retirement Community (CCRC) give the narrow north-south shape of the parcel. It is conceivable that the site could be used for a Continuing Care Retirement Community (CCRC); however, it is not believed to be an optimum site for such use and there is no reason to believe that the ongoing business that has been operating for the past 57 years would change. There are no pending plans for this use on the site and no known interest in pursuing anything other than the ongoing business.

ID No. 10 – The Gyrodyne/Flowerfield site could potentially be suitable for a Continuing Care Retirement Community (CCRC) use, but would be subject to further analysis based on the zone change process which would address site specific considerations including: wetland and slope protection, stormwater management under Chapter 153, the Special Exception process and the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest in pursuing such a use. In fact, several different development plans have been pursued at the planning stages and none have included a Continuing Care Retirement Community (CCRC) use.

ID No. 11 – This parcel is the site of the Mayfair Shopping Center. This appears to be an ongoing and successful retail site. There is no reason to believe that this use will change from its current ongoing commercial use. If land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources. Any such use would involve further analysis based on specific site considerations, the zone change process, the Special Exception process and the Environmental Impact Statement (EIS) process which would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest. It is more likely that this site will continue as the Mayfair Shopping Center.

[8] As evidenced by the sign in front of the nursery stand which proudly proclaims "1954".

ID No. 12 – This parcel is the site of Forest Laboratories. This appears to be an ongoing and successful single industrial site user. There is no reason to believe that this use will change from its current ongoing industrial use. If land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources. Any such use would involve further analysis based on specific site considerations, the zone change process, the Special Exception process and the Environmental Impact Statement (EIS) process which would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest. It is more likely that this site will continue as the location of Forest Laboratories.

ID No. 13 – This parcel is the site of three (3) relatively new large retail stores (Wal-Mart, Home Depot and Kohls). This appears to be an ongoing and successful multiple retail user site. There is no reason to believe that this use will change from its current ongoing retail use. If land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources. Any such use would involve further analysis based on specific site considerations, the zone change process, the Special Exception process and the EIS process which would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest. It is more likely that this site will continue as the location of the three (3) existing retail uses.

ID No. 14 – This parcel is part of Smith Haven Mall which involves an ongoing and successful multiple retail user site. There is no reason to believe that this use will change from its current ongoing retail use. If land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources. Any such use would involve further analysis based on specific site considerations, the zone change process, the Special Exception process and the Environmental Impact Statement (EIS) process which would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. There are no pending plans for this use on the site and no known interest. It is more likely that this site will continue as retail use in connection with Smith Haven Mall.

ID No. 15a – The site could potentially be suitable for a Continuing Care Retirement Community (CCRC) use, but would be subject to further analysis based on the zone change process which would address site specific considerations including: the Special Exception process and the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. The site is near Lake Ronkonkoma and Spectacle Pond is across the street. Environmental analysis would have to consider depth to groundwater and protection of groundwater and surface water quality. The site is also surrounded on three (3) sides by residential uses, and is not in an area where a new Continuing Care Retirement Community (CCRC) use would be compatible unless proper access and buffering is provided. These factors including land use consideration and

traffic would be considered as part of environmental review. Given the vegetated condition of the site, land use compatibility, traffic and access and water resource protection goals, scrutiny of site specific environmental resources would be appropriate under the State Environmental Quality Review Act (SEQRA) process to address natural vegetation, habitats, depth to groundwater, traffic, land use compatibility, zoning and land use plans. The site would more likely be developed in conformance with its current R15 zoning, and could potentially involve the use of clustering to preserve some resources on-site, depending on the outcome of the State Environmental Quality Review Act (SEQRA) and planning process. There are no pending plans for this use on the site and no known interest in pursuing any land use projects on the site.

ID No. 15b – This site adjoins ID No. 15a and is owned by a common entity. The site on its own could potentially be suitable for a Continuing Care Retirement Community (CCRC) use, but would be subject to further analysis based on the zone change process which would address site specific considerations including: the Special Exception process and the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues. Similar to the ID No. 15a, the site is near Lake Ronkonkoma and Spectacle Pond is across the street and groundwater mounding and ground/surface water quality protection would have to be considered. This site has access to Smithtown Boulevard and was previously approved for a Retirement Community use that was not constructed. Some clearing occurred on the site but the majority remains wooded. This site is surrounded on two (2) sides by residential uses, to the north is ID No. 15a, and to the south is a transportation corridor. If a Continuing Care Retirement Community (CCRC) use were proposed, it would be subject to scrutiny of site specific environmental resources would be appropriate under the State Environmental Quality Review Act (SEQRA) process to address natural vegetation, habitats, depth to groundwater, traffic, land use compatibility, zoning and land use plans. The site would more likely be developed as a retirement community, but either on its own or in combination with ID No. 15a, could potentially provide a suitable site for Continuing Care Retirement Community (CCRC) use provided that adequate buffering is provided and other potential impacts satisfactorily addressed and subject to the outcome of the change of zone, Special Exception and State Environmental Quality Review Act (SEQRA) process. There are no pending plans for this use on the site and no known interest in pursuing any land use projects on the site.

The analysis contained herein has identified several sites out of the total of seventeen (17) potentially eligible sites that may be suitable for Continuing Care Retirement Community (CCRC) use. These are listed and summarized in terms of their potential for Continuing Care Retirement Community (CCRC) use as follows:

- ID No. 4 – golf driving range, area of fill, potentially compatible
- ID No. 6 – Kings Park Psychiatric Center, will be subject to community input; proximate to St. Johnland, not likely
- ID No. 7 – adjoins St. Catherine of Siena Medical Center, potentially compatible, but not likely

- ID No. 9 – Borella's nursery since 1954, potentially compatible, but not likely
- ID No. 10 – Gyrodyne/Flowerfield, existing businesses, potentially compatible, not pursued
- ID No. 15a – vacant site with constraints and not compatible surrounding zoning, not likely
- ID No. 15b – vacant site with prior RC zoning approval, potentially compatible

This analysis provides a basis for the following findings:

- Out of seventeen (17) potentially eligible sites Town-wide, there appears to be at most seven (7) sites that could potentially be used for Continuing Care Retirement Community (CCRC); however, of these, five (5) are not likely or not pursued in connection with prior land use plans.
- Land use conversion of an existing use could take place; however, if land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources.
- Any future use would be subject to change of zone to Retirement Community (RC) and review by the Town Board.
- Any future use would be subject to Continuing Care Retirement Community (CCRC) Special Exception review by the Town Board and would have to meet the criteria and dimensional requirements.
- Any future use would be subject to the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues.
- Any future use would be subject to Town Code Chapter 322, §322-19, Environmentally Sensitive Lands and protection of site resources as well as Chapter 153 for stormwater management.

This analysis demonstrates that the St. Johnland site is not the only eligible site for Retirement Community (RC) zoning and Continuing Care Retirement Community (CCRC) use in the Town of Smithtown. The analysis shows that there are very limited cumulative impacts associated with the creation of the Continuing Care Retirement Community (CCRC) Special Exception under the Retirement Community (RC) zone, based on the criteria contained in the proposed Code revision, the dispersed and limited nature of potentially eligible sites, the preliminary environmental resource analysis of potentially eligible sites contained herein, the State Environmental Quality Review Act (SEQRA) process and conformance to land use and environmental regulations that would be required for use of one of these sites as a Continuing Care Retirement Community (CCRC). The analysis further supports a finding that environmental review would address social, environmental and economic factors, and would ensure balanced decision-making with respect to any potential Continuing Care Retirement Community (CCRC) use in the Town.

SECTION 2.0

DESCRIPTION OF THE SITE SPECIFIC CHANGE OF ZONE PROJECT

2.0 DESCRIPTION OF THE SITE SPECIFIC CHANGE OF ZONE PROJECT

2.1 Location

The project site for the proposed site specific Continuing Care Retirement Community (CCRC) change of zone is located on the southwest side of the intersection of St. Johnland Road and Old Dock Road in the hamlet of Kings Park, Town of Smithtown. **Figure 1-1** provides a location map of the project site. The proposed project site consists of a single tax parcel, identified as Suffolk County Tax Map lot # 800-008-04-02. The 49.69-acre project site is comprised of vacant wooded land with a freshwater pond in the northern central portion of the site. **Figure 2-1** provides an aerial photograph illustrating site conditions. A survey illustrating existing site conditions (**Map of Property**) is provided in a pouch at the end of the document.

The application also considers the use of a ±5-acre parcel located northwest of the subject property which is currently part of the St. Johnland Nursing Center property for the purpose of sanitary effluent recharge from the Kings Park Sewage Treatment Plant (STP). Prior to development of the proposed Continuing Care Retirement Community (CCRC), this ±5-acre parcel will be subdivided for use by the Suffolk County Department of Public Works (SCDPW) to provide for recharge of the entire effluent flow from the Kings Park Sewage Treatment Plant (STP), which is currently in operation and serving projects in the area including the St. Johnland Nursing Center. Under the proposed project, the Uplands at St. Johnland will connect to the Kings Park Sewage Treatment Plant (STP), which would then divert their current surface water discharge to Long Island Sound, to an inland groundwater recharge system on the ±5-acre parcel. As a result, this five-acre area is considered in the environmental review contained herein. Sanitary disposal is described further in **Section 2.2.4** (see page 2-13).

The proposed project site is within the following planning and service zones and districts:

- Residence R-43 zoning district
- Groundwater Management Zone VIII
- Wild, Scenic and Recreational Rivers Corridor (WSRR) (eastern portion of the site)
- Kings Park Central School District
- Kings Park Fire District
- Suffolk County Police Department (SCPD), 4th Precinct
- Suffolk County Water Authority (SCWA)
- Long Island Power Authority (LIPA)/National Grid (electricity & natural gas)
- Directly adjacent to Local Waterfront Revitalization Plan (LWRP) area

The subject property was part of the former 400-acre Smith Farm and was purchased in 1866 by the founder of St. Johnland, Dr. William Augustus Muhlenberg. The St. Johnland farm operated from 1870 until 1949 and the three barns located on the site burned down in 1971. A review of historic aerial photographs for the property shows that in 1954, the eastern and western portions of the property were vegetated fields. A roadway (the former Cottage Road), was visible crossing the center of the property in a north-south orientation. Three structures were located on the northwestern portion of the property near St. Johnland Road and four structures were visible on the southwestern portion of the subject property. The existing pond was not apparent near the

center of the site, although two or three dark, apparently wet areas were visible in this area. A 1966 aerial shows on-site conditions similar to the 1954 aerial; however, the property did not appear to have been farmed and the pond was visible in its current shape and location. A 1976 aerial shows the property more vegetated and overgrown. The structures previously observed on the northwestern portion of the property were not apparent and fewer structures were visible on the southwestern portion of the property. Cottage Road is still visible and a sewer pump station was constructed on the eastern portion of the property, near the intersection of Old Dock Road and St. Johnland Road. The majority of the site was covered with trees in the 1980 aerial photograph and Cottage Road still crossed the center of the property. No structures were visible on the property. The 1994 aerial shows the property more overgrown and only the northern portion of Cottage Road could be seen. A series of historic aerials is provided as **Appendix D**. No structures are currently present on the property; however, activity from several adjacent parcels has encroached onto the property, specifically, the adjacent commercial use to the south has modified an estimated 0.10 acres of land for landscaping, and along the western boundary, two neighbors have encroached with a swimming pool and a shed. It should be noted that the property owner will require that these encroaching activities be removed.

As illustrated on the **Master Development Plan** and **Figure 2-2**, the eastern portion (±22.46 acres) of the subject property is located within the Recreational portion of the Nissequogue River Wild, Scenic and Recreational Rivers (WSRR) corridor. The proposed project's conformance to the WSRR regulations is provided in **Section 3.4.2** (see page 3-27).

The proposed project site is located within the residential R-43 zoning district, which requires a minimum lot area of one acre. If the site were developed in conformance with its existing zoning, an estimated 21 lots for detached, single-family homes could be constructed. A **Yield Map** was prepared for the subject site (in a pouch at the end of this document), and is discussed further in **Section 6.2** (see page 6-3).

2.2 Project Design and Layout

2.2.1 Overall Site Layout

The proposed project seeks to develop the property with a Continuing Care Retirement Community (CCRC) development including 199 units comprised of 22 townhouse units, 153 independent living units and 24 assisted living units. **Figure 2-3** provides an overlay of the proposed project on an aerial photograph of the site; this depicts the relationship of the proposed project with site and area conditions.

The subject site contains environmentally sensitive lands, which the Town defines as any of the following:

1. Any A or V Flood Hazard Zones;
2. Slopes in excess of 15%;
3. Depth to seasonal high-water table of less than 10 feet;
4. Freshwater wetlands (as defined by Chapter 170, Article II, of the Town Code);

5. A distance of less than 100 feet to the nearest surface water feature identified on the latest USGS map;
6. Poorly drained soils, as defined by the United States Soil Conservation Service; or
7. A habitat for protected, threatened or endangered species.

The subject site contains a pond (0.78 acres), wetlands (1.33 acres), 100-foot offset from surface water (2.58 acres), slopes in excess of 15% (3.13 acres), and shallow groundwater (7.31 acres) (see Density Summary Chart on the **Master Development Plan**). Because several of these areas overlap, the cumulative environmentally sensitive lands total 10.44 acres, resulting in a total developable land area of 39.25 acres. An additional 1.34 acres of environmentally sensitive land (consisting of 0.64 acres of steep slopes and 0.70 acres of shallow groundwater area) are proposed to be disturbed and will require a variance. The Density Summary Chart provides a means to assess the proposed density and conformance with Code requirements. The developable land is calculated as follows:

Total Site Area:	**49.69 acres**
Environmentally Sensitive Land:	
Pond	0.78 acres
Wetlands	1.33 acres
100-foot surface water offset	2.58 acres
15% steep slopes	3.13 acres
Shallow groundwater	7.31 acres
Total Environmentally Sensitive Land	**10.44 acres** (including overlap)
Disturbed Environmentally Sensitive Land:	
15% steep slopes	0.64 acres
Shallow groundwater	0.70 acres
Total Disturbed Environmentally Sensitive Land:	**1.34 acres** (variances requested)

Total Developable Land: 49.69 Ac – 10.44 Ac = 39.25 Ac

As previously mentioned in **Section 1.2.1** (see page 1-11), the maximum allowable density in the proposed Continuing Care Retirement Community (CCRC) district is 5 units per acre up to 6 units per acre if sufficient land is preserved in its natural state (1 additional unit per 4,000 SF of land preserved in its natural state) pursuant to 322-99.1B(4). When considering the site's allowable density, the environmentally sensitive land to be disturbed (and requesting a variance), as well as the 2.10 acres (91,503 SF) of additional open space being preserved outside the buffer areas which is not environmentally sensitive land, the allowable density can be calculated based on the Density Summary Chart (as shown on the **Master Development Plan)**, as well as in consideration of the provision that allows the Town Board to increase density as related to on site open space up to a maximum of 6 units per acre. The calculations are provided as follows:

39.25 Ac of Developable Land x 5 units per acre = 196.25 maximum allowable units

91,503 SF (2.10 Ac) of additional preserved open space / 4,000 SF (1 additional unit permitted for every 4,000 SF of open space preserved) = 22.8 additional units permitted; *up to a maximum of:*

196 units + 22 units = 218 maximum allowable units

199 units proposed;
conforms to draft 322-99.1B(4)

The townhouse units are proposed to be located on the eastern portion of the site, all of which will include two bedrooms, two bathrooms and a garage and will range in size from 1,600 SF to 1,800 SF. The independent living units will be located in the central portion of the site, south of the existing pond. All units will be contained in a three-story building with an underground parking garage. Units in the independent living building will include both one and two bedroom units ranging in size from 761 SF to 1,794 SF. The independent living building will be a total of 314,577 SF of gross floor area and will provide extensive amenities to the residents, as outlined in **Table 2-1b**. Food service will be provided to residents a variety of ways, including a communal dining room, private dining, café and bakery. The building will include a great room which will act as a multi-purpose room for resident activities. The building will have a lap pool and spa with men's and women's locker rooms. Other common areas available to residents include: exercise and strength training equipment; an arts and crafts studio; a library and computer lab; a parlor area that includes a cocktail lounge, card area and bar; a beauty shop and barber; a convenience store; woodworking shop; mail room and lounge; seminar, media room, theatre and meeting room; and bank. The assisted living units will be located in a two-story building on the western portion of the site, closest to the proposed site entrance off St. Johnland Road and will connect via a walkway to the independent living building. All assisted living units will include one bedroom and one bathroom, all of which are 539 SF. The assisted living building will include resident lounges; common resident laundries with washers and dryers; communal dining area; parlor/living room; library; an arts and crafts studio and TV/media room. **Table 2-1a** below provides a breakdown of residential unit types for the three types of residential units, as well as gross floor area (GFA) totals for the Continuing Care Retirement Community (CCRC) components. **Table 2-1b** provides a breakdown of the proposed amenity square footages for the independent living and assisted living buildings:

Table 2-1a
UNIT BREAKDOWN & GROSS FLOOR AREA

Unit Type	Unit Size (SF)	Amenities	# Units
Townhomes			
A	1,679	2 bed, 2 bath, 1 car garage, loft	10
B	1,600	2 bed, 2 bath, 1 car garage, loft, basement	4
C	1,717	2 bed, 2 bath, den, 1 car garage, loft, basement	2
D	1,800	2 bed, 2 bath, den, 2 car garage, loft, basement	6
Total Townhouse GFA			***74,797 SF***
Independent Living			
A	1,314	2 bedroom, 1 bath, den	6
B	1,367	2 bedroom, 1 bath, den	11
C	1,508	2 bedroom, 1 bath, den	14
D	1,440	2 bedroom, 1 bath, den	7
E	1,794	2 bedroom, 1 bath, den	2
F	1,733	2 bedroom, 1 bath, den	4
G	1,697	2 bedroom, 1 bath, den	4
H	1,653	2 bedroom, 1 bath, den	2
I	1,116	2 bed, 1 bath	6
J	1,166	2 bed, 1 bath	10
K	1,133	2 bed, 1 bath	11
L	1,178	2 bed, 1 bath	21
M	1,142	1 bed, 1 bath, den	1
N	955	1 bed, 1 bath, den	8
O	988	1 bed, 1 bath, den	20
P	966	1 bed, 1 bath, den	6
Q	989	1 bed, 1 bath, den	12
R	917	1 bed, 1 bath, den	2
S	761	1 bed, 1 bath	2
T	833	1 bed, 1 bath	4
Total Independent Living GFA			***314,577 SF***
Assisted Living			
A	539	1 bed, 1 bath	24
Total Assisted Living GFA			***27,742 SF***
TOTAL UNITS			**199**
TOTAL GFA			**429,116 SF***

* Includes 12,000 SF safety factor as provided by architect; Square footages are gross and only include three-sided portions of balconies and entries- no patios, porte cochere, etc. included

Table 2-1b
AMENITIES BREAKDOWN

Amenities Area	**Proposed Square Footage (SF)**
Independent Living Non-Leasable Areas	82,204
Dining (includes private dining)	2,813
Great Room (includes storage)	2,400
Pool (includes exercise & lockers)	5,700
Arts and Crafts Studio	400
Library	500
Lounge/Card Room	500
Barber/Beauty	450
Convenience Store	350
Woodworking	500
Mail Room	300
Café & Servery	1,250
Administration	2,940
Total IL Amenities	18,103 [1]
Assisted Living Non-Leasable Areas	11,009
Wellness	630
Dining	720
Pantry/Country Kitchen	400
Parlor/Living Room	200
Library	200
Activities	200
TV/Media	200
Total AL Amenities	2,550 [2]

1. Balance of independent living non-leasable SF is provided for administration, circulation, kitchen, service, and storage areas.
2. Balance of assisted living non-leasable SF is provided for administration, circulation, service and support areas.

The proposed Continuing Care Retirement Community (CCRC) use will require a Special Exception (subject to approval by the Town Board), and the creative design achieved through conceptual plan development necessitates variances to achieve the flexibility needed to conform to the design goals of the project. The project will require six variances:

- building on steep slopes,
- building on areas with groundwater less than 10 feet below ground surface,
- gross floor area,
- natural buffer zone,
- parking garage, and
- height.

The following briefly describes each requested variance.

1. *Disturbance of steep slopes:* Pursuant to §322-19E, no structure shall be constructed within 10 feet of any slope higher than five feet or having a slope greater than 15%. As illustrated on the Master Development Plan, several areas with slopes greater than 15% exist on the site. The Plan identifies those areas with grey shading, as well as a 10-foot buffer line from steep slopes. A total of 3.13 acres of slopes in excess of 15% exist on the property. Several small areas of encroachment to the steep slopes and buffer area are proposed, primarily to be used for access roads, which total approximately 0.64 acres of disturbance. Pursuant to §322-19B(1)(a), the Board of Appeals may grant a variance for up to 50% of the maximum permissible yield if the land were deemed not to be environmentally sensitive. A variance is being requested to permit these areas of development.

2. *Development on areas of high groundwater:* Pursuant to §322-19B(1)(b), where land is deemed environmentally sensitive because the depth to groundwater is equal to or less than 10 feet, the Board of Appeals may grant a variance for up to 50% of the maximum permissible yield if the land were deemed not to be environmentally sensitive. As illustrated on the Master Development Plan, the high groundwater line identifies 7.31 acres of area on the site, in the vicinity of the pond and wetlands area to have high groundwater. A portion of that area (approximately 0.70 acres) will be disturbed for development of the independent living building and walkway. A variance is being requested to permit these areas of encroachment.

3. *Maximum gross floor area:* The draft Continuing Care Retirement Community (CCRC) zoning ordinance permits a maximum of 20% of gross floor area, which would allow construction of 341,946 SF of gross floor area. The applicant is requesting construction of 429,116 SF of gross floor area to accommodate the CCRC development, which includes three different types of housing: townhouse units, independent living units and assisted living units. A variance on gross floor area to accommodate the proposed development is being requested.

4. *Natural buffer zone:* The draft Continuing Care Retirement Community (CCRC) zoning ordinance requires a densely wooded natural buffer zone of at least 200 feet in depth to be provided adjacent to all property lines with the exception of two driveways. The proposed development has been situated to provide a 200-foot buffer to the north (along St. Johnland Road), southeast (along Dock Road) and to the west adjacent to single family residences. The buffer area located along the property line directly south of the independent living building (adjacent to the Kings Park Psychiatric Center) is proposed to be 100 feet in order to accommodate the internal roadway and parking. A variance for a decrease in a portion of the natural buffer area to accommodate the proposed development is being requested.

5. *Parking garage:* Parking garages are not permitted in the Town of Smithtown. The proposed project includes a subsurface parking garage in the independent living building with 104 spaces. In order to accommodate the required parking (including landbanked spaces), the underground parking garage is required. The proposed project site is partially located within the WSRR corridor which significantly restricts the developable area of the site. The applicant has indicated that this results in a hardship that necessitates some of the design features including the proposed parking garage. The garage is also provided for the convenience of the residents.

6. *Height:* Maximum height in the RC district is 35 feet/2 ½ stories; however, the draft Continuing Care Retirement Community (CCRC) ordinance permits an additional foot of height for every two feet of setback from the inside line of the buffer area, up to a maximum height of 50 feet.

The proposed townhouses and assisted living building will not exceed 2 ½ stories/35 feet; however, the proposed independent living building will be a maximum of 50 feet/four stories. Cross sections for the independent living building are provided in **Appendix E-1**, which illustrate the varying height of the structure, based on the site's topography. As shown, the height of the building at the southern portion of the site, closest to the 200-foot buffer setback, is 39 feet/three stories; however, a variance is needed to permit the proposed building, which has a maximum height of 50-feet. In order to more clearly illustrate the different heights being proposed on the site, **Appendix E-2** includes a color-coded Building Height Diagram which shows the different heights throughout the site.

The requested Special Exception and variances will be subject to further deliberation by the Town Board and Board of Zoning Appeals at the time of review of the proposed change of zone application and Site Plan review.

The subject site lies on the south side of St. Johnland Road and northwest side of Old Dock Road, both of which will provide access to the site. A single interior roadway will provide access to the assisted living structure, the independent living structure and the townhouses. A covered drop off/pick up area will be provided at the front of each of the independent living and assisted living buildings. The developed portion of the site will include pedestrian pathways; allowing residents to walk from one area to another.

Based on Town Zoning Code requirements, a minimum of 531 parking spaces are necessary; a total of 531 parking spaces will be provided throughout the site, including 271 surface spaces, 128 landbanked spaces, 104 spaces in the subsurface parking garage in the independent living building, and 28 townhouse garage spaces.

An estimated 18.47 acres of the site will be cleared to allow for the proposed construction, primarily located in the central portion of the site, south/southwest/southeast of the pond. Approximately 30.34 acres of natural vegetation will remain, providing vegetated buffers along all property boundaries. The remaining site acreage will be impervious surfaces (9.53 acres) and landscaping (9.04 acres). The buffer along the western, northern and eastern property boundary includes a 200-foot setback and a 100-foot buffer is provided along the southern property boundary adjacent to the state-owned vacant Kings Park Psychiatric Center, and a 100 foot buffer around the delineated freshwater wetland area.

Table 2-2
SITE AND PROJECT CHARACTERISTICS
Existing Conditions & Proposed Project

Parameter	Existing Conditions	Proposed Project
Use & Yield	Vacant	199 CCRC units
Zoning	R-43	RC
Coverages (acres)**:**		
Coastal Oak-Hickory	7.39	7.33
Successional Southern Hardwood	39.73	21.68
Red Maple Swamp	1.33	1.33
Pond	0.78	0.78
Impervious	0.36	9.53
Landscaped	0.10	9.04
Water Resources:		
Domestic Water Use (gpd) (1)	0	37,820
Landscape Irrigation (gpd)	0	±3,699
Total Water Use (gpd)	0	41,519
Recharge Volume (MGY)	27.29 (2)	46.64 (3)
Nitrogen Concentration (mg/l)	0.01 (2)	3.30 (3)
Trip Generation (vph)**:**		
Weekday AM Peak Hour	0	49
Weekday PM Peak Hour	0	58
Saturday Midday		78
Miscellaneous:		
Total Residents	0	287
School-Age Children	0	0
Employees (FTE)	0	73.6
Solid Waste (lbs/day)	0	1,004.5 (4)
Parking Required	0	531
Parking Provided	0	531

gpd – gallons per day; MGY-million gallons per year; mg/l – milligrams per liter; vph-vehicles per hour.
(1) Based on Suffolk County Department of Health Services (SCDHS) rates, see **Table 2-4**
(2) See **Appendix J-2**.
(3) See **Appendix J-3.**
(4) Assumes 3.5 lbs/day/capita (**Salvato et al, 2009**).

The applicant has designed the proposed development to meet several energy efficient/"green" construction goals, including the following strategies:

Site

- Site will be developed with full erosion controls in place to reduce sediment run off into local streams and bodies of water.
- Buildings are designed to be in a high density arrangement to reduce site development footprint impact and preserve green space.
- At grade parking has been minimized to reduce heat island effect from pavement areas by providing subsurface and landbanked parking.

- Minimum required 100 foot buffers maintained between development and wetland areas.

Water
- Landscape plantings are proposed to be selected as indigenous or drought tolerant and turf grasses are minimized thereby reducing the need for irrigation water and maintenance.
- Plumbing fixtures will meet energy act for flow rate thereby conserving water.

Energy and Atmosphere
- Highly efficient thermal envelope reduces heat loss and air infiltration leading to reduced energy consumption and greater indoor comfort.
- Energy star appliances and windows are planned throughout.
- Efficient HVAC equipment to reduce electrical and gas consumption.
- Fluorescent or LED efficient light fixtures with lighting controls systems where applicable.

Materials and Resources
- Construction team will divert any recyclable waste materials away from landfills.
- Exterior materials will be chosen to provide long life and minimize maintenance.
- Low VOC paints and adhesives will be utilized
- All framing materials will be ordered to length from fully estimated quantities to reduce waste.
- Efficient framing techniques will be used where possible to reduce material use.
- Construction team will maximize the amount of materials that are locally harvested and processed.

Indoor Environmental Quality
- All fuel burning appliances will meet basic combustion venting standards.
- CO detection will be placed immediately inside the door at units with attached garages.
- HVAC equipment will contain upgraded filters.
- Walkoff mats will be included at all primary entrances to reduce foot traffic contaminants.
- Green cleaning products are planned to maintain a low VOC environment.

2.2.2 Grading and Drainage

Soil disturbance is necessary to establish suitable grades for the proposed roads and building locations, in consideration of the need for low grades required for proper drainage, road grades, conformance with requirements of the Americans with Disabilities Act (ADA), etc. In order to reduce the acreage of disturbance and the volume of soil excavated, retaining walls may be used on the site. Preliminary grading is shown on the **Master Development Plan** as well as the **Preliminary Grading and Drainage Plan**; however, detailed grading will be prepared as part of the formal Site Plan submission to the Town if and when the requested Change of Zone is approved by the Town Board. The Grading and Drainage Plan will require Town Engineering Department review and Town Board approval prior to construction.

It is expected that the estimated 18.47 acres of the central portion of the property will be subject to clearing and grading, leaving 30.34 acres in a naturally-vegetated state; this latter area will not be disturbed. All disturbed soil areas will be stabilized and all areas other than buildings and paved surfaces will be re-landscaped. The areas of anticipated clearing are presented in **Table 2-3**, below:

Table 2-3
ANTICIPATED CLEARING

Coverage Type	Existing Conditions	Remaining After Construction	Cleared
Successional Southern Hardwood Forest	39.73 acres	21.68 acres	18.05 acres
Coastal Oak-Hickory Forest	7.39 acres	7.33 acres	0.06 acres
Impervious/Paved	0.36 acres	0	0.36 acres
Total Cleared	**---**	**---**	**18.47 acres**

The independent living building will include a subsurface parking garage consisting of 104 spaces. Based on preliminary grading design, it is anticipated that approximately 66,000 cubic yards (CY) of soil will be required as fill material for grading operations. Of this total 61,000 CY will be obtained from on site cut generated from excavation necessary during construction activities (foundation and drainage excavations, etc.) and that approximately 5,000 CY of fill will be required to be imported to the site to provide adequate surface areas and grade transitions for development. In addition, it should be noted that approximately 55,000 CY of top soil will be excavated from the property. Of this total, 15,000 CY will be reused within planned landscaped areas and the excess 40,000 CY will be removed from the property.

In conformance with Town of Smithtown requirements, stormwater runoff generated from the proposed project will be retained on-site and recharged to groundwater. The drainage system will be designed for storage of stormwater generated from a minimum three-inch rainfall event, as identified in the "site plan requirements for commercial and industrial sites" included in the Board of Site Plan Review Application Checklist. The project will be subject to the State Pollution Discharge Elimination System (SPDES) requirements under New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP 0-10-001 or "General Permit") and Chapter 153 of the Town Code. These permits require evaluation of the proposed stormwater management system to ensure adequate storage of stormwater is provided such that peak discharge of stormwater does not increase from existing conditions based on a 10-year and 100-year storm event. Based on this evaluation, the on-site stormwater management system may require storage in addition to the Town's base three-inch rainfall event. This analysis will be completed during the site plan review of the project if the requested change of zone and Special Exemption application is approved by the Town Board.

The Preliminary Grading and Drainage Plan illustrates that subsurface leaching pools are proposed throughout the site for containment and recharge of stormwater. Leaching pools will be located within well-draining soils, however if soil conditions limit recharge capabilities, subsurface material will be excavated and replaced with a minimum three foot collar of well-draining soil. The Town will be responsible for the review and approval of the drainage system design. Additional details on the preliminary grading plan are provided in **Section 3.3.2** (see page 3-10)**.**

A detailed site plan will be prepared for review by the Town Board; it will include final design of grading and drainage systems. Stormwater generated on-site will be fully accommodated on-site. As described above, the system must be designed to comply with State Pollution Discharge Elimination System (SPDES) requirements under New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP 0-10-001 or "General Permit") and Chapter 153 of the Town Code. Under these requirements, a site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared and submitted to the Town for review and approval as a condition to final site plan approval.[1] The Stormwater Pollution Prevention Plan (SWPPP) must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is no net increase in peak stormwater discharges from a property once developed.

Additionally, the Stormwater Pollution Prevention Plan (SWPPP) includes details of erosion controls required during construction to contain stormwater runoff on site during construction and ensure that there is no transport of sediment off site. The Erosion Control Plan will be prepared in accordance with the recommendations of the *NYSDEC Standards and Specifications for Erosion and Sedimentation Control* and the New York State Department of Environmental Conservation (NYSDEC) Technical Guidance Manual. Use will be made of measures including:

- silt fencing and temporary diversion swales installed along the perimeter of the limits of clearing within the site to minimize/prevent sediment from washing into the natural buffer areas, adjacent streets and properties.
- inlet protection installed around all grated drainage inlets to trap sediments in stormwater runoff.
- dust control and watering plan and a stabilized construction entrance to minimize the tracking of dirt and debris from construction vehicles onto adjacent roadways.
- designation of material and topsoil stockpile areas as well as use of silt fencing and anchored tarps to prevent/reduce wind-blown dust and erosion from rainwater.
- establishment of a stabilized stone vehicle washing station which drains into an approved sediment-trapping device.

The proposed locations, sizes, and lengths of each of the temporary erosion and sediment control practices planned during site construction activities, and the dimensions, material specifications, and installation details for all erosion and sediment control practices will also be provided on the Erosion Control Plan.

The drainage system and associated Stormwater Pollution Prevention Plan (SWPPP) will be fully designed for the site plan application (prepared subsequent to approval of the change of zone),

[1] The SWPPP must include: a description of the existing site conditions including topography, soils, potential receiving water bodies and stormwater runoff characteristics, a description of the proposed construction project, construction schedule, the erosion and sediment controls planned during construction activities and the details of the post construction stormwater management system design and consistency of said system with the *NYS Stormwater Design Manual*, appropriate maintenance procedures for the erosion and sediment controls and each component of the post construction drainage system, pollution prevention measures during construction activities, a post-construction hydrologic and hydraulic analysis for all structural components of the post construction stormwater management system for a 1, 10 and 100 year storm event, and comparison of existing and post construction peak stormwater discharges.

and will require the review and approval of Town engineering and the Town Board. Evaluation of the drainage system through preparation of the Stormwater Pollution Prevention Plan (SWPPP) analysis required pursuant to Chapter 153 of the Town Code and the New York State Department of Environmental Conservation (NYSDEC) General Permit ensures there will be no net increase in stormwater runoff generated by the proposed project. Based on existing developments in the area, local geologic conditions, and areas of adequate depth to groundwater, subsoils are expected to be of suitable quality to allow efficient recharge of stormwater, subject to further evaluation during subsequent project review. However, if soil conditions limit recharge capabilities, subsurface material will be excavated and replaced with well-draining soil.

2.2.3 Access, Road System and Parking

The subject property has frontage on St. Johnland Road and Old Dock Road. In the vicinity of the subject site, St. Johnland Road and Old Dock Road each have one travel lane in each direction, but have shoulder lanes on each side. Site access is proposed from both St. Johnland Road and Old Dock Road. A single interior roadway will provide access to the assisted living structure, the independent living structure and the townhouses. The project's internal aisle/roadway is proposed to be 24 feet in paved width. The project's internal roadways will remain in private ownership, to be maintained by the owner. This surface will be curbed and equipped with a drainage system. A covered drop off/pick up area will be provided at the front of each of the independent living and assisted living buildings. The developed portion of the site will include pedestrian pathways; allowing residents to walk from one area to another.

As required by the draft Continuing Care Retirement Community (CCRC) zoning ordinance and the Town Code, respectively, each of the independent and assisted living units require 2.5 spaces per unit and the townhouse units require 4 spaces per unit. As a result, a total of 531 parking spaces are required for the proposed project. A total of 531 parking spaces will be provided, including 271 surface spaces, 128 landbanked spaces, 104 spaces in the subsurface parking garage and 28 garage spaces (townhouse units).

2.2.4 Sanitary Disposal and Water Supply

<u>Water Supply</u>
Potable water will be provided to the proposed project from the Suffolk County Water Authority (SCWA) distribution system. The project will include extension of a 12-inch water main beneath St. Johnland Road (see **Figure 2-4**). All necessary connections, meters, easements and installations will be provided to ensure adequate water supply. The potable water consumed by the project would be supplied from Suffolk County Water Authority (SCWA) Distribution Area #11.

<u>Water Use</u>
Assuming the sanitary design flow rates used by the Suffolk County Department of Health Services (SCDHS) for wastewater systems (which provides an indication of water use), the estimated water use and sewage flow for the Continuing Care Retirement Community (CCRC)

units is 37,820 gpd of water will be consumed for domestic purposes (based on size and/or type of the proposed units, see **Table 2-4**). Assisted living units (all of which are less than 600 SF) will consume 110 gpd of potable water, independent living units (including townhouse units) 600-1,600 SF will consume 150 gpd of potable water and independent living units (including townhouse units) 1,600 SF-2,000 SF will consume 225 gpd of potable water. In addition, pursuant to Suffolk County Department of Health Services (SCDHS) sanitary design flow rates, wastewater from kitchen use associated with communal dining areas must be accounted for (20 gpd per bed of the independent and assisted living units), as well as flow allocation for a swimming pool (5 gpd per swimmer). Therefore, a total of 37,820 gpd of water will be consumed for domestic purposes. It is expected that landscape irrigation will require an annualized average of 3,699 gpd, assuming that 5.5 inches are applied over the growing season, and the entire 9.04 acres of landscaping would be irrigated. Thus, total water use of the proposed project is estimated at 41,519 gpd (see **Table 2-4**).

Sanitary Wastewater Treatment

Sanitary wastewater flow and discharge requirements are determined by the Suffolk County Department of Health Services (SCDHS), under the jurisdiction of SCSC Article 6, which also addresses sewage facility requirements for realty subdivisions, development and other construction projects in order to limit the loading of nitrogen in various groundwater management zones as established by the Suffolk County Department of Health Services (SCDHS). The project site is located within Groundwater Management Zone VIII as defined by the Suffolk County Department of Health Services (SCDHS). Based on the requirements of Suffolk County Sanitary Code (SCSC) Article 6, no more than 600 gallons may be discharged per acre on a daily basis within this zone. The proposed project site acreage used for determining this Population Density Equivalent must not include wetlands, surface waters, or land in flood zones. The subject site is 49.69 acres in size and contains 2.11 acres of wetlands and surface water (1.33 acres of red maple hardwood swamp and 0.78 acres of surface water). Thus, the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

$$(49.69 \text{ acres} - 2.11 \text{ acres}) \times 600 \text{ gpd/acre} = 28{,}548 \text{ gpd}$$

The current design sewage flow standard applied by the Suffolk County Department of Health Services (SCDHS) estimates that the proposed project will generate approximately 37,820 gpd of sanitary effluent. This will exceed the 28,548 gpd allowable for the site in Groundwater Management Zone VIII and as a result, use of a sewage treatment plant (STP) will be required for disposal of sanitary waste.

Table 2-4
WATER USE & SANITARY WASTEWATER FLOWS (1)

Component	Yield	Flow Factor (2)	Use
Assisted Living	24	110 gpd/bed	2,640 gpd
CCRC units 600 SF – 1,600 SF	145	150 gpd/unit	21,750 gpd
CCRC units 1,600 SF – 2,000 SF	30	225 gpd/unit	6,750 gpd
Common kitchen area per bed for independent and assisted living units	--	20 gpd/bed	6,600 gpd
Pool	16	5 gpd/swimmer	80 gpd
Total Sanitary Wastewater Flow	**---**	**---**	**37,820 gpd**
Irrigation	9.04 acres	5.5 inches/year	3,699 gpd
Total Water Usage	**---**	**---**	**41,519 gpd**

(1) Maximum sanitary flow for septic system in Zone VIII is 600 gpd/acre, or 28,548 gpd for site.
(2) Per Suffolk County Department of Health Services, Division of Environmental Quality, Standards for Approval of Plans and Construction for Sewage Disposal Systems for Other Than Single-Family Residences, December 1, 2009. Note that kitchen wastewater flow is based on 20 gpd per bed for independent and assisted living units (accounts for two beds per independent living unit and one bed per assisted living unit) and swimming pool flow is based on 5 gpd per swimmer (assuming 50 SF of pool area per potential swimmer).

A pump station is presently located in the northeast corner of the subject property, which pumps wastewater to the Suffolk County Sewer District #6 (Kings Park Sewage Treatment Plant (STP)) which is located southeast of the subject property, off of Mariner Road. The Uplands at St. Johnland project proposes to connect to this pump station for transfer of wastewater to the Kings Park Sewage Treatment Plant. The sufficiency of this pump station for the additional flow will be evaluated as part of the site plan application review to determine if upgrades are needed to the pump station. As part of the proposed project, a ± 5-acre portion of the St. Johnland Nursing Center property (SCTM No. 800-08-04-01.6), located outside the westernmost boundary of the Nissequogue River Wild, Scenic and Recreational Rivers area boundary (see **Figure 2-2**), is proposed to be transferred to Suffolk County Department of Public Works to allow for recharge of treated effluent. Treated effluent would be pumped back to the ± 5-acre property and discharged to sanitary leaching pools to be installed by the Suffolk County Department of Public Works (SCDPW) on the property. A map illustrating the ±5-acres of St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) for sanitary discharge and leaching is provided in **Figure 2-5**. According to a letter from the Suffolk County Department of Public Works (SCDPW) (see **Appendix G-3**), the use of ±5-acre parcel will allow the Kings Park Sewage Treatment Plant (STP) to process the full treatment capacity of the plant, while maintaining compliance with the permit restrictions set forth by the Long Island Sound Study. The ±5-acre area will be mostly cleared and replanted with grass with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer. Leaching pools will be a maximum depth of 15 feet (or an effective depth of 12 feet). Pools will be located no closer than 25 feet from the ±5-acre property boundary.

2.2.5 Site Landscaping and Lighting

It is anticipated that, in general, native or native-compatible grasses will be planted throughout as groundcover, with decorative shrubs interspersed at appropriate locations. Turf will be limited to areas surrounding the buildings and site entrance. Total landscaped coverage is estimated to be 9.04 acres. A detailed Landscape Plan will be prepared for the site plan application, which would be submitted contingent on approval of the change of zone application. As much natural vegetation will be retained as possible in preparing the Landscape Plan, dependant upon the final Grading Plan.

Lighting will be consistent with current Town standards and requirements, all installed with dark-sky compliant downcast fixtures. Lighting will be provided to establish a safe and secure environment with illumination only in those areas where it is necessary. Illumination will not extend beyond the property boundaries and diffuse lighting will not occur.

2.3 Construction Schedule and Operations

Construction Schedule
The applicant will proceed with construction upon final Town Board and other agency approvals. Construction of the proposed project is anticipated to culminate in 2014.

Construction Operations
The construction process will begin with establishment of flagged clearing limits, followed by installation of staked hay bales and silt fencing in critical areas for erosion control purposes, including the downslope limit of all cleared/graded area, to minimize the potential for eroded soils to impact the wetlands and other environmentally sensitive areas. For trucks exiting the site, “rumble strips” (which cause truck tires to shed any mud trapped within the treads) will be placed at the construction vehicle entrance/exit, to prevent soil from being tracked onto adjacent roadways. Construction equipment and materials and all vehicles will be parked and loaded/unloaded within the site.

Based on the quantities presented in **Table 2-2**, an estimated 18.47 acres will be cleared for construction. This includes areas for the new buildings, the internal roadways and parking surfaces, the drainage system and landscaping. In order to minimize the time span that denuded soil in the developed area is exposed to erosive elements; excavations will take place immediately after grading operations have been completed. Excavations for building foundations, roadways and parking areas, the drainage system and utility connections will occur next, followed by pouring of concrete for the foundations. Building construction can then begin concurrent with the utility connections, final grading and paving of the internal roadways, driveways and parking areas. Because these steps will take the most time, installation of the site lighting system and landscaping can be performed prior to final grading and initial paving lifts, and while the buildings are completed.

The construction manager, in combination with the various specialized contractors, will be responsible for all construction activities, site grading, and installation and maintenance of the erosion and sediment controls. The construction manager will also be responsible for ensuring proper storage and stockpiling of construction materials and that building supplies will be stored in designated areas, and that measures are implemented to prevent/reduce wind-blown dust. The construction manager will be responsible for securing an approved carter to empty the site dumpster and haul waste from the site to an approved location for disposal. The potential for erosion during the construction period will be mitigated by conforming to the requirements of Chapter 153 of the Town Code, and with the New York State Department of Environmental Conservation's (NYSDEC) review of the project's runoff control methods under the State Pollutant Discharge Elimination System (SPDES) program. Under this program, a site-specific Stormwater Pollution Prevention Plan (SWPPP) will be prepared and submitted to the Town for review and approval, if required. Once the Town approves the Stormwater Pollution Prevention Plan (SWPPP), the applicant must file a Notice of Intent with the New York State Department of Environmental Conservation (NYSDEC) to obtain coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit, designated GP 0-10-001.

Erosion and sediment transport control measures will be incorporated into the construction process, such that sediment will not be transported off-site by stormwater runoff and fugitive dust will be limited to the maximum extent practicable during construction. The erosion control plan must provide measures consistent with the best management practices contained in the New York State Department of Environmental Conservation's (NYSDEC) Technical Guidance Manual, and use of measures such as:

- Silt fence, storm drain inlet protection, hay bales & good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;
- "Rumble strips" will be placed at the site entrance to prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures;
- Construction of the structures can then begin concurrent with the utility connections. Once heavy construction is complete, finish grading will occur followed by soil preparation using topsoil mix, turf and installation of the landscaping, which will be performed while the structures are being completed;
- The drainage system and revegetation plan will further provide permanent stormwater controls once construction is completed; and
- A water truck will be available on-site during construction to wet excessively dry soils as needed to prevent fugitive dust during elevated wind conditions.

Maintenance of all permanent stormwater management controls and drainage structures will be the responsibility of the site owner upon the completion of construction activities. Pursuant to the requirements of Chapter 153 of the Town Code and the New York State Department of Environmental Conservation (NYSDEC) General Permit, inspections of the installed erosion controls are required to be conducted at a minimum frequency of every seven calendar days throughout the construction period to ensure erosion controls are installed and properly maintained. Routine maintenance responsibilities for permanent stormwater structures and practices include:

1. Monitoring of the drainage inlets should be completed routinely, particularly following rainfall events with significant rainfall (defined as 0.5 inches of rainfall over a 24 hour period, or greater is recommended as a minimum).
2. Drainage grates should be kept free from obstruction of leaves, trash, and other debris.
3. Drainage structures are to be initially inspected annually to determine if sediment removal is necessary to ensure drainage structures are properly functioning and permitting adequate conveyance throughout the system and establish the frequency of future maintenance.
4. All seeded and landscaped areas are to be maintained, reseeded, and mulched as necessary to maintain a dense vegetative cover.

Old Dock Road will be used for all construction vehicle access. Construction activities are not anticipated to occur outside weekday daytime hours (7 AM to 6 PM) or as governed by Town regulations, and will conform to applicable Town regulations regarding construction noise generation and hours.

In addition to the measures noted above, it is noted that the proposed development areas are removed from residential areas and will take place on the interior of the site. A wooded buffer will remain between the proposed project and the nearest neighborhood. The applicant will not allow grading to occur during periods when winds exceed 20 miles per hour (mph) in order to reduce potential wind blown dust. This combined with limited construction areas based on the Stormwater Pollution Prevention Plan (SWPPP) and maintaining a water truck on-site to "wet" excessively dry soils should this be necessary will further ensure that wind blown dust does not impact surrounding areas. Based on the construction management plan outlined above, the potential for dust generation/migration will be reduced to the maximum extent practicable.

2.4 Permits and Approvals Required

A number of approvals will ultimately be required for the proposed project. A list of anticipated approvals is provided in **Table 2-5**.

Table 2-5
PERMITS AND APPROVALS REQUIRED

Applicable Board/Agency	Approval Type
Town Board	Change of Zone, Special Exception approval, Site Plan review, Modifications for gross floor area, natural buffer area and height
Town Board of Zoning Appeals	Variance for disturbance of environmentally sensitive lands (steep slopes and high groundwater) and parking garage
Town Planning Board	Subdivision (5-acre parcel for transfer to Suffolk County Department of Public Works)
Town Building Department	Building Permits
Town Highway Department	Road Opening Permit
Suffolk County Department of Health Services	Wastewater Disposal & Water Supply permits
Suffolk County Department of Public Works/Suffolk County Sewer Agency	Approval to Connect to Kings Park Sewage Treatment Plant, Modification of the Kings Park Sewage Treatment Plant State Pollutant Discharge Elimination System (SPDES) permit for relocation of discharge
Suffolk County Water Authority	Water Supply and Connection approvals
New York State Department of Environmental Conservation	Non-Jurisdiction letter or Article 24 Freshwater Wetlands Permit, as necessary; Modification of the Kings Park Sewage Treatment Plant State Pollutant Discharge Elimination System (SPDES) Permit for relocated discharge; General Permit for Stormwater Discharges from Construction Activities; Wild, Scenic & Recreational Rivers System Permit

SECTION 3.0

NATURAL ENVIRONMENTAL RESOURCES

3.0 NATURAL ENVIRONMENTAL RESOURCES

3.1 Geology

3.1.1 Existing Conditions

Long Island is located within the Atlantic Coastal Plain, a physiographic province in which substantial sediment deposits overlie the base, or bedrock (**Fuller, 1914**). The surface topography primarily reflects the glacial history of the Island and subsequent human activity. Understanding the geologic history and stratigraphy of Long Island is important in relating potential impacts of the project to hydrogeologic resources.

The bedrock which underlies Long Island slopes south and east at a rate of approximately 70 feet per mile, and the overlying sediments increase in thickness toward the south (**Jensen and Soren, 1974; Smolensky, et al., 1989**). The elevation of the top of bedrock is approximately 800 feet below sea level in the area of the site (**Smolensky, et al., 1989**). Bedrock is of Precambrian age, and is overlain by unconsolidated sediments of Cretaceous and Quaternary age. The Cretaceous sediments contain three major groundwater aquifers: the Lloyd, Magothy and Upper Glacial Aquifers. **Figure 3-1** provides a cross section of Long Island for a profile running from Long Island Sound to the Atlantic Ocean in the vicinity of the project site, with the approximate site location indicated (**Jensen and Soren, 1974**).

The primary Cretaceous sediments on Long Island are the Raritan and Magothy Formations, which were deposited atop bedrock during the mid to late Cretaceous period (138 to 65 million years ago) as a result of sediment transport from highlands to the north (**Koszalka, 1984**). The Raritan Formation consists of two members: the Lloyd Sand and the Raritan Clay. The Lloyd Sand contains the Lloyd aquifer, which is separated from the overlying Magothy aquifer by the low permeability Raritan Clay (**Suter et al., 1949; Jensen and Soren, 1974**). The upper altitude of the Lloyd sand member is approximately 600 feet below sea level in the vicinity of the site, indicating a thickness of 200 feet, and the top of the Raritan clay is approximately 450 feet below sea level, indicating a thickness of 150 feet. The Magothy Formation and Matawan Group, which form the Magothy aquifer, were deposited in the late Cretaceous (approximately 75 million years ago) following a period of erosion of the Raritan clay. The base of the Magothy is composed of coarse sand, gravel and pebbles as large as 2 inches in diameter. These coarse sediments are interbedded with fine to clayey sands and solid clays. Locally thick clay beds have been traced to spans of up to one mile. At the site, the upper altitude of the Magothy Formation is approximately 50 feet below sea level, indicating a thickness of about 400 feet (**Smolensky et al., 1989**).

During the Tertiary period (65 to 2 million years ago) there was erosion of Cretaceous deposits over much of Long Island due to hydrologic processes such as stream formation. Sea level was low, and a large valley formed north of Long Island in what is now Long Island Sound. Most of the surface sediments evident on Long Island were deposited during the glacial advances of the Pleistocene epoch, Quaternary period (2 million years ago to 10,000 years ago). The Pleistocene was marked by cycles of glacial advance and subsequent retreat producing morainal and glaciofluvial (outwash) sediments on top of the Magothy Formation and Matawan Group. These

Quaternary sediments, which consist of clay, silt, sand, gravel, and boulders, include both the Gardiners Clay and the Upper Glacial aquifer. The Ronkonkoma and Harbor Hills Terminal Moraines were deposited as part of this Upper Glacial deposit along the spine and the North Shore of Long Island as the glaciers retreated during the Wisconsin stage of the Late Pleistocene (approximately 25,000 to 10,000 years ago) (**Koszalka, 1984, p. 15**). Low, flat outwash plains formed southward as erosional processes carried sediments away from the moraines, and coastal processes formed barrier beaches along the south shore as sea level rose.

The proposed project site is situated on the northern side of the Harbor Hill end moraine (**Jensen and Soren, 1974**). The sediments of the moraines typically consist of unsorted and unstratified clay, silt, sand, gravel, and boulders but can also include crudely to well-sorted, stratified glacial drift. In contrast, the glaciofluvial sediments of the outwash plains consist of fine to coarse sand and gravel. The surface elevation of the proposed project site is ranges from 27 to 98 feet above mean sea level (msl), and thus the thickness of the Upper Glacial aquifer ranges from 77 to 148 feet beneath the site.

Four (4) soil borings were installed in the central portion of the property during May of 2010 and generally surround the on-site pond, which can be found in a pouch at the rear of the document. Review of the logs generated for these borings reveal that below the overlying surface soil layer (which consists of an organic loam to a sand silt loam), subsurface soils consist of fine to medium sand with intermittent layers of clay and silty clay.

In addition, a series of six (6) supplemental soil borings were installed along portions of the northern, eastern and southern property boundaries on the subject property during October of 2010, which can be found in a pouch at the rear of the document. The purpose of these borings was to further characterize the subsurface clay. Review of the logs generated for these soil borings indicate that beneath the overlying surficial soils (which generally consist of an organic loam to fine sandy silt loam), subsurface soils generally consist of fine to medium sand with traces of silt, coarse sand and gravels.

Four (4) geologic cross-sections have been prepared to provide a graphic depiction of the stratigraphy underlying the subject property and have been included as **Appendix G-1** and discussed further in **Section 3.5.1** (Water Resources) (see page 3-31).

Three soil borings were conducted on the nursing home property, in the vicinity of the proposed effluent recharge area to be used by the Kings Park Sewage Treatment Plant. A location map and test boring log is included in **Appendix G-2**. Soils were classified using the Unified Soil Classification System as per ASTM D2488 which provides alphabetical classification codes which are dependent on the percentages of soil types present.

Each boring was excavated to a depth of 40 feet below ground surface. Review of the logs generated for these borings reveals that subsurface soils at each location were classified as SP, SW, SM or SP-SM soils. SP and SW soils respectively consist of poorly graded and well graded sands while SM soils consist of silty sands. Combination SP-SM soils are noted to generally consist of poorly graded sands with silt.

3.1.2 Anticipated Impacts

The proposed project involves building construction, subsurface parking, surface improvements such as parking, and recharge systems for drainage. The project will convey sanitary effluent to the Kings Park Sewage Treatment Plan (STP). Effluent generated by this sewage treatment plant (STP) is proposed to be pumped to the ±5-acre area on the St. Johnland Nursing Center property, proposed to be transferred to the Suffolk County Department of Public Works (SCDPW) for discharge to sanitary leaching pools to be installed by the Suffolk County Department of Public Works (SCDPW) (see **Figure 2-2**). Test borings installed within the proposed effluent recharge area reveal that subsurface soils within this area possess suitable characteristics for leaching purposes and are not expected to limit the areas potential for use as a leaching field.

Review of the test hole boring logs for borings installed on the proposed project site show that subsoils are variable beneath the site and include locations where intermittent underlying clay is prevalent, as well as areas that provide suitable subsoils for leaching. A number of locations do not exhibit clay and therefore would provide locations for drainage recharge.

Buildings and subsurface parking areas can be excavated and foundations formed and poured for the proposed on-site structures. Surface improvements are not hampered by subsurface conditions given the variable soils which provide suitable surface qualities. Drainage systems will be designed based on the subsurface soil information and will be located to take advantage of suitable quality leaching soils.

Final design will occur at the time of site plan review should the change of zone be reviewed favorably by the Town Board. It is expected that a combination of surface detention and subsurface recharge to areas with suitable soils will provide the necessary elements of the drainage system to ensure conformance with Town of Smithtown requirements. As noted in **Section 2.2.2** (see page 2-10), stormwater runoff generated from the proposed project will be retained on-site and recharged to groundwater. The drainage system will be designed for storage of stormwater generated from a three-inch rainfall event, as identified in the "site plan requirements for commercial and industrial sites" included in the Board of Site Plan Review Application Checklist, and will utilize subsurface leaching pools and rain gardens for containment and recharge of stormwater. A detailed site plan will be prepared for review by the Town Board; it will include final design of grading and drainage systems. The system will be designed to comply with State Pollution Discharge Elimination System (SPDES) requirements under New York State Department of Environmental of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP 0-10-001 or "General Permit") and Chapter 153 of the Town Code. Under these requirements, a site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared and submitted to the Town for review and approval as a condition to final site plan approval.

The test holes effectively characterize subsurface soils for the purpose of this Draft Environmental Impact Statement (DEIS); however, further test holes can be installed in connection with final drainage design if further characterization is necessary at the time of site

plan review. In addition, unsuitable material, if encountered, can be removed and backfilled with clean material to promote proper leaching of stormwater; however, this is not expected based on the information provided by the existing test borings conducted on the subject site.

The existing geologic conditions of the subject site have been characterized and potential impacts assessed. The proposed change of zone would allow the proposed project to proceed to site plan review which would further consider subsoils, drainage design, grading and stabilization of the site in conformance with the regulations outlined above. Sufficient information has been obtained to demonstrate the feasibility of the project, to assess potential impacts and identify mitigation measures to minimize impacts to the maximum extent practicable. Given the characterization of subsoils, design intent and permit review, significant long-term adverse environmental impacts are not expected. Potential short-term impacts will be minimized through proper grading, erosion control, construction management and site stabilization techniques that will be employed as described in detail in **Section 2.3** (see page 2-16) of this document. As noted, further information on subsoils as related to water resources is provided in **Section 3.5.2** (see page 3-36)**.**

3.1.3 Proposed Mitigation

- Additional test holes may be required prior to any site plan approvals from the Town Board or Suffolk County Department of Health Services (SCDHS) (if the on-site sewage treatment plant alternative is selected). This will permit evaluation of soils in conjunction with detailed grading, drainage and sanitary system final design.
- Unsuitable material, if encountered, will be removed and backfilled with clean material to promote proper leaching of stormwater and sanitary effluent.
- Short-term impacts will be mitigated by proper grading, erosion control, construction management and site stabilization techniques.

3.2 Surface Soils

3.2.1 Existing Conditions

The United States Department of Agriculture (USDA) Soil Survey of Suffolk County, New York provides a complete categorization, mapping and description of soil types found in Suffolk County. Soils are classified by similar characteristics and depositional history into soil series, which are in turn grouped into associations. These classifications are based on profiles of the surface soils down to the parent material, which is little changed by leaching or the action of plant roots. An understanding of soil character is important in environmental planning as it aids in determining vegetation type, slope, engineering properties and land use limitations. These descriptions are general, however, and soils can vary greatly within an area, particularly soils of glacial origin. The slope identifiers named in this subsection are generalized based upon regional soil types; the more detailed subsection on topography should be consulted for analysis of slope constraints.

The soil survey identifies the subject site as well as the ±5-acre portion of the St. Johnland Nursing Center property proposed for the effluent recharge area to be used by the Kings Park Sewage Treatment Plant, as lying within an area characterized by Carver-Plymouth-Riverhead Association soils, which are deep, rolling, excessively drained, coarse and well drained, coarse textured and moderately coarse textured soils on moraines. A total of seven (7) soils have been identified on proposed project site; the locations of these soils are depicted in **Figure 3-2**.

Specific descriptions of the soils found on-site follow:

Carver and Plymouth sands, 0-3% slopes (CpA) - These soils are mainly on outwash plains; however, they are also found on some flatter hilltops and intervening draws on moraines. This unit can be made up entirely of Carver sand, entirely of Plymouth sand or a combination of the two. The Carver series consists of deep, excessively drained coarse-textured soils. The hazard for erosion is slight and natural fertility is low. Many of these areas which were cleared for farming are now idle. Most areas in the western part of the county and near the shores of the eastern part of the county are used for housing development.

Carver and Plymouth sands, 15-35% slopes (CpE) - The Carver series consists of deep, excessively drained coarse-textured soils. This soil type is found almost exclusively on moraines except for a few steep areas on side slopes along some of the more deeply cut drainage channels on outwash plains. This unit can be made up entirely of Carver sand, entirely of Plymouth sand, or of a combination of the two soils. The hazard for erosion is moderate to severe. These soils are also droughty and natural fertility is low. The moderately steep to steep slopes are a limitation to use. Areas in the western part and north shore of the county are used for homesites.

Plymouth loamy sand, 0-3% slopes (PlA) - These soils consists of deep, excessively drained, coarse-textured soils that form a mantle of loamy sand or sand over thick layers of stratified coarse sand and gravel. These soils are mainly on outwash plains south of the Ronkonkoma moraine. The areas are generally level, but undulate in some areas. The hazard of erosion is slight. In the western portion of the county, this soil unit is used for hosing developments and as industrial sites.

Plymouth loamy sand, 3-8% slopes (PlB) - This soil has the profile described as representative of the series. It is mainly on outwash plains south of the Ronkonkoma moraine. It is also on flat hilltops and in drainageways on morainic deposits. The areas generally are nearly level, but they are somewhat undulating in places. Areas on outwash plains are large and uniform, and areas on the moraine are small and irregular. The hazard of erosion is slight on this soil. Many areas were formerly cleared for farming, but most of these areas are idle or are in brush or trees. In the western part of the County, most of this soil is used for housing developments and as industrial sites.

Riverhead sandy loam, 0-3% slopes (RdA) - This soil is generally on outwash plains where it has a slope characteristic of this landform and are in areas that are large and uniform. These soils consist of deep, well-drained, moderately coarse textured soils that are uniform in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. The hazard of erosion is slight on this soil. This soil is limited only by moderate doughtiness in moderately coarse textured solum.

Riverhead sandy loam, 3-8% slopes (RdB) - This soil is on moraines and outwash plains. It generally is in areas along shallow, intermittent drainageways. Slopes generally are moderately short, but large areas on moraines are undulating. The hazard of erosion is moderate to slight on this Riverhead soil. The main concerns of management are controlling runoff and erosion and providing adequate

moisture.

Sudbury sandy loam (Su) – This nearly level soil is between areas of more poorly drained soils and adjoining well drained soils of the Riverhead series. In a few places this soil is in the bottom of closed depressions in large tracts of Riverhead sandy loam and these areas are small. The hazard of erosion is slight and this soil is used for building sites if it is part of a larger development area.

All of the soils noted above are present on the proposed project site while only PlA and PlB soils are present on the ±5-acre portion of the St. Johnland Nursing Center property proposed to be transferred to Suffolk County Department of Public Works (SCDPW) for effluent recharge.

The Soil Survey was also consulted for information on the potential limitations for development that the soils may present. Such constraints for the soils are summarized in **Table 3-1**.

Table 3-1
SOIL LIMITATIONS

<table>
<tr><th>Parameter</th><th>Carver and Plymouth sands, 0-3% slopes (CpA)</th><th>Carver and Plymouth sands, 15-35% slopes (CpE)</th><th>Plymouth loamy sand, 0-3% slopes (PlA)</th><th>Plymouth loamy sand, 3-8% slopes (PlB)</th></tr>
<tr><td colspan="5">Soil Features Affecting:</td></tr>
<tr><td>Highway location</td><td colspan="2">Poor trafficability; extensive cuts and fills likely on CpE</td><td>No unfavorable features</td><td>---</td></tr>
<tr><td>Embankment foundation</td><td colspan="2">Strength generally adequate for high embankments; slight settlement; moderately steep to steep slopes on CpE soils.</td><td colspan="2">Strength generally adequate for high embankments; slight settlement.</td></tr>
<tr><td>Foundations for low buildings</td><td colspan="2">Low compressibility; large settlement possible under vibratory load; moderately steep to steep slopes on CpE</td><td colspan="2">Low compressibility</td></tr>
<tr><td>Irrigation</td><td colspan="2">Very low available moisture capacity; rapid water intake; moderate and moderately steep to steep slopes on CpE</td><td colspan="2">Very low available moisture capacity; rapid water intake</td></tr>
<tr><td colspan="5">Limitations for:</td></tr>
<tr><td>Sewage disposal fields</td><td rowspan="2">Slight</td><td rowspan="2">Severe: slopes</td><td rowspan="2">Slight</td><td>Slight</td></tr>
<tr><td>Streets and parking lots</td><td>Moderate: slopes</td></tr>
<tr><td>Lawns and landscaping</td><td colspan="2" rowspan="4">Severe: sandy surface layer; slopes on CpE</td><td colspan="2">Severe: sandy surface layer</td></tr>
<tr><td>Paths and trails</td><td rowspan="3">Moderate: sandy surface layer</td><td rowspan="3">Moderate: sandy surface layer</td></tr>
<tr><td>Picnic/play areas</td></tr>
<tr><td>Athletic and intensive play areas</td></tr>
</table>

Table 3-1 (cont'd)
SOIL LIMITATIONS

Parameter	**Sudbury sandy loam** (Su)	**Riverhead sandy loam, 0-3% slopes** (RdA)	**Riverhead sandy loam, 3-8% slopes** (RdB)
Soil Features Affecting:			
Highway location	Seasonal high water table	---	---
Embankment foundation	Strength generally adequate for high embankments; slight settlement		
Foundations for low buildings	Seasonal high water table; low compressibility;	Low compressibility	
Irrigation	Seasonal high water table; moderate to rapid water intake; moderate available moisture capacity.	Moderate to rapid water intake; moderate available moisture capacity	
Limitations for:			
Sewage disposal fields	Moderate: seasonal high water table at depth of 0.5 to 1.5 feet	Slight	Slight
Streets and parking lots			Moderate: slopes
Lawns and landscaping	Slight		Slight
Paths and trails			
Picnic/play areas			
Athletic and intensive play areas			Moderate: slopes

As noted in the table, six of these soils pose "moderate" to "severe" limitations for development due specifically, to slopes, sandy surface layer and seasonal high water table. The implications of these constraints with respect to development will be discussed in **Section 3.2.2** (see page 3-8).

A Phase I Environmental Site Assessment (ESA) was conducted at the subject property by Stantec Consulting Group, Inc. (Stantec) in May of 2004. Based on the findings of the report, it was recommended that the locations of former structures in the southwestern portion of the property should be investigated for the possible presence of buried tanks or other potential contamination issues. The Phase I ESA is provided as **Appendix H-1**.

During August of 2004, Stantec conducted a test pit program as part of a Phase II Environmental Site Assessment (ESA) (see **Appendix H-2**). A total of twelve test pits were excavated to a maximum depth of twelve feet below ground surface in the southwestern portion of the property Results of the test pit program revealed that three former building foundations had been backfilled with various materials. In addition, two fuel oil tanks were found in the former building foundations but the contents did not appear to have impacted surrounding soils. However, dark soil, dark ash-rich material and dark ash rich soils were observed around some of the building foundations. Analysis of these soils found that they contained elevated levels of

barium, lead and mercury. It was concluded that since this area of the site was occupied by former buildings that were destroyed by fire and because barium and lead have historically been used as paint additives, it was possible that paint from the former residential structures in the southwestern portion of the subject property was the source of the elevated concentrations of metals.

Based on these findings, Stantec recommended that additional soil sampling be conducted in the southwestern portion of the subject property to further delineate the contamination noted above. This supplemental sampling was conducted during October of 2004 and December of 2005. In October of 2004 a total of 37 surficial soil samples were collected from the southwestern portion of the property and sampled for lead since it was the most predominantly detected metal and therefore was used as a "marker" metal to delineate overall metal contamination. Results of the sampling revealed that 26 of the samples were found to exceed the Eastern United States background level for lead (500 mg/kg). Based on these results, Stantec recommended that additional soil samples be collected to further assess the vertical and lateral extent of lead impacted soils; this work was conducted during December of 2005. During this sampling event, 53 soil samples were collected from the southwestern portion of the subject property but ultimately only 41 samples were submitted for laboratory analysis and the results were used to delineate the final boundaries for future remedial activities.

Remedial activities were conducted by VHB, Inc. in 2007. Based on the results of the Phase II ESA investigations noted above, eight former foundation areas in the southwestern portion of the property were excavated for the purpose of removing impacted soils. Each excavation was advanced based on visual observation and previous analytical results. Following the excavation of each area, post excavation samples were collected to confirm that impacted soils had been removed in compliance with applicable regulatory agency background levels. As a result of remedial activities conducted, a total of 602.62 tons of hazardous and 488.35 tons of non-hazardous soil was removed from the subject property and transported to appropriate facilities for disposal. The Remedial Action Report can be found as **Appendix H-3**.

3.2.2 Anticipated Impacts

Developed surfaces are considered to be the sum of building coverage ("footprint"), paved areas (sidewalks, parking areas, etc.) and lawn/landscaped areas; it is anticipated that these are the areas that would be graded for the project. **Table 2-3** indicates that 18.47 acres of the proposed project site would be cleared, it is anticipated that this is the acreage to be graded.

Six (6) of the soils (CpA, CpE, PlA, PlB, Su and RdB) found on the subject site pose "severe" to "moderate" limitation to development due to seasonal high water table at depth of 0.5 to 1.5 feet, sandy surface layer and/or slopes. These limitations relate to several project features, which include sewage disposal fields (which require leaching soils similar to stormwater drainage facilities), streets and parking areas, lawns and landscaping, paths and trails and play areas. Of these soils, only Su and RdB are in areas of the site proposed for development and may be present in areas of buildings, paved areas and landscaping. Both of these soils pose only "moderate" limitations due to seasonal high water table and slopes. Seasonal high groundwater,

as well as "perched" water are addressed more specifically on the site through the soil boring program that has been completed. This is discussed in detail in **Section 3.5.2** (see page 3-36). Slopes have been determined on site using site-specific topography, and the proposed project has been designed in consideration of this constraint. As a result, the general limitations noted in the regional Soil Survey based on soil types, will be addressed in greater detail based on site-specific information. The remaining four (4) soils are primarily within the proposed buffer areas along the site periphery and are not expected to significantly impact site development.

Appropriate site development practices will be employed to minimize potential impact to soils. The developed portions of the site will be initially graded or re-graded (to provide an acceptable surface on which development can occur), followed by the installation of landscaping or soil stabilization controls (retaining walls, etc.). Methods of site construction and development will be employed to ensure that slope constraints do not present an impediment to the safe and environmentally appropriate use of the site.

On-site topographic mapping and previous site use activities indicate that the area of the site proposed for development has been disturbed and generally maintains less steep topography with localized areas of slopes greater than 15%. The more significant slopes found on the property are restricted to the proposed buffer setback area. As a result, limitations due to slopes will mostly be mitigated through careful design of site layout and a final grading plan at the time of site plan review. In addition, an estimated 62.63% of the overall site (31.12 acres) will remain in natural state and includes the periphery buffer area, wetlands area and 100 ft. wetland buffer setback area and most areas of high groundwater. As a result, disturbance will occur within the internal portions of the property, and site plan engineering will be used to ensure suitable grade transitions and protection of natural soils on site.

Review of **Table 3-1** reveals that the PlA and PlB soils which are present on the ±5-acre portion of the St. Johnland Nursing Center property proposed for the Kings Park Sewage Treatment Plant leaching field present no significant limitation for this use. It is noted that stormwater runoff will be contained on site and will use a combination of stormwater recharge catch basins and leaching pools within the developed sections serving the internal roadways and parking areas. These systems will be designed for the specific site conditions based on test boring data which will ensure suitable soil recharge locations. These systems will also direct recharge away from areas of seasonal high water and therefore, these conditions are not expected to cause an impediment to drainage systems on the site.

Measures anticipated to be taken during the construction period which will minimize the potential for erosion include, but are not limited to 1) use of groundcovers; 2) minimize the time span that denuded soil is exposed to erosive elements; 3) use of drainage diversions; 4) use of soil traps; and 5) use of retaining walls which reduce the area required for grading. As a result of these measures, it is not anticipated that soil erosion will constitute a significant impact.

3.2.3 Proposed Mitigation

- Mitigation measures identified in **Section 3.1.3** (see page 3-4) are applicable here with respect to soils.
- Ensure proper grading plans, erosion control plans and Stormwater Pollution Prevention Plans (SWPPPs) to address identified slope limitations associated with some on-site soils.
- Convey sanitary waste to Kings Park Sewage Treatment Plant (STP) and discharge effluent to the ±5-acre parcel on the St. Johnland Nursing Center property leaching field to mitigate high seasonal water table limitation with respect to sewage disposal.
- Conduct additional test borings if necessary to locate appropriate soils for stormwater recharge, detention and related leaching systems to mitigate potential impact with regard to high seasonal water table and slopes with respect to stormwater handling.

3.3 Topography

3.3.1 Existing Conditions

The subject site exhibits a maximum elevation of approximately 98 feet above sea level (asl) within the northwestern corner of the property and a minimum elevation of approximately 27 feet asl in the southeastern corner of the property. Generally the site slopes from the northwest to the southeast and exhibits an irregular, undulating topography that was created by natural geologic factors as well as past property use. The general topographic trend of the site is interrupted by two distinctive topographic features. The first consist of a freshwater pond located in the north-central portion of the property and the second consists of an elevated, ten foot mound located in the eastern portion of the property. A site survey (**Map of Property**) illustrating topography on the subject site is provided in a pouch at the end of this document.

A majority of the property contains slopes ranging from 3% to 10%; however, slopes in excess of 15% are present primarily along the northern, western and southern property boundaries as well in small isolated areas within the site. A plan illustrating the slopes in excess of 15% is provided with the **Master Development Plan**.

As part of the proposed project, ±5-acres of the St. Johnland Nursing Center property will be used for a leaching field to recharge treated effluent generated by the Kings Park Sewage Treatment Plant (STP). The topography of this property trends from a maximum elevation of 160 feet above mean sea level (msl) in the north to a minimum elevation of 70 feet above mean sea level (msl) in the south at a general grade of approximately 9%.

3.3.2 Anticipated Impacts

It is anticipated that up to 18.47 acres of the property will be subject to grading operations. The area to be graded will be situated primarily within the internal portions of the property leaving the perimeter buffer setback along the property boundary as well as the existing pond and its associated wetland buffer area in its existing natural state.

Earthwork is necessary to establish suitable slopes for the proposed roads, parking areas and building locations, in consideration of proper engineering for safe use of the site and the design parameters to allow safe access in conformance with the Americans with Disabilities Act (ADA). Grade transitions between developed and undeveloped areas will be made using slopes not to exceed 1:3; if necessary retaining walls may be needed to make suitable slope transitions and ensure that natural vegetation is retained at the edges of the development areas. All disturbed soil areas will be stabilized in conformance with detailed site plans that will follow the change of zone process. All areas not occupied by buildings or paved surfaces will be retained as natural and/or landscaped with primarily native vegetation and very limited turf and ornamental landscape species.

Earthwork estimates indicate that import of soil will be necessary to achieve the proposed development. The objective of the grading plan will be that any excess soil will be retained on-site and reused as fill. Based on preliminary grading design, it is anticipated that approximately 66,000 cubic yards (CY) of soil will be required as fill material for grading operations. Of this total 61,000 CY will be obtained from on-site cut generated from excavation of the subject property (for building foundations, drainage structures, rough grading, etc.) and approximately 5,000 CY of fill will be required to be imported to the site to provide adequate surface areas and grade transitions for development. In addition, it should be noted that 55,000 CY of top soil will be excavated from the property. Of this total, 15,000 CY will be reused within planned landscaped areas and the excess 40,000 CY will be removed from the property.

As discussed herein, the Suffolk County Department of Public Works (SCDPW) intends to utilize ±5-acres of the St. Johnland Nursing Center property as a recharge area for treated effluent from the Kings Park Sewage Treatment Plant (STP). Grading and excavation of this parcel will be required for the creation of this leaching field. The land of this parcel will be mostly cleared and replanted with lawn, with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer which will provide screening of the property. According to a letter from the Suffolk County Department of Public Works (SCDPW) (see **Appendix G-3**), leaching pools with a maximum depth of 15 feet (or an effective depth of 12 feet) would be installed to provide for recharge of treated effluent.

It is expected that 20% of the steep slope areas (0.64 acres) of the subject property will be subject to grading activities. As per Section 322-12, a variance is required for alterations of slopes of 15% or greater. As a result, the applicant will request a variance from the Town Board of Zoning Appeals to facilitate the required grading.

A detailed Grading and Drainage Plan will be prepared as part of the Site Plan application, which will provide additional details of overall site grading, and will require Town Planning Division and Engineering Division reviews and Town Board approval prior to implementation.

The clearing and grading process is expected to take 6-8 months to complete. Grading activity will be conducted internally within the site and will not impact adjacent properties. In addition, construction management techniques outlined in **Section 2.3** (see page 2-16) will ensure that sedimentation and erosion control measures are implemented.

As discussed in **Section 2.3** (see page 2-16), applicable erosion and sedimentation control guidelines will be observed during construction of the proposed project in order to minimize impacts. In accordance with the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) Program, coverage under the General Permit for Stormwater Discharges from Construction Activities (NYSDEC Permit No. GP-0-010-001) will be obtained prior to the initiation of construction activities. Prior to filing for coverage under the General Permit, the New York State Department of Environmental Conservation (NYSDEC) requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the parcel, including a detailed erosion and sediment control plan, to manage stormwater generated on-site during construction activities, and for post-construction stormwater management. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared to ensure compliance with water quality and quantity requirements pursuant to Technical Guidance and GP-0-10-001 and Town of Smithtown requirements. The Notice of Intent (NOI) requesting coverage under the General Permit will be reviewed by the Town prior to filing in accordance New York State Department of Environmental Conservation (NYSDEC) requirements and prior to the initiation of construction activities at the subject property. Additionally, the General Permit requires that inspections of the construction site be performed under the supervision of a qualified professional to ensure that erosion controls are properly maintained during the construction period.

The applicant will complete grading and development of sections of the site in conformance with the approved Stormwater Pollution Prevention Plan (SWPPP). The Town requires phasing of site grading activities (i.e., that defined areas of the site be subject to development activities and that soil surfaces in these areas be stabilized before proceeding to new areas of development). The phasing of clearing activities will be determined during Stormwater Pollution Prevention Plan (SWPPP) preparation and review, and will be based site conditions subject to Town review and approval. The development areas would be specified in the Stormwater Pollution Prevention Plan (SWPPP) and would be managed on-site to ensure that no erosion or sedimentation would occur.

The existing topographic conditions of the subject site have been characterized and potential impacts assessed. The proposed change of zone would allow the proposed project to proceed to site plan review which would further consider grading and excavation of the site in conformance with the regulations outlined above. Sufficient information has been obtained to demonstrate the feasibility of the project, assess potential impacts and identify mitigation measures to minimize impacts to the maximum extent practicable. Given the characterization of topography, preliminary grading design and future site plan and permit review, significant long-term adverse environmental impacts to topography are not expected, particularly in view of the following considerations:

- Slopes will be maintained at less than 1:3 for grade transition areas and/or limited retaining walls will be used to make grade transitions and ensure retention of natural vegetation;
- The project will be subject to a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP) and Notice of Termination (NOT) for construction areas;
- Disturbance of steep slope areas will be limited to the maximum extent possible such that 20% of

the steep slope areas (0.64 acres) of the subject property will be subject to grading activities.

- Construction areas under development at one time will be limited to a specified acreage and segment of the site, as per the SWPPP.

3.3.3 Proposed Mitigation

- Required fill will be generated from site grading activities to the maximum extent possible, to reduce import of soil to the site.
- Construction access areas will be stabilized with stone and installed with rumble strips to knock off dirt before trucks enter adjoining roadways.
- A water truck will be available on-site when needed during construction activities to wet excessively dry soils.
- Site grading of exposed soil surfaces will not occur during time periods when winds exceed 20 miles per hour.
- Measures to be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) and anticipated to be taken during the construction period which will minimize the potential for erosion include, but are not limited to 1) use of groundcovers; 2) minimize the time span that denuded soil is exposed to erosive elements; 3) use of drainage diversions; 4) use of soil traps; and 5) drainage structure inlet protection.

3.4 Vegetation and Wildlife

3.4.1 Existing Conditions

<u>Vegetation</u>
The proposed project site is predominantly vacant wooded land, with a freshwater wetland located on the northern portion of the site. An access roadway/utility easement runs through the central portion of the site, from north to south. St. Johnland Road, vacant land and St. Johnland Nursing Center occurs to the north and east, while Old Dock Road and the Kings Park Psychiatric Center occurs to the south, and residential development occurs to the west.

The 49.69 acre subject parcel was inspected on February 14, 2011, June 15, 2011, July 19, 2011 and January 5, 2012. Qualifications of NP&V staff that inspected the subject parcel are included in **Appendix I-1**. The property can best be described as containing Successional Southern Hardwood forest, Coastal Oak-Hickory forest and Red Maple Hardwood Swamp, as defined by the classification system developed by the NYSDEC **(Edinger *et al.*, 2002).** A small sanitary pump station is located in the southeast corner of the site. The existing site habitat quantities as determined by aerial photography and field inspections by NP&V are presented in **Table 3-2. Figure 3-3** provides a habitat map of the subject property. Below is a detailed description of the habitat types found on site along with a list of species present or expected on the site.

The majority of the site (39.73 acres) is comprised of Successional Southern Hardwood forest, which is defined by **Edinger** (**2002**) as "*a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: American elm (Ulmus americana), slippery elm (U. rubra), white ash (Fraxinus*

americana), red maple (Acer rubrum), box elder (Acer negundo), silver maple (A. saccharinum), sassafras (Sassafras albidum), gray birch (Betula populifolia), hawthorns (Crataegus spp.), eastern red cedar (Juniperus virginiana), and choke-cherry (Prunus virginiana). Certain introduced species are commonly found in successional forests, including black locust (Robinia pseudo-acacia), tree of- heaven (Ailanthus altissima), and buckthorn (Rhamnus cathartica). Any of these may be dominant or codominant in a successional southern hardwood forest. Southern indicators include American elm, white ash, red maple, box elder, choke-cherry, and sassafras. This is a broadly defined community and several seral and regional variants are known." As much of the subject site was previously cleared and utilized for farming and housing (as evidenced in historic aerials included as **Appendix D**) invasive species had the opportunity to colonize the site once farming activities and residential uses ceased to exist on the subject property. As such, the Successional Southern Hardwood forest arose at the subject site, and is dominated by Norway maple (invasive) and Eastern red cedar. Other common species encountered in this habitat include black locust (invasive), tree-of-heaven (invasive), sassafras, poison ivy, and garlic mustard (invasive). The edges of this habitat are dominated by invasive species including Japanese knotweed, wineberry, multiflora rose and mugwort. The northwestern portion of this habitat is heavily dominated by black locust, which is most likely a result of the disturbance associated with the installation of the recharge basin and residential development located adjacent to the west of the subject site. The successional process located on this portion of the subject site is nearing completion, as evidenced by the poor condition of the Eastern red cedars located within this habitat, which are a typical indicator of successional habitats. Overall, the Successional Southern Hardwood forest habitat located within the subject site is of poor quality and ecological value as a result of the predominance of invasive species located within this habitat.

The ±5-acre parcel to be transferred to the Suffolk County Department of Public Works for effluent leaching from the Kings Park Sewage Treatment Plant (STP) has been evaluated for ecological resources. The parcel is occupied by Successional Southern Hardwood forest (4.55 acres), with remnants of the original Coastal Oak-Hickory forest present. Historic aerial photographs illustrate that the majority of this area was previously cleared, with select individual trees retained. Inspection of this area revealed a heavily disturbed community as evidenced by the significant numbers of invasive species (multiflora rose and Norway maple) present along the boundaries of this parcel. The more interior portions of the parcel exhibit more native vegetation as evidenced by the oaks that comprise a portion of the canopy; however, it is evident that this community is still disturbed due to dumping of garbage, soil and landscaping debris that was noted during the January 2012 site visit. Overall, the Successional Southern Hardwood forest habitat located within this parcel is of poor quality and ecological value as a result of the prevalence of invasive species and disturbance within the habitat.

The southeast portion of the proposed project site which is the only portion of the site that had not previously been cleared (7.39 acres) consists of Coastal Oak-Hickory forest. **Edinger** (**2002**), defines Coastal Oak-Hickory forest as "*a hardwood forest with oaks (Quercus spp.) and hickories (Carya spp.) codominant that occurs in dry well-drained, loamy sand of knolls, upper slopes, or south facing slopes of glacial moraines of the Atlantic Coastal Plain. The forest is usually codominated by two or more species of oaks, usually white oak (Q. alba), black oak (Quercus velutina) and chestnut oak (Q. montana). Scarlet oak (Quercus coccinea) is also a*

common associate. Mixed with the oaks, usually at moderate densities, are one or more of the following hickories: pignut (Carya glabra), mockernut (C. tomentosa), and sweet pignut (C. ovalis). These hickories can range from nearly pure stands to as little as about 25% cover." Pignut hickory, mockernut hickory, black oak and scarlet oak are the dominant species present in the canopy of this habitat. The oaks and hickories that are present in this area are of significant height and girth, indicating the relative age of the forest. It should be noted that the overall quality of the Coastal Oak-Hickory forest found on the subject site is diminished due to the significant presence of invasive species (particularly multiflora rose, Oriental bittersweet and winged euonymous) located along the interior access roadway, Old Dock Road and St. Johnland Road.

Table 3-2a
HABITAT QUANTITIES – PROPOSED PROJECT SITE
Existing Conditions

Coverage Type	Quantity	
	acres	% of site
Successional Southern Hardwood Forest	39.73	79.96%
Coastal Oak-Hickory Forest	7.39	14.87%
Red Maple Hardwood Swamp	1.33	2.68%
Pond	0.78	1.57%
Landscaped	0.10	0.20%
Impervious/Paved	0.36	0.72%
TOTAL	**49.69**	**100.0%**

Table 3-2b
HABITAT QUANTITIES – ±5-ACRE PARCEL
Existing Conditions

Coverage Type	Quantity	
	acres	% of site
Successional Southern Hardwood Forest	4.43	88.60%
Landscaped	0.57	11.40%
TOTAL	**5.00**	**100.0%**

The remainder of the vegetated portion of the site consists of the freshwater wetland located in the north central portion of the site. The wetland is regulated by the New York State Department of Environmental Conservation (NYSDEC) under Article 24 and is identified as freshwater wetland SJ-18. The on site wetland boundary was flagged on April 19, 2010 by David Kennedy of VHB Engineering and the wetland delineation was field checked and confirmed by NP&V. It should be noted that any development located within 100 feet of a regulated Article 24 wetland must be approved by the New York State Department of Environmental Conservation (NYSDEC) through a permitting process. In addition, the wetlands are defined as

Environmentally Sensitive Lands pursuant to Town of Smithtown Town Code Chapter 322, §322-19.

The wetland habitat found at this location is best described as Red Maple Hardwood Swamp, which is defined by **Edinger** (**2002**) as *"a hardwood swamp that occurs in poorly drained depressions, usually on inorganic soils. This is a broadly defined community with many regional and edaphic variants. In any one stand red maple (Acer rubrum) is either the only canopy dominant, or it is codominant with one or more hardwoods including ashes (Fraxinus pennsylvanica, F. nigra, and F. americana), elms (Ulmus americana and U. rubra), yellow birch (Betula alleghaniensis), and swamp white oak (Quercus bicolor). Other trees with low percent cover include butternut (Juglans cinerea), bitternut hickory (Carya cordiformis), black gum (Nyssa sylvatica), ironwood (Carpinus carolinianus), and white pine (Pinus strobus). The shrublayer is usually well-developed and may be quite dense. Characteristic shrubs are winterberry (Ilex verticillata), spicebush (Lindera benzoin), alders (Alnus incana ssp. rugosa and A. serrulata), viburnums (Viburnum recognitum, and V. cassinoides), highbush blueberry (Vaccinium corymbosum), common elderberry (Sambucus canadensis), and various shrubby dogwoods (Cornus sericea, C. racemosa, and C. amomum). Swamp azalea (Rhododendron viscosum) is more common in southern examples, and poison sumac (Toxicodendron vernix) and black ash are more common in richer (higher pH) examples. The herbaceous layer may be quite diverse and is often dominated by ferns, including sensitive fern (Onoclea sensibilis), cinnamon fern (Osmunda cinnamomea), royal fern (O. regalis), and marsh fern (Thelypteris palustris), with much lesser amounts of crested wood fern (Dryopteris cristata), and spinulose wood fern (Dryopteris carthusiana). Characteristic herbs include skunk cabbage (Symplocarpus foetidus), white hellebore (Veratrum viride), sedges (Carex stricta, C. lacustris, and C. intumescens), jewelweed (Impatiens capensis), false nettle (Boehmeria cylindrica), arrow arum (Peltandra virginica), tall meadow rue (Thalictrum pubescens), and marsh marigold (Caltha palustris). Open patches within the swamp may contain other herbs characteristic of shallow emergent marsh."* Red maple and northern arrowwood dominate this habitat on the subject site. Other common species found within this habitat include spice bush, greenbriar, and poison ivy. It should be noted that the overall quality of this habitat is somewhat diminished as a result of the presence of litter, garbage and debris in the wetland. Historic aerial photographs provided in **Appendix D** indicate that this feature was an agricultural pond located at a low point in an area surrounding by agricultural activities. The configuration of the pond changed before farming ceased, and the site was allowed to go fallow resulting in the successional forest and wetland that exist on the site today.

Freshwater wetlands are important ecological communities. These habitats are generally more productive than upland habitats, and are typically high in both plant and animal diversity. Wetlands are also vital in controlling floodwaters and filtering pollutants, and are valuable as recreation areas and as refuge for rare species. As the intrinsic value of wetlands has become recognized, they have received increasing protection from Federal, State, and local regulations and are often prioritized for public acquisition and preservation. Wetland boundaries are generally defined by the presence of significant numbers of indicator plant species which are typical of flooded or waterlogged soils. This approach may be somewhat arbitrary and is open to individual interpretation, particularly in areas with shallow slopes and broad transition zones.

Table 3-3 presents a list of vegetation observed or expected on site given the habitats present; it is based upon field investigations conducted by NP&V on February 14, 2011, June 15, 2011, July 19, 2011 and January 5, 2012. This list is not meant to be all-inclusive but was prepared as part of several field inspections to provide a detailed representation of what is found on site. Care was taken to identify any species that might be unusual for the area.

TABLE 3-3
VEGETATION SPECIES

Trees		
*Japanese maple	*Acer palmatum*	UPL
*Norway maple	*Acer platanoides [i]*	FAC
*red maple	*Acer rubrum*	FAC
*Tree of Heaven	*Ailanthus altissima [i]*	FACU
alder	*Alnus serrulata*	OBL
*yellow birch	*Betula alleghaniensis*	FAC
gray birch	*Betula populifolia*	FAC
*pignut hickory	*Carya glabra*	FACU-
*shagbark hickory	*Carya ovata*	FAC
*mockernut hickory	*Carya tomentosa*	FAC
*common catalpa	*Catalpa bignonioides*	FACU
gray dogwood	*Cornus foemina racemosa*	FAC
red osier dogwood	*Cornus stolonifera*	FACW
*American holly	*Ilex opaca*	FAC
butternut	*Juglans cinerea*	FACU+
*walnut	*Juglans nigra*	FACU
*red cedar	*Juniperus virginiana*	FACU-
*mulberry	*Morus rubra*	FACU
*black gum	*Nyssa sylvatica*	FAC+
* cottonwood	*Populus deltoides*	FAC
*black cherry	*Prunus serotina*	FACU
*choke cherry	*Prunus virginiana*	FACU
*white oak	*Quercus alba*	FACU-
swamp white oak	*Quercus bicolor*	FACW
*scarlet oak	*Quercus coccinea*	FACU-
*Blackjack oak	*Quercus marilandica*	FAC
*chinquapin oak	*Quercus muehlenbergii*	FACU-
*red oak	*Quercus rubra*	FACU-
*black oak	*Quercus velutina*	FACU-
*black locust	*Robinia pseudo-acacia [i]*	FACU-
pussy willow	*Salix discolor*	FACW
gray willow	*Salix humilis.*	FACU
black willow	*Salix nigra*	FACW+
*sassafras	*Sassafras albidum*	FACU-
Shrub and Vines		
shadbush	*Amelanchier canadensis*	FAC-
chokeberry	*Aronia arbutifolia.*	FACW
*black chokeberry	*Aronia melanocarpa*	FAC

*Japanese barberry	*Berberis thunbergii [i]*	FACU
*Oriental bittersweet	*Celastrus orbiculatus [i]*	FAC
buttonbush	*Cephalanthus occidentalis*	OBL
sweet pepperbush	*Clethra alnifolia*	FAC+
*winged euonymus	*Euonymus alatus [i]*	FAC
*wintercreeper	*Euonymus fortunei*	FAC
*English ivy	*Hedera helix [i]*	FAC
*Japanese holly	*Ilex crenata*	FAC
inkberry	*Ilex glabra [p]*	FACW-
winterberry	*Ilex verticillata [p]*	FACW
*Japanese honeysuckle	*Lonicera japonica [i]*	FAC
*Morrow's honeysuckle	*Lonicera morowii [i]*	FAC
*spicebush	*Lindera benzoin*	FACW-
maleberry	*Lyonia ligustrinan*	FACW
bayberry	*Myrica pensylvanica [p]*	FAC
*Virginia creeper	*Parthenocissus quinquefolia*	FACU
swamp azalea	*Rhododendron viscosum [p]*	OBL
*smooth sumac	*Rhus glabra*	NI
currant	*Ribes lacustre*	FACW
*multiflora rose	*Rosa multiflora [i]*	FACU
swamp rose	*Rosa palustris*	OBL
*brambles	*Rubus sp.*	Various FAC
*wineberry	*Rubus phoenicolasius [i]*	FAC
common elderberry	*Sambucus canadensis*	FACW-
cat greenbrier	*Smilax glauca*	FACU
*common greenbrier	*Smilax rotundifolia*	FAC
*bittersweet nightshade	*Solanum dulcamara*	FAC-
meadowsweet	*Spirea latifolia*	FAC+
hardhack	*Spirea tomentosa*	FACW
*poison-ivy	*Toxicodendron radicans*	FAC
*highbush blueberry	*Vaccinum corymbosum*	FACW-
*arrowwood	*Viburnum dentatum*	FAC
*grape	*Vitis sp.*	Various FAC

Herbaceous Plants

sweet flag	*Acorus americanus*	OBL
*garlic mustard	*Alliaria petiolata [i]*	FACU
*wild onion	*Allium ascalonicum*	NI
big bluestem	*Andropogon gerardii*	FAC
Jack-in-the-pulpit	*Ariasaema triphyllum*	FACW-
*mugwort	*Artemesia vulgaris [i]*	FAC
aster	*Aster sp.*	Various
bald rush	*Brasenia schreberi*	OBL
bluejoint grass	*Calamagrotis canadensis*	FACW
marsh bellflower	*Campanula aparinoides*	FACU
bladder sedge	*Carex intumecens*	FACW+
lurid sedge	*Carex lurida*	OBL
umbrella sedge	*Carex strigosus*	FAC
coontail	*Ceratophyllum demersum*	OBL
*Asiatic dayflower	*Commelina communis*	FAC

dodder	*Cuscuta gronovii*	n/a
*Jimson weed	*Datura stramonium*	FAC
sundew	*Drosera filiformes[p]*	OBL
sundew	*Drosera intermedia[p]*	OBL
sundew	*Drosera rotundifolia [p]*	OBL
crested wood fern	*Dryopteris cristata[p]*	FACW+
three way sedge	*Dulichium arundinaceum*	OBL
spikerush	*Eleocharis sp.*	OBL
waterweed	*Elodea sp.*	OBL
pipewort	*Eriocaulon aquaticum*	OBL
cleavers	*Galium aparine*	FACU
mannagrass	*Glyceria canadensis*	OBL
gratiola	*Gratiola aurea*	OBL
Canadian St.John's-wort	*Hypericum canadense*	FACW
*jewelweed	*Impatiens capensis*	FACW
yellow flag	*Iris pseudoacorus*	OBL
blue flag	*Iris versicolor*	OBL
Canada rush	*Juncus canadensis*	OBL
soft rush	*Juncus effusus*	FACW+
bayonet rush	*Juncus militaris*	OBL
rushes	*Juncus sp.*	Various
rice cutgrass	*Leersia oryzoides*	OBL
duckweed	*Lemna sp.*	OBL
club moss	*Lycopodium sp.*	OBL
bugleweed	*Lycopus virginicus*	OBL
purple loosestrife	*Lythrum salicaria*	FACW+
tufted loosestrife	*Lythrum thrysiflora*	OBL
*Canada mayflower	*Maianthemum canadense*	FAC-*
milfoil	*Myriophyllum sp.*	OBL
naiad	*Najas flexilis*	OBL
yellow pond lily	*Nuphar luteum*	OBL
white waterlily	*Nymphaea odorata*	OBL
sensitive fern	*Onoclea sensibilis*	FACW
cinnamon fern	*Osmunda cinnamomea [p]*	FACW
royal fern	*Osmunda regalis [p]*	OBL
arrowleaf	*Peltandra virginica*	OBL
canary grass	*Phalaris arundinacea*	FACW+
timothy	*Phleum pratense*	FACU
common reed	*Phragmites australis [i]*	FACW
*pokeweed	*Phytolacca americana*	FAC
coolwort	*Pilea pumila*	FACW
common plantain	*Plantago major*	FACU
Soloman's seal	*Polygonatum biflorum*	FACU
water smartweed	*Polygonum amphibium*	OBL
*Japanese knotweed	*Polygonum cuspidatum [i]*	FAC
nodding smartweed	*Polygonum lapathifolium*	FACW+
*pink smartweed	*Polygonum pensylvanicum*	FACW
* jumpseed	*Polygonum virginianum*	FAC
pondweed	*Potamogeton perfoliatus*	OBL
bracken fern	*Pteridium aquilinum*	FACU

horned rush	*Rhynchospora macrostachya*	OBL
*bitter dock	*Rumex obtusifolius*	FACU
water dock	*Rumex orbiculatus*	OBL
duck potato	*Sagittaria latifolia*	OBL
pitcher plant	*Sarracenia purpurea*	OBL
wool grass	*Scirpus cyperinus.*	FACW+
common three-square	*Scirpus pungens*	FACW+
soft-stem bulrush	*Scirpus validus*	OBL
hard-stem bulrush	*Scirpus acutus*	OBL
skullcap	*Scutellaria galericulata*	OBL
false Soloman's seal	*Smilacina racemosa*	FAC-
*goldenrod	*Solidago sp.*	Various
bur-reed	*Sparganium eurycarpum*	OBL
sphagum moss	*Sphagnum sp.*	NI
*aster sp.	*Symphyotrichum sp.*	Various
bushy aster	*Symphyotrichum dumosum*	FAC
many flowered aster	*Symphyotrichum ericoides*	FAC
skunk cabbage	*Symplocarpus foetidus [p]*	OBL
*common dandelion	*Taraxacum officinale*	FACU
marsh fern	*Thelypteris thelypteroides [p]*	FACW+
*red clover	*Trifolium pretense*	FACU-
cattails	*Typha latifolia*	OBL
bladderwort	*Utricularia sp.*	OBL
*creeping myrtle	*Vinca minor [i]*	FAC
large yellow-eyed grass	*Xyris smalliana*	OBL
wild rice	*Zizania aquatica*	OBL
water starwort	*Zosterella dubia*	OBL

OBL	Obligate, always found in wetlands under natural conditions (frequency > 99%)
FACW	Facultative Wetland, usually found in wetlands (67% to 99% frequency)
FAC	Facultative, sometimes found in wetlands (34% to 66% frequency)
FACU	Facultative Upland, seldom found in wetlands (1% to 33% frequency)
+	Higher frequency in the region
-	Lower frequency in the region
[p]	NYS Exploitably Vulnerable Protected Plant
[i]	NYS invasive species (no legal status)
[e]	NYS Rare Protected Plant
*	species observed by NP&V staff during field visits.

Wildlife

Site inspections were performed on February 14, 2011, June 15, 2011, July 19, 2011 and January 5, 2012 by NP&V staff. Linear transects were utilized throughout the property in order to provide a representative sample of species present on the subject property. Care was taken to identify the presence/absence of rare, threatened or endangered species in the appropriate habitat settings. Relatively few wildlife species other than songbirds were observed on site, although it is expected that the woodland and freshwater wetland habitats on the property should support a number of wildlife species common to suburban habitats, particularly those species that are more tolerant of human activity. The following paragraphs describe the wildlife observed or expected on site.

Birds - Avian species which might be expected on the property include a variety of woodpeckers, wrens, titmice, nuthatches, thrushes, creepers, flycatchers, swallows, warblers, corvids, thrashers, orioles and blackbirds, doves, starling, grosbeaks, finches, towhees and sparrows. During the warmer months, a variety of warblers also migrate into the area. Owls and raptors may use the site for hunting and limited numbers may breed in the surrounding areas.

During the site visit, black-capped chickadees, crows, cardinals and wild turkeys were observed. In order to provide a more detailed representation of the avian species potentially present on site, the New York State (NYS) Breeding Bird Atlas was reviewed to obtain data from the 2000-2005 Breeding Bird Survey for the census block encompassing the subject parcel (**Appendix I-2**). This study surveyed the entire State by 25 km² census blocks over a five-year period (2000 to 2004) to determine the bird species which breed within the State. Most of the species listed by the New York State Department of Environmental Conservation (NYSDEC) breeding bird survey are likely to be found on site. **Table 3-4** is a list of the bird species observed or expected on site given the habitats present; it is based upon the field investigation conducted by NP&V.

Table 3-4
BIRD SPECIES

American black duck	*Anas rubripes*
*American crow	*Corvus brachyrhynchos*
American goldfinch	*Carduelis tristis*
*American robin	*Turdus migratorius*
barn swallow	*Hirundo rustica*
belted kingfisher	*Megaceryle alcyon*
black-billed cuckoo	*Coccyzus erythropthalmus*
*black capped chickadee	*Parus atricapillus*
black-and-white warbler	*Mniotilta varia*
black-throated blue warbler	*Dendroica caerulescens*
blue jay	*Cyanocitta cristatta*
blue-gray gnatcatcher	*Polioptila caerulea*
blue-winged warbler	*Vermivora pinus*
brown creeper	*Certhia familiaris*
brown thrasher	*Toxostoma rufum*
brown-headed cowbird	*Molothrus ater*
Canada goose	*Branta Canadensis*
Carolina wren	*Thryothorus ludovicianus*
cedar waxwing	*Bombycilla cedrorum*
chimney swift	*Chaetura pelagica*
chipping sparrow	*Spizella passerina*
northern flicker	*Colaptus auratus*
common grackle	*Quiscalus quiscula*
common yellowthroat	*Geothlypis trichas*
Eastern screech owl	*Otus asio*
Cooper's hawk	*Accipiter cooperii [s]*
downy woodpecker	*Picoides pubescens*
Eastern kingbird	*Tyrannus tyrannus*
Eastern phoebe	*Sayornis phoebe*

Eastern towhee	*Pipilo erythropthalmus*
Eastern wood-peewee	*Contopus virens*
European starling	*Sturnus vulgaris*
Fish crow	*Corvus ossifragus*
fox sparrow	*Passerella iliaca*
golden-crowned kinglet	*Regulus satrapa*
*gray catbird	*Dumetella carolinensis*
great blue heron	*Ardea Herodias*
great crested flycatcher	*Myiarchus crinitus*
great-horned owl	*Bubo virginianus*
hairy woodpecker	*Picoides villosus*
hermit thrush	*Catharus guttatus*
house finch	*Carpodacus mexicanus*
house sparrow	*Passer domesticus*
house wren	*Troglodytes aedon*
long-eared owl	*Asio otus*
mallard	*Anas platyrhynchos*
mourning dove	*Zenaida macroura*
mute swan	*Cygnus olor*
*Northern cardinal	*Cardinalis cardinalis*
dark-eyed junco	*Junco hyemalis*
Northern mockingbird	*Mimus polyglottos*
Baltimore oriole	*Icterus galbula*
ovenbird	*Seiurus aurocapillus*
purple martin	*Progne subis*
red-bellied woodpecker	*Melanerpes carolinus*
red-eyed vireo	*Vireo olivaceus*
red-tailed hawk	*Buteo jamaicensis*
red-winged blackbird	*Agelaius phoeniceus*
ring-necked duck	*Aythya collaris*
rough-winged swallow	*Stelgidopteryx ruficollis*
ruby-crowned kinglet	*Regulus calendula*
scarlet tanager	*Piranga olivacea*
sharp-shinned hawk	*Accipiter striatus [s]*
song sparrow	*Melospiza melodia*
tree swallow	*Tachycineta bicolor*
tufted titmouse	*Parus bicolor*
veery	*Catharus fuscescens*
white-breasted nuthatch	*Sitta carolinensis*
white-eyed vireo	*Vireo griseus*
*wild turkey	*Meleagris gallopavo*
wood duck	*Aix sponsa*
wood thrush	*Hylocichla mustelina*
yellow-bellied sapsucker	*Sphyrapicus varius*
yellow-billed cuckoo	*Coccyzus americanus*
yellow warbler	*Dendroica petechia*

[s] special concern species
*species observed by NP&V staff during field visits.

Mammals - The habitats found on the proposed project site are expected to support a number of mammal species. Small rodents and insectivores such as mice, shrews and voles are expected to be the most abundant mammals, but the property and surrounding area should also support larger mammals. Deer and rabbit scat were observed on the subject site.

Table 3-5 is a list of the mammal species that are expected to occur on the property because of existing conditions on-site and in the surrounding area. This list is not meant to be all-inclusive but is intended to provide a list of the most common species.

Table 3-5
MAMMAL SPECIES

big-brown bat	*Eptesicus fuscus*
*Eastern chipmunk	*Tamis striatus*
*Eastern cottontail	*Sylvilagus floridanus*
Eastern gray squirrel	*Sciurus carolinensis*
Eastern mole	*Scalopus aquaticus*
Eastern pipistrelle	*Pipistrellus subflavus*
hoary bat	*Lasiurus borealis*
house mouse	*Mus musculus*
Keen's bat	*Myotis keenii*
little-brown bat	*Myotis lucifugus*
long-tailed weasel	*Mustela frenata*
masked shrew	*Sorex cinereus*
meadow vole	*Microtus pennsylvanicus*
meadow-jumping mouse	*Zapus hudsonicus*
mink	*Mustela vison*
muskrat	*Ondarta zibethicus*
Norway rat	*Rattus norvegicus*
pine vole	*Microtus pinetorum*
racoon	*Procyon lotor*
red bat	*Lasiurus borealis*
red fox	*Vulpes vulpes*
short-tailed shrew	*Blarina breuicauda*
silver-haired bat	*Lasionycteris noctivagans*
southern-flying squirrel	*Glaucimys volans*
striped skunk	*Mephitis mephitis*
Virginia opossum	*Didelphis virginiana*
white-footed mouse	*Peromyscus leucopus*
*white-tailed deer	*Odocoileus virginianus*

* Species observed on site by NP&V staff during field visits.

Amphibians and Reptiles - The site may support a limited number of terrestrial species. An American bullfrog and an eastern box turtle were encountered on the property during site inspections. Two toads are common on Long Island in upland habitats. The spadefoot toad occurs in woods, shrublands and fields with dry, sandy loam soils, and breeds in temporary pools (**Behler and King, 1979**). The Fowler's toad prefers sandy areas near marshes, irrigation ditches

and temporary pools. These species are the most likely amphibians to be present on the site. Salamanders and frogs may also potentially utilize the pond on the property, although none were visually observed during the site visits; however, an American bullfrog was heard during a site visit. Surveys consisted of traversing the perimeter as feasible. Species that were not observed during these surveys, but would be expected based on site habitat are included in the species list in order to fully account for potential impacts to observed and expected amphibians and reptiles.

Several species of reptiles might potentially be found on the property, including the eastern garter snake, and eastern milk snake (**Wright, 1957**). All of these species are terrestrial species found in a variety of habitats. The garter snake is relatively tolerant of human activity, but prefers moist soils and would be most likely to be present near the recharge basin to the northwest and in the vicinity of the on-site pond. The milk snake is found in soils of varying moisture content. These snakes are all colubrid snakes, which feed on whole animals such as worms, insects or small amphibians (**Behler and King, 1979**). The larger milk snake will also take small rodents and birds (**Behler and King, 1979**).

The only turtle species common to terrestrial habitats on Long Island (although listed in New York State as a species of special concern) is the eastern box turtle, which requires very little water (**Obst, undated**). The species is found in a variety of habitats, and prefers moist woodlands, but was encountered in the southern portion of the subject property. The box turtle feeds primarily on slugs, earthworms, wild strawberries and mushrooms (**Behler and King, 1979**). The similar wood turtle utilizes both aquatic and terrestrial habitats, but is restricted to eastern Long Island (**Conant and Collins, 1991**).

Table 3-6 presents a list of reptile species that might occur on site given the existing habitats. This list is not intended to be all-inclusive but provides a detailed representation of what is or is likely to be found on site. In addition, further information regarding these species can be found in **Appendix I-3**.

Table 3-6
REPTILE AND AMPHIBIAN SPECIES

Amphibians	
common gray treefrog	*Hyla versicolor*
Eastern spadefoot toad	*Scaphiopus holbrooki [s]*
Fowler's toad	*Bufo woodhousei fowleri*
*American bullfrog	*Rana catesbeiana*
green frog	*Rana clamitans*
marbled salamander	*Ambystoma opacum [s]*
red-backed salamander	*Plethodon cinerus cinerus*
red-spotted newt	*Notophthalmus viridescens*
spotted salamander	*Ambystoma maculatum*
spring peeper	*Hyla crucifer*
wood frog	*Rana sylvatica*
Reptiles	
*Eastern box turtle	*Terrepene Carolina [s]*
Eastern garter snake	*Thamnophis sirtalis*

eastern milk snake	*Lampropettis d. triangulum*
Eastern ribbon snake	*Thamnophis s. sauritus*
Northern ringneck snake	*Diadophis punctatus*
Northern water snake	*Natrix sipedon sipedon*
painted turtle	*Chrysemys picta*
stink pot	*Sternotherus odoratue*

[s] NYSDEC special concern species
* Species observed on site by NP&V staff

Rare and Endangered Species Potential

No rare, threatened or endangered plants were observed on site. The New York Natural Heritage Program (Environmental Conservation Law 9-1503) was contacted to determine if there is any record of rare plants, habitats or wildlife in the vicinity. The Natural Heritage Program has six records of known occurrences of rare or state-listed plants, significant natural communities or other significant habitats on or in the vicinity of the subject site. Correspondence with the Natural Heritage Program is contained in **Appendix I-4**.

Three endangered/threatened avian species were identified as being located within the vicinity of the proposed project. The identified species include Piping Plover (*Charadrius melodus*), Common Tern (*Sterna hirundo*) and Least Tern (*Sternula antillarum*). A summary of each of these species and its potential for occurring on the property is provided below.

Specific location information regarding the piping plover was not included in the correspondence from the New York Natural Heritage Program. It should be noted that the piping plover is listed as federally endangered in the Great Lakes Region, and as federally threatened in the Atlantic Coastal Region. Within New York State, the piping plover is listed as an endangered species. The New York State Department of Environmental Conservation (NYSDEC) provides the following information on piping plovers: "Piping plovers breed on dry sandy beaches or in areas that have been filled with dredged sand, often near dunes in areas with little or no beach grass. They occur along the Atlantic Coast from southwestern Newfoundland and southeastern Quebec south to North Carolina, and on inland beaches from eastern Alberta and Nebraska to Lake Ontario. Three populations currently exist: one along the east coast, another on the upper Great Lakes, and a third on the major river systems and wetlands of the northern Great Plains. Within New York, this species breeds on Long Island's sandy beaches, from Queens to the Hamptons, in the eastern bays and in the harbors of northern Suffolk County. A single pair was also recorded in 1984 at Sandy Pond, Lake Ontario in Oswego County. Piping plovers spend winters along the coast from Texas to North Carolina, and infrequently as far south as the Bahamas and Greater Antilles." As the piping plover requires beach/dune habitat, and no beach/dune habitat is present on site, the piping plover is not expected to utilize the subject site.

As with the piping plover, specific location information regarding the least tern, a New York State-listed threatened species, was not included in the correspondence from the New York Natural Heritage Program. The New York State Department of Environmental Conservation (NYSDEC) provides the following information on least terns: "The least tern has a nearly worldwide distribution. In the Western Hemisphere, it breeds on the Pacific Coast from central

California to Peru, inland along the Colorado, Red, Rio Grande, Missouri and Mississippi river systems, on the Atlantic Coast from Maine to Argentina, and along the Great Lakes in Michigan, Minnesota, Wisconsin and Ohio. Migrants mainly occur on Long Island's outer coast and rarely on the lower Hudson River. This species winters from the Gulf Coast and Central America south to Peru and Brazil. The least tern breeds on broad, level expanses of open sandy or gravelly beach, dredge spoil and other open shoreline areas, and more rarely, inland on broad river valley sandbars. In an unusual case, 20 pairs nested on the roof of a city auditorium in Pensacola, Florida in 1957, and have continued to do so annually." As the least tern requires beach/dune habitat, and no beach/dune habitat is present on site, the least tern is not expected to utilize the subject site.

As with the piping plover and least tern, specific location information regarding the common tern, a New York State listed threatened species, was not included in the correspondence from the New York Natural Heritage Program. The New York State Department of Environmental Conservation (NYSDEC) provides the following information on common terns: "The common tern is the most widespread and abundant tern in New York. Common terns inhabit sand and shell beaches, grassy uplands and rocky inland shores in North and South America, Eurasia, and northern Africa. This species breeds in North America along the Atlantic Coast from the northern Maritime Provinces of Canada to South Carolina, and occasionally in the Gulf of Mexico or on large inland lakes. Wintering grounds are from its southernmost breeding areas on the Atlantic Coast to northern Ecuador and Brazil. In New York, common terns nest predominantly on Long Island, but they are also known to breed on small natural and artificial islands (power cribs, piers, navigation sites, etc.) in Lake Erie, Lake Ontario, the St. Lawrence and Niagara rivers, and Oneida Lake in central New York. From late April to mid-May, common terns return to their northern breeding colonies. These colonies may contain several hundred to several thousand birds, including roseate, least and gull-billed terns, and black skimmers on Long Island. The nest is a simple scrape built above the high tide line in sand, gravel, shells or windrowed seaweed. It is usually lined with vegetation." As the common tern requires beach/dune habitat, and no beach/dune habitat is present on site, the common tern is not expected to utilize the subject site.

Two significant natural communities were identified as occurring within the vicinity of the project area. Maritime Dunes and Low Salt Marsh are indicated as occurring east and west of the mouth of the Nissequogue River. It should be noted that these communities support the endangered and threatened species listed above. Neither of these communities are found on the subject site, as the site is located in an upland area.

One historical record of a threatened plant was listed as occurring in the general vicinity of Kings Park. Slender Crabgrass (*Digitaria filiformis*) is an herbaceous annual that was last identified in Kings Park in 1926 along the border of unspecified dry hilly woods. Slender crabgrass prefers full sun in sterile, sandy soils. As the subject site is primarily densely wooded, and no large open areas exist to provide full sun, no suitable habitat for slender crabgrass is located on the subject site. It should be noted that while the remnants of the old roadway which run north-south through the site consist of some sandy soils, the surrounding tree canopy provides significant shade for the former roadway and would not permit the area to receive full sun.

No "exploitably vulnerable" species were observed within the woodland on the property. "Exploitably vulnerable" plants are species which are not currently threatened or endangered, but which are commonly collected for flower arrangements or other uses. Under Environmental Conservation Law (ECL) 1503.3, no person may "*knowingly pick, pluck, sever, damage by the application of herbicides or defoliants or carry, without the consent of the owner thereof, protected plants"* (**NYSDEC, 1975**). As per this section of the Environmental Conservation Law (ECL) the project sponsor (i.e. owner) would not be restricted in utilizing the site for the intended purpose. Therefore, the presence of protected plants would not restrict use of the site under the New York State Environmental Conservation Law.

3.4.2 Anticipated Impacts

Vegetation

The impacts to the ecological resources of a site are generally a direct result of clearing of natural vegetation, increase in human activity and associated wildlife stressors, and the resulting loss and fragmentation of wildlife habitat. The majority of the site is currently wooded, with the exception of approximately 0.78 acres of the existing pond, 0.10 acres of landscaped area and 0.36 acres of impervious area. A total of 30.34 acres of natural vegetation are proposed to be retained, which will include 21.68 acres of Successional Southern Hardwood forest, 1.33 acres of Red Maple Hardwood Swamp and 7.33 acres of Coastal Oak-Hickory forest.

The change in habitat quantities is listed in **Table 3-7a** and **3-7b**. As illustrated in **Table 3-7**, the planned development intends to ultimately provide approximately 62.63% of naturally vegetated and pond area as well as 18.19% of landscaped area and 19.18% or 9.53 acres of impervious surfaces. As a result, the site will continue to provide some natural habitat for wildlife, though the removal of the existing woodland vegetation on the property is expected to result in a change in the characteristics of site habitat. It is noted that the majority of the proposed development will occur in areas which were previously cleared for farming and residential development and now consist of Successional Southern Hardwood forest, which is of less ecological value than the Coastal Oak-Hickory forest.

Table 3-7a
HABITAT QUANTITIES – PROPOSED PROJECT SITE
Existing and Proposed Conditions

Coverage Type	Existing Conditions		Proposed Project		Change (ac)
	Coverage (ac)	**Percent**	**Coverage** (ac)	**Percent**	
Successional Southern Hardwood Forest	39.73	79.96%	21.68	43.63%	18.05(-)
Coastal Oak-Hickory Forest	7.39	14.87%	7.33	14.75%	0.06(-)
Red Maple Hardwood Swamp	1.33	2.68%	1.33	2.68%	0
Pond	0.78	1.57%	0.78	1.57%	0
Landscaped	0.10	0.20%	9.04	18.19%	8.94(+)
Impervious/Paved	0.36	0.72%	9.53	19.18%	9.17(+)
TOTAL	**49.69**	**100.0%**	**49.69**	**100.0%**	---

Table 3-7b illustrates the anticipated change in habitat quantities within the area to be utilized as leaching field for the Kings Park Sewage Treatment Plant. It is anticipated that the entirety of the ±5-acre site will be cleared for the installation of the leaching field and as a result the existing Successional Southern Hardwood forest on this parcel (±4.43 acres) will be removed. Once all the effluent leaching pools are installed, the area will be re-seeded with a native, low maintenance seed mix. Minimal mowing is anticipated to be necessary within the parcel and fertilizers will not be utilized within the re-seeded area. The proposed use of this parcel for sanitary effluent leaching will also result in the removal of existing invasive species within the parcel, which will be replaced with native grasses. In addition, the parcel will be protected from further unauthorized dumping which has impacted the land to date.

Table 3-7b
HABITAT QUANTITIES – ±5-ACRE PARCEL
Existing and Proposed Conditions

Coverage Type	Existing Conditions		Proposed Project		Change (ac)
	Coverage (ac)	**Percent**	**Coverage** (ac)	**Percent**	
Successional Southern Hardwood Forest	4.43	88.60%	0	0%	4.43(-)
Landscaped	0.57	11.40%	5.00	100.0%	4.43(+)
TOTAL	**5.00**	**100.0%**	**5.00**	**100.0%**	---

As previously stated, the New York Natural Heritage Program did not identify any rare, threatened or endangered plant species on or in the vicinity of the site. As such, no impact to rare, threatened or endangered plant species are anticipated as a result of the proposed project.

Regulatory

As the subject site contains a New York State Department of Environmental Conservation (NYSDEC) Freshwater wetland and is partially located within the Wild, Scenic and Recreational

Rivers (WSRR) corridor of the Nissequogue River, two sets of New York State regulations with regard to ecological resources apply to the subject site. Correspondence from NYSDEC confirming the wetland boundary and the WSRR boundary depicted on the **Master Development Plan** is provided in **Appendix I-4**.

New York State Department of Environmental Conservation (NYSDEC) regulates freshwater wetlands through Article 24, in which their jurisdiction extends 100 feet from the freshwater wetland boundary. Any improvements proposed within 100 feet of a New York State Department of Environmental Conservation (NYSDEC) regulated freshwater wetland boundary will require a permit prior to development activities. As illustrated on the **Master Development Plan**, the proposed layout for the Continuing Care Retirement Community (CCRC) development maintains a 100 foot buffer around the delineated freshwater wetland area. As such, it is not anticipated that an Article 24 permit will be necessary for the development of the proposed project. However, the final site plan will be submitted to the New York State Department of Environmental Conservation (NYSDEC) for a determination of jurisdiction and whether a wetlands permit may be necessary.

Article 15, Title 27 of the Environmental Conservation Law (ECL) regulates development within a Wild and Scenic Recreational Rivers (WSRR) corridor. As illustrated on the **Master Development Plan** and **Figure 2-3**, the eastern portion (±22.46 acres) of the subject property is located within the Recreational portion of the Nissequogue River Wild and Scenic Recreational Rivers (WSRR) corridor. As the proposed project consists of a residential use, development within the Wild and Scenic Recreational Rivers (WSRR) designated area must conform to §666.13(C) of the New York State Department of Environmental Conservation (NYSDEC) regulations. Under these regulations, a permit is necessary for multiple family dwellings located more than 150 feet from the river bank. The applicable development regulations for multiple family dwellings are as follows:

> *(i) All new residential structures constructed within 500 feet of the bank must be screened by vegetation or topographic features as viewed from the river; must not exceed 34 feet in height; and must not be constructed on a slope greater than 15 percent.*
>
> *(iv) Multiple family dwellings must be on a lot of at least one acre per living unit and have, when applicable, a shoreline frontage of at least 200 feet.*
>
> *(v) Clustering will be encouraged and may be allowed by rivers system permit in order to maintain undeveloped and undisturbed open areas.*
>
> *(vi) When clustering is permitted, the minimum cumulative, developable acreage, density and, when applicable, shoreline acreage, density and, when applicable, shoreline lot width must be satisfied for the parcel as a whole. For scenic and recreational river areas, not less than 40 percent or 30 percent of the clustered subdivision respectively will be retained in an undisturbed condition during and after development.*

As the proposed development is located more than 500 feet from the bank of the Nissequogue River, Item (i) above does not apply to the proposed project. Item (iv) requires that the site provide one acre per dwelling unit within the Wild and Scenic Recreational Rivers (WSRR) area

and residential units must have a shoreline frontage of 200 feet. As approximately 22.46 acres of land are located within the Wild and Scenic Recreational Rivers (WSRR) boundary, 22 units would be permitted within this area. As illustrated on the **Master Development Plan**, 22 townhomes are proposed within the Wild and Scenic Recreational Rivers (WSRR) area on site and as the units proposed equal the number of units permitted within this area, the proposed project conforms to this Item within the Wild and Scenic Recreational Rivers (WSRR) regulations. As the subject site is not located along a shoreline, this part of Item (i) does not apply to the proposed project.

Item (v) encourages clustering of residential developments to maintain open space areas. The 22 proposed townhouse units are clustered within the central portion of the site, and are located along the outside of a looped road, thus minimizing the amount of area necessary for clearing within the subject site. As the proposed project provides a clustered design which maintains large open space areas (31.12 acres), the proposed development conforms to this Item within the WSRR regulations.

Finally, Item (vi) requires that the site density be retained for the parcel, and that 30 percent of the site be retained as undisturbed, natural area. As demonstrated for Item (iv), the proposed 22 townhouse units within the Wild and Scenic Recreational Rivers (WSRR) boundary are the maximum allowable for the 22.46 acre Wild and Scenic Recreational Rivers (WSRR) area on the subject site. As the proposed project seeks to retain 62.63 percent of natural vegetated, undisturbed area, 48.07 percent (±14.96 acres) of which is located within the Wild and Scenic Recreational Rivers (WSRR) portion of the site, and the proposed project retains the allowable density within the (WSRR) area, the proposed project conforms to this Item within the Wild and Scenic Recreational Rivers (WSRR) regulations.

<u>Wildlife</u>
The majority of habitat on the property is dominated by Successional Southern Hardwood forest. The property is not expected to act as a refuge for rare native flora or fauna, but does contain a small population of local birds and mammals, such as chipmunks and deer. The proposed project will favor those wildlife species that prefer edge and suburban habitats and those that are tolerant of human activity. Most of the species expected on the property are at least somewhat tolerant of human activity, but others will be impacted by the proposed clearing operation and increase in human activity.

A total of 31.12 acres of natural vegetation and the existing pond are proposed to remain on the site. The proposed 9.04 acres of landscaped vegetation is expected to provide some habitat for some species to remain that are tolerant and/or dependent on human activity and are adapted to surviving in multiple habitat types.

In the short term, lands adjacent to the property will experience an increase in the abundance of some wildlife populations due to displacement of individuals by the construction phase of the proposed project. Mobile species and particularly large mammals such as fox and deer would be expected to find suitable habitat south of the site where larger areas of natural open space currently remain. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding lands would be expected to result in a net decrease in

population size for most species. While a significant portion (62.63%) of the existing habitat will remain, site specific populations may decrease from the loss of interior woodland habitat/fragmentation of large contiguous which certain species prefer. It is anticipated that species that prefer edge habitats will be prevalent within the proposed development.

No rare or endangered wildlife species are expected on the site given the habitats present. The marbled salamander, Eastern box turtle, and eastern spadefoot toad are the only species potentially expected on site which are listed as special concern species. Although there is documented concern about their welfare in New York State, these species receive no additional legal protection under Environmental Conservation Law (ECL) Section 11-0535. This category is presented primarily to enhance public awareness of these species that bear additional attention (6NYCRR §182.2(u) and 6NYCRR §182.2(x))).

3.4.3 Proposed Mitigation

- Native plant species that provide food and shelter to wildlife will be utilized in some of the landscaped areas.
- Disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- The ±5-acre effluent leaching parcel will be re-seeded with a native grasses mix once installation of the leaching field is complete. Fertilizers will not be utilized within the re-seeded ±5-acre effluent leaching parcel.
- No known invasive plant species will be utilized, including those species specifically those species listed in Resolution 614-2007 enacted by the Suffolk County Legislature. A copy of Resolution 614-2007 is included in **Appendix I-5**.

3.5 Groundwater and Surface Water Resources

3.5.1 Existing Conditions

<u>Groundwater Hydrology</u>
Groundwater on Long Island is derived from precipitation. Precipitation entering the soils in the form of recharge passes through the unsaturated zone to a level below which all strata are saturated. This level is referred to as the water table. In general, the groundwater table coincides with sea level on the north and south shores of Long Island, and rises in elevation toward the center of the Island. The high point of the parabola is referred to as the groundwater divide. Differences in groundwater elevation create a hydraulic gradient, which causes groundwater to flow perpendicular to the contours of equal elevation, or generally toward the north and south shores from the middle of the Island. Near the shore, water entering the system tends to flow horizontally in a shallow flow system through the Upper Glacial Aquifer to be discharged from subsurface systems into streams or marine surface waters as subsurface outflow. Water that enters the system farther inland generally flows vertically to deeper aquifers before flowing toward the shores.

The major water-bearing units beneath the subject site are the Upper Glacial aquifer, the Magothy aquifer, and the Lloyd aquifer. The top altitude of the Upper Glacial aquifer is equal to the topographic elevation of the property, which ranges from 27 to 98 feet asl and ranges in thickness from 77 to 148 feet. The top of the Magothy aquifer is approximately 50 feet below sea level (bsl) and exhibits an approximate thickness of 400 feet. The Lloyd aquifer is 600 feet bsl and exhibits a thickness of 200 feet. Bedrock is present at a depth of about 800 feet bsl. Based on soil boring logs prepared for the subject property, groundwater is generally encountered at elevations of approximately 15 feet to 18 feet asl and at depths ranging from 10 to 48 feet below ground surface (bgs). However, due to the presence of less permeable soil consisting of layers of clays and silty clays in the vicinity of the pond, perched water is noted to exist within the northwestern quadrant of the site at depths of 4 feet to 19 feet.

Regionally groundwater is observed to flow in a north-northeasterly direction and will eventually discharge to Sunken Meadow Creek. The regional groundwater flow direction can be found in **Figure 3-4**.

The Long Island Regional Planning Board, in conjunction with other agencies, prepared a management plan for Long Island groundwater resources in 1978 under a program funded by Section 208 of the 1972 Federal Water Pollution Control Act Amendments. The purpose of the 208 Study was to investigate waste disposal options and best practice for ground and surface water protection. The study delineated Hydrogeologic Zones for the formulation of management plans based on groundwater flow patterns and quality. The subject site is located in Groundwater Management Zone VIII, and is characterized as a shallow flow system which discharges primarily to streams and marine surface waters. As a result, these discharges will have a greater effect on these surface systems than on the deep flow drinking water supply resources (**SCDHS, 1985**).

Groundwater Quality

The Suffolk County Comprehensive Water Resources Management Plan (SCCWRMP) provides general information concerning groundwater quality in Suffolk County based upon file review at the time of preparation of the study which was released in 1987. The following paragraphs summarize water quality information available from these sources.

The Suffolk County Comprehensive Water Resources Management Plan (**SCDHS, 1987-2**) provides information on water quality from 0 to 100 feet below the water table based on observation wells as well as public and private water supply and well monitoring. With respect to nitrate-nitrogen at a depth into the aquifer of between 0 and 100 feet, the Plan shows the subject site as lying within a “good” area in terms of water quality (1 to 6 mg/l of nitrogen) (**SCDHS, 1987-2; Plate 4**). Insufficient nitrate-nitrogen concentration information is available for depths of 100 to 400 feet beneath the site to draw conclusions regarding water quality beneath the site. The Plan also provides information regarding concentrations of Volatile Organic Compounds (VOC’s) in groundwater. Groundwater quality in the vicinity of the site is also “good” (less than 60% of applicable guidelines), although there are detectable levels of some compounds at a depth of 0 to 100 feet (**SCDHS, 1987-2; Plate 6**). Insufficient water quality information is available from the area of the site for water at a depth of 100 to 400 feet. VOC's are synthetic organic compounds such as degreasers, oil additives, solvents and

pesticides. They are typically introduced to groundwater through chemical manufacturing, dry cleaning, fuel spills, agricultural practices and improper disposal of both household and industrial wastes.

As previously mentioned, the subject site is located in Groundwater Management Zone VIII. Based on the requirements of Article 6, no more than 600 gallons may be discharged per acre on a daily basis within this zone. The site acreage used for determining this Population Density Equivalent must not include wetlands, surface waters, or land in flood zones. The subject site is 49.69 acres in size and contains 2.11 acres of wetlands and surface water (1.33 acres of red maple hardwood swamp and 0.78 acres of surface water). Thus, the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

(49.69 acres – 2.11 acres) x 600 gpd/acre = 28,548 gpd

The current design sewage flow standard applied by the Suffolk County Department of Health Services estimates that the proposed project will generate approximately 37,820 gpd of sanitary effluent. This will exceed the 28,548 gpd allowable for the site in Groundwater Management Zone VIII and as a result, use of a sewage treatment plant (STP) will be required for disposal of sanitary waste.

The 208 Study recommends that development in this zone utilize public sewers if available, or provide for wastewater collection/treatment where the wastewater generation rate is 600 gpd/acre or more minus wetlands areas. In addition, the 208 Study recommends: 1) that stormwater runoff be controlled on-site by preventing sediments, nutrients, metals, organic chemicals and bacteria from reaching surface waters and, eventually, ground waters; and 2) provide routine maintenance of on-site disposal systems.

Stormwater, as runoff, is the vehicle by which pollutants move across land and through the soil to groundwater or surface waters. Contaminants accumulate or are disposed of on land and developed surfaces. Sources of contaminants include:

- animal wastes
- highway deicing materials
- decay products of vegetation and animal matter
- fertilizers
- pesticides
- air-borne contaminants deposited by gravity, wind or rainfall
- general urban refuse
- by-products of industry and urban development
- improper storage and disposal of toxic and hazardous material

In 1982, the Long Island Regional Planning Board (LIRPB) prepared the L.I. Segment of the Nationwide Urban Runoff Program (NURP Study). This program attempted to address, among other things, the following:

- the actual proportion of the total pollutant loading that can be attributed to stormwater

runoff, given the presence of other point and non-point sources and conditions within the receiving waters. (**Koppelman, 1982, p. 1**)

The purpose of the Nationwide Urban Runoff Program (NURP Study) was to determine:

- the source, type, quantity, and fate of pollutants in stormwater runoff routed to recharge basins, and
- the extent to which these pollutants are, or are not, attenuated as they percolate through the unsaturated zone. (**Koppelman, 1982, p. 7**)

In order to accomplish this, five recharge basins, located in areas with distinct land use types, were selected for intensive monitoring during and immediately following storm events. Five recharge basins, three in Nassau and two in Suffolk, were chosen for the study on the basis of the type of land use from which they receive stormwater runoff. The following is a listing and description of each drainage area:

Site Location	Land Use
Centereach	Strip Commercial
Huntington	Shopping Mall, Parking Lot
Laurel Hollow	Low Density Residential (1 acre zoning)
Plainview	Major Highway
Syosset	Medium Density Residential (1/4 acre zoning)

(**Koppelman, 1982, pp.8-9**).

Based on the sampling program, the Nationwide Urban Runoff Program (NURP Study) reached the following relevant findings and conclusions:

Finding: Stormwater runoff concentrations of most of the inorganic chemical constituents for which analyses were performed were generally low. In most cases, they fell within the permissible ranges for potable water; however, there were two notable exceptions:

- median lead concentrations in stormwater runoff samples collected at the recharge basin draining a major highway (Plainview) consistently exceeded the drinking water standards;
- chloride concentrations in stormwater runoff samples generally increase two orders of magnitude during the winter months.

Conclusion: In general, with the exception of lead and chloride, the concentrations of inorganic chemicals measured in stormwater runoff do not have the potential to adversely affect groundwater quality (**Koppelman, 1982, p.115**).

Finding: The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10^8 Most Probable Number (MPN) to 10^{10} MPN per acre per inch of precipitation.

Conclusion: Coliform and fecal streptococcal indicator bacteria are removed from stormwater as it infiltrates through the soil (**Koppelman, 1982, p. 116**).

The handling of stormwater for the proposed use and potential impact on groundwater will be considered in **Section 3.5.2** (see page 3-36) with specific correlation of the proposed project to land use types and potential impacts.

Water Balance

Groundwater flows generally perpendicular to the lines of equal water table elevation as a result of hydraulic gradient or the difference in water table elevation over a distance. Therefore, as the proposed project site is located to the north of the regional groundwater divide, water recharged on the proposed project site will generally flow toward the north-northeast toward Sunken Meadow Creek and Long Island Sound.

The proposed project site currently is vacant woodlands, successional field, cleared surfaces which expose barren soils, and does not withdraw water from the underlying aquifer. In addition, recharge that occurs on the site is derived from regional precipitation.

The groundwater budget for an area is expressed in the hydrologic budget equation, which states that recharge equals precipitation minus evapotranspiration plus overland runoff. This indicates that not all rain falling on the land is recharged. Loss in recharge is represented by the sum of evapotranspiration and overland runoff. The equation for this concept is expressed as follows:

$$\mathbf{R = P - (E + Q)}$$

where: **R** = recharge
P = precipitation
E = evapotranspiration
Q = overland runoff

Nelson, Pope & Voorhis, LLC (NP&V) has utilized a microcomputer model developed for its exclusive use in predicting both the water budget of a site and the concentration of nitrogen in recharge. The model, named **SONIR** (**S**imulation **O**f **N**itrogen **I**n **R**echarge), utilizes a mass-balance concept to determine the nitrogen concentration in recharge. Critical in the determination of nitrogen concentration is a detailed analysis of the various components of the hydrologic water budget, including recharge, precipitation, evapotranspiration and overland runoff generated on the subject property.

The **SONIR** model includes four sheets of computations: 1) Data Input Field; 2) Site Recharge Computations; 3) Site Nitrogen Budget; and 4) Final Computations. All information required by the model is input in Sheet 1. Sheets 2 and 3 utilize data from Sheet 1 to compute the Site Recharge and the Site Nitrogen Budget. Sheet 4 utilizes the total values from Sheets 2 and 3 to perform the final Nitrogen in Recharge computations. Sheet 4 also includes tabulations of all conversion factors utilized in the model.

It should be noted that the simulation is only as accurate as the data that is input into the model. An understanding of hydrologic principles is necessary to determine and justify much of the data inputs used for water budget parameters. Further principles of environmental science and engineering are applied in determining nitrogen sources, application and discharge rates,

degradation and losses, and final recharge. Users must apply caution in arriving at assumptions in order to ensure justifiable results. There are a number of variables, values and assumptions concerning hydrologic principles, which are discussed in detail in a user manual developed for the Simulation of Nitrogen in Recharge (SONIR) Model and provided in **Appendix J-1**.

The model was run to obtain the existing water budget and nitrogen concentration in recharge. The run was based on current site conditions and land use coverages. The site currently has a total site recharge of 27.29 MGY. Since the site is undeveloped with no sanitary discharge or fertilized areas, there is no site-generated nitrogen in recharge; in consideration of precipitation nitrogen the ambient concentration of nitrogen in recharge is 0.01 mg/l. The results of this analysis are presented in **Appendix J-2**.

Surface Water and Drainage

A freshwater pond is located in the northwestern quadrant of the subject property and was initially suspected to be the result of a perched water condition. This pond is identified on New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands maps as SJ-18 and is identified on National Wetland Inventory maps as POWZ which is defined as Palustrine, Open Water Intermittently Exposed/Permanent.

Review of geologic boring logs (provided in a pouch at the end of the document) and geologic cross-sections (provided in **Appendix G-1**) reveal that the impermeable clays beneath the pond generally slope from west to east and do not create a retaining feature (a concave stratigraphic layer) which would retain surface runoff. In addition the silty clay layer is noted to be discontinuous and does not extend beneath the entire area of the pond. Water retained within the pond is most likely the result of low permeability silts and organic material that has collected within the basin and retains surface runoff that is directed to the pond by existing on-site topography. This is also consistent with the agricultural origin of this pond as evidenced in historic aerial photographs contained in **Appendix D**, whereby surrounding disturbed soils would result in transport of finer soils to collect in a low area which later retains runoff to become a pond feature over time.

The site does not contain any major drainage features such as intermittent streambeds or gullies, which would, if present, indicate that significant volumes of movements of surface runoff were occurring, traversing long distances. Precipitation on the subject property infiltrates the subsurface through natural percolation and excess runoff is directed along the natural topography of the site where it either enters the pond or flows beyond the property boundaries.

3.5.2 Anticipated Impacts

Groundwater Hydrology

Based on the site quantities presented for the proposed project it is anticipated that a total of 46.64 MGY of water will be recharged on the subject site. This represents a 70.91% increase in recharge generated on the property, as compared with the existing recharge volume. Stormwater will be handled by a drainage system that will recharge at point of generation as well as provide pickup systems to convey stormwater to a leaching pool network placed across the property,

outside required buffer areas. Sanitary effluent will be conveyed to the Kings Park Sewage Treatment Plant for treatment and treated effluent is proposed to be recharged on the ±5-acre parcel proposed for transfer to Suffolk County Department of Public Works. It is anticipated that groundwater flow underlying the subject site will continue to flow in a north-northeasterly direction based on regional hydrology. Furthermore, Long Island subsoils within the water table are highly permeable with a greater hydraulic conductivity in a horizontal direction, allowing recharge water to rapidly be assimilated into the upper aquifer (**SCCWRMP, 1987**).

As noted previously, review of logs generated for soil borings installed on the subject property indicate that perched water conditions are present within the southwestern quadrant of the property and sections of this area will be subject to development. As per Section 322-19 of the Town Code a variance is required to permit development within areas where groundwater is 10 feet below ground surface or less. It is expected that approximately 10% of the building area will overly shallow perched water beneath the subject property and as a result the applicant will request variances from the Town Board of Zoning Appeals to accommodate development.

It should be further noted that a subsurface parking garage is proposed in an area where perched water is noted to be present at approximately 9 feet to 10 feet below ground surface. To mitigate concerns related to water intrusion, a foundation drain will be provided along the perimeter of the subsurface parking garage to alleviate potential infiltration issues related to perched water and foundation walls will be appropriately water proofed using acceptable methods and techniques. All drainage facilities and methods will be subject to Town engineering and Town Board review and approval.

A pump station is presently located in the northeast corner of the subject property, which pumps wastewater to the Suffolk County Sewer District #6 (Kings Park Sewage Treatment Plant (STP)), which is located southeast of the subject property, off of Mariner Road. The Uplands at St. Johnland project proposes to connect to this pump station for transfer of wastewater to the Kings Park Sewage Treatment Plant. The sufficiency of this pump station for the additional flow will be evaluated as part of the site plan application review to determine if upgrades are needed to the pump station. As part of the proposed project, a ± 5-acre portion of the St. Johnland Nursing Center property (SCTM No. 800-08-04-01.6), located outside the westernmost boundary of the Nissequogue River Wild, Scenic and Recreational Rivers area boundary (see **Figure 2-2**), is proposed to be transferred to Suffolk County Department of Public Works to allow for recharge of treated effluent. Treated effluent would be pumped back to the ± 5-acre property and discharged to sanitary leaching pools to be installed by the Suffolk County Department of Public Works (SCDPW) on the property. A map illustrating the ±5-acres of St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) for sanitary discharge and leaching is provided in **Figure 2-5**. According to a letter from the Suffolk County Department of Public Works (SCDPW) (see **Appendix G-3**), the use of ±5-acre parcel will allow the Kings Park Sewage Treatment Plant (STP) to process the full treatment capacity of the plant, while maintaining compliance with the permit restrictions set forth by the Long Island Sound Study. The ±5-acre area will be mostly cleared and replanted with grass with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer. Leaching pools will be a maximum depth of 15 feet (or an effective depth of 12 feet). Leaching pools will be located no closer than 25 feet from the ±5-acre property boundary.

Groundwater Quality

Degradation of groundwater quality is typically a result of sanitary discharge and recharge of stormwater on a site using improper treatment or design. An increase in the amount of water that is recharged is also expected as a result of the increase in impervious surfaces on site, although this is not expected to result in a significant change in the regional hydrologic regime. The following analyzes changes in water quality that may result from implementation of the proposed project.

In general, the primary groundwater concern associated with development on Long Island is nitrate/nitrogen loading, due to disposal of sanitary waste effluent and lawn fertilization. Nitrogen (as nitrate), which is introduced to a site from these sources, may impair the viability of groundwater for water supply. Wastewater will be generated as a result of the proposed use of the site. However, all sanitary wastewater effluent is proposed to be conveyed to the Kings Park Sewage Treatment Plant (STP).

This form of treatment and disposal is permitted subject to engineering review in cases where wastewater design flow exceeds standards established by the Suffolk County Department of Health Services (SCDHS) under Suffolk County Sanitary Code (SCSC) Article 6. Nitrogen, the primary contaminant of concern, is to be reduced to a concentration of less than 10 mg/l, the NYS effluent limitation, in accordance with the State Pollution Discharge Elimination System (SPDES) permit in place for the Kings Park Sewage Treatment Plant (STP). Furthermore, the proposed project will facilitate the transfer of the ±5-acre parcel to the Suffolk County Department of Public Works for treated effluent discharge. These changes would allow the Kings Park Sewage Treatment Plant (STP) to process the full treatment capacity of the plant, while maintaining compliance with the permit restrictions set forth by the Long Island Sound Study. The treatment of the proposed project's wastewater in the Kings Park Sewage Treatment Plant (STP) is expected to produce effluent below discharge limitations, specifically treating to 10 mg/l or less. The proposed project is anticipated to generate 37,820 gpd of sanitary effluent which will be discharged to the Kings Park Sewage Treatment Plant (STP). In order to accommodate the connection to the Kings Park Sewage Treatment Plant (STP), the existing pump station on the subject property must be evaluated to determine if any necessary upgrades are necessary in accordance with Suffolk County Department of Public Works (SCDPW) requirements.

The results of the Simulation of Nitrogen in Recharge (SONIR) Model for the project are presented in **Table 2-2**. The printout (see **Appendix J-3**) indicates that the concentration of nitrogen in recharge (including the sewage treatment plant recharge on the ±5-acre parcel) would be 3.30 mg/l. This concentration is substantially less than the drinking water standard of 10 mg/l.

Due to the construction of impervious surface areas resulting from paved parking surfaces and buildings, the amount of stormwater recharge generated by the proposed project will dramatically increase at the subject site. To assess the impact that this increase may have on groundwater quality underlying the site a review of the Nationwide Urban Runoff Program

(NURP study) results was conducted. Applicable sections of the Nationwide Urban Runoff Program (NURP study) which relate to the proposed project are included in **Appendix K**. The land use included in the Nationwide Urban Runoff Program (NURP) report that is most like the proposed use would be medium density residential (Syosset). The Nationwide Urban Runoff Program (NURP study) results for these land use types are shown in **Table 3-8**.

None of the parameters examined within the Nationwide Urban Runoff Program (NURP study) exceeded standards for the reported constituents at the site, with the exception of pH and turbidity. However, the levels of both these parameters are not expected to have a significant impact on the subject property or surrounding resources. As expected, slightly elevated levels of heavy metals were detected; however, their concentrations were significantly reduced through attenuation and did not exceed standards.

The Nationwide Urban Runoff Program (NURP study) found that chloride concentrations in stormwater generally increase by two orders of magnitude during the winter months. Chloride is not attenuated in soils like lead and chromium (**Koppelman, 1982, p. 115**), and thus it is anticipated that the amount of chloride contributed to groundwater will be correlated with the amount of salt applied to roadways and parking areas within the stormwater drainage area, during winter months.

Additional discussion regarding the handling of stormwater for the proposed use and its potential impact on groundwater is contained later in this subsection.

<u>Water Balance</u>
While values for impervious surfaces and irrigated areas for the proposed project have been added to the calculation for recharge volume, the Simulation of Nitrogen in Recharge (SONIR) model results indicate an increase in overall recharge volume, in comparison to the existing condition. Specifically, under existing conditions the site (including the ±5-acre parcel on which the sewage treatment plant will be located), generates 27.29 million gallons annually; the proposed project is calculated to generate 46.64 million gallons per year, a 70.91% increase. The reason for this increase is due to the addition of impermeable surface area. Because impermeable surfaces do not experience evapotranspiration to nearly the same degree as vegetated or unvegetated surfaces, these impermeable surfaces recharge runoff faster than the other surfaces, and as a result, do not lose as much to the atmosphere.

Table 3-8
STORMWATER IMPACTS FROM LAND USE, NURP Study
Medium-Density Residential Sites

Parameter	Medium Density Residential	Standard
Spec. Cond (umhos)	104	[n]
pH	5.1	6.5-8.5
Turbidity (NTU)	26	5
Hardness (mg/l)	16.5	[n]
Calcium (mg/l)	4.85	[n]
Magnesium (mg/l)	1.2	[n]
Sodium (mg/l)	4.25	[n]
Potassium (mg/l)	1.0	[n]
Sulfate (mg/l)	7.05	250
Fluoride (mg/l)	0.1	1.5
Chloride (mg/l)	7.3	250
Nitrogen-Total (mg/l)	0.395	10
Phosphorus (mg/l)	0.01	[n]
Cadmium (ug/l)	2.5	10
Chromium (ug/l)	1.0	50
Lead (ug/l)	6	50
Arsenic (ug/l)	0	25
Coliform (MPN)	13	[n]
Coliform, fecal	3	[n]

Source: Koppelman, 1982, p. 26-29
[n] - no standard for parameter

Surface Water and Drainage

The proposed project will utilize an on-site drainage system that will be designed to collect all stormwater runoff originating on developed surfaces and convey excess recharge to the subsurface for disposal. The overall system will be capable of accommodating a minimum 3-inch rain storm event, as identified in the "site plan requirements for commercial and industrial sites" included in the Board of Site Plan Review Application Checklist.

Stormwater generated by the proposed development will be fully accommodated on-site in conformance with Town of Smithtown Engineering requirements. The system will be designed to comply with State Pollution Discharge Elimination System (SPDES) requirements under New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP 0-10-001 or "General Permit") and Chapter 153 of the Town Code. Under these requirements, a site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared and submitted to the Town for review and approval as a condition to final site plan approval. The Stormwater Pollution Prevention Plan (SWPPP) evaluates the proposed drainage system to ensure that it meets the New York State Department of Environmental Conservation (NYSDEC) and Town requirements for treatment and retention of stormwater runoff. The Stormwater Pollution Prevention Plan (SWPPP) must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is no net increase in peak stormwater discharges

from a property once developed, based on a 10-year and 100-year storm event. Therefore, the proposed stormwater management system will be designed to ensure there is no net increase in stormwater runoff to adjacent properties.

A **Preliminary Grading and Drainage Plan** (**GD-1**) has been prepared, which utilizes a series of interconnected catch basins and leaching pools for the collection and recharge of stormwater runoff. The location of the tributary areas and the collection structures are provided on the **Preliminary Grading and Drainage Plan** (**GD-1,** which has been provided in a pocket at the end of this document). All leaching pools will be installed within suitable material appropriate for the effective recharge of runoff. Excavations for leaching pools will be advanced until a sufficient depth is achieved where such materials are encountered in accordance with Town and County requirements. The drainage design for the project will be subject to Town Engineering and Town Board prior to approval. In addition, the buffer areas around the on-site wetland will remain, providing for overland flow of runoff from the areas to remain natural within the buffer, thereby maintaining the current hydrologic properties of this system.

The existing water resources of the subject site have been characterized and potential impacts assessed. The proposed change of zone would allow the proposed project to proceed to site plan review which would further consider ensuring treatment of sanitary effluent, stormwater management and drainage system design in conformance with the regulations outlined above. Sufficient information has been obtained to demonstrate the feasibility of the project, to assess potential impacts and identify mitigation measures to minimize impacts to the maximum extent practicable. Given the planned treatment of sanitary effluent and the appropriate management of stormwater in conformance with Town Engineering and State Pollutant Discharge Elimination System requirements, significant long-term adverse environmental impacts are not expected. The existing perched wetland on-site has been evaluated in terms of underlying soils and its presence. This wetland does not reflect the elevation of the regional water table; based on review of test borings, this feature is believed to be the result of accumulated silts and organic material. Recharge on the remainder of the site will percolate vertically downward, to intermittent silty clay and/or the regional groundwater table. The remaining natural areas of the overall site, comprising a total of 31.12 acres (or 62.63%) will continue to act as natural drainage areas recharging and evapotranspiring precipitation. As a result the proposed project is not expected to cause a significant adverse impact to groundwater, surface water or drainage resources associated with the project site.

3.5.3 Proposed Mitigation

- Use of the existing Kings Park Sewage Treatment Plant (STP), which will be subject to the review and approval of the Suffolk County Department of Health Services (SCDHS), Suffolk County Department of Public Works (SCDPW), Suffolk County Sewer Agency (SCSA) and New York State Department of Environmental Conservation (NYSDEC), will ensure that groundwater quality will be protected from impact via treated sanitary effluent recharge; nitrogen in effluent from the sewage treatment plant will be limited to 10 mg/l or less.
- Potential groundwater quality impacts from nitrogen-bearing fertilizers will be minimized by limiting both the rate of fertilizer use and the acreage of fertilizer-dependent landscaping.

- It should be further noted that a subsurface parking garage is proposed in an area where perched water is noted to be present at approximately 10 feet below ground surface. To mitigate concerns related to water intrusion, a perimeter foundation drain will be provided in the parking garage to alleviate potential infiltration issues related to perched water and foundation walls will be appropriately water proofed using acceptable methods and techniques. Further drainage details will be completed during the design phase of the project and will be subject to appropriate agency review and approval.
- The proposed project will utilize an on-site drainage system that will be designed to collect all stormwater runoff originating on developed surfaces and convey excess recharge to the subsurface for disposal. The overall system will be capable of accommodating a minimum of a 3-inch rain storm event and will utilize leaching pools to recharge stormwater close to the source. The system will be designed to ensure that overland flow of runoff from newly developed areas to on-site wetlands located on the property will not occur. In addition, the extensive buffer areas around this wetland will allow it to continue to receive runoff from natural lands within its contributing area, maintaining the current hydrologic properties of this system.
- The remaining natural areas of the overall site, comprising a total of 31.12 acres (or 62.63%) will continue to act as natural drainage areas recharging and evapotranspiring precipitation.
- Adherence to the proposed Stormwater Pollution Prevention Plan (SWPPP) (to be prepared for the State Pollution Discharge Elimination System (SPDES) GP-0-10-001 permit, and would include an erosion control plan) would ensure that stormwater generated during the construction period is controlled, and that erosion and its associated impacts is minimized.
- There are an estimated 10 to 48 feet of vertical separation between the surface and true underlying water table. This distance is expected to be more than sufficient to ensure adequate levels of attenuation and decay of contaminants in stormwater runoff, which would protect groundwater quality.
- The wetland does not reflect the elevation of the regional water table, but is the result of accumulated silts and organic material, the recharge on the remainder of the site will percolate vertically downward, to the regional groundwater table. Specifically, the remaining natural areas of the overall site, comprising a total of 31.12 acres (or 62.63%) will continue to act as natural drainage areas recharging and evapotranspiring precipitation. As a result the proposed project is not expected to adversely impact surface water or drainage resources associated with the project site.
- The use of a road deicer other than chloride (road salt) can mitigate groundwater, and subsequent impacts to surface water quality, in the on-site pond. One such type of product contains calcium magnesium acetate (CMA), and is considered far less corrosive than conventional road deicers. calcium magnesium acetate (CMA)-based deicers are used by a number of state and local transportation agencies throughout North America. Use of other deicer products would be considered by the applicant to compare the effectiveness and cost before a final determination is made.

SECTION 4.0

HUMAN ENVIRONMENTAL RESOURCES

4.0 HUMAN ENVIRONMENTAL RESOURCES

4.1 Transportation

4.1.1 Existing Conditions

Appendix L contains the Traffic Impact Study (TIS) prepared in August 2011 for the subject site. The following excerpts provide a relevant summary of the existing conditions as described in the TIS:

The following is a list of roadways included in the study network surrounding the site. The traffic generated by the proposed developments will be distributed throughout the network. The general descriptions listed here refer only to the sections of the roadways that exist near the site. Their cross-section may vary further away from the site. The Average Annual Daily Traffic (AADT) is listed for each roadway where available in the most recent New York State Department of Transportation (NYSDOT) Local Highway Traffic Volumes Report.

NYS Route 25A is an east/west urban principal arterial under the jurisdiction of the New York State Department of Transportation (NYSDOT). NYS Route 25A in the vicinity of the study area provides one lane per travel direction with exclusive turn lanes at key intersections. NYS Route 25A runs through downtown Kings Park. Parking is permitted on some sections of NYS Route 25A in the downtown area of Kings Park. The section of NYS Route 25A, west of Pulaski Road has an average annual daily traffic (AADT) volume of approximately 10,248 vehicles per day (source: NYSDOT Traffic Volume Report 2008) and the section of NYS Route 25A, east of Pulaski Road has an average annual daily traffic (AADT) volume of approximately 16,008 vehicles per day (source: NYSDOT Traffic Volume Report 2008). The posted speed limit is 30 miles per hour. The land uses along this roadway in the vicinity of the study area are a mix of commercial and residential.

Old Dock Road is a northeast/southwest roadway under the jurisdiction of the Town of Smithtown that extends from NYS Route 25A to the Nissequogue River, providing one lane per travel direction.

Sunken Meadow Road is an east/west Town roadway that extends from Old Dock Road to Bread and Cheese Hollow Road. This roadway provides one lane per travel direction.

St Johnland Road is a Town roadway that extends from Sunken Meadow Road to NYS Route 25A. This roadway provides one lane per travel direction.

<u>Traffic Volume Data</u>
Weekday turning movement counts were collected at the study intersections on Tuesday, November 16, 2010 during the weekday AM (7:00-9:00 AM) and PM (4:00-7:00 PM) peak periods. The weekend turning movement counts were collected on Saturday, November 13, 2010 during the Saturday midday peak period (11:00 AM – 2:00 PM). The volume data was tabulated to identify the peak hours at each of the study intersections. In order to perform a conservative analysis the peak hour volumes at each intersection were utilized in this study.

A weekday seasonal adjustment factor of 1.033 and a weekend seasonal adjustment factor of 0.858 for November (months of counts) were obtained from New York State Department of Transportation (NYSDOT). Applying the weekend normalization factor will increase the existing weekend traffic volumes, therefore the weekend counts were normalized to account for seasonal fluctuation. Applying

the weekday normalization factor to the weekday traffic count data collected would reduce the existing peak hour volumes. Therefore to be conservative, the weekday peak hour traffic volumes collected were not normalized. The existing intersection peak hour volumes are shown on Figures 3, 4, and 5 [in the Traffic Impact Study] and detailed data are contained in Appendix A [in the Traffic Impact Study].

Accident History

Accident data for the sections of roadways and intersections in the vicinity of the site was obtained from the New York State Department of Transportation (NYSDOT). The most recent data available was from September 2007 to September 2010. Table 2 [in the Traffic Impact Study] indicates a total of 100 accidents occurred at or in the vicinity of study intersections during the 37-month analysis period, none of which resulted in a fatality. The majority of accidents, 59%, involved property damage only. The locations with the greatest number of accidents are the section of NYS Route 25A between Pulaski Road and Church Street, the intersection of NYS Route 25A at Church Street, the intersection of NYS Route 25A at Pulaski Road followed by the section of Pulaski Road between NYS Route 25A and 1st Avenue. A review of Table 3 [in the Traffic Impact Study] indicates that a plurality of the accidents (44%) involved accidents that are either unknown or unclassified. The second most frequent accident type was rear-end accidents at 17%.

Existing Condition Analysis

The 2010 existing peak hour traffic volumes depicted in Figures 3, 4, and 5 [in the Traffic Impact Study] were used to determine the existing capacity and Levels of Service (LOS) of the study intersection. Tables 4 and 5 [in the Traffic Impact Study] contain the Level of Service (LOS) summary for the Existing Condition calculated through the HCS+ software described previously [in the Traffic Impact Study]. The detailed analysis worksheets are in Appendix D [in the Traffic Impact Study].

NYS Route 25A at Sunken Meadow Road- The signalized intersection of NYS Route 25A at Sunken Meadow Road currently operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

NYS Route 25A at Pulaski Road/Old Dock Road- The signalized intersection of NYS Route 25A at Pulaski Road/Old Dock Road currently operates at LOS C during the weekday AM, PM and Saturday midday peak hours.

NYS Route 25A at Church Street/Indian Head Road- The signalized intersection of NYS Route 25A at Church Street/Indian Head Road currently operates at LOS C during the weekday AM, PM and Saturday midday peak hours.

NYS Route 25A at St. Johnland Road/Rose Street- The signalized intersection of NYS Route 25A at St. Johnland Road/Rose Street currently operates at LOS C during the weekday AM, PM and Saturday midday peak hours.

Old Dock Road at Church Street/Kohr Road- The signalized intersection of Old Dock Road at Church Street/Kohr Road currently operates at LOS B during the weekday AM and PM peak hours and at LOS C during the Saturday midday peak hour.

Old Dock Road at Sunken Meadow Road/St. Johnland Road- The signalized intersection of Old Dock Road at Sunken Meadow Road/St. Johnland Road currently operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

Sunken Meadow Road at St. Johnland Nursing Center Driveway- Currently the Sunken Meadow Road approaches operate at Level of Service (LOS) A during the weekday AM, PM and Saturday midday peak hours. The southbound St. Johnland Nursing Center Driveway approach operates at LOS B during the weekday AM and weekday PM peak hours and operate at LOS A during the Saturday midday peak hour.

Sunken Meadow Road at Society of St. Johnland Driveway- Currently the Sunken Meadow Road approaches operate at LOS A during the weekday AM, PM and Saturday midday peak hours. The southbound Society of St. Johnland Driveway approach operates at LOS A during the weekday AM, PM and Saturday midday peak hours.

Sunken Meadow Road at Kohr Road- Currently the Sunken Meadow Road approaches operate at LOS A during the weekday AM, PM and Saturday midday peak hours. The northbound Kohr Road approach operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

4.1.2 Anticipated Impacts

The following provides descriptions of the analysis of the proposed project, taken from the TIS (**Appendix L**).

Site Access
As depicted on the Master Development plan, access to the developments under both scenarios [Scenario 1- 2014 Build Condition for the proposed CCRC; Scenario 2 – 2014 Build Condition for a permitted use (21 single family homes) under current zoning] will be provided via two full movement driveways; one driveway located on Old Dock Road and one driveway located on Sunken Meadow Road.

Parking
403 parking spaces will be provided (271 surface parking spaces, 104 sub-surface parking spaces and 28 garage stalls) and 128 spaces will be landbanked resulting in a total of 531 parking spaces. [note: parking numbers have been updated, but Traffic Impact Study (TIS) has not] The parking calculations on the Master Development plan indicate that 531 parking spaces are required based on the Town parking requirement per the draft 2006 Continuing Care Retirement Community (CCRC) code (2.5 spaces/unit of Continuing Care Retirement Community (CCRC) and 4 parking spaces per unit of Townhouse). Also indicated on the Master Development plan a parking requirement for the Continuing Care Retirement Community (CCRC) based on a feasibility study was calculated as 266 parking spaces (1.5 spaces/unit) for the Continuing Care Retirement Community (CCRC). In addition to the 88 parking spaces required for the townhouse portion of the project, the proposed Continuing Care Retirement Community (CCRC) development will require 354 parking spaces (266+ 88) as per the feasibility study. Therefore the 403 parking spaces provided exceed the parking requirement based on the feasibility study and the 531 parking spaces that could be provided (403 spaces + 128 landbanked spaces) will meet the parking requirement based on the draft 2006 Continuing Care Retirement Community (CCRC) code.

Trip Generation
In order to identify the impacts the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1) and the permitted use (Scenario 2- 21 single family homes) will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume to be generated

by both scenarios during the peak hours and to estimate the directional distribution of the site traffic when traveling to and from the subject property. The proposed Continuing Care Retirement Community (CCRC) development will contain 199 units and if the site is developed according to current zoning it will comprise 21 single family homes.

Trip generation for CCRC - The trip generation estimates for the proposed Continuing Care Retirement Community (CCRC) development were prepared for three alternatives:

- Utilizing data found under Land Use Code 255-Continuing Care Retirement Community within the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Eighth Edition.* This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country.
- Utilizing data found under Institute of Transportation Engineers (ITE) Land Use Code 252-Senior Adult Housing Attached for the Independent Living and Townhouse portions of the project and Institute of Transportation Engineers (ITE) Land Use Code 254 –Assisted Living for the Assisted Living portion of the project.
- Utilizing trip generation rates calculated from peak hour traffic counts conducted at the access to the "Jefferson's Ferry", a Continuing Care Retirement Community located at 1 Jefferson Ferry Drive in South Setauket, New York. This Continuing Care Retirement Community (CCRC) contains 248 Independent Living Units and 60 Assisted Living Beds and is very similar to the proposed Continuing Care Retirement Community (CCRC).

The following Table summarizes the comparison of the trip generation estimates from the three alternatives. Appendix B [in the Traffic Impact Study] contains the trip generation worksheets.

Table 4-1
Trip Generation - CCRC

Time Period	Distribution	199 units – based on ITE LUC 255	199 units based on ITE LUC 252 and ITE LUC 254	199 units based trip generation rates from similar CCRC
Weekday AM Peak Hour	Enter	24	12	32
	Exit	12	15	17
	Total	**36**	**27**	**49**
Weekday PM Peak Hour	Enter	28	22	22
	Exit	30	14	28
	Total	**58**	**36**	**50**
Saturday Midday Peak Hour	Enter	42	30	30
	Exit	36	32	26
	Total	**78**	**62**	**56**

Source: Trip Generation, 8th Edition, published by ITE

As can be seen from **Table 4-1** above, the trip generation for the proposed Continuing Care Retirement Community (CCRC) obtained from Institute of Transportation Engineers (ITE) Land Use Code (LUC) 225 is significantly higher than the one obtained from Land Use Code (LUC) 252 and 254 and higher than the one calculated from the rates obtained from the similar Continuing Care Retirement Community (CCRC) development during the PM and Saturday peak hours. The AM trip generation calculated from the similar Continuing Care Retirement Community (CCRC) is higher. The trip generation rates calculated from the similar Continuing Care Retirement Community (CCRC) development should be more representative of what is anticipated at the proposed Continuing Care Retirement Community (CCRC) development since it is located in the same State

and County as the proposed CCRC and contains similar type and number of units. However, to perform a conservative analysis, the trip generation data from ITE LUC 255 was utilized for the PM and Saturday peak hours and the rates for the similar Continuing Care Retirement Communities (CCRCs) were utilized for the AM peak hour in this study. Therefore the proposed Continuing Care Retirement Community (CCRC) development is conservatively projected to generate 49 trips (32 entering and 17 exiting) during the weekday AM peak hour, 58 trips (28 entering and 30 exiting) during the weekday PM peak hour and 78 trips (42 entering and 36 exiting) during the Saturday midday peak hour.

Traffic Impact Analyses

In order to identify the impacts created by the proposed Continuing Care Retirement Community (CCRC) development in the study area, capacity analyses were conducted at the study intersections for the No Build and Build Scenario 1 Conditions during the weekday AM, PM and Saturday midday peak hours. The results of the capacity analyses for the No Build and Build Scenario 1 Conditions were compared to determine the impact that will be created on the study intersections by the proposed Continuing Care Retirement Community (CCRC) development. Capacity analyses were also conducted for the current residential zoning to determine the impacts of the permitted residential use and compare the results to the impacts of the proposed Continuing Care Retirement Community (CCRC) development. The tables [provided in the Traffic Impact Study] summarize the results of the capacity analyses for both Build Scenarios.

Signalized Intersections

From the review of the tables [in the Traffic Impact Study], it can be seen that during the No Build Conditions all the signalized intersections studied operate at overall LOS C or better during the weekday AM, weekday PM and Saturday midday peak hours with all the movements operating at LOS D or better except for the westbound left turn movement at the intersection of NYS Route 25A and Pulaski Road that operates at LOS E during the Saturday midday peak hour. With the construction of the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1), the signalized intersections are expected to continue to operate at No Build conditions with minor or no increases in delay. Therefore, the construction of the proposed Continuing Care Retirement Community (CCRC) development is not expected to significantly impact the operation of the signalized intersections and roadways in the study area. The results of the analyses conducted for the permitted use under current zoning (21 single family homes) are similar to those of the proposed Continuing Care Retirement Community (CCRC).

Unsignalized Intersections

From the review of the tables [in the Traffic Impact Study], it can be seen that during the No Build Conditions all the unsignalized intersections studied operate at LOS B or better during the weekday AM, weekday PM and Saturday midday peak hours. With the construction of the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1), the unsignalized intersections including the proposed site driveways are expected to continue to operate at LOS B or better. Therefore, the construction of the proposed Continuing Care Retirement Community (CCRC) development is not expected to significantly impact the operation of the unsignalized intersections and roadways in the study area. The results of the analyses conducted for permitted use under current zoning (21 single family homes) are similar to those of the proposed Continuing Care Retirement Community (CCRC).

TRAFFIC IMPACT STATEMENT FINDINGS SUMMARY

Nelson & Pope has investigated the potential traffic impacts associated with the development of the subject site under the following scenarios

1. Development of the subject parcel with the currently proposed Continuing Care Retirement Community (CCRC)
2. Development of the subject parcel in accordance with the existing zoning (R-43/ Residential Zone)

The following is a summary of this investigation and the findings thereof:

1. The following intersections were studied:
    - NYS Route 25A at Sunken Meadow Road
    - NYS Route 25A at Old Dock Road/Pulaski Road
    - NYS Route 25A at Church Street/Indian Head Road
    - NYS Route 25A at St. Johnland Road
    - Old Dock Road and Church Road/Kohr Road
    - Old Dock Road at St. Johnland Road/Sunken Meadow Road
    - Sunken Meadow Road at St. Johnland Nursing Center Driveway
    - Sunken Meadow Road at the Society of St. Johnland Driveway
    - Sunken Meadow Road at Kohr Road
    - Old Dock Road and Site Driveway
2. The proposed Continuing Care Retirement Community (CCRC) development is projected to generate 49 trips during the AM peak hour (32 entering, 17 exiting), 58 trips during the PM peak hour (28 entering, 30 exiting) and 78 trips during the Saturday midday peak hour (42 entering, 36 exiting).
3. The permitted use (21 single family homes) under the current zoning is projected to generate 24 trips during the AM peak hour (6 entering, 18 exiting), 26 trips during the PM peak hour (16 entering, 10 exiting) and 28 trips during the Saturday midday peak hour (15 entering, 13 exiting).
4. As depicted on the Master Development plan, access to the site will be provided via two full movement driveways; one driveway located on Sunken Meadow Road opposite the Society of St. Johnland driveway and one driveway on Old Dock Road.
5. Capacity analyses were conducted at all the study intersections and site access driveways for the 2010 Existing, 2014 No Build, 2014 Build Scenario 1 and 2014 Build Scenario 2 conditions during the weekday AM, weekday PM and Saturday midday peak hours. The Scenario 1 and Scenario 2 analyses conditions are described below:
    - 2014 Build Scenario 1 Condition – This condition represents the analyses of the study intersections in 2014 assuming the proposed Continuing Care Retirement Community (CCRC) development is built on the site.
    - 2014 Build Scenario 2 Condition – This condition represents the analyses of the study intersections in 2014 assuming 21 single family homes are built on the site under the current zoning.
6. The results of the capacity analyses showed that during the No Build Conditions all the signalized intersections studied operate at overall LOS C or better during the weekday AM, weekday PM and Saturday midday peak hours with all the movements operating at LOS D or better except for the westbound left turn movement at the intersection of NYS Route 25A and Pulaski Road that operates at LOS E during the Saturday midday peak hour. With the construction of the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1), the signalized intersections are expected to continue to operate at No Build conditions with minor or no increases in delay. Therefore, the construction of the proposed Continuing Care Retirement Community (CCRC) development is not expected to significantly impact the operation of the signalized intersections and roadways in the study area. The results of the analyses conducted for

permitted use under current zoning (21 single family homes) are similar to those of the proposed Continuing Care Retirement Community (CCRC).

7. The results of the capacity analyses showed that during the No Build Conditions all the unsignalized intersections studied operate at LOS B or better during the weekday AM, weekday PM and Saturday midday peak hours. With the construction of the proposed Continuing Care Retirement Community (CCRC) development (Scenario 1), the unsignalized intersections including the proposed site driveways are expected to continue to operate at LOS B or better. Therefore, the construction of the proposed Continuing Care Retirement Community (CCRC) development is not expected to significantly impact the operation of the intersections and roadways in the study area. The results of the analyses conducted for permitted use under current zoning (21 single family homes) are similar to those of the proposed Continuing Care Retirement Community (CCRC).

Based on the results of the Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Nelson & Pope that, the construction of the proposed Continuing Care Retirement Community (CCRC) development will not result in an adverse traffic impact at the study intersections.

4.1.3 Proposed Mitigation

- The TIS did not identify any significant impacts associated with the proposed project. Accordingly, no mitigation is proposed.

4.2 Community Services

The project site is served by the following service districts and community service providers:

- Kings Park Central School District
- Kings Park Library District
- Suffolk County Police Department (SCPD), 4th Precinct
- Kings Park Fire District
- Suffolk County Water Authority (SCWA)
- LIPA (electricity)/National Grid (natural gas)

Information regarding these community resources as well as the related fiscal considerations is discussed in this section.

Appendix M contains correspondence with the various community service providers regarding facilities, services and conditions; information provided in the service providers' responses is included in the following subsections.

4.2.1 Existing Conditions

<u>Fiscal Considerations and Tax Revenue</u>
The majority of the Town's revenues are levied through property tax generation, which is based upon a rate per $1,000 assessed valuation of a given parcel. As seen in **Table 4-2**, property

owners within this part of Town are currently[1] taxed at a rate of $1,820.439 per $1,000 assessed valuation; this accounts for property taxes paid to Kings Park Central School District (CSD), Suffolk County (including Suffolk County Police Department), the Town of Smithtown, Kings Park Fire District, and other local and special taxing jurisdictions.

Table 4-2
EXISTING TAX RATES 2010-11

Taxing Jurisdiction	Current Tax Rate (per $1,000 Assessed Valuation)
Kings Park Central School District	1,214.802
Suffolk County General	14.797
District Court	3.349
Suffolk County Police	213.553
Town Wide	78.771
Town (excluding Villages)	15.828
Highway I (excluding Villages)	87.062
Highway II, III, IV	23.899
New York State Real Property Tax	43.825
New York State Property Tax PD*	5.350
New York MTA Tax	0.513
New York MTA Tax PD*	0.487
Kings Park Fire District	64.081
Smithtown Library	47.482
Street Lighting District	2.960
Arterial Highway Lights	3.680
Total: All Taxing Jurisdictions	**1,820.439**

Source: Statement of Real Property Taxes, Town of Smithtown Receiver of Taxes, 2010-11
* Note: Per correspondence with the Town of Smithtown Assessor's Office on February 4, 2011, this taxing jurisdiction reflects the portion of taxes that are distributed to the Suffolk County Police Department.

According to the Town of Smithtown Receiver of Taxes and the Town of Smithtown Assessor's Office, the subject property is currently owned by a healthcare facility, and is exempt from paying property taxes. The St. Johnland Nursing Center property, including the ±5-acres to be utilized by the Suffolk County Department of Public Works (SCDPW), is also currently exempt from paying property taxes due to its 501(c)(3) (non-profit/charitable organization) status.

Educational Facilities

The subject property is located in the Kings Park Central School District (CSD). The District is comprised of five (5) schools. Fort Salonga Elementary School and Park View Elementary School provide education to students enrolled in Kindergarten through third (3rd) grade, while R.J.O. Intermediate School provides education to students enrolled in third (3rd) through fifth

[1] Fiscal Year 2010-11.

(5th) grade. William T. Rogers Middle School serves students enrolled in grades six (6) through eight (8), and Kings Park High School serves those enrolled in grades nine (9) through twelve (12). **Figure 4-1** shows the location of the schools in reference to the project site.

According to the New York State Education Department, New York State School Report Card, enrollment within the Kings Park Central School District (CSD) has increased by 6.2% – or by 232 students – over the ten years between 2000-01 and 2009-2010. Regardless of these trends, however, there are no known capacity or overcrowding issues within the Kings Park Central School District (CSD).

According to the New York State School Report Card, Fiscal Accountability Supplement for Kings Park Central School District (CSD), expenditures averaged $10,432 per general education student and $23,918 per special education student during the 2008-09 academic year.[2] During this year, 614 students, or 13.5% of the students within the Kings Park Central School District (CSD), were enrolled in the special education program.

Similar to other school districts on Long Island and across New York State, the Kings Park Central School District (CSD) is facing financial challenges which are attributed to the current recession and economic conditions. This has resulted in the need to make considerable cuts to various components of their budget. The Kings Park Central School District (CSD) adopted a balanced budget for the 2011-12 academic year, with revenues and expenditures totaling approximately $79.1 million.[3]

The subject site is currently vacant, and as such does not generate school-aged children. Moreover, the subject property is currently tax exempt, and therefore does not generate property taxes to the Kings Park Central School District (CSD).

Police Protection

Figure 4-2 shows the location of the public safety services in reference to the project. The subject site lies within the Suffolk County Police Department (SCPD) Fourth Precinct, Sector 401. The 4th Precinct headquarters is located at 345 Old Willets Path in Hauppauge.

Funding for police protection is received through property taxes placed on lands within the five western towns of Suffolk County. The subject property is currently tax exempt, and therefore does not generate property taxes to the Suffolk County Police Department.

Fire Protection

The Kings Park Fire District provides fire protective services to the subject site. Boundaries of the Kings Park Fire District include Bread and Cheese Hollow Road to the west, Town Line Road/Old Northport Road to the south, St. Nicolas/Landing Road/25A to the east and the Long Island Sound as the northern boundary. Funding for fire protection is received through property taxes placed on lands within that fire district and the District's annual operating budget for 2012 is $2,817,750. The subject property is currently tax exempt, and therefore does not generate

[2] As of the date of submission of this analysis, this represents the most current year that such detailed financial data is available.
[3] Kings Park Central School District.

property taxes to the Kings Park Fire District. The District is comprised of Engine Company 1 and 2, Truck Company 3, Fire Police Company 4 and Fire Medic Company 5. District headquarters are located at 2 East Main Street, Kings Park, approximately 1.5 miles south of the subject property. The District operates four Class A engines, one ladder truck, one heavy rescue, one brush fire unit, two fire police vehicles, one marine fire/rescue unit and three ambulances (two basic life support and one advanced life support) and currently has 94 volunteer firefighters and EMT's assigned to operate out of their main fire station headquarters.

Solid Waste Removal and Disposal

As the site is currently vacant, it does not generate any solid waste. The Town of Smithtown manages municipal solid waste within the Town. Correspondence received from the Town's Department of Environment and Waterways indicates that the Town of Smithtown generated approximately 51,882 tons of residential solid waste and 50,470 tons of nonresidential (commercial) solid waste in 2010. The tonnages are representative of a typical year and are consistent with waste generation trends. All of the combined solid waste was delivered and disposed of at the Huntington Resource Recovery Facility (HRRF) energy from waste facility. The facility is shared by the Towns of Huntington and Smithtown and is operated by Covanta Energy. The Town collected approximately 8,257 tons of recyclables consisting of paper, cardboard, plastic, glass, aluminum and other metals. All of the combined recyclables were delivered and processed at the Town of Smithtown Municipal Recycling Facility in Kings Park. The entire volume of recyclables was marketed and delivered for reuse. The Town of Smithtown does not have an operating disposal facility (i.e. landfill) except for the processing of residential and some commercial recyclables. Nonresidential facilities are required to recycle cardboard and are encouraged to recycle other paper material and comingled recyclables.

Water Supply

The subject property and surrounding region are located within the service area of the Suffolk County Water Authority (SCWA), specifically Suffolk County Water Authority (SCWA) Distribution Area #11. Existing water mains in the vicinity include a 12-inch service beneath St. Johnland Road. As the subject site is presently undeveloped, no water supply facilities into the site are present, and the site consumes no water. Correspondence from the Suffolk County Water Authority (SCWA) indicates that the following wells could serve the site:

1. Sunken Meadow State Park Well Field, Pump Station and Booster Station: N/S of 25A, E/S of Sunken Meadow State Parkway, Kings Park
2. Middleville Road Well Field, Pump Station and Standpipe: S/S of Middleville Road, approximately 2,300 feet w/o Bridge Road, Middleville, Town of Huntington
3. Wayne Court Well Field and Pump Station: E/S of Wayne Court, approximately 910 feet s/o Mountain View Drive, Fort Salonga, Town of Huntington

Wastewater Treatment

The site is presently vacant and therefore does not require the use of any wastewater treatment facilities for the disposal of sanitary or other liquid wastes. The St. Johnland Nursing Center north of the subject site is connected to the Kings Park Sewage Treatment Plant, operated by Suffolk County Department of Public Works.

Energy Supply
LIPA is the public electric company in the area. As the subject property is currently vacant it is not served by LIPA, but electrical service will be available. National Grid serves as the natural gas supplier for the area. Correspondence from National Grid indicates that high pressure gas is located in the project vicinity.

Recreational Facilities
The site consists of privately owned vacant woodland and is not used for any authorized recreational purpose. The Sunken Meadow State Park is located north of the St. Johnland Nursing Center and the Nissequogue River State Park is located nearby, to the east of the project site.

4.2.2 Anticipated Impacts

All community service providers were contacted by mail. As a result, all recipients have been made aware of plans to utilize the subject property for St. Johnland Continuing Care Retirement Community (CCRC). Responses received from service providers are included in **Appendix M**. Further impact analysis and discussion regarding community services are included herein.

Fiscal Considerations and Tax Revenue
Many of the Town and County's community services and facilities are supported in large part by the revenues generated through property taxes. The Town of Smithtown and Suffolk County, as well as other local taxing jurisdictions will greatly benefit from an increase in such property tax revenues, resulting from the development and operations of the proposed project.

For the purpose of this analysis, it is necessary to determine the assessed valuation for the proposed project. Per correspondence (as seen in **Appendix M**) from the Town of Smithtown's Assessor, dated June 12, 2012 *"it is estimated that the project will result in a total assessment of approximately $685,000, or the equivalent market value of approximately $49,000,000 to $50,000,000. Using the current tax rate for the area, this would yield an approximate gross tax liability of approximately $1,290,000."* It is important to note that both the assessed valuation and the estimated tax levy *"are based on current conditions and approximations, and are subject to change and/or review as of taxable status date of each tax year, pursuant to the Real Property Tax Law of the State of New York."* Moreover, the applicant has neither agreed, nor will be bound to these assessment and/or tax figures. The estimates and projections provided herein are preliminary, and the final assessment and levy will be determined by the sole assessor, coupled with negotiations with the applicant at the time of occupancy. Projections included herein are as accurate as possible using fiscal impact methodologies, for the purpose of the planning and the land use approval process.

Assuming a tax levy of approximately $1.29 million, **Table 4-3** shows how the projected taxes will be distributed to each taxing jurisdiction.

Table 4-3
ANTICIPATED TAX REVENUE GENERATION

Taxing Jurisdiction	Current Tax Rate (per $1,000 Assessed Valuation)	Projected Tax Revenue	Percent of Total Tax Revenue
Kings Park Central School District	1,214.802	$860,833	66.7%
Suffolk County General	14.797	$10,485	0.8%
District Court	3.349	$2,373	0.2%
Suffolk County Police	213.553	$151,328	11.7%
Town Wide	78.771	$55,819	4.3%
Town (excluding Villages)	15.828	$11,216	0.9%
Highway I (excluding Villages)	87.062	$61,694	4.8%
Highway II, III, IV	23.899	$16,935	1.3%
New York State Real Property Tax	43.825	$31,055	2.4%
New York State Property Tax PD*	5.350	$3,791	0.3%
New York MTA Tax	0.513	$364	0.0%
New York MTA Tax PD*	0.487	$345	0.0%
Kings Park Fire District	64.081	$45,409	3.5%
Smithtown Library	47.482	$33,647	2.6%
Street Lighting District	2.960	$2,098	0.2%
Arterial Highway Lights	3.680	$2,608	0.2%
Total: All Taxing Jurisdictions	**1,820.439**	**$1,290,000**	**100.0%**

Source: Statement of Real Property Taxes, Town of Smithtown Receiver of Taxes, 2010-11; Town of Smithtown Office of the Assessor
* Note: Per correspondence with the Town of Smithtown Assessor's Office on February 4, 2011, this taxing jurisdiction reflects the portion of taxes that are distributed to the Suffolk County Police Department.

Upon full build-out, the proposed project will levy nearly $861,000 to the Kings Park CSD, representing 66.7% of the total tax generated by the site. Suffolk County – which includes taxes generated for the General Fund, the Police Department and the District Court – is projected to levy over $164,000, comprising 12.7% of the total generation. Moreover, the Town of Smithtown is projected to receive over $145,000 in annual property tax revenues under the proposed development, representing 11.3% of the tax generation. In excess of an additional $119,000, or 9.2%, will be generated by the proposed development and distributed among the Town's special taxing jurisdictions, including the New York State Real Property Tax, New York State Metropolitan Transportation Authority Tax, Kings Park Fire District, Smithtown Library District, the Street Lighting District, and the Arterial Highway Lighting District.

As part of the proposed project, ±5-acres of the St. Johnland Nursing Center property will be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW). Despite this transfer of ownership, the parcel will not pay taxes as it will be used by a government agency; therefore there is not expected change in tax revenue generation as a result of the proposed ±5-acre transfer.

Educational Facilities

The proposed project involves the development of a Continuing Care Retirement Community (CCRC). Such a community is age-restricted, and will not create additional school-aged children to the Kings Park Central School District (CSD). However, as seen in **Table 4-3** it is estimated that the school district will receive nearly $861,000 in tax revenue.

Police Protection

The proposed project will incrementally increase the potential need for the protective services of the Suffolk County Police Department (SCPD) for the subject site. However, based on the size, experience level and staffing of its facilities, this increase in the potential need for services is not anticipated to be to a level which would cause a significant impact on the ability of the Suffolk County Police Department (SCPD) to provide such services.

It is expected that the project will result in an increase of $151,328 in annual tax revenue for the SCPD, which is expected to offset the costs to provide the increase in police services.

Fire Protection

The development will include current building materials and safety installations per the NYS Building Code. The proposed project will result in an increased need in fire protection services. It is expected that the project will result in an increase of $45,409 per year in tax revenue for the Fire District, which is expected to offset the costs to provide the increase in fire protective services related to the development. Correspondence from the Fire District requests the opportunity to review all site and building plans prior to approval in order to have their requirements, such as vehicle access, turning ratio or apparatus, type of building construction, fire protection systems, complex access, fire alarm control panel locations and functionality, smoke detection and carbon monoxide detection, included in the development. The Fire District will have an opportunity for this examination during Site Plan review.

Solid Waste Removal and Disposal

It is anticipated that the 287 residents would generate a total of 1,004.5 lbs/day of solid waste based on an average of 3.5 lb/day per capita.

Correspondence received from the Town's Department of Environment and Waterways indicates that the Town of Smithtown will accept solid waste generated at the proposed CCRC development at the Huntington Resource Recovery Facility (HRRF) pursuant to the Nonresidential Solid Waste Disposal Capacity Generation Fee program. The proposed facility and its waste contractors are subject to all licensing, permitting and fees as indicated in Chapter 177 of the Smithtown Town Code, Solid Waste Management.

Based on the use proposed, the solid waste generated at the residential, office and commercial uses on-site is not anticipated to contain significant amounts of potentially toxic or hazardous materials.

Wastewater Treatment

Wastewater will be generated as a result of the proposed use of the site. However, all sanitary wastewater effluent is proposed to be disposed of via an off-site sewage treatment plant, the

Kings Park Sewage Treatment Plan (STP). This form of treatment and disposal is permitted subject to engineering review in cases where wastewater design flow exceeds standards established by the Suffolk County Department of Health Services (SCDHS) under Suffolk County Sanitary Code (SCSC) Article 6. In order to accommodate the sanitary flow generated as a result of the proposed Continuing Care Retirement Community (CCRC) development, the applicant proposes to subdivide a ±5-acre portion of the St. Johnland Nursing Center directly north of the subject property for transfer to Suffolk County Department of Public Works (SCDPW) for effluent disposal and recharge. A map illustrating the area being considered for the subdivision and sale to Suffolk County Department of Public Works is provided in **Figure 2-5**. The Suffolk County Department of Public Works (SCDPW) intends to convey treated sanitary effluent from the Kings Park Sewage Treatment Plant to the ±5-acres, thereby allowing the plant's current surface water discharge to the Long Island Sound to be eliminated. The ±5-acre Suffolk County Department of Public Works (SCDPW)-used land will be mostly cleared and replanted with native grasses with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer. Ten-foot diameter leaching pools area anticipated to be utilized, installed with a maximum depth of 15 feet (or an effective depth of 12 feet) to provide for recharge of the treated wastewater. The leaching pools will be located no closer than 25 feet from the ±5-acre property boundary (see letter from the Suffolk County Department of Public Works, **Appendix G-3**).

The Uplands at St. Johnland proposes to establish the connection to the Kings Park Sewage Treatment Plant by connecting to the existing pump station located in the northeast corner of the subject property. This pump station pumps wastewater to the Suffolk County Sewer District #6 (Kings Park Sewage Treatment Plant (STP)), which is located southeast of the subject property, off of Mariner Road. The sufficiency of this pump station for the additional flow will be evaluated as part of the site plan application review to determine if upgrades are needed to the pump station.

Water Supply

The project will utilize public water to be supplied by the Suffolk County Water Authority (SCWA) via an extension to the existing 12-inch water main beneath St. Johnland Road. The total water requirement of the project of approximately 41,519 gpd, is not anticipated to impact the ability of the Suffolk County Water Authority (SCWA) to serve the subject site and existing customers. Suffolk County Water Authority (SCWA) is chartered to provide water to its service district customers, based on approved tariffs. The presence of a 12-inch water main indicates a substantial distribution system in the area of the subject site. The site is intended to be connected to this system, and will pay the required rates for water used.

Energy Supply

The proposed project will use LIPA and National Grid to supply energy resources to the subject property. Connections will be made to each utility through the creation of an internal distribution network within the proposed development. Connection of this network to LIPA will likely be through the transmission line that presently runs along St. Johnland Road along the property. It is anticipated that both of these energy supply companies maintain adequate resources to supply the proposed project. Correspondence from National Grid indicates that the nearest gas main to the west of the site may require a significant customer contribution and main

work. Energy saving devices will be utilized where practical to reduce the total energy demand that will be required by the project site upon completion.

Recreational Facilities

The independent living and assisted living buildings will include amenities for residents including a great room; lap pool and spa with men's and women's locker rooms; exercise and strength training equipment; an arts and crafts studio; a library and computer lab; a parlor area that includes a cocktail lounge, card area and bar; a beauty shop and barber; a convenience store; woodworking shop; mail room and lounge; seminar, media room, theatre and meeting room; and bank in the independent living building. The assisted living building will include resident lounges; common resident laundries with washers and dryers; communal dining area; parlor/living room; library; an arts and crafts studio and TV/media room. The developed portion of the site will include pedestrian pathways; allowing residents to walk from one area to another.
The proposed project provides on-site recreational amenities for the residents that will occupy the site. It is also noted that there are many active and passive recreational opportunities throughout the area within about one mile of the subject site including; State Lands associated with Nissequogue State Park, Sunken Meadow State Park (and golf course), Harrison Pond Town Park, Landing Avenue Park and Arthur H. Kunz County Park, to name a few of the nearby recreational resources. Other County parks, private golf courses and Town park facilities are present beyond one mile and are available for use by County and Town residents. The subject site is privately owned and is not used as a public recreational area. Given the significant acreage of existing public recreational land in the area, and the privately owned status of the subject site, the proposed Uplands at St. Johnland is not expected to diminish public open space. Also given the nature of the proposed use, and the planned recreational facilities and activities for the residents of the Uplands at St. Johnland, the proposed use is not expected to cause a significant demand for off-site open space even though such recreational opportunities are abundant in the area (also see **Sections 4.4.1** and **4.4.2,** pages 4-23 to 4-27).

4.2.3 Proposed Mitigation

- Adherence to the New York State Fire and Building Codes will increase the level of safety from fires. In addition, use of fire/smoke alarms will assist in minimizing the incremental increase in the potential need for fire protective services.
- Streets, sidewalk, recreation and common areas will be maintained privately.
- Water and energy resources will be conserved through water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.
- Significant amenities will reduce reliance on public recreational amenities.

4.3 Economic Impacts

4.3.1 Existing Conditions

Economic Conditions

Unemployment data for the Town of Smithtown, Suffolk County and Long Island were compared to that of New York State to illustrate the current economic state of the region. Unemployment rates in the Town of Smithtown have increased substantially over the past few years. According to New York State Department of Labor, the Town's unemployment rate nearly doubled between 2007 and 2010. As of May 2011, approximately 3,600 persons – 5.9% of the Town's labor force – are unemployed. Such trends are comparable – yet slightly lower than – those of Suffolk County, Long Island and New York State, indicative of the ongoing economic crisis throughout the state and the nation.

In addition to relatively high levels of unemployment, Long Island is facing an uncertain housing market and consumer spending has been conservative. However, the demand for senior communities is on the rise, nationwide. This demand is expected to continue based on shifting demographics, the need for personal care, and a preference among senior residents for homelike settings and the ability to age-in-place when possible.

Despite job loss in other industry sectors including local government, manufacturing and financial services, the Long Island Association indicates that the private-sector job growth is accelerating, with a net growth of approximately 5,700 jobs created in Long Island between October 2009 and October 2010. The industry sectors with the largest growth include retail trade, education, health services and wholesale trade.[4] It is important to note that economic conditions facing the Town of Smithtown and the Long Island region are temporary and the local economy is showing signs of recovery. It is projected that consumers may begin to spend more freely, reflective of private-sector employment growth.[5]

4.3.2 Anticipated Impacts

The economic impact of the proposed project was evaluated through an examination of impacts to occur during the construction phase, as well as the impacts to occur annually, during long-term operations of the proposed development. In addition, a Residential Market Analysis was prepared (see **Appendix B**) to determine the demand for the project and market absorption (including potential impact on other Continuing Care Retirement Communities (CCRCs) and other senior housing alternatives in the region).

These analyses are presented herein in order to establish the economic impacts of the proposed project. The analyses quantify the significant economic benefit (both direct and indirect) associated with construction jobs and permanent operational jobs, in addition to output and labor income during both construction and operations. The Residential Market Analysis finds that

[4] Long Island Association Weekly Economic Update, LIA LINK, November 23, 2010.
[5] Long Island Association Weekly Economic Update, LIA LINK, November 30, 2010.

there is sufficient demand to support the project and that the residential development can be absorbed within the local housing market.

Key economic impacts[6] are noted, below:

Anticipated Economic Impacts of Construction

- Construction of the Continuing Care Retirement Community (CCRC) is projected to be completed in 2014.[7]
- During the construction period, direct output refers to the investment, or total costs associated with the construction of the proposed project. This output includes construction and land development costs associated with the development of the proposed project. Such output will flow throughout the community in the form of dollars spent on construction materials and labor income/wages, as well as soft costs at local architecture, engineering, and other affiliated work.
- The construction period is projected to represent a total of approximately $103.6 million in investment.[8]
- It is important to note that while the direct impacts on output refer solely to the construction costs, the proposed project also generates indirect and induced economic benefits to the community during construction. Indirect impacts refer to the increase in sales of other industry sectors, which include further round-by-round sales. Moreover, induced impacts account for the changes in output and labor income by those employed within the region, resulting from direct and indirect impacts. For example, construction workers will purchase food, drink and other convenience goods at local establishments.
- The $103.6 million in direct output is projected to generate an indirect impact of approximately $31.4 million, and an induced impact of over $41.2 million, bringing the total economic impact on output to over $176.2 million during the construction period. This represents the entire economic benefit to the community, resulting from construction output.[9]
- During the construction period, direct employment refers to the number of short-term jobs necessary to build the Continuing Care Retirement Community (CCRC). It is projected that the construction period will necessitate 456.1 full time equivalent (FTE) employees.[10]
- It is assumed that the same basic construction crew will be utilized from the commencement until

---

[6] A direct impact arises from the first round of buying and selling. These direct impacts can be used to identify additional rounds of buying and selling for other sectors of the economy and to identify the impact of spending by local households. An indirect impact refers to the increase in sales of other industry sectors, which include further round-by-round sales. An induced impact accounts for the changes in output and labor income by those employed within the region, resulting from direct and indirect impacts. The total impact is the sum of the direct, indirect and induced impacts.

[7] Construction schedule provided by applicant in December 2010.

[8] Construction costs provided by applicant in February 2011, and were revised in August 2011. It is important to note that all costs are estimates based upon market conditions as of the date of submission of this analysis.

[9] According to IMPLAN, a multiplier of 1.618405 represents the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand through the "Construction of new residential permanent site single- and multi-family structures" (IMPLAN Sector 37) in Suffolk County, New York.

[10] According to the Bureau of Economic Analysis, "full-time equivalent (or FTE) employees equal the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis." The designation of FTE is an industry standard means to standardize the number of part-time and full-time employees so that they can be compared across the board. For example, an FTE of one (1) means that an employee works a total of 40 hours per week (or whatever the standard number of hours per work-week in a given occupation). If a company employs ten (10) part-time persons who each work 20 hours per week, this equates to five (5) FTE. This conversion allows for an accurate and clear projection as to the number of employees within a given location, and a benchmark in which to measure employment in other uses and/or locations.

the culmination of construction. Since it is the policy of the Suffolk County Industrial Development Agency (SCIDA) to encourage the use of local labor during construction of this and other projects throughout the County, it is likely that the majority of these construction workers will be hired from within the local labor force, with many from the Town of Smithtown.

- Direct employment creates additional opportunities for job creation throughout other sectors of the economy through expenditures derived from labor income and output. The 456.1 FTE jobs created during the construction period will have an indirect impact of 231.1 FTE employees and an induced impact of 295.5 FTE employees in other industry sectors, bringing the total impact of construction to 982.8 FTE jobs during the construction period. This represents the entire economic benefit to the community, resulting from construction employment.[11]
- This job creation is most crucial during Long Island's present economic state, and presents an opportunity for the thousands of persons who are currently unemployed throughout the region.
- During the construction period, direct labor income refers to the earnings, wages, or salary paid to each of the construction workers. For residential projects, labor income typically comprises approximately 50% of the total cost of construction; the remaining 50% represents the cost of construction materials.[12]
- It is the policy of the Suffolk County Industrial Development Agency (SCIDA) to encourage the payment of the area standard wage during construction of this and other projects throughout Suffolk County. As such, and assuming wages remain constant (with the exception of a 3% annual inflation adjustment) throughout the construction period, labor income from the construction jobs is projected to amount to $113,542[13] per FTE employee over the long construction period. This represents approximately $51.8 million in collective earnings among the 456.1 FTE employees over the construction period. This labor income is projected to have an indirect impact of over $13.1 million and an induced impact of over $14.6 million, bringing the total economic impact of the construction to over $79.5 million in labor income. This represents the entire economic benefit to the community, resulting from construction labor income.[14]

<u>Anticipated Economic Impacts of First-Year Operations[15]</u>

- It is assumed that the Continuing Care Retirement Community (CCRC) will begin the operational phase of development upon the completion of the construction, anticipated to occur in 2014.
- During the first full-year of operations (2015), direct output refers to the total revenues derived from the first year of operation of the proposed project. This includes entrance fees, rent, and

[11] According to IMPLAN, a multiplier of 10.204122 represents the total change in the number of jobs that occurs in all industries for each additional one million dollars of output delivered to final demand through the "Construction of new residential permanent site single- and multi-family structures" (IMPLAN Sector 37) in Suffolk County, New York.

[12] Construction labor and materials estimates per architectural design group Hawkins, Webb, Jaeger, PLLC.

[13] New York State Department of Labor's Quarterly Census of Employment and Wages reports an average wage of $60,162 among those employed within the construction industry in the Long Island labor market in 2009. For the purpose of this analysis, an additional annual inflation factor of three (3%) percent was applied to the average wage, to reflect wages during the construction period.

[14] According to IMPLAN, a multiplier of 0.548916 represents the total dollar change in labor income of households employed by all industries for each additional dollar of output delivered to final demand through the "Construction of new residential permanent site single-and multi-family structures" (IMPLAN Sector 37) in Suffolk County, New York.

[15] It is important to note that the economic impacts – on output, employment and labor income – projected to occur during the first year of operations includes both entrance fees as well as rents and leases for each type of residential unit. Moreover, an additional annual inflation factor was applied to all dollar values, to reflect wages during the first year of the operations period, projected to occur in 2015. As such, these direct economic impacts will result in relatively greater indirect and induced economic impacts when compared to subsequent years of operations, which for the purpose of this analysis will only include rents and leases.

leases from residents. This includes entrance fees ranging from $395,000-$465,000 for a one-bedroom unit, to $550,000-$700,000 for a two-bedroom unit, to $825,000 for a townhouse unit. In addition, revenues include monthly fees ranging from $2,250-$2,750 for a one-bedroom unit, to $3,250-$3,950 for a two-bedroom unit, to $3,500 for a townhouse unit. Operational revenues also include second-person entrance fees of $35,000 plus second-person fees of $1,000 per month.[16] Combined, all entrance fees and monthly fees are anticipated to total over $114.7 million during the first year of operations.

- The direct output will allow for the first year of operations of the Continuing Care Retirement Community (CCRC), but will also benefit other retailers in the community since it is likely that the Continuing Care Retirement Community (CCRC) will purchase a portion of their operational equipment, food, beverages, supplies, and other goods and services from retailers and distributors in the region.
- It is important to note that while the direct impacts on output refer solely to the revenues derived from resident rent and leases, the proposed project also generates indirect and induced economic benefits to the community during the first year of operations. Indirect impacts refer to the increase in sales of other industry sectors, which include further round-by-round sales. Moreover, induced impacts account for the changes in output and labor income by those employed within the region, resulting from direct and indirect impacts. For example, residents and employees of the proposed project will frequent local retailers, service providers, banks, grocers, restaurants, financial institutions, insurance companies, health and legal service providers, and other establishments in the region.
- The first-year direct operational revenues of approximately $114.7 million are projected to generate an indirect impact of approximately $26.0 million and an induced impact of over $7.7 million during the first year of operations. The sum of the direct, indirect and induced impacts results in a total economic impact on output of over $148.4 million during the first year of annual operations. This represents the entire economic benefit to the community, resulting from the first-year of operational output.[17]
- During operations, direct employment refers to the number of persons that are employed by the Continuing Care Retirement Community (CCRC). The proposed Continuing Care Retirement Community (CCRC) is anticipated to generate 73.6 FTE[18] employees during annual operations. It is estimated that this will translate into approximately 100 full- and part-time employees.
- The 73.6 FTE employees includes 7.5 FTE employees responsible for administrative services, 3.0 FTE employees responsible for activities services, 11.0 FTE employees responsible for assisted living services, 3.0 FTE employees responsible for building and maintenance, 2.8 FTE employees responsible for emergency systems services, 20.7 FTE employees responsible for

[16] Estimated entrance fees and monthly fees provided by the applicant in February 2011. It is important to note that this analysis presents a conservative estimate, and these operational revenues do not include daily fees for outside residents, if any, wishing to reside within any of the available 24 assisted living units upon the opening of the Continuing Care Retirement Community (CCRC).

[17] According to IMPLAN, a multiplier of 1.702242 represents the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand by "Nursing and Residential Care Facilities" (IMPLAN Sector 398) in Suffolk County, New York.

[18] According to the Bureau of Economic Analysis, "full-time equivalent (or FTE) employees equal the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis." The designation of FTE is an industry standard means to standardize the number of part-time and full-time employees so that they can be compared across the board. For example, an FTE of one (1) means that an employee works a total of 40 hours per week (or whatever the standard number of hours per work-week in a given occupation). If a company employs ten (10) part-time persons who each work 20 hours per week, this equates to five (5) FTE. This conversion allows for an accurate and clear projection as to the number of employees within a given location, and a benchmark in which to measure employment in other uses and/or locations.

dining services, 3.0 FTE employees responsible for grounds maintenance services, 15.8 FTE employees responsible for housekeeping and laundry services, 2.8 FTE employees responsible for transportation services, and 4.0 FTE employees responsible for marketing services.[19]

- The 73.6 FTE direct employment positions during the first year of operations is projected to result in an indirect impact of 158.6 FTE jobs, and an induced impact of 52.6 FTE jobs throughout the region, bringing the total economic impact of operational employment to 284.8 FTE jobs during the first year of annual operations. This represents the entire economic benefit to the community, resulting from the first-year of operational employment.[20]
- During operations, direct labor income refers to annual wages, earnings or salary that is paid to the 73.6 FTE employees during annual operations of the Continuing Care Retirement Community (CCRC). The 73.6 FTE employees are anticipated to earn a total of approximately $3.3 million in collective labor income during the first year of operations.[21]
- This $3.3 million in direct labor income is projected to result in an indirect impact of over $8.8 million and an induced impact of nearly $2.8 million, bringing the total economic impact of labor income to over $14.9 million during the first year of operations. This represents the entire economic benefit to the community, resulting from the first-year of operational labor income.[22]

<u>Anticipated Economic Impacts of Second-Year Operations and Annually Thereafter[23]</u>

---

[19] Operational employment provided by the applicant in June 2011.

[20] According to IMPLAN, a multiplier of 19.558549 represents the total change in the number of jobs that occurs in all industries for each additional one million dollars of output delivered to final demand by "Nursing and Residential Care Facilities" (IMPLAN Sector 398) in Suffolk County, New York.

[21] This figure assumes that the 7.5 FTE employees responsible for administration services will earn annual salaries ranging from $39,323 for the Receptionists/Concierges to $159,296 for the Executive Director; the 3.0 FTE employees responsible for activities services will earn annual salaries ranging from $31,579 for the Activities Assistants to $57,488 for the Activities Director; the 11.0 FTE employees responsible for assisted living services will earn annual salaries ranging from $33,781 for the Receptionist to $133,374 for the Assisted Living Supervisor; the 3.0 FTE employees responsible for building and maintenance will earn annual salaries ranging from $49,605 for the Building Maintenance staff to $89,137 for the Plant and Maintenance Supervisor; the 2.8 FTE employees responsible for emergency system services (security guards) will earn annual salaries of $37,850; the 20.7 FTE employees responsible for dining services will earn annual salaries ranging from $22,328 for Dishwashers to $69,835 for the Chef; the 3.0 FTE employees responsible for grounds maintenance services will earn annual salaries of $33,549; the 15.8 FTE employees responsible for housekeeping and laundry services will earn annual salaries ranging from $26,258 for Laundry Staff to $35,740 for Janitors/Porters; the 2.8 FTE employees responsible for transportation services (drivers) will earn annual salaries of $32,958; and the 4.0 FTE employees responsible for marketing services will earn annual salaries ranging from $56,190 for Sales Counselors to $166,460 for the Marketing Director. Occupational wage data is based on New York State Department of Labor's Occupational Employment Statistics (OES) survey, which collects information from approximately 57,000 businesses. Data were collected in 2006, 2007, 2008 and 2009, and then updated to the first quarter of 2010 by making cost-of-living adjustments. These wage estimates reflect New York State's minimum wage of $7.25, the minimum wage in effect at the time these estimates were prepared. All wages are specific to the Long Island region, and reflect the mean annual wage for the specified occupation. Furthermore, for the purpose of this analysis, an additional annual inflation factor of three percent was applied to the mean annual wage, to reflect wages during the first year of the operations period, projected to occur in 2015.

[22] According to IMPLAN, a multiplier of 0.872894 represents the total dollar change in labor income of households employed by all industries for each additional dollar of output delivered to final demand by "Nursing and Residential Care Facilities" (IMPLAN Sector 398) in Suffolk County, New York.

[23] It is important to note that the economic impacts – on output, employment and labor income – projected to occur during the second year of operations and annually thereafter includes only rents and leases for each type of residential unit. Moreover, an additional annual inflation factor was applied to all dollar values, to reflect wages during the second year of the operations period, projected to occur in 2016. As such, these direct economic impacts will result in relatively smaller indirect and induced economic impacts when compared to the first year of

- The second year of operations is anticipated to occur in 2016. By that time, it is assumed that the Continuing Care Retirement Community (CCRC) will be operating at near full occupancy, with most of the housing units occupied.
- During the second year of operations and annually thereafter, direct output refers to the total revenues derived from the annual operation of the proposed project. This includes rent and leases from residents. For the purpose of this analysis, it is conservatively assumed that such revenues will only include monthly fees (ranging from $2,250-$2,750 for a one-bedroom unit, to $3,250-$3,950 for a two-bedroom unit, to $3,500 for a townhouse unit[24]) during the second year of operations, and annually thereafter. Combined, all monthly fees are anticipated to total approximately $7.9 million during the second year of operations, and annually thereafter.[25]
- The direct output will allow for the annual operations of the Continuing Care Retirement Community (CCRC), but will also benefit other retailers in the community since it is likely that the Continuing Care Retirement Community (CCRC) will purchase a portion of their operational equipment, food, beverages, supplies, and other goods and services from retailers and distributors in the region.
- It is important to note that while the direct impacts on output refer solely to the revenues derived from resident rent and leases, the proposed project also generates indirect and induced economic benefits to the community during annual operations. Indirect impacts refer to the increase in sales of other industry sectors, which include further round-by-round sales. Moreover, induced impacts account for the changes in output and labor income by those employed within the region, resulting from direct and indirect impacts. For example, residents and employees of the proposed project will frequent local retailers, service providers, banks, grocers, restaurants, financial institutions, insurance companies, health and legal service providers, and other establishments in the region.
- These direct operational annual revenues of approximately $7.9 million are projected to generate an indirect impact of approximately $1.8 million and an induced impact of over $2.5 million during second-year operations, and annually thereafter. The sum of the direct, indirect and induced impacts results in a total economic impact on output of approximately $12.2 million during the second-year of operations, and annually thereafter. This represents the entire economic benefit to the community, resulting from the second-year and annual operational output thereafter.[26]
- During the second year of operations and annually thereafter, direct employment refers to the number of persons that are employed by the Continuing Care Retirement Community (CCRC). The proposed Continuing Care Retirement Community (CCRC) is anticipated to generate 73.6 FTE[27] employees during annual operations. It is estimated that this will translate into approximately 100 full- and part-time employees.

---

operations, which for the purpose of this analysis, also included entrance fees.

[24] Estimated monthly fees provided by the applicant in February 2011. It is important to note that this analysis presents a conservative estimate, and these operational revenues do not include daily fees for outside residents, if any, wishing to reside within any of the available 24 assisted living units upon the opening of the CCRC.

[25] It is important to note that all fees are assumed to increase 4% annually.

[26] According to IMPLAN, a multiplier of 1.702242 represents the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand by "Nursing and Residential Care Facilities" (IMPLAN Sector 398) in Suffolk County, New York.

[27] According to the Bureau of Economic Analysis, "full-time equivalent (or FTE) employees equal the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis." The designation of FTE is an industry standard means to standardize the number of part-time and full-time employees so that they can be compared across the board. For example, an FTE of one (1) means that an employee works a total of 40 hours per week (or whatever the standard number of hours per work-week in a given occupation). If a company employs ten (10) part-time persons who each work 20 hours per week, this equates to

- The employment includes the same distribution of employees that was seen under first-year operations: 7.5 FTE employees responsible for administrative services, 3.0 FTE employees for activities services, 11.0 FTE employees for assisted living services, 3.0 FTE employees for building and maintenance, 2.8 FTE employees for emergency systems services, 20.7 FTE employees for dining services, 3.0 FTE employees for grounds maintenance services, 15.8 FTE employees for housekeeping and laundry services, 2.8 FTE employees for transportation services, and 4.0 FTE employees for marketing services.[28]
- The 73.6 FTE direct employment positions is projected to result in an indirect impact of 10.5 FTE jobs, and an induced impact of 16.9 FTE jobs throughout the region, bringing the total economic impact of operational employment to 101.0 FTE jobs during the second year of operations, and annually thereafter. This represents the entire economic benefit to the community, resulting from the second-year and annual operational employment thereafter.[29]
- During the second year of operations and annually thereafter, direct labor income refers to annual wages, earnings or salary that is paid to the 73.6 FTE employees during annual operations of the CCRC. The 73.6 FTE employees are anticipated to earn a total of over $3.4 million in collective labor income during the second year of operations, and annually thereafter.[30]
- The $3.4 million in direct labor income is projected to result in an indirect impact of over $596,000 and an induced impact of over $910,000, bringing the total economic impact of labor income to over $4.9 million during the second year of operations and annually thereafter. This represents the entire economic benefit to the community, resulting from the second-year and annual operational labor income thereafter.[31]

---

five (5) FTE. This conversion allows for an accurate and clear projection as to the number of employees within a given location, and a benchmark in which to measure employment in other uses and/or locations.

[28] Operational employment provided by the applicant in June 2011.

[29] According to IMPLAN, a multiplier of 19.558549 represents the total change in the number of jobs that occurs in all industries for each additional one million dollars of output delivered to final demand by "Nursing and Residential Care Facilities" (IMPLAN Sector 398) in Suffolk County, New York.

[30] This figure assumes that the 7.5 FTE employees responsible for administration services will earn annual salaries ranging from $40,502 for the Receptionists/Concierges to $164,075 for the Executive Director; the 3.0 FTE employees responsible for activities services will earn annual salaries ranging from $32,526 for the Activities Assistants to $59,213 for the Activities Director; the 11.0 FTE employees responsible for assisted living services will earn annual salaries ranging from $34,795 for the Receptionist to $137,376 for the Assisted Living Supervisor; the 3.0 FTE employees responsible for building and maintenance will earn annual salaries ranging from $51,093 for the Building Maintenance staff to $91,811 for the Plant and Maintenance Supervisor; the 2.8 FTE employees responsible for emergency system services (security guards) will earn annual salaries of $38,986; the 20.7 FTE employees responsible for dining services will earn annual salaries ranging from $22,997 for Dishwashers to $71,930 for the Chef; the 3.0 FTE employees responsible for grounds maintenance services will earn annual salaries of $34,556; the 15.8 FTE employees responsible for housekeeping and laundry services will earn annual salaries ranging from $27,045 for Laundry Staff to $36,813 for Janitors/Porters; the 2.8 FTE employees responsible for transportation services (drivers) will earn annual salaries of $33,947; and the 4.0 FTE employees responsible for marketing services will earn annual salaries ranging from $57,876 for Sales Counselors to $171,454 for the Marketing Director. Occupational wage data is based on New York State Department of Labor's Occupational Employment Statistics (OES) survey, which collects information from approximately 57,000 businesses. Data were collected in 2006, 2007, 2008 and 2009, and then updated to the first quarter of 2010 by making cost-of-living adjustments. These wage estimates reflect New York State's minimum wage of $7.25, the minimum wage in effect at the time these estimates were prepared. All wages are specific to the Long Island region, and reflect the mean annual wage for the specified occupation. Moreover, for the purpose of this analysis, an additional annual inflation factor of three percent was applied to the mean annual wage, to reflect wages during the second year of the operations period, projected to occur in 2016. It is further assumed that these wages will increase by an additional annual inflation factor of three percent for each year of operations after 2016.

[31] According to IMPLAN, a multiplier of 0.872894 represents the total dollar change in labor income of households employed by all industries for each additional dollar of output delivered to final demand by "Nursing and

A summary of key economic findings is provided in **Table 4-4**.

TABLE 4-4
SUMMARY OF KEY ECONOMIC FINDINGS

Economic Impact Parameter	Output (Total Revenue)	Employment (Number of Jobs)	Labor Income (Total Wages)
Economic Impact of Construction			
Direct Impact	$103,581,379	456.1 FTE	$51,790,690
Indirect Impact	$31,414,140	231.1 FTE	$13,103,287
Induced Impact	$41,230,777	295.5 FTE	$14,686,446
Total Economic Impact of Construction	$176,226,296	982.8 FTE	$79,580,422
Economic Impact of First-Year Operations			
Direct Impact	$114,744,800	73.6 FTE	$3,329,489
Indirect Impact	$25,966,197	158.6 FTE	$8,836,580
Induced Impact	$7,753,756	52.6 FTE	$2,773,341
Total Economic Impact of First-Year Operations	$148,464,754	284.8 FTE	$14,939,410
Economic Impact of Second-Year Operations and Annually Thereafter			
Direct Impact	$7,909,800	73.6 FTE	$3,429,374
Indirect Impact	$1,770,200	10.5 FTE	$596,495
Induced Impact	$2,545,001	16.9 FTE	$910,714
Total Economic Impact of Second-Year Operations and Annually Thereafter	$12,225,001	101.0 FTE	$4,936,583

A Residential Market Analysis was completed for the proposed project (see **Appendix B**).

4.3.3 Proposed Mitigation

- Neither the economic impact analysis nor the Residential Market Analysis identified any significant adverse impacts associated with the proposed project. Accordingly, no mitigation is proposed.

4.4 Land Use, Zoning and Town Plan Update

4.4.1 Existing Conditions

Land Use

The current land use classification of the subject site and of the vicinity discussed herein is based on aerial photography (see **Figure 4-3**) and visual observations of the property and vicinity. The subject site is presently classified as vacant; it is undeveloped and predominantly wooded, with a freshwater pond/wetland area in the north-central portion of the property. Minor encroachments exist on the site's southern border (the adjacent commercial use has modified an estimated 0.10

Residential Care Facilities" (IMPLAN Sector 398) in Suffolk County, New York.

acres of land for landscaping), and along the western boundary (two neighbors have encroached with a swimming pool and a shed). The adjacent and nearby land uses are as presented in **Table 4-5**.

Table 4-5
LAND USE

Direction	Adjacent Land Uses	Nearby Land Uses
North	Institutional (St. Johnland Nursing Center), Vacant	Public Recreational (Sunken Meadow State Park)
East	Vacant, Vacant Institutional (Kings Park Psychiatric Center)	Public Recreational (Nissequogue River State Park, Town Park)
South	Vacant Institutional (Kings Park Psychiatric Center), Commercial	Vacant Institutional (Kings Park Psychiatric Center), Institutional, Commercial
West	Single-family residential	Single-family residential, Public Recreational (Sunken Meadow State Park)

The site is surrounded by vacant land, residential properties, an institutional use located opposite the site across St. Johnland Road to the north, and a small abutting commercial use to the south. Farther from the site, public recreational lands are found to the north, east and west, with residential lands to the west, vacant institutional land to the south, and commercial uses along the Old Dock Road corridor to the south. In general, the pattern of land uses in the vicinity indicates that the site is located in the corner of a large inverted U-shaped area of institutional and public recreational lands (comprised primarily of the now-vacant Kings Park Psychiatric Center, the 521±-acre Nissequogue River State Park and 1,266±-acre Sunken Meadow State Park), interspersed with vacant, residential and some commercial properties.

The ±5-acres of the St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) is presently undeveloped and mostly wooded.

Figure 4-4 depicts the locations of open spaces in the Town of Smithtown. As can be seen, the subject site is located in the vicinity of three significant public open space areas: Sunken Meadow State Park (to the north and west), Nissequogue River State Park (to the east), and Harrison Pond Town Park (to the east).

<u>Zoning</u>
The current zoning classifications of the subject site and area are based on the Town Zoning Map (see **Figure 4-5**). The subject site and ±5-acres to be subdivided from the St. Johnland Nursing Center property are both presently zoned Residence R-43 District. The adjacent and nearby lands are zoned as presented in **Table 4-6**.

Table 4-6
ZONING

Direction	Adjacent Land Zones	Nearby Zones
North	R-43	R-10, R-43, OB
East	R-43	R-43
South	R-43, NB	R-43
West	R-15	R-10, R-43

Similar to the pattern of land uses, the pattern of zoning in the vicinity indicates that the site is located within the corner of a large inverted U-shaped area of R-43-zoned land. Much of this land is developed with single-family homes, with the remainder taken up by large acreages in Kings Park State Hospital, Nissequogue River State Park and Sunken Meadow State Park. To the west of the site in this area are higher-density residential zones (R-10 and R-15), which trend southward to NYS Route 25A and the commercial districts in Kings Park hamlet that line this roadway. Here, commercial zones (including CB, SCB and HI) are found, along with higher-density residential zones such as R-6, RM-7and RM-GA. Lands to the east, beyond the Kings Park Hospital property, are zoned R-10

Permitted uses in the R-43 district include one-family dwelling, cemetery, church or similar place of worship, convent or monastery, fire or ambulance station, park, playground or nature preserve, public library, museum or similar use, school (elementary or high) and agriculture.

Table 4-7 lists the dimensional requirements for the existing R-43 zoning of the project site.

Table 4-7
DIMENSIONAL REQUIREMENTS, Existing Zoning
R-43 District

Use	Required
Minimum lot area (SF)	43,560
Minimum lot area per dwelling (SF)	43,560
Minimum lot frontage at setback line (feet)	150
Minimum road frontage (feet)	40
Minimum front yard depth (feet)	60
Minimum rear yard depth (feet)	100
Minimum side yard width, one/both (feet)	24/60
Maximum GFA (%)	20
Maximum height (feet/stories)	35/2-½

The site's existing zoning would allow for 21 lots (see **Yield Map Site Plan** in pocket at the end of the document).

Land Use Plans

Town Plan Update - The Town is in the process of preparing a Comprehensive Plan Update. The Plan, once complete, will be subject to the review and input of the Town and community, and adoption by the Town Board. The Plan, which is presently in preparation, currently includes five volumes, and the sixth is in preparation:

I. Draft Goals and Objectives Statement (undated)
II. Draft Population Study (May 2007)
III. Draft Natural and Cultural Resources Study (August 2007)
IV. Draft Community Facilities Study (April 2008)
V. Draft Economic Resources Study (February 2010)
VI. Draft Implementation Plan (in preparation)

The goal of the Update to the Town's Comprehensive Plan is to improve the quality of life for its residents by proposing an environment that is reflective of the community's wishes, including:

- Developing and enhancing the community's "sense of place" in order to provide a strong community identity.
- Managing and modernizing the infrastructure so that it becomes more efficient while it serves the needs of the community.
- Enhancing the environment and cultural resources through protection, preservation and management.
- Improving the local economy in terms of business activities, taxes, employment, and property values so as to provide an attractive, affordable and livable community.
- Providing for needs of all segments of the population.
- Providing existing and future trends in land use, communication, technology, transportation and related fields to remain competitive and economically viable in the 21st century.

As the Town Plan Update has not been completed, no recommendations specific to the subject site are available; these will be contained in the above-noted Draft Implementation Plan. The following are the main findings of the five draft Plan Update components that pertain to the site and/or proposed project.

Volume II: Draft Population Study

- The median age in the Town has increased while the number of families with school-age children has decreased.

Volume III: Draft Natural and Cultural Resources Study

- Altering natural landforms to make property more useable can have substantial impacts on the surrounding properties.
- The native vegetation and wildlife resource is important to the welfare of the community.
- People identify themselves with the community in which they live.
- Smithtown's most desirable features are spacious yards, large pockets of open space, and wooded neighborhoods.

Volume IV: Draft Community Facilities Study

- In order for a community to function well, it must have the proper type, amount and distribution of community facilities.
- Nursing homes in Smithtown have greater than 96% occupancy rates.

- As a result of the large amount of wastewater generated from medical facilities, wastewater restrictions have become a major factor in locating such facilities.

Volume V: Draft Economic Base Study

- There is insufficient housing of the types needed to serve younger families, singles, "empty nesters", senior citizens, and others who wish to live in smaller units or different styles of community. The lack of housing diversity along with the cost of housing is a major factor in the out-migration of younger and older age groups.

Town of Smithtown Local Waterfront Revitalization Program – The Town's Local Waterfront Revitalization Program was adopted in May 1989 to "promote the beneficial use of coastal resources and avoid impairment of these resources" within the Town. This is accomplished through the Town's adoption of specific policies for the coastal area which are designed to promote desired uses and prohibit detrimental uses within the coastal boundary. The coastal boundary is defined by the New York State Department of State, and can be further refined by the Town. As depicted in **Figure 4-6**, the subject parcel is not located within the Local Waterfront Revitalization Area, while the parcel slated for Sewage Treatment Plant expansion is located within the Local Waterfront Revitalization Area. As indicated in the Positive Declaration (**Appendix A-1**), the subject parcel has been considered for inclusion within the Local Waterfront Revitalization Area, and therefore consistency to the applicable Local Waterfront Revitalization Program policies should be conducted. This analysis is provided in **Section 4.4.2** below.

4.4.2 Anticipated Impacts

Land Use

The proposed project will change the land use classification of the site from its current vacant status to senior residential use. However, in consideration of the existing mix, presence and pattern of institutional, public recreational, residential and commercial uses in the area (particularly with respect to the proximity of the adjacent nursing home use, which is complementary to that of the proposed project), this change would not necessarily represent a significant or adverse land use impact. The proposed project represents an appropriate transition parcel between lands occupied by single-family residences to the west and the nursing home to the north. There is at present a significant amount of public recreational land in the vicinity, as illustrated in **Figure 4-4**. These open spaces provide a significant public benefit and contributor to the existing rural ambiance of the area, which will not be significantly impacted by the conversion of the subject site from vacant and wooded to a site developed for a Continuing Care Retirement Community (CCRC) which will include retention of large natural buffers, pond retention, and significantly reduced density in the Wild, Scenic and Recreational Rivers portion of the site. Considering the large amount of open spaces in the area represented by these public lands, the use of approximately 47 acres (including developed as well as retained open space areas) represented by the project would not significantly reduce this resource. Finally, the subject site lies on a local roadway that situates the subject property on a transportation corridor that provides access to the site.

The design of the project and resultant anticipated aesthetic character of the project is expected to reduce the potential for adverse impact with respect to land use character. This will be accomplished primarily by the retention of a minimum 200-foot deep (north and west side) and 100-foot deep (south side) naturally-vegetated buffer along the entire perimeter of the site (except for the two access drives), the preservation of the entire wetland area, and use of a professionally-designed and executed landscape plan within the developed area.

The new residents will provide economic benefits to local merchants, service-oriented businesses and general consumer activities in the area, which represent beneficial impacts to the land use pattern of the area. The convenience of local shopping and resultant use by the residents would help to strengthen the residential character of the community. The proposed project will generate construction jobs and operation and maintenance jobs for the facility and will result in an immediate realization of these economic benefits.

The type of housing offered will help to diversify available housing types in the area and will provide various levels of care for senior citizens in the community and the region. Single-family residential development is a prevalent type of housing in the area, with intermittent nursing home and townhouse/condominium developments in localized settings. The proposed project provides quality housing that is designed to allow seniors the option to "age-in-place". The proposed Continuing Care Retirement Community (CCRC) development will provide residents lifelong care and residence, unlike other forms of retirement housing. Designed as a residential campus with a variety of housing types, the proposed Continuing Care Retirement Community (CCRC) residents could move into the townhouse or independent living units and are able to eventually move into the assisted living units if a higher degree of health care becomes necessary, without having to move out of the community to obtain the needed care.

The target market for the type of units offered is expected to include active seniors (in the townhouse units), elderly residents who wish to remain near their families in downsized living quarters (the independent living units) as well as providing a type of housing that employs medical staff (the assisted living units).

The project will create a "continuum of care" environment to allow the full spectrum of senior housing uses from full independent living units in the townhouses to enhanced senior living, then assisted living; skilled nursing care would be available at the nursing home across St. Johnland Road.

The ±5-acres of the St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) will be mostly cleared and replanted with native grasses with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer. Leaching pools will be a maximum depth of 15 feet (or an effective depth of 12 feet) and a 10-foot diameter for the full 600,000 gpd capacity. Pools will be located no closer than 25 feet from the ±5-acre property boundary.

<u>Zoning</u>
The proposed project would change the zoning of the site, from R-43 to RC-Retirement Community, however no change of zoning for the ±5-acres of the St. Johnland Nursing Center

property is being requested. As the Town Zoning Code would be amended at the same time to provide for the Continuing Care Retirement Community (CCRC) use (as a Special Exception in the RC district), the project would represent the first use of this amendment in the Town. In this respect, the project will result in an impact to zoning with respect to the pattern of zoning in the area as well as from the implementation of the Continuing Care Retirement Community (CCRC) amendment.

The only zoning district in which the proposed project would be allowed is the RC district. **Table 4-8** presents the anticipated dimensional requirements of the Continuing Care Retirement Community (CCRC) regulations, as well as the project's conformance to each. As can be seen, the proposed project will generally conform to the Continuing Care Retirement Community (CCRC) dimensional requirements though six variances would be required. **Section 2.4** (see page 2-18) presents a discussion of these permits.

Table 4-8
DIMENSIONAL REQUIREMENTS, Proposed Project
CCRC Amendments (1)

Use	Required	Proposed
Minimum site area (acres)	25	49.69
Maximum gross floor area (%)	20	25.1*
Maximum building height (feet)	50**	50*
Maximum building coverage (%)	10	9.35
Maximum density (units/acre)	5	5
Minimum number of access driveways	2	2
Minimum depth of natural buffer (feet)	200	100*
Minimum building setback from property lines (feet)	200	200

(1) Special Exception required for CCRC in the RC district.
* Variance requested.
** For every 2 feet of additional setback, may increase building height by 1 foot, to a maximum height of 50 feet.

The proposed project requests a yield that conforms to the maximum number of units allowed for a Continuing Care Retirement Community (CCRC). The density analysis is presented in **Section 2.2.1** (see page 2-2).

The subject site is located opposite a nursing home project that is developed on an R-43-zoned site. Therefore, a precedent for uses that would be complementary to this type development has been established. Through the requested rezoning, the proposed project provides housing for an under-served portion of the population in the Town.

The community would benefit economically from increased senior housing diversity, the increased value of the property, and from increased property tax revenues. The proposed project would result in temporary jobs during the construction phase in addition to the number of jobs created due to operation of site facilities, particularly the assisted living component. In addition, the project would generate revenues to applicable service jurisdictions through the generation of property taxes, though it would result in incremental increases in demand for services. Finally, the project is not in conflict with land use plans.

Land Use Plans

Town Plan Update - As noted above, the Draft Implementation Plan is currently being prepared. It will be the concluding section of the Town Plan Update, and will present the recommendations to address the future needs of the Town, as described and explained in the main findings of each of the component documents of the Plan Update. The following briefly discusses whether and how the proposed project addresses the pertinent findings of the Plan Update (by volume):

Volume II: Draft Population Study

- The two trends discerned regarding aging population and a decrease in families with school-age children suggests that housing for families that lack school-age children (either newly-wed couples without children as yet or older households where the children have grown and departed) will become increasingly attractive. In addition, the trend for aging population suggests that housing for such residents will also become attractive. The Continuing Care Retirement Community (CCRC) amendments to the Town Zoning Code (and as represented by the proposed project) would address these markets, by providing housing for both older, smaller households where children are not present, as well as older families that are beyond child-rearing years and are oriented toward aging lifestyles and housing/elder care needs.

Volume III: Draft Natural and Cultural Resources Study

- The proposed project minimizes alterations of the site's existing natural landforms, particularly of the freshwater wetlands in the property's north-central area. This resource and its surrounding 100-foot buffer) will be avoided entirely. In addition, clearing/development of the rest of the site has been minimized to about 38%, so that a high level of preservation has been achieved.
- As noted above, the project has been designed to disturb the minimum amount of the site's existing natural vegetation necessary to provide the quality development sought by the applicant. As a result, the maximum preservation of natural spaces and associated habitat value of the site will be retained.
- The proposed project is intended to create, by the interaction of its appearance, amenities, natural resources and facilities, a community as identified by its residents.
- The project will retain and incorporate the numerous and significant desirable feature of the site (including the freshwater wetlands and extensive wooded spaces), and will utilize the site's location within the hamlet of Kings Park to provide an attractive and successful facility of which its residents and neighbors will be proud.

Volume IV: Draft Community Facilities Study

- The project will provide a number of community facilities and services on-site for its residents, but does not include such features for the larger community. It is noted that these features are already found in the Kings Park hamlet center on and along NYS Route 25A to the south.
- The proposed project does not include a nursing home; such a facility is found on the north side of St. Johnland Road, opposite the subject site and under the same ownership. As required by NYS law, the types of senior residential facilities included in the proposed project must be associated with and proximate to a nursing home. As experience indicates that nursing homes are popular in the Town, it is expected that the proposed project would be well-occupied.
- The proposed project will provide for the proper treatment and disposal of its wastewater, by connection to the existing Kings Park Sewage Treatment Plant (STP), operated by the Suffolk County Department of Public Works (SCDPW).

Volume V: Draft Economic Base Study

- The project will address the insufficiency of diverse housing types, by providing three types of senior residential development: townhouses, independent living units and assisted living units. This would have the effect of alleviating the paucity of such housing opportunities as well as the associated out-migration of seniors due to this absence of desired housing.

Town of Smithtown Local Waterfront Revitalization Program – As indicated in **Section 4.4.1** (see page 4-23), the subject property is not located within the Local Waterfront Revitalization Area, but is being considered for inclusion within the area and as such, should be analyzed for Local Waterfront Revitalization Program consistency. The Sewage Treatment Plant expansion area is within the Local Waterfront Revitalization Area and consistency analysis to applicable policies for this parcel and the subject property is provided below.

Policy 5: Encourage the location of development in areas where public services and facilities essential to such development are adequate, except when such development has special functional requirements or other characteristics which necessitates its location in other coastal areas.

St. Johnland Parcel: The proposed Continuing Care Retirement Community (CCRC) development is located such that it is accessible by existing road systems, is served by existing electrical service and public water supply, and is able to connect to a Sewage Treatment Plant[32]. There are available recreational facilities in the vicinity of the subject site. In addition, services provided by the St. Johnland Nursing Center to the north of the subject property would complement those provided by the proposed Continuing Care Retirement Community (CCRC) facility. As a result, the proposed project is believed to be consistent with this policy.

Sewage Treatment Parcel: The proposed sewage treatment leaching area is located outside of the Wild, Scenic and Recreational Rivers boundary and adjacent to the existing St. Johnland Nursing Center. The land enables Suffolk County to convey effluent from a surface water discharge to an inland groundwater discharge outside of the Wild, Scenic and Recreational Rivers boundary. This area is also one of the only areas appropriate for such a leaching field as other parcels within the vicinity of the existing sewer system are either developed, are located within the Wild, Scenic and Recreational Rivers corridor or do not have adequate depth to groundwater. The site will not require structural improvements as leaching facilities will be subsurface and the site will appear as an open field. As a result, the proposed leaching field is believed to be appropriately sited and therefore consistent with this policy.

Policy 14a: Undertake erosion control and management techniques for all phases of new development, including construction.

St. Johnland Parcel: As described in **Section 2.2.2** (see page 2-10), a Stormwater Pollution Prevention Plan will be prepared as part of site plan approval. Stormwater and erosion control measures will be designed in accordance with the New York State Department of Environmental Conservation Technical Guidance Manual. As per New York State Department of Environmental Conservation regulations, the site will be inspected on a weekly basis to ensure stormwater and erosion control measures are being properly implemented. If an erosion control measure is not in compliance with engineering specifications, the site inspector will notify the contractor and will provide recommendations for corrective actions. As stormwater and erosion control measures

[32] The existing St. Johnland Nursing Center is connected to the Kings Park Sewage Treatment Plant.

will be implemented and inspected according to State regulations, the proposed development is believed to be consistent with this policy.

Sewage Treatment Parcel: Similar to the measures to be implemented for the St. Johnland Parcel, all appropriate erosion control measures will be utilized during leaching field installation. Stormwater and erosion control measures will be designed in accordance with the New York State Department of Environmental Conservation Technical Guidance Manual. As per New York State Department of Environmental Conservation regulations, the site will be inspected on a weekly basis to ensure stormwater and erosion control measures are being properly implemented. If an erosion control measure is not in compliance with engineering specifications, the site inspector will notify the contractor and will provide recommendations for corrective actions. As stormwater and erosion control measures will be implemented and inspected according to State regulations, the proposed development is believed to be consistent with this policy.

Policy 18: To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the state has established to protect valuable coastal resource areas.

St. Johnland Parcel: The proposed development is undergoing the State Environmental Quality Review Act process, which included a Positive Declaration (**Appendix A-1**) outlining the economic, social, and environmental concerns associated with the proposed development. This Draft Environmental Impact Statement has been prepared to assess those concerns, and no development decision can be made until all potential impacts have been analyzed. The Statement of Findings will weigh the environmental, social and economic issues in consideration of the Environmental Impact Statement process documents. As no decision can be made until the agencies consider the relevant findings of the Environmental Impact State process, the project will be ensured of conforming with this policy.

Sewage Treatment Parcel: The proposed development is undergoing the State Environmental Quality Review Act process, which included a Positive Declaration outlining the environmental concerns associated with the proposed development. The development of the proposed Sewage Treatment Plant leaching area is being evaluated in conjunction with the proposed development. This Draft Environmental Impact Statement has been prepared to assess the concerns outlined in the Positive Declaration (**Appendix A-1**), and no development decision can be made until all potential impacts have been analyzed. The Statement of Findings will weigh the environmental, social and economic issues in consideration of the Environmental Impact Statement process documents. As no decision can be made until the agencies consider the relevant findings of the Environmental Impact State process, the project will be ensured of conforming with this policy.

Policy 25b: Prevent the irreversible modification of natural geological forms and the removal of vegetation from dunes, bluffs and wetland areas which are significant to the scenic areas of the Town of Smithtown.

St. Johnland Parcel: No significant geologic formations exist on the subject property. Although ±18.57 acres (37.37 %) of vegetation will be removed, a 200 foot buffer (100 feet along Old Dock Road) will surround the development, screening it from the surrounding community (**Section 4.6.2** (see page 4-47)). The proposed development is not anticipated to impact the

scenic quality of this area and as a result the proposed project is believed to conform to this policy.

Sewage Treatment Parcel: No significant geologic formations exist on the proposed Sewage Treatment Plant leaching area and no dunes, bluffs and wetland areas are located on this parcel. Vegetation will be removed from this parcel; however, no structural improvements are necessary as all improvements will be subsurface. The site will appear as an open meadow. Consequently, the use of the ±5-acre parcel is believed to be consistent with this policy.

Policy 32: Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high given the size of the existing tax base of these communities.

St. Johnland Parcel: The St. Johnland parcel will connect to the Kings Park Sewage Treatment Plant and will not utilize conventional on-site sanitary systems. This connection will allow for sanitary effluent to be treated before being discharged to the proposed leaching field. As the proposed project will utilize a sewage treatment plant in place of conventional sanitary systems, the project is believed to conform to this policy.

Sewage Treatment Parcel: The installation of a leaching field for discharge of the existing Kings Park Sewage Treatment Plant effluent inherently provides consistency with this policy as the installation of this leaching field will be removing an existing effluent discharge to Long Island Sound and the Kings Park Sewage Treatment Plant is an existing waste treatment facility. As the leaching field is a part of an alternative sanitary system for the development of the St. Johnland parcel, the use of the leaching field is believed to conform to this policy.

Policy 33: Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.

St. Johnland Parcel: As described in **Section 2.2.2** (see page 2-10), a Stormwater Pollution Prevention Plan will be prepared for site plan approval. Stormwater and erosion control measures will be designed in accordance with the New York State Department of Environmental Conservation Technical Guidance Manual. As per New York State Department of Environmental Conservation regulations, the site will be inspected on a weekly basis to ensure stormwater and erosion control measures are being properly implemented. If an erosion control measure is not in compliance with engineering specifications, the site inspector will notify the contractor and will provide recommendations for corrective actions. It is noted that no combined sewer overflows are proposed in connection with this project. As a result, the proposed development is believed to conform to this policy.

Sewage Treatment Parcel: As with the development of the St. Johnland parcel, stormwater runoff from the site will be prevented during construction of the leaching field. As the leaching field will be re-seeded with native grasses after construction resulting in no new impervious surfaces, stormwater runoff will not occur as a result of the proposed leaching field. There is no combined sewer overflow proposed in connection with this project. As a result, the installation of the leaching field is believed to conform to this policy.

Policy 37: Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.

St. Johnland Parcel: Once the development of the St. Johnland parcel is complete, on site landscaping will be maintained by a professional landscaper. Best management practices anticipated to be employed by the landscaper include the use of fertilizer in landscaped areas only when necessary, adherence to manufacturer's fertilizer application instructions and maintenance of landscaped beds. The subject site will have an on-site drainage system that will ensure collection and recharge of stormwater such that non-point source discharge to coastal waters is not expected. By utilizing the above best management practices, the parcel will not discharge excess nutrients via stormwater to coastal waters during rain events. As a result, the proposed development is believed to conform to this policy.

Sewage Treatment Parcel: As previously indicated, the installation of the leaching field will be re-seeded with native grasses once construction is complete. The grasses will require limited mowing and will not require fertilizer application. As a result, no nutrients are anticipated to enter coastal waters via stormwater from the proposed parcel and as such, the installation of the leaching field is believed to conform to this policy.

Policy 37a: New development shall not result in greater than zero percent additional stormwater run-off.

St. Johnland Parcel: As described in **Section 2.2.2** (see page 2-10) and **Section 3.5.2** (see page 3-36), stormwater generated on site will be fully accommodated on site, and drainage design will be subject to review and approval by the Town, who will ensure that the drainage system is adequate for the proposed development. The current drainage plan is designed to store stormwater runoff from a three inch storm event, which is the minimum required. A Stormwater Pollution Prevention Plan will be prepared for the site which will include a model of the drainage contributing area to the site to ensure that the proposed drainage system will be adequate for containing stormwater from applicable storm events. As the proposed drainage system will be designed to contain stormwater runoff from the site and a Stormwater Pollution Prevention Plan will be prepared in accordance with State and Town requirements, the proposed development is believed to conform to this policy.

Sewage Treatment Parcel: As the parcel will be re-seeded with native grasses once construction is complete and no impervious surfaces will be added to the parcel, no increase in stormwater runoff will occur from the parcel. As a result, the installation of the leaching field is believed to conform to this policy.

Policy 38: The quality and quantity of surface water and groundwater supplies, will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.

St. Johnland Parcel: As described in **Section 3.5.2** (see page 3-36), the proposed project will connect to an existing sewage treatment plant and as a result, no nitrogen generated from sanitary waste will enter groundwater on site. Modeling of nitrogen recharging to the site as a result of the proposed development results in a concentration of recharge well below the Suffolk County drinking water standard of 10 mg/L. As described in **Section 3.5.2** (see page 3-36), the proposed

project will increase the amount of recharge on the site due to the addition of impermeable surface area. All stormwater will be recharged on site either naturally or through the drainage system ensuring that all stormwater recharges resulting in no reduction in the quantity of water recharging to groundwater. No changes are proposed to the existing wetland or pond that would affect the water level of the pond. As the proposed development protects the quality and quantity of water on the subject site, the proposed project is believed to conform to this policy.

Sewage Treatment Parcel: As described in **Section 3.5.2** (see page 3-36), the sanitary effluent from the proposed project will be pumped to the existing Sewage Treatment Plant in Kings Park. Treated effluent would then be pumped to the ±5 acre parcel for discharge. Modeling of nitrogen recharging to the site as a result of the proposed development results in a concentration of recharge well below the Suffolk County drinking water standard of 10 mg/L. As described in **Section 3.5.2** (see page 3-36), the proposed project will increase the amount of recharge on the site due to the addition of impermeable surface area. All stormwater will be recharged on site naturally, ensuring that all stormwater recharge will result in no reduction in the quantity of water recharging to groundwater. As the proposed development protects the quality and quantity of water on the subject site, the proposed project is believed to conform to this policy.

<u>Policy 38a: Uses and/or development which may adversely impact ground and surface waters shall not be permitted in the coastal area.</u>

St. Johnland Parcel: As described in **Section 2.2.4** (see page 2-13) the proposed development will connect to the Kings Park Sewage Treatment Plant for treatment of sanitary wastewater. **Section 3.5.2** (see page 3-36) describes the nitrogen modeling conducted for the proposed project demonstrating that the proposed project will not adversely affect groundwater supply. The proposed project will employ stormwater management systems consistent with best management practices and will include a Stormwater Pollution Prevention Plan and containment of stormwater on-site consistent with Town design standards. As the proposed use is not expected to cause groundwater or surface water impacts as a result of sanitary wastewater or stormwater, the proposed development is believed to conform to this policy.

Sewage Treatment Parcel: **Section 3.5.2** (see page 3-36) describes the nitrogen modeling conducted for the proposed project demonstrating that the proposed project will not adversely affect groundwater supply. The proposed project will employ stormwater management systems consistent with best management practices and will include a Stormwater Pollution Prevention Plan and containment of stormwater on-site consistent with Town design standards. Additionally, the ±5-acre parcel will only be utilized as a subsurface leaching field for discharge of treated sanitary effluent. It should be noted that the discharge to the ±5-acre parcel also protects surface waters as the leaching field removes a direct discharge from the Kings Park Sewage Treatment Plant into Smithtown Bay and conveys it to an inland groundwater leaching field. As the proposed leaching field protects both surface and groundwater, the installation of the leaching field on the ±5-acre parcel is believed to conform with this policy.

<u>Policy 44: Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.</u>

St. Johnland Parcel: As described in **Section 3.4.1** (see page 3-13), a NYSDEC regulated freshwater wetland is located on the subject property. As described in **Section 3.4.2** (see page 3-

27), the flagged freshwater wetland will not be disturbed as a result of the proposed project, and a 100 foot buffer surrounding the wetland area will be provided to ensure the protection of this feature. As such, the proposed development is believed to conform to this policy.

Sewage Treatment Parcel: No tidal or freshwater wetlands are located on this parcel, and as such, this policy does not apply to this parcel.

4.4.3 Proposed Mitigation

- The proposed project represents a use that would complement the nursing home use located opposite, on the north side of St. Johnland Road, as well as the public recreational and vacant institutional uses that dominate the area (i.e., Sunken Meadow State Park, Nissequogue River State Park, the Town Park and Kings Park Psychiatric Hospital).
- The proposed use would also complement the low-density residential uses and zoning of the immediate area, and further, would complement the higher-density residential uses that are found at greater distances.
- The nature of the project would provide a substantial number of seniors having a continuum of consumer needs that would increase the customer bases of the commercial sites in the Kings Park hamlet center.
- The project will not impact the freshwater wetland/buffer area that occupies 1.33 acres of the property's north-central area.
- The project will permanently preserve and protect an additional 29.01 acres of wooded land on the site.
- The project would conform to the applicable aspects of the Town Plan Update.
- The project would help mitigate the unfulfilled need for a variety of housing options in the Town, which is a goal of the Town Plan Update.

4.5 Air Quality and Noise

4.5.1 Existing Conditions

Air Quality

General Air Quality Information - This section includes descriptions of the existing meteorological and climate characteristics of the vicinity, the air quality in the area, and the applicable air quality standards and regulations, as well as the current conformance to each.

Meteorology and Climate

This section will describe the meteorological setting for eastern Long Island, which includes the subject site, and existing air quality based on published air quality monitoring data. These conditions are important in terms of analyzing project related impacts to air resources.

Temperature - Long Island lies within the humid continental climatic region, and is characterized by four seasons with precipitation occurring throughout the year. Winter temperatures tend to be relatively severe with the average temperature during the coldest month at 32 degrees Fahrenheit (ºF) or below. Summer tends to be long and hot with temperatures above 72ºF. Winters on Long Island tend to be warmer than on the surrounding mainland due to the moderating effect of

the Atlantic Ocean (because of its mass, the temperature of the water is very slow to change). Summers tend to be cooler, which is due to the moderating effect of sea breezes and the presence of the ocean (**Navarra, 1979**).

Wind - Because air pollutants are carried and dispersed by wind, local air quality is directly affected by the local wind speed and direction. The prevailing ground level winds on Long Island are from the southwest in the summer, northwest in the winter, and close to equal distribution from these two directions during the spring and fall. **Table 4-9** provides the frequency of wind from various directions on an annual basis for the years 1979 to 1988.

Table 4-9
WIND DIRECTION

Wind Direction	Annual Frequency (%)	Wind Direction	Annual Frequency (%)
N	5.95	S	4.59
NNE	5.16	SSW	10.36
NE	5.01	SW	10.67
ENE	4.01	WSW	6.68
E	3.15	W	6.95
ESE	2.95	WNW	10.13
SE	2.98	NW	9.61
SSE	3.45	NNW	8.35

Wind speed and gustiness are effective indicators of Long Island meteorological conditions and are monitored at Brookhaven National Laboratory (BNL) in Upton. **Table 4-10a** provides the wind speed for this period, as well as an indication of wind gustiness/stability, based upon the percent of time wind occurred within each specified range. Wind speed monitoring conducted at BNL finds that wind speed is between 5 and 16 miles per hour (mph) 63.95% of the time, with peak wind speeds of 1-12 mph 96.47% of the time and 3-9 mph 77.26% of the time (**Nagle, 1975; Brown, 1992**). It is important to note the rare occurrences of wind speeds less than 1 mph (1.17%). **Table 4-10b** provides a record of wind stability for the period 1979-1988 as recorded at BNL. Unstable wind conditions were recorded 54.22% of the time indicating a high potential for atmospheric mixing.

Table 4-10
WIND SPEED AND GUSTINESS

Table 4-10a
Wind Speed (1979-1988)

Wind Speed (mph)	Frequency (%)
<1	1.17
1-3	10.20
3-5	24.44
5-7	31.86
7-9	20.96
9-12	9.01
12-16	2.12
>16	0.23

Table 4-10b
Gustiness (1979-1988)

Gustiness	Frequency (in %)
Very Unstable (BNL GC: A & B_2)	11.16
Unstable (BNL GC: B_1)	43.06
Neutral Instability (BNL GC: C)	13.04
Stable (BNL GC: D)	32.72

Source: Robert Brown, BNL Meteorologist, Revision Date 2-21-91.
Notes: Height of wind vane changed from 355 ft. to 290 ft. in May 1981.
BNL GC is the acronym for Brookhaven National Lab Gustiness Classification (A and B_2 represent the very unstable case; B_1, the typical daytime unstable case; C, the strong wind-speed neutral stability case; and D, the nighttime stable case).

Regulatory Framework

The 1970 Clean Air Act required the United States Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) for six principal pollutants; carbon monoxide (CO), nitrogen dioxide, ozone, lead, particulate matter (PM), and sulfur dioxide. Under the requirements of the Clean Air Act, states are required to ensure that air quality levels do not exceed the National Ambient Air Quality Standards (NAAQS) provided in **Table 4-11**. The Clean Air Act established two types of national air quality standards. According to the Environmental Protection Agency (EPA), primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.[33]

[33] http://www.epa.gov/air/criteria.html

Table 4-11
NATIONAL AMBIENT AIR QUALITY STANDARDS*

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour (1)	None	
	35 ppm (40 mg/m^3)	1-hour (1)		
Lead	0.15 µg/m^3 (2)	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m^3	Quarterly Average	Same as Primary	
Nitrogen Dioxide	0.053 ppm (100 µg/m^3)	Annual (Arithmetic Mean)	Same as Primary	
Particulate Matter (PM_{10})	150 µg/m^3	24-hour (3)	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15.0 µg/m^3	Annual (4) (Arithmetic Mean)	Same as Primary	
	35 µg/m^3	24-hour (5)	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour (6)	Same as Primary	
	0.08 ppm (1997 std)	8-hour (7)	Same as Primary	
	0.12 ppm	1-hour (8) (Applies only in limited areas-does not apply for NY)	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m^3)	3-hour (1)
	0.14 ppm	24-hour (1)		

* ppm - parts per million; mg/m^3 - millgrams per cubic meter; µg/m^3 - micrograms per cubic meter.
(1) Not to be exceeded more than once per year.
(2) Final rule signed October 15, 2008.
(3) Not to be exceeded more than once per year on average over 3 years.
(4) To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m^3.
(5) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m^3 (effective December 17, 2006).
(6) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm (effective May 27, 2008)

(7) (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
(8) (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is $\leq$ 1.

(b) As of June 15, 2005 EPA revoked the 1-hour ozone standard in all areas except the 8-hour ozone nonattainment Early Action Compact (EAC) Areas (which does not include NY).

Areas that exceed the National Ambient Air Quality Standards (NAAQS) for any of the six criteria pollutants are designated nonattainment areas. Currently, Nassau and Suffolk Counties are considered non-attainment areas for ozone and fine particulate matter ($PM_{2.5}$) and moderate maintenance attainment areas for CO which means that it is an area where the CO levels formerly exceeded the National Ambient Air Quality (NAAQ) standard, but which currently meets the standard. Nassau and Suffolk Counties will continue to be designated as maintenance areas for CO for 20 years, and as long as the National Ambient Air Quality Standards (NAAQS) for CO are maintained during this time period, the areas will be designated as attainment areas for CO. The United States Environmental Protection Agency (USEPA) requires the preparation of State Implementation Plans (SIPs), which establish strategies to reduce air pollution for nonattainment areas towards achieving National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. States are required to prepare and adopt SIPs for all nonattainment areas and periodically review and evaluate the effectiveness of the plans. New York State Department of Environmental Conservation (NYSDEC) has made recommendations to the United States Environmental Protection Agency (USEPA) that portions of the State be designated as nonattainment areas for ozone (under the revised 2008 National Ambient Air Quality Standards (NAAQS) of 0.075 ppm) and fine particle ($PM_{2.5}$) and NYS is currently under a mandate to prepare a State Implementation Plan (SIP) to address ozone and $PM_{2.5}$.

The New York State Department of Environmental Conservation (NYSDEC) continually monitors air pollution levels at more than 80 locations around the State. The closest New York State Department of Environmental Conservation (NYSDEC) air quality monitoring stations to the project site are located in Holtsville and Riverhead where ozone levels are monitored between April and November. Additional pollutants are monitored at stations in Babylon and Eisenhower Park (Nassau County). The 2009 data for Region 1 is provided in **Appendix N** of this document. The data indicates generally excellent air quality in the region where monitoring is conducted. Ozone levels have varied from year to year. Ground-level ozone is considered a secondary pollutant, since it is formed through a photochemical reaction between nitrogen oxides and reactive hydrocarbons in the presence of elevated temperatures and ultraviolet light. The sources of the primary pollutants that form ozone include automobiles, trucks and buses, large combustion sources such as utilities, fuel stations, print shops, paints and cleaners, and engines (including construction and lawn equipment). Ozone level concentrations that exceed the National Ambient Air Quality Standards (NAAQS) usually occur on hot sunny summer days with little to no wind. Implementation of more stringent emission controls and vehicle inspection requirements are strategies included in the State Implementation Plan (SIP), which are expected to contribute to the reduction of ozone concentrations. The present air quality in the vicinity of the site is expected to be excellent for the majority of the year, with the exception of a few days in summer when ozone levels are higher than normal.

Noise

General Noise Information - The environmental impact of noise can have various effects on human beings ranging from annoyance to hearing loss. A noise problem is said to exist when

noise interferes with human activities (**Rau and Wooten, 1980**). Various noise scales have been developed to describe the response of an average human ear to sound. The most common unit utilized to characterize noise levels is the A-weighted decibel ("dBA"), which weighs the various components of noise according to the response of the human ear. Because the human ear perceives the middle range of frequencies better than the high or low frequencies, the dBA scale assigns the middle range a much larger "loudness" value than higher and lower frequencies. For the purpose of this report, sound levels are reported in L_{eq} and range (minimum/maximum). L_{eq} refers to the energy-average sound level for a specific time period and relates sound intensity level to time as the "equivalent sound level" scale expressed in dBA. L_{eq} is commonly utilized as a statistical average sound level in noise impact prediction.

Physical measurements of noise may be measured in dBA using a sound level meter. The meter collects frequency values, which are automatically interpreted as a function of human hearing frequency response (according to the weighted decibel scale). The weighted scale thus provides a measure of noise that is meaningful for assessing ambient noise environments and potential noise impacts as heard by human beings. On average, a change of 3 dBA is required for the average person to detect a difference in the level of noise, whereas a change between 2 and 3 dBA is the level associated with the threshold of detection and a change in the range of 5 dBA is noticeable and is considered to be an impact (see **Table 4-12**).

Table 4-12
AVERAGE ABILITY TO PERCEIVE CHANGES IN NOISE LEVELS

Change (dBA)	**Human Perception of Change in Sound Levels**
2-3	Barely perceptible, threshold of detection
5	Readily noticeable
10	Doubling or halving of the loudness of sound
20	Dramatic change
40	Difference between a faintly audible sound and very loud sound

Source: Fundamentals and Abatement of Highway Traffic, Report No. PB-222-703, Federal Highway Administration, June 1973.

Sound levels decrease with distance from the source as a result of dispersion which is predicted using the "inverse square law", which applies a reduction of 4.5 dBA for each doubling of distance from a line source (such as a roadway) and 6 dBA reduction for a point source (a stationary source). This reduction effect is due to natural dispersion only and is not a function of the presence of barriers or other objects (**USDOT, 1980-1**), which may result in additional attenuation of noise. Also, because the decibel scale is logarithmic, the laws for addition of logarithms must be utilized for addition of decibels. The addition of two similar noise levels will result in an increase of 3 dBA. For example, a noise level of 50 dBA added to an existing noise level of 50 dBA would result in an end noise level of 53 dBA, an increase that is considered to be the threshold for human detection.

As a point of reference and comparison, an increase of 10 dBA equates to a doubling of the sound energy. This phenomenon is related to the logarithmic nature of the decibel scale, which will be explained below. In the same respect, a decrease of 10 dBA appears to the listener as a

halving of noise. **Table 4-13** relates changes in dBA to a receiver as compared to a base reference of 60 dBA.

In addition to measurable and detectable increases in dBA, public reaction to noise is also a function of location (urban, suburban, rural), time of day, fluctuation of noise levels, duration, and individual judgment of the listener.

In addition to attenuation by distance from the source, vegetation and noise barriers also result in attenuation of noise levels. Densely wooded areas are expected to have an attenuation rate of 5 dBA for every 100-foot depth of woods (up to a maximum attenuation of 10 dBA). For low-density vegetation, a nominal amount of attenuation of 2 to 3 dBA per 100 feet of woods may be expected to occur. The attenuation of noise due to barriers (walls and buildings) is a function of the height and composition of the barrier. A barrier capable of reducing sound energy transmission through the structure which interrupts the line of sight between a source and a receptor, will generally provide a minimum sound reduction of 5 dBA.

By utilizing this information, it is possible to use the ambient noise, source noise and attenuating factors to predict noise levels resulting from a particular source. The adjusted level is the noise level associated with the source after it is attenuated by distance and other attenuating factors such as structures interrupting the line of sight between the source and receptor, noise barriers, and thick vegetation. The adjusted level is combined with the ambient level using the concepts of decibel addition described previously.

Town of Smithtown Code - Noise regulations are contained in Chapter 207 of the Town Code. The intent of the noise control section of the Town Code is to prevent excessive sound that may jeopardize the health, welfare or safety of the public and applies to both mobile and stationary sources of noise generated within the Town. The Town has set maximum permissible sound levels for different property categories for daytime and evening hours, provided in **Table 4-14**. It is noted that noise from construction activities are exempt from the maximum sound levels if performed between 7 AM and 6 PM on weekdays (not weekends or legal holidays).

Table 4-13
COMMON NOISE LEVELS AND REACTIONS

Sound Source	**Noise Level** (dBA)	**Apparent Loudness**	**Typical Human Reaction**
Military jet Air raid siren	130	128X as loud	Limit of amplified speech
Amplified rock music	110	32X as loud	Maximum vocal effort
Jet takeoff at 500 meters Train horn at 30 meters	100	16X as loud	
Freight train at 15 meters	95		
Heavy truck at 15 meters Busy city street Loud shout	90	8X as loud	Very annoying Hearing damage (8+ hours)
Busy traffic intersection	80	4X as loud	Annoying
Highway traffic at 15 meters Train horn at 500 meters Noisy restaurant	70	2X as loud	Telephone use difficult
Predominantly industrial areas Light car traffic at 15 meters City or commercial areas Residential areas close to industry Noisy office	60	Base reference	Intrusive
Quiet office Suburban areas with medium-density transportation	50	1/2 as loud	Speech interference
Public library	40	1/4 as loud	Quiet
Soft whisper at 5 meters	30	1/8 as loud	Very quiet
	10	1/32 as loud	Just audible
Threshold of hearing	0	1/64 as loud	

Note: The minimum difference in noise level noticeable to the human listener is 3 dBA. A 10 dBA increase in level appears to double the loudness, while a 10 dBA decrease halves the apparent loudness.
Source: (NYSDOT, 1980 and White, 1975)

Existing Noise Conditions

In order to assess potential noise impacts of the project, several factors must be considered including the location of potential sensitive noise receptors with respect to the noise source, the existing background environment and sources of noise, potential noise generated by the project and attenuation factors.

The site is a vacant wooded area adjacent to Old Dock Road and St. Johnland Road, which are moderately traveled roadways. Receptors in the area are residences located to the west of the property, located on Twin Oaks Drive and St. Johnland Nursing Center to the north of the property. To establish a baseline for analysis, sound level monitoring was conducted during a weekday morning at two stations: near the residential properties, and at the Nursing Home. A

figure illustrating the locations of the sound level monitoring stations, on an aerial photograph indicating homes in the area and local sources of noise is provided as **Appendix O**.

Table 4-14
PERMISSIBLE A-WEIGHTED SOUND PRESSURE LEVELS BY RECEIVING PROPERTY CATEGORY, IN dBA
Receiving Property Category

Sound Source Property Category	Residential, 7:00 a.m. to 10:00 p.m. (dBA)	Residential, 10:00 p.m. to 7:00 a.m. (dBA)	Commercial, all times (dBA)	Industrial, all times (dBA)
Residential	45	40	65	70
Commercial or public lands or rights-of-way	55	45	65	70
Industrial	55	45	65	70

Source: Table I, Chapter 207: Noise Control, Town of Smithtown Town Code

Noise monitoring was conducted on August 23, 2011 beginning at 9:15 AM, to evaluate the ambient noise environment in the vicinity of the site near the closest residential receptors and identify existing sources of noise in the area. Sound level measurements were collected using a SPER Scientific Model 840029 Digital Sound Level Meter. The meter was calibrated before every period of readings. Fifty sound level readings were taken at 10-second intervals at each sampling station. Weather conditions were noted as sunny and cool with no significant breeze. Sound level measurement data and calculation of L_{eq} for each sampling station for the period of sampling is included in **Appendix O** of this document.

A discussion of the ambient noise at each of the stations is provided below:

Station 1 is located to the north of the property along St. Johnland Road within the St. Johnland Nursing Center property. A wooded area surrounds the Nursing Home to the north, east, and west. Readings were taken at a small area with picnic tables next to a driveway and parking lot for the Nursing Home. This station is representative of the ambient conditions on the Nursing Home's property. The sound levels measured at this station were between 41.5 dBA and 62.4 dBA with vehicular traffic along St. Johnland Road and the driveway to the Nursing home audible. Other ambient sounds were bird calls and cicada "singing".

Station 2 is located on the corner of Twin Oaks Drive and Mountain Laurel Lane, a residential area to the west of the property. The sound levels measured at this station were between 39.0 dBA and 70.4 dBA. Ambient conditions at the site were typical of a suburban area with the noise environment existing of bird calls, cicada "singing", minimal vehicular traffic, and surrounding neighborhood sounds with louder interspersed passing cars and trucks.

Table 4-15 provides the range of sound level readings and L_{eq} (the equivalent A-weighted sound level over a given time interval) for the station locations. In general, vehicle traffic along St. Johnland Road, local roads within the residential area, and various sounds from fauna are the factors that most noticeably impact the ambient noise levels.

Table 4-15
SOUND LEVEL MEASUREMENT RESULTS
(in decibels; dBA)

Station	L_{eq}	Maximum	Minimum
Station 1	51.0	64.2	41.5
Station 2	55.3	70.4	39.0

The existing noise environment surrounding the site is fairly typical for a property located in a moderately developed area along roadways with moderate traffic. Based on the noise monitoring conducted, the L_{eq} for the site ranges between 51.0 dBA to the north of the property and 55.3 dBA to the west of the property (level associated with a suburban area) (**Cowan, 1994**) for the time periods studied.

4.5.2 Anticipated Impacts

Air

A short-term increase in noise level and dust can be expected as a result of construction activities. Potential adverse air quality impacts during construction may occur due to dust raised by truck movement, clearing/grading operations and from truck and construction equipment emissions. During this period, dust and particulate matter from the project site may be released into the air and carried off-site by wind. These increases in construction-related dust will be temporary.

Noise

Noise is regulated by Chapter 207 of the Town Code. Pursuant to the Town Code, the sound levels generated by a commercial property as received by a residential property may not exceed 55 dBA between 7 AM and 10 PM and 45 dBA between 10 PM and 7 AM.

The change of land use from the vacant wooded area to a commercial-residential development will change the character of the area and is expected to result in a moderate increase in ambient noise over the current noise environment in the immediate area, due to the increase in activity over the present (vacant) land use.

Potential sources of noise that may be associated with the proposed development include short term construction noise and long term noise related to on-site vehicle use, additional traffic on area roadways, sound generated by residents, employees and visitors, maintenance of property (snow removal, landscape maintenance), and truck traffic (solid waste removal and deliveries).

A typical sound level for a busy commercial area is in the range of 60 dBA and a residential area is in the range of 50 dBA. It is expected that the proposed uses will generate sound levels within the range of these standards during typical waking hours of the public (i.e. between 7 AM to 10 PM). Prior to 7 AM and after 10 PM, the majority of commercial uses will be closed and therefore are not expected to generate significant levels of noise.

The project design provides significant buffers, separating the proposed development from existing residences and roads. A 200 foot buffer is proposed around the north and west sides of the property. To the south along Old Dock Road a buffer of 100 feet is proposed.

It is noted that construction noise will be short term and temporary. Additional traffic on the site will travel at slower speeds and therefore generate less noise from tire wear and acceleration than vehicles traveling on public roads.

In the short term, noise impacts are anticipated during the construction phase of the project related to clearing, grading, excavation, and building activities. This will occur over a limited period of time between the hours of 7 AM and 6 PM in compliance with Town regulations and are not anticipated to result in a significant impact.

No significant long-term noise impacts are anticipated from the project, as the proposed commercial-residential uses are buffered from nearby land uses via the proposed 200 foot buffer along the north and west sides of the property and the 100 foot buffer along Old Dock Road.

4.5.3 Proposed Mitigation

- Potential noise impacts will be mitigated by ensuring that construction and operation comply with the Town of Smithtown noise code which specifies maximum permissible sound pressure levels.
- Construction activities will be limited to weekdays between the hours of 7 AM and 6 PM on weekdays (not on legal holidays) to minimize the impacts of construction noise.
- Noise dampening practices will be utilized during construction to minimize the impact on surrounding areas including keeping all mechanical construction equipment maintained in good working order to minimize noise levels.
- Long-term impacts related to noise will predominantly result from the residential activities on the site that occur periodically and are a factor of any development, such as garbage removal, which typically occurs in early morning.

4.6 Visual Resources

4.6.1 Existing Conditions

The property currently consists of vacant wooded land with a pond and associated wetlands located in the north central portion of the property. An old driveway runs in a north-south direction through the central portion of the property, and trails traverse the entire site. Institutional uses and vacant land dominate the land uses towards the north, while vacant land and a State Park dominate the land uses to the south and east, and single-family residences

dominate the land uses towards the west, as described in **Section 4.4.1** (page 4-23) The following discussion presents the existing visual character of the site and vicinity; the photographs in **Appendix P-1** represent typical views of the site and its environs and depict the visual resources of the surrounding area.

Photographs 1, 2 and 4 depict views along Old Dock Road in the vicinity of the subject site. Prominent features visible along Old Dock Road include Shanahan's Bar, wooded land, and portions of the abandoned Kings Park Psychiatric Center. The lack of maintenance of the Kings Park Psychiatric Center buildings and grounds is visible from these vantage points.

Views of the area in the vicinity of the subject site along St. Johnland Road are represented in Photographs 3, 6, 9, 10 and 11. As illustrated in these photographs, the views along St. Johnland Road are dominated by the surrounding vacant, wooded land; the existing vegetation is the main component of these views. These views are representative of much of the area surrounding the subject site as much of the developed areas surrounding the subject site are obstructed from view by intervening vegetation.

Views looking towards the subject site from surrounding public vantage points are depicted in Photographs 5, 7, 8, 12, 13, 14 and 15. These photographs illustrate that views of the subject site consist primarily of vacant, wooded land. Photographs 13, 14 and 15 are from intersections in the residential neighborhood located west of the subject site looking towards the subject property. The residences are the dominant features in these views, while wooded land is visible in the background. It is expected that views from the backyards of the residences located along the eastern side of Twin Oaks Drive would be of wooded land as these residences are adjacent to the subject property which currently does not contain any developed areas.

In general, areas of varying uses are visible intermittently in the vicinity of the subject property, which include commercial, residential and institutional uses. Overall, the views of the site and vicinity are dominated by vacant wooded land resulting from the lack of development on the subject site and the surrounding parklands which are partially developed.

As previously mentioned, the ±5-acres of the St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) is presently undeveloped and mostly wooded.

4.6.2 Anticipated Impacts

As discussed and analyzed in **Section 4.4.2** (page 4-27), the land use classification of the site would be changed by the proposed project, and the intensity of the site's land use will be increased. However, in consideration of the existing mix, presence and pattern of institutional, public recreational, residential and commercial uses in the area (particularly with respect to the proximity of the adjacent nursing home use, which is complementary to that of the proposed project), this change would not necessarily represent a significant change in use.

In order to provide representative views of the subject site subsequent to the development of the proposed project, photosimulations were created from three key vantage points in the vicinity of the proposed project; at the location of the proposed site access located along Old Dock Road, at the location of the proposed site access located along St. Johnland Road, and from the residential neighborhood located west of the subject site, from a point just north of the intersection of Twin Oaks Drive and Lyn Oak Lane. The locations of the vantage points and the photosimulations are depicted in **Appendix P-2**.

Photographic simulations of the proposed project were prepared by merging photographs taken in February 2011 from proposed project entrances along Old Dock Road and St. Johnland Road as well as along Twin Oaks Drive located in the adjacent residential neighborhood. Several photographs from each location were merged to provide a wider range of views to include the entire property to the extent practicable. Modeled representations of the proposed Uplands at St. Johnland complex were prepared using Sketchup™ computer modeling program. A 3D terrain model was created in SketchUp using contour information from AutoCAD. This same AutoCAD file had the building footprints, First Floor Elevation (FFE) information and location points for the three photo locations. This additional information was added to the terrain model. A basic building model was also created in SketchUp and placed on the terrain, matching the FFE information. Using the photo location points, a camera view was set on each point and, inserting the existing photo in SketchUp, the camera view of the model was matched to features in the photo. Metadata from the photo, specifically, image dimension and focal length are mimicked in the camera view in SketchUp to ensure the most accurate matching of the model to the photo. The rendered model image was exported from SketchUp and placed in Photoshop, matching the existing photo to simulate the proper location, heights (proposed 50-foot building) and overall scale of the actual proposed conditions. This simulated future views of the area with the proposed units constructed. Features in the foreground are placed over the rendered model image to simulate the visibility of the project looking through the natural landscape that is to remain.

As depicted in **Appendix P-2**, existing views from Location 1 are comprised of vacant wooded land and a cleared area associated with the former internal roadway. The simulated view of the proposed project from Location 1 illustrates an increase in clearing within the subject site, and the visibility of the proposed structures and landscaping within the site. The proposed access roadway is the most prominent feature in this view, as it is located closest to Old Dock Road. Although the proposed structures will be visible from this vantage point, they will be partially screened by existing natural vegetation to remain on the subject site (minimum of 100 feet along Old Dock Road) and landscaping proposed around the proposed structures.

Similar to views from Location 1, existing views from Location 2 are comprised of vacant wooded land. The simulated view from this location depicts the proposed site access point from St. Johnland Road as the most prominent feature, and the proposed structures within the site visible in the background. As with the simulated views from Location 1, views of the proposed structures from Location 2 will be partially screened by existing natural vegetation to remain (minimum of 200 feet along St. Johnland Road).

The most prominent features in views from Location 3 are the existing single family residential structures. As illustrated in the simulated view, the single family residences will remain the most prominent feature from this Location, with the proposed structures visible in the background. As with views from Locations 1 and 2, the majority of the proposed structures will be screened from view as a result of the intervening vegetation to remain on site (minimum of 200 feet along the western property boundary). It is anticipated that the structures will have minimal visibility from all three Locations during the summer months when all vegetation is in full bloom.

In general, the impact of the project on the visual resources of the site will be an increase in the visibility of the proposed buildings located in the interior portion of the site, primarily for observers traversing Old Dock Road and St. Johnland Road. Viewers from the residential development to the west will have views of the proposed development, although these views will be limited. As the majority of the proposed development is located within the interior portion of the site, and significant areas of existing vegetation will remain around the perimeter of the proposed development, it is anticipated that very limited views of the proposed development will be visible during the summer months. During winter months, the buildings will be more visible through the unvegetated trees. As noted, the buildings are "set back" within the site, thus reducing mass and apparent size.

The proposed use is not in stark contrast with uses in the area including the existing nursing home, Kings Park Psychiatric Center buildings and residences. The site does contain open space associated with Nissequogue River State Park and holdings of New York State as well as public lands in the Nissequogue River corridor. These public lands will remain. The proposed project provides a transitional use between the nursing home to the north and single family homes to the west, and the structures associated with Kings Park Psychiatric Center. The project represents a change in the visual character of the area; however, design parameters including 200 foot perimeter buffering which allow the buildings and facilities to be set back within the parcel and screened by 200 feet of natural vegetation will assist in reducing impacts to the maximum extent practicable.

The ±5-acres of the St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) will be mostly cleared and replanted with native grasses with the exception of a five-foot buffer of either natural vegetation or a planted berm/buffer. No above-ground structures are required as all facilities will be underground; the site will appear as a meadow area and as a result, the site will not be in visual contrast to the surrounding area.

4.6.3 Proposed Mitigation

- Visibility of the site from all vantage points will be mitigated through the provision of a wooded vegetative buffer along the perimeter of the property (with the exception of the proposed site access locations).
- On site landscaping will serve to enhance the views of the proposed development and will provide some screening of the proposed structures.

4.7 Cultural Resources

4.7.1 Existing Conditions

The site is located within an area identified by the State Historic Preservation Office (SHPO) as archeologically sensitive (see **Figure 4-7**). The following description and discussion of the site's potential for the presence of cultural resources has been taken from the Phase I Archaeological Investigation prepared for the site (see **Appendix Q-1**).

Between February 21 and March 11, 2011, TRACKER-Archaeology Services, Inc. conducted a Phase IA documentary study and a Phase IB archaeological survey for the Old Dock property in Kings Park, Township of Smithtown, Suffolk County, New York. The purpose of the documentary study was to determine the prehistoric and historic potential of the project area for the recovery of archaeological remains. The Phase IA was implemented by a review of the original and current environmental data, archaeological site files, other archival literature, maps and documents. The prehistoric and historic site file search was conducted utilizing the resources of the New York State Historic Preservation Office in Waterford, New York. Various historical and/or archaeological web sites may have been queried to review any pertinent site information.

The purpose of the Phase IB survey was to recover physical evidence for the presence or absence of archaeological sites on the property. This was accomplished through subsurface testing and ground surface reconnaissance. The entire property is 50 acres, located on the southwest side of the Old Dock Road and Saint Johnland Road intersection. The project area (APE) is limited to 26.9 acres minus wetlands and buffers. The study was completed by TRACKER-Archaeology Services, Inc. of Monroe, New York. Prehistoric and historic research was conducted by Alfred Cammisa, M.A. Phase IB field work was completed by field director Alexander Padilla, B.A. and PI, Alfred Cammisa. Report preparation was by Alfred Cammisa, Felicia Cammisa, B.A. and Alexander Padilla. The work was performed for Nelson, Pope & Voorhis, LLC, New York.

PREHISTORIC POTENTIAL
A prehistoric site file search was conducted at the New York State Historic Preservation Office (NYSHPO). The search included a 1 mile radius around the project area. The following sites are recorded:

Table 4-16
PREHISTORIC POTENTIAL

NYSM Sites	NYSHPO Sites	Distance from APE ft(m)	Site Description
	10308.00033	3227 (984)	Kallen Site: no info.
8057		2204 (672)	Kings Park Hospital: flakes, misc. on eroded bluff adjacent to marsh
8060		3520 (1073)	Pond Park: flakes, points?, near stream into pond.
	10308.000030	3368 (1027)	Obadiah Smith House: midden

A Paleoindian point was recovered from this vicinity and a burial was also reported (Stone nd:map). In addition, an Indian foot trail may have existed along current Saint Johnland Road (Stone: not dated: map). Assessing the known environmental and prehistoric data, we can summarize the following points:

-A pond and associated wetlands are on the property adjacent to the project area. The study area is about 1700 feet west of Nissequogue River and 2000 feet south of Sunken Meadow Creek, both of which drain shortly into the Long Island Sound.
-The project area contains level to moderate sloping terrain with well drained soils.
-An Indian trail was likely located very close to the project area.
-Prehistoric sites are recorded in the surrounding vicinity.

In our opinion, the study area has an above average potential for the recovery of prehistoric remains along the level portion of the property. The type of site encountered may be a procurement and/or processing station or camp.

HISTORIC POTENTIAL
Contact Period (Seventeenth Century)
At the time of European contact and settlement, the study area and surrounding territories were probably occupied by either the Slongo or Arhakaamunk, or Shockheyoune people. These people were likely villagers or a subtribe of either the large Nesaquake (Missaquogue) tribe or Matinecock. The Nesaquake and the Matinecock-used territory appear to have interfaced in the Sunken Meadow area (Bolton 1975: 53-54; Stone nd:map; Erichsen 1968: 1). An Indian foot trail may have existed along current Saint Johnland Road(Stone nd:map).

Eighteenth Century
Wigwams were still being used during this period. A wigwam was reported along the aforementioned Indian foot trail not far from the project area. It was reported by Reverend Horton in the 1740's who probably lived in it while visiting (Stone 1980:170; 1983; 1993:6; Stone nd: map). The term wigwam may have referred to 1 or a hamlet of wigwams. Smithtown was predominantly an agricultural community where wheat, rye, corn, oats and potatoes were the primary crops. The cutting and selling

of cordwood also provided income. Fishing was a thriving industry. The waters had a large supply of clams, crabs, oysters and eels and because of the Nichols Patent of 1665 and the Andros Patent of 1667, Smithtown owned its own local water (Erichsen 1968: 7). Settlement appears to have originally been concentrated near the northern part of the Town near the coast and upper Nissequogue River. During this century, settlement shifted further to the south of Town. The Nissequogue was dredged making it available for the bigger ships to dock further south (Cammisa 1994: 6).

Nineteenth Century

The 1836 Colton map shows what appears to be Route 25A but not Saint Johnland Road. No structures are on, or adjacent to, the study area (Figure 3 [of the Phase I Archaeological Investigation]). The 1858 Chace map appears to depict buildings along Saint Johnland Road. Captain Smith's house appears adjacent to the project area. Three buildings are depicted across the road to the north (Figure 4 [of the Phase I Archaeological Investigation]). The 1873 Beers atlas shows a school house on the property possibly adjacent to the project area. The buildings on the north side of Saint Johnland Road are the St. Johnland Institute for Children (Figure 5 [of the Phase I Archaeological Investigation]). The project property has been owned by the St. Johnland Nursing Facility since 1866. At this time the property was used as a dairy farm (NPV 2011). The 1896 Hyde atlas shows the school still on the property adjacent to the project area. Other buildings are depicted on the property adjacent to the project area to the southwest and off the property. State Institutions are shown to the north and southeast of the project parcel (Figure 6 [of the Phase I Archaeological Investigation]).

Twentieth Century

The 1904 USGS shows no structures on or adjacent to the project area (Figure 7 [of the Phase I Archaeological Investigation]). Barns and workers' quarters for the St. Johnland Nursing facility may have been located on the property. These may have included block foundations heated by coal (NPV 2011). An historic site file search was conducted at the New York State Historic Preservation Office (NYSHPO). The following sites were recorded within 1 mile:

Table 4-17
HISTORIC POTENTIAL

NYSM Sites	NYSHPO Sites	Distance from APE ft(m)	Site Description
	10308.000822	2868 (874)	Kings Park State Hospital: open field on Maple Hill was the burial ground (c. 1890-1980) with unmarked graves
	96NR01061	3508 (1070)	Obadiah Smith House: c. 1708-1850

Assessing the known environmental and historic data, we can summarize the following points:

- A pond and associated wetlands are on the property adjacent to the project area. The study area is about 1700 feet west of Nissequogue River and 2000 feet south of Sunken Meadow Creek, both of which drain shortly into the Long Island Sound.
- The project area contains level to moderate sloping terrain with well drained soils.

-An Indian trail is located close to the project area.
-Historic burials and a house were located in the vicinity.
-Historic map documented structures were depicted adjacent to the project area.

In our opinion, the project area has a higher than average potential for the recovery of nineteenth century European-American sites, possibly related to the St. Johnland Nursing facility.

FIELD METHODS
Walkover
Exposed ground surfaces were walked over at shoulder width transects to observe for artifacts. Covered ground terrain was reconnoitered at about 15 meter intervals or less for any above ground features, such as berms, depressions, structures, or rock configurations, which might be evidence for a prehistoric or historic site.

Shovel Testing
Shovel test intervals were excavated at 15 meter intervals across the project area. Each shovel test measured about 30 to 40 cm. in diameter and was dug into the underlying subsoil (B horizon) 10 to 20 cm. when possible. All soils were screened through 1/4 inch wire mesh and observed for artifacts. All shovel test pits were mapped on the project area map. Soil stratigraphy was recorded according to texture and color. Soil color was matched against the Munsell color charts for soils. Notes were transcribed on pre-printed field forms and a field journal.

FIELD RESULTS
Field testing of the project area consisted of the excavation of 432 shovel tests. No prehistoric features or artifacts were encountered. No historic features or artifacts were encountered. What appears to be a slate platform-like structure and associated building depressions were encountered along a gravel drive in the woods.

Stratigraphy
Stratigraphy on the property included the following:
A/O horizon - 1 to 12 cm. thick of root mat, leaf litter, and humus.
A horizon - 10 to 41 cm. thick of 10YR4/3 brown, 10YR3/3 dark brown, and 10YR4/4 dark yellow brown
loamy sand.
B horizon - 10 to 20 cm. into of 10YR5/6, yellow brown loamy sand, which was occasionally impeded.

The ±5-acres of the St. Johnland Nursing Center property to be subdivided and utilized by the Suffolk County Department of Public Works (SCDPW) is not located within an archeologically sensitive area (see **Figure 4-7**).

4.7.2 Anticipated Impacts

The following conclusions and recommendations are taken from the Phase I Archeological Survey (see **Appendix Q-1**):

The documentary study had revealed that the study area had a higher than average potential for the recovery of prehistoric sites and for historic sites. This was based upon environmental characteristics,

proximity to prehistoric and historic sites, Indian trails, and European-American structures. The field testing included the excavation of 432 shovel tests. No prehistoric artifacts or features were encountered. No historic artifacts or features were encountered. Twentieth century debris, slate platform-like structure and associated building depressions and roads were encountered. No further work is recommended.

A Letter of No Impact was received from SHPO dated May 3, 2011 which indicates that the proposed project will have no impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places (see **Appendix Q-2**).

4.7.3 Proposed Mitigation

- The Phase I Archaeological Survey on the site recommends that no further work be performed and, therefore, no impact to such resources is expected. Accordingly, no mitigation is proposed.

SECTION 5.0

OTHER IMPACTS EVALUATED

5.0 OTHER IMPACTS EVALUATED

This section provides a summary of the anticipated impacts of the proposed project on the environmental and human resources of the area, that were described in detail in **Sections 3.0 and 4.0**.

5.1 Cumulative Impacts

Cumulative impacts are the potential impacts of a proposed action taken in conjunction with other active or anticipated nearby development projects, where the sum may potentially result in cumulative impacts that are greater than the individual impacts from each project. An analysis of cumulative impacts is generally required within a Draft EIS when it is expected that multiple projects within the same area may result in a greater cumulative impact than is suggested by impact analyses of the individual actions.

As described in the State Environmental Quality Review (SEQR) Handbook (**NYSDEC, 2010**), cumulative impacts are:

> Cumulative impacts occur when multiple actions affect the same resource(s). These impacts can occur when the incremental or increased impacts of an action, or actions, added to other past, present and reasonably foreseeable future actions. Cumulative impacts can result from a single action or from a number of individually minor but collectively significant actions taking place over a period of time. Cumulative impacts do not have to all be associated with one project sponsor or applicant. They may include indirect or secondary impacts, long term impacts and synergistic effects.

Communication with the Town requesting information on the existence of pending or proposed projects in the vicinity (to be considered in the Traffic Impact Study) confirms that there are no such applications. As a result, there are no other projects in the area whose impacts, in conjunction with those of the proposed project, may result in impacts that are greater than the individual impacts from each project.

Section 1.3 (see page 1-14) contains the cumulative impact analysis of the proposed zoning amendment within the Town of Smithtown's Zoning Ordinance to include Continuing Care Retirement Community (CCRC) as a Special Exemption use. The analysis identified several sites out of the total of seventeen (17) potentially eligible sites that may be suitable for Continuing Care Retirement Community (CCRC) use. These are listed and summarized in terms of their potential for Continuing Care Retirement Community (CCRC) use as follows:

- ID No. 4 – golf driving range, area of fill, potentially compatible
- ID No. 6 – KPPC, will be subject to community input; proximate to St. Johnland, not likely
- ID No. 7 – adjoins St. Catherine of Siena Medical Center, potentially compatible, but not likely
- ID No. 9 – Borella's nursery since 1954, potentially compatible, but not likely

- ID No. 10 – Gyrodyne/Flowerfield, existing businesses, potentially compatible, not pursued
- ID No. 15a – vacant site with constraints and not compatible surrounding zoning, not likely
- ID No. 15b – vacant site with prior RC zoning approval, potentially compatible

The analysis provides a basis for the following findings:

- Out of seventeen (17) potentially eligible sites Town-wide, there are at most seven (7) sites that could potentially be used for Continuing Care Retirement Community (CCRC); however, of these, five (5) are not likely or not pursued in connection with prior land use plans.
- Land use conversion of an existing use could take place; however, if land use conversion were to take place in the future, it would occupy a disturbed site and would not impact natural resources.
- Any future use would be subject to change of zone to Retirement Community (RC) and review by the Town Board.
- Any future use would be subject to Continuing Care Retirement Community (CCRC) Special Exception review by the Town Board and would have to meet the criteria and dimensional requirements.
- Any future use would be subject to the State Environmental Quality Review Act (SEQRA) process which could include an Environmental Impact Statement (EIS) that would address project need, site conditions, potential environmental impacts, mitigation and alternatives to form a basis for a decision that weighs and balances social, environmental and economic issues.
- Any future use would be subject to Town Code Chapter 322, §322-19, Environmentally Sensitive Lands and protection of site resources as well as Chapter 153 for stormwater management.

The analysis demonstrates that the St. Johnland site is not the only eligible site for Retirement Community (RC) zoning and Continuing Care Retirement Community (CCRC) use in the Town of Smithtown. The analysis shows that there are very limited cumulative impacts associated with the creation of the Continuing Care Retirement Community (CCRC) Special Exception under the Retirement Community (RC) zone, based on the criteria contained in the proposed Code revision, the dispersed and limited nature of potentially eligible sites, the preliminary environmental resource analysis of potentially eligible sites contained herein, the State Environmental Quality Review Act (SEQRA) process and conformance to land use and environmental regulations that would be required for use of one of these sites as a Continuing Care Retirement Community (CCRC). The analysis further supports a finding that environmental review would address social, environmental and economic factors, and would ensure balanced decision-making with respect to any potential Continuing Care Retirement Community (CCRC) use in the Town.

5.2 Adverse Impacts That Cannot Be Avoided

The site and project have been characterized, the potential adverse impacts to the existing site and vicinity have been assessed, and mitigation measures have been described. Some adverse impacts may still exist for which no mitigation is available. Adverse impacts have been quantified and discussed; for those adverse impacts that cannot be quantified, qualitative discussions have been provided in previous sections of this document. The adverse impacts of

the proposed project will be minimized where possible, but this section acknowledges those adverse impacts that may still occur, as follows:

- Grading will permanently alter at most an estimated 38% of the site's topography.
- Despite the planned mitigation measures planned under the SWPPP (such as soil wetting, etc.), temporary increases in the potential for fugitive dust during the construction period may still occur.
- Temporary increases in construction traffic and noise during the construction period.
- Increase in the concentration of nitrate/nitrogen in water recharged on-site (including the ±5-acre sewage treatment plant parcel), from 0.01 mg/l at present, to 3.30 mg/l after construction.
- Removal of a total of 18.47 acres of natural vegetation.
- Increase in vehicle trips generated on the site and on area roadways over existing conditions (though no off-site mitigation appears necessary, as no decrease in LOS is expected).
- Increased total anticipated water consumption on the site, from zero at present to 41,519 gpd associated with the project.
- Increased intensity of land use on the site (over current site conditions).
- Increased potential need for emergency services of Suffolk County Police Department (SCPD) and Kings Park Fire Department (offset by property tax revenues).
- Increased demand on energy services of Long Island Power Authority (LIPA) and National Grid (to be paid for according to rate tariffs).

5.3 Irreversible and Irretrievable Commitment of Resources

This subsection is intended to identify those natural and human resources discussed in **Sections 3.0 and 4.0** that will be consumed, converted or made unavailable for future use as a result of the proposed project. The proposed project will result in irreversible and irretrievable commitment of resources, as follows:

- Material used for construction on the site, including but not limited to: wood, asphalt, concrete, fiberglass, steel, aluminum, etc.
- 18.47 acres of natural vegetation on the overall site.
- Energy used in the construction, operation and maintenance of this project, including fossil fuels (i.e., oil and natural gas).
- Potable water to be consumed on a daily basis, for the operation of the project, totaling an estimated 41,519 gpd.

However, the impact of this commitment of resources is not anticipated to be significant, as the magnitude of these losses does not appear to be substantial.

5.4 Growth-Inducing Aspects

Growth-inducing aspects of a proposed development are those project characteristics which would cause or promote further development in the vicinity, either due directly to the project, or indirectly as a result of a change in the population, markets or potential for development in that

community. Direct impacts might include, for example, the creation of a major employment center or institutional facility, installation or extension of infrastructure improvements or the development of a large residential project, particularly if that project were designed for a specific age group. An indirect impact would cause an increase in the potential for further development in an area, which in turn would result in direct impacts.

In consideration of the above description of growth inducement, The Uplands at St. Johnland would increase the potential for growth in the vicinity**.** However, the proposed project also reflects an on-going trend in the Town for growth in both the amount and diversity of quality senior housing. In this sense, therefore, the proposed project does not in itself represent a trigger for such growth, but rather is a response to an established trend for such growth.

It is anticipated that the proposed project would contribute to an increase in activity for local businesses. The project will increase the number of residents in an area where commercial and service-oriented businesses are available by relatively short auto trips. These businesses, especially those serving the needs of senior customers, would tend to experience incrementally increased activity due to the increase in their customer bases.

The construction of the site will create both short-term and long-term job opportunities. In the short-term, development will create an estimated 456 construction jobs (to last multiple years), and indirectly jobs may be created based on increased patronage of material suppliers. In the long-term, the proposed project will create an estimated 73.6 full time equivalent (FTE) permanent maintenance-related, skilled nursing and office-related positions. These jobs may be filled first from within the local labor pool. These job opportunities would not require relocation of specialized labor forces or influx of large businesses from outside the area to provide construction support. As a result, job-related growth-inducing aspects of the proposed project are not expected to be significant.

Development of the site will result in an incrementally increased usage of utilities. Electrical and natural gas services are generally available throughout Long Island (and are presently available in the immediate vicinity of the subject site), and water mains are adjacent; therefore, significant expansions of these utilities are not expected. Because these facilities and services already exist and have the capacity to service the proposed project, no significant change in potential growth is expected to result solely from this availability. As the project will be developed at a density in excess of that allowable under Article 6 of the Suffolk County Sanitary Code (SCSC), on-site septic systems are not allowed, so use of a sewage treatment plan (STP) is required and proposed. The project proposes to connect to the existing Kings Park Sewage Treatment Plant (STP) for treatment and disposal of its wastewater. This connection is facilitated by the partitioning of a ±5-acre portion of the St. Johnland Nursing Center property (located northwest of the proposed project site) to allow for the transfer of this five acres to the Suffolk County Department of Public Works (SCDPW) for the purpose of discharging treated sanitary effluent from the Kings Park Sewage Treatment Plant (STP). According to a letter from the Suffolk County Department of Public Works (SCDPW) (see **Appendix G-3**), the use of ±5-acre parcel will allow the Kings Park Sewage Treatment Plant (STP) to process the full treatment capacity of the plant, while maintaining compliance with the permit restrictions set forth by the Lon Island

Sound Study. The Kings Park Sewage Treatment Plant (STP) currently serves projects in the area (including the St. Johnland Nursing Center) and discharges treated effluent to the Long Island Sound. The transfer of the five acres will allow the Kings Park Sewage Treatment Plant (STP) to divert their current surface water discharge to an inland groundwater recharge system on the ±5-acre parcel, and will provide availability for the proposed Uplands at St. Johnland Continuing Care Retirement Community project to connect to the Kings Park Sewage Treatment Plant (STP) (see Suffolk County Department of Public Works letter in **Appendix G-3**). It is understood that the use of the ±5-acre parcel allows the Kings Park Sewage Treatment Plant to treat to the full capacity of the plant, but does not provide for district expansion (to include Main Street Kings Park for example). This facility already exists and serves other properties in the region, the proposed project does not present a growth-inducing aspect with respect to potential development.

The proposed project may lead to the improvement of community services in the area as stimulated by the increased need for such services, the costs of which would be at least partially offset by the increased taxes generated by the project.

5.5 Effects on the Use and Conservation of Energy Resources

An increase in the consumption of energy resources would typically be expected from the intensification of land use on a site. In general, the buildings will be constructed in conformance with New York State and Town building codes, which require adequate insulation as well as other design standards that would minimize energy use. The proposed project will utilize energy efficient design standards to minimize energy consumption at the site. In addition, use of new, energy-efficient building materials (e.g., insulations, windows, weather stripping, door seals, etc.) and mechanical systems (e.g., air conditioners, heating systems, HVAC systems, water heaters, heat pumps, etc.) is anticipated, which would minimize the amount of energy resources required. Incorporation of such energy-conserving measures is not only required by New York State, but is a sensible building practice, particularly in light of the increasing cost of energy resources. Water-saving plumbing fixtures can be specified for the proposed buildings in accordance with current building requirements and practice of the trade. Installation of low-flow toilets, showers, sinks and equipment would reduce unnecessary water loss, which would translate into conservation of the energy resources required to heat this water.

As discussed in **Section 2.2.2** (see page 2-10), the applicant intends to incorporate substantial energy-saving features. Generally, these features include use of building materials, site and project layout and design characteristics, and mechanical systems and operational procedures to reduce energy consumption. As the project is only in a preliminary design stage, a final roster of these features is not available. It is expected that a final decision on these features will be made prior to the submission of a Site Plan application.

It is expected that the existing public energy supply available in the area will be adequate to meet the expected demand of the project.

There will be an increase in energy use during the construction phase of the proposed project. These impacts are expected to be of short duration, and the long-term energy demand is expected to remain stable.

In summary, it is not anticipated that the project will result in significant adverse impacts on energy resources.

SECTION 6.0

ALTERNATIVES

6.0 ALTERNATIVES

The New York State Environmental Quality Review Act requires the consideration of alternatives to a proposed project in order to determine the merits and relative impacts of the proposed project as compared to those of other reasonable and feasible uses, sites and technologies that would reduce environmental impacts while achieving the applicant's objectives. The discussions and analyses of the alternatives should be conducted at a level of detail sufficient to allow for this informed comparison to be conducted by the decision-making agencies. Alternative 1 is the "No Action" alternative, which is required by the State Environmental Quality Review Act and is intended to represent site conditions if it were maintained in its current status and condition. For the subject application, the lead agency has determined that the following alternatives shall be analyzed:

- Alternative 1: No Action - assumes that the subject site and the ±5-acre Nursing Center site remain in their current uses and conditions.
- Alternative 2: As-of-Right Development at Existing Zoning - this scenario assumes that the subject site is developed according to its current Residence-43 zoning; sanitary wastewater would be handled in individual on-lot septic systems. The ±5-acre Nursing Center site would remain in its present use and condition.
- Alternative 3: Development Conforming to Continuing Care Retirement Community Special Exception Requirements (assumes no height or gross floor area variances are requested, and all parking is at grade). This Alternative would require two variances for minor disturbances of environmentally sensitive lands. Sanitary wastewater would be conveyed to the Kings Park Sewage Treatment Plant, and treated effluent would be discharged to the ±5-acre Nursing Center site to be transferred to the Suffolk County Department of Public Works.
- Alternative 4: Development per the Retirement Community District - assumes the subject site is rezoned to the Retirement Community district without the Continuing Care Retirement Community Special Exception, and is developed with age restricted apartments. Sanitary wastewater would be conveyed to the Kings Park Sewage Treatment Plant, and treated effluent would be discharged to the ±5-acre Nursing Center site to be transferred to the Suffolk County Department of Public Works.
- Alternative 5: Proposed Project, with Alternative Wastewater Treatment - assumes development of the proposed project, but utilizing a new sewage treatment plant, to be built on the adjacent ±5-acre St. Johnland Nursing Center property to the north, which is also owned by the applicant.

The anticipated yields and layouts of these alternatives are described at a level of detail sufficient for a valid, quantified comparison of impacts necessary to satisfy State Environmental Quality Review Act requirements. **Sections 6.1 through 6.5** provide descriptions of each alternative, and **Table 6-1** lists their estimated uses, yields and characteristics, along with those of the proposed project, to enable comparisons against the values of the proposed project as well as against each other.

Table 6-1
COMPARISON OF ALTERNATIVES
Site and Scenario Characteristics

Parameter	Proposed Project	Alternative 1 (No Action)	Alternative 2 ("As of Right" Single Family)	Alternative 3 (Conformance with all Continuing Care Retirement Community Special Exception Criteria)	Alternative 4 (Retirement Community District without Special Exception)	Alternative 5 (Proposed Project with Alternative Sanitary Disposal)
Zoning	Retirement Community	Residence-43	Residence-43	Retirement Community	Retirement Community	Retirement Community
Use/Yield	Senior Residential/199 Continuing Care Retirement Community units	Vacant	Single-Family Residential/21 Lots	Senior Residential/199 Continuing Care Retirement Community units	Senior Residential/392 apartments	Senior Residential/199 Continuing Care Retirement Community units
Sanitary Treatment	Kings Park Sewage Treatment Plant (connection required); recharge on Nursing Center site	n/a	On-Lot Septic Systems	Kings Park Sewage Treatment Plant (connection required); recharge on Nursing Center site	Kings Park Sewage Treatment Plant (connection required); recharge on Nursing Center site	New Sewage Treatment Plant on Nursing Center Site (to serve Proposed Project and Nursing Center only)
Coverages (acres)**:**	---	---	---	---	---	---
Impervious/Paved	9.53	0.36	6.04	11.45	11.25	9.53
Landscaped	9.04	0.10	24.32	7.09	9.94	9.04
Water Surface	0.78	0.78	0.78	0.78	0.78	0.78
Red Maple Hardwood Swamp	1.33	1.33	1.33	1.33	1.33	1.33
Forested	29.01	47.12	17.22	29.04	26.39	29.01
Water Resources:	---	---	---	---	---	---
Domestic Water Use (gpd)	37,820	0	6,300	37,820	58,800	37,820
Irrigation Demand (gpd) (1)	3,699	0	9,950	2,900	4,067	3,699
Total Water Use (gpd)	41,519	0	16,250	40,720	62,867	41,519
Recharge Volume (MGY)	46.64	27.29	34.41 (2)	47.59 (2)	55.30 (2)	46.71 (2)
Recharge Nitrogen Conc. (mg/l)	3.30	0.01	3.22 (2)	3.17 (2)	4.20 (2)	3.30 (2)
Trip Generation (vph)**:**	---	---	---	---	---	---
Weekday AM Peak Hour	49	0	24	49	24	49
Weekday PM Peak Hour	58	0	26	58	43	58
Saturday Midday Peak Hour	78	0	28	78	118	78
Miscellaneous:	---	---	---	---	---	---
Residents (capita) (3)	287	0	94	287	588	287
School-Age Children (capita) (4)	0	0	32	0	0	0
Employees (Full-Time Equivalents)	73.6	0	0	73.6	0	73.6
Solid Waste (5)	1,004.5	0	1,410	1,004.5	2,058	1,004.5
Parking Required (spaces)	531	n/a	42	531	294	531
Parking Provided (spaces)	531	0	42	531	295	531
Total Taxes ($/year)	1.29 million	0(6)	350,550	1.29 million	1.458 million	1.29 million
School Taxes ($/year)	860,833	0	223,926	860,833	972,696	860,833
School Costs ($/year)	0	0	387,768	0	0	0
Net School Tax Impact (±$/year)	+860,833	0	-153,842	+860,833	+972,696	+860,833

(1) Assuming 5.5 inches/year of acreage to be fertilized and irrigated; annualized to 365 days/year.
(2) See **Appendix J-4**.
(3) Assuming 4.47 capita/ single-family unit, 1.50 capita/townhouse, independent living or apartment unit, and 1.0 capita/assisted living unit.
(4) Assuming 1.52 school-age children/single-family unit.
(5) Assuming 3.5 lbs/day/capita for Continuing Care Retirement Community and 15 lbs/day/household for the single-family units (**Salvato et al, 2009**).
(6) The applicant is a non-profit entity [501(c)(3)], and is therefore tax exempt under existing conditions.

6.1 Alternative 1: No Action

If no action is taken and the proposed project is not implemented, the subject site would not be disturbed; it would remain vegetated and vacant. In addition, the changes to the Kings Park Sewage Treatment Plant discharge of treated effluent would not change (i.e., surface discharge would continue). As such, this scenario also describes the site's existing conditions and impacts, which are described and analyzed in **Sections 3.0 and 4.0**. The site would retain the potential for redevelopment in accordance with its existing Residence-43 zoning (see **Section 6.2**).

This scenario would continue the natural functions associated with the site's natural areas (i.e., 2.11 acres of freshwater wetlands and surface water, 47.12 acres of forested land). These areas would continue to provide habitats for wildlife. In addition, these natural surfaces would sustain the site's recharge function for aquifer replenishment, with minimal potential for adverse impacts to either groundwater or surface water quality. This is due to the absence of pollutants deposited on these surfaces.

The combined project site and ±5-acre St. Johnland Nursing Center site would continue to generate a total of 27.29 MGY of recharge, containing a concentration of nitrogen at 0.01 mg/l. This concentration conforms to the New York State Drinking Water standard of no more than 10 mg/l.

The public benefits associated with this scenario would be much reduced compared to those of the proposed project. There would be no increases in public revenues in this scenario, and the site's forested areas and wetland (and accompanying buffer area) would not be explicitly protected to the degree that would occur with the proposed project. This alternative would not enable the Suffolk County Department of Public Works to establish a subsurface recharge area for treated effluent from the Kings Park Sewage Treatment Plant, which assists the County in meeting the Long Island Sound Study nitrogen reduction goals. The Kings Park Sewage Treatment Plant would continue to discharge treated effluent to surface water, which would continue to have an adverse impact on the quality of water of Long Island Sound.

This alternative is not in keeping with the goals and objectives of the applicant.

6.2 Alternative 2: "As-of-Right" Development per Existing Zoning

The Alternative 2 scenario assumes that the parcel is redeveloped in accordance with its existing Residence-43 zoning (see **Yield Map Site Plan**), which would yield 21 lots for detached, single-family homes. Each of these lots would conform to Suffolk County Sanitary Code Article 6, so that use of on-site septic systems would be permitted. Lots are shown with a minimum lot size of two acres for the 22.46 acre portion of the property within the New York State Wild, Scenic, and Recreational Rivers Corridor and a minimum lot size of one acre for the remainder of the property. The homes are assumed to be 5-bedroom units totaling 5,000 SF in area (2,500 SF footprint), with 3,500 SF of additional impervious surfaces assumed for the driveway, walkways and pool/patio. It was assumed that approximately 40 percent of the total area in lots would remain natural (accounting for perimeter buffers to adjacent roadways and residences), and the

remaining area in lots would be maintained (i.e., fertilized and irrigated as described in **Section 2.2.4,** page 2-13).

This alternative assumes that the on-site wetland and surrounding 100 foot buffer would remain in its current natural condition. Development pursuant to Residence-43 zoning would not be subject to the same road/lot setbacks as required by the proposed change of zone application; therefore single family development would result in activity within 200 feet of St. Johnland Road and Old Dock Road. There would be two vehicle access points to the site, one on St. Johnland Road, and one on Old Dock Road, which are located in roughly the same locations as for the proposed project and located to avoid environmentally sensitive lands (see **Yield Map Site Plan**).

Similar to the proposed project, a grading program would be required, to provide for proper surfaces for development and drainage system operations; this program would range over the eastern and western portions of the parcel, and avoid the wetland and its associated setback. Based on the values in **Table 6-1**, this alternative would clear more land than would occur in the proposed project (30.36 acres vs. 18.57 acres, respectively), as larger areas of lawn are anticipated and the lots would be in the control of individual home owners. However, it is recognized that the final design and clearing would be determined at the time of subdivision review of detailed grading, drainage and development plans. The drainage system would be designed to accommodate the volume of runoff required by Town standards, and would be subject to Town review and approval.

The site's roadway would be offered to the Town for dedication as a Town roadway, to be owned and maintained by that entity. The Town Highway Department would therefore be responsible for maintenance, snow removal, recharge facilities and street lighting.

In comparison to the proposed project, there would be fewer impervious surfaces in this scenario, however there would be more landscaped area and fertilizer/irrigation water usage given the larger lawn areas typical to single family lots. As 200 foot buffers would not be required pursuant to Residence-43 zoning requirements, it is assumed that less natural buffer area would be retained, but the existing on-site wetland and setback area would remain under the single family development scenario. This scenario would consume less water for domestic purposes than the proposed project (due to its conformance to Article 6), and so would generate less sanitary wastewater; however, the amount of water used for landscape irrigation would be greater given the larger lawn areas. The total amount of potable water used would be significantly less than for the proposed project (16,250 gpd vs. 41,519 gpd, respectively). The concentration of nitrogen in overall recharge generated would be similar to the proposed project (3.22 mg/l vs. 3.30 mg/l, see **Appendix J-4**) (the proposed project would have higher contributions of nitrogen from sanitary wastewater, but the single family Alternative 2 has larger area of lawn fertilized and conventional on-site sanitary system disposal). Alternative 2 would have a lower volume of recharge due to the lower overall water use. This alternative would not enable the County to address the current surface water discharge limitations at the Kings Park Sewage Treatment Plant, which would assist Suffolk County in conforming to the Long Island Sound Study nitrogen reduction goals.

Alternative 2 would generate fewer peak hour vehicle trips than the proposed project in all three cases examined: weekday AM, weekday PM and Saturday midday (49.0%, 44.8% and 35.9%, respectively). This scenario would generate fewer residents than the proposal, but is expected to generate in the range of 32 school-age children, a cohort not represented in the proposed project. There would be no on-site employees here, while the proposed project would be a significant local employment generator.

With regard to taxes, this scenario would generate a substantial amount of revenues available for all tax jurisdictions; these revenues are expected to offset the demand for services such as road maintenance, park use, and emergency services. However, as this alternative would generate school-age children, there would be an increase in enrollment for the Kings Park Central School District that would necessitate an increase in expenditures to educate project generated students. The cost to educate the additional school aged children is not fully covered by the tax revenues levied to the school district from the additional single family dwellings. In comparison, the proposed project would not generate any school aged children and is estimated to generate approximately $860,833 in taxes for the Kings Park Central School District.

In terms of overall project feasibility, it is noted that the location of this site is well-suited to residential development, as two roadways offering safe and efficient access abut the site. The Town Plan Update includes a number of goals that would be realized by this scenario, but these would be fewer than the number realized by the proposed project, particularly with respect to addressing senior housing needs.

Town comprehensive planning efforts seek a balance of housing for diverse populations on appropriate sites in conformance with the Town Plan Update and Zoning Code. While Alternative 2 would provide an appropriate and conforming land use on the site and would conform to zoning, it would not achieve the municipal goal to provide a greater diversity of housing options for diverse populations. This alternative is not in keeping with the goals and objectives of the applicant.

6.3 Alternative 3: Development Conforming to the Continuing Care Retirement Community Special Exception Requirements

Alternative 3 assumes that the parcel is redeveloped with a senior residential project identical in use and yield to that of the proposed project, but would conform to the Continuing Care Retirement Community Special Exception requirements and therefore would not require height or gross floor area variances. Additionally, all parking is provided at grade, consistent with Town Code requirements. Alternative 3 would require minor variances for disturbances of environmentally sensitive lands (building on steep slopes and on areas where the depth to groundwater is less than 10 feet).

This Alternative differs from the Proposed Action by providing the following changes to the plan:

- the independent living building is reduced in size as compared to the proposed project, by shortening two of its southward-extending arms;
- the underground parking beneath the independent living building has been eliminated and all parking is provided at grade;
- the western portion of the internal roadway and associated parking areas are reconfigured to reduce encroachment into the 200-foot Continuing Care Retirement Community buffer on the site's southern side; and
- the square footages of the independent living units have been reduced (though none of the yields of the three residential types yields have been changed).

Similar to the proposed project, there would be two vehicle access points to the site, one on St. Johnland Road and one on Old Dock Road. These two driveways would be located in the same locations as for the proposed project. Also similar to the proposed project, this yield would exceed the allowed Suffolk County Sanitary Code Article 6 density for use of conventional on-site sanitary systems, so that sewage treatment would be required. Therefore, this Alternative would also connect to the Kings Park Sewage Treatment Plant.

This alternative assumes that roughly the same portions of the site would be developed as for the proposed project though, as noted above, this scenario incorporates several plan changes that reduce the gross floor area and building footprint, allowing the proposed parking area to be located 200 feet from the southern property boundary. The building remains the same height as the proposed project; however the wing of the building which abuts the 200 foot set back in the proposed project plan (thus necessitating the variance) has been removed. As permitted by the Continuing Care Retirement Community Special Exception requirements, one additional foot of building height is permitted for every two feet of setback from the inside line of the 200 foot buffer area, up to a maximum height of 50 feet. By removing the wing which abuts the 200 foot setback for the Alternative 3 site plan layout, the required additional setback is provided to allow the 50 foot building height (see CCRC Conforming Site Plan, **Appendix R-1**). As demonstrated by the photosimulations prepared for the proposed project (**Appendix P-2**), views of the development will be visible along the site access road from Old Dock Road. This view will remain similar to the proposed project as construction of the Alternative 3 building and parking area will still require the removal of trees, opening views along the access driveway. The increased buffer may provide additional screening for the central portion of the building; however it is noted that the existing restaurant/bar use to the west of the Old Dock Road access driveway and natural buffer significantly screen views of portion of the building requiring a variance under the proposed action (the wing proposed to abut the 200 foot buffer).

Similar to the proposed project, a grading program would be required, to provide for proper surfaces for development and drainage system operations; this grading program would range over the eastern, south-central and western portions of the parcel, and avoid the wetland and its associated setback. Based on the values in **Table 6-1**, this alternative would clear slightly less of the property than would occur in the proposed project (18.44 acres vs. 18.47 acres). However, it is recognized that the final design and clearing would be determined at the time of site plan review of detailed grading, drainage and development plans. The drainage system would be

designed to accommodate the volume of runoff required by Town standards, and would be subject to Town review and approval.

In comparison to the proposed project, there would be more impervious surface area in this scenario as all parking would be provided at grade, and there would be less landscaped area (so there would be less fertilizer usage and less irrigation water demand). There would also be slightly more natural area retained; the same acreages of water surface in the freshwater wetland and fringing natural vegetation would be preserved. This scenario would consume the same amount of water for domestic purposes as the proposed project, and so would generate the same volume of sanitary wastewater, and the amount of water used for landscape irrigation would be slightly less, so that the total amount of water used would be slightly less than for the proposed project (40,720 gpd vs. 41,519 gpd). The concentration of nitrogen in overall recharge generated would potentially be slightly less than the proposed project (3.17 mg/l vs. 3.30 mg/l; see **Appendix J-4**). Alternative 3 would have a slightly higher volume of recharge than the proposed project. This alternative would enable the County to address the current surface water discharge limitations at the Kings Park Sewage Treatment Plant, and would cause an incremental reduction in nitrogen load to Long Island Sound by removing a surface water discharge to this water body. The potential for groundwater mounding beneath the new sewage treatment plant would be mitigated by the minimum 70 feet of vertical separation between the site and the groundwater table, which would be more than sufficient to enable horizontal dispersion of recharge as it percolates downward.

Alternative 3 would have the same trip generation characteristics and transportation impacts as the proposed project, as it is based on the same uses and yields, as well as the same roadway improvements. This scenario would generate the same number of residents as the proposal, and would also not include any school-age children. This scenario would also have the same employment impacts as the proposed project.

It is expected that this alternative would be assessed similar to what was estimated by the Town Assessor, generating taxes of approximately $1.29 million per year. Such tax revenues would be proportionately allocated to each taxing jurisdictions located within the boundary of the site. Thus, this alternative would have a similar fiscal impact to the proposed project. As this alternative would generate no school-age children, there would be no enrollment impact for the Kings Park Central School District.

It is acknowledged that, from a land use perspective, this alternative would have a similar level of feasibility as the proposed project, as these two development scenarios are similar (the differences are related to encroachment into the southern buffer, the reduction in building height and the size of the independent living units). However, the independent living units in the proposed project would vary between 761 SF and 1,794 SF in size, while the units in this alternative would range from 750 SF to 1,100 SF in size. It is this difference that makes this alternative unattractive to the applicant. As independent living units constitute the majority of the residences proposed, the success of the project would depend primarily on the attractiveness of these units to potential buyers. The applicant believes that a range of unit sizes including larger independent living units is more desirable from a marketing and occupancy perspective. The applicant does not wish to construct a large number of units that would not attract sufficient

sales from the segment of the housing market that the project seeks to address. As such, this alternative is not in keeping with the goals and objectives of the applicant.

6.4 Alternative 4: Retirement Community District (Without Special Exception)

Alternative 4 would involve a change of zone of the subject site, from its existing Residence-43 zone to Retirement Community, which would allow senior rental apartment units. This use is allowed as-of-right in the Retirement Community district (the Continuing Care Retirement Community type of senior residential use of the proposed project and Alternative 3 would require a Special Exception approval in the Retirement Community district). The assumed 392-unit yield represents the site's maximum yield based on the zoning included in this alternative. Twenty-four units would be located on the site's eastern portion within the Wild, Scenic and Recreational Rivers corridor, and the remaining 368 units would be placed outside this area on the western portion.

The apartments would be distributed into a number of two-story structures, and are assumed to include a mix of studio, one- and two-bedroom units having between 750 and 950 SF of floor area; with hallways and other common indoor spaces, gross floor area is assumed to average 1,200 SF/unit. This would represent a total Floor Area Ratio of 0.217, and a building coverage of 5.40 acres. The Town Code requires a minimum of three parking spaces for each four units in the Retirement Community zone, or 294 spaces. This scenario assumes that one space would be provided for each unit, or 392 spaces total.

Design standards of the Suffolk County Department of Health Services require an assumed water use of 150 gpd/unit, for a total water use of 58,800 gpd. This volume is well in excess of the volume for which on-site septic systems would be allowed (see **Section 2.2.4,** page 2-13), and as a result, connection to an off-site sewage treatment plant would be necessary for this alternative. It is assumed that the method of handling sanitary waste would be the same as for the proposed project and Alternative 3.

This alternative assumes that, generally the same portions of the site would be developed as for the proposed project; however, this alternative would not be subject to the same road/lot setbacks and could result in activity within 200 feet of St. Johnland Road and Old Dock Road. Therefore, the visibility of the residential buildings is expected to be greater than under the proposed project. There would be two vehicle access points to the site, one on St. Johnland Road, and one on Old Dock Road. It is assumed that these two driveways would be located in roughly the same locations as for the proposed project. All internal site roadways would remain private.

Similar to the proposed project, a grading program would be required, to provide for proper surfaces for development and drainage system operations; this program would range over the eastern, south-central and western portions of the parcel, and would avoid the wetland and its associated setback. Based on the values in **Table 6-1**, this alternative would clear more land than would occur in the proposed project (20.73 acres vs. 18.47 acres); however, it is recognized that the final design and clearing would be determined at the time of site plan review of detailed grading, drainage and development plans. The drainage system would be designed to

accommodate the volume of runoff required by Town standards, and would be subject to Town review and approval.

Assuming that, similar to the proposed project, roughly 20% of the site's total acreage would be landscaped, there would be 9.94 acres of combined open spaces/recreational area/landscaping in this alternative. This would leave 28.50 acres of the site as undisturbed natural lands, including the 0.78 acres of water surface in the freshwater wetland, and 1.33 acres of surrounding Red Maple Hardwood Swamp.

In comparison to the proposed project, there would be more impervious surfaces in this scenario, and there would be more landscaped area (so there would be more fertilizer usage and more irrigation water demand). There would be less natural area retained. This scenario would consume more water for domestic purposes than the proposed project (due to its greater yield), and so would generate more sanitary wastewater, and the amount of water used for landscape irrigation would be more, so that the total amount of potable water used would be greater than for the proposed project. Alternative 4 would have a larger volume of recharge than the proposed project, and the concentration of nitrogen in overall recharge on-site would be higher than that of the proposed project (4.20 mg/l vs. 3.30 mg/l; see **Appendix J-4**). This alternative would enable the County to address the current surface water discharge limitations at the Kings Park Sewage Treatment Plant, and would assist the County in meeting the nitrogen load reduction requirements to Long Island Sound by removing a surface water discharge to this water body.

Alternative 4 would generate fewer peak hour vehicle trips than the proposed project in two of the three cases examined: the weekday AM and weekday PM (51% and 26%, respectively), and a 51% increase during the Saturday midday peak hour. This scenario would generate more than twice the number of residents than the proposal but, like the proposed project, would not generate any school-age children. There would be no significant amount of on-site employment here, as no commercial use is included. It is acknowledged that some employment may occur, from need for maintenance/landscaper positions, to be employed by outside contractors, and management/office operations. In contrast, the proposed project would generate an estimated 74 full-time equivalent positions.

It is estimated that this scenario would generate a substantial amount of revenues available for all jurisdictions; these revenues would be slightly greater than would be generated by the proposed project. Similar to the proposed project, this alternative would generate no school-age children, and there would be no enrollment impact for the Kings Park Central School District. Similar to the proposed project and with respect to school district economics, this alternative would not necessitate an increase in expenditures, so that a substantial net annual fiscal benefit would accrue to the district.

In terms of overall project feasibility and public benefits, it is noted that the location of this site is suitable for senior residential development, as two roadways offering safe and efficient access abut the site. However, Town comprehensive planning efforts seek a balance of housing for diverse populations on appropriate sites in conformance with the Town Plan Update and Zoning Code. While Alternative 4 would provide senior housing, it would not achieve the larger

municipal goal to address a needed variety of senior housing needs, which would be the case for the proposed project. This alternative is not in keeping with the goals and objectives of the applicant as the applicant seeks to build a CCRC to complement the existing St. Johnland nursing facility and the organizations mission.

6.5 Alternative 5: Proposed Project, with Alternative Wastewater Treatment

This scenario assumes that the proposed project is built on the subject site, but that its wastewater would be conveyed off-site, to a new sewage treatment plant to be funded and built by the applicant on the St. Johnland Nursing Center property to the north. It is noted that the applicant owns this latter facility. A schematic STP Layout with Leaching Pools Plan prepared by Michael P. Chiarelli Engineer P.C. (January 2012) is provided in **Appendix R**.

This scenario would involve disconnecting the St. Johnland Nursing Center from the sewer system that conveys wastewater to the Kings Park Sewage Treatment Plant. Construction of a sewage treatment plant on the nursing center property would require redirection of the existing collection facilities on this site to the new sewage treatment plant, and directing the new sewers from the proposed Uplands at St. Johnland to the new sewage treatment plant as well. The existing pump station and force main would require decommissioning and abandonment according to State and County requirements. Unlike the proposed project, no land transfer/sale agreement with the County would occur. It is assumed that the new sewage treatment plant would be designed with a capacity sufficient to treat wastewater from only the proposed 199 Continuing Care Retirement Community units and that of the St. Johnland Nursing Center. This new sewage treatment plant would be subject to a full and complete permitting review by the Suffolk County Department of Health Services and Suffolk County Department of Public Works, and would conform to all applicable design standards and requirements.

As can be seen upon review of **Table 6-1**, except for recharge volume, the physical characteristics and consumptions of this scenario are identical to those of the proposed project. Therefore, the impacts of this scenario for the subject site would also be identical to those of the proposed project, which are presented and analyzed in detail in **Sections 3.0 and 4.0**.

Alternative 5 would have a slightly larger volume of recharge than the proposed project, and the concentration of nitrogen in overall recharge on-site would be identical to that of the proposed project (3.30 mg/l; see **Appendix J-4**). This alternative would not enable the County to address the current surface water discharge limitations at the Kings Park Sewage Treatment Plant, which require the County to meet nitrogen load reduction requirements pursuant to the Long Island Sound Study. The Kings Park Sewage Treatment Plant would continue to discharge treated effluent to surface water, which would continue to have an adverse impact on the quality of water of Long Island Sound.

Preliminary analysis suggests that this scenario would be feasible from engineering, regulatory and economic perspectives. Groundwater flow in the area is generally northward toward Long Island Sound, so that recharge generated on either site, as well as at the new sewage treatment plant, would flow in a northward direction and away from the wetland on the subject site, so that

no impact to the water regime of this feature would be expected. The potential for groundwater mounding beneath the new sewage treatment plant would be mitigated by the minimum 70 feet of vertical separation between the site and the groundwater table, which would be more than sufficient to enable horizontal dispersion of recharge as it percolates downward. Installation of a new sewage treatment plant would be allowed under Suffolk County Sanitary Code Article 6, so that the only potential difficulties in this regard would be related to the cost of its construction and time frames for County and New York State Department of Environmental Conservation reviews and approvals.

SECTION 7.0

REFERENCES

7.0 REFERENCES

American Association of State Highway and Transportation Officials (AASHTO), A Policy on the Geometric Design of Highways and Streets, 1994, Washington, D.C.

American Planning Association, A Glossary of Zoning, Development and Planning Terms, PAS Report Number 491/492, 1999

Andrle, R.E. and J.R. Carroll, 1988. The Atlas of Breeding Birds in New York State. Cornell University Press, Ithaca, NY.

Behler, J.L. and F.W. King, 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred Knopf, N.Y.

Bent, A. C., 1946. Life Histories of North American Jays, Crows, and Titmice. Dover Publications, New York.

Bent, A. C., 1953. Life Histories of North American Wood Warblers, Part I. Dover Publications, New York.

Bent, A. C., 1953. Life Histories of North American Wood Warblers, Part II. Dover Publications, New York.

Bent, A. C., 1961. Life Histories of North American Birds of Prey, Part I. Dover Publications, New York.

Bent, A. C., 1963. Life Histories of North American Gallinaceous Birds. Dover Publications, New York.

Bent, A. C., 1964. Life Histories of North American Flycatchers Larks, Swallows, and their Allies. Dover Publications, New York.

Bent, A. C., 1964. Life Histories of North American Nuthatches, Wrens, Thrashers, and their Allies. Dover Publications, New York.

Bent, A. C., 1964. Life Histories of North American Woodpeckers. Dover Publications, New York.

Bent, A. C., 1964. Life Histories of North American Cuckoos, Goatsuckers, Hummingbirds and their Allies, Part II. Dover Publications, New York.

Bent, A. C., 1965. Life Histories of North American Wagtails, Shrikes, Vireos, and their Allies. Dover Publications, New York.

Bent, A. C., 1964. Life Histories of North American Cuckoos, Goatsuckers, Hummingbirds and their Allies, Part I. Dover Publications, New York.

Bent, A. C., 1965. Life Histories of North American Blackbirds, Orioles, Tanagers and Allies. Dover Publications, New York.

Bent, A. C., 1968. Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows and Allies, Part I. Dover Publications, New York.

Bent, A. C., 1968. Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows and Allies, Part II. Dover Publications, New York.

Bent, A. C., 1968. Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows, and Allies, Part III. Dover Publications, New York.

Bishop, S.C. 1943. Handbook of Salamanders. The Salamanders of the United States, Canada, and of Lower California. Comstock Publishing, Ithaca, New York.

Brown, Robert, 1991, Unpublished Manuscript Containing Meteorological Data Compiled at Brookhaven National Laboratory, Upton, NY. Data supplied by Robert Brown, Meteorologist, Revision Date, February 21, 1991, BNL, Upton, New York.

Bull, J. and Farrand, J., 1977, The Audubon Society Field Guide to North American Birds, New York: Alfred A. Knopf, Inc.

Burchell, R. W., D. Listokin, and W. R. Dolphin, 1985. The New Practitioners Guide to Fiscal Impact Analysis**.** Center for Urban Policy Research, Rutgers University, New Brunswick, N.J.

Burt, William H. and Grossenheider, Richard P., 1976, A Field Guide to the Mammals of America North of Mexico, Boston: Houghton Mifflin Company.

Busciolano, Ronald., Jack Monti, Jr., and Anthony Chu., (1997). Water-Table and Potentiometric-Surface Altitudes of the Upper Glacial, Magothy, and Lloyd Aquifers on Long Island, New York, in March-April, 1997, with a Summary of Hydrogeologic Conditions. U.S. Geological Survey Water-Resources Investigation Report 98-4019, United States Department of the Interior, U. S. Geological Survey, Coram, NY.

Chapman, J.A. and G.A. Feldhamer, 1982, Wild Mammals of North America: Biology, Management, Economics. John Hopkins University Press, Baltimore, Maryland.

Cohen, Philip, O.L. Frank, and B. L. Foxworthy, 1968. An Atlas of Long Island Water Resources, New York Water Resources Commission Bulletin 62, USGS in cooperation with the New York State Water Resources Commission, Published by the State of New York.

Conant, R. and J.T. Collins. 1991. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. Peterson Field Guide Series, Number 12. Houghton Mifflin Company, Boston, Ma.

Connor, Paul F., 1971, The Mammals of Long Island, New York, Albany, New York: New York State Museum & Science Service.

Council On Environmental Quality (CEQ), undated. Natural Habitats of Suffolk County, Hauppauge, New York.

CUPR [Center for Urban Policy Research], Rutgers University, 1994.

Doriski, T.P., 1986. Potentiometric Surface of the Water Table, Magothy and Lloyd Aquifers on Long Island, New York, in 1984. Water Resources Investigation Report 86-4189. USGS, Washington D.C.

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2002. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Environmental Laboratory, 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Farrand, John, 1997, National Audubon Society Field Guide to North American Birds, Eastern Region, Alfred A. Knopf, New York.

Farrand, J. ed. 1983. The Audubon Society Master Guide to Birding Vols. 1, 2 and 3. Alfred A. Knopf, New York, N.Y. 447 pp.

Fernald, M. L, 1970. Gray's Manual of Botany. 8th edition. D. Van Nostrand, New York. 1632 pp.

Freeze, Allan R. and Cherry, John A., 1979. Groundwater, Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Fuller, Myron L., 1914. The Geology of Long Island, Department of the Interior, U.S. Geological Survey, Professional Paper 82, Government Printing Office, Washington, DC.

Gerrard, Michael B., Esq, et al. Environmental Impact Review in New York, updated August 2008. Matthew Bender & Company, Inc.

Gleason, Henry A. and A. Cronquist, 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. The New York Botanical Garden. 910 pp.

Godin, Alfred J., 1983, Wild Mammals of New England. The Globe Pequot Press, Chester, Connecticut.

Godin, Alfred J., 1977, Wild Mammals of New England. The Globe Pequot Press, Chester, Connecticut.

Hughes, Henry B.F.; Pacenka, Steve; Snowdon, Elizabeth, 1985. Thornthwaite and Mather's Climatic Water Budget Method: An Implementation using the Lotus 1-2-3 (TM) Spreadsheet Program, Draft, April 1985, Cornell University, Center for Environmental Research, Ithaca, New York.

Hydrologic Investigations Atlas, Department of the Interior, U.S. Geological Survey, Washington, DC.

Illuminating Engineering Society of North America (IESNA), 1993. Lighting Handbook, Reference and Application, 8th Edition, New York, NY.

Institute of Transportation Engineers, 1997, Highway Capacity Manual. Washington D.C. ITE Technical Council Committee 6A-32.

Institute of Transportation Engineers (ITE) 2003, Trip Generation, 7th Edition, Washington D.C. ITE Technical Council Committee 6A-32.

Jensen, H.M. and Julian Soren, 1974. Hydrogeology of Suffolk County, Long Island, New York, Hydrologic Investigations Atlas, Department of the Interior, U.S. Geological Survey, Washington, DC.

Koppelman, Lee., 1978. 208 Areawide Waste Treatment Management, Hauppauge, New York: Nassau-Suffolk Regional Planning Board.

Koppelman, Lee., 1992. The Long Island Comprehensive Special Groundwater Protection Area Plan, Hauppauge, New York: Long Island Regional Planning Board.

Leahy, C., 1982, The Birdwatcher's Companion, Gramercy Books, New York, New York.

LIPA, 2007, Long Island Population Survey, 2006, Long Island Power Authority, Hicksville, New York.

Long Island Regional Planning Board, 1982. Historical Population of Long Island Communities. LIRPB, Hauppauge, New York.

Long Island Regional Planning Board, 1982. The Long Island Segment of the Nationwide Urban Runoff Program. LIRPB, Hauppauge, New York.

Long Island Regional Planning Board, 1984. Non-point Source Management Handbook**.** LIRPB, Hauppauge, New York.

Metcalf & Eddy, Inc., 1979, Wastewater Engineering: Disposal Reuse, Second Edition., McGraw-Hill Book Company.

Nagle, Constance M., 1975, Climatology of Brookhaven National Laboratory: 1949 through 1973. Brookhaven National Laboratory and Associated Universities, Inc., Upton, New York.

Newcomb, L. 1977. Newcomb's Wildflower Guide. Little, Brown and Co., Boston, Ma.

New York State, 1987, (revised January 1996) State Environmental Quality Review, 6 NYCRR Part 617, Environmental Conservation Law Sections 3-0301(1)(b), 3-0301(2)(m) and 8-0113, Albany, NY

NYSDEC (New York State Department of Environmental Conservation), 1975. Environmental Conservation Law, New York.

NYSDEC, 1986. Long Island Groundwater Management Program. NYSDEC Division of Water.

NYSDEC, 1987, Well Permit Data Base, list of Suffolk County Well permits, NYSDEC, SUNY @ Stony Brook, New York.

NYSDEC, 1998 Conserving Open Space in New York State: State Open Space Plan and Final Generic Environmental Impact Statement. NYS Department of Environmental Conservation and Office of Parks, Recreation and Historic Preservation. Albany, New York.

NYSDEC, 2001, Stormwater Technical Guidance Manual, Albany, New York.

NYSDEC, 2003, SPDES General Permit For Stormwater Discharges from Construction Activities, Permit No. GP-02-01. New York.

NYSDEC. 2007. List of Endangered, Threatened and Special Concern Fish & Wildlife Species of New York State, NYS DEC Endangered Species Unit, Albany, N.Y.

NYSDEC. 2007. NYS Breeding Bird Atlas, 2000-2005. http://www.dec.ny.gov/cfmx/extapps/bba/. Accessed January 8, 2008.

NYSDEC, Undated, Water Quality Regulations -Surface Water and Groundwater Classifications and Standards, New York State Codes, Rules, and Regulations, Title 6, Chapter X, Parts 700-705, Section 703.5 Classes and Quality Standards for Groundwater, NYSDEC, Albany, New York.

New York State Department of Education, The State of Learning: Statistical Profiles of Public School Districts, July 2004, The University of the State of New York, Albany, NY, July 2004

Obst, F.J. 1988. Turtles, Tortoises, and Terrapins. St. Martin's Press, New York.

Peterson, Roger Tory, 1980, A Field Guide to the Birds East of the Rockies, Boston, Houghton Mifflin Company.

Rau, John G., Wooten, David C., 1980, Environmental Impact Analysis Handbook, McGraw-Hill, Inc.

Ramsay/Sleeper, Architectural Graphic Standards, Ninth edition, John Wiley & Sons, 1994

Real Property Tax Service Agency, Subscriber Map Album, County of Suffolk, 1997.

Robbins, C.S., B. Bruun and H.S. Zim. 2001. Birds of North America. St. Martin's Press. New York, NY.

Salvato, Joseph, 2009, Environmental Engineering and Sanitation, 3rd Edition, A Wiley-Interscience Publication, New York.

SCDHS, 1985-1, Suffolk County Sanitary Code-Article 7 Groundwater Management Zones & Water Supply Sensitive Areas, Map: Scale 1"=2 miles, Hauppauge, New York.

SCDHS, 1985-2, Suffolk County Sanitary Code-Article 7 Water Pollution Control, May, 1985, Code of Administrative Regulations, Hauppauge, New York.

SCDHS, 1987-1, Suffolk County Sanitary Code-Article 6 Realty Subdivisions, Development and Other Construction Projects, Amended March 4, 1987, Code of Administrative Regulations, Hauppauge, New York.

SCDHS, 1987-2, Suffolk County Comprehensive Water Resources Management Plan Volume 1, Division of Environmental Health, SCDHS; Dvirka and Bartilucci; and Malcolm Pirnie, Inc., Hauppauge, New York.

SCDHS, 1997, Contour Map of the Water Table and Location of Observation Wells in Suffolk County, New York, 1997, Division of Environmental Health Services, Hauppauge, New York.

SCDHS, 1998, Data Base, Well Network Database for Suffolk County Well Data, 225 Rabro Drive, Hauppauge, New York. Hauppauge, New York.

Smolensky, D.A., H.T. Buxton and P.K. Shernoff, 1989, Hydrologic Framework of Long Island, New York, Hydrologic Investigation Atlas, Department of the Interior, U.S. Geological Survey, Washington, D.C.

Spinello, A.G., J.H. Makao, and R.B. Winowitch, 1992, Water Resources Data, New York Water Year 1991, Volume 2. Long Island, United States Geological Survey Water Data Report NY-89-2, Syosset, New York.

Sutter, Russel, M.A. deLaguna and Perlmutter, 1949, Mapping of Geologic Formations and Aquifers of Long Island, New York Bulletin GW-18, State of New York Department of Conservation, Water Power and Control Commission, Albany, New York.

Sutton, Ann and Myron, 1925, Eastern Forests, New York: Alfred A. Knopf, Inc.

University of the State of New York, State Education Department. "The New York State School Report Card, June 2004 Report to the Governor and the Legislature

US Department of the Navy, 1979. Solid Waste Disposal; Civil Engineering Design Manual, 5.10. Naval Facilities Engineering Command, Alexandria, VA.

US Geological Survey, 1981, Moriches Quadrangle, Suffolk County, NY Topographic Map 7.5 Minute Series, Photo-revised 1979, USGS Dept. of the Interior/NYS Dept. of Transportation, Denver, Colorado/Weston, Virginia.

US Geological Survey, 2002, Water-Resources Investigations Report, US Dept. of the Interior, Denver, Colorado/Weston, Virginia.

Warner, J.W., W.E. Hanna, R.J. Landry, J.P. Wulforst, J.A. Neeley, R.L. Holmes, C.E. Rice., 1975, Soil Survey of Suffolk County, New York, Washington, D.C.: U.S. Department of Agriculture, Soil Conservation Service, in cooperation with Cornell Agriculture Experiment Station, U.S. Government Printing Office.

Washington State Noxious Weed Control Board, 1999. Perennial Pepperweed (*Lepidium latifolium*). Washington.

Welsch, David J., and David L. Smart, James N. Boyer, Paul Minkin, Howard C. Smith, Tamara L. McCandless, 1995, Forested Wetlands Functions, Benefits and the Use of Best Management Practices, NA-PR-01-95, U.S.D.A. Forest Service, Radnor, PA.

Whitaker, J.O. 1996. National Audubon Society Field Guide to North American Mammals. Alfred A. Knopf, N.Y., N.Y.

Wright, A.H. and A.A. Wright, 1949. Handbook of Frogs & Toads. Comstock Pub. Assoc., Ithaca, NY.

Wright, A.H., and A.A. Wright, 1957. Handbook of Snakes V1. Comstock Pub. Assoc., Ithaca, NY.

FIGURES

APPENDICES