DRAFT ENVIRONMENTAL IMPACT STATEMENT

THE PRESERVE AT ISLANDIA

Change of Zone Application

Village of Islandia, Town of Islip
Suffolk County, New York

Volume 1 of 2
Main Text and Plans

NP&V Project No. 07246

July 2008

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Volume 1 of 2

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TABLE OF CONTENTS
Volume 1 of 2

TABLES

FIGURES

Found in separate section immediately following Section 6.0

In pouches at the end of this Volume:

Site Plan, R&W Engineering, (February 2008)
SP1.0 Existing Conditions and Topography Plan, (November 2007)
SP1.0 Existing Conditions and Topography Plan, (November 2007)
SP2.0 General Notes, Legend, Abbreviation and Zoning Tabulation Plan, (November 2007)
SP3.0 Clearing and Demolition Plan, (November 2007)
SP4.0 Layout and Dimension Plan, (November 2007)
SP5.0 Grading and Drainage Plan, (November 2007)
SP6.0 Utility Plan, (November 2007)
SP7.0 Soil Erosion and Sediment Control Plan, (November 2007)
SP8.1 Lighting Plan, (November 2007)
SP8.2 Landscaping Plan, (November 2007)
Alt1.0 Alternate Layout Plan, (November 2007)

Volume 2 of 2

SUMMARY

SUMMARY

Introduction

This document is a Draft Environmental Impact Statement (DEIS) prepared for a change of zone application on 9.87 acres of land located south of the intersection of Old Nichols Road and Schley Street (a paper street), in the Village of Islandia, Town of Islip. The address on record for the subject property is 1239 Old Nichols Road, Islandia, New York. The site, identified as Suffolk County Tax Map (SCTM) #504-17-3-7 & 8, is occupied by an equestrian center. The proposed project seeks a change of zone from AG-Agriculture to MF-Multifamily Residence to allow for the development of 72 condominium units, a pool, a one-story clubhouse, tennis courts and other recreational facilities, and a sanitary wastewater treatment facility. A total of 47 of the proposed units will be restricted to occupants aged 55 years or above, with the remaining 25 units offered as non age-restricted. Additionally, the applicant proposes that the undeveloped street abutting the site's northern boundary (Schley Place) be abandoned, and half of the abandoned area (approximately 0.25 acres; 10,890 square feet, SF) be appended to the subject property, increasing the site to a total of 10.12 acres. This additional acreage would allow the proposed development to meet setback requirements. The majority of this paper street is cleared and is utilized by the existing equestrian center. Further, the right-of-way (ROW) is not needed to access any other properties. The proposed development would have a density of 7.1 units per acre and a Floor Area Ratio (FAR) of 0.389. A variance will be required, as a maximum FAR of 0.35 is allowed by the Village. (Please refer to the **Layout and Dimension Plan SP4.0**, in a pouch at the rear of this document)

A Positive Declaration was issued under SEQRA on October 30, 2007 and the Final Scope for the proposed project was accepted by the Village of Islandia during a meeting on October 30, 2007 (see **Appendix A-1**). The adopted Final Scope is included in **Appendix A-2**. It is recognized that typographical errors exist in this document whereby "Draft Scope" appears on the first page which contradicts the heading which states "Final Scope"; it is not the applicants responsibility to correct this oversight. The contents and analysis presented in this document conforms to the Final Scope. The Village of Islandia Board of Trustees has assumed the role of Lead Agency for review of the action.

Project Location and Existing Site Conditions

The 9.87-acre project site is located at 1239 Old Nichols Road. The majority of the paper street is cleared and had been used by the equestrian facility. The subject property is located in an area defined by a variety of existing land uses, including single-family residences, commercial uses, emergency services, utility (water supply) and open space. There is a multi-family housing community 200 feet to the west (Silver Woods) and the subject property is in proximity to commercial uses and other services, as well as major thoroughfares including the Long Island Expressway (LIE) and Veterans Memorial Highway (NYS Route 454). Station 3 of the Central Islip Fire Department is located opposite the site on the north side of Old Nichols Road. A station on the Long Island Rail Road (LIRR) is located less than two miles to the west in Central Islip. Recreational amenities in the area include the Town of Islip owned parkland located

immediately south of the subject property and the Connetquot River State Park is located farther to the south.

Currently, the subject property consists of an equestrian facility. A total of twenty seven (27) horses are housed at the facility. There are four (4) full time and four (4) part-time employees. A narrow fringe of vegetation exists along the southeastern and eastern portions of the property. A few mature trees are scattered within the paddocks located on the property. A small area of maintained turf is located on the western property boundary, in proximity to Old Nichols Road; however, the majority of the site consists of bare soil. The site is located within/served by the following:

- Central Islip Fire Department
- Suffolk County Water Authority (SCWA)
- Long Island Power Authority (LIPA)/National Grid (formerly KeySpan Energy)
- Suffolk County Police Department (SCPD), 4th Precinct
- Central Islip Union Free School District (UFSD)
- Groundwater Management Zone I
- AG-Agriculture Zoning District
- Central Islip Hauppauge Volunteer Ambulance Corps

Project Design and Site Layout

The project has been designed to utilize a single, gated access point located along Old Nichols Road. A looped, internal roadway will provide access to the residential units and the recreation area. A traffic circle with a water feature will be located where the looped roadway meets, just east of the main entrance point. Planned recreation amenities include a clubhouse, tennis court and outdoor pool and patio. Residential units will be housed in 6-, 5-, and 4-unit structures located on both sides of the internal roadway. A total of 170 parking stalls, including 4 handicapped spaces, will be provided for the overall project which meets the Village requirements. Parking will be provided in several locations along the internal roadway and adjacent to the recreation area. Additional parking will be provided in driveways and garages. The proposed Cromaglass sewage treatment plant will be located in the western portion of the property adjacent to Old Nichols Road and the proposed recreation area. Except for the control building (300 SF), the entire system will be located underground and will result in no visual, noise or odor impacts.

Topography and Soils

Topography

The subject site was cleared and graded a number of years ago to accommodate past agricultural use and the current equestrian use. As a result, little natural surfaces still exist on-site and the anticipated grading for the proposed development will impact primarily altered surfaces. However, the areas of the site proposed to accommodate development will require grading to provide appropriate surface areas for buildings, roads, utilities, amenities and landscaping within the site. All created soil slopes will be 1:3 or less and will be stabilized using ground cover material. Several retaining walls are needed to assist with grade transitions for the proposed

project. A 100 foot long retaining wall, with a maximum height of 3 feet is proposed along the north central property line to reduce the property line grade to a lower elevation within the site. In addition, a 415 foot long retaining wall is proposed along part of the south property line to transition the grade from higher to lower elevations at the property line. The grading plan establishes floor elevations for the units within each building in a manner that creates suitable grades within the site for gradual slope transitions and diversion of stormwater to strategically placed drainage structures. As a result, it is expected that topographic impacts will be minimized to the maximum extent practicable.

The site will be graded to keep all stormwater runoff on-site. In view of the nature of this proposed residential project and the existing topography of the site, it is anticipated that the grading involved would not be extensive in terms of depth of cut or fill. The most extensive grading will likely occur along the descending ridge transecting the central portion of the property; however, the grading and drainage plan considers the regrading of this area in a manner that establishes suitable grades with minimum anticipated impacts. The current high point of the site will likely be removed; however, since this is not a significant natural feature no impacts are expected. The site's low point, at the southwestern corner of the site is not expected to be altered as a result of grading.

An additional safeguard is achieved through the NYSDEC State Pollutant Discharge Elimination System (SPDES) review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of 1-acre (SPDES GP-0-08-001). Under this program, a Notice of Intent must be filed with the NYSDEC 60-days prior to commencement of construction, and a site specific Stormwater Pollution Prevention Plan (SWPPP) must be maintained on site. In addition, a copy of the final Notice of Intent, SWPPP and Erosion & Sedimentation Control Plan will be submitted to the Village of Islandia simultaneously with the NYSDEC submission. Given that the design of the project will balance cut and fill volumes, incorporates erosion control measures, and will be subject to a detailed public review and approval process, no significant adverse long-term impacts are expected with respect to topography. Short-term impacts may occur; however, these are also minimized through project design and government oversight. Short-term impacts may include dust, noise, truck activity on roads and disturbance in the area. Truck access will be only from Old Nichols Road, and all equipment, materials and trucks will be stored and staged within the site. Shore term impacts are not expected to be significant given the erosion control measures, presence of a water truck to wet dry soils, access via Old Nichols Road, short-term duration of the proposed project, activities to occur during normal daytime hours, lack of sensitive receptors or immediate neighbors, and the review, approval, construction management and development oversight that will occur with respect to this project.

A Landscape Plan has been prepared for this change of zone and will be reviewed and approved by the Planning Board. This will ensure that potential impacts with respect to a sandy surface layer and slopes are adequately addressed and as a result, no long-term soil impacts are expected. Short-term soil impacts will be mitigated through erosion control measures that were previously discussed.

Soils

Soils on site have been somewhat impacted by grading and compaction from the horse farm use. Modification of soil by grading activities for the proposed project is an unavoidable impact. None of the three (3) soil types on-site present significant difficulties in regard to the type of development proposed. The only significant limitation is related to slopes and sandy surface layers. Amendment of soil using surface topsoil will ensure that soils support landscape vegetation. As a result, limitations to lawns which are projected due to sandy surface layers will be mitigated through the importation of topsoil and the use of drought resistant vegetation for landscape purposes. Loss of soils classified as prime agricultural soils is an impact that cannot be avoided. There is no realistic possibility that the farming will occur on the property given the land values in the Village of Islandia. In addition, the site size of 10.12 acres is small for commercial farm purposes. Farming would require plowing, fertilization and harvest; all activities which would generate noise and dust and impacts that may be incompatible with the surrounding community. There are no farms in the nearby area and, as a result of these factors, farming is not considered to be a viable use of the property.

Proposed Mitigation

- A Landscaping Plan has been prepared and will be further, reviewed and approved by the Planning Board.

- The site's surfaces to be regraded are not significant, as the site had been altered for the existing horse farm. The Site Plan has been devised to minimize the area and volume of disturbance, and grading is anticipated to be the minimum necessary to achieve the goals for the proposed development. Resultant development areas will be permanently stabilized using grading techniques and retaining walls, and slopes will not anticipated to exceed 1:3. Additionally, graded areas will be either developed with buildings and pavement or will be revegetated with groundcover and landscape species; no bare soil surfaces will remain.

- Dust raised during grading operations will be minimized and controlled by the use of water sprays, truck cleaning stations at the construction exit, and implementation of any dust suppression systems specified by the appropriate Village agencies.

- There will be no washing or processing of excavated material on site; all excess material will be trucked off-site and sold as fill.

- Truck movements and construction activities will be undertaken on the site 5 days a week during the hours of approximately 8 AM-5 PM or as specified by the Village Code. Truck routes to and from the site will be limited to Old Nichols Road with convenient access to and from the LIE, thereby minimizing noise, dust and potential safety impacts to residential communities adjacent to the site.

- Roadways will conform to existing topography to the maximum extent possible and will require some grading for slope transitions to promote drainage pickup and recharge. All man-made slopes on the site will be 1:3 or less.

- None of the three soil types on-site present significant difficulties in regard to erosion or grading operations. Only the PlA and PlC soil poses severe limitations due to slopes and sandy surface layer.

However, these limitations can be overcome through proper site grading as well as the importation of topsoil and the use of drought resistant vegetation for landscape purposes.

- Erosion control measures such as staked hay bales, silt fences, groundcovers (vegetative or artificial), drainage diversions, minimizing the area of soil exposed to erosive elements at one time, and minimizing the time span that soil is exposed to erosive elements, will be utilized to minimize loss of soil during construction, particularly in locations where erosion and sedimentation could adversely impact adjoining properties and streets. Applicable Village of Islandia standards and construction practices will be followed. As long as erosion is controlled during grading and construction, the potential for sediment transport will be minimal, and no significant loss of soils is expected.

Water Resources

Hydrogeologic Conditions

The depth to water beneath the subject property is approximately 12 ft bgs and regionally groundwater is observed to flow in a southerly direction. The subject site has adequate depth to groundwater to ensure that leaching of wastewater and stormwater recharge will occur efficiently. Recharge quality must be considered to determine water quality impacts. Related to recharge characteristics of the developed site is the density of development and sewage handling which are described below.

The 72 proposed condominiums will generate approximately 14,550 gpd of sewage flow and the clubhouse will generate 375 gpd, for a total residential wastewater generation of approximately 14,925 gpd. Since the project design flow exceeds the allowable flow, a sewage treatment system is required. The project sponsor intends to utilize a Cromaglass wastewater treatment system on site; therefore, the total design flow must not exceed 15,000 GPD.

The proposed sewage treatment plant will be the subject of an engineering report, and design and specification review and approval by the SCDHS and SCSA, with issuance of a State Pollutant Discharge Elimination System (SPDES) permit by SCDHS as an arm of the NYSDEC. STPs are required to meet discharge limitations under the SPDES permit effluent requirements; Cromaglass plants are designed to meet the total nitrogen limit of 10 mg/l, which is also the drinking water standard. In addition, the STP will be operated by a NYS licensed operator, and will be required to file discharge monitoring reports (DMRs). STPs are subject to inspection by personnel and are regularly maintained to ensure safety and ability to meet discharge limitations. As a result, no significant adverse impacts are expected as related to the STP. The siting of the STP discharge is considered in the following subsection.

Groundwater Quality

As noted in **Section 2.2.1**, a SCWA wellfeld and pump station are located immediately north of the subject property. The SCWA provided water quality testing data ranging from September 2006 to September 2007. The SCWA 2007Annual Drinking Water Quality Report was consulted. Both sources indicated that methyl tertiary butyl ether (MTBE) was detected in some untreated water samples at a level well below the MCL of 5 micrograms per liter (ug/l). Specifically, the test results indicate an MTBE concentration of 0.7 ug/l, which is 86% below the MCL. It is expected that this MTBE originated from leakage of underground gasoline storage

tanks in the area upgradient of the wellfiled. As a result of this low concentration and conformance to the MCL, the presence of MTBE does not pose a significant health risk to site or area occupants.

SCDHS utilizes a groundwater model to determine the contributing area to wellfields in Suffolk County; the application of the model for this purpose is referred to as the Source Water Assessment Program (SWAP). SWAP runs were obtained for the wellfield north of the site (**Appendix E**). The central part of the subject site contributes to this wellfield; however, the west and extreme east part of the site are not within the contributing area. As a result, the proposed Cromaglass system and discharge are proposed to be located in the extreme west part of the site, so as to avoid impact to this wellfield from recharge of sanitary effluent. The location of the STP discharge in this area of the site, coupled with the treatment of sanitary wastewater to less than 10 mg/l, ensures that no significant water quality impacts or impacts to the wellfield will occur as a result of the project. As a portion of the site to be landscaped is within the contributing area, it is expected that some impact to groundwater quality may occur from landscape chemical applications on this area. However, such potential impacts are not expected to be significant, as the NURP Study established that the concentrations of inorganic chemicals in recharge (including landscape fertilizers and pesticides) are generally low, and within permissible ranges for potable water.

Groundwater Budget

SONIR computer model results indicate that the volume of water recharged on the subject site will be increased by the proposed project (see **Appendix B-3**). Specifically, a total of 13.29 MGY will be recharged annually, of which 41.0% originates from sanitary wastewater, 57.3% comes from stormwater, and 1.61% is irrigation. As the site currently generates 6.00 MGY of recharge, the project represents a 54.85% increase in this resource.

Nitrogen Budget

The concentration of nitrogen in the site's recharge will be decreased by the proposed project, from an existing concentration of 7.28 mg/l to 4.99 mg/l. This overall concentration results from 90.43% sanitary wastewater, 0.12% from stormwater, 0.05% from irrigation water and 9.40% from fertilizers. The proposed project represents an overall decrease in nitrogen concentration as compared to the existing value, and will be well within the applicable NYS Drinking Water Standard of 10 mg/l. In consideration of these factors, the project would have no adverse impact on groundwater quality or quantity.

Proposed Mitigation

- The subject site has adequate depth to groundwater to ensure that leaching of wastewater and stormwater recharge will occur efficiently.

- The proposed Cromaglass system will be the subject of an engineering report, and design and specification review and approval by the SCDHS and SCSA, with issuance of a State Pollutant Discharge Elimination System (SPDES) permit by SCDHS as an arm of the NYSDEC. Such systems are required to meet discharge limitations under the SPDES permit effluent requirements; SBR plants of this size are typically below or meet the total nitrogen limit of 10 mg/l, which is also the NYS drinking water standard.

- The Cromaglass system will be operated by a NYS licensed operator, and will be required to file DMRs. Such systems are subject to inspection by personnel and are regularly maintained to ensure safety and ability to meet discharge limitations. As a result, no significant adverse impacts are expected.

- The proposed development will include a Cromaglass wastewater treatment facility which will be located in the western corner of the property to ensure that the discharge is not located in a contributing area to the wellfield based on the results of the SWAP model run for the wellfield.

Vegetation and Wildlife

Vegetation

As most of the site is currently disturbed, impacts to vegetation will be minimized through the replanting of native vegetation and landscaping. Quantities associated with retention of vegetated open space are summarized in order to assess the impacts of the project upon vegetation. The project site is approximately 10.12 acres in size, all of which will be developed. Of the developed area, approximately 5.47 acres (54.05%) will consist of fertilized lawn and/or landscaping.

Review of regional aerial photographs and inspection of areas surrounding the subject site find that wooded forest habitat is found within the general area (south and east). The property is not expected to act as a refuge for rare native flora, and impacts to plant species should be minimal.

Wildlife

Since the entirety of the site is currently disturbed, no significant impacts are expected to existing wildlife. The small areas of successional field found on the project site provides habitat for several wildlife species, many of which are tolerant of human activity. Most of these species will utilize a range of habitats, including suburban yards, and thus would be expected to utilize the newly landscaped portions of the site to a limited degree.

In determining impacts upon the existing wildlife populations, it can generally be assumed that an equilibrium population size is established in an area for each species as determined by availability of resources in the habitat. Thus, the removal of habitat resulting from the proposed project will cause a direct impact on the abundance and diversity of wildlife using the site. Although the assumption that species are at equilibrium is an oversimplification, it does provide a worst case scenario in determining the impact of habitat loss. In addition to this direct impact, the increased intensity of human activity on the site will cause an indirect impact on the abundance of wildlife which remain on the site and in the area, under post-development conditions.

The majority of the vegetation on the property is frequently mowed under existing horse-farm operations. The development of the farm will have few impacts on local wildlife. As large blocks of woodlands are found throughout the area, no significant long-term impacts are expected. Short-term impacts may occur due to temporary displacement of wildlife, loss of

vegetation and disruption of soils and habitat; however, the stabilization of the site and retention of natural areas are expected to ameliorate these potential impacts.

Proposed Mitigation

- Areas of the site will be established in alternative forms of landscaping to ensure their retention. This will include conservation seed mix consistent with accepted herbaceous species to create successional field areas, woodchip planting beds, establishment of forest areas and other non-fertilized areas managed to reduce fertilized vegetation.

- Native plant species that provide food and shelter to wildlife will be utilized in landscaped areas.

Traffic

Based on the TIS prepared for the proposed project, there are no anticipated impacts associated with the proposed project.

Proposed Mitigation

- The TIS prepared for this proposal anticipates that the project is expected to generate a total of 32 trips in the AM Peak Hour and 47 trips during the PM Peak Hour. Based on the results of the TIS, this increase is not anticipated to result in significant adverse impacts to the existing Levels of Service at the study intersections. As a result, no traffic mitigation measures are necessary or proposed.

Land Use, Zoning and Plans

Land Use

The project is consistent with existing land uses in the surrounding areas, particularly the multi-family development located adjacent to the west. The proposed development would provide a similar multiple-family zoned parcel to this existing use, and would affirm the multi-family development pattern in the southern portion of the Village of Islandia. The proposed project is an appropriate use for the property given that residential nature of the Village and surrounding lands, coupled with the existing multi-family use near the site. The site is located on an existing arterial road in the Village, and is in a mixed land use area including single family, vacant open space and utility uses along with the nearby multi-family use. Given this mixed land use pattern, the Old Nichols Road corridor, and the current primarily cleared and impacted condition of the site (with respect to natural resources), the proposed zoning and intended project are believed to be a compatible addition to the Village land use pattern that will provide housing opportunities on a parcel appropriate for such use. Adequate landscaped buffers will be provided to maintain the integrity of open space parcels located to the south. In consideration of the existing predominantly residential uses of varying densities adjacent to the north, east and west, the proposed land use change is not expected to represent a significant overall impact.

Zoning

The proposed project will change the zoning of the site, from its current zoning of AG-Agriculture to the residential zoning of MF-Multi-family Residential. The project is located in a predominantly residentially zoned area; however, three (3) retail zoned parcels are located in the vicinity. To the south of the site, the property borders lands classified as G-Greenbelt, undeveloped, Town owned open space lands. Residential zoning districts dominate the zoning designations in the area. As a result, the proposed zone change will allow for the expansion of residential development with the construction of the proposed condominium units all of which is in keeping with the zoning districts in the area. In consideration of the existing residential zoning districts adjacent to the north, east and west, the proposed change of zone is not expected to represent a significant overall impact. No additional lots are available for multi-family development in the area and, as such, the proposed change will not serve as a precedent for any additional future development.

The intent of the agricultural district per Section 177.46 of the Zoning Code of the Village of Islandia *"is to allow for the preservation of existing agricultural and agriculturally related uses in those areas most suitable for such uses…to protect agricultural uses by prohibiting uses which are incompatible with agricultural activities and to prevent the encroachment of residential or other nonagricultural uses into the district."* There are two agriculturally zoned parcels in the Village which offer limited protection potential given the development potential in the area and current land values. A change of zone will not significantly impact agriculturally zone parcels in the town as there is only one other parcel besides the subject property within that zoning district.

Land Use Plans

The Village of Islandia's Comprehensive Plan proposed to maintain the use of the subject property as an agriculturally-based use; however, the plan also recognized the need to provide multi-family development to fulfill the need for various housing types for the residents of the village. The proposed project does not directly conform to the Village's vision of preserving the agricultural use of the site, but will assist in meeting the goal of providing multi-family residential housing. The Comprehensive Plan was prepared approximately 13 years ago, and since that time, the viability of agricultural use in consideration of land values, land use trends and the economic needs of the landowner, indicate that the existing use of the site may not be a feasible long-term use. As a result, the applicant has offered the proposed use as an attractive alternative that fulfills housing objectives of the Comprehensive Plan including senior and non-age restricted mixed housing opportunities.

Proposed Mitigation

- No mitigation beyond that inherent in the project is necessary or proposed.

Taxes and Community Services

Taxes

The proposed project will significantly increase the assessed value of improvements on the project site, with the result that the property taxes generated will also be increased significantly. **Table 3-6** presents the estimated tax generation for the project based upon current rates, along with the projected distribution of taxes to the various jurisdictions. As discussed below, this property tax increase (approximately $755,887 annually) is anticipated to be sufficient to offset the increase in costs to public agencies to provide services to the site.

Education

Based on a multiplier of 0.39 school-age children per 3-bedroom, non age-restricted, single-family units (25), the project is estimated to generate 10 school-age children and the remaining 47 units will not generate any children as these are age-restricted units. The document, "New York: The State of Learning" **(NYS Dept. of Education, 2006)** indicates that the Central Islip UFSD expends $18,388/year/student; thus, the proposed project would result in an increased annual expenditure of $183,880 for 10 additional students. The proposed project would generate over $580,000 per year in school district and school district library taxes. Based on this analysis, the revenue from the proposed project would fully compensate the Central Islip School District for the increased district costs and in fact provide a surplus of nearly $400,000 per year.

A letter was sent to the Central Islip Union Free School District seeking input on the proposed development but a response has not been received to date; however, in a conversation on March 14, 2008, the superintendent indicated that the projected number of school-aged children generated by the proposed project (10) is less than would be expected. The number of school-age children has been accurately estimated using standard references, and the project is expected to generate a substantial tax revenue surplus. Providing a portion of the units for occupancy by senior citizens is a form of mitigation with respect to potential school district impacts.

Police Protection

It is anticipated that the proposed project would not have a significant adverse impact on the patrol responsibilities of the SCPD for security/safety purposes. Correspondence from the SCPD indicates *"At this point in time we would not be adding any additional units to the area. Any staffing decisions along those lines could only be made after your project is complete and occupied"*. While the potential need for police services to the site would be increased by the residential character of the site, this increase would not in itself be a significant added burden on patrol activities, as this use does not generate much potential need for response. As a result, the cost to the SCPD to serve the site would not be increased on a day-to-day basis; the SCPD would only provide services to the site in case of an emergency. In this case, police service costs would accrue, to be offset by the police department taxes paid by the project.

Based on the applicable 2007-08 tax rates, it is estimated that the proposed project would generate about $77,460 per year in taxes allocated to the SCPD, which would offset costs for services.

Fire Protection

Similar to police protection, the proposed project is not expected to have a significant adverse impact on the ability of the Central Islip Fire Department to serve the site. The project would increase the potential need for fire protective services; though this increased potential need would not in itself be a significant added burden on the department. This is due to the project's adherence to the NYS Fire Code in construction, and the anticipated use of fire-resistant building materials and smoke/fire alarms and detectors. Additionally, the Central Islip Fire Department has asked that consideration be given to the installation of a water main fire hydrant system throughout the development to provide adequate water for firefighting activities. Adequate fire hydrants have been incorporated into the site plan. Similar to police services, the cost for the Central Islip Fire department to serve the site would not be increased on a day-to-day basis; the department would only need to provide services to the site in case of an emergency. In this case, fire service costs would accrue, to be offset by the fire district taxes paid by the project.

It is noted in a letter regarding the proposed development that the Central Islip Fire Department expressed concern regarding the additional burden on this volunteer service, the location of the entrance to the site on a blind curve, the addition of more traffic on congested roadways where accidents are common and the possibility of delayed response time if an accident should occur in-front of the station house opposite the subject property. The proposed use will add residents to the Village, and as a result, the pool of potential volunteers will be increased. Site access has been analyzed by the engineer and the planned entrance has been designed to maximize sight distance for vehicles entering and exiting the site. The TIS indicated that the trip generation for this use will not affect the capacity of the roadway. Accident rates were also analyzed and found to be within normal levels.

Based on the applicable 2007-08 tax rates, it is estimated that the proposed project would generate an estimated $27,266 per year in taxes allocated to the Central Islip Fire Department, which would offset a portion of the increased potential costs to the department.

Ambulance Services

Ambulance services will be provided by the Central Islip-Hauppauge Volunteer Ambulance service. While the proposed project may increase the need for emergency services, this increase is expected to be minimal and will not have impact on the ability of the service to provide emergency care. Emergency care services provided by the Central Islip-Hauppauge Volunteer Ambulance will be billed to the user separately.

Solid Waste Disposal

The proposed project will generate a greater amount of solid waste than the current equestrian use; it is estimated at 507 lbs/day. However, this amount will not affect the Village's contracted waste removal service as waste removal for the proposed development will be handled through the Condominium Association. As a result, no significant solid waste disposal impacts or Village expenses are anticipated.

Wastewater Treatment

The proposed project will generate a total of approximately 14,925 gpd of sanitary wastewater, to be treated and recharged on-site via a proposed Cromaglass wastewater treatment system. The use of this type of treatment is approvable in consideration of SCSC Article 6, as this volume is less than the maximum allowable volume of 15,000 gpd that can be treated by such a system on a daily basis. The design and installation of the system will be subject to the review and approval by the SCDHS, ensuring that the potential for adverse impacts to groundwater quality and quantity is minimized. The sanitary treatment system has been sited at the southwest corner of the property, so as not to impact to the groundwater within the contributing area of the SCWA Nichols Road South wellfield located immediately north of the subject property. The flow of groundwater in the area of the subject property is generally to the south; treated effluent will be discharged to groundwater in a location more than 500 feet from the wellfield and completely outside of the capture area as depicted in the Source Water Assessment Program (SWAP) maps obtained from SCDHS for the purpose of project planning.

As sanitary wastewater disposal will be handled by on-site systems, no public utility is utilized, and there is no public utility expenditure associated with this treatment system.

Water Supply

The project is expected to increase the use of SCWA-supplied potable water by 14,925 gpd; an additional 4,430 gpd is estimated to be used for lawn irrigation. The increase in total water use is not expected to significantly impact the ability of the SCWA to serve the site or area, as the SCWA has an extensive distribution network in-place in this area, with sufficient groundwater supplies available. In addition, SCWA is chartered to provide public water to customers within its service area. Residents will pay the SCWA directly for the water consumed as will the Condominium Association for water used for irrigation, recreation facilities and for maintenance in the common areas of the site.

Energy

It is expected that there would be no significant adverse impacts to either LIPA or National Grid as a result of the project's increased consumption of electricity or natural gas, respectively. Correspondence with LIPA/National Grid finds that these utilities can provide electricity and natural gas service to the site in accordance with the filed tariff and schedules in effect at the time service is requested. In addition, new construction will utilize appropriate and necessary energy-conserving materials and mechanical systems, consistent with NYS Building Code, minimizing the increased consumption of these energy forms. Additionally, these utilities are chartered to serve development within their service areas, and the area is already well-served with electricity and natural gas.

Similar to public water supply, the residents will pay LIPA for the electricity and (if applicable) the natural gas consumed by the project and, as no property taxes are allocated to LIPA, an analysis of the cost of community energy service would not apply.

Proposed Mitigation

- The proposed project will generate significant increases in tax revenues and allocations to each of the pertinent community services (including the Central Islip UFSD, the SCPD and Central Islip Fire District), which would offset at least a portion of the increased costs to the pertinent community services to provide services.

- The project will be home to an estimated 10 school-age children; as the site is within the Central Islip UFSD, it is expected that these children would attend this school district. The cost to educate these students would, based on current rates, total an estimated $183,880 /year. However, the project will generate an estimated $580,666 per year in school district taxes, which would offset the entire cost to educate these students and provide a yearly surplus for the district.

- Provision of 47 age-restricted units is itself a mitigation measure for the school district, as these units will not generate any school-age children, and thereby will not require additional school district expenditure to provide services while contributing significant monies to help offset the increased costs to the district to provide educational services.

- Smoke and fire detectors will be installed in the proposed units and current construction standards will be adhered to as mandated by the NYS Building Code. Additionally, fire hydrants will be installed throughout the development to aid in fire fighting activities.

- Energy-efficient design and current construction methods will be utilized and buildings will be constructed consistent with NYS Building Code requirements.

- Water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be used where appropriate in order to minimize water consumption.

- Energy efficient appliances and fixtures will be utilized to reduce energy consumption.

- Native and near-native, drought tolerant and, non-fertilizer dependent landscape species will be utilized where feasible to reduce water and fertilizer use.

Aesthetic Resources and Community Character

The project will remove all of the existing structures on the property, followed by construction of thirteen (13) two-story structures housing the 72 proposed condominium units, a clubhouse with an outdoor swimming pool/patio and tennis courts. As a result, the visual character of the subject site will be changed, from its existing equestrian related use to a developed residential site. However, the extent of this change is minimized by the aspects of site design discussed below.

The project's single internal roadway will be a linear, loop design oriented such that views from Old Nichols Road will be generally eastward along its length. Such views would be narrowed from those at present, but will continue to be deep, and extend to a single structure in the distance at the site's eastern border.

The nearest structure to Old Nichols Road will be the residential structure at the site's northernmost corner, which will be set back about 45 feet from this road. This setback is similar to that of the detached, single-family residences in the vicinity. For the remaining structures on-

site, the greater number of these new buildings (in comparison to that of the existing single-family homes in the area) will be offset by their substantially greater setbacks from Old Nichols Road. As a result, the greater distances to these buildings for observers on Old Nichols Road will tend to render these structures smaller to the eye, and therefore less obtrusive and different from their neighbors. Therefore, the greater building setbacks from Old Nichols Road are a significant design factor that will minimize potential visual impacts.

The development will use a single, cohesive landscaping design to enhance the aesthetic appeal of the development and to reduce the differences in appearance of this site from those of its neighbors. Landscaping will include an attractive entrance landscape treatment, street trees within the development, and specific planting areas for visual buffering. A decorative water feature will be located in the traffic circle just east of the main entrance. Landscape buffer plantings will be installed in strategic locations within the project site, specifically noted as follows: at the end of Schley Street in the northeast part of the site; south of the parking area in the west-central part of the site, and west of the sanitary waste treatment facility in the west part of the site. These buffers will assist in ensuring that the visual aspects of the proposed project are addressed.

The new residential buildings will be two stories in height, and will not exceed the 35-foot maximum allowed height in the proposed MF zone, and so will be similar to the heights of other residences in the area. It is not anticipated that the residential structures will be tall enough to be visible to outside observers over the existing treelines, though they will be visible from adjacent properties through the existing vegetation on properties abutting the site. Therefore, the new residences would not significantly differ from the appearance and massing of the existing residences in the vicinity.

Finally, it is expected that the architectural theme to be employed in all buildings and amenities will be appropriate to and reminiscent of the general building character of the area, and that building materials will have textures and colors that will support this theme.

A Visual Environmental Assessment Form Addendum prepared was for the project. There are five visual impact receptors within ½-mile of the site, though two of these receptors are public roadways and the remaining three refer to the nearby Town and State parks. At a greater distance, there are five receptors within the interval between ½ and 5 miles from the site. These include a State roadway (NYS Route 454), public parks, an interstate transportation corridor (the Long Island Expressway), the Nissequogue River, and historic resources in the region. In addition, the project site will be visible to observers throughout the year; however, the majority of those observers would be associated with passing motorists on Old Nichols Road. The area is characterized by a mix of land use types and intensities, so that the proposed project would not represent a new or dissimilar land use from those that already exist in the visual field. Finally, there are visually similar properties throughout the area, which would tend to reduce the visual impact of the proposed project.

<u>Proposed Mitigation</u>

- Proposed landscaping will include groundcovers, shrubs and trees to be planted both between the new buildings and along the entire perimeter of the site, to partially screen and minimize adverse visual impacts of the project for observers on Old Nichols Road as well as on adjacent and nearby properties.

- A decorative water feature will be located in the traffic circle located just east of the main entrance and will further enhance the character of the development.

- It is anticipated that the project will be developed in conformance with a single, consistent architectural theme appropriate to the prevailing aesthetic of the area. Such a theme would utilize building materials having textures and colors to achieve this goal.

- Residential structures will be set back at least 45 feet from Old Nichols Road, and thereby provide visual buffering from outside viewers on Old Nichols Road.

Cultural Resources

The subject site has been subject to significant prior development and resulting disturbance, and is not located within, abutting or in the vicinity of an area designated by the OPRHP as having known or suspected cultural resources. As a result, no impact to such resources is expected to occur as a result of the proposed project.

Proposed Mitigation

- As there are no known or suspected cultural resources on the site that could be disturbed by the proposed project, no mitigation is necessary or proposed.

Alternatives Considered

SEQRA requires the investigation of reasonable alternatives to a proposed project. Alternatives must be feasible and in keeping with the goals and objectives of the project sponsor. The discussion and analysis of each alternative should be conducted at a level of detail sufficient to allow for the comparison of various impact categories by the decision-making agencies. The following lists the alternatives analyzed in this document:

Alternative 1: No Action
(The site remains in its current use and condition)

Alternative 2: Existing Zoning
(This alternative assumes that the project site is planted with cash crops intended for local use)

Alternative 3: Alternative Layout Design
(This alternative assumes that the project site is developed with a layout similar to the proposed development but with curved interior roadways and offset buildings and units)

Alternative 4: Alternative Site Access

(This alternative assumes that the proposed project's vehicle access on Old Nichols Road has been moved to the site's northern corner, in order to improve sight lines for exiting drivers)

Issues of Controversy

The applicant has not to-date been apprised of any substantive issues of controversy by the Lead Agency.

Permits and Approvals Required

This DEIS is intended to provide the Village of Islandia Village Board of Trustees with information to assist in reaching a decision on the change of zone approval for the Preserve at Islandia project. This document is intended to comply with SEQRA requirements as administered by the Village of Islandia. Following completion of the environmental review process, the following approvals would be obtained prior to construction:

- Village of Islandia Board of Trustees - Change of Zone
- Village of Islandia Planning Board - Site Plan
- Village of Islandia Highway Department - Roadwork Permit
- Village of Islandia Board of Trustees – Variance for tennis court (if required)
- SCDHS – SCSC Article 6 (Sanitary system design review)
- SCDHS – SCSC Article 4 (Water supply system design review)
- SCWA - Water Supply Connection
- NYSDEC - SPDES Stormwater permit

SECTION 1.0

DESCRIPTION OF THE PROPOSED PROJECT

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Introduction

This document is a Draft Environmental Impact Statement (DEIS) prepared for a change of zone application on 9.87 acres of land located south of the intersection of Old Nichols Road and Schley Street (a paper street), in the Village of Islandia, Town of Islip. The address on record for the subject property is 1239 Old Nichols Road, Islandia, New York. The site, identified as Suffolk County Tax Map (SCTM) #504-17-3-7 & 8, is occupied by an equestrian center. The proposed project seeks a change of zone from AG-Agriculture to MF-Multifamily Residence to allow for the development of 72 condominium units, a pool, a one-story clubhouse, tennis courts and other recreational facilities, and a sanitary wastewater treatment facility. A total of 47 of the proposed units will be restricted to occupants aged 55 years or above, with the remaining 25 units offered as non age-restricted. Additionally, the applicant proposes that the undeveloped street abutting the site's northern boundary (Schley Place) be abandoned, and half of the abandoned area (approximately 0.25 acres; 10,890 square feet, SF) be appended to the subject property, increasing the site to a total of 10.12 acres. This additional acreage would allow the proposed development to meet setback requirements. The majority of this paper street is cleared and is utilized by the existing equestrian center. Further, the right-of-way (ROW) is not needed to access any other properties. The proposed development would have a density of 7.1 units per acre and a Floor Area Ratio (FAR) of 0.389. A variance will be required, as a maximum FAR of 0.35 is allowed by the Village. (Please refer to the **Layout and Dimension Plan SP4.0**, in a pouch at the rear of this document)

As noted above, the subject property consists of an equestrian center where 27 horses are currently housed. Buildings and structures associated with the use include stables, an indoor riding facility, trailers, paddocks and a small structure used for retail purposes. A narrow fringe of vegetation exists along the southeastern and eastern portions of the property. A few mature trees are scattered within the paddocks located on the property. A small area of maintained turf is located on the western property boundary, in proximity to Old Nichols Road; however, the majority of the site consists of bare soil. Past use(s) of the property were determined by a review of historical aerial photographs. Review of a 1938 aerial photograph revealed that the western portion of the property was used for agricultural purposes while the eastern portion was wooded. The analysis indicates the overall site was utilized as farmland until at least 1966. The majority of the property was cleared in the 1980 aerial photograph, and by the time the 1994 aerial photograph was taken, the site was in its current use and condition.

The review of environmental consequences of an action is regulated by Part 617, Title 6 of the New York Code of Rules and Regulations, as promulgated under the New York State Environmental Quality Review Act (SEQRA). The Village of Islandia Board of Trustees has assumed the role of Lead Agency for review of the action.

1.2 Project Background, Need, Objectives and Benefits

1.2.1 Project Background and History

A Positive Declaration is not available; however, a resolution was issued under SEQRA on October 30, 2007 and the Final Scope for the proposed project was accepted by the Village of Islandia during a meeting on October 30, 2007 (see **Appendix A-1**). The adopted Final Scope is included in **Appendix A-2**. It is recognized that typographical errors exist in this document whereby "Draft Scope" appears on the first page which contradicts the heading which states "Final Scope"; it is not the applicants responsibility to correct this oversight. The contents and analysis presented in this document conforms to the Final Scope.

In its role as a referral agency, preliminary review of the proposed project was undertaken by the Suffolk County Planning Commission (SCPC) and in a letter dated September 5, 2007 comments were provided on the application. The SCPC resolved to approve the project with conditions. The SCPC suggested that an access other than Old Nichols Road be provided and suggested that Sampson Avenue would be appropriate. An alternate plan has been prepared with an entrance located at Schley Place, which the client deems as more appropriate. A preliminary emergency access will be provided from Sampson Avenue. During the site plan review process, the location of the emergency access will be finalized with input from the Village engineer and Fire Marshal. The SCPC also suggested that a 50-foot buffer be established between the project site and the Town owned property to the south. The SCPC pointed out that relocating the drainage reserve areas to the southern property boundary and planting with native vegetation will achieve the required buffering. A 25-foot wide buffer has been provided in the area behind the residences which conforms to the proposed zone. Providing a 50-foot wide buffer along the southern property boundary will reduce the buildable area of the property by almost one acre and make site layout difficult and confined. Moving the drainage reserve areas to the southern property boundary will have the same effect as providing the 50-foot wide buffer. The SCPC suggested that a fence be provided along the southern property boundary to define the Town owned Greenbelt property from the subject property in the same area that will allow wildlife to move freely between the buffer area and the Greenbelt parcel. The site plan depicts a retaining wall that extends for 415 feet along the southern property that will serve to delineate the subject parcel from the adjacent parkland (Greenbelt). The SCPC also suggested that 20 percent of the units be set aside as affordable. The issue of affordable units will be addressed by the applicant after the zone change has been approved by the Village.

1.2.2 Public Need and Municipality Objectives

The need for the project is related to the benefits to be derived if the project is implemented. The Applicant has designed the project to achieve the highest and best use of the site based on the proposed multifamily residential zoning, pattern of adjacent uses and amenities, proximity to major thoroughfares, and market trends.

The 1995 Comprehensive Plan for the Village of Islandia proposed to maintain the agricultural use of the subject property. The plan realizes the pressure to provide residences, but recommends clustering on agriculturally zoned parcels to preserve that use. However, one of the goals of the plan was to "*…[p]rovide for a balanced and diversified housing stock in Islandia to meet the needs of all of its residents*." The proposed project, by conforming to the proposed MF-Multi-family zoning, will add to the mix of housing stock in the Village by offering a combination of age-restricted and non age-restricted units. The project is compatible with the surrounding communities and is well-designed to function internally. A similar development, Silver Woods, is located approximately 200 feet west of the proposed project.

1.2.3 Objectives of the Applicant

It is the applicant's goal to develop a high-quality residential use on a property which is well-suited to attract and accommodate such a use. The proposed project will provide a permanent use of land in conformance with the proposed multi-family residential zoning. The development of the property will increase the property tax revenues generated to taxing jurisdictions, though it will result in incremental increases in demand for services, particularly in regard to school enrollments associated with the proposed 25 non age-restricted units. However, this impact is minimized by the predominance of the "age-restricted" component, which will not generate school-age children.

The objective of the project sponsor is motivated in part by the desire to produce a profitable economic return on the land investment, which would result from a high-quality residential development. The applicant is seeking to provide a use that will conform to the proposed zoning of the property, as well as conform to the surrounding land use pattern and, at the same time, provide an economic return to the Village through increased tax revenues with a minimal impact on the environment.

It is the applicant's opinion that the Preserve at Islandia will provide an opportunity for viable residential growth within an area of the Village of Islandia well-suited to accommodate such growth. The project will address the public need for senior citizen and non-age restricted residential communities in an attractive setting and a desirable area and minimizes potential adverse impacts.

1.2.4 Benefits of the Proposed Project

The benefits of the proposed project are based on social, economic and land use considerations. The proposed project requires a zone change from the site's existing AG-Agriculture zoning to MF-Multi-family. The Applicant believes that the project will provide an opportunity for high quality residential housing in a desirable area of the Village of Islandia. The community will benefit economically from increased housing diversity and the increased value in the property. The proposed project will also result in generation of a substantial number of temporary jobs during the construction phase of the project. While four full-time and four part-time jobs will be lost with the closure of the equestrian center, it is expected that there would be a comparable

number of new jobs associated with the operation of site facilities and demand for private maintenance services (i.e. landscaping, home maintenance, etc.). Consumer spending will "ripple" additional economic benefit to local merchants and businesses during and following construction due to increased customer base. In addition, the project will generate a substantial amount of real property tax revenues to applicable taxing jurisdictions, though it will also result in an incremental increase in need for community services. The project will also provide a permanent land use for the site which the applicant believes has a high probability of success through full utilization.

A Condominium Association will be established to maintain common areas, roadways, drainage features and the Cromaglass sewage treatment facility, thereby relieving the Village of this responsibility and expense.

1.3 Project Location and Existing Site Conditions

1.3.1 Geographic Boundaries of the Project Site

The 9.87-acre project site is located south of the intersection of Old Nichols Road and Schley Street, a "paper street" in the Village of Islandia, Town of Islip, Suffolk County, New York. The property has approximately 750 feet of frontage along Old Nichols Road and has an address of 1239 Old Nichols Road. The site is further identified as SCTM #504-17-3-7 & 8. The property boundary is based on a survey performed by Schnepf & Murrell, P.C. and is deemed to be correct. The applicant proposes that the undeveloped street abutting the site's northern boundary (Schley Place) be abandoned, and half of the abandoned area (approximately 0.25 acres; 10,890 SF) be appended to the subject property, increasing the site to a total of 10.12 acres. The Village of Islandia, in discussions with the applicant, expressed a willingness to abandon Schley Place and convey a portion to the applicant. The majority of the paper street is cleared and had been used by the equestrian facility. **Figure 1-1** provides a location map of the subject property (*All figures are located after the main text of this document*.)

1.3.2 Current Site Conditions

The subject property is located in an area defined by a variety of existing land uses, including single-family residences, commercial uses, emergency services, utility (water supply) and open space. There is a multi-family housing community 200 feet to the west (Silver Woods) and the subject property is in proximity to commercial uses and other services, as well as major thoroughfares including the Long Island Expressway (LIE) and Veterans Memorial Highway (NYS Route 454). Station 3 of the Central Islip Fire Department is located opposite the site on the north side of Old Nichols Road. A station on the Long Island Rail Road (LIRR) is located less than two miles to the west in Central Islip. Recreational amenities in the area include the Town of Islip owned parkland located immediately south of the subject property and the Connetquot River State Park is located farther to the south. **Figure 1-2** provides an aerial photograph of the site and immediate area.

Currently, the subject property consists of an equestrian facility, which contains several buildings, including a barn. A total of twenty seven (27) horses are housed at this facility. There are four (4) full time and four (4) part-time employees. A narrow fringe of vegetation exists along the southeastern and eastern portions of the property. A few mature trees are scattered within the paddocks located on the property. A small area of maintained turf is located on the western property boundary, in proximity to Old Nichols Road; however the majority of the site consists of bare soil. It is not known whether there are any underground storage tanks for heating oil; if such are present, they will be removed as part of the site preparation process, and any leakage detected at that time will be remediated and reviewed by the NYS Department of Environmental Conservation (NYSDEC).

The site is located within/served by the following:

- Central Islip Fire Department
- Suffolk County Water Authority (SCWA)
- Long Island Power Authority (LIPA)/National Grid/KeySpan Energy
- Suffolk County Police Department (SCPD), 4th Precinct
- Central Islip Union Free School District (UFSD)
- Groundwater Management Zone I
- AG-Agriculture Zoning District
- Central Islip Hauppauge Volunteer Ambulance Corps

1.3.3 Zoning of the Project Site

The site is zoned AG-Agriculture by the Village. The existing AG-Agriculture zone allows for agricultural uses and associated accessory structures, single family detached dwellings that serve as the principal residence of the farmer or proprietor, single-family cluster developments, horticultural uses, farm stands to sell produce grown on the property, commercial stables, a riding academy, animal exhibit or petting zoo and accessory buildings associated with the above uses.

A change of zone to MF-Multi-family is proposed to allow for the development of 72 condominium units, a pool, a clubhouse, tennis courts and other recreational facilities, and a Cromaglass sanitary wastewater treatment facility. A total of 47 of the proposed units will be age-restricted and 25 will be non age-restricted. The proposed MF-Multi-family zone permits single-family detached dwellings, residential, owner-occupied condominiums, agricultural uses, senior citizen dwelling, public library or municipal parking, playground or municipal parks, model houses or developments within the Village, apartment or townhouses and accessory buildings. Special permits are required for private or parochial schools, monuments, two-family dwellings, and adult homes. Additional information on zoning and land use is provided in **Section 3.2**.

1.4 Project Design and Site Layout

1.4.1 Overall Site Layout

The project has been designed to utilize a single, gated access point located along Old Nichols Road. A looped, internal roadway will provide access to the residential units and the recreation area. A traffic circle with a water feature will be located where the looped roadway meets, just east of the main entrance point. Planned recreation amenities include a clubhouse, tennis court and outdoor pool and patio. A variance will require for the proposed tennis court. Residential units will be housed in 6-, 5-, and 4-unit structures located on both sides of the internal roadway. A rendering of a typical proposed building showing architectural features, typical siding materials, cultured rock façades, and landscape plantings is provided in **Figure 1-3**. A total of 170 parking stalls will be provided for the overall project which meets the Village parking requirement. A total of 98 parking stalls will be provided in several locations along the internal roadway and adjacent to the recreation area. Additional parking (72 spaces) will be provided in driveways and garages. A total of four (4) handicapped spaces will be provided. It should be noted that the driveways have a slope that is less than 8% and are considered handicapped accessible. The proposed Cromaglass sewage treatment facility and 300 SF control building will be located in the western portion of the property adjacent to Old Nichols Road and the proposed recreation area. Except for the control building, the entire system will be located underground and will result in no visual, noise or odor impacts. Suffolk County Department of Health Services (SCDHS) approval will be required for the proposed Cromaglass treatment system. **Figure 1-4** provides an aerial overlay of the proposed project.

The existing coverages and physical characteristics of the subject site and the estimated full site development quantities for the total site area are provided in **Table 1-1**. The existing coverages were determined through site inspections and aerial photography; post development conditions are based on the **Site Plan** (see pocket at end of document).

Table 1-1
SITE AND PROJECT CHARACTERISTICS
Existing and Proposed Conditions

Parameter	**Existing Conditions**	**Proposed Project**
Use & Yield	Equestrian Center	Residential/47 age-restricted condos, 25 unrestricted condos & recreation area
Zoning	AG-Agriculture	MF-Multi Family
Coverages (acres)**:**	---	---
Buildings/Impervious	0.81	4.65
Successional Field	1.32	0
Pervious	6.55	0
Fertilized Landscape/Lawn	1.44	5.47 (1)
TOTALS	10.12	10.12
Water Resources:	---	---
Sanitary Wastewater (gpd)	see total water use	14,925 (2)

Landscape/Lawn Irrigation (gpd)	see total water use	4,538 (3)
Total Water Use (gpd)	**2,200** (8)	**19,463**
Recharge Volume (gpd)	16,430 (4)	36,408 (4)
Nitrogen Concentration (mg/l)	7.29 (4)	5.29 (4)
Miscellaneous:	**---**	**---**
Total Residents	--	170 (5)
Age-Restricted Residents	--	99
School-Age Children	--	10 (6)
Solid Waste Generation (lbs/day)	--	507 (7)

Level of Service Summary (Existing Conditions)	**AM Peak Hour**		**PM Peak Hour**		**Saturday Midday Peak Hour**	
	LOS	**Delay** (secs/veh)	**LOS**	**Delay** (secs/veh)	**LOS**	**Delay** (secs/veh)
NYS Route 454 at Old Nichols Road/East Suffolk Avenue	D	36.8	E	65.8	D	37.0
Old Nichols Road at LIE South Service Road	B	20.0	D	45.8	B	19.8
Old Nichols Road at LIE North Service Road	C	34.6	C	24.1	B	19.0

Level of Service Summary (Build Conditions)	**AM Peak Hour**		**PM Peak Hour**		**Saturday Midday Peak Hour**	
	LOS	**Delay** (secs/veh)	**LOS**	**Delay** (secs/veh)	**LOS**	**Delay** (secs/veh)
NYS Route 454 at Old Nichols Road/East Suffolk Avenue	D	40.4	E	72.6	D	37.8
Old Nichols Road at LIE South Service Road	C	20.1	D	51.3	B	20.0
Old Nichols Road at LIE North Service Road	D	36.2	C	24.3	B	19.3

gpd – gallons per day.
mg/l – milligrams per liter.

(1) Includes Drainage Reserve Areas.
(2) Based on 300 gpd-non age-restricted units, 150 gpd-age-restricted units and 0.10 gpd/SF-clubhouse.
(3) Assuming an irrigation rate of 5.5 inches per year for the period May to September.
(4) See **Appendix B-3**.
(5) Based on 2.09 resident/age-restricted unit (47 units) and 2.83 residents/ non age-restricted unit (25), per Rutgers University, Center for Urban Policy Research, 2006.
(6) Based on 0.39 school-aged children/non age-restricted unit (25 units), per Rutgers University, Center for Urban Policy Research, 2006.
(7) Based on 2.3 lbs/capita for residential unit and 3.12 lbs/100 SF-Clubhouse, per Rutgers University, Center for Urban Policy Research, 2006.
(8) Based on a monthly average water usage charge of $110.

1.4.2 Clearing, Grading and Drainage

Initial site preparation will include the demolition and removal of existing structures. The portion of Schley Place that is currently paved will be removed and drainage inlets will be replaced with concrete covers. (Please refer to the **Clearing and Demolition Plan SP3.0**) The subject site was cleared and graded a number of years ago to accommodate the current use as a horse farm. As a result, little natural surfaces still exist on-site and the anticipated grading for the proposed development will impact previously altered surfaces. However, the areas of the site proposed to accommodate development will require grading to provide appropriate surface areas. All created slopes will be 1:3 or less and will be stabilized using ground cover material.

As required by the Village, the site will be graded to keep stormwater runoff on-site. In view of the nature of this proposed residential project and the existing topography of the site, it is anticipated that the grading involved would not be extensive in terms of depth of cut or fill. The most extensive grading will likely occur along the descending ridge transecting the central portion of the property but it is expected that due to the limited extent of this sloping area that any cut required will be regarded into the site. The current high point of the site will likely be removed, however since this is not a natural feature no impacts are expected. The site's low point, at the southwestern corner of the site is not expected to be altered as a result of grading.

Existing conditions are such that there are few trees on the site and much of the site consists of bare soils which is the result of the equestrian use. The site will be graded to accommodate the proposed development and to direct stormwater to appropriate storage and recharge features. Drainage reserve areas are proposed for the internal area of the property. Stormwater generated by roofs will be directed to leaching pools while roadside catch basins will collect runoff from paved surfaces and landscaped areas. Overflow from catch basins located at the roadway in the eastern portion of the site will be directed to a leaching field located in the adjacent drainage area. The drainage system, roadways and catch basins will be maintained by the Condominium Association established for this development.

In conformance with Village of Islandia requirements, all stormwater runoff generated by impervious surfaces will be retained on-site, to be recharged to groundwater in the proposed drainage reserve areas. The system will be sized and designed to accommodate the volume of runoff resulting from a 2-inch rainfall. The development will require a NYSDEC State Pollutant Discharge Elimination System (SPDES) stormwater and Erosion Control Plan prior to construction.

1.4.3 Site Access and Roadway System

The proposed project includes one access point located on the east side of Old Nichols Road. A looped, internal roadway will provide access to the residential units and the recreation area. A traffic circle will be located east of the main ingress/egress point. The proposed internal roadway is 25 feet in width. A total of 170 parking stalls will be provided including 72 driveway

and garage spaces. The remaining 98 spaces will be provided in various locations along the internal roadway as "head-in" spaces. A total of nineteen (19) spaces will be provided in proximity to the recreation area which conforms to the required 1 space per 200 SF for this use. Sufficient parking is proposed to meet village requirements. All roads and associated drainage structures will be maintained by the Condominium Association.

The Village of Islandia requires 1.75 spaces per dwelling unit plus one space for each additional bedroom above two and 1 space per 200 SF for the club house. Based on these requirements a total of 151 parking spaces are required.

The potential for installation of a cul de sac terminus of Schley Place at Sampson Avenue was investigated. It was determined that there is insufficient ROW at this location to provide a conforming cul de sac at this roadway. The proposed hammer head-type turn around can accommodate emergency vehicles.

1.4.4 Sanitary Disposal and Water Supply

Sanitary wastewater will be generated by the proposed residences as well as the clubhouse (see **Table 1-2**). All sanitary wastewater will be treated in the proposed on-site sanitary wastewater treatment facility (the "Cromaglass" system) planned for the southwest corner of the property. The proposed system is a Cromaglass modular treatment method, and is based on a Sequencing Batch Reactor (SBR) design that has been accepted by the NYSDEC and the SCDHS for similar applications. Positive features of this system include, but are not limited to; easy expansion, noise- and odor-free operation, easy installation and reduced leaching field size requirements. This method of wastewater treatment requires no chemicals, which eliminates the possibility of spills. This form of disposal is acceptable provided the projected wastewater design flow does not exceed standards established by the SCDHS for the entire site. The entire Cromaglass system will be underground and can process a maximum of 15,000 gpd of wastewater which will be recharged to groundwater via a system of leaching pools.

Article 6 of the Suffolk County Sanitary Code (SCSC) 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 SCDHS. As promulgated under Article 6, a Population Density Equivalent must be determined for the subject site in order to determine the type of sewage disposal system required for a proposed project. This equivalent (or total allowable flow) is then compared to the design sewage flow for the project. If the project's design sewage flow exceeds the Population Density Equivalent, a community sewerage system or on-lot sewage treatment plant is required. If the project's design sewage flow is less than the site's Population Density Equivalent, conventional subsurface sewage disposal systems (i.e., septic systems) may be used, provided individual systems comply with the current design standards and no community sewerage system is available or accessible.

Table 1-2
DERIVATION OF SANITARY WASTEWATER VOLUMES AND TOTAL WATER USAGE

Use	Quantity	Flow Factor	Wastewater Volume
Preserve at Islandia:	---	---	---
Attached non age-restricted units	25 units	300 gpd/unit*	7,500 gpd
Attached age-restricted units	47 units	150 gpd/unit*	7,050 gpd
Clubhouse	3,750 SF	0.10 gpd/SF*	375 gpd
TOTAL SANITARY VOLUME	---	---	***14,925*** gpd
Irrigation	5.47 acres	5.5 inches per year	4,538 gpd
TOAL WATER USE			**19,463** gpd

* per SCDHS design criteria.

The project site is located within Groundwater Management Zone I as defined by the SCDHS. Based on the requirements of Article 6, no more than 600 gallons per acre may be discharged on a daily basis within this zone. The site acreage used for determining this Population Density Equivalent may not include wetlands, surface waters, or land in flood zones; no such areas are found on the subject site. The project site is 10.12 acres in size, thus, the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

(10.12 acres x 0.75 x 43560 SF/20,000 SF) x 300 gpd/acre = 4,959 gpd

As shown in **Table 1-2**, it is estimated that the 72 proposed condominiums will generate approximately ***14,550*** gpd of sewage flow and the clubhouse will generate ***375*** gpd, for a total residential wastewater generation of approximately ***14,925*** gpd. The proposed project will generate more sanitary wastewater than is allowed to be discharged via a conventional system in Groundwater Management Zone I and as a result, the project will be required to connect to an existing municipal sanitary district or utilize an on-site sanitary wastewater treatment system. The project sponsor intends to utilize a Cromaglass wastewater treatment system; therefore, the total design flow must not exceed 15,000 gpd.

Covenants will be filed with the Village of Islandia and the SCDHS to ensure that the 47 proposed age-restricted units do not convert to non age-restricted use in the future, thereby impacting water use and the performance of the sanitary treatment facility.

Irrigation of the landscaped portions of the site (±5.47 acres) is expected and an annual average of 4,538 gpd based on an irrigation rate of 5.5 inches per year. Assuming that all potable water needs will originate from the public water supply, average daily water consumption and irrigation will total 19,463 gpd.

In a letter dated December 12, 2007, the SCWA indicated that sufficient capacity is available that will allow the project to be served with potable water and water for fire protection services (see **Appendix E**).

1.4.5 Site Landscaping and Amenities

It is anticipated that, at a maximum, no more than 5.47 acres of the site will be landscaped. Native or non-invasive ornamental, drought tolerant, non-fertilizer-dependent species will be utilized to reduce the need for fertilizers and, thereby, the potential to impact groundwater quality. Hydroseeded buffers will be provided along the majority of the property boundary. The hydroseed mix would contain native grasses and wildflowers with reduced fertilizer dependence and will be mowed at least twice per growing season. Street trees (Sweet Gum, Pin Oak and Red Maple) will be provided along the looped internal driveway and the entranceway. Additionally, landscaped areas with entrance signage will be provided on either side of the entrance point. Street trees will also be provided along Old Nichols Road to "soften" the appearance of the site and provide visual screening; these will be planted on 20-foot centers, as required by the Village Code. Screen plantings including Arbor Vitae and White Pine will be strategically placed in the area of the Cromaglass system, near the community building parking area and at the end of Schley Place. A water feature is proposed for the traffic circle located where the looped roadway meets, just east of the main entrance point. Sod is proposed for the internal areas of the property. It is expected that the hydroseeded areas will be minimally fertilized. Irrigation at a rate of approximately 5.5 inches annually is anticipated. Ground disturbance will take place on the majority of the property, and all disturbed areas not covered by buildings or pavement will be revegetated following construction. Maintenance of common areas within the development will be conducted under the jurisdiction of the Condominium Association. Specific locations and species of the shrubs to be planted will be depicted on the Landscape Plan, as part of the Site Plan review process. However, it is anticipated that junipers, rhododendrons, hollys and azaleas will be used.

Sidewalks will be provided within the site and along the site's frontage on Old Nichols Road. Intermodal transportation resources available to the site include:

- the LIRR Central Islip Station, approximately 2.0 road-miles to the west, along Suffolk Avenue
- Suffolk County Transit bus route #3D
- Suffolk County Transit bus route #S54
- bicycle trail on Old Nichols Road along the site's frontage

The internal roadway and the exterior of the community building will be illuminated. A total of 36 twelve-foot high lighting fixtures are proposed for the development. Each fixture will be fitted with a 70 watt high pressure sodium lamp that emits 6300 lumens. Please refer to the **Lighting Plan SP8.1** for locations of the proposed fixtures and a photometric analysis. Adjacent properties will not be affected by light from the proposed light fixtures. Lighting will be provided consistent with the locations, pole heights and specifications of the type and power of fixtures ("luminaire") typically required by the Village for residential developments. Section **108-10** specifies Village lighting requirements as follows: *Any use of floodlighting or other external lighting shall be prohibited unless proper safeguards are taken to shield said lighting from all nearby residences or roadways where said lighting may interfere with the safety of the motoring public.*

The applicant will ensure that only dark sky compliant luminaires will be used; this type of fixture is equipped with a "full cut-off" shroud that directs all illumination downward or, at most, laterally. By use of such fixtures, the potential for adverse impacts to the visibility of the nighttime sky is minimized.

1.4.6 Open Space

A total of approximately 5.47 acres of the site will be landscaped. This area includes the southwestern corner of the property, and the 25-foot buffer along the southern, eastern and northern property boundaries. Common areas are also planned for the central portion of the property. Common areas will be maintained by the Condominium Association as open space for the benefit of residents of the development.

1.4.7 Conformance with Village Zoning Requirements

Table 1.3 provides an analysis of Village zoning requirements as compared to the proposed project. It is noted that the project will conform to the bulk requirements of the proposed MF-Residence zone.

Table 1-3
Zoning Conformance

Description	Required	Provided
Front Yard Setback (min.)	25 feet	25 feet
Rear Yard Setback (min.)	25 feet	25 feet
Side Yard Setback (min.)	15 feet (35 feet total)	15 feet
FAR(max.)	35%	25.40%
Building Height (max.)	35 feet	35 feet
Lot Area (min.)	20,000 SF	10.12 acres
Lot Width (min.)	100 feet	722 feet*

* At widest point

1.5 Construction, Operation and Schedule

1.5.1 Construction and Operation

The Applicant will proceed with construction upon final Village and other agency approvals. The following discussion briefly presents actions that will be taken during construction in order to minimize impacts.

Old Nichols Road will be used for construction access and the LIE and Veterans Memorial Highway (NYS Route 454) will be the two major routes taken to access the site. Local construction vehicle impacts will be limited to Old Nichols Road as this provides the only access to the site. For trucks exiting the site, "rumble strips" (which cause truck tires to shed any mud trapped within the tire treads) will be placed at the construction vehicle entrances, to prevent soil

on truck tires from being tracked onto adjacent roadways. All construction equipment and worker vehicles will be parked and loaded/unloaded within the site.

Prior to the onset of construction, existing structures will be removed. Erosion and sediment control methods (including dust control methods) to be implemented at this time are discussed below. Refer to Clearing and **Demolition Plan SP3.0** and **Erosion and Sediment Plan SP7.0**.

To minimize sediment and debris transported off-site by stormwater runoff and the impact to local water quality, erosion and sedimentation controls will be provided during construction activities associated with the project. An Erosion Control Plan incorporating measures such as silt fencing, storm drain inlet protection, hay bales, water sprays, groundcovers and good housekeeping procedures is indicated with this change of zone information as this will be updated as necessary during the site plan review process. The Erosion Control Plan has been designed to contain sediment, debris, and pollutants from traveling off site by utilizing sediment barriers and sound construction practices. All sediment spilled, dropped, washed, or tracked onto public ROWs are to be removed daily. The site contractor will be responsible for ensuring storage and stockpiling of construction materials and supplies will be in designated areas and erosion control measures are implemented to prevent/reduce wind-blown dust and erosion from rainwater. The site operator 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 drainage system and revegetation plan will provide further permanent stormwater controls once construction is completed. Development of the property is not anticipated to significantly increase erosion/sedimentation or stormwater impacts since the site is mostly flat and, as a result of proper site grading procedures, erosion controls, and drainage system design.

The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures noted above. Then, demolition and site clearing operations can begin. The buildings will be inspected by a NYS-certified inspector to determine the presence of asbestos or other potentially hazardous materials in the structures. If such materials are found, they will first be removed according to applicable NYS standards and procedures, and the removed materials will be disposed of properly. Any tanks will be removed and disposed according to applicable SCDHS requirements.

Grading operations will take place next. In order to minimize the time span that denuded soil is exposed to erosive elements, excavations for the roads, building foundations, wastewater systems, stormwater system and utilities will take place immediately after grading operations have been completed. Building construction can then begin concurrent with the utility connections and paving of the internal road and driveways. As building construction nears completion, finish grading will occur, followed by spreading of topsoil and installation of the landscaping, which will be performed while the structures (primarily interior work) are being completed.

As of January 2003, New York State requires construction projects involving disturbance of 1 acre or more which may impact any surface water body or municipal system that discharges to a surface water body to obtain permit coverage from NYSDEC under the General Permit for

Stormwater Runoff from Construction Activity (GP-0-08-001, or General Permit). Under this program, permit coverage must be obtained and a Notice of Intent (NOI) must be filed with the NYSDEC 5-business days/60-business days (as specified pursuant to GP-0-08-001) prior to commencement of construction. Prior to submitting the NOI, preparation of a Stormwater Pollution Prevention Plan (SWPPP) that includes a detailed erosion and sediment control plan to manage stormwater generated on-site during construction activities and a post-construction hydrologic and hydraulic analysis for all structural components of the stormwater control system is required.

The site operator/contractor contracted by the site owners will be responsible for all construction activities, site grading, and installation of the erosion and sediment controls. In addition, inspections are to be conducted by a qualified professional to ensure that all erosion and sediment control practices specified in the Stormwater Pollution Prevention Plan and Erosion Control Plan are being followed and working effectively. As required by the General Permit, a record of inspection reports should be maintained on site.

The development will have a gated entrance point. A Condominium Association to be formed pursuant to Article 5 of the NYS Private Housing Finance Law, will be responsible for the maintenance of all common areas, roadways, the Cromaglass system, drainage reserves and all other drainage features. The planned recreational amenities will be available for use by all residents of the development. The clubhouse will include a meeting room, gym facilities and showers.

1.5.2 Construction Schedule

It is anticipated that grading, road and utility installations will take approximately 6 to 8 months. Construction of the individual homes would begin shortly after the onset of this period and would extend beyond it (the exact length of time needed for home construction would depend on the pace of sales and customers' needs); at this time, total construction time is estimated to be 24 months. Construction activities are not proposed outside weekday daytime hours (8 AM to 5 PM), and will conform to applicable Village regulations regarding construction noise generation and hours by restricting construction activities to weekdays. **Section 118** of the Village Code specifies that "*…noise shall not extend beyond a property boundary between the hours of 10 PM and 7AM*."

1.6 Permits and Approvals Required

This DEIS is intended to provide the Village of Islandia Village Board of Trustees with information to assist in reaching a decision on the change of zone approval for the Preserve at Islandia project. This document is intended to comply with SEQRA requirements as administered by the Village of Islandia. Following completion of the environmental review process, the following approvals would be obtained prior to construction:

- Village of Islandia Board of Trustees - Change of Zone
- Village of Islandia Planning Board - Site Plan
- Village of Islandia Highway Department - Roadwork Permit

- Village of Islandia Board of Trustees – Variance for tennis court setback
- SCDHS – SCSC Article 6 (Sanitary system design review)
- SCDHS – SCSC Article 4 (Water supply system design review)
- SCWA - Water Supply Connection
- NYSDEC - SPDES Stormwater permit

SECTION 2.0

NATURAL ENVIRONMENTAL RESOURCES

2.0 NATURAL ENVIRONMENTAL RESOURCES

2.1 Soils and Topography

2.1.1 Existing Conditions

Topography

The subject property generally slopes from an elevation of 72 feet above mean sea level (msl) in the northern corner of the subject property down to a minimum elevation of 42 feet above msl in the southwestern corner of the property. The highest point on the property can be found atop a small mound centrally located along the northern property boundary which rises to a maximum elevation of 74 feet above msl. Overall the property exhibits generally gentle relief of approximately 1.5% in the northwestern half of the site which becomes dramatically more steep at a slope of approximately 37.5% along a descending ridge line that transects the central portion of the property. Beyond these steeper slopes the property slope becomes more gradual exhibiting a general relief of approximately 3.5%.

Soils

The United States Department of Agriculture (USDA) Soil Survey of Suffolk County, New York (**Warner et al, 1979**) 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 lying within an area characterized by Riverhead-Plymouth-Carver association soils, which are deep, nearly level to gently sloping, well-drained and excessively drained, moderately coarse textured and coarse textured soils on the south outwash plain. Within this association, three (3) soil types have been identified on site. The locations of these soils are depicted in **Figure 2-1**. More detailed descriptions of the characteristics of these soils are provided below.

Plymouth loamy sand, 0-3% slopes (PlA) - 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.

Plymouth loamy sand, 8-15% slopes (PlC) - This moderately sloping soil is on moraines and outwash plains. Where it occurs on moraines, slopes are rolling in many places, and the surface is broken by closed depressions. On outwash plains this soil is on the short side slopes along intermittent drainageways. Areas on moraines are fairly large, but most other areas are small and long and

narrow. The hazard of erosion is moderate to severe because of slope and the sandy texture of this soil. Slope and droughtiness are the main limitations on this soil for most nonfarm uses. Most of this soil is wooded. Where extensive excavation is not needed, some areas are used for estate-type housing developments.

Riverhead sandy loam, 0-3% slopes (RdA) - Consists of deep, excessively-drained, coarse-textured soils that formed in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. This soil is generally found on outwash plains, and the areas are large and uniform. Hazard of erosion is slight.

The RdA soil type occupies the northwestern portion of the site while the PlC soils occupy the central portion of the site and the PlA soils occupy the eastern portion of the site. Soil borings provide more specific information regarding the subsurface conditions at the site. Two (2) borings were conducted on October 30, 2007 by McDonald Geoscience. The results of the on-site soil boring for boring B1 indicates that the surface layer is composed of a layer of brown clayey sand from the surface to two and a half (2½) foot below grade followed by a layer of pale brown fine to coarse with some gravel. No groundwater was encountered. In boring B2, a three (3) foot layer of brown silty sand followed by a layer of pale brown, fine sand was encountered. Water was encountered at a depth of approximately seven (7) feet below grade. Both borings extended to seventeen (17) feet below grade. *(Please refer to **Existing Conditions and Topography Plan SP1.0)***

Soil types are further defined based on groupings assigned by the USDA's Natural Resource Conservation Service and New York State. Soils identified in groups 1-4 are considered to be prime agricultural soils by New York State. These soils are believed to offer the best nutrient levels, moisture retention and other characteristics that provide good growing conditions for crop production. Based on this New York State classification, RdA-Riverhead Sandy Loam (Group 3) is classified prime soil.

The USDA Natural Resources Conservation Service (**USDA NRCS, 2007**) defines prime farmland soils as having "the best combination of physical and chemical characteristics for producing, food feed, forage, fiber, and oilseed crops and that is available for these uses. Such soils have a combination of soil properties, growing season, and moisture supply needed to produce sustained yields of crops in an economic manner if it is treated and managed according to acceptable farming methods. Additionally, "prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity and alkalinity, an acceptable content of salt or sodium, and few or no rocks." The USDA includes soil type RdA-Riverhead Sandy Loam, 0-3% slopes as a prime farmland soil and soil types PlA-Plymouth Loamy Sand, 0-3% slopes and PlC Plymouth Loamy Sand, 8-15% slopes as having farmland and statewide importance.

Table 2-1 presents a list of the limitations and characteristics of these soils that are pertinent to the proposed project. As can be seen upon review of the table, the soils present on the subject property exhibit severe limitations to development related to lawns as well as streets and parking lots due to sandy surface layer and slopes. In addition, the soils on-site also affect the installation of highways due to extensive cuts and fills in areas occupied by PlC soils; embankment foundations due to slight settlement on PlC and RdA soils; foundations for low

buildings for all on-site soils due to low compressibility; and irrigation for all on-site soils due to low available moisture capacity, rapid water intake and moderate slopes.

Table 2-1
SOIL LIMITATIONS

Parameter	**Plymouth loamy sand, 0-3%** (PlA)	**Plymouth loamy sand 8-15%** (PlC)	**Riverhead sandy loam, 0-3%** (RdA)
Soil features affecting:	---	---	---
Highway location	Extensive cuts and fills likely on PlC soils. ---		---
Embankment foundations	Strength generally adequate for high embankments; slight settlement.		Strength generally adequate for high embankments; slight settlement.
Foundations for low buildings	Low compressibility; moderate slopes on PlC.		Low compressibility.
Irrigation	Very low available moisture capacity; rapid water intake, moderate slopes on PlC.		Moderate to rapid water intake; moderate available moisture capacity.
Limitations of soil for:	---	---	---
Sewage disposal fields	Slight	Moderate: slopes	Slight
Homesites	Slight	Moderate: slopes	Slight
Streets and parking lots	Slight	Severe: slopes	Slight
Lawns	Severe: sandy surface layer	Severe: sandy surface layer	Slight
Picnic/play areas	Moderate: sandy surface layer		Slight

2.1.2 Anticipated Impacts

Topography

The subject site was cleared and graded a number of years ago to accommodate past agricultural use and the current equestrian use. As a result, little natural surfaces still exist on-site and the anticipated grading for the proposed development will impact previously altered surfaces. However, the areas of the site proposed to accommodate development will require grading to provide appropriate surface areas for buildings, roads, utilities, amenities and landscaping within the site. As depicted in the **Grading and Drainage Plan** (**SP5.0**), all created soil slopes will be 1:3 or less and will be stabilized using ground cover material. Several retaining walls are needed to assist with grade transitions for the proposed project. A 100 foot long retaining wall, with a maximum height of 3 feet is proposed along the north central property line to reduce the property line grade to a lower elevation within the site. In addition, a 415 foot long retaining wall is proposed along part of the south property line to transition the grade from higher to lower elevations at the property line. The grading plan establishes floor elevations for the units within each building in a manner that creates suitable grades within the site for gradual slope transitions and diversion of stormwater to strategically placed drainage structures. As a result, it is expected that topographic impacts will be minimized to the maximum extent practicable. (Please refer to **Existing Conditions and Topography Plan SP1.0**)

The site will be graded to keep all stormwater runoff on-site. In view of the nature of this proposed residential project and the existing topography of the site, it is anticipated that the grading involved would not be extensive in terms of depth of cut or fill. The most extensive grading will likely occur along the descending ridge transecting the central portion of the property; however, the grading and drainage plan considers the regrading of this area in a manner that establishes suitable grades with minimum anticipated impacts. The current high point of the site will likely be removed; however since this is not a significant natural feature no impacts are expected. The site's low point, at the southwestern corner of the site is not expected to be altered as a result of grading.

An additional safeguard is achieved through the NYSDEC SPDES review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of 1-acre (SPDES GP-0-08-001). Under this program, a Notice of Intent must be filed with the NYSDEC 60-days prior to commencement of construction, and a site specific SWPPP must be maintained on site. In addition, a copy of the final NOI, SWPPP and Erosion & Sedimentation Control Plan will be submitted to the Village of Islandia simultaneously with the NYSDEC submission. This process, as well as construction and operation of the proposed project are discussed in **Section 1.5**. Given that the design of the project will balance cut and fill volumes, incorporates erosion control measures, and will be subject to a detailed public review and approval process, no significant adverse long-term impacts are expected with respect to topography. Short-term impacts may occur; however, these are also minimized through project design and government oversight. Short-term impacts may include dust, noise, truck activity on roads and disturbance in the area. Truck access will be only from Old Nichols Road, and all equipment, materials and trucks will be stored and staged within the site. Shore term impacts are not expected to be significant given the erosion control measures, presence of a water truck to wet dry soils, access via Old Nichols Road, short-term duration of the proposed project, activities to occur during

normal daytime hours, lack of sensitive receptors or immediate neighbors, and the review, approval, construction management and development oversight that will occur with respect to this project.

Erosion control measures to be instituted during development of the proposed project will include:

- installation of staked hay bales and silt fencing, including the downslope limit of all cleared/graded areas,
- installation of "rumble strips" (which cause truck tires to shed any mud trapped within the treads) at the construction vehicle entrance,
- minimizing the time span that denuded soil is exposed to erosive elements,
- the construction manager, in combination with the various specialized contractors, will be responsible for installation and maintenance of the erosion and sediment controls,
- a dust control and watering plan will be instituted, and
- the construction manager will be responsible for ensuring proper storage and stockpiling of construction materials and that building supplies will be stored in designated areas.

A **Landscape Plan** (**SP8.2**) has been prepared for this change of zone and will be further reviewed and approved by the Planning Board. This will ensure that potential impacts with respect to a sandy surface layer and slopes are adequately addressed and as a result, no long-term soil impacts are expected. Short-term soil impacts will be mitigated through erosion control measures that were previously discussed.

Soils

Soils on site have been somewhat impacted by grading and compaction from the horse farm use. Modification of soil by grading activities for the proposed project is an unavoidable impact. None of the three (3) soil types on-site present significant difficulties in regard to the type of development proposed. The only significant limitation is related to slopes and sandy surface layers. Amendment of soil using surface topsoil will ensure that soils support landscape vegetation. As a result, limitations to lawns which are projected due to sandy surface layers will be mitigated through the importation of topsoil and the use of drought resistant vegetation for landscape purposes. Loss of soils classified as prime agricultural soils is an impact that cannot be avoided. There is no realistic possibility that the farming will occur on the property given the land values in the Village of Islandia. In addition, the site size of 10.12 acres is small for commercial farm purposes. Farming would require plowing, fertilization and harvest; all activities which would generate noise and dust and impacts that may be incompatible with the surrounding community. There are no farms in the nearby area and, as a result of these factors, farming is not considered to be a viable use of the property.

2.1.3 Proposed Mitigation

- A Landscaping Plan has been prepared and will be reviewed and approved by the Planning Board.

- The site's surfaces to be regraded are not significant, as the site had been altered for the existing horse farm. The Site Plan has been devised to minimize the area and volume of disturbance, and grading is anticipated to be the minimum necessary to achieve the goals for the proposed development. Resultant development areas will be permanently stabilized using grading techniques and retaining walls, and slopes will not anticipated to exceed 1:3. Additionally, graded areas will be either developed with buildings and pavement or will be revegetated with groundcover and landscape species; no bare soil surfaces will remain.

- Dust raised during grading operations will be minimized and controlled by the use of water sprays, truck cleaning stations at the construction exit, and implementation of any dust suppression systems specified by the appropriate Village agencies.

- There will be no washing or processing of excavated material on site; all excess material will be trucked off-site and sold as fill.

- Truck movements and construction activities will be undertaken on the site 5 days a week during the hours of approximately 8 AM-5 PM or as specified by the Village Code. Truck routes to and from the site will be limited to Old Nichols Road with convenient access to and from the LIE, thereby minimizing noise, dust and potential safety impacts to residential communities adjacent to the site.

- Roadways will conform to existing topography to the maximum extent possible and will require some grading for slope transitions to promote drainage pickup and recharge. All man-made slopes on the site will be 1:3 or less.

- None of the three soil types on-site present significant difficulties in regard to erosion or grading operations. Only the PlA and PlC soil poses severe limitations due to slopes and sandy surface layer. However, these limitations can be overcome through proper site grading as well as the importation of topsoil and the use of drought resistant vegetation for landscape purposes.

- Erosion control measures such as staked hay bales, silt fences, groundcovers (vegetative or artificial), drainage diversions, minimizing the area of soil exposed to erosive elements at one time, and minimizing the time span that soil is exposed to erosive elements, will be utilized to minimize loss of soil during construction, particularly in locations where erosion and sedimentation could adversely impact adjoining properties and streets. Applicable Village of Islandia standards and construction practices will be followed. As long as erosion is controlled during grading and construction, the potential for sediment transport will be minimal, and no significant loss of soils is expected.

2.2 Water Resources

2.2.1 Existing Conditions

<u>Hydrogeologic Conditions</u>

Groundwater on Long Island is entirely 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, referred to as the water table. The groundwater table is equal to 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. The changes in elevation of the water table create a hydraulic gradient that causes groundwater to flow downgradient.

The subject property is south of the regional groundwater divide indicating that in the horizontal plane, flow is generally toward the south. Groundwater will be ultimately discharged from the subsurface system into the Connetquot River which flows toward Great South Bay. The major water bearing units beneath the subject property include: the Upper Glacial aquifer, the Magothy aquifer, and the Lloyd aquifer **(Smolensky et al, 1989).**

The water table beneath the site it lies at approximately 38 feet above msl and encountered at a depth of approximately 12 feet below ground surface (bgs). It should be noted that the elevation of the water table fluctuates on a seasonal basis, and depends on meteorological conditions. The water table elevations and generalized direction of flow are illustrated in **Figure 2-2**.

Groundwater Quality

The Suffolk County Comprehensive Water Resources Management Plan (1987) provides information on water quality from 0 to 400 feet below the water table, based upon observation as well as public and private water supply and well monitoring. The general area in proximity to the subject property is depicted as having good water quality with respect to nitrate-nitrogen (0-6 mg/l) at between 0 and 100 feet. With regard to organic compounds, SCDHS water quality data presented in the Suffolk County Comprehensive Water Resources Management Plan indicates that Volatile Organic Compound levels at 0-100 feet below the water table are good (less than 60% of standard) and found not to exceed drinking water standards the majority of the time; however, there are several areas in proximity to the site that exceed drinking water standards for organic parameters.

The SCDHS conducted an eighteen-month long study of the impact pesticides have had on the groundwater. The study obtained water quality information from across the full geographic area of both counties in order to identify if any pesticides and metabolites had leached into the groundwater. The data from the wells in Nassau County and the five western towns of Suffolk County show that only 1.5 and 2.0%, respectively, exceeded the pesticide related drinking water maximum contaminant levels (MCL) and 15.4% of the wells in the five eastern Suffolk towns exceeded the MCL. Private wells in the five eastern towns are at the highest risk of pesticides contamination. Based on the maps provided in the appendix of the SCDHS study revealed the subject property is not located in the vicinity of any wells that are contaminated with pesticides.

The SCWA Nichols Road South wellfield and pump station is located immediately north of the subject property. **Figure 2-3** illustrates the location of the wellfield in relation to the subject property as well as water mains in the area. The water table beneath this wellfield is at a similar elevation as that of the project site and, as the water table slopes downward to the south, water pumped at this wellfield is not generally recharged from the project site.

The SCWA provided water quality testing data ranging from September 2006 to September 2007. The SCWA 2007Annual Drinking Water Quality Report was consulted. Both sources indicated that methyl tertiary butyl ether (MTBE) was detected in some untreated water samples

at a level well below the MCL of 5 micrograms per liter (ug/l). Specifically, the test results indicate an MTBE concentration of 0.7 ug/l, which is 86% below the MCL. It is expected that this MTBE originated from leakage of underground gasoline storage tanks in the area upgradient of the wellfiled. As a result of this low concentration and conformance to the MCL, the presence of MTBE does not pose a significant health risk to site or area occupants.

Groundwater Budget

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. The basis for this method of nitrogen budget analysis is well established, and similar techniques have been used to simulate nitrogen in recharge as published by the New York State Water Resources Institute, Center for Environmental Research at Cornell University, Ithaca, New York (BURBS - A Simulation of the Nitrogen Impact of Residential Development on Groundwater). The **SONIR** model includes four sheets of computations: 1) Data Input Field; 2) Site Recharge Computations; 3) Site Nitrogen Budget; and 4) Final Computations. There are a number of variables, values and assumptions concerning hydrologic principles, which are discussed in detail in a user manual developed for the **SONIR** Model and provided in **Appendix B-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 (see **Table 1-1**). The project site currently has a total site recharge of 6.02 million gallons per year (MGY; 16,491 gpd) and this volume originates solely from stormwater recharge. The results of this analysis are presented in **Appendix B-2**.

Nitrogen Budget

A detailed assessment of the existing concentration of nitrogen in site-generated recharge can be made by calculating the total nitrogen input to groundwater, diluted by the total volume of recharge water. The basis for this simulation was established in the 208 Study and further developed by the Cornell University, Water Resources Program.

The **SONIR** model was utilized to determine the present recharge volume and nitrogen concentration existing at the site; the results are presented in **Appendix B-2.** The estimated nitrogen concentration in recharge generated on the site is 7.29 mg/l, a total which originates completely from stormwater and the horses housed at the facility.

Stormwater

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 improved 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 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…"

The purpose of the NURP Study carried out by the US Geological Survey 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.

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 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)

Based on the sampling program, the 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[including Syosett, which is the area whose density is most similar to the project site]; 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.

Finding: The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10^0 MPN (Most Probable Number) 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.

The findings of the NURP report are relevant to development of the subject site. Leaching pools are recognized as being appropriate for best stormwater management practice on Long Island.

The Nonpoint Source Management Handbook issued several regulation recommendations that apply to Federal, State and Local agencies in order to provide protective measures for ground and surface waters. Development of the proposed project will comply with all applicable regulations with regard to ground and surface water issues which will be evaluated during SEQRA and Site Plan review. Any deficiencies in site design or layout will be addressed accordingly in order to obtain development approval for the project.

2.2.2 Anticipated Impacts

Hydrogeologic Conditions

The depth to water beneath the subject property is approximately 12 feet bgs and regionally groundwater is observed to flow in a southerly direction. The subject site has adequate depth to groundwater to ensure that leaching of wastewater and stormwater recharge will occur efficiently. Recharge quality must be considered to determine water quality impacts. Related to recharge characteristics of the developed site is the density of development and sewage handling which are described below.

Wastewater will be generated as a result of the proposed use of the site for multi-family residential purposes. Article 6 of the SCSC 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 SCDHS. As promulgated under Article 6, a Population Density Equivalent must be determined for the subject site in order to determine the type of sewage disposal system required for the proposed project. This equivalent (or total allowable flow) is then compared to the design sewage flow for the project. If the project's design sewage flow exceeds the Population Density Equivalent, a community sewerage system or on-lot sewage treatment system is required. If the project's design sewage flow is less than the site's Population Density Equivalent, a conventional subsurface sewage disposal system may be used, provided individual systems comply with the current design standards and no community sewerage system is available or accessible.

The project site is located within Groundwater Management Zone I as defined by the SCDHS. Based on the requirements of Article 6, no more than 600 gallons per acre may be discharged 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 project site is 10.17 acres in size, thus, the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

(10.12 acres x 0.75 x 43,560 SF/20,000 SF) x 300 gpd/acre = 4,959 gpd

The 72 proposed condominiums will generate approximately 14,550 gpd of sewage flow and the clubhouse will generate 375 gpd, for a total residential wastewater generation of approximately 14,925 gpd. Since the project design flow exceeds the allowable flow, a sewage treatment system is required. The project sponsor intends to utilize a Cromaglass wastewater treatment system on site; therefore, the total design flow must not exceed 15,000 gpd.

The proposed Cromaglass system will be the subject of an engineering report, and design and specification review and approval by the SCDHS and SCSA, with issuance of a SPDES permit by SCDHS as an arm of the NYSDEC. Such systems are required to meet discharge limitations under the SPDES permit effluent requirements; Cromaglass plants are designed to meet the total nitrogen limit of 10 mg/l, which is also the drinking water standard. In addition, the system will be operated by a NYS licensed operator, and will be required to file discharge monitoring reports (DMRs). STPs are subject to inspection by personnel and are regularly maintained to ensure safety and ability to meet discharge limitations. As a result, no significant adverse impacts are expected. The siting of the effluent discharge is considered in the following subsection.

Groundwater Quality

As noted in **Section 2.2.1**, a SCWA wellfeld and pump station are located immediately north of the subject property. The SCWA provided water quality testing data ranging from September 2006 to September 2007 which indicated that methyl tertiary butyl ether (MTBE) was detected in some untreated water samples at a level well below the MCL of 5 micrograms per liter (ug/l). As a result of this low concentration and treatment prior to delivery to customers, the presence of MTBE does not pose a significant health risk to site or area occupants.

SCDHS utilizes a groundwater model to determine the contributing area to wellfields in Suffolk County; the application of the model for this purpose is referred to as the Source Water

Assessment Program (SWAP). SWAP runs were obtained for the wellfield north of the site (**Appendix E**). The central part of the subject site contributes to this wellfield; however, the west and extreme east part of the site are not within the contributing area. As a result, the proposed Cromaglass system and discharge are proposed to be located in the extreme west part of the site, so as to avoid impact to this wellfield from recharge of sanitary effluent. The location of the STP discharge in this area of the site, coupled with the treatment of sanitary wastewater to less than 10 mg/l, ensures that no significant water quality impacts or impacts to the wellfield will occur as a result of the project. As a portion of the site to be landscaped is within the contributing area, it is expected that some impact to groundwater quality may occur from landscape chemical applications on this area. However, such potential impacts are not expected to be significant, as the NURP Study established that the concentrations of inorganic chemicals in recharge (including landscape fertilizers and pesticides) are generally low, and within permissible ranges for potable water.

As noted in **Section 1.3.2**, it is not known whether there are any underground storage tanks on the site; in consideration of the site's horse farm usage, any such tanks would be associated with the building's heating system. Nevertheless, if any underground tanks are present, they will be properly removed during the site preparation phase and any contamination resulting from leakage will be properly remediated and reviewed by the NYSDEC.

Groundwater Budget

SONIR computer model results indicate that the volume of water recharged on the subject site will be increased by the proposed project (see **Appendix B-3**). Specifically, a total of 13.29 MGY will be recharged annually, of which 41.0% originates from sanitary wastewater, 57.3% comes from stormwater, and 1.61% is irrigation. As the site currently generates 6.00 MGY of recharge, the project represents a 54.85% increase in this resource.

Nitrogen Budget

Appendix B-3 indicates that the concentration of nitrogen in the site's recharge will be decreased by the proposed project, from an existing concentration of 7.28 mg/l to 4.99 mg/l. This overall concentration results from 90.43% sanitary wastewater, 0.12% from stormwater, 0.05% from irrigation water and 9.40% from fertilizers. The proposed project represents an overall decrease in nitrogen concentration as compared to the existing value, and will be well within the applicable NYS Drinking Water Standard of 10 mg/l. In consideration of these factors, the project would have no adverse impact on groundwater quality or quantity.

2.2.3 Proposed Mitigation

- The subject site has adequate depth to groundwater to ensure that leaching of wastewater and stormwater recharge will occur efficiently.

- The 72 proposed condominiums will generate approximately 14,550 gpd of sewage flow and the clubhouse will generate 375 gpd, for a total residential wastewater generation of approximately 14,925 gpd. The design flow of the proposed project exceeds the allowable flow for the property and as a result, a sewage treatment system is required. The project sponsor intends to utilize a

Cromaglass wastewater treatment system on site; therefore, the total design flow must not exceed 15,000 gpd.

- The proposed Cromaglass system will be the subject of an engineering report, and design and specification review and approval by the SCDHS and SCSA, with issuance of a SPDES permit by SCDHS as an arm of the NYSDEC. Such systems are required to meet discharge limitations under the SPDES permit effluent requirements; SBR plants of this size are typically below or meet the total nitrogen limit of 10 mg/l, which is also the NYS drinking water standard.

- The Cromaglass system will be operated by a NYS licensed operator, and will be required to file DMRs. Such systems are subject to inspection by personnel and are regularly maintained to ensure safety and ability to meet discharge limitations. As a result, no significant adverse impacts are expected.

- The proposed development will include a Cromaglass wastewater treatment facility which will be located in the western corner of the property to ensure that the discharge is not located in a contributing area to the wellfield based on the results of the SWAP model run for the wellfield.

2.3 Ecological Resources

2.3.1 Existing Conditions

Vegetation

The subject property is 10.12 acres in size and consists of an active equestrian center with some areas of successional field, as defined by NYSDEC (**Reschke, 1990; Edinger et al, 2002**). Unvegetated areas occupy most of the site (approximately 6.55 acres). The remainder of the site is comprised of buildings/paved areas and trees.

The existing site habitat quantities as determined by aerial photography and field visits by NP&V and are presented in **Table 2-2**. **Figure 2-3** provides a habitat map of the subject site. The Final Scoping document had specified that a Tree Preservation Plan was to be prepared for the project, showing all trees having a diameter-at-breast-height (dbh) of 6 inches or greater. However, this has not been done because on-site inspections have revealed that few eligible trees are present, which would not have justified the time and expense to prepare such a map. 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 Connetquot River (NYSDEC Freshwater Wetland C-3) is located approximately 800 feet from the subject site at its nearest point, as illustrated in **Figure 2-4**.

Table 2-2
EXISTING HABITAT QUANTITIES

Parameter	Existing Conditions
Successional Field	1.32 acres
Buildings & Impervious	0.81 acres
Landscaped	1.44 acres

Unvegetated	6.55 acres
TOTAL	**10.12 acres**

Successional old field is the initial stage in the process of succession, which is the reversion of disturbed habitats to climax forest. The habitat generally supports a wide variety of weedy species that colonize readily, including goldenrods, grasses, timothy, ragweed and asters. **Reschke (1990)** defines an old field as "*a meadow dominated by forbs and grasses that occurs on sites that have been cleared or plowed, and then abandoned."* Woody species may be present, but coverage by shrubs is less than 50%. The successional field on the project site (approximately 1.32 acres) is dominated by grasses (e.g. foxtail, switch grass, broom sedge) and mugwort. Other common herbaceous species include mullein, goldenrod, plantain, goose grass, and Jimson weed.

Table 2-3 presents a list of vegetation observed or expected on site given the habitats present; it is based upon field investigations conducted by NP&V during December of 2007. 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 2-3
PLANT SPECIES LIST

Trees		
	amur maple	*Acer pginnala [i]*
*	Norway maple	*Acer platanoides [i]*
	red maple	*Acer rubrum*
	silver maple	*Acer saccharinum*
	sugar maple	*Acer saccharum*
	tree-of-heaven	*Alianthus altissima [i]*
	gray birch	*Betula populifolia*
	white birch	*Beti]ula papyrifolia*
	pignut hickory	*Carya ovalis*
	mockernut hickory	*Carya tomentosa*
	silky dogwood	*Cornus amomum*
	flowering dogwood	*Cornus florida [p]*
	red-osier dogwood	*Cornus stolonifera*
	hawthorne	*Craetagus sp.*
	American beech	*Fagus gradifolia*
	black walnut	*Juglans nigra*
	eastern red cedar	*Juniperus virginiana*
	magnolia	*Magnolia sp.*
	crab apple	*Malus coronaria[p]*
	common apple	*Malus pumila*
	mulberry	*Morus alba*
*	pitch pine	*Pinus rigida*
	white pine	*Pinus strobus*
	eastern cottonwood	*Populus deltoides.*

bigtooth aspen	*Populus grandidenta.*
* black cherry	*Prunus serotina*
choke cherry	*Prunus virginiana*
* white oak	*Quercus alba*
* scarlet oak	*Quercus coccinea*
pin oak	*Quercus palustris*
chestnut oak	*Quercus prinus*
red oak	*Quercus rubra*
* black oak	*Quercus velutina*
* black locust	*Robinia pseudoacacia [i]*
sassafrass	*Sassafras albidum*
yew	*Taxus floridana*
hemlock	*Tsuga canadensis*

Shrubs and Vines

bamboo (several "running" varieties) *[i]*	
porcelain-berry	*Ampelopsis brevipedunculata [i]*
Japanese barberry	*Berberis thunbergii [i]*
boxwood	*Bux sempervirens*
trumpet creeper	*Campsis radicans*
Oriental bittersweet	*Celastrus orbiculatus [i]*
American bittersweet	*Celastrus scandens [p]*
Chinese yam	*Dioscorea batatas [i]*
silverberry	*Elaeagnus commutata*
Russian olive	*Elaeagnus angustifolia [i]*
autumn olive	*Elaeagnus umbellata [i]*
winged eunonymous	*Euonymus alatus [i]*
burningbush	*Euonymus atropurpureus*
forsythia	*Forsythia sp.*
English ivy	*Hedera helix[i]*
Japanese holly	*Ilex crenata 'Microphylla'*
bush clover	*Lespedeza sp.*
border privet	*Ligustrum obtusifolium [i]*
California privet	*Ligustrum ovalifolium [i]*
Chinese privet	*Ligustrum sinense [i]*
European privet	*Ligustrum vulgare [i]*
honeysuckle	*Lonicera spp.*
Japanese honeysuckle	*Lonicera japonica [i]*
fly honeysuckle	*Lonicera morrowii [i]*
trumpet honeysuckle	*Lonicera sempervirens*
tartarian honeysuckle	*Lonicera tatarica [i]*
stagger-bush	*Lyonia mariana*
bayberry	*Myrica pensylvanica* [p]
Virginia creeper	*Parthenocissus quinquefolia*
mile-a-minute vine	*Polygonum perfoliatum [i]*
kudzu	*Pueraria Montana var. lobata [i]*
common buckthorn	*Rhamnus cathartica [i]*
smooth buckthorn	*Rhamnus frangula [i]*
pinkster bloom	*Rhododendron nudiflorum [p]*

azaelea	*Rhododendron sp. [p, native only]*
smooth sumac	*Rhus glabra*
staghorn sumac	*Rhus typhina*
currant	*Ribes lacustre*
* multiflora rose	*Rosa multiflora [i]*
brambles	*Rubus sps.*
blackberry	*Rubus allegheniensis*
common dewberry	*Rubus flagellaris*
wineberry	*Rubus phoenicolasius[i]*
greenbriar	*Smilax rotundifolia*
nightshade	*Solanum sp.*
Japanese spiraea	*Spiraea japonica [i]*
poison-ivy	*Toxicodendron radicans*
maple-leaved viburnum	*Viburnum acerifolium*
grape	*Vitis spp.*
myrtle	*Vinca minor[i]*
Japanese wisteria	*Wisteria floribunda [i]*
American wisteria	*Wisteria frutescens*
Chinese wisteria	*Wisteria sinensis [i]*

Herbs and Groundcovers

yarrow	*Achillia millefolium*
redtop	*Agrostis gigantea*
garlic mustard	*Alliaria petiolata [i]*
wild onion	*Allium stellatum*
* big bluestem grass	*Andropogon gerardii*
little bluestem grass	*Andropogon scoparius.*
pigweed	*Amaranthus sp.*
ragweed	*Ambrosia artemisiifolia*
dogbane	*Apocynum maculosa*
* mugwort	*Artemisia vulgaris [i]*
* common milkweed	*Asclepias syrica*
* asters	*Aster spp.*
yellow rocket	*Barbarea vulgaris*
mustard	*Brassica sp.*
sedge	*Carex sp.*
spotted knapweed	*Centurea maculosa*
common lamb’s quarters	*Chenopodium album*
chicory	*Cichorium intybus*
enchanter’s nightshade	*Circacea quadrisulcata*
thistle	*Cirsium sp.*
crown vetch	*Coronilla varia*
black swallow-wort	*Cynanchum louiseae [i]*
* broom	*Cytisus scoparius*
* orchard grass	*Dactylis glomerata*
poverty grass	*Danthonia spicata*
* Jimson weed	*Datura stramonium*
Queen Anne's lace	*Daucus carota*
cypress spurge	*Euphorbia cyparissias*

common strawberry	*Fragaria virginiana*
ground ivy	*Glechoma hederaceae*
woodland sunflower	*Helianthus divaricatus*
giant hogweed	*Heracleum mantegazzianum [i]*
hawkweed	*Hieracium sp.*
common St. Johnswort	*Hypericum perforatum*
tall, perennial pepperweed	*Lepidium latifolium [i]*
field pepperweed	*Lepidium campestre*
butter-n-eggs	*Linaria vulgaris*
* rye grass	*Lolium sp.*
white campion	*Lychnis alba*
whorled loosestrife	*Lysimachia quadrifolia*
Japanese stilt grass	*Microstegium vimineum [i]*
Chinese silver grass, Eulalia	*Miscanthus sinensis [i]*
evening primrose	*Oenethera biennis*
sensitive fern	*Onoclea sensibilis*
sweet cicely	*Osmorhiza claytoni*
panic grass	*Panicum sp*
common reed	*Phramites australis.[i]*
timothy	*Phleum pratense*
poke weed	*Phytolacca americana*
bluegrass	*Poa sp.*
Soloman's seal	*Polygonatum biflorum*
* plantain	*Plantago sp*
cinquefoils	*Potentilla spp.*
mock or Indian strawberry	*Potentilla indica*
common buttercup	*Ranunculus acris*
lesser celandine	*Ranunculus ficaria [i]*
black-eyed Susan	*Rudbeckia hirta*
dock	*Rumex crispus*
bouncing bet	*Saponaria officinalis*
* green foxtail	*Setaria viridis*
* goldenrod	*Solidago spp.*
false Soloman's seal	*Smilacina racemosa*
* common dandelion	*Taraxacum officinale*
* clover	*Trifolium sp.*
* common mullein	*Verbascum thapsus*
cow vetch	*Vicia cracca*
spring vetch	*Vicia satvia*
sweet violet	*Viola blanda*
cocklebur	*Xanthium chinense*

* Species identified on site during field visits by NPV Staff.
[e] NYS endangered species
[i] NYS invasive species (no legal status)
[p] NYS exploitably vulnerable protected plant

Rare and Endangered Plant Species Potential

No rare, threatened or endangered plants were observed on site. The NY Natural Heritage Program (Environmental Conservation Law, ECL 9-1503) was contacted to determine if there is any record of rare plants, habitats or wildlife in the vicinity. Correspondence with the Natural Heritage Program is contained in **Appendix D-1**; this includes information in a search of their files for unique plants and communities, as well as the Breeding Bird Atlas printout material.

The Natural Heritage Program has fifteen (15) records of known occurrences of rare or state-listed plants in the vicinity of the subject site, and has listed two (2) significant natural communities in the vicinity of the property. The Connetquot River watershed is located less than one-half mile south of the subject property and contains extensive acreage of Red Maple-Hardwood Swamp (as much as 236 acres) as well as Pitch Pine-Oak Forest (more than 1,000 acres). Both of these communities are considered significant from a statewide perspective by the NY Natural Heritage Program. Pitch Pine-Oak Forest is considered to be apparently secure within the State. Red Maple-Hardwood Swamp is considered to be apparently/demonstrably secure with the State. Neither of these communities are located on the subject site.

Barratt's sedge (*Carex barrattii*) is an endangered graminoid plant last observed in 1991 near the Connetquot railroad. Although listed in New York State as critically imperiled, it is listed as apparently secure on a global scale. This species generally prefers wet pine barrens habitat. No wetlands or wet areas were identified on the subject site, which makes it unlikely that this species is present on site.

Collins Sedge (*Carex collinsii*) is an endangered vascular plant with historical records in the vicinity. This species was last identified in 1925 in a wet sphagnum thicket. This species is listed as apparently secure globally, although it may also be quite rare. Statewide, this species is listed as having both 5 or fewer and/or 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors making it especially and/or very vulnerable. This species prefers bog habitats. The historical record, as well as lack of suitable habitat, make it unlikely that this species is present on site.

Little-leaf tick trefoil (*Desmodium ciliare*) is a New York State threatened species last observed in 1928. The plants are documented as being located pine barrens scrub in Central Islip. On a global scale, this species is listed as being demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery. Statewide, however, this species has been give both a "S2" and "S3" ranking, meaning there are typically 6 to 20 occurrences, few remaining individuals or factors making it very vulnerable in New York and/or typically 21 to 200 occurrences, limited acreage or miles of stream in New York, respectively. This species is found in dry sandy soils in open ground. Although some suitable habitat exists on site, the historical observations of this species and lack of optimum habitat make it unlikely that this species is found on site or in the vicinity.

Slender crabgrass, *Digitaria filiformis*, is a threatened vascular plant with historical records in the vicinity. This species is listed as typically having 6 to 20 occurrences or other factors demonstrably making it very vulnerable in New York although is demonstrably secure on a global scale. This species was last observed in 1923 and prefers dry sandy soil. The property

was well traversed in linear and random transects to identify the existing habitats and subsequent plant species present. Particular attention was given to locating habitat which would be suitable for the growth of Slender Crabgrass, such as woodland edges and openings within the tree canopy. Slender Crabgrass was not identified as occurring on the subject property. Although suitable habitat exists on the subject property, the property is developed and actively used making the potential for the presence of the species to be low.

American waterwort (*Elatine Americana*) is listed as critically imperiled in New York State, although it is apparently secure on a global scale. The species was last documented in 1974 within Connetquot River State Park in Islip. The historical record, as well as lack of suitable habitat, makes it unlikely that this species is present on site.

Showy aster, *Eurybia spectabilis,* is a threatened forb/herb plant that prefers dry, sandy habitat. Although listed as imperiled in New York State, it is considered demonstrably secure on a global scale. This species was last documented in 2003 along the Connetquot railroad in Islip. Although some suitable habitat exists on site, the highly disturbed nature of the subject site makes it unlikely that this species is found on the subject site or in the immediate vicinity.

Swamp sunflower (*Helianthus angustifolius*) is listed as imperiled in New York State, although it is demonstrably secure on a global scale. This species was last documented in a pine barrens swamp in Central Islip in 1923. The historical record, as well as lack of suitable habitat, makes it unlikely that this species is present on site.

Bead pinweed (*Lechea pulchella var. moniliformis*) is an endangered forb/herb plant that prefers dry, sandy soils. Although listed in New York State as crucially imperiled, it is considered apparently secure on a global scale. This species was last documented in 1990 along the Connetquot railroad in Islip. Although some suitable habitat exists on site, the highly disturbed nature of the subject site makes it unlikely that this species is found on the subject site or in the immediate vicinity.

Velvety bush-clover, or *Lespedeza stuevei*, is listed as rare in New York State, although it is apparently secure on a global scale. Currently, there is a question with regards to the global ranking of this species. Statewide, there are typically 6 to 20 occurrences, few remaining individuals, acres or other factors, which make it very vulnerable in New York State. The species was last documented in 1924 within a dry pine barrens habitat in Central Islip. Although some suitable habitat exists on site, the historical observations of this species make it unlikely that this species is found on site or in the vicinity.

Southern yellow flax *(Linum medium var. texanum)* is a threatened vascular plant that prefers rocky open woods with acidic soils. It was last observed in 1921 in a dry, roadside pine barrens habitat in Central Islip. This species is listed as demonstrably secure globally, although only typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State. This species is typically found in dry soil habitats. Although some suitable habitat exists on site, the historical observations of this species make it unlikely that this species is found on site or in the vicinity.

Orange milkwort, *Polygala lutea*, is an endangered forb/herb plant that prefers dry, sandy soils. Although listed in New York State as crucially imperiled, it is considered demonstrably secure on a global scale. The species was lasted documented in 1985 along the Connetquot railroad in Islip. Although some suitable habitat exists on site, the highly disturbed nature of the subject site makes it unlikely that this species is found on the subject site or in the immediate vicinity.

Catfoot (*Pseudognaphalium helleri ssp. micradenium*) is an endangered forb/herb plant that prefers dry, sandy soil. Although listed in New York State as historical, it is considered vulnerable on a global scale. There is some question to its global status. The last report of this species was located in the general area of Central Islip in 1925. Although some suitable habitat exists on site, the historical observations of this species make it unlikely that this species is found on site or in the vicinity.

Flax-leaf whitetop (*Sericocarpus linifolius*) is a threatened forb/herb plant that prefers dry, sandy soils. It was last observed in 1921 in a dry roadside pine barrens in Central Islip. Although listed in New York State as imperiled, it is demonstrably secure on a global scale. Although some suitable habitat exists on site, the historical observations of this species make it unlikely that this species is found on site or in the vicinity.

Coastal goldenrod (*Solidago latissimifolia*) is an endangered forb/herb plant that prefers wet areas. It was last observed in 1919 in a Connetquot swamp. Although listed in New York State as critically imperiled, it is demonstrably secure on a global scale. The historical record, as well as lack of suitable habitat, make it unlikely that this species is present on site.

Silvery Aster (*Symphyotrichum concolor*) is a threatened forb/herb plant that prefers dry, sandy soil, and open woods. The last report of this species was located in the general area of Central Islip on October 10, 1918. Fire suppression is a threat to this species, as it generally requires more open areas, and as a result, the species adapts to grassy openings, roadsides and fence lines of successional coastal heathland. While the site may contain some suitable habitat (e.g. small cleared areas in the site), the more developed surrounding areas where historical fire suppression is prevalent and roadsides experience continued disturbance, may be more appropriate habitat. The presence of invasive plants on the property further reduce the suitability of the habitat on site and observations conducted during multiple field visits have not found silvery aster to be present on the property. As a result, the species is unlikely to be found on the site.

No “exploitably vulnerable” species were identified 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. Regardless, under 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 ECL the *Applicant* (i.e. owner) would not be restricted in utilizing the site for the intended purpose. Therefore, the presence of any protected plants would not restrict use of the site under the NYS ECL.

Wildlife

The successional vegetation found on site should provide habitat for a number of wildlife species, although few were observed during the field visit. Most wildlife species found in early successional habitats adjust well to human activity, and the small size of the successional areas combined with the surrounding development make it unlikely that area-sensitive grassland species are present. The species present on site are likely to be relatively common suburban species. The following text discusses the avian species that would be expected to breed on site, as well as those species that might be expected during migrations or as winter residents. In addition, data from the 2000-2005 Breeding Bird Survey for the census blocks which contain the site was obtained from the NYSDEC (**Appendix D-2**). This study surveyed the Entire State by 25 km^2 census blocks over a five-year period to determine the bird species which breed within the State. Most of the species listed by the NYSDEC breeding bird survey are likely to be found on site, with the exception of species restricted to wetlands or other habitats not found on site. Birds that prefer a mix of woodland and suburban habitats may be present on the property. **Appendix D-3** presents a computer-generated list of species expected on site given the habitat available. This list is provided as a supplement to site specific discussions included herein, and also includes information on the biological needs of each species. NP&V developed the model, as a tool to supplement site specific inventory and discussions, and is described more fully in the introductory statement contained in **Appendix D-3**.

Birds

Seed-eating birds, including finches, towhees, and sparrows, are expected to be relatively common on site **(Bent, 1968, 1968).** The most common sparrow which breeds on Long Island is the song sparrow, and the introduced house sparrow is also abundant. Both species are found in forest openings, suburban areas and overgrown field habitats, and are expected on site. The house sparrow, an introduced old world species which often nests on buildings, is considered a pest and was observed on site. It is likely to be present in the area. The chipping sparrow and field sparrow may also utilize the site to a limited degree, as they prefer overgrown brushy areas. The related northern junco, fox sparrow, white-throated sparrow and white-crowned sparrows are common winter visitors on Long Island, and are expected during the colder months. The vesper, Savannah and grasshopper sparrows are area-sensitive grassland species. They are not expected on site given the frequently disturbed sod fields which dominate the site and the existing development in the surrounding area.

The American goldfinch and house finch are the most likely finches to utilize the property. The house finch prefers suburban and edge habitats. The American goldfinch prefers a diet of thistle and dandelions and may utilize the successional old field portion of the site. The northern cardinal, as well as the related rufous-sided towhee and rose-breasted grosbeak prefer woodlands with dense understory and or hedgerows and are likely to be on the site.

Corvids which are common on Long Island include the American crow and blue jay. Both are expected on site. The northern mockingbird, brown thrasher, and gray catbird are thrasher species that might be found on site, and are also expected to utilize the site and surrounding areas, as this group generally prefers more open habitats **(Andrle and Carroll, 1988**). Two additional confirmed breeders, the American robin and the European starling, both have similar

habitat requirement as the thrashers. These species are common in fields and suburban areas and typically feed on insects and fruits.

Birds from the oriole and blackbird family also feed on a mix of insects, seeds, fruit and aquatic fauna. The grackle and brown-headed cowbird might be expected on site **(Andrle and Carroll, 1988).** These birds generally prefer open woodlands and field habitats, and are probably common throughout the area, as they are relatively tolerant of development. The cowbird is a nest parasite which lays eggs in the nests of other birds. The northern oriole is expected to be present, as it generally prefers to nest in taller trees in open areas. The horned lark and killdeer are also generally expected, as they prefer open areas with short grass.

Woodpeckers prefer mature woodlands where insects are abundant. Mature trees are present within the pitch pine-oak forest habitats on site, and woodpeckers are expected in small numbers in these areas. Species such as the northern flicker, hairy woodpecker and downy woodpecker are all common on most of Long Island; these species are listed as confirmed breeders within the atlas blocks. The hairy woodpecker is secretive and avoids human activity, and thus is likely to be restricted to the pitch pine-oak woodland on the southern portion of the site, which is contiguous with a larger woodland area to the south and west. The red-bellied woodpecker may also potentially be found in the mature woodland on site.

A few smaller insect feeding birds are found in overgrown areas, including the wrens, titmice, and nuthatches. The nuthatch and titmouse typically breed in woodlands and may be present on site. The house wren is the only wren expected on site, as it is commonly found in suburban areas and edge habitats as well as forest understory, where it feeds on insects.

Birds from the flycatcher family feed on flying insects in woodlands, edge habitats and open areas. The eastern kingbird, eastern wood-pewee and great-crested flycatcher are the most common flycatchers on Long Island **(Bent, 1963; Andrle and Carroll, 1988)**. These species are generally found in deciduous woodlands or edge habitats, although the great-crested flycatcher prefers larger blocks of woodland and is less tolerant of human activity **(Andrle and Carroll, 1988**). The kingbird generally prefers more open areas, and is most likely to utilize the edge habitat on the site. The eastern wood-pewee is an "edge" species found mainly at forest margins and openings and is common to fragmented and open forest tracts **(Bent, 1963; Andrle and Carroll, 1988).** This species is also expected to utilize the site. The willow flycatcher is a western flycatcher which appears to be expanding its range in the eastern U.S., including Long Island (**Andrle and Carroll, 1988**). The willow flycatcher is most common in overgrown pastures and shrub wetlands, and is not likely on site. The least flycatcher is a breeding bird of deciduous and mixed forests. It prefers semi-open areas: forest edges, open woodlands, stream and pond borders, and also orchards and parks **(Andrle and Carroll, 1988)**. The scarlet tanager is extremely vulnerable to habitat fragmentation and is usually found in mature wooded areas of over 50 acres; thus, it may be expected on the woodlands adjacently south and east of the property, but not on the property as there is lack of suitable habitat **(Andrle and Carroll, 1988).**

Most thrushes and creepers also feed on insects in wooded areas. The eastern bluebird is typically a rural bird of open country, found in cropland, gardens, roadsides, wetlands and edges

of open woodlands **(Andrle and Carroll, 1988**) which may utilize the open portion of the site. The wood thrush is expected to utilize the site, as it prefers open woods with a well developed understory of shrubs and small trees **(Andrle and Carroll, 1988**). Suitable habitat is found over portions of the property for both of these species. The hermit thrush might also be present, as it prefers pine barrens habitats **(Andrle and Carroll, 1988**). Long Island is at the southern limit of the species breeding range, although it is a relatively common winter visitor in the area.

The vireos are also somewhat vulnerable to forest fragmentation, with only the red-eyed vireo expected on site. Although it will use suburban habitats and is found in woodlots of varying sizes, the red-eyed vireo appears to be more susceptible to nest parasitism by the cowbird in developed areas where there is more edge habitat (**Andrle and Carroll, 1988**).

Common Long Island swallows include the barn and tree swallows, both of which adjust well to human activity. The barn swallow nests on barns and other buildings, but may use natural nest sites as well, and is generally the only swallow expected on site. The tree swallow and purple martin prefer wetland areas where insects are abundant, and are unlikely to be present. Both swallows nest in cavities of trees, but are also common residents in nesting boxes and bird houses.

Two doves are found on Long Island, including the mourning dove and the introduced rock dove, also known as the domestic pigeon. Both are common in suburban areas, parks, cultivated fields and along roadsides. The mourning dove typically nests in overgrown areas and tangled vines, while the rock dove prefers to nest on buildings and other structures **(Andrle and Carroll, 1988)**. Both species may utilize the site.

The yellow-billed cuckoo prefers to nest in open wooded areas or along edges, but tends to avoid developed areas. The black-billed cuckoo seems to prefer more wooded areas than the yellow-billed cuckoo and nests in habitats such as brushy pastures, shrubby hedgerows and dry open upland woods **(Andrle and Carroll, 1988)** and may potentially utilize portions of the site.

Warblers feed on a variety of insects, and several species may be found on site. The forest canopy and understory would provide habitat for several species when they are present on Long Island during the warmer spring and summer months **(Bent, 1963; Andrle and Carroll, 1988**). Warblers that prefer woodland habitats include the black-and-white warbler, black-throated bluwarbler, pine warbler, prairie warbler, yellow warbler and the yellow-rumped warbler. The blue-winged warbler primarily utilizes abandoned and overgrown fields, and would be limited to small portions of the site. The black-throated blue warbler can adapt to suburbs and the yellow-rumped warbler may be found in yards. The ovenbird prefers an open forest with little underbursh and an abundance of fallen leaves, logs, and rocks **(Andrle and Carroll, 1988**) and may be expected. The black-and-white warbler, ovenbird and American redstart generally prefer larger tracts of open space, and may utilize the site as it is located at the north edge of extensive woodland. All of these species are listed as probable breeders within the census blocks.

The mix of open areas, open woodlands and successional shrubby edge habitats in the vicinity may provide habitat for game birds and similar species, including the killdeer, ruffed grouse,

ring-necked pheasant and bobwhite. These birds are year-round residents on Long Island, and are found in a mix of field and overgrown habitats **(Bent, 1963; Andrle and Carroll, 1988)**.

The site and surrounding area are suitable for use by raptor and owl species for hunting, and a limited number may potentially breed in the pitch pine-oak forest found on and adjacent to the site. Most raptors prefer to nest in high, forested areas away from humans, and suitable nesting sites are available within the general vicinity of the site. Owls and raptors prey primarily on small mammals, which are likely to be abundant on site and in the surrounding area. The most common raptors on Long Island are the red-tailed hawk and the American kestrel, as they are relatively tolerant of human activity **(Bent, 1961; Andrle and Carroll, 1988**). Although none were seen, the eastern screech owl and red-tailed hawk may occasionally be found on site. These species are relatively tolerant of humans and may also be found in suburban areas and city parks **(Bent, 1961; Andrle and Carroll, 1988**). The great horned owl is more susceptible to human disturbance (**Andrle and Carroll, 1988)** and if present, would be more likely in the southern portion of the site. Species such as the sharp-shinned hawk and Cooper's hawk are more susceptible to human disturbance but may occasionally be expected to utilize the site **(Andrle and Carroll, 1988).** The Cooper's hawk needs extensive woodland, is a non-breeder on Long Island **(Andrle and Carroll, 1988),** and thus is not expected to breed on site, but may be within the woodland adjacently south of the site or east of the site. The northern harrier is a ground-nester, and utilizes various wetland and upland habitats, but avoids humans and is not likely to be on site **(Andrle and Carroll, 1988)**.

The nocturnal whip-poor-will feeds on moths and other insects, and prefers dry woods with adjacent fields. This species is likely to breed and forage on site. The chimney swift also feeds on flying insects, and is found in a variety of habitats. Although it originally nested in cliffs and tree cavities, the species now is most commonly found nesting on buildings and other structures **(Andrle and Carroll, 1988**). It may also forage in the vicinity of the site, as well as breed on the property. The common nighthawk on Long Island are known to breed in such places as sandy openings in mixed pine-scrub oak barrens, on bare ground in pastures and fields, on sand dunes, on gravel beaches, and on flat rocks and logs in the open **(Andrle and Carroll, 1988).** This species may also utilize portions of the site.

The New York Natural Heritage Program identified no species of concern on the subject site (**Appendix D-1)**.

Table 2-4 is a list of the bird species observed or expected on site given the habitats present; it is based upon a field investigation conducted by NP&V during December 2007. Additional information regarding these species and others can be found within **Appendix D-3**.

Table 2-4
BIRD SPECIES LIST

red-winged blackbird	*Agelaius phoeniceas*
bobwhite	*Colinus virginianus*
indigo bunting	*Passerina cyanes*
northern cardinal	*Cardinalis cardinalis*

gray catbird	*Dumetella carolinensis*
black capped chickadee	*Parus atricapillus*
yellow-breasted chat	*Icteria virens*
brown-headed cowbird	*Molothrus ater*
American crow	*Corvus brachyrhynchos*
black-billed cuckoo	*Coccyzus erythrothalmus*
yellow-billed cuckoo	*Coccyzus americanus*
mourning dove	*Zenaida macroura*
rock dove	*Columba livia*
American goldfinch	*Carduelis tristis*
house finch	*Carpodacus mexicanus*
common flicker	*Colaptus auratus*
great created flycatcher	*Myiarchus crinitus*
least flycatcher	*Empidonax minimus*
willow flycatcher	*Empidonax traillii*
common grackle	*Quiscalus quiscula*
ruffed grouse	*Bonasa umbellus*
rose-breasted grosbeak	*Pheucticus ludovicianus*
red tailed hawk	*Buteo jamaicensis*
blue jay	*Cyanocitta cristatta*
northern junco	*Junco hyemalis*
American kestrel	*Falco sparverius*
killdeer	*Charadrius vociferous*
eastern kingbird	*Tyrannus tyrannus*
ruby-crowned kinglet	*Regulus calendula*
horned lark	*Eremophilia alpestris*
eastern meadowlark	*Sturnella magna*
northern mockingbird	*Mimus polyglottus*
white-breasted nuthatch	*Sitta carolinensis*
northern oriole	*Icterus galbula*
screech owl	*Otus asio*
great-horned owl	*Bubo virginianus*
ring-necked pheasant	*Phasianus colchicus*
American redstart	*Setophaga ruticilla*
* American robin	*Turdus migratorius*
chipping sparrow	*Spizella passerina*
fox sparrow	*Passerella iliaca*
field sparrow	*Spizella pusilla*
house sparrow	*Passer domesticus*
song sparrow	*Melospiza melodia*
white-crowned sparrow	*Zonotrichia leucophrys*
white-throated sparrow	*Zonotrichia albicollis*
European starling	*Sturnus vulgaris*
barn swallow	*Hirundo rustica*
chimney swift	*Chaetura pelagica*
brown thrasher	*Toxostoma rufum*
tufted titmouse	*Parus bicolor*
rufous-sided towhee	*Pipilo erythrophthalmus*
chestnut-sided warbler	*Dendroica pensylvanica*

prarie warbler	*Dendroica discolor*
yellow warbler	*Dendroica petechia*
cedar waxwing	*Bombycilla cedrorum*
whip-poor-will	*Caprimulgus vociferous*
American woodcock	*Scolopax minor*
house wren	*Troglodytes aedon*
common yellowthroat	*Geothlypis trichas*

* Species observed on site by NP&V staff, December, 2007

Mammals

The habitats found on the 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.

The masked shrew may be the most common mammal on Long Island. Although it is rarely seen, this small insectivore has been captured and identified in almost every type of habitat on Long Island **(Connor, 1971).** It will utilize any site with sufficient ground cover, including woods, fields, bogs, and both marine and freshwater marshes. The short-tailed shrew also uses a variety of habitats, but on Long Island it appears to be most common in deciduous woodlands **(Connor, 1971; Godin, 1977)**. Both shrews feed on insects and other small invertebrates, and are expected to be abundant on site.

A larger insectivore, the eastern mole, is also found on Long Island, and is expected to utilize the site. The eastern mole is common in woodlands, fields and suburban lawns throughout the island, where they dig tunnels which are also used by mice and shrews. The species is probably most common in the rich soils of deciduous woodlands along the north shore of Long Island. Its habitats also include landscaped areas, Pine Barrens, dunes and salt marsh borders, but the species seems to avoid fresh water swamps and marshes **(Connor, 1971).**

The meadow vole prefers open woodlands while the pine vole prefers sandy soils in woodlands or in fields. Both species utilize underground tunnels and are expected on site.

Other rodents expected on site include mice and rats, and some of the larger rodents. Most mice and rats are omnivorous, feeding on grasses, herbs, roots, tubers and occasionally small invertebrates. The white-footed mouse is likely to be the most abundant mouse on site. It is found in a wide variety of habitats on Long Island, including wetlands, dry fields, woods and occasionally buildings **(Connor, 1971)**. This mouse is one of the most common mammals on the Island, but local populations appear to fluctuate greatly from year to year **(Connor, 1971)**. The house mouse and Norway rat are introduced European species that prefer to be near human structures and are considered pests. These two species are likely to be present in areas surrounding developments.

Of the larger rodents, both the eastern gray squirrel and the eastern chipmunk are expected, particularly along the eastern property boundary adjacent to the residential backyards. Gray squirrels are quite tolerant of humans and will use both woodland and open habitats as long as

large, nut bearing trees are present for foraging and nesting. On Long Island, they are most common in the oak woodlands of the north shore, but are also present in Pine Barrens, where they feed on pine seeds. The species may become a pest, and individuals are often found in the attics of older buildings. **Connor (1971**) indicates that the southern flying squirrel is also present in heavily wooded areas away from developed areas, although its distribution does not appear to extend east of Riverhead and the species is not expected on the site based on the habitat. The chipmunk prefers forest and edge habitats with thick understory vegetation, where it feeds on a variety of plant materials, and it will utilize suburban areas with sufficient cover **(Connor, 1971; Godin, 1977).**

Bats typically prefer areas near water where there are abundant insects for feeding, and thus should be found on or near the site. Due to the absence of caves on Long Island, these species generally roost in colonies in the attics of buildings, although some species will occasionally roost in trees **(Connor, 1971).** The big brown bat is present throughout the year, and is the most common bat in many areas of Long Island **(Connor, 1971)**. The most common summer bats are the little brown myotis and Keen's bat, and the red bat and eastern pipistrelle are also present in small numbers **(Connor, 1971)**. The silver-haired bat and hoary bat are found on the Island only during seasonal migrations. All of these species are tolerant of humans, and may be present on site. However, these species tend to hunt and feed in wet areas and are more likely to be found elsewhere in the vicinity.

The eastern cottontail is the most common rabbit on Long Island, although the similar New England cottontail is also present in some areas **(Connor, 1971)**. The cottontails occupy a variety of habitats, including dry and swampy woods, fields, bogs, dunes and shrublands **(Connor, 1971).** They are also tolerant of humans and utilize suburban lawns and gardens extensively if food is available. The opossum is the only marsupial on Long Island, and makes use of a variety of habitats ranging from brushy woods to towns and urban areas with cover. It appears to be quite abundant, and is often killed on roadways. This species is likely to be present on site.

The woodchuck, or ground hog, has a scattered distribution throughout central Suffolk County. It is found in a variety of habitats, including fields, meadows, brushy areas and woods **(Connor, 1971)** and may inhabit the property.

The raccoon is common throughout Long Island and prefers brushy wooded habitats near water, but is likely to be present in the general area. The raccoon is tolerant of humans, and may become a pest, foraging in garbage cans, gardens and agricultural fields. They will occasionally cause damage by denning in attics and other structures. The red fox is found throughout Suffolk County in a variety of habitats with limited human development, and often hunts in freshwater and marine wetlands. Fox typically prefer diverse habitats consisting of "intermixed cropland, rolling farmland, brush, pastures, mixed hardwood stands and edges of open areas that provide suitable hunting grounds" **(Chapman and Feldhamer, 1982).** Much of this habitat has been either urbanized or allowed to revert to dense forest throughout the northeast U.S. **Chapman and Feldhamer (1982)** report ranges from 140 to 400 acres depending on the habitat, though regardless of size, home ranges are generally twice as long as they are wide. Home range size is

determined by "abundance of food, degree of intraspecific and interspecific competition, type and diversity of habitat and the presence of natural physical barriers such as rivers or lakes" **(Wade et al., 1990).** It appears that although fox will utilize suburban areas, their range increases with diminished amounts of open land. The active nature of the farmland and limited forest cover habitat make it unlikely that the red fox is present.

Table 2-5 is a list of the mammal species that are expected to occur in the study area and more specifically on site because of the existing site and area conditions. Additional information regarding these species and others can be found within **Appendix D-3.**

Table 2-5
MAMMAL SPECIES LIST

big-brown bat	*Eptesicus fuscus*
hoary bat	*Lasiurus borealis*
Keen's bat	*Myotis keenii*
little-brown bat	*Myotis lucifugus*
red bat	*Lasiurus borealis*
Eastern pipistrelle	*Pipistrellus subflavus*
silver-haired bat	*Lasionycteris noctivagans*
Eastern chipmunk	*Tamis striatus*
Eastern cottontail	*Sylvilagus floridanus*
red fox	*Vulpes vulpes*
Eastern mole	*Scalopus aquaticus*
house mouse	*Mus musculus*
white-footed mouse	*Peromyscus leucopus*
Virginia opossum	*Didelphis virginiana*
raccoon	*Procyon lotor*
Norway rat	*Rattus norvegicus*
masked shrew	*Sorex cinereus*
short-tailed shrew	*Blarina breuicauda*
Eastern gray squirrel	*Sciurus carolinensis*
southern-flying squirrel	*Glaucimys volans*
meadow vole	*Microtus pennsylvanicus*
pine vole	*Microtus pinetorum*
woodchuck	*Marmota monax*

Amphibians and Reptiles

No reptile or amphibian species were seen on the property, although the site may support a limited number of terrestrial species. Two toads are common on Long Island in the 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 would not be expected on the property, as they typically require either moist woodland habitat or permanent pools.

Several species of reptiles might potentially be found on the property, including the eastern garter snake, eastern hognose 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 north. The hognose snake prefers dryer soils while 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, black racer and hognose snakes will also take small rodents and birds **(Behler and King, 1979)**.

The only turtle species common to terrestrial habitats on Long Island is the eastern box turtle, which requires very little water **(Obst, undated).** The species is found in a variety of habitats, but prefers moist woodlands. The species feeds on 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 2-6 is a list of amphibian and reptile species that might occur on site given the existing habitat. This list is not intended to be all-inclusive but provides a detailed representation of what is likely to be found on site.

Table 2-6
AMPHIBIAN AND REPTILE SPECIES LIST

Amphibians	
Fowler's Toad	*Bufo woodhousei fowleri*
eastern spadefoot toad	*Scaphiopus holbrooki*
Reptiles	
common garter snake	*Thamnophis sirtalis*
eastern hognose snake	*Heterodon platyrhinos [s]*
eastern milk snake	*Lampropeltis triangulum*
Eastern box turtle	*Terrepene carolina*

[s] NYSDEC special concern species

Rare and Endangered Wildlife Species Potential

Of the wildlife species listed as being likely on the site, the eastern hognose snake, Cooper's hawk, sharp-shinned hawk, horned lark, and whip-poor-will are identified as special concern species. Special concern species are native species which are not recognized as endangered or threatened, but for which there is documented concern about their welfare in New York State as a whole. Unlike threatened or endangered species, species of special concern receive no additional legal protection under ECL Section 11-0535. This category is intended to enhance public awareness of those species which deserve additional attention.

Additionally, the New York Natural Heritage Program listed the Edwards' Hairstreak (*Satyrium edwardsii*) and the Pirate Perch (*Aphredoderus* sayanus) as potentially being present in the vicinity of the site. The Edwards' Hairstreak is known to occur within the Connetquot River State Park in the Town of Islip. Signs of these moths have been observed on scrub oaks surrounding the ponds in this area. The Edwards' Hairstreak was not observed on site and is not expected to be on the subject property due to lack of suitable habitat.

The Pirate Perch was identified in the nearby Connetquot River in 1998. It has an unlisted legal status in New York State, although its rank is considered imperiled. On a global scale, it is considered demonstrably secure. The Pirate Perch was not observed on site and is not expected to be on the subject property due to lack of suitable habitat.

No endangered or threatened species were identified as potentially present on site.

2.3.2 Anticipated Impacts

Vegetation

As most of the site is currently disturbed, impacts to vegetation will be minimized through the replanting of native vegetation and landscaping. Quantities associated with retention of vegetated open space are summarized in **Table 1-1** in order to assess the impacts of the project upon vegetation. The project site is approximately 10.12 acres in size, all of which will be developed. Of the developed area, approximately 5.34 acres (52.51%) will consist of fertilized lawn and/or landscaping.

Review of regional aerial photographs and inspection of areas surrounding the subject site find that wooded forest habitat is found within the general area (south and east). The property is not expected to act as a refuge for rare native flora, and impacts to plant species should be minimal.

Wildlife

Since the entirety of the site is currently disturbed, no significant impacts are expected to existing wildlife. The small areas of successional field found on the project site provides habitat for several wildlife species, many of which are tolerant of human activity. Most of these species will utilize a range of habitats, including suburban yards, and thus would be expected to utilize the newly landscaped portions of the site to a limited degree.

In determining impacts upon the existing wildlife populations, it can generally be assumed that an equilibrium population size is established in an area for each species as determined by availability of resources in the habitat. Thus, the removal of habitat resulting from the proposed project will cause a direct impact on the abundance and diversity of wildlife using the site. Although the assumption that species are at equilibrium is an oversimplification, it does provide a worst case scenario in determining the impact of habitat loss. In addition to this direct impact, the increased intensity of human activity on the site will cause an indirect impact on the abundance of wildlife which remain on the site and in the area, under post-development conditions.

The following provides a discussion of the wildlife populations associated with the subject site. The following text considers the site-specific aspects of the proposed development in regard to groups of wildlife species.

Literature suggests that many avian species are able to adjust to both urban and suburban environments, and, as birds are typically mobile, direct losses during clearing are generally low. Birds such as the crows, doves, blue jay, American robin, brown thrasher, gray catbird, grackle, and cowbird are expected to be only minimally impacted by the proposed project, as they will use the proposed landscaped areas **(Andrle and Carroll, 1988; Bent, 1963, 1964, 1968)**. Some smaller birds which also adapt well to development include the finches, towhees, juncos and most sparrows. These seed-eating species are typically found in edges and buffer zones, and would be expected to utilize the landscaped areas. Those species which prefer open areas for foraging are expected to suffer more substantial decreases in numbers, including hawks and owls. As these species are expected to be abundant in the surrounding area, no significant regional impacts are expected. Warblers south of the site would be expected to suffer minor localized declines, as most avoid developed areas and may push farther into the interior of the block of woodlands south of the property (**Andrle and Carroll, 1988; Bent, 1964, 1968).**

The small mammalian fauna found on the site may be minimally impacted by the proposed clearing and resulting habitat loss. As with avian species, some individuals are expected to relocate to adjacent open areas, and populations within the vicinity are expected to reach a slightly lower equilibrium population density. As was discussed in the previous section of this document, the incidence of reptile and amphibians on the site is expected to be relatively low and restricted to terrestrial species. Most of the herptile species which are found in field habitats adjust well to suburban areas. Clearing of portions of the site may push some wildlife individuals into the surrounding natural area and populations may recover after completion of the project, but some local impacts would be expected. Regional impacts are not expected to be significant, as the majority of natural areas on the site will remain as undisturbed woodland and there is more suitable habitat elsewhere within the area. Refer to **Appendix D-4** *Species Adaptability* for species specific information regarding adaptability of individual species to post-development conditions.

The majority of the vegetation on the property is frequently mowed under existing horse-farm operations. The development of the farm will have few impacts on local wildlife. As large blocks of woodlands are found throughout the area, no significant long-term impacts are expected. Short-term impacts may occur due to temporary displacement of wildlife, loss of vegetation and disruption of soils and habitat; however, the stabilization of the site and retention of natural areas are expected to ameliorate these potential impacts.

2.3.3 Proposed Mitigation

- Areas of the site will be established in alternative forms of landscaping to ensure their retention. This will include conservation seed mix consistent with accepted herbaceous species to create successional

field areas, woodchip planting beds, establishment of forest areas and other non-fertilized areas managed to reduce fertilized vegetation.

- Native plant species that provide food and shelter to wildlife will be utilized in landscaped areas.

SECTION 3.0

HUMAN ENVIRONMENTAL RESOURCES

3.0 HUMAN ENVIRONMENTAL RESOURCES

3.1 Transportation

3.1.1 Existing Conditions

Existing traffic conditions and potential impacts of the proposed project are evaluated in a Traffic Impact Study (TIS) prepared by Nelson & Pope, Engineers and Surveyors. The following subsections provide excerpts from the TIS for the proposed project related to site and area's existing traffic conditions. A full copy of the TIS is provided as **Appendix C** of this document.

Purpose of Report

This report summarizes the results of a detailed investigation of the traffic impacts of the proposed development by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the proposed development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network.

Existing Conditions

Roadway Conditions

The following is a list of roadways included in the study network surrounding the site. The greatest portion of the traffic generated by the proposed development 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 is listed for each roadway where available in the most recent NYDOT Local Highway Traffic Volumes Report. Average Annual Daily Traffic (AADT) is not available for Old Nichols Road as it is not a county road.

The roadways evaluated include Veterans Highway (NYS Route 454), the North and South Service Roads of the LIE and Old Nichols Road.

Accident History

Accident data for the sections of roadways and intersections in the vicinity of the site was obtained from the NYS Department of Transportation (NYSDOT). The most recent data available was from July 2004 to June 2007 (3 year period). A total of 78 accidents occurred at or in the vicinity of the study intersections during the analysis period (3 years). A total of two accidents involved fatalities during the study period, one of them resulting in two fatalities which occurred at the intersection of Nichols Road and NYS Route 454. The location with the greatest number of accidents is the intersection of Old Nichols Road and NYS Route 454.

Existing Conditions Analysis

The 2007 existing peak hour traffic volumes depicted in Figures 3, 4 and 5 of the TIS [see **Appendix C**] were used to determine the existing capacity and level of service (LOS) of the study intersections. **Table 3-1** contains the LOS summary for the Existing Conditions. The detailed analysis worksheets are in **Appendix C**.

Table 3-1
LOS SUMMARY, Existing Conditions

Location (Signalized Intersections)	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS
NYS Route 454 at Old Nichols Road/East Suffolk Avenue	36.8	D	65.8	E	37.0	D
Old Nichols Road at LIE South Service Road	20.0	B	45.8	D	19.8	B
Old Nichols Road at LIE North Service Road	34.6	C	24.1	C	19.0	B

3.1.2 Anticipated Impacts

The following discussions of the No Build and Build (proposed project) Conditions are excerpted from the TIS.

No Build Condition

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2009 without the construction of the proposed project. The No Build Condition traffic volumes are estimated based on two factors as follows:

- Increases in traffic due to general population growth and developments outside of the immediate project area. A 1.2% annual growth factor was obtained from the NYSDOT. The existing traffic volumes were increased by this factor for a period of 2 years to project volumes to the year 2009.

- Other planned projects located near the project site that may affect traffic levels and patterns at the study intersections in this report were investigated. Planned projects to be constructed prior to the proposed project that may significantly influence the traffic flow through the study intersections would be considered as part of the No Build analysis. The Town of Islip and Village of Islandia were contacted to obtain information on any planned projects in the area. At the time this study was conducted, no other planned projects were identified. The 2009 No Build traffic volumes are shown on Figures 6, 7 and 8 of the TIS [see **Appendix C**].

Proposed Development

In order to identify the impacts the proposed development will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume to be generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. As requested by the Village of Islandia, Nelson & Pope conducted traffic counts at the Silver Woods condominium development similar to the proposed development located on Erhardht Way south of the proposed site in the Village of Islandia. The data was collected by means of manual turning movement counts at the driveway of the Silver Woods development for the weekday AM (7- 9AM) peak period, weekday PM (4-6 PM) peak period and Saturday midday (11 AM–2 PM) peak period.

Silver Woods contains 68 residential condominium units. The site data indicates rates of 0.41, 0.29 and 0.39 trips per unit during the weekday AM, PM and Saturday midday peak hours of the adjacent street respectively. Utilizing the Silver Woods trip generation rates, trip generation estimates were conducted for the proposed development. **Table 3-2** summarizes the trips anticipated to be generated by the proposed 72 residential condominium units. The data collected at Silver Woods is included in **Appendix C**.

Table 3-2
TRIP GENERATION ESTIMATES (based on Silver Wood rates)

Land Use	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
	Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
68 condominium units (Silver Woods)	6	22	28	13	7	20	14	12	26
Trip generation rates (trips/unit)	*0.09*	*0.32*	*0.41*	*0.19*	*0.10*	*0.29*	*0.21*	*0.18*	*0.39*
Proposed 72 condominium units (based on Silver Woods trip generation rates)	**7**	**23**	**30**	**14**	**7**	**21**	**15**	**13**	**28**

Trip generation estimates for the proposed residential development (47 age restricted and 25 non age restricted residential condominium units) were also prepared utilizing data from the Institute of Transportation Engineers' (ITE) publication, Trip Generation, Seventh Edition. **Table 3-3** summarizes the trip generation estimates for the proposed project obtained from ITE. **Appendix C** contains the trip generation worksheets.

Table 3-3
TRIP GENERATION
Proposed Project

Time Period	Distribution	47 Senior Housing Units (ITE LUC 251)	25 Condominium/ Townhouse Units (ITE LUC 230)	Total
Weekday AM Peak Hour	Enter	*6*	*3*	*9*
	Exit	*9*	*14*	*23*
	Total	***15***	***17***	***32***
Weekday PM Peak Hour	Enter	*17*	*13*	*30*
	Exit	*11*	*6*	*17*
	Total	***28***	***19***	***47***
Saturday Midday Peak Hour	Enter	*17*	*13*	*30*
	Exit	*11*	*6*	*17*
	Total	***28***	***19***	***47***

Source: Trip Generation, 7th Edition, published by ITE
LUC - ITE Land Use Code.

As can be seen from **Tables 3-2** and **3-3** above, the trip generation estimates from ITE are higher than those from the Silver Woods rates. In order to perform a conservative analysis, the trip generation rates obtained from ITE were utilized in this study. It can be seen from **Table 3-3** that, the proposed project is estimated to generate 32 trips (8 entering and 24 exiting) during the weekday AM peak hour, 49 trips (31 entering and 18 exiting) during the weekday PM peak hour and 62 trips (33 entering and 29 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. Figure 9 of the TIS depicts the trip distribution for the proposed project. Figures 10, 11 and 12 of the TIS [see **Appendix C**] depict the site generated volumes for the weekday AM, PM, and Saturday midday peak hours. The site generated volumes were then added to the weekday AM, PM and Saturday midday No Build Condition volumes resulting in the Build Condition volumes. The Build volumes are depicted in Figures 13, 14 and 15 of the TIS [see **Appendix C**].

Traffic Impact Analysis

The intersection capacity and LOS analyses were based on the procedures and guidelines presented in the Highway Capacity Manual 2000, published by the Transportation Research Board. The HCS+, Release 5.21 was used to analyze the study intersections and provide a LOS measurement of the intersections operation. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in **Appendix C**. **Table 3-4a and 3-4b** summarize the anticipated LOSs at the study's signalized and unsignalized intersections, respectively.

Table 3-4a
LEVEL OF SERVICE SUMMARY (Signalized)

Signalized Intersections	Condition	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay
NYS Route 454 at Old Nichols Road/East Suffolk Avenue (CR 100)	Existing	D	38.6	E	65.8	D	37.0
	No Build	D	40.0	E	72.1	D	37.8
	Build	D	40.4	E	72.6	D	37.8
Old Nichols Road at LIE South Service Road	Existing	B	20.0	D	45.8	B	19.8
	No Build	C	20.1	D	49.9	B	19.9
	Build	C	20.1	D	51.3	B	20.0
Old Nichols Road at LIE North Service Road	Existing	C	34.6	C	24.1	B	19.0
	No Build	D	36.1	C	24.2	B	19.2
	Build	D	36.2	C	24.3	B	19.3

Notes: LOS = Level of Service, Delay = seconds/vehicle,

Table 3-4b
LEVEL OF SERVICE SUMMARY (Unsignalized)

Unsignalized Intersections	Condition	Approach/ Movmnt.	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Old Nichols Road at Site Driveway	Build	SB-L	A	8.6	B	11.5	A	9.8
		WB- LR	C	22.1	E	40.9	D	26.3

Notes: LOS = Level of Service, Delay = seconds/vehicle

As indicated above, there is no change in the LOS for the build condition for of the signalized intersections, therefore, no mitigation measures are proposed. After the completion of the project, the southbound Old Nichols Road left turn movement at the intersection of Old Nichols Road and the site driveway will operate at LOS A, B, and A during the weekday AM, PM and Saturday midday peak hours, respectively. The westbound site driveway approach will operate at LOS C, E and D during the weekday AM, PM and Saturday midday peak hours respectively.

Traffic Impact of Construction Phase

Information obtained from the client indicates that, between 20 and 30 vehicles are anticipated to utilize the site per day during the peak phase of the construction period. Construction work will be done on a 7:00 AM to 3:00 PM shift, meaning most of the workers will be on site on or before 7:00 AM (before the AM peak hour) and will vacate the site before the PM peak hour. The traffic anticipated to be generated by the proposed project as shown in the traffic study is higher than the number of vehicles anticipated utilizing the site during construction. The Traffic Study states that the construction phase will not significantly impact the operation of the roadways in the vicinity of the site since the findings of the traffic impact study indicated the same for the traffic generated by the project after construction.

3.1.3 Mitigation Measures

- The TIS prepared for this proposal anticipates that the project is expected to generate a total of 32 trips in the AM Peak Hour and 47 trips during the PM Peak Hour. Based on the results of the TIS, this increase is not anticipated to result in significant adverse impacts to the existing Levels of Service at the study intersections. As a result, no traffic mitigation measures are necessary or proposed.

3.2 Land Use, Zoning & Plans

3.2.1 Existing Conditions

Land Use

This section describes the current land uses on the subject property and in the surrounding areas with reference to a 2004 aerial photograph (see **Figure 3-1**). The subject property is presently classified as agricultural land use, and is improved with an equestrian center. The site is surrounded predominantly by residential uses, emergency service and utility uses, and vacant land, more specifically identified as follows:

North: SCWA Old Nichols Road well field and pump station, beyond which are single family residential homes and a convenience store.
East: Town of Islip owned Greenbelt property, single family residential homes, beyond which are and a village owned preserve and county owned parkland/open space.
South: Town of Islip owned Greenbelt, LIRR, beyond which is Connetquot River State Park.
West: Central Islip Fire Department Station 3, vacant commercial buildings, single family residential homes and Silver Woods multi-family residential development beyond which is NYS Route 454.

The subject property is located south of the "triangle" created by the LIE, Veterans Memorial Highway and Old Nichols Road. The majority of the lands within the triangle are developed with single family residences on small lots. The A.T. Morrow Elementary School, the only school within the Village, is also located in this area, less than a half-mile from the subject property to the northwest. Vacant commercial buildings are located opposite the subject property at the northwest corner of Old Nichols Road and Bedford Avenue. A 7-11 convenience store is located on the north side of Old Nichols Road approximately 400 feet to the north of the site. The Village of Islandia Village Hall and commercial uses are located north along Old Nichols Road closer to the LIE. A variety of commercial, office and industrial uses are located along Veterans Highway, Suffolk Avenue and the LIE services roads.

As discussed, town, county and state owned open space are located in the vicinity of the subject property. No interest has been expressed by any Town, County or State agencies in acquiring the subject property for preservation.

Zoning

The site is presently zoned Agricultural (AG), which allows for agricultural and agriculturally related uses. The current zoning of the subject property and surrounding area is described based on inspection of the Village Zoning Map (see **Figure 3-2**), as follows:

South: G (Greenbelt)
West: MF (Multi-Family Residence)
North: M (Medium Density Residence)
East: L (Low Density Residence)

The subject property is located in an area defined by residential zoning. Medium density residential zoning is located north of Old Nichols Road. Permitted uses in this zone include single-family detached dwellings on lots that are a minimum of 11,250 SF for residential uses and 30,000 SF for other permitted uses. The A. T. Morrow Elementary school is located in this area.

Three small parcels zoned NR-Neighborhood Retail are located north of the subject property. Permitted uses in the NR-Neighborhood Retail district include retail stores, offices, banks, personal service establishments and other uses.

The majority of area to the east is zoned L-Low Density Residential with minimum lot sizes of 20,000 SF for residential uses and 40,000 for other permitted uses. Town of Islip parcels farther to the east are zoned G-Greenbelt. No zoning is designated for the Suffolk County owned parcels located to the east. Other adjoining zoning districts include G-Greenbelt and L-Low Density residential zoning located immediately south of the subject property.

MF-Multi-family Residential zoning is located east of the subject property. Permitted uses in this district include single-family detached dwelling, residential owner-occupied condominiums, apartment house or townhouse, agriculture or nursery, including farmstands used to sell products produced on-site, shared senior citizen dwellings, public library or municipal building, municipal recreational facilities, public utility provided that there is no repair, office or storage facilities, model homes that are part of an existing subdivision, accessory structures and permitted accessory uses as per Section 177-57.

Land Use Plans

A Comprehensive Land Use Plan was prepared for the Village of Islandia in 1995; this plan was the first comprehensive plan since the Village's incorporation in 1985. The Plan seeks to preserve and maintain the Village's agricultural past and rural character. Specific mention is made of maintaining the remaining agriculturally zoned parcels in the Village which includes the project site. The land use plan identifies the subject property as appropriate for continued agricultural use. **Figure 3-3** presents the comprehensive land use plan map depicting the subject property.

3.2.2 Anticipated Impacts

Land Use

The proposed project will consist of a multi-family development of 72 condominium units on a 10.12-acre parcel. A total of 47 of the proposed units will be age-restricted. Planned recreation amenities include a clubhouse, tennis court and outdoor pool and patio.

The project is consistent with existing land uses in the surrounding areas, particularly the multi-family development located adjacent to the west. The proposed development would provide a similar multiple-family zoned parcel to this existing use, and would affirm the multi-family development pattern in the southern portion of the Village of Islandia. The proposed project is an appropriate use for the property given that residential nature of the Village and surrounding

lands, coupled with the existing multi-family use near the site. The site is located on an existing arterial road in the Village, and is in a mixed land use area including single family, vacant open space and utility uses along with the nearby multi-family use. Given this mixed land use pattern, the Old Nichols Road corridor, and the current primarily cleared and impacted condition of the site (with respect to natural resources), the proposed zoning and intended project are believed to be a compatible addition to the Village land use pattern that will provide housing opportunities on a parcel appropriate for such use. Adequate landscaped buffers will be provided to maintain the integrity of open space parcels located to the south. In consideration of the existing predominantly residential uses of varying densities adjacent to the north, east and west, the proposed land use change is not expected to represent a significant overall impact.

Zoning

The proposed project will change the zoning of the site, from its current zoning of AG-Agriculture to the residential zoning of MF-Multi-family Residential. The project is located in a predominantly residentially zoned area; however, three retail zoned parcels are located in the vicinity. To the south of the site, the property borders lands classified as G-Greenbelt, undeveloped, Town owned open space lands. Residential zoning districts dominate the zoning designations in the area. As a result, the proposed zone change will allow for the expansion of residential development with the construction of the proposed condominium units all of which is in keeping with the zoning districts in the area. In consideration of the existing residential zoning districts adjacent to the north, east and west, the proposed change of zone is not expected to represent a significant overall impact. No additional lots are available for multi-family development in the area and, as such, the proposed change will not serve as a precedent for any additional future development.

The intent of the agricultural district per Section 177.46 of the Zoning Code of the Village of Islandia *"is to allow for the preservation of existing agricultural and agriculturally related uses in those areas most suitable for such uses…to protect agricultural uses by prohibiting uses which are incompatible with agricultural activities and to prevent the encroachment of residential or other nonagricultural uses into the district."* There are two agriculturally zoned parcels in the Village which offer limited protection potential given the development potential in the area and current land values. A change of zone will not significantly impact agriculturally zone parcels in the town as there is only one other parcel besides the subject property within that zoning district.

Land Use Plans

The Village of Islandia's Comprehensive Plan proposed to maintain the use of the subject property as an agriculturally-based use; however, the plan also recognized the need to provide multi-family development to fulfill the need for various housing types for the residents of the village. The proposed project does not directly conform to the Village's vision of preserving the agricultural use of the site, but will assist in meeting the goal of providing multi-family residential housing. The Comprehensive Plan was prepared approximately 13 years ago, and since that time, the viability of agricultural use in consideration of land values, land use trends and the economic needs of the landowner, indicate that the existing use of the site may not be a feasible long-term use. As a result, the applicant has offered the proposed use as an attractive

alternative that fulfills housing objectives of the Comprehensive Plan including senior and non-age restricted mixed housing opportunities.

3.2.3 Proposed Mitigation

- No mitigation beyond that inherent in the project is necessary or proposed.

3.3 Community Facilities and Services

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

- Central Islip Fire District
- SCWA
- Central Islip-Hauppauge Volunteer Ambulance
- SCPD 4th Precinct
- LIPA (electricity)
- National Grid (natural gas)

Letters were sent to each community service provider to allow these entities to provide input to the preparation of this DEIS. The correspondence sent to, and responses received from each jurisdiction are provided in **Appendix E**, with summaries of relevant input provided in the following sections. In addition, the estimated revenue generated for each taxing jurisdiction is discussed.

3.3.1 Existing Conditions

Taxes

Based on the Statement of Taxes for the year 2007-08, the total assessed value of the site for purposes of real property tax assessment is currently $103,000. The total property tax paid on the property during the 2007-08 tax year was $23,803. **Table 3-7** provides a summary of the distribution of tax revenues and total taxes paid to each taxing jurisdiction based on the 2007-08 tax bills for the properties.

Table 3-5
PROPERTY TAXES
Existing Conditions

Taxing Jurisdiction	**Existing Taxes** ($/yr)
Central Islip UFSD	17,727.74
Central Islip Library District	578.95
County General Fund	225.57
SCPD	2,364.88
General Town	553.89
NYS Real Property Tax Law	276.04

Central Islip Fire District	831.21
Village	1,245.68
Total	**$23,803.96**

Education

The subject property consists of an agriculture related use and thus generates no school-aged children. The subject property is located in the Central Islip UFSD. **Figure 3-4** depicts the school districts in the vicinity of the project site.

Based on the 2007-08 tax bills, the subject site generates a total of about $17,724 per year in property tax revenue for the school district. The most current per-pupil expenditure value available, as indicated by the document, "The State of Learning", published by the NYS Education Department (2006) is $18,388/year.

Police Protection

Figure 3-5 shows the location of the public safety services in reference to the project. The subject site lies within the SCPD Fourth Precinct. The 4th Precinct office is located at 345 Old Willets Path, Hauppauge.

The project site is located within Patrol Sector 417. Funding for police protection is received through property taxes for lands within Suffolk County. Based on the 2007-08 tax bill, the subject site currently generates approximately $2,365 in annual property tax allocations to the SCPD.

Fire Protection

The subject site is served by the Central Islip Fire Department. **Figure 3-5** shows the locations of fire protection services for the subject site. The department consists of 162 volunteer firefighters who are based in four Engine Companies, one Ladder Company and one Rescue Company. There are three fire stations in the department, one of which (Station Three) is located opposite the project site on the west side of Old Nichols Road. This station houses one Engine Company which is equipped with one Class A Engine and one Class B Brush Fire Engine. Seventeen volunteers are assigned to Station Three. Dispatch service is provided by a communications center, staffed by paid personnel, 365 days a year, located in Station One at 97 Carleton Avenue, Central Islip. The department responds to more than 1,000 fire and emergency alarms per year but does not provide emergency medical services.

Funding for fire protection is received through property taxes placed on lands within the fire districts. During the 2007-08 tax year, the subject property generated approximately $831 for the Central Islip Fire department.

Ambulance

The project site is served by the Central Islip-Hauppauge Volunteer Ambulance District. It is the second busiest ambulance service in Suffolk County with over 5,000 calls per year. The district currently has five ambulances, all equipped with advanced life support systems and five support vehicles. The headquarters of the Central Islip-Hauppauge Volunteer Ambulance is located

approximately 1.8 miles west of the subject property in Central Islip.

Solid Waste Disposal

It is anticipated that the horse farm currently generates only non-hazardous solid waste such as manure, paper/cardboard or plastic storage containers, wooden pallets, some food wastes and paper associated with office operations. An estimate of the amount of solid waste generated by the horse farm is not available; however, based on observations, the amount of waste generated is not excessive. These materials are deposited in a dumpster, which is removed on an as-needed basis by a private carter.

The Village of Islandia contracts a private solid waste carting service to remove residential solid waste generated within the Village; however, it does not provide any direct waste management services to commercial facilities such as Islandia Farms. The owner, operator, and/or manager of such a facility must make separate arrangements for removal of waste generated at their property. The most common arrangement is to contract for waste removal with a local carting company.

The Village requires source-separation of recyclable material. It is the responsibility of the owner, operator and/or manager of any facility to separate all mandatory recyclables from its waste stream, and to find a means of recycling these source-separated materials. Residential solid waste and recyclable materials are collected on a regular basis. Separate arrangements are needed for the removal of items such as oil burners, water heaters, propane tanks and tree stumps. Solid waste is carted to the Town of Islip Resource Recovery Facility in Islip.

Wastewater Treatment

The subject site is not located within a sewer district. The subject site is presently served by on-site septic systems for sanitary wastewater disposal, as no public sanitary sewers are present.

Water Supply

As noted in **Section 2.2.1**, there is a SCWA wellfield (Nichols Road South Wellfield) located immediately north of the subject property. The SCWA provided raw water quality testing data for September 2006 to September 2007 and the SCWA 2007 Annual Drinking Water Quality Report was consulted. Both sources indicated that MTBE was detected in some untreated water samples at a level below the MCL of 5 ug/l. As these results are below the MCL they do not pose any health risks to site occupants or the community. Chloroform was also detected in many samples raw water and treated samples al levels below the MCL.

The site is presently served by public water by the SCWA, which maintains a 12-inch water main along Old Nichols Road and an 8-inch main along Ehrdardt Way, located 200 feet west of the site; it is anticipated that the existing facility is served via connection from the water main located along Old Nichols Road. An estimate of the amount of potable water used by the horse farm is based on a monthly average bill of $110 and the current SCWA commercial billing rate of $1.46 per 1,000 gallons. It is estimated that the existing equestrian facility uses approximately 2,200 gpd of potable water.

Energy Services

LIPA is the local provider of electricity in the vicinity of the site and National Grid Energy Delivery provides natural gas. National Grid maintains gas mains along NYS Route 454 and portions of Old Nichols Road. The site currently uses electricity supplied by LIPA.

3.3.2 Anticipated Impacts

Taxes

In order to quantify the estimated tax revenue of the proposed development, it is first necessary to estimate its assessed value. Based on a preliminary estimate of market value, it is estimated that the proposed multi-family units for this particular site will have an approximate sales price of $525,000. Multiplying the estimated market value by the current Residential Assessment Rate of 9.18% yields an assessed value of $48,195 per unit. This creates a total assessed value for the project of $3,470,040.

The proposed project will significantly increase the assessed value of improvements on the project site, with the result that the property taxes generated will also be increased significantly. **Table 3-6** presents the estimated tax generation for the project based upon current rates, along with the projected distribution of taxes to the various jurisdictions. As discussed below, this property tax increase (approximately $755,887 annually) is anticipated to be sufficient to offset the increase in costs to public agencies to provide services to the site.

Table 3-6
PROPERTY TAXES
Proposed Project

DTaxing Jurisdiction	**Existing Taxes** ($/yr)	**Anticipated Taxes** ($/yr)	**Increase in Taxes** ($/yr)
Central Islip UFSD	17,727.74	580,666.38	562,938.64
Central Islip Library District	578.95	18,963.32	18,384.37
County General Fund	225.57	7,388.47	7,162.90
SCPD	2,364.88	77,460.88	75,096.00
General Town	553.89	18,142.49	17,588.60
NYS Real Property Tax Law	276.04	9,041.60	8,765.56
Central Islip Fire District	831.21	27,226.01	26,394.80
Village	1,245.68	40,801.84	39,556.16
TOTAL	**$23,803.96**	**$779,691.00**	**$755,887.04**

Education

Based on a multiplier of 0.39 school-age children per 3-bedroom, non age-restricted, single-family units (**Rutgers, 2006**) (25), the project is estimated to generate 10 school-age children and the remaining 47 units will not generate any children as these are age-restricted units. The document, "New York: The State of Learning" **(NYS Dept. of Education, 2006)** indicates that the Central Islip UFSD expends $18,388/year/student; thus, the proposed project would result in an increased annual expenditure of $183,880 for 10 additional students. **Table 3-6** indicates that the proposed project would generate over $580,000 per year in school district and school district library taxes. Based on this analysis, the revenue from the proposed project would fully compensate the Central Islip UFSD for the increased district costs and in fact provide a surplus of nearly $400,000 per year.

A letter was sent to the Central Islip UFSD seeking input on the proposed development but a response has not been received to date; however, in a conservation on March 14, 2008, the superintendent indicated that the projected number of school-aged children generated by the proposed project (10) is less than would be expected. The number of school-age children has been accurately estimated using standard references, and the project is expected to generate a substantial tax revenue surplus. Providing a portion of the units for occupancy by senior citizens is a form of mitigation with respect to potential school district impacts.

Police Protection

It is anticipated that the proposed project would not have a significant adverse impact on the patrol responsibilities of the SCPD for security/safety purposes. Correspondence from the SCPD states *"At this point in time we would not be adding any additional units to the area. Any staffing decisions along those lines could only be made after your project is complete and occupied"*. While the potential need for police services to the site would be increased by the residential character of the site, this increase would not in itself be a significant added burden on patrol activities, as this use does not generate much potential need for response. As a result, the cost to the SCPD to serve the site would not be increased on a day-to-day basis; the SCPD would only provide services to the site in case of an emergency. In this case, police service costs would accrue, to be offset by the police department taxes paid by the project.

Based on the applicable 2007-08 tax rates, it is estimated that the proposed project would generate about $77,460 per year in taxes allocated to the SCPD, which would offset costs for services.

Fire Protection

Similar to police protection, the proposed project is not expected to have a significant adverse impact on the ability of the Central Islip Fire Department to serve the site. The project would increase the potential need for fire protective services; though this increased potential need would not in itself be a significant added burden on the department. This is due to the project's adherence to the NYS Fire Code in construction, and the anticipated use of fire-resistant building materials and smoke/fire alarms and detectors. Additionally, the Central Islip Fire Department has asked that consideration be given to the installation of a water main fire hydrant system

throughout the development to provide adequate water for firefighting activities. Adequate fire hydrants have been incorporated into the site plan. Similar to police services, the cost for the Central Islip Fire department to serve the site would not be increased on a day-to-day basis; the department would only need to provide services to the site in case of an emergency. In this case, fire service costs would accrue, to be offset by the fire district taxes paid by the project.

It is noted in a letter regarding the proposed development that the Central Islip Fire Department expressed concern regarding the additional burden on this volunteer service, the location of the entrance to the site on a blind curve, the addition of more traffic on congested roadways where accidents are common and the possibility of delayed response time if an accident should occur in-front of the station house opposite the subject property. The proposed use will add residents to the Village, and as a result, the pool of potential volunteers will be increased. Site access has been analyzed by the engineer and the planned entrance has been designed to maximize sight distance for vehicles entering and exiting the site. The TIS indicated that the trip generation for this use will not affect the capacity of the roadway. Accident rates were also analyzed and found to be typical.

Based on the applicable 2007-08 tax rates, it is estimated that the proposed project would generate an estimated $27,266 per year in taxes allocated to the Central Islip Fire Department, which would offset a portion of the increased potential costs to the department.

Ambulance Services

Ambulatory services will be provided by the Central Islip-Hauppauge Volunteer Ambulance service. While the proposed project may increase the need for emergency services, this increase is expected to be minimal and will not have impact on the ability of the service to provide emergency care. Emergency care services provided by the Central Islip-Hauppauge Volunteer Ambulance will be billed to the user separately.

Solid Waste Disposal

The proposed project will generate a greater amount of solid waste than the current equestrian use; it is estimated at 507 lbs/day. However, this amount will not affect the Village's contracted waste removal service as waste removal for the proposed development will be handled through the Condominium Association. As a result, no significant solid waste disposal impacts or Village expenses are anticipated.

Wastewater Treatment

The proposed project will generate a total of approximately 14,925 gpd of sanitary wastewater, to be treated and recharged on-site via a proposed Cromaglass wastewater treatment system. The use of this type of treatment is approvable in consideration of SCSC Article 6, as this volume is less than the maximum allowable volume of 15,000 gpd that can be treated by such a system on a daily basis. The design and installation of the system will be subject to the review and approval by the SCDHS, ensuring that the potential for adverse impacts to groundwater quality and quantity is minimized. The sanitary treatment system has been sited at the southwest corner of the property, so as not to impact to the groundwater within the contributing area of the SCWA Nichols Road South wellfield located immediately north of the subject property. The flow of groundwater in the area of the subject property is generally to the south; treated effluent will be

discharged to groundwater in a location more than 500 feet from the wellfield and completely outside of the capture area as depicted in the SWAP maps obtained from SCDHS for the purpose of project planning.

As sanitary wastewater disposal will be handled by on-site systems, no public utility is utilized, and there is no public utility expenditure associated with this treatment system.

Water Supply

The project will be supplied with potable water via an existing water main along Old Nichols Road. The project is expected to increase the use of SCWA-supplied potable water by 14,925 gpd; an additional 4,430 gpd is estimated to be used for lawn irrigation. The increase in total water use is not expected to significantly impact the ability of the SCWA to serve the site or area, as the SCWA has an extensive distribution network in-place in this area, with sufficient groundwater supplies available. In addition, SCWA is chartered to provide public water to customers within its service area. Residents will pay the SCWA directly for the water consumed as will the Condominium Association for water used for irrigation, recreation facilities and for maintenance in the common areas of the site.

Energy

It is expected that there would be no significant adverse impacts to either LIPA or National Grid as a result of the project's increased consumption of electricity or natural gas, respectively. Correspondence with LIPA/National Grid finds that these utilities can provide electricity and natural gas service to the site in accordance with the filed tariff and schedules in effect at the time service is requested. In addition, new construction will utilize appropriate and necessary energy-conserving materials and mechanical systems, consistent with NYS Building Code, minimizing the increased consumption of these energy forms. Additionally, these utilities are chartered to serve development within their service areas, and the area is already well-served with electricity and natural gas.

Similar to public water supply, the residents will pay LIPA for the electricity and (if applicable) the natural gas consumed by the project and, as no property taxes are allocated to LIPA, an analysis of the cost of community energy service would not apply.

3.3.3 Proposed Mitigation

- The proposed project will generate significant increases in tax revenues and allocations to each of the pertinent community services (including the Central Islip UFSD, the SCPD and Central Islip Fire District), which would offset at least a portion of the increased costs to the pertinent community services to provide services.

- The project will be home to an estimated 10 school-age children; as the site is within the Central Islip UFSD, it is expected that these children would attend this school district. The cost to educate these students would, based on current rates, total an estimated $183,880/year. However, the project will generate an estimated $580,666 per year in school district taxes, which would offset the entire cost to educate these students and provide a yearly surplus for the district.

- Provision of 47 age-restricted units is itself a mitigation measure for the school district, as these units will not generate any school-age children, and thereby will not require additional school district expenditure to provide services while contributing significant monies to help offset the increased costs to the district to provide educational services.

- Smoke and fire detectors will be installed in the proposed units and current construction standards will be adhered to as mandated by the NYS Building Code. Additionally, fire hydrants will be installed throughout the development to aid in fire fighting activities.

- Energy-efficient design and current construction methods will be utilized and buildings will be constructed consistent with NYS Building Code requirements.

- Water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be used where appropriate in order to minimize water consumption.

- Energy efficient appliances and fixtures will be utilized to reduce energy consumption.

- Native and near-native, drought tolerant and, non-fertilizer dependent landscape species will be utilized where feasible to reduce water and fertilizer use.

3.4 Aesthetic Resources and Community Character

3.4.1 Existing Conditions

Appendix F contains a series of photographs of the site and vicinity that were taken in early December of 2007 and mid-February 2008. Photographs are presented to document the appearance of the site as well as its visual relationship to its surroundings in that portion of the year when leaves are off the trees, rendering the site most visible from outside viewpoints. The following discussion of the site's visual resources, as well as of the area's aesthetic character, is based on these photographs.

The subject site currently operates as an equestrian center and is well-established in the community, both socially and visually. The site is improved with a small wood-framed general store structure, large metal barn structures, and several paddocks. The majority of the site is cleared, with the exception of a number of well-spaced trees, and a landscaped area in the western corner of the site fronting the general store. The site is in full view of approaching traffic on Old Nichols Road, as well as from the commercial establishment at the end of St Mark's Circle, Station 3 of the Central Islip Fire Department, and the residential developments across the street.

The topography in the immediate vicinity, and particularly along Old Nichols Road, is generally flat, so views in the area are wide and open. The site's structures are set back from Old Nichols Road at least 100 feet, and what little landscaping there is on the property is turf, so views southward into the site from this roadway are similarly wide and deep. Adjacent to the northeast and the northwest are low-density and medium-density residential developments, respectively, set within landscaped lots and some natural vegetation. In general, the lack of vegetation on the

site and its flat topography allow for relatively unobstructed views from the dwellings in the adjacent M and MF districts to the north and southwest as well as the subdivision to the northeast, which has an unfinished road that ends at the property boundary. A narrow vegetated buffer, which comprises part of the unimproved Schley Street, exists between the subject property and the SCWA-owned parcel to the northeast. Overall, there are relatively unobstructed views of the site from every direction, except from the south and southeast; those lands are undeveloped parklands owned by the Town of Islip (north of the LIRR tracks) and the State of New York (south of the tracks).

The aesthetic character of the area is suburban and residential in nature. Single-family residential development is located generally to the north, northeast and northwest, though a small area of commercial and institutional land is found opposite the site (at the end of St. Mark's Circle). Public open space, interrupted only by the LIRR, dominates areas south of the property.

3.4.2 Anticipated Impacts

The project will remove all of the existing structures on the property, followed by construction of 13 two-story structures housing the 72 proposed condominium units, a clubhouse with an outdoor swimming pool/patio and tennis courts. As a result, the visual character of the subject site will be changed, from its existing equestrian related use to a developed residential site. However, the extent of this change is minimized by the aspects of site design discussed below.

The project's single internal roadway will be a linear, loop design oriented such that views from Old Nichols Road will be generally eastward along its length. Such views would be narrowed from those at present, but will continue to be deep, and extend to a single structure in the distance at the site's eastern border.

The nearest structure to Old Nichols Road will be the residential structure at the site's northernmost corner, which will be set back about 45 feet from this road. This setback is similar to that of the detached, single-family residences in the vicinity. For the remaining structures on-site, the greater number of these new buildings (in comparison to that of the existing single-family homes in the area) will be offset by their substantially greater setbacks from Old Nichols Road. As a result, the greater distances to these buildings for observers on Old Nichols Road will tend to render these structures smaller to the eye, and therefore less obtrusive and different from their neighbors. Therefore, the greater building setbacks from Old Nichols Road are a significant design factor that will minimize potential visual impacts.

The development will use a single, cohesive landscaping design to enhance the aesthetic appeal of the development and to reduce the differences in appearance of this site from those of its neighbors. Landscaping will include an attractive entrance landscape treatment, street trees within the development, and specific planting areas for visual buffering. A decorative water feature will be located in the traffic circle just east of the main entrance. Landscape buffer plantings will be installed in strategic locations within the project site, specifically noted as follows: at the end of Schley Street in the northeast part of the site; south of the parking area in the west-central part of the site, and west of the sanitary waste treatment facility in the west part

of the site. These buffers will assist in ensuring that the visual aspects of the proposed project are addressed.

The new residential buildings will be two stories in height, and will not exceed the 35-foot maximum allowed height in the proposed MF zone, and so will be similar to the heights of other residences in the area. It is not anticipated that the residential structures will be tall enough to be visible to outside observers over the existing treelines, though they will be visible from adjacent properties through the existing vegetation on properties abutting the site. Therefore, the new residences would not significantly differ from the appearance and massing of the existing residences in the vicinity.

Finally, it is expected that the architectural theme to be employed in all buildings and amenities will be appropriate to and reminiscent of the general building character of the area, and that building materials will have textures and colors that will support this theme.

Appendix A-3 contains the Visual Environmental Assessment Form Addendum prepared for the project. As can be seen, there are five visual impact receptors within ½-mile of the site, though two of these receptors are public roadways and the remaining three refer to the nearby Town and State parks. At a greater distance, there are five receptors within the interval between ½ and 5 miles from the site. These include a State roadway (NYS Route 454), public parks, an interstate transportation corridor (the LIE), the Nissequogue River, and historic resources in the region. In addition, the project site will be visible to observers throughout the year; however, the majority of those observers would be associated with passing motorists on Old Nichols Road. The area is characterized by a mix of land use types and intensities, so that the proposed project would not represent a new or dissimilar land use from those that already exist in the visual field. Finally, there are visually similar properties throughout the area, which would tend to reduce the visual impact of the proposed project.

3.4.3 Proposed Mitigation

- Proposed landscaping will include groundcovers, shrubs and trees to be planted both between the new buildings and along the entire perimeter of the site, to partially screen and minimize adverse visual impacts of the project for observers on Old Nichols Road as well as on adjacent and nearby properties.

- A decorative water feature will be located in the traffic circle located just east of the main entrance and will further enhance the character of the development.

- It is anticipated that the project will be developed in conformance with a single, consistent architectural theme appropriate to the prevailing aesthetic of the area. Such a theme would utilize building materials having textures and colors to achieve this goal.

- Residential structures will be set back at least 45 feet from Old Nichols Road, and thereby provide visual buffering from outside viewers on Old Nichols Road.

3.5 Cultural Resources

3.5.1 Existing Conditions

The site is improved with an equestrian center, which consists of several barns, an indoor training facility, a free-standing general store and various small maintenance and storage structures. This equestrian facility was constructed between 1980 and the early 1990's (see also **Section 1.2.1**).

In order to determine the presence or the potential for the presence of cultural resources, records of the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) were consulted. **Figure 3-6** is a portion of the State Historic Preservation Office (SHPO) Cultural Sensitivity Map for the area including the subject site. That document depicts areas of known and/or suspected cultural resources, which includes pre-historic and historic-era archaeological, historical and architectural resources. As can be seen, there are no known occurrences of cultural resources on the subject site. Therefore, it is not anticipated that the existing equestrian center structures or the site have significant historic value.

In addition, the subject property is not within 1,000 feet of any site that has known cultural resources (such areas are shown in gray); the nearest boundary of this zone is approximately 2,000 feet to the south-southwest, within Connetquot River State Park.

The subject site is approximately 350 feet north of the northern border of Connetquot River State Park, which coincides in this area with the LIRR tracks. **Figure 3-5** shows that this public park facility is listed on the National Register of Historic Places. However, the proposed development would not be expected to affect the subject site, due to the distance between the subject site and the park border, as well as the presence of intervening development represented by the LIRR tracks.

In consideration of the above-described reviews, no cultural resources are expected to be present on the subject site nor are any cultural resources in the vicinity of the site expected to be significantly impacted by the proposed development.

3.5.2 Anticipated Impacts

As noted above, the subject site has been subject to significant prior development and resulting disturbance, and is not located within, abutting or in the vicinity of an area designated by the OPRHP as having known or suspected cultural resources. As a result, no impact to such resources is expected to occur as a result of the proposed project.

3.5.3 Proposed Mitigation

- As there are no known or suspected cultural resources on the site that could be disturbed by the proposed project, no mitigation is necessary or proposed.

SECTION 4.0

OTHER REQUIRED SECTIONS

4.0 OTHER REQUIRED SECTIONS

4.1 Construction-Related Impacts

As indicated in **Section 1.5**, the entire construction phase is anticipated to last approximately 24 months. Construction activities are anticipated to result in short-term transportation, noise, dust, aesthetic and erosion impacts; however, these impacts are not expected to extend throughout this entire period.

It is anticipated that the majority of the property will be cleared and graded for construction of the internal roadway, parking spaces, buildings, the sanitary system and landscaping. Construction areas may be subject to erosion during this phase, and could potentially generate dust due to truck movements, equipment operations and wind. Erosion control measures will be taken to minimize the potential for impacts to sensitive on- or off-site natural or developed areas. These measures are discussed in detail in **Section 1.5.1**, but would include use of groundcovers, drainage diversions, soil traps, water sprays and minimization of the time span that bare soil is exposed to erosive elements.

A construction access/exit will be located on Old Nichols Road, at roughly the mid-point of the property's frontage. As construction equipment loading/unloading, materials storage, and construction staging areas and construction worker parking will be located within the site, no significant or long-term construction impacts to the surrounding areas are anticipated.

The use of "rumble strips" (which cause truck tires to shed any mud trapped within the tire treads) at the construction entrance will prevent soil on truck tires from being tracked onto adjacent roadways, thereby minimizing the potential for dust to be raised.

It is not anticipated that there will be a decrease in the existing level of safety in regard to school bus operations on Old Nichols Road from construction phase truck traffic, for the following reasons: 1) school bus activities occur during early morning and early afternoon hours, when only a limited number of trucks are utilizing the roads; 2) bus drivers as well as truck drivers are trained and specially licensed to operate their vehicles in a safe manner, observing appropriate traffic laws; and 3) Old Nichols Road is an arterial roadway used by differing types of traffic and is not a lightly-traveled, local road often used by pedestrians.

The construction activity related to the proposed development is a relatively short-term impact limited geographically to the site and immediate area. In general, the construction phase is anticipated to progress in a manner typical for a project of this size and type; no unique or unusual construction difficulties are anticipated.

4.2 Cumulative Impacts

Cumulative impacts are the potential impacts of a proposed action taken in conjunction with those of other active or anticipated nearby development projects. An analysis of cumulative

impacts is generally required within a DEIS when it is expected that multiple projects within the same area may result in a greater cumulative impact than is suggested by an impact analysis of an individual action or actions.

The Town and Village were contacted to determine if there were any other pending development projects in the area that should be considered in the TIS in connection with expected traffic growth patterns. No additional developments were identified and, as a result, no cumulative impacts are expected in connection with the proposed project combined with other potential developments in the area.

4.3 Adverse Impacts That Cannot Be Avoided

The site has been characterized, and the potential impacts to the existing site have been assessed. Some impacts may still exist for which no mitigation is available. The impacts themselves have been quantitatively and qualitatively discussed in previous sections of this document. The impacts of the proposed project will be minimized where possible, but this subsection acknowledges those impacts that may still occur:

- Temporary increases in the potential for fugitive dust and construction traffic and noise during the construction period.
- Loss of the equestrian use on the subject property.
- Change in visual character of the site.
- Displacement and/or loss of the limited number and diversity of wildlife species which are expected to inhabit or utilize the site.
- Increase in vehicle trips generated on the site and on area roadways.
- Increase in the number of school-aged children who may attend the Central Islip UFSD.
- Increased potential need for emergency (fire and police) services; increased need for public services including solid waste disposal and water and energy utilities.
- Costs of increased need for public educational, police and fire protective services are not expected to be fully offset by increased property tax allocations to these services.

4.4 Irreversible and Irretrievable Commitment of Resources

This subsection is intended to identify those natural and human resources discussed in **Sections 2.0 and 3.0** that will be consumed, converted or made unavailable for future use as a result of this project. The development of the proposed project will result in irreversible and irretrievable commitment of resources. The impact of this commitment of resources is not anticipated to be significant, as the magnitude of these losses is not substantial.

- Material used for construction on the site, including but not limited to: wood, asphalt, concrete, fiberglass, steel, plastic, aluminum, etc.
- Energy and resources used in the operation and maintenance of this project, including fossil fuels, electricity and water.

4.5 Growth-Inducing Aspects

Growth-inducing aspects of a project are those characteristics that may promote further development in an area. A project can be assessed in terms of primary impacts and secondary impacts. For residential projects, primary impacts would be associated with an increased likelihood for other landowners in the area to develop their properties, whereas secondary impacts would be associated with the increased population or the needs of a particular type of population added to the area. The following are brief discussions of the project aspects that would tend to minimize its potential to induce growth in the vicinity:

- There are no other similar properties in the vicinity available for development or redevelopment, so the project would have little potential to induce growth in the area.
- The site would be rezoned for a residential use complementary to that of the area, at a yield that would conform with the allowed yield for the property under the requested zoning. In this way, there would be no inducement established to seek development at yields higher than allowed by the proposed zoning.
- The Preserve at Islandia is expected to be occupied by an estimated 170 residents, of which 99 would be seniors; neither population group would be considered a significant number in consideration of area demographics.
- There are service businesses and retail stores in the area that may benefit from an incrementally increased customer base.
- The 47 age-restricted units are expected to attract senior residents from the area and the remaining 25 non age-restricted units would attract families in the area. As there is a regional demand for quality housing for both senior citizens and families, the project is expected to be attractive to these buyers and not cause growth inducement, but serve a need in the community and the area.
- The primary impact that may occur is based on the creation of construction jobs. In the short-term, a limited number of construction jobs will be directly created, and a few jobs may be indirectly created, based on increased patronage of material suppliers, shops and the like. These job opportunities will not require relocation of specialized labor forces or an influx of large businesses from outside the area to provide construction support. As a result, construction-related growth-inducing aspects of the proposed project are expected to be not significant. The existing four full-time and four part-time jobs will be lost with the closure of the equestrian center, but it is expected that there would be a comparable number of new jobs associated with the operation of site facilities and demand for private maintenance services (i.e. landscaping, home maintenance, etc.).
- The site is also well served by existing roads, water mains, gas service and other infrastructure. Development of the site will result in an increased usage of these utilities. Electrical service is generally available throughout Long Island, and water mains are adjacent to the site; therefore, significant expansions of these utilities are not expected. The proposed project may lead to the improvement of community services in the area as stimulated by the increased taxes generated by the project. This will add to the fabric of the community and support existing programs and special districts without adding significantly to growth potential.

Based on applicable plans and zoning, existing infrastructure availability, need for senior and family housing and support and benefit to services and businesses through new residential occupancy, the proposed project is not in itself anticipated to cause significant growth in the community.

SECTION 5.0

ALTERNATIVES

5.0 ALTERNATIVES

SEQRA requires the investigation of reasonable alternatives to a proposed project. Alternatives must be feasible and in keeping with the goals and objectives of the project sponsor. The discussion and analysis of each alternative should be conducted at a level of detail sufficient to allow for the comparison of various impact categories by the decision-making agencies. The following lists the alternatives analyzed in this document:

Alternative 1: No Action
(The site remains in its current use and condition)

Alternative 2: Existing Zoning
(This alternative assumes that the project site is planted with cash crops intended for local use)

Alternative 3: Alternative Layout Design
(This alternative assumes that the project site is developed with a layout similar to the proposed development but with curved interior roadways and offset buildings and units)

Alternative 4: Alternative Site Access
(This alternative assumes that the proposed project's vehicle access on Old Nichols Road has been moved to the site's northern corner, in order to improve sight lines for exiting drivers)

To assist in this analysis, a chart has been prepared to compare those alternatives that result in changes to site conditions, site quantities and environmental resource factors that can be quantified; **Table 5-1** compares these quantities for Alternatives 1 through 4. A discussion of the various alternatives is provided in the following subsections.

5.1 Alternative 1: No Action

This alternative assumes that the proposed project is not built; the site would continue to operate as an equestrian facility. Horses would be housed in the stables and patrons would continue to use the outdoor and indoor riding areas. The site would employ full time and part time employees. The existing natural and human environmental resource conditions are described in detail in Sections 2.0 and 3.0 and these sections can be referred to for current site conditions. In summary, under this alternative, the site would have the following environmental resource characteristics:

Geology – The existing topography, drainage patterns, soils and subsoils, as described in Section 2.1 would remain unchanged. The site would retain the existing geologic resources.

Water Resources – The site has natural qualities in terms of evapotranspiration and recharge, and currently has a recharge volume of 6.00 MGY (16,430gpd) and a nitrogen concentration in recharge of 7.28 mg/l if the equestrian use continues. These conditions would remain unchanged.

Table 5-1
COMPARISON OF ALTERNATIVES

Parameter	Proposed Project	Alt. 1 No Action	Alt 2. Farm	Alt 3. Alternative Layout Design	Alt. 4 Alternative Site Access
Use & Yield	Residential: 72 units	Agriculture: Horse farm	Agriculture: Cash Crops	Residential: 72 units	Residential: 72 units
Coverages (acres)**:**	---		---	---	---
Buildings /Impervious	4.83	0.81	0.37	4.64	4.83
Agricultural	--	--	9.00	--	---
Pervious	--	6.55	.5	--	---
Successional	--	1.32	--	--	---
Landscape/Lawn (fertilized)	5.34 (1)	1.44		5.53	5.58
TOTAL	**10.12**	**10.12**	**9.87**	**10.17**	**10.41**
Water Resources:	---		---	---	---
Sanitary Wastewater (gpd)	14,925 (2)	see total use	300 (2)	14,925	14,925
Agricultural Irrigation (gpd)	---	--	7,466 (3)	--	---
Landscape/Lawn Irrig. (gpd)	4,430 (3)	see total use	--	5,588 (3)	4,630 (3)
Total Water Use (gpd)	**19,355**	**2,200** (8)	**7,766**	**20,513**	**19,555**
Recharge Volume (gpd)	36,408 (4)	16,430 (4)	21,702 (4)	35,966 (4)	36,751 (4)
Nitrogen Conc. (mg/l)	4.99 (4)	7.28 (4)	18.02 (4)	5.29 (4)	4.95 (4)
Miscellaneous:	---		---	---	---
Total Residents (5)	170	--	3	170	170
Age-Restricted Residents (5)	99	--	--	99	99
School-Age Children (6)	10	--	1	10	10
Solid Waste (lbs/day)(7)	507	--	200	507	507

(1) Includes Drainage Reserve Areas
(2) Based on 300 gpd-non age-restricted units, 150 gpd-age-restricted units and 0.10 gpd-clubhouse.
(3) Assuming an irrigation rate of 5.5 inches per year for the period May to September.
(4) See **Appendix B-3**.
(5) Based on 2.09 resident/age-restricted unit (47) and 2.83 residents/ non age-restricted unit (25), per Burchell et al, 2006.
(6) Based on 0.39 school-aged children/non age-restricted unit (25).
(7) Based on 2.3 lbs/capita for residential unit and 3.12 lbs /100 SF-Clubhouse.
(8) Based on a monthly average bill of $110.

Ecology – The majority of the site consists of bare soil with very few trees and this condition would remain on the subject site.

Land Use, Zoning and Plans – The project would retain the current AG-Agriculture zoning and the permitted equestrian use would continue. The project site would be consistent with the Village's comprehensive plan and would be compatible with surrounding uses.

Transportation – Vehicle trips associated with the equestrian use would continue as would the current traffic patterns associated with this use.

Community Services – The subject site would generate approximately $23,803/year in tax revenue, based on the current tax structure. The site would not generate school aged

children, or significant need for fire/police/ambulance response. No additional energy resources would be required.

Community Character – The existing visual character would remain unchanged. The noise environment would be characterized mainly by highway traffic along Old Nichol's Road and occasionally, by the Central Islip Fire Department Station 3 located opposite the site.

A summary of quantifiable data with respect to this alternative is provided in **Table 5-1**. The existing use of the subject site is expected to change at some point in the future due to real estate market pressures and the inability of the existing use to continue on the site in an economically viable manner. In comparison to the proposed project, this alternative would not satisfy the goals and objectives of the project sponsor as the property is under consideration for a multi-family development consistent with MF-Multi-family residential zoning.

5.2 Alternative 2: Farm Use

This alternative assumes that the project site is converted to farm fields and planted with cash crops for sale locally. A single-family residence, farm stand and accessory structures associated with the use are located on-site as allowed by the AG-Agriculture zoning district. Water usage will be comprised primarily of irrigation. A minimal amount of solid waste and wastewater would be generated by the single-family residence.

A brief overview of the natural and human environmental resource analysis association with this alternative is provided below, and summary information is provided in **Table 5-1**:

Geology – The existing topography, subsoils and surface soils would all be altered as approximately 90% of the site would be converted to farm fields. Soils would be altered to create suitable planting conditions. The ridge located in the south central portion of the property and the mound located along the northern property would be removed to increase tillable areas.

Water Resources – The sanitary flow would be restricted to the residence only; however, a significant amount of water (7,760 gpd) will be used for irrigation during the growing season. The volume of recharge will be approximately 7.92 MGY (21,702 gpd) and the nitrogen concentration in recharge approximately 18.02 mg/l, which is greater than that of the proposed project and any of the other alternatives.

Ecology – The surface of the site would be altered to create suitable farming conditions. The limited existing vegetation would be removed and replaced with crop species. As a result, impacts of this alternative would be that vegetative cover would increase during the growing season.

Land Use, Zoning and Plans – The project would retain its AG-Agriculture zone and conform to the Village's Comprehensive Land Use Plan. No impacts would result from this use.

Transportation – Traffic impacts would be limited to the growing and harvest season when produce is transported from the site on-site sales occur when customers stop and park to purchase items. Deliveries to the site are expected to be intermittent and relatively minimal. There are no turn-lanes in this portion of Old Nichols Road and this may impact traffic movements to and from the site. Schley Road will remain a paper street.

Community Services – The subject site would generate the same amount of tax revenue as the existing use as both are agriculture related and allowed by zoning. Taxing jurisdictions will receive the same amount of benefit as compared to the current use. However, expected tax revenue ($17,727.74) will not be sufficient to cover the cost of educating the one (1) school-aged child ($18,838) in the Central Islip UFSD. While water use is expected to be less for this use, fertilizer use is expected to be significant and groundwater quality may be affected by an increased concentration of nitrogen in recharge (18.02 mg/). Police and fire response would be expected to be similar; and ambulance response needs might be slightly less than that of the proposed project.

Community Character – The existing visual character would be altered by the additional of vegetation on the majority of the property. Farming equipment will be used during in the growing and harvesting season which may result in noise impacts.

Overall, this alternative will result in an increased concentration of nitrogen in recharge which may affect groundwater quality and the SCWA public water supply well located adjacent to the site. In addition, given the desirable location, the residential character of the Village of Islandia, and current/future land values, this alternative does not take advantage of the full potential of the subject property. The economic viability of this alternative is questionable and the project is not in keeping with the objectives of the project sponsor. In consideration of the totality of its various impacts, this alternative has a greater impact than that of the proposed project.

5.3 Alternative 3: Alternative Layout

This alternative assumes that the project site is developed with 72-unit condominiums in fifteen (15) buildings in a different configuration than that of the proposed project. **Figure 5-1** provides an illustration of this alternative, and quantifiable impacts are summarized in **Table 5-1**. The alternative provides a modified approach to the development which provides more internal open space and resulting sense of place, in a manner that creates a more walkable and pleasant community setting. The unit configuration is less linear, and the road system would tend to reduce vehicle speeds as a result of traffic calming features (i.e. intersections, crosswalks, etc.). This design provides elements of "smart growth" design that improve the design and layout of the development.

Residential units would be housed in 6-, 5-, 4-, and 3-unit structures to be located on both sides of a curved internal roadway and a cul-de-sac which extends eastward from an internal loop road. On-street parking will be provided along the internal roadway and adjacent to the recreational building. One ingress and egress point will be provided along Old Nichol's Road.

The development will feature a system of curved walkways that will provide access from the main roadway to front and side entrances and the recreation facilities. The areas created by the walkways provide unique opportunities for attractive landscaping. Drainage reserves are provided for the internal area of the development and along the southern property boundary. A proposed Cromaglass sanitary wastewater treatment system is planned for the western portion of the property. This alternative would have essentially the same physical impacts as the proposed project.

The following summarizes the key aspects of this development in terms of resource impacts, and quantifiable data is provided in **Table 5-1**:

Geology – The existing topography, subsoils and surface soils would be impacted the same as with the proposed project since the design, building and landscaped areas are very similar.

Water Resources – The sanitary flow would be the same as the proposed project as the number of units does not change; however, slightly more landscaped areas will result requiring more irrigation and more fertilizer. As a result, the project would have slightly greater nitrogen concentration in recharge (5.29 mg/l) than the proposed project; this concentration is less than the drinking water standard for nitrogen of 10 mg/l, and as a result, no significant adverse impact is expected. In addition, recharge volume is expected to be slightly less than the proposed project.

Ecology – The alternative would require that the site be cleared; however, very little vegetation currently exists on the site. This alternative provides slightly more opportunities for landscape vegetation as compared with the proposed project.

Land Use, Zoning and Plans – The project would require a change of zone from the current AG-Agriculture to MF-Multi-family. The project would not be consistent with the Village's land use plan but will help to meet the goal of providing more multi-family housing opportunities. Overall impacts would be similar to those of the proposed project since a similar number of residents, school aged children, vehicle trips, solid waste generation and tax benefits would result.

Transportation – The traffic aspects of the project would be the same as the proposed project as the same number of units and the same unit breakdown of 47 age-restricted units and 25 non age-restricted units would result.

Community Services – Tax generation and benefits to taxing jurisdictions will be the same as the proposed project since the same number of units is planned. Water use would be slightly more for this alternative due the increase in landscaped areas. Solid waste generation and energy consumption would be expected to be the same as the proposed project. Police, fire and ambulance response would be expected to be similar as the same number of residents and units are anticipated.

Community Character – The existing visual character would be similar to that of the proposed project. The layout of this alternative is more appealing than the proposed project due to the design features noted above.

Overall, this alternative is feasible as it is very similar to that of the proposed project. Based on the proposed increase in landscaped areas, slight increases in irrigation and fertilizer use are anticipated. This alternative provides an alternative site design for consideration by the Village of Islandia, in a manner that introduces "smart growth" design elements that provide for greater internal sense of place and walkability, improved landscaping, less linear building design and a road system that encourages traffic calming.

5.4 Alternative 4: Alternative Site Access

This alternative was prepared to analyze the potential for improved traffic safety and efficiency if the site's vehicle access point were relocated to occupy a portion of the alignment of Schley Place at Old Nichols Road. These goals would be achieved by the resulting increase in sight distance along Old Nichols Road for traffic exiting the site (particularly the exiting left turn movement), as well as for construction vehicle access (during the construction phase). It is noted that this alternative access roadway would not extend southeastwards, and so would not connect the existing paved portion of Schley Place to Old Nichols Road. Like the proposed project, this new access point will be configured for all movements, and Stop-controlled; it would not be signalized. It should be noted that the applicant would be required to purchase the 0.24 acres in the Schley Place ROW from the Village of Islandia.

This scenario assumes that the project site is increased by the 0.54 acres of the Schley Place ROW, to a total of 10.41 acres. A minor amount of the ROW will be paved for the access driveway the remainder will increase the depth of the landscaped rear yards for the units abutting the ROW.

This alternative assumes that the site is developed with the same yield, features and configuration of the proposed project, though minor changes in the siting of five residential structures and the northernmost portion of the internal roadway would be necessary; the Cromaglass system, tennis courts, clubhouse and pool/patio would not be changed. A plan for this alternative is contained in a pouch at the rear of this document, and quantifiable impacts are summarized in **Table 5-1**. This alternative would have essentially the same physical characteristics and impacts as those of the proposed project.

Geology – Impacts to the existing topography, subsoils and surface soils of the site would be the same or similar as those of the proposed project, since the design, building and landscaped areas of this alternative are very similar to those of the proposed project.

Water Resources – The sanitary flow of this scenario would be the same as the proposed project, as the number and distribution of units is identical to the proposed project; however, the slightly greater landscaped area will require slightly more irrigation and fertilization. However, the slightly greater property area is sufficient to cause a slightly lower nitrogen

concentration in recharge (of 4.95 mg/l) than the proposed project. Like the proposed project, this concentration is less than the NYS Drinking Water standard for nitrogen of 10 mg/l, and as a result, no significant adverse impact is expected. In addition, the volume of recharge generated on-site would be slightly greater than the proposed project.

Ecology – Like the proposed project, the alternative would require that the site be cleared; however, very little vegetation currently exists on the site, so that no significant impacts to habitat area would occur. Because this scenario is slightly larger in area than the proposed project, it provides slightly more opportunities for landscape vegetation as compared with the proposed project.

Land Use, Zoning and Plans – This alternative would require the same change of zone from the current AG-Agriculture to MF-Multi-family as the proposed project, and would not be consistent with the Village's land use plan. Nevertheless, this scenario will help to meet the Village's goal of providing more multi-family housing opportunities. Overall, the land use, Zoning and plan impacts of this alternative would be the same as those of the proposed project, since the same number of residents, school-aged children, vehicle trips, solid waste generation and tax benefits would result.

Transportation – The trip generations and patterns of this scenario would be the same as those of the proposed project as the same number of units and the same unit breakdown would be provided. As a result, the impacts on local roadways and intersections would be the same as well. As intended by the lead agency, this alternative would provide sight distances for exiting drivers that are in excess of the minimum required, thereby enabling safe turning movements. In this regard, the TIS stated:

> As requested by the Village of Islandia, an alternative access off of Old Nichols Road via the existing Schley Place ROW was considered. These two driveway locations were analyzed from the standpoint of safety, location and design. Sight distance measurements were performed at both access points and compared with the recommendations contained in the reference, *A Policy on Geometric Design of Highways and Street* published in 2004 by AASHTO. It was determined from the review of the sight distance data that the measured sight distances from both driveways will exceed the recommended sight distance criteria for left turn and right turn vehicles exiting the site. However the Schley Place ROW location will provide better sight lines for left turn vehicles exiting the site.

Thus, both the proposed project and Alternative 4 would provide for safe exiting left turning movements, though the access in Alternative 4 would provide better sight lines for exiting left turns.

Community Services – Tax generation and benefits to taxing jurisdictions will be the same as the proposed project since the same number of units is planned. Water use would be slightly more for this alternative due the increase in landscaped areas. Solid waste generation and energy consumption would be the same as the proposed project. Police, fire and ambulance response times would be expected to be similar, as the new site access would

not be at a significantly greater distance from these service providers than is provided in the proposed project, and same number of residents and units are anticipated.

Community Character – The visual character of the site from observers on Old Nichols Road would be similar to that of the proposed project, with the exception of the rear facade of the six-unit residential building dominating the site's central frontage.

Overall, this alternative is feasible, as its characteristics and impacts are very similar to those of the proposed project. The differences in characteristics and impacts are associated with the shifted vehicle access location, and lead to impacts as follows:

- the slightly increased landscaped area causes slight increases in irrigation demand and fertilizer use; and
- views from Old Nichols Road will be dominated by the rear façade of the large residential building at the center of this frontage.

The groundwater quality-related impacts would be mitigated by the slight reduction in nitrate concentration in recharge and increased site recharge volume, and the increased impact on visual character of the project could be reduced by judicious landscape design. In addition, while this alternative would provide better sight lines for exiting left turns than that of the proposed project, both of these scenarios would provide sight distances in excess of the minimum distance necessary for safe turning movements.

In consideration of the foregoing analysis, it may be concluded that the central aspect of this alternative, the relocated access point, would not yield a project that is sufficiently improved to justify both the increased cost of land acquisition (for the Schley Place ROW) and the adverse visual impact that would occur by siting a large residential structure at the center of the site's frontage on the roadway that provides the majority of observers. As such, there would be no compelling reason to institute this alternative in preference to the proposed project.

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The analyses and discussions of the anticipated impacts to the site's resources discussed in this document indicate that, while some impacts will occur for which no mitigation is proposed (such as a loss of an agricultural use, change in land use of the site, increase in site-generated traffic, increase in school-age children, increase in need for community services, and change in the visual character of the developed area), these impacts are neither significant or necessarily adverse. Specifically;

- the site is already cleared, as it is an active, equestrian facility;
- the site will be changed to a land use similar to that of the area, and will be used in accordance with the proposed zoning classification;
- while traffic generated will be increased, no significant adverse impacts are anticipated at the proposed site entrance and at intersections along Old Nichol's Road;

- while the project will generate an increase in school-age children, the potential adverse impact to the Central Islip UFSD is minimized, as the project will generate school taxes more than sufficient to compensate for the increased district costs to provide services to these students; and
- potential increased needs for other community services will also be offset by the increased property taxes paid to these agencies by the project.

The potential impacts of the proposed project have been evaluated through this DEIS. Natural resources impacts are minimal due to an altered topography created by past and present uses, and absence of significant natural vegetation; in addition, it should be noted that other development in conformance with the current zoning would result in greater adverse impacts to groundwater quality. Of the human resources, no significant adverse impacts to existing or anticipated traffic flow conditions are anticipated. The use is compatible in terms of land use and zoning to the area, and fulfills the need for increased multi-family development as noted in the Village's Comprehensive Land Use Plan.

Other potential impacts, to community services and community character, are similar to or greater than those if the site were developed with other conforming development scenarios under current zoning. The project will have positive benefits in terms of tax revenue, and will fulfill a need in the area for multi-family housing opportunities. As a result, there is no compelling reason to select a non-residential alternative, and none of the non-residential alternatives were found to be warranted to reduce potential significant adverse environmental impacts. Further, the non-residential alternatives are not in keeping with the objectives of the project sponsor, which is to construct a multi-family residential development which conforms to agency requirements, Village zoning and fulfills a need in the area.

SECTION 6.0

REFERENCES

6.0 REFERENCES

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FIGURES