Draft
Environmental Impact Statement

OLD ORCHARD WOODS
Subdivision Application

North Creek Road, Eatons Neck
Town of Huntington
New York

Volume 2 of 2
Appendices A to G

NP&V Project #85046

March, 2002

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

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Draft
Environmental Impact Statement

OLD ORCHARD WOODS
Subdivision Application

North Creek Road, Eatons Neck
Town of Huntington, New York

Prepared for:

William Kollmer and Mary Ellen Curtis (owners)
22 North Creek Road
Eaton's Neck, NY 11768
and
William Kollmer Contracting, Ltd (Applicant)
22 North Creek Road
Eaton's Neck, NY 11768

Lead Agency:

Town of Huntington, Planning Board
c/o Department of Planning and Environment
Town Hall, 100 Main Street
Huntington, NY 11747
(631) 351-3196
Contact: Richard Machtay, Director of Planning

Prepared by:

Rieger Walsh & McGinity
199 Main Street
Northport, NY 11768
(631) 261-6400
Contact: John T. Rieger, Esq.

First Coastal Corporation
PO Box 1212
Westhampton Beach, NY 11978-1212
(631) 288-2271
Contact: Aram Terchunian, President

Nelson, Pope & Voorhis, LLC
Nelson and Pope, LLP
572 Walt Whitman Road
Melville, NY 11747
(631) 427-5665
Contact: Charles J. Voorhis, CEP, AICP

Archaeological Services, Inc.
11 Woodthrush Court
Miller Place, NY 11764
(631) 331-5665
Contact: Robert J. Kalin, Principle Investigator

Freudenthal & Elkowitz Consulting Group, Inc.
368 Veterans Memorial Highway
Commack, NY 11725
(631) 499-2222
Contact: Theresa Elkowitz, President

Date of Acceptance by Lead Agency: _____

Comments to the Lead Agency are to be Submitted By: _____

APPENDIX A

TOWN & SEQRA-RELATED DOCUMENTS

Appendix A-1

Hogan Plat, EAF Parts II & III

(1/10/89)

ENVIRONMENTAL ASSESSMENT FORM
PART II & III

HOGAN PLAT SUBDIVISION

PROJECT DESCRIPTION:

Hogan Plat is the proposed subdivision of a 34+ acre property into two lots in an area zoned predominantly R-20 (24 acres) and R-80 (10 acres). The subject site is located on the northwest corner of the intersection or North Creek and Eatons Neck Roads, bordered on the east by the boundary line of the Village of Asharoken and on the west by the Long Island Sound. An existing complex of buildings -- sheds, shacks, cottages, a principal residence and a garage -- is to remain located on the proposed lot 1.

The landscape of the central section or lot 1 (roughly the plateau within the 80 foot contour interval) has been largely manipulated and contains many non-native plantings. However, to the west of this plateau area is a remnant cliff face that plunges to the Long Island Sound shore. The land to the east of the plateau contains coastal forest that blends into vegetation indicative of moist soil conditions about the easement area known as North Creek Road that bisects the site and then grades upward gradually to form the forested proposed lot 2.

The property is listed on the Town Open Space Index (OSI NE-1) and is truly exceptional for the habitat diversity it provides. A 3.4-acre (10%) "reserve area to remain undisturbed" is delineated containing the bluff along the site's entire Long Island Sound frontage on the map dated 1/5/89. Both lots created by the proposed action will be substantially oversized and may be further subdivided. The subdivision as proposed will serve to create one new lot at this time that may be physically altered to accommodate a single-family residence. Although no dwelling footprint is depicted, this review will focus more specifically on the potential impact of construction of one new home on lot 2.

IMPACT ON LAND:

1. Will the proposed action result in a physical change to the project site?

***Yes, construction may affect general slopes in the project area exceeding 10%. Some land on the site may be characterized by a seasonal depth to the water table of less than 3 feet. The proposed action will involve the subsequent construction or one proposed residence on the 10-acre subdivided parcel (per EAF part I). Impervious surfaces will be increased on the site as a result or such action. Retention of an open space reserve on lot 1, natural buffer on lot 2, and limitation of site grading, as noted below will provide mitigation.**

Since the possibility of far greater subdivision of the site remains for which cluster development would be advocated, this SEQR review is being segmented. Per 617.3 of SEQR: "If a lead agency believes that circumstances warrant a segmented review, it must clearly state in its determination of significance and any subsequent EIS the supporting reasons and must demonstrate that such review is clearly no less protective of the environment. Related actions should be identified and discussed to the fullest extent possible." The Planning Board, as lead agency, acknowledges that the SEQR review of Hogan Plat is being segmented; however, pursuant to 617.3 as lead agency reserves the right to further, more extensive review of any such application that may be submitted for the subject property wherein specific mitigation measures applicable to the proposal may be imposed.

2. Will there be an effect to any unique or unusual land form(s) found on the subject site? (i.e:cliffs, dunes etc.)

*No, there is no such effect to the cliff implicit to the application; however, the applicant does not preclude the possibility of such by the offered declaration or covenants (i.e. erection of bulkheads or similar structures).

IMPACT ON WATER :

3. Will the proposed action affect any body of water designated as protected under Articles 15,24,25 of the NYS Environmental Conservation Law or Town of Huntington Marine Conservation Law?

*No, not as presently proposed; however, the Long Island Sound shorefront is protected by both the Town Marine Conservation Law and by the New York State Tidal Wetlands Regulations. Part 661 which details the tidal wetlands regulatory process applies "to any tidal wetland the final bounds of which have been established by an order or the Commissioner pursuant to section 25-0201 of the Act and to any adjacent area." The adjacent area may be defined in three ways, the one applicable to the subject application being:

> "Adjacent area" shall mean any land immediately adjacent to a tidal wetland within whichever of the following limits is closest to the most landward tidal wetland boundary, as such most landward tidal wetlands boundary is shown on an inventory map (3) to the elevation contour of 10 feet above mean sea level, except when such contour crosses the seaward face of a bluff or cliff, or crosses a hill on which the slope equals or exceeds the natural repose of the soil, then to the topographic crest of such bluff, cliff, or hill."

The site contains a regulated tidal wetlands area defined on map 634-532, index map no. 2.

No new construction is proposed within a designated freshwater or tidal wetland area; however, the declaration of covenants has not impeded such right of ownership to erect and to maintain "a docking facility that would not extend beyond the 10 foot elevation nor shall it preclude declarant from erecting bulkheads or similar structures or taking other measures specifically designed to protect the bluffs from erosion, provided the same comply with all laws and regulations of the State or New York and its departments, regulations of the U.S. Army Corps. of Engineers, and the Marine Conservation Law and other applicable ordinances of the Town of Huntington and provided declarant procures all required permits."

4. Will proposed action affect any non-protected existing or new body of water?

*No; however, there is a marginal area about North Creek Road that may accept drainage waters which does contain some typical wetland indicator vegetation. Review and approval of the new dwelling fooprint on the conditional final map and grading plan therefor will assure that no effect to the existing drainage patterns will occur.

5. Will the proposed action affect surface or groundwater quality or quantity?

*Yes, the proposed action will adversely affect groundwater quality. <u>However, the proposed large lot sizes and uses therefor, combined with the preservation of natural vegetation thereon, will mitigate potential impact to groundwater quality. Approval of an on-site sanitary disposal by the SCDHS for lot 2 may be considered to reduce this concern to an acceptable level.</u> The EAF Part I notes that depth to the water table is 0-80 feet. The SCDHS may require a test boring to determine whether the underlying soils are conducive to proper leaching given the likelihood of saturated soil conditions/raised groundwater level.

The developed portion of the Hogan property contains two pump houses with private wells for water supply. Any new development on lot 2 will be serviced by a public water supplier.

6. Will proposed action alter drainage flow or patterns or surface water run-off?

*Yes, any construction activity on lot 2 will alter the terrain and pose impact to existing drainage patterns, possibly presenting the potential for runoff/sediment discharge to a NYSDEC-regulated freshwater wetland area further north on North Creek Road.

According to the EAF Part I 90% of the overall site contains slopes in excess of 10% (95% being in excess of 10%). An addition of only 0.25 acres of new impervious surface is noted in the EAF Part I. It is likely that additional disturbance may be corollary to even the most limited development of the site. As a property zoned R- 20 and R-80, the site is subject to the Town Steep Slope Ordinance. However, the proposed development will occur on a 10-acre parcel and factoring of the average slope will have no bearing on the proposed lot 2 which is entirely zoned R-80.

To mitigate potential impacts to vegetation and existing drainage patterns a grading, drainage and erosion control plan depicting house location, limits of clearing, and stabilization/sedimentation control measures to be implemented during and following construction must be submitted for review of the Environmental Review and Engineering Divisions of the Planning Department.

IMPACT ON AIR:

7. Will proposed action affect air quality?

*No

IMPACTS ON PLANTS AND ANIMALS:

8. Will the proposed action affect any protected, threatened and/or endangered species; (as per Federal or State Law)

*Yes, it is possible that development in the future may affect one or more species listed on the New York or Federal list, using the site, over or near site or found on the site. The site lies just south or the Eatons Neck Point area designated as significant coastal fish and wildlife habitat by the New York State Department of State (see attached). Such area supports least terns, common terns, and piping plovers. The construction of a single residence on lot 2; however, should pose no such impact to animals. The site does contain NYS-protected plant species (Christmas fern, spotted wintergreen) that may be reserved by providing limits of clearing on the grading plan for lot 2.

9. Will proposed action substantially affect non-protected, non-threatened or non-endangered species?

*Yes, the action will affect locally important vegetation; however, not to a significant extent for the construction of a single new residence. Any such removal of vegetation will be subject to approval of the Environmental Review Division of a grading plan which shall depict existing mature trees.

IMPACT ON AGRICULTURAL LAND RESOURCES :
10. Will the proposed action affect agricultural land resources?

***No**

IMPACT ON AESTHETIC RESOURCES :
11. Will proposed action affect aesthetic resources?

***No**

IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES :
12. Will the proposed action impact any site or structure of historic, prehistoric or paleontological importance?

***No, not to the best or reviewer's knowledge.**

IMPACT ON OPEN SPACE AND RECREATION:
13. Will the proposed action affect the quantity or quality of existing or future open spaces or recreational opportunities;

***Yes, the subject action will result in a reduction of an open space important to the community. By filing a a declaration of covenants insuring the 3.4-acre shorefront reservation, it would appear as if mitigation to loss or open space in the amount of area required by the lead agency has been implemented. Of the area designed for inclusion in the declaration, all that land eastward from mean sea level to the topographic crest of the cliff is already protected/ restricted by the State Tidal Wetland land use regulations. Further, 6 NYCRR Part 505, Coastal Zone Regulations and final maps filed with the Town Clerk require that a coastal erosion management permit be approved by the NYSDEC for the undertaking of any regulated activity within erosion hazard areas as shown on the coastal erosion hazard maps. The site-specific map which contains the Hogan property (sheet 2 of 5, photo no. 76-1033-83) delineates an area 10 to 50 feet landward from the crest of the bluff. Therefore, such action (covenant relative to the open space reservation) is somewhat duplicative and offers but minimal land protection above and beyond that which is existing with no grant of access to the Town for the purpose or continuous monitoring. However, as noted in #1 above, the lead agency may further protect the area through subsequent review.**

In a memo forwarded to the lead agency by the reviewer (March 30, 1987), it was noted that "the contours depicted in the Long Island Sound area or the Hogan property do not adequately represent the existing severe topography. The face of the bluff is unvegetated and drops with a sheer face for at least 100 feet. The sewer topo information is not a suitable representation of this area of the site." Comparison of the present map with the earlier rendition reveals no difference

in topogfaphy shown, though the reviewer maintains such contention. Spot elevations are presented for the areas proximal to North Creek Road, with no confirmation of the topography in the bluff area.

The same memo indicated the significance of the natural diversity of habitats on site. To provide the optimal open space reservation given the area restriction (3.4 acres), the lead agency has requested that the area already restricted by the NYSDEC be expanded to include a continuum of the coastal forest ecotype. The final plan will show the area presently regulated by the NYSDEC on its final plan with the additional natural buffer covenanted for a totl 3.4-acre reserve area. That the land is regulated by the NYSDEC does not infer that such area is sterilized for the purposes of procuring yield for later subdivision.

IMPACT ON TRANSPORTATION:

14. Will there be an effect to existing transportation systems?

*No

IMPACT ON ENERGY:

15. Will the proposed action have an adverse effect on the communities sources of fuel or energy supply?

*No

NOISE AND ODOR IMPACTS :

16. Will there be objectionable odors, noise or vibration as a result of proposed action?

*No

IMPACT ON PUBLIC HEALTH:

17. Will proposed action adversely affect public health and safety?

*No

IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD:

18. Will the proposed action affect the character of the existing community?

*Yes, development will create a slight demand for additional community services (e.g. schools, police and fire, etc.). The proposed action will set an important beneficial precedent for future projects wherein the applicant reserves open space at the direction or the lead agency via covenant to be held in private ownership, rather than be directly deeded to the municipality. Such arrangement assures the retention or open space without the ongoing maintenance commitment on the Town's

part. However, to prove fully effective and to establish a more broad-reaching precedent, the declaration or covenants should include a clause wherein the property so affected may be vested in the Town outright should efforts to enforce the declaration prove ineffective due to the present or future owners' noncompliance with conditions stated therein. In addition, if the reservation is to remain private, the declarant should grant to the Town a perpetual easement for access to monitor site conditions within the subject area periodically.

19. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts that may result if the proposed action is implemented?

***No, not to the best of reviewer's knowledge as of 1/10/89.**

Signed: _____, Senior Environmental Analyst
Date: January 10, 1989

Appendix A-2
Town Planning Board Resolution

(1/11/89)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF JANUARY 11, 1989

The following resolution was offered by A. Cisternino and seconded by G. Asher:

WHEREAS, JOHN HOGAN, 307 Burns Street, Forest Hills, NY 11375, fee title owner of the land, and DARREN RATHKOPF, 149 Turkey Lane, Cold Spring Harbor, NY 11724 have submitted a subdivision map known as HOGAN PLAT, prepared by Nelson & Pope, for property located on the northwest corner of North Creek Road and Eatons Neck Road in Eatons Neck and indicated as parcels 0400-001-02-02, 03, and 04 on the Suffolk County Tax Map, and

WHEREAS, said preliminary application was received on August 18, 1988, and

WHEREAS, the Planning Board has caused a review of the subdivision map to be made, pursuant to the New York State Environmental Conservation Law, Article 8, State Environmental Quality Review Act (SEQRA), and Part 617 of the implementation regulations (6 NYCRR Part 617), and

WHEREAS, the Huntington Town Environmental Review Division of the Planning Department, at the direction of the Planning Board has reviewed the environmental information provided with Part I of the Environmental Assessment Form, and has commented, in Parts II and III of the Form that SEQR conditions may be imposed pursuant to 617.3(b) to eliminate or adequately mitigate all significant environmental impacts, a Conditioned Negative Declaration may be issued providing that such mitigating measures as specified in Part III will be included on the final map, and

WHEREAS, the Huntington Town Planning Board has conducted a complete review of all aspects of the Environmental Assessment Form and the facts presented thereby, and has determined that the proposed action is an unlisted action that does not meet or exceed a threshold listed in 6 NYCRR 617.12, nor any of the criteria listed in 6 NYCRR 617.11; now, therefore be it

RESOLVED, that the Planning Board of the Town of Huntington finds as follows:

1. That the requirements of SEQRA have been met;

2. The SEQR review of Hogan Plat is being segmented; however, the Planning Board reserves, pursuant to 617.3, the right to conduct further, more extensive review of any such application that may be submitted for the subject property wherein specific mitigation measures applicable to the proposal may be imposed.

DISTRIBUTION TM

SENT TO	DATE
APPLICANT	
ATTORNEY	
ENGINEER / SURVEYOR Nelson + Pope	1/20/89
ENGINEERING	
BUILDING & HOUSING	
TOWN ATTORNEY	
PLANNING BOARD MEMBERS	
SUPERVISOR	
TOWN BOARD MEMBERS	
ENVIRONMENTAL PROTECTION	
ZONING BOARD OF APPEALS	
OTHER (SPECIFY)	

Re resolution 2-22-89

Negative Declaration

3. Sewage disposal facilities on the site will be in compliance with the requirements of the Suffolk County Department of Health Services;

4. The optimal open space reservation that the Planning Board may require per Article X of the Subdivision and Site improvement Specifications (10% or 3.4 acres) has been delineated on the subdivision map. The applicant will show the area presently regulated by the NYSDEC on its final plan with additional natural buffer (to comprise the 3.4-acre reservation) protected as per a declaration of covenants to be filed with the affected deeds.

   The declaration of covenants shall include a clause wherein the property so affected shall vest in the Town as park-preserve property outright should efforts to enforce the declaration prove ineffective due to the present or future owner's noncompliance with conditions stated therein. In addition, if the reservation is to remain private, the declarant shall grant to the Town a perpetual easement for access to monitor site conditions within the subject area periodically.

   Retention of the open space reserve on lot 1 via a declaration of covenants, natural buffer on lot 2, and limitation of site grading will mitigate against loss of open space.

5. To mitigate potential impacts to vegetation and existing drainage patterns, a grading and erosion control plan depicting house location, limits of clearing, and stabilization/sedimentation control measures to be implemented during and following construction shall be submitted for review and approval of the Environmental Review and Engineering Divisions.

   The grading plan will depict limits of clearing so as to enable a swath of oak woodland habitat in this hillside area, a buffer corridor, to be reserved for the benefit of slope management, private landowners' passive use, and wildlife resources.

6. The above factors mitigate against any potential significant environmental impact;

7. There will be no significant environmental impacts by virtue of this application and be it further

3

RESOLVED, that the Huntington Town Planning Board hereby determines that the proposed action described herein will not have a significant effect on the environment with the mitigating measures noted above incorporated therein, and hereby issues a **Conditioned Negative Declaration**, pursuant to SEQRA, supported by the Board's review of the full Environmental Assessment data submitted, and

RESOLVED, that the Planning Board hereby directs the Environmental Review Division of the Planning Department to prepare and file the conditioned negative declaration in accordance with SEQRA 617.6(g) and 617.10(a)(2); and

RESOLVED, that the Environmental Assessment Form, Part III, dated January 10, 1989 is attached hereto and made a part hereof.

VOTE: 6 **AYES:** 6 **NOES:** 0

The resolution was thereupon declared to be duly adopted.

Appendix A-3
Conditioned Negative Declaration
Town Planning Board

(1/17/89)

14-12-7 (2/87)—9c

SEQR

617.21

Appendix F

State Environmental Quality Review

NEGATIVE DECLARATION

Notice of Determination of Non-Significance

Project Number _____ Date January 17, 1989

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Huntington Planning Board, as lead agency, has determined that the proposed action described below will not have a significant effect on the environment and a Draft Environmental Impact Statement will not be prepared.

Name of Action: Hogan Plat Subdivision

SEQR Status: Type I ☐
Unlisted ☒

Conditioned Negative Declaration: ☒ Yes
☐ No

Description of Action:

Subdivision of a 34+ acre property into two lots in an area zoned predominantly 1/2 acre residential (R-40, 24 acres) and 2-acre residential (R-80, 10 acres). The property is listed on the Town Open Space Index and is depicted on the NYSDEC Tidal Wetlands and Coastal Erosion Hazard Maps.

Location: (Include street address and the name of the municipality/county. A location map of appropriate scale is also recommended.)

Town of Huntington, Hamlet of Eaton's Neck
Suffolk County Tax Map #Dist. 0400- Sect. 011 - Block 02 - Lots 02, 03 and 04
Located on the northwest corner of the intersection of North Creek and Eatons Neck Road, extending to Long Island Sound.

Reasons Supporting This Determination: *See attached EAF Parts II and III
(See 617.6(g) for requirements of this determination; see 617.6(h) for Conditioned Negative Declaration)

See #2-5 on attached sheet.

If Conditioned Negative Declaration, provide on attachment the specific mitigation measures imposed.

For Further Information:

Contact Person: Richard Machtay, Director of Planning

Address: 100 Main Street, Huntington, NY 11743

Telephone Number: 516-351-3196

For Type I Actions and Conditioned Negative Declarations, a Copy of this Notice Sent to:

Commissioner, Department of Environmental Conservation, 50 Wolf Road, Albany, New York 12233-0001

Appropriate Regional Office of the Department of Environmental Conservation

Office of the Chief Executive Officer of the political subdivision in which the action will be principally located. Supervisor Rettaliata

Applicant (if any)

Other involved agencies (if any)

SCDHS

2. The SEQR review of Hogan Plat is being segmented; however, the Planning Board reserves, pursuant to 617.3, the right to conduct further, more extensive review of any such application that may be submitted for the subject property wherein specific mitigation measures applicable to the proposal may be imposed.

3. Sewage disposal facilities on the site will be in compliance with the requirements of the Suffolk County Department of Health Services;

4. The optimal open space reservation that the Planning Board may require per Article X of the Subdivision and Site improvement Specifications (10% or 3.4 acres) has been delineated on the subdivision map. The applicant will show the area presently regulated by the NYSDEC on its final plan with additional natural buffer (to comprise the 3.4-acre reservation) protected as per a declaration of covenants to be filed with the affected deeds.

   The declaration of covenants shall include a clause wherein the property so affected shall vest in the Town as park-preserve property outright should efforts to enforce the declaration prove ineffective due to the present or future owner's noncompliance with conditions stated therein. In addition, if the reservation is to remain private, the declarant shall grant to the Town a perpetual easement for access to monitor site conditions within the subject area periodically.

✳ Retention of the open space reserve on lot 1 via a declaration of covenants, natural buffer on lot 2, and limitation of site grading will mitigate against loss of open space.

5. To mitigate potential impacts to vegetation and existing drainage patterns, a grading and erosion control plan depicting house location, limits of clearing, and stabilization/sedimentation control measures to be implemented during and following construction shall be submitted for review and approval of the Environmental Review and Engineering Divisions.

   The grading plan will depict limits of clearing so as to enable a swath of oak woodland habitat in this hillside area, a buffer corridor, to be reserved for the benefit of slope management, private landowners' passive use, and wildlife resources.

Appendix A-4
Town Planning Board Resolution

(2/22/89)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF FEBRUARY 22, 1989

The following resolution was offered by A. Cisternino and seconded by A. McKay:

WHEREAS, on January 11, 1989, the Planning Board passed a resolution issuing a "Conditional Negative Declaration" (CND) pursuant to SEQR, to the subdivision known as HOGAN PLAT, and

WHEREAS, said CND included the statement:

> The declaration of covenants shall include a clause wherein the property so affected shall vest in the Town as park-preserve property outright should efforts to enforce the declaration prove ineffective due to the present or future owner's noncompliance with conditions stated therein. In addition, if the reservation is to remain private, the declarant shall grant to the Town a perpetual easement for access to monitor site conditions within the subject area periodically.

and

WHEREAS, the purpose here is not to cause the applicants property to be "taken" by the Town but to provide the best protection possible for the 3.4 acre reservation, and

WHEREAS, as almost all of the 3.4 acres are within the jurisdiction of the N.Y.S. DEC under the N.Y.S. ECL Tidal Wetlands Act, and

WHEREAS, the area to be protected is Steep Slopes exposed to the vagaries of the Long Island Sound and as a consequence subject to change, and

WHEREAS, the face of the land could change making it virtually impossible to deliniate that area presently delinated to be protected by the covenant and causing said covenant to be construed as a "taking" without compensation, now be it therefore

Hogan Plat

RESOLVED, that the Planning Board hereby amends the Conditional Negative Declaration issued to the HOGAN PLAT by deleting the offending paragraph as cited above in the second WHEREAS of this resolution and issuing a Negative Declaration.

VOTE: 5 AYES: 5 NOES: 0

ABSENT: V. Earing

The resolution was thereupon declared to be duly adopted.

Appendix A-5
Town Planning Board Resolution

(4/26/89)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF APRIL 26, 1989

The following resolution was offered by A. Cisternino

and seconded by R. Hennessey:

WHEREAS, JOHN V. HOGAN, 307 Burns Street, Forest Hills, New York 11375, fee title owner of the land, and DAREN A. RATHKOPF, 149 Turkey Lane, Cold Spring Harbor, New York 11724, under contract to purchase lot 2, have submitted a subdivision map known as HOGAN PLAT, prepared by Nelson and Pope, and indicated as parcels 0400-001-02-002, 003, and 004 on the Suffolk County Tax Map, and

WHEREAS, said preliminary application was received on August 18, 1988, and

WHEREAS, the Huntington Town Planning Board held a public hearing on April 12, 1989 on said preliminary map of HOGAN PLAT in accordance with Section 276 of Town Law, which was duly advertised, and all interested persons who wished to be heard were heard, and the Planning Board having found that said map as presented conforms in all respects to the zoning requirements of the area in which said map is located, and

WHEREAS, the Planning Board caused a review of the subdivision to be made pursuant to the State Environmental Quality Review Act (SEQRA), has determined that there will be no significant environmental impact, has issued a Negative Declaration, and the SEQRA review is complete, and

WHEREAS, The Suffolk County Planning Commission has approved said map subject to six conditions, and the Huntington Town Planning Board has considered said conditions and has determined that the first, concerning filing of future subdivisions, is required by law; that the second, concerning clearing and grading, has been addressed in the SEQRA review; that the third, concerning sanitary disposal facilities, has been adopted; that the fourth, concerning stormwater runoff, has been adopted; that the fifth and sixth, concerning filing the conditions one through four as restrictive covenants, is not appropriate, now therefore be it

RESOLVED, that the map of HOGAN PLAT dated July 29, 1988, amended to January 18, 1989, and received January 26, 1989 is hereby granted preliminary approval as of April 26, 1989, and be it further

DISTRIBUTION

SENT TO	DATE
APPLICANT	
ATTORNEY	
ENGINEER/SURVEYOR	
ENGINEERING	
BUILDING & HOUSING	
TOWN ATTORNEY	
PLANNING BOARD MEMBERS	
SUPERVISOR	
TOWN BOARD MEMBERS	
ENVIRONMENTAL PROTECTION	
ZONING BOARD OF APPEALS	
OTHER (SPECIFY)	

See Amending Resolution 6-7-89

Preliminary Approval

RESOLVED, that a restrictive covenant stating that

1. Neither lot may be subdivided more than once subsequent to filing of the final map.

shall be submitted to the Planning Department, approved by the Town Attorney, and filed in the Suffolk County Clerk's office, and noted on the map, prior to the signing of the final map, and be it further

RESOLVED, that this approval is subject to the following conditions:

1. No new residential structure or sanitary disposal facility shall be constructed or otherwise located within 100 feet of the shoreline of Long Island Sound;

2. No stormwater runoff resulting from the development and improvement of the subdivision or any of its lots shall be discharged into Long Island Sound;

3. Further subdivision of either lot shall include improvement of the intervening private right-of-way and dedication of the roadway to the Town.

and be it further

RESOLVED, that the findings set forth in the Negative Declaration Resolution shall be fulfilled prior to the dedication of the subdivision, especially:

1. The optimal open space reservation that the Planning Board may require per Article X of the Subdivision Regulations and Site Improvement Specifications (10% or 3.4 acres) has been delineated on the subdivision map. The applicant shall show the area presently regulated by the NYSDEC on its final plan with additional natural buffer (to comprise the 3.4-acre reservation) protected as per a declaration of covenants to be filed with the affected deeds.

   Retention of the open space reserve on lot 1 via declaration of covenants, natural buffer on lot 2, and limitation of site grading will mitigate against loss of open space.

2. To mitigate potential impacts to vegetation and existing drainage patterns, a grading and erosion control plan depicting house location, limits of clearing, and stabilization/sedimentation control measures to be implemented during and following construction shall be submitted for review and approval of the Environmental

Review and Engineering Divisions.

The grading plan shall depict limits of clearing so as to enable a swath of oak woodland habitat in this hillside area, a buffer corridor, to be reserved for the benefit of slope management, private landowners' passive use, and wildlife resources.

VOTE: 5 AYES: 5 NOES: 0
ABSENT: S. Levin

The resolution was thereupon declared duly adopted.

Appendix A-6

Hogan Plat Subdivision Approval

(9/20/89, amended 10/25/89)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF SEPTEMBER 20, 1989

The following resolution was offered by A. Cisternino and seconded by S. Levin:

WHEREAS, JOHN V. HOGAN, 307 Burns Street, Forest Hills, New York 11375, fee title owner of the land, and DAREN A. RATHKOPF, 149 Turkey Lane, Cold Spring Harbor, New York, under contract to purchase Lot #2, have submitted a subdivision map known as HOGAN PLAT, prepared by Nelson and Pope, and indicated as parcels 0400-001-02-002,003,004 on the Suffolk County Tax Map, and

WHEREAS, said conditional-final application was received on July 5, 1989, and

WHEREAS, the Huntington Town Planning Board held a public hearing on August 2, 1989 on said conditional-final map in accordance with Section 276 of Town Law, which was duly advertised, and all interested persons who wished to be heard were heard, and the Planning Board having found that said map as presented conforms in all respects to the zoning requirements of the area in which said map is located, and

WHEREAS, the review time was extended by mutual agreement to October 16,1989 and

WHEREAS, the Planning Board caused a review of the subdivision to be made pursuant to the State Environmental Quality Review Act (SEQRA), has determined that there will be no significant environmental impact, has issued a Negative Declaration, and the SEQRA review is complete, and

WHEREAS, the Suffolk County Planning Commission has approved said map subject to six conditions, and the Huntington Town Planning Board has considered said conditions and has determined that the first, concerning filing of future subdivisions, is required by law; that the second, concerning clearing and grading, has been addressed in the SEQRA review; that the third, concerning sanitary disposal facilities, has been adopted; that the fourth, concerning stormwater runoff, has been adopted; that the fifth and sixth, concerning filing the conditions one through four as restrictive covenants, is not appropriate, now therefore be it

RESOLVED, that the map of HOGAN PLAT, dated May 1989, amended August 14, 1989, and received August 16, 1989 is hereby granted conditional-final approval as of September 20, 1989, and

DISTRIBUTION

SENT TO	DATE
APPLICANT	
ATTORNEY	
ENGINEER/SURVEYOR	10-3-89 Nelson + Pope
ENGINEERING	
BUILDING & HOUSING	
TOWN ATTORNEY	
PLANNING BOARD MEMBERS	
SUPERVISOR	
TOWN BOARD MEMBERS	
ENVIRONMENTAL PROTECTION	
ZONING BOARD OF APPEALS	
OTHER (SPECIFY)	

See ~~plan~~ amending resolution 10-25-89

Conditional Final Approval

be it further

RESOLVED, that a restrictive covenant shall be submitted to the Planning Department, approved by the Town Attorney, and filed in the Suffolk County Clerk's office, and noted on the final map prior to signing of the map, stating the following:

1. Neither lot may be subdivided more than once subsequent to filing of the final map.

2. The 3.4-acre natural buffer area on Lot #1 shall be shown on the final map. In this buffer area no building or structure shall be erected, trees removed or grading or excavation performed. This declaration shall not preclude declarant from making ordinary repairs to or maintaining the existing stairway or any part thereof located within the aforesaid 3.4-acre area or erecting and maintaining any docking facility which would not extend above the 10-foot elevation, nor shall it preclude declarant from erecting bulkheads or similar structures or taking other measures specifically designed to protect the bluffs from erosion, provide the same comply with all laws and regulations of the State of New York and its departments, regulations of the U.S. Army Corps of Engineers, and the Marine Conservation Law and other applicable ordinances of the Town of Huntington and provided declarant procures all required permits.

and be it further

RESOLVED, that this approval is granted on condition that:

1. No new residential structure or sanitary disposal facility shall be constructed or otherwise located within 100 feet of the shoreline of Long Island Sound;

2. No stormwater runoff resulting from the development and improvement of the subdivision or any of its lots shall be discharged into Long Island Sound;

and be it further

RESOLVED, that payment of a Park and Playground Fee of $1,430.00 shall be made prior to the signing of the final map, and be it further

RESOLVED, that no plot may be subdivided or changed at any future date in any manner except by special action of the Huntington Town Planning Board, and be it further

RESOLVED, that the Director of Planning is authorized and

empowered to sign said map upon finding that prints submitted for signature and filing are in conformance herewith, and with any other requirements and conditions established by the Board. This approval is valid for 180 days from the date of this resolution, and be it further

RESOLVED, that the findings set forth in the Negative Declaration resolution shall be fulfilled prior to the dedication of the subdivision, especially:

1. The optimal open space reservation that the Planning Board may require per Article X of the Subdivision Regulations and Site Improvement Specifications (10% or 3.4 acres) has been delineated on the subdivision map. This natural buffer area shall be protected by a declaration of covenants to be filed with the affected deeds.

   Retention of the open space reserve on lot 1 via declaration of covenants, and limitation of site grading on lot #2 will mitigate against loss of open space.

2. To mitigate potential impacts to vegetation and existing drainage patterns, a grading and erosion control plan depicting house location, limits of clearing, and stabilization/sedimentation control measures to be implemented during and following construction shall be submitted for review and approval of the Environmental Review and Engineering Divisions.

   The grading plan shall depict limits of clearing so as to enable a swath of oak woodland habitat in this hillside area, a buffer corridor, to be reserved for the benefit of slope management, private landowners' passive use, and wildlife resources.

VOTE: 5 AYES: 5 NOES: 0
ABSENT: R. Hennessey

The resolution was thereupon declared duly adopted.

HUNTINGTON TOWN PLANNING BOARD

MEETING OF OCTOBER 25, 1989

The following resolution was offered by A. McKay

and seconded by W.G. Asher:

WHEREAS, JOHN V. HOGAN, 307 BURNS STREET, FOREST HILLS, NEW YORK 11375, fee title owner of the land, and DAREN A. RATHKOPF, 149 TURKEY LANE, COLD SPRING HARBOR, NEW YORK 11724, under contract to purchase lot #2, have submitted a subdivision map known as HOGAN PLAT, prepared by Nelson and Pope, and indicated as parcels 0400-001-02-002,003,004 on the Suffolk County Tax Map, and

WHEREAS, at the regular meeting of the Town of Huntington Planning Board, on September 20, 1989, the subdivision known as HOGAN PLAT received Conditional Final Approval, and

WHEREAS, the applicant has set aside an area, that is equivalent to 10% of the total land mass being subdivided, for the purpose of meeting the Park and Playground requirement in the Planning Boards regulations, and

WHEREAS, the resolution of Conditional Final Approval for the HOGAN PLAT required "that payment of a Park and Playground fee of $1,430.00 shall be made prior to the signing of the final map," now therefore be it

RESOLVED, that since the applicant has met the Park and Playground requirement by setting aside 10% (3.4 acres) of his land and placing covenants and restrictions on that set aside the Planning Board of the Town of Huntington hereby rescinds the requirement, in the September 20, 1989 resolution, for the applicant to pay the Park and Playground fee.

VOTE: 5 AYES: 5 NOES: 0
ABSENT: S. Levin
The resolution was thereupon declared duly adopted.

DISTRIBUTION

SENT TO	DATE
APPLICANT	11-1-89
ATTORNEY	
ENGINEER/SURVEYOR	
ENGINEERING	
BUILDING & HOUSING	Nelson & Pope
TOWN ATTORNEY	
PLANNING BOARD MEMBERS	
SUPERVISOR	
TOWN BOARD MEMBERS	
ENVIRONMENTAL PROTECTION	
ZONING BOARD OF APPEALS	
OTHER (SPECIFY)_____	

Rescinds resolution 9-20-89 - Rescinds Park and Playground fee

Appendix A-7
Declaration of Covenants

(8/10/88)

Declaration of Covenants

THIS INDENTURE made the 10th day of August, 1988 by John V. Hogan, residing at 307 Burns Street, Forest Hills, New York (Hereinafter called "declarant").

WITNESSETH

WHEREAS, declarant owns the premises known as Lots 2, 3 and 4, Block 2, Section 001, District 0400 on the Suffolk County Tax Map, located on the westerly side of Eatons Neck Road in Eatons Neck, Town of Huntington, County of Suffolk, New York, more fully described in Schedule A annexed hereto (hereinafter called "the subject premises");

WHEREAS, Daren A. Rathkopf, as contract vendee of a portion of the subject premises has applied to the Planning Board of the Town of Huntington for approval of the subdivision of the subject premises into two lots, one of said lots being shown on Exhibit A annexed hereto as Lot 1 (hereinafter called "Lot 1") and the other being shown on Exhibit A as Lot 2 (hereinafter called "Lot 2");

WHEREAS, the Planning Board wants to provide for the preservation of the bluffs adjacent to Long Island Sound, preventing their despoliation by building construction, excavation, grading or tree removal;

WHEREAS, the area sought to be preserved by the Planning Board consists of the 3.4 acre portion of the subject premises

located adjacent to Long Island Sound which on the annexed Exhibit A bears the legend "Reserved Area";

WHEREAS, the Planning Board has determined that the setting aside of the aforesaid 3.4 acre area on the applied- for subdivision of the premises into two lots will satisfy any requirement that land be shown as a park upon this subdivision or any future resubdivision of Lot 1 or Lot 2;

WHEREAS, the Planning Board has determined that no dedication of the aforesaid 3.4 acre area shall be required;

WHEREAS, Planning Board approval of said application is predicated upon execution of the following declaration,

NOW THEREFORE, declarant does hereby make the following declaration:

1. In consideration of the premises herein, no building or structure shall be erected, trees removed or grading or excavation performed upon any portion of the 3.4 acre portion of the subject premises located adjacent to Long Island Sound which on the annexed Exhibit A bears the legend "Reserved Area". This declaration shall not preclude declarant from making ordinary repairs to or maintaining the existing stairway and storage shed or any part thereof located within the aforesaid 3.4 acre area or erecting and maintaining any docking facility which would not extend above the 10 foot elevation nor shall it preclude declarant from erecting bulkheads or similar structures or taking other measures specifically designed to protect the bluffs from erosion, provided the same comply with all laws and regulations of the State of New York and its departments,

regulations of the U.S. Army, Corps of Engineers, and the Marine Conservation Law and other applicable ordinances of the Town of Huntington and provided declarant procures all required permits.

2. The within covenant shall run with the land, however only the Town of Huntington may bring an action to enforce it.

3. This declaration may be cancelled or amended at any time by declarant and his successors in title to the aforesaid 3.4 acre portion of the subject premises, but only with the consent of the Planning Board of the Town of Huntington or any authority succeeding to its jurisdiction or the Town Board of the Town of Huntington.

IN WITNESS WHEREOF, declarant has caused this instrument to be executed the day and year first above written.

John V. Hogan

STATE OF NEW YORK)
ss.:
COUNTY OF SUFFOLK)

On this 10th day of August, 1988 before me personally came John V. Hogan, to me known and known to me to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same.

LOUIS C. BERNST
Notary Public, State of New York
No. 52-5295864
Qualified in Suffolk County
Commission Expires September 30, 19

Appendix A-8
Old Orchard Woods, EAF Part I

(undated)

FULL ENVIRONMENTAL ASSESSMENT FORM
COVER SHEET AND STATEMENT OF DETERMINATION OF SIGNIFICANCE

Purpose: The Environmental Assessment form (EAF) is designed to help applicants and reviewing agencies determine, in an orderly manner, whether a project or action may result in significant impacts. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasureable making the determination difficult. It should also be understood that individuals that review projects may have different levels of expertise, differing analytical skills and/or be proficient in varying disciplines. The Full EAF is intended to provide an analytical tool by which applicants and agencies can be sure that the process has been orderly and comprehensive in nature, while remaining flexible enough to allow the introduction of data to the process resulting in a project that best fits the circumstances.

The full EAF is designed to in some way quantify the decision making process. It provides an agency with a record of the review that supports a final decision. If more information is needed before a decision can be made then it can be provided in an impact statement, however, processing the Full EAF can result in a determination that a project impacts can be mitigated and no further review is necessary.

Components of the Full EAF:

Part 1: Filled out by the applicant/sponsor - It provides data and information about a given project and its site. By identifying basic project data, it assists the reviewer in the analysis that takes place in the EAF Part II and III.
Part 2: Focuses on identifying the range of possible impacts, if any, that may occur from a project or action. It provides guidance as to whether an impact is likely to be small, moderate or potentially large. The form also assists the reviewer in identifying whether an impact can be mitigated or reduced. Filled out by reviewing agency.
Part 3: If any impact is identified in part two (2) as one which is potentially large then part three (3) is used to analyze the impact and determine whether or not it can be mitigated or more information is needed before a decision can be made by the agency about the proposed project. Part III need not be prepared if upon preparing Part II can be determined that the significant impacts will result from the proposed project or action. Prepare by reviewing agency.

TO BE COMPLETED BY THE LEAD AGENCY
DETERMINATION OF SIGNIFICANCE
For Type I and Unlisted Actions

Identify the portions of the EAF prepared for the proposed project described herein: X Part I ___Part 2 ___Part 3
Upon review of the information recorded on this EAF (Parts I and II and III if necessary), and any other supporting data, and considering both the magnitude and importance of each impact that may occur if the project is implemented, it is reasonably determined by the lead agency that:

___A. The project will not result in any large and important impact(s) and, therefore, is one which will not have a significant effect on the environment, therefore **a Negative Declaration** will be prepared.

___B. Although the project could have a significant effect on the environment, this unlisted action will not have such an effect because the mitigating measures described in Part III of the EAF have been required, therefore **a Conditioned Negative Declaration** will be prepared.

___C. The project may result in one or more large and/or important impacts that may have a significant impact on the environment, therefore **a Positive Declaration** will be issued and an **Environmental Impact Statement** will be prepared.

Resubdivision of Lot 1 , Hogan Plat (Old Orchard Woods)
Name of Action

Name of Lead Agency

Print or type name of officer in Lead Agency | Title of Officer

Signature of Officer in Lead Agency | Signature of Preparer (if different than Officer)

Date

PART 1 - PROJECT INFORMATION

Responsibility of project sponsor to complete

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Complete the entire form, Parts A through E. Answers to these questions herein will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts II and III of the Full EAF. It is expected that completion of the Full EAF will be dependent on information not currently available and requiring additional work is needed and should be supplied, then he/she does so at his/her own discretion. **Please answer N.A. to any question below that does not apply.**

Name of Action: *Resubdivision of Lot 1, Hogan Plat (Old Orchard Woods)*

Suffolk County Tax Map Number: *0400-001-02-4.1*

Location: *22 North Creek Road* (Street) *Eaton's Neck* (Hamlet)

Applicant/Sponsor Information:
Name: *William Kollmer Contracting* Phone: *(516) 754-5252*

Street Address: *74 Dogwood Lane*
City/State/Zip: *Northport, NY 11768*

Owner Information (if different than Applicant/Sponsor):
Name: *Madeline Hogan* Phone: *(718) 268-6510*

Street Address: *307 Burns St.*

City/State/Zip: *Forest Hills, NY 11375*

Use the last page or the back of this form to answer questions for which there is insufficient space on the form to include all pertinent information.

DESCRIPTION OF ACTION

See attached

A. Site Description:
Physical setting of overall project, both developed and undeveloped areas.

1. Present land use: CHECK ALL THAT APPLY

Urban	Industrial	Commercial	Residential *X*
Rural (non-farming	Forest	Other (explain)	Agriculture

2. Total Acreage of Project Area: *24.4* acres.

APPROXIMATE ACRES	PRESENT		COMPLETED PROJECT	
Meadow or Brushland		acres		acres
Forest	*24.0*	acres	*14.59±*	acres
Agriculture		acres		acres
Wetland		acres		acres
Water Surface Area		acres		acres
Unvegetated		acres		acres
Roads, Buildings etc.	*0.4±*	acres	*2.81±*	acres
Other (indicate) *Lawn, recharge*		acres	*7.00±*	acres

3. What is predominant soil type(s) on project site? *CpE, RdC, Bc, Es*

Soil Drainage:

Well Drained	*90*	%	Moderately Drained	*5*	%	Poorly Drained	*5*	%

4. Approximate percentage of proposed project site with slopes:

0 to 10%	*37*	%	10 to 15%	*13*	%	15% or greater-	*50*	%

5. Is project site contiguous to or substantially contiguous to (i.e., across the street etc.), or contain a building, site or district on the State or National Registers of Historic Places or on the Register of Natural Landmarks? ___ Yes _X_ No

6. Is project site contiguous or substantially contiguous to or is it occupied by an historic building or landmark as designated pursuant to Article VI of the Town Code? ___ Yes _X_ No

7. Is the project site within a one mile radius of an archaeologically significant site or multiple site zone, as has been identified by the New York State Office of Parks, Recreation and Historic Preservation using the "circles and squares" method of evaluation? ____ Yes _X_ No

8. What is the elevation of the water table? *<10* (in feet) ***(SCDHS Water Table Contour Map, 1997)***
and depth to Groundwater? *0* feet. ***(minimum; seepage visible along base of bluff)***

9. Is project site located over a primary, principal, or sole source aquifer? _X_ Yes ___ No

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? ___ Yes _X_ No
If yes, will they continue after completion of the project? ____Yes _____No

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered?
___ Yes _X_ No

If yes, then indicate authority_____
and Identify each species _____
_____

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, etc.)
_X_ Yes ____ No Indicate which: *Bluffs*
_____

13. Is the project site presently used by the community or neighborhood as an open space or recreation area? ___ Yes _X_ No ***If yes, explain on the back of this form.***

If yes, will the use continue at the completion of the project? _____ Yes _____ No

14. Does the site presently include views known to be important to the community? _X_ Yes ___ No
If yes, will the views be retained with the completion of the proposed project? _X_ Yes ___ No

15. Name(s) of Stream and or rivers within or contiguous to project area? *N/A*
_____

A. Name of water body to which the stream/river is tributary: *N/A*
_____

16. Names and sizes (acres) Lakes, ponds and other wetland areas within or contiguous to project area:
Long Island Sound

17. Is the project site served by existing public utilities or are such utilities readily available to the site?
X Yes ___ No

a) If yes, is there sufficient capacity to allow the proposed project to connect? ___ Yes *X* No
b) If yes, will improvements be necessary to allow connection? *X* Yes ___ No

18. Is project site located in or substantially contiguous to (e.g., across the street, etc.) a Critical Environmental Area (CEA) designated pursuant to Article 8 of the ECL, and 6 NYCRR 617 (SEQRA)?
X Yes _____ No ***Town Open Space Index #NE-1***

19. Has the project site ever been used for the disposal of solid or hazardous wastes? ___ Yes *X* No

B. PROJECT DESCRIPTION

1. Physical dimensions and scale of project (fill in dimensions as appropriate)

a. Total contiguous and/or substantially contiguous (e.g., across the street) acreage owned or controlled by the project sponsor is *34±* acres.
b. Project acreage to be developed initially is *18.1* acres and ultimately is *18.1* acres.
c. Acreage to remain undeveloped upon completion of project is *6.3* acres. ***(Reserve Areas)***
d. Length of project, in miles is *N/A* miles. (If appropriate)
e. If project will result in enlargement of a facility indicate the percent expansion here: *N/A* %
f. For commercial/industrial indicate, if any, the number of off-street parking spaces existing: *N/A* ; proposed: *N/A* , and required by Code: *N/A* .
g. Estimate the maximum vehicular trips that will be generated per hour upon completion of project: *22* trips/hour. ***(per ITE #210, weekday PM)***
h. If the proposed project is residential indicate below the number and type of housing unites below:

	One Family	Two Family	Multi-Family	Attached Cluster
Initially	*22*			
Ultimately	*22*			

i. Dimensions, in feet, the largest proposed structure N/A
2-story ***height;*** *40* width; *50* length. ***(estimated)***
j. If non-residential indicate the gross floor area of proposed building: *N/A* sq. ft.
k. If commercial/industrial indicate the "Floor Area Ratio": *N/A* FAR.
(Proposed building area in square feet divided by lot area in square feet)
l. Linear feet of frontage on any road in the Town is *1,060* feet. ***(Access Easement only, along North Creek Road)***

2. How much natural material (e.g., rock, earth, sand, etc.) will be removed from the project site?
_____ tons _____ cubic yards. *N/A*

3. Will disturbed areas be reclaimed? *X* Yes No N/A

a. If yes indicate here the intended purpose for reclamation: ***lawn/landscaping***
b. Will top soil and/or upper subsoil be stock piled for reclamation? *X* Yes ___ No

4. Indicate here how many acres of vegetation (trees, shrubs, ground covers) will be removed from the project site during construction? *9.41±* acres

5. Will mature forest (over 100 years old) or other locally-important vegetation and/or NYS projected native plants be removed by the proposed project? *X* Yes No

6. If the proposed project is multi phased then: *N/A*

   a. Total number of phases are _____.
   b. Anticipated starting date phase one is: _____Month_____Year .
   c. Approximate completion date of final phase _____Month_____Year.
   d. Is the first phase functionally dependent on the following Phase(s) Yes No

7. Estimate the number of jobs generated: during construction *50* : if industrial/office or retail indicate number of jobs generated when complete *N/A* .

8. Indicated the number of jobs that will be eliminated by the proposed project if it is implemented: *0*
9. Will the proposed project require relocation of any other projects or facilities? Yes *X* No
   If yes, explain here:

10. Does the proposed project involve a liquid waste discharge to a body of water? Yes *X* No

    a. If yes, indicate volume per day (_____ gallons), & type (sewage, industrial) _____.
    b. If yes, indicate into what body of water the discharge will take place:

    _____

11. Is subsurface liquid waste disposal involved? *X* Yes _____ No
    If yes, indicate volume per day ***(6600 gallons)***, type (storm water, sewage, industrial): ***Sanitary***

12. Will the surface area of an existing body of water increase, decrease or will the bottom become deeper as a result of the proposed project? ___ Yes *X* No ***If yes, explain on back of this form.***

13. Is any portion of the proposed project within either a 50 year or 100 year flood plain? *X* Yes___ No
    If yes, which: ***A-7. V-8*** Year flood plain. ***(only along base of slope, on waterly edge of site)***

14. If implemented will the project generate solid waste? *X* Yes ___ No

    a. If yes, estimated amount per month will be *7.9* tons.
    b. If yes, will an existing solid waste facility be used? *X* Yes ___No If yes, provide name and location here: ***Town of Huntington Resource Recovery Facility, East Northport***

    _____

15. Will any wastes **not** go into a sewage disposal system, a sanitary landfill, resource recovery facility or be recycled? _____ Yes *X* No

    a. If yes, explain_____

    _____

16. Indicate the volume of solid waste that will be recycled by the completed project each month:
    2 (est.) tons.

To be answered only if project is one that will operate a facility that disposes of solid waste

17. Will the project involve the handling and disposal of solid waste? ___ Yes ___ No
    a. if yes, what is the anticipated rate of disposal? _____ tons/month.
    b. If yes, and landfilling is proposed, what is the site life? _____ years.

18. Is the project expected to use herbicides or insecticides on a regular basis for other then normal landscape maintenance? _____ Yes _X_ No

19. If implemented will project routinely produce odors? ___ Yes _X_ No

20. Is project expected to produce operating noise which exceeds local ambient noise levels? ___ Yes _X_ No

21. Will project result in increased in energy usage for other than ordinary lighting and heating requirements? ___ Yes _X_ No
    If yes, indicate type(s) _____

22. If water supply is from wells indicate pumping capacity _*N/A*_ gallons/minute.

23. Total anticipated water usage will be _*6600*_ gallons per day. *(SCWA)*

24. Does project involve Local, State or Federal funding? ___ Yes _X_ No
    If yes, explain _____

25. Approvals Required:

Agency			Type of Approval	Submittal Date
Town Board	*X* Yes	No	*Resubdivision*	*Pending*
Planning Board	*X* Yes	No	*Site Plan*	*Pending*
Town ZBA	Yes	No		
Health Department	*X* Yes	No	*Water, Sanitary Design*	*Pending*
Other Local Agencies	Yes	No		
State Agencies	Yes	No		
Federal Agencies	Yes	No		
Other	Yes	No		

C. ZONING AND PLANNING INFORMATION

1. Does proposed action involve a planning or zoning decision? _X_ Yes ___ No
   Indicate which of the following: **Check All that Apply**

Zoning Amendment	Zoning Variance	Special Use Permit	Subdivision *X*
Site Plan *X*	New or Updated Master Plan	Resource Management Plan	Other

If other, explain: _____

2. What is the zoning classification(s) of the site? _*R-20 (Residence)*_

3. In your opinion, what is the estimated maximum potential development of the subject site at the existing zoning? _*Approx. 30 residences*_

4. If a zone change is proposed what zoning classification is requested and, in your opinion, what is the estimated maximum development potential of the subject site? Explain: _____
N/A

5. Is the proposed action consistent with the recommended uses in adopted local land use plan (s)?
X Yes ___ No

6. What are the predominant land uses and zoning classifications within a 1/4 mile radius of the proposed action? List: ***Residential; R-20, R-80, R-15, R-5, A (Asharoken Village)***

7. In your opinion, is the proposed project compatible with adjoining/surrounding land uses within 1/4 mile of the subject site? *X* Yes ____No

8. If the proposed action compatible is a subdivision of land how may lots are proposed and what is the minimum lot size proposed? Explain: ***22 lots; minimum lot size of 21,000 sf***

9. Will the proposed action require the extension of an existing sewer district or authorization for formation of a new sewer or water district? ____Yes *X* No

10. Will the proposed action create a demand on any community provided services (recreation, education, police, fire protection etc.)? *X* Yes ____No

If yes, is the existing capacity of the utility or service sufficient to handle the project demand?
X Yes ____No

11. Will the proposed action result in generation of vehicular traffic significantly above present levels?
X Yes ____ No

a. If yes, is existing infrastructure (roads, signals, signage, etc.) adequate to handle the additional traffic? ___ Yes *X* No On what authority is this opinion offered? ***Site inspection of Aug. 12, 1998***

b. Will Improvements be necessary? *X* Yes ___ No If yes to either a) or b) provide the basis for such opinion and agency name and documentation that supports the conclusion: _____
In vicinity of site frontage, North Creek Road is unpaved and not of sufficient width to accommodate anticipated traffic generation

D. Additional Informational Details

Attach any addendum with any additional information needed to clarity your project. If there may be adverse impacts associated with the proposal, discuss those impacts and the measures which you will undertake to mitigate or avoid them.

E. VERIFICATION

I hereby certify that I have filled out the above form for the action known as:

Resubdivision of Lot 1, Hogan Plat (Old Orchard Woods)
and to the best of my knowledge all of the answers are true.

Name: *Phillip A. Malicki, AICP; Nelson, Pope & Voorhis, LLC* Date _____
(Print or type name)

Signature _____ Title *Senior Environmental Scientist*
(Preparer)

If the Applicant/Sponsor did not fill out this form then the following verification must be signed.

I am the applicant/sponsor of the proposed project described above and I hereby certify that I have given the above signed individual/company permission to fill out this form on my behalf. I further certify that the above signed consultant has made me aware of the questions on this form and explained the answers that have been provided, and I understand the proposed project and the answers provided on this form.

Name: _____ Date: _____
(Print or type name)

Signed: _____ Title: _____
(Applicant/Sponsor)

DESCRIPTION OF ACTION

General Description of Action

The application requires an Environmental Assessment Form (EAF) Part 1 to enable the Lead Agency to make a determination of significance for the proposed resubdivision of the 24.4 acre site, which is presently Lot 1 of the Hogan Plat; the application is known as Old Orchard Woods. The site is located on the west side of North Creek Road, in the hamlet of Eatons Neck, in the Town of Huntington.

The proposed project would yield 22 lots, the smallest of which would be 21,000 square feet in size. Each lot will be served by an on-lot septic system, potable water will be supplied by the Suffolk County Water Authority, and a single recharge basin will provide stormwater runoff control.

A triangular 0.6 acre covenanted Reserve Area exists in the northwesterly corner on the site. The project would remove this Reserve area and replace it with two (2) new Reserve Areas; 2.8 acres along the beach, slope and top of the bluff along the entire westerly border of the site, and 3.5 acres along the site's easterly boundary, on North Creek Road. All three Reserve Areas contain steep slopes and are densely vegetated; there are no significant differences in the quality or composition of the vegetation in the existing 0.6 acre covenanted area and the easterly Reserve Areas. In exchange for the 6.3 acres of new Reserve Area and to provide residential lots with access to the bluff and beach in the northwest area of the site, the applicant requests that the covenanted Reserve Area be removed and replaced as noted herein.

Ecological Description

The site is classified as an oak-tulip tree forest. The dominant tree species on the site include the tulip tree, black birch, scarlet oak, black oak and sassafras. Many large diameter (i.e., over 12 inches dbh) oak and tulip trees are located throughout the site. The sub canopy is dominated by sassafras saplings, with scattered tulip, oak, and sumac species also present. The dense understudy is dominated by species such as northern blackberry, multiflora rose, poison ivy, virginia creeper, and garlic mustard. The major difference in habitat type at this site begins west of the bluff line, which is outside the jurisdiction of the property owner(s).

Both the existing covenanted and proposed easterly Reserve Areas (0.6 acres and 4.3 acres, as discussed above) contain the above-noted species, with large diameter trees being scattered equally throughout these two areas. The 0.6 acre area contains more specimens of bracken fern, primarily due to the sandier soil and semi-shaded conditions in this area. As determined through a site inspection of August 12 1998, there appears to be no significant differences in vegetation between habitats in these two Reserve Areas.

Appendix A-9

County Planning Commission Resolution

(10/7/98)

File No. S-HU-89-20P.1

Resolution No. ZSR-98-62 of Suffolk County Planning Commission
Pursuant to Sections A14-24, Article XIV of Suffolk County Administrative Code

WHEREAS, pursuant to Sections A14-24, Article XIV of the Suffolk County Administrative Code, a referral was received by the Suffolk County Planning Commission on September 7, 1998, with respect to a proposed plat entitled, "Old Orchard Woods" affecting premises located on the northwesterly side of North Creek Road approximately 750 feet west from Eaton's Neck Road, and

WHEREAS, said referral was considered by the Suffolk County Planning Commission at its meeting on October 7, 1998, now therefore, Be it

RESOLVED, That the Suffolk County Planning Commission hereby approves and adopts the report of its staff, as amended, as the report of the Commission, Be It Further

RESOLVED, That said proposed plat is approved subject to the following conditions:

1. Due to the vegetated swale area along the bluff receding into the subject property at the northern end, the map shall be redrawn to retain the original configuration of the 3.4 acre "reserve area" with the intent to preserve the vegetative slope of the swale and control erosion and sedimentation to Long Island Sound.

2. An alternate means of access must be provided for all subdivisions to insure access by emergency and service vehicles. Where a second street for an alternate means of access can not be provided a special right-of-way must be created for this purpose. While the chance of a sole means of access becoming blocked is extremely remote it is nevertheless possible, especially during hurricane season.

3. The "top of bluff" shall be flagged in the field by a qualified expert, verified by the appropriate regulatory agency, and noted as to date verified on all surveys and plans related to the subject application.

4. No proposed residential structure is to be located within 100 feet of the top edge of the bluff.

5. No proposed major nonresidential structures, such as, swimming pools, decks, garages, patios, etc., but not including structures providing access to the beach in front of the bluff, shall be constructed or located within 50 feet of the top edge of the bluff.

6. Grading within 50 feet of the top edge of a bluff shall not be permitted. Grading that may be necessary to control or remedy erosion or to divert stormwater from flowing over the edge of the bluff may be allowed.

7. Clearing and cutting of vegetation within 50 feet of the top edge of a bluff shall be limited in the future, to that necessary for maintenance and the removal of diseased, decayed and dead material.

8. No sanitary disposal facility of any nature shall be constructed or located within 100 feet of the top edge of a bluff.

9. No stormwater runoff resulting from the development and improvement of any lot within the subdivision or the subdivision road itself shall be discharged over the top edge of the bluff, down existing swales on the bluff, or down over the face of its slope in any manner.

10. Access to the beach at the toe of the bluff shall be restricted to a community access structure where one can be provided. Access shall be restricted to the structure designed and constructed so as to cause the least disturbance to the stability of the bluff. Appropriate steps shall be taken to ensure that future maintenance of the community access structure is equitably shared by each of the 22 proposed lots.

11. There shall not be any individual access structure from the top of the bluff to the beach from any of the lots. Access to the beach shall be limited to a single structure to serve all residents of the subdivision. The structure shall be designed and constructed in a manner that will result in the least disturbance of the stability of the bluff face to Long Island Sound.

12. Building envelopes on lots 9-11 and 13-22 of the proposed plan are particularly problematic due to slopes within the proposed lots. Disturbance of and construction on steep slopes can require considerable removal of native vegetation resulting in excessive surface water runoff and severe soil erosion. Clearing envelopes shall be drawn for the above lots. All land clearing and construction shall be confined to areas within building envelopes where slopes are no greater than 15%.

13. Clearing and grading within each lot of the subdivision shall be limited to that necessary for siting and constructing a house and typical accessory structures with the intent of preserving as much of the natural vegetation on the site as possible, and to minimize storm water runoff and erosion.

14. Appropriate steps should be taken to ensure that the "reserve areas" shown on this map remain as open space excluded from future development. This may involve either

a.) the formation of a homeowners' association;

b.) dedication of the areas to the Town of Huntington;

c.) or other means to ensure that if the properties remain on the tax rolls, they will not go into tax default.

- Assessment of the "reserve areas" shall be based upon these areas being open space and/or recreational areas. Such areas shall be given a "zero" assessment and the assessment records prepared both for the open space areas and all the affected properties within the subdivision shall show that the value of the "reserve areas" is "reflected" on the tax rolls by adding the proportionate share of the value of the common property to the value of the remaining properties in the subdivision.

- The "reserve areas" shall not be subdivided in the future or used for commercial purposes.

- The "reserve areas" shall not be used as collateral for any purpose.

- If a homeowner's association is utilized to manage the open space it shall meet all the requirements and regulations of the State Attorney General's office (Refer to 13 N.Y.S.R.R. Parts 20, 21, and 22, issued by the New York State Department of Law).

15. The Commission is concerned that North Creek Road is not paved its entire length. Therefore, the owner of this property shall make an offer to dedicate to the Town of Huntington, for highway purposes his interest in the road right-of-way of North Creek Road. Said right-of-way shall be paved to Town specifications, the entire length fronting on the proposed subdivision.

16. The subdivider shall acknowledge in writing to the Planning Board that the creation of this subdivision in no way commits either the Town of Huntington or the County of Suffolk to any program to protect this property from shoreline or bluff erosion through the construction of engineering or other works. Said acknowledgment shall be placed as a note on the subdivision map.

Motion by: Commissioner Dietz Seconded by: Commissioner Vahradian

Commission Vote:	Present - 11	Yeas	11
		Nays	0
		Abstentions	0

Dated: October 7, 1998
Suffolk County Water Authority Laboratory, Hauppauge, New York
Suffolk County Planning Commission

Appendix A-10

Old Orchard Woods, EAF Parts II & III

(March 3, 1999)

ENVIRONMENTAL ASSESSMENT FORM
PARTS II & III

OLD ORCHARD WOODS

SEQRA CLASSIFICATION

The subject property is within a designated open space parcel listed as OSI # NE-1 in the Town of Huntington Open Space Index and is proposed to have 22 residential homes without connection to a public or community sewage system. Pursuant to 6 NYCRR Part 617 (SEQRA) sections 617.4 (B) (5) (ii), and 617.4 (b) (10), the proposed action is classified Type I.

PROJECT LOCATION

The subject site is located at the easterly terminus of North Creek Road in Eatons Neck, bordered by the Long Island Sound to the west and the Village of Asharoken to the east, within a R-20 Residential Zone District, designated as parcel #0400-001-01-004.1 on the Suffolk County Tax Map.

AREA ZONING AND PLANNING

Zoning within 500 feet of the subject site includes Town of Huntington R-80, R-20, R-10, R-5 and Village of Asharoken Zone C (two acre minimum) districts. Uses surrounding the site are residential, partially or fully improved with single-family homes. Lots with potential for subdivision include properties to the north and across North Creek Road to the east.

The Incorporated Village of Asharoken adjoins the site for about 270' along its northeastern border. The Village of Asharoken encompasses the northern portion of the Eatons Neck peninsula and the narrow segment of land that connects the peninsula with the mainland. The only developable open space within the Village is composed of large properties found primarily on the 440-acre Morgan Estate property to the north. The Village had rezoned this property to require a minimum lot area of two acres in an effort to control future land development. In addition, a comprehensive plan was prepared requiring setbacks from the bluff and similar controls to preserve the significant aspects of this site.

The west side of the subject site adjoins and overlooks the Long Island Sound, an "Estuary of National Significance" (National Estuary Program). The National Estuary Program, modeled after the Chesapeake Bay and Great Lakes Programs, was established by Congress to address the complex problems associated with estuary management. Estuaries are one of the most productive types of ecosystems, and yet are also among the most stressed. Because of the size of the surrounding population, large inputs of anthropogenic wastes and toxic chemicals have stressed the sound, causing degradation and potential loss of habitats. Several studies, programs and regulations have been developed and implemented for protecting this body of water, its resources and habitats, including The Coastal Zone Management Act, Waterfront Revitalization and Coastal Resources Act, Coastal Non-point Source Pollution Program, The National Estuary Program,

The Long Island Sound Study, The Long Island Sound Coastal Management Program (LISCMP) and Suffolk County Planning Commission Guidelines. [1]

PROJECT DESCRIPTION

The action is for a twenty-two (22) lot subdivision of a wooded, steeply sloped 24.21 acre site for the subsequent construction of new single-family homes and a 62,650 square foot recharge basin (Preliminary Map, received October 23, 1998). Access will be provided from a privately owned portion of North Creek Road via a proposed standard 50' right-of-way terminating with two cul-de-sacs at the north and south boundaries of the site. Two Reserve Areas are shown; 3.4 acres, along the Long Island Sound (part of lots 3-10) and 2.27 acres along North Creek Road (common area).

All building lots are shown with modified front-yard setbacks of 40 feet, where 50 feet is required. Except for a beach access stairway and shed at the northwest corner of the site, all existing structures are to be removed (i.e. principal residence, caretakers cottage, guest cottage, garage, sheds, pump houses, shacks, parking area and bituminous drive). A 14' wide easement is proposed to provide access to the beach stairway between lots 9 and 10.

Improvements to North Creek Road are proposed from the limit of Town of Huntington jurisdiction to 80 feet north of the proposed entrance (Apple Place). The remaining approximately 600' of 18' wide road is shown to be unimproved.

Each lot will be served by a sub-surface septic system with potable water supplied by the Suffolk County Water Authority.

SEQRA HISTORY

Old Orchard Woods is the re-subdivision of a previously filed map, known as Hogan Plat (Planning Board Final Approval 9/20/89, amended 10/25/89). The action involved a two (2) lot subdivision of 34 acres for the initial development of a single residence and garage on a 9.371 acre lot. No physical change was proposed at the time to the remaining 24.21 acres (now Old Orchard Woods) except that 3.4 acres of the property was required to be reserved along the Long Island Sound as open space and for bluff protection. A declaration of covenants, however, was submitted which included an exemption for bulkheading and erection of docking facilities subject to approval by regulating agencies. It also has a provision that subdivision of the premises into two lots "...will satisfy any requirement that land be shown as a park upon this subdivision or any future subdivision of Lot 1 or Lot 2". Designed to satisfy the Town's 10% parkland requirement, this area is shown on the current preliminary map as part of the eight (8) lots along the Long Island Sound. At their regular meeting of January 13, 1999 the Planning Board discussed this issue and determined that parkland dedication was not required (R. Machtay, 1/14/99). However, if the Planning Board issues a Positive Declaration on the action, this issue can be further evaluated in an Environmental Impact Statement.

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[1] Long Island Sound Coastal Management Program (New York State Department of State, 1994).

On January 1, 1989 the Planning Board issued a Conditioned Negative Declaration on Hogan Plat (amended on January 11, 1989). Although the Environmental Assessment Form Parts II & III for Hogan Plat (prepared 1/10/89, attached) considered some impacts from future subdivision, it was a segmented action. Segmentation is defined as the division of the environmental review of an action such that various activities or stages are addressed as through they are independent, unrelated activities needing individual determinations of significance.

Sections where future impacts were discussed included:

Impact on Land

> "Since the possibility of far greater subdivision of the site remains **for which cluster development would be advocated**, this SEQRA review is being segmented"; and

Impact on Open Space and Recreation

> "By filing a declaration of covenants insuring the 3.4-acre shorefront reservation, it would appear as if mitigation to loss of open space in the amount of area required by the lead agency has been implemented. Of the area designed for inclusion in the declaration, all that land eastward from mean sea level to the topographic crest of the cliff is already protected/restricted by the State Tidal Wetland land use regulations" and "Coastal Zone Regulations...**Therefore, such action (covenant relative to open space reservation) is somewhat duplicative and offers but minimal land protection above and beyond that which is existing....However, as noted in #1 above, the lead agency may further protect the area through subsequent review".**

PRE-APPLICATION REVIEW

The subject site underwent a pre-application review by Planning Department staff in July 1998, followed by a conference with the applicant on August 4, 1998. Items discussed or referred to at the conference included:

- Clustering as recommended per Hogan Plat SEQRA review.
- Environmental Constraints for the site range from slight to severe as mapped in the 1993 Town Comprehensive Plan Update.
- Potential significant impacts are possible to Long Island Sound, coastal erosion hazard area, habitat and steep slopes.
- A tree survey should be supplied with formal application.
- Cultural Resource Issues (Department of Planning and Environment letter dated October 1, 1998).
- Applicant anticipates HOA.

Yield and Steep Slope Analysis

Although the site is within an R-20 Residence District Zone, which would typically establish yield based upon lots with areas of 20,000 square feet (minimum), a steep slope adjustment factor was

applied pursuant to Town Zoning Code, Steep Slope Ordinance, Chapter 198, Article 10 to ensure appropriate safeguards and standards for the particular problems associated with development of hillside areas. A lot yield analysis, dated January 27, 1999 was prepared by Planning Staff for purposes of applying the Town's Steep Slope Ordinance and a required recharge basin. The Study determined that twelve (12) lots one acre in size or larger was required in the hillside development area and that a total yield of 23 lots could be established.

PLANNING BOARD DISCUSSION AND CONSENSUS

The yield map submitted by the applicant did not show the required 10% parkland dedication. In order to establish yield, this and other issues were brought to the Planning Board for consensus. At their regular meeting on January 13, 1998 the Planning Board reviewed the application and decided that no parkland dedication was required and that the two reserves would protect sensitive areas. Additionally, the Planning Board determined:

1. To allow property lines for lots with coastal frontage to extend into the 3.4-acre reserve area along the Long Island Sound with additional covenants restricting its use; and
2. Improvements to the northerly end of North Creek Road, as requested by the Village of Asharoken would be decided after the public hearing.

NATURAL RESOURCE DESCRIPTION

Topography

The topography of the site rises steeply from North Creek Road, plateaus at the 162' contour, then falls to the west, dropping sharply at the 80' contour (top of bluff) to the Long Island Sound below. A natural ravine exists at the northwest corner of the site having an extensive basin perimeter, encompassing half the property as well as a portion of land to the north (Now or formerly of Michael J. Lawlor).

Soils

Soils in the study area are described as Beaches, Escarpments and Carver Plymouth sands, 15 to 35 percent slopes and Riverhead sandy loam, 8 to 15 percent slopes (Soil Survey of Suffolk County, Map 35, Inset).

Natural Resources

The site can be classified into two habitat types; oak-tulip forest and bluff-beach association. A descriptive evaluation of vegetation landward of the bluff is provided in the Cultural Resource Assessment, Phase IA for Old Orchard Woods prepared by the applicant's consultant, *Archeological Services Inc.* In addition to a vegetative account, this assessment provides an understanding of possible past and future influences. Relevant portions have been extracted and paraphrased here:

> 'The vegetation of the study area is comprised of patches of mature forest and former cleared areas which are dominated by grapevines and greenbriar. A large number of mature well developed Tulip-trees (Liriodendron tulipifera) were observed. These are of a size and girth that deserve consideration for preservation. Also observed in the vicinity of proposed lots 4, 5 and 6 were large numbers of

fruits of the now rare American Chestnut tree (Castanea dentata). Apparently, numbers of these trees are growing in the forest here since large numbers of their spiny husk fruits were observed on the footpaths. They were probably here prior to 1900 when the Asian fungus bark disease struck this area killing off most of these formerly common woodland trees. Typically, after infection and death of the tree the roots remain viable and continue to form shoots, some of which actually grow to a size of the fruits found here suggest that the trees may be of considerable age and size and may possibly have within their group individuals that have some resistance to the Asian blight. These larger chestnut tree specimens also deserve consideration for preservation when planning development.'

A floral study should determine whether the chestnut husks are from American or Chinese/Oriental Chestnut trees. In any event, the site contains large numbers of unique specimen trees.. Trees of this caliber may be considered historic and potential "champion specimens". Other species present include birch (a large stand exists on the site) as well as beech, red maple, cherry and sassafras. In addition to grapevine and greenbriar, common forest understory includes wild rose, red cedar, bayberry, virginia creeper and solomon seal. These habitats provide for a diversity of wildlife including common mammals, songbirds, waterbirds, and raptors. Oak-Tulip tree forest should support avian species such as the towhees and warblers in the less disturbed sections and mourning dove, blue jay, northern oriole and American robin in edge and more developed areas. A red-tailed hawk was observed by the Conservation Board during their visit to the site (memorandum dated 12/9/98, see attachment). This site should also support a large number of mammal species, including shrews, mice, raccoons, rabbit, chipmunk, bats, red fox and voles.

Along North Creek Road and at the toe of the bluff are marginal areas which contain freshwater wetland vegetation. The freshwater vegetation at the toe of the bluff appears to be attributable to the presence of springs, noted by the applicant (EAF, Part I, (A)(8), Planning Staff and the Town Conservation Board. Wetland vegetation along North Creek Road appears associated with the Eatons Neck Point area (designated as significant coastal fish and wildlife habitat) which is north and downgradient of the site. Eatons Neck Point supports least terns, common terns and piping plovers. The coastal waters are also nursery and feeding grounds for finfish and shellfish important to commercial and recreational fishing in Long Island Sound.

Vegetation along the top and down the face of the bluff is characterized by deciduous shrubs, bracken and christmas ferns. The bluff shoreline represents a unique habitat for various marine animals and numbers of shore and songbirds that nest and feed near and in the crevices of the bluff.

Bluff Dynamics

Bluffs are steep shoreforms, composed of soft erodible material such as clay, sand, or soft rock. Bluffs may be unstable because of the physical characteristics of the bluff materials, seepage of groundwater within the bluff, and erosion by wave action at the base. Wave motion, particularly that of breaking waves, is the most important active agent in the building and erosion of the shoreline. As the waves break, run up the shore, and return, they carry sedimentaty material onshore and offshore. This sedimentary material is called littoral drift. Growing shores are fed, or

"nourished", by material that has been eroded from somewhere else. Often attempts to reduce erosion and build up one area will result in reduced deposition elsewhere, "staving" another shoreline. Erosion and accretion may either occur at extremely slow rates or make dramatic changes in the shoreline within a human lifetime.

Shoreline hardening with the use of bulkheads and seawalls protect bluffs by completely separating land from water. Bulkheads act as retaining walls, keeping the earth or sand behind them from crumbling or slumping. Seawalls are primarily used to resist wave action. However, these structures do not protect the beach in front of them. When bulkheads and seawalls are used in areas where there is significant wave action, they may actually accelerate beach erosion. This happens because much of the energy of the waves breaking on the structure is redirected downward, to the toe where the wall meets the soft sand or earth. The shore is thus subjected to much more of the force of the waves than if there were no wall at all. Such structures can interrupt wave-driven drift, stealing sand from downshore beaches and habitat. Although bluff erosion results in the loss of valuable waterfront property, shoreline hardening can increase erosion, injury to natural processes, aesthetic impairments, water quality degradation and loss of public recreational resources and habitats. [2]

PART 3 EVALUATIONS MUST BE PREPARED IF ONE OR MORE IMPACT(S) IS CONSIDERED TO BE POTENTIALLY LARGE, EVEN IF THE IMPACT(S) MAY BE MITIGATED

IMPACT ON LAND:

1. WILL THE PROPOSED ACTION RESULT IN A PHYSICAL CHANGE TO THE PROJECT SITE?

The action will result in a significant physical change to the project site as a consequence of clearing of woodland, grading and construction on steep and erodible slopes. According to the applicant's EAF, Part I, 9.41 acres of vegetation (trees, shrubs and ground covers will be removed with the project. Although this estimate is based upon an earlier preliminary map (received September 9, 1998) which depicted 5.82 acres of reserve vs. 5.7 acres currently proposed, the amount for clearing should be comparable since the layout is essentially the same.

Although two reserve areas are proposed for mitigation, potentially large impacts (direct and indirect, short and long-term) can be reasonably expected with the action due to the overall sensitivity of the site. It is important to recognize the site's land and water resources are a connected system. Any change to one part can have consequences on others. There are many agencies and different laws covering protection of the area along the Long Island Sound. However, they do not cover resources across the entire site: There is a need to look more comprehensively at the wider environmental factors and ecosystems when making decisions regarding subdivision.

Mitigation should not necessarily be considered complete simply because the applicant shows reserve areas The applicant should demonstrate that the reserve areas will successfully mitigate impacts to land without causing additional non-mitigated harm, now or in the future. Although a

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Arthur N. and Alan H. Strahler. Environmental Geoscience (Hamilton Publishing Co., 1973).

total of 5.7 acres are shown as reserve, restrictions for the 3.4 acres area are limited (allows shoreline hardening) and unknown for the 2.27 acres along North Creek Road. Also of concern is the absence of data in the EAF Part I (B)(2) regarding the amount of material (e.g., rock, earth, sand, etc.) that may be removed with the action. Substantial removal of material would pose a major physical change to the site and possible material demand for other actions (e.g. use of roadways by trucks removing soils).

Significant physical effect to slopes, vegetation and surface waters are possible with the action. Utilizing the guidelines provided in the EAF Part II-Projects Impacts and Their Magnitude, the following can be expected:

⇒ Construction on slopes of 15% or greater
⇒ Removal of plant cover over highly erodible soils
⇒ Changes in volume and duration of water concentrations caused by altering steepness, distance and roughness

Resulting in the following potentially large impacts:

- During construction increases in overland flow of stormwater and its contaminants (soils) can be taken directly to surface waters for discharge, displacing and loading contaminants into the Long Island Sound.

- Soils within the site are primarily sandy in texture. Due to their non-cohesive nature, these soils have a high propensity for eroding from steep sloped areas when their protective covering is removed. As such, major forms of environmental hazards are possible. In cases where huge masses of soil are involved, the result could be catastrophic in loss of life and property.

- Loss of property from shoreline or bluff erosion

2. WILL THERE BE AN EFFECT TO ANY UNIQUE OR UNUSUAL LAND FORM(S) FOUND ON THE SUBJECT SITE?

Yes; significant impact to the site's bluffs may result with residential development by increasing loads within the angle of repose and manipulation of stabilized surfaces (see Section 18 below, *Impact on Public Health* for more information on *angle of repose)*. Site bluffs are steep-faced cliffs of unconsolidated sediment that are continuously eroding. By adding weight (structures and wastewater from septic systems) erosion can be accelerated. In attempts to mitigate these impacts, the toes of bluffs have been armored in adjoining locations. Scouring has undermined some of these structures and may be threatening the stability of the site's bluffs.

In anticipating future development of the subject property, the applicant for Hogan Plat had required a clause in the covenant for the 3.4 acre reserve area that allows construction of bulkheads or similar structures or taking other measures for hardening the bluffs. Pursuant to SEQRA §617.7(2) Criteria for determining significance: "For the purpose of determining whether

. an action may cause one of the consequences listed in paragraph (1) of this subdivision, the lead agency must consider reasonably related long-term, short-term, direct, indirect and cumulative impacts, including other simultaneous or subsequent action. This includes:

I. any long-range plan of which the action under consideration is a part;
II. likely to be undertaken as a result thereof; or
III. dependent thereon.

According to Recommendation 27 of the Long Island Sound Coastal Management Program: "Although the cumulative impact of these structures [bulkheads, sea walls, etc.] has not been quantified, it is potentially large. Increased erosion, aesthetic impairments, loss of public recreational resources, loss of habitats and water quality degradation are all possible results of hardening the shoreline". Recommendation 25 states: The coastline in the region should generally remain in a natural condition to respond to coastal processes. The primary approach to accomplish this is regulation of development and redevelopment in hazard areas to reduce exposure of human development to hazards". Since shoreline hardening is likely to be undertaken as a result of the project, potential significant impacts may result. Review by appropriate agencies at the time application is made to construct such structures can mitigate some of these impacts. However, the bluff should not be used, or adversely affected, beyond the point where future generations (people and other species) are likely to find this resource can no longer meet their needs. Rather than waiting to see how future residents may react, options should be investigated at the beginning of the review process (i.e. in an Environmental Impact Statement).

IMPACT ON WATER:

3. WILL THE PROPOSED ACTION AFFECT ANY BODY OF WATER DESIGNATED AS PROTECTED UNDER ARTICLES 15, 24, 25 OF THE NYS ENVIRONMENTAL CONSERVATION LAW OR THE TOWN OF HUNTINGTON MARINE CONSERVATION LAW?

Yes; State regulated wetlands may be significantly affected by the proposed action from runoff of sediment laden stormwater during and following construction and from subsurface sanitary flows that may discharge into surface waters.

Soils within construction areas are subject to moderate to severe erodibility and high permeability. Due to grading that may be required, where slopes are exceptionally steep and runoff from storms exceptionally heavy, sheet and gully erosion can occur. Site topography (slopes, bluff, ravine and the basin divide) lends itself to accelerated erosion and pollution of surface waters. The combination of permeability and the presence of a clay layer (page 2, paragraph 3, Conservation Board memorandum) could allow water and sanitary flows to percolate quickly to the clay layer. These flows then could move laterally along the clay layer to sea level (natural springs at the toe of the bluff).

Contamination of surface waters can also occur due to runoff from lands that carry pathogens and dissolved inorganic matter. Input from lawn fertilizers and pesticides and pathogens in soils cause shellfish bed closures; overenrichment of nutrients contributing to lower dissolved oxygen levels,

introduction of invasive species and habitats to be lost, altered or degraded. All these impacts lead to declines in water quality and overall ecosystem health.

4. WILL THE PROPOSED ACTION AFFECT ANY NON-PROTECTED EXISTING OR NEW BODY OF WATER?

No.

5. WILL THE PROPOSED ACTION AFFECT SURFACE OR GROUNDWATER QUALITY OR QUANTITY?

Yes. Development of the subject property is not expected to connect to an existing municipal or private sewer system. As proposed, twenty-two (22) residential dwellings will discharge a total of 6,600 gallons per day (gpd) of sanitary wastewater (300 gpd per dwelling) to subsurface leaching pools. Although, proposed flows are within Suffolk County Department of Health design standards, there is potential for groundwater impacts due to site soils and groundwater conditions. Test holes for nearby Faber Plat showed sand and clay at 5' below grade. Wasterwater flows in areas with rapidly permeable Carver and Plymouth sands, clay layers and proximity to bluffs and surface waters can pose potential pollution hazards to ground and surface waters.

Review and approval by Suffolk County Department of Health that includes consideration of groundwater elevation, soils and the potential effect from/to proposed recharge will mitigate concerns associated with sanitary sewage disposal. Soil borings may need to be taken within the site to verify site soils and site conditions.

6. WILL THE PROPOSED ACTION ALTER DRAINAGE FLOW OR PATTERNS OR SURFACE WATER RUN-OFF?

Yes, the proposed action is incompatible with existing drainage flow. Impervious surfaces will be created in an area with steep slopes, ravine, sandy and clay soils. Runoff from such surfaces increases the potential for flooding and erosion. Although an approved drainage system (proposed collection pipes, catch basins & recharge basin) will mitigate impacts, not all runoff may be captured for recharge. In areas along the Long Island Sound, runoff may be allowed to continue to flow naturally into the site's ravine and down the bluff. Studies and programs including the Nassau-Suffolk Regional Planning Board 208 Study (1982); County Water Quality Strategy, Local Waterfront Revitalization Program, NYS Coastal Nonpoint Pollution Control Program and NYS Open Space Conservation Plan have documented where such non-point source runoff has caused significant impacts to surface waters and habitat.

IMPACT ON AIR:

7. WILL THE PROPOSED ACTION AFFECT AIR QUALITY?

Temporary air impacts from dust are likely during construction.

IMPACTS ON PLANTS AND ANIMALS:

8. WILL THE PROPOSED ACTION AFFECT ANY PROTECTED, THREATENED AND/OR ENDANGERED SPECIES (AS PER FEDERAL OR STATE LAW)?

Yes; the action may reduce one or more species listed on the New York State protected plant list. Other woodland sites with similar habitats support an occurrence of New York State protected species that may not have been observable during visits to the site by Town staff. Additional floral and faunal studies should be conducted to evaluate the ecological significance of the site and whether suitable mitigation can be incorporated. Due to the site's visual quality; existing natural land features (steep slopes; woodland stands and habitat) and its relationship to the water a unique situation exists that requires special consideration for evaluating potential environmental effects.

9. WILL THE PROPOSED ACTION SUBSTANTIALLY AFFECT NON-PROTECTED, NON-THREATENED OR NON-ENDANGERED SPECIES?

Yes; according to the applicant's EAF Part 1, approximately 9 acres of vegetation will be removed during construction, including many unique and unusual woodland species (see Natural Resource description above). Clearing of native vegetation can also result in severe soil erosion, excessive stormwater runoff and destroyed wildlife habitat. Due to the site's proximity to a water source, its importance as a natural feeding or breeding area must be considered. An evaluation of the potential impacts to both the physical and natural environment should be conducted, including identification of the local rarity of the site's plant and animal life.

IMPACT ON AGRICULTURAL LAND RESOURCES:

10. WILL THE PROPOSED ACTION AFFECT AGRICULTURAL LAND RESOURCES?

No.

IMPACT ON AESTHETIC RESOURCES:

11. WILL THE PROPOSED ACTION AFFECT AESTHETIC RESOURCES?

Yes; clearing of site vegetation and replacement with eight (8) dwellings, along the bluff and fourteen (14) dwellings at higher elevations within the interior of the site may pose impacts to aesthetic qualities as viewed from the west (the Long Island Sound, Lloyds Neck & the Connecticut shore) and adjoining properties. The subject site has a significant scenic vista over Long Island Sound. The spectacular scenery of the coast constitutes a natural resource of unmatched recreational value. Construction of homes along the bluff and subsequent clearing for water views will remove vegetation on top of a striking cliffed coastline. In addition, construction along the site's north and south boundaries will remove existing buffer vegetation that currently provides aesthetic relief to neighboring homeowners.

It is recognized that visual quality of the landscape cannot be determined by a precise formula and that subjective differences exist. For removing as much subjectivity as possible, a Visual EAF Addendum has been completed and made part of this review to assist the Planning Board in its determination of significance.

IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES:

12. WILL THE PROPOSED ACTION IMPACT ANY SITE OR STRUCTURE OF HISTORIC, PREHISTORIC OR PALEONTOLOGICAL IMPORTANCE?

The subject property is not listed on the National Register of Historic Places, nor is it designated under the Town of Huntington landmark ordinance, Article VI of the Huntington Town zoning code. The property is not contained within a circle or square, indicating a one mile diameter or a one mile square from an archaeological site documented by the New York State Museum or the New York State Office of Parks Recreation and Historic Preservation However, important prehistoric and historic period resources are noted in and near Eaton's Neck in the Stage IA Cultural Resources Assessment, prepared by archaeologist, Robert Miller, Ph.D., in 1991 for the Skodnek Hills subdivision, located at Winkle Point; the Stage IA provides an archival search which includes a listing of all prehistoric and historic period sites within the Eaton's Neck and Asharoken area. These data are included in the Old Orchard Woods Stage I study. It should be noted that evidence of prehistoric occupation of the Skodnek site was uncovered during the Stage I/Stage II investigation of the property. The importance of the Old Orchard Woods site and its environs are also well-documented in a recent history of Eaton's Neck and Asharoken by Edward T. Carr and others, entitled Faded Laurels, the History of Eaton's Neck and Asharoken, which provides photographs of a number of the structures situated thereon, as well as describes the previous use of a portion of the property as a camp, known as "Camp Marshall Field." The subject property contains old oak-tulip tree forest, a high plateau area overlooking Northport Bay/Long Island Sound, and extensive sheltered wetlands to the east and north. The favorable natural features may have afforded prehistoric Native Americans opportunities for settlement and encampment. The Suffolk County Archeological Association Cultural Resources Inventory Map designates Eaton's Neck as an area of "intensive aboriginal habitation."

Due to the multiple indicators of potential historic and prehistoric sensitivity of the subject property, the Department of Planning and Environment requested the applicant, in a letter dated October 1, 1998, to have prepared a Stage I Cultural Resources Assessment, containing both a Stage IA archival documentation of site history and use, and a Stage IB subsurface testing of the property. The purpose of a Stage I investigation is to document all potential subsurface remains, and to note and evaluate all standing structures as well as site features for the purpose of evaluating the degree of site impacts to cultural resources posed by the proposed subdivision plan, in order to devise appropriate mitigation where necessary. Following receipt of the Stage I, the applicant was informed that copies of the study would be sent to the State Historic Preservation Office for review in order to assure compliance with all standards of the New York State Historic Preservation Office and with New York Archaeological Council guidelines. The Stage I study was received by the Department of Planning and Environment on January 12, 1999 and two copies forwarded to the New York State Historic Preservation Office on January 22, 1999. Review comments have yet to be received. If further archaeological investigation is required and mitigation indicated such should be included in a Draft Environmental Impact Statement so that the full significance of proposed alternatives can be evaluated with regard to cultural resources. A copy of the full study entitled Cultural Resource Assessment, Phase I Study, Literature Search and Sensitivity Assessment and Field Reconnaissance Study for Old Orchard Woods proposed Subdivision, Eaton's Neck, New York, Archaeological Services, Inc, Robert J. Kalin, principal investigator,

December 13, 1998, can be found in the Department of Planning and Environment file for the Old Orchard Woods preliminary subdivision.

The Stage IA concludes based on documentary research, local informant interviews and site inspection that:

> This parcel has a better than average potential to produce cultural evidence related to the prehistoric past. There appears to be little potential for evidences of early historic sites given the known history of the site. Evidences of early 20th century structures such as cottages, out buildings or similar features---may be located near the existing buildings. The remainder of the parcel may have preserved evidences of the prehistoric past on the tops of knolls, and in small hollows and or relatively level areas.

As a result of the Stage IA findings, a Stage IB field reconnaissance survey was recommended and carried out to address the question regarding the presence or absence of culturally significant subsurface or ground level prehistoric or historic evidences. The Stage IB survey provides a list of the site's eleven standing structures which is attached for reference. The list indicates that most of the structures were built about 1924, with the exception of one residence of 1970 vintage. A description of the manmade features contained on the property from the Stage IA, and a chronology of events relating to the subject property from the Stage IB study is attached to provide background information on the subject of study. The Stage IB provides a summary of the subsurface testing program:

> "No culturally significant recoveries were found as a result of the subsurface testing of the Old Orchard Woods property. Of the 159 subsurface tests dug in the approximately nine-acre subsurface test area, most were culturally barren. Twenty-six tests out of 159 revealed cultural evidences such as brick coal, metal brick plastic, etc. Thus 26 out of 159 or 26/159 or 16% of the tests were culturally positive. Tests were more likely to be positive in the vicinity of presently or formerly occupied structures. The remaining tests were culturally barren designated as "CN" on the data forms.) The character of cultural materials recovered are commonly associated with soils in the vicinity of occupied residences, or are found in former gardens or agricultural fields which were fertilized by manure and domestic wastes. Their recovery can be ascribed to periods of human activity, past waste disposal or soil fertilization practices. No culturally significant recoveries were made from the subsurface at the old orchard woods site."

The Stage I study does not address the significance of the structures on the property. The plan calls for all of the structures to be removed. The Stage I study which contains photographs of the structures and a description of each, were forwarded to the State Historic Preservation Office for review of the Stage I study and comment on impacts to the structures contained on the site. As the plan now stands, all of the structures will be demolished. The SHPO has commented that in order to review the significance of the structures original photographs must be sent. The applicant has been informed of this requirement. The development in general will accomplish the complete eradication of the site's significance with respect to its former use as a camp. If a Draft Environmental Impact Statement is prepared as part of the preparation of alternatives, reservation of some of the buildings for community recreational use can be explored. The two-story residence located near the bluff could serve as a community meeting place and social hall, being well designed and located for the purpose. Any

comments or recommendations recieved from the SHPO will be included in the Draft Environmental Impact Statement.

IMPACT ON OPEN SPACE AND RECREATION:

13. WILL THE PROPOSED ACTION AFFECT THE QUANTITY OR QUALITY OF EXISTING OR FUTURE OPEN SPACES OR RECREATIONAL OPPORTUNITIES?

*Yes, the proposed action will result in the permanent foreclosure of a future recreational opportunity and a major reduction of an open space important to the community (impact to a property listed on the Town Open Space Index). The subject property is a designated Town open space index parcel that provides attributes such as physical and psychological relief from the built environment, diversity of visual experience, protection of natural resources and groundwater recharge that will be impacted by the proposed action.

Based on the September 1974 Open Space Index for the Town of Huntington, the 24.2 acre subject site is part of a larger 56.4 acre Town designated Open Space Index Parcel (OSI # NE-1) that includes the Morgan Estate and others. These properties are described in the index as woodland, forest and second-growth woodland with bay or beach frontage with steep slopes having erosion potential. The Index defines priorities for insuring that open space is given the same consideration as other factors in granting or denying permits. Of six possible levels that can be assigned, the subject property was defined as "Priority 1", which carries the most immediate need of consideration. Recommendations call for affirmative action to preserve the property or to conserve its open space value and natural features.

The 1974 Open Space Index only mapped two areas on Eatons Neck. While a large portion of the Neck is under the jurisdiction of the Village of Asharoken, the two sites identified had particularly special qualities upheld by their Priority 1 classification. The other OSI parcel adjoins Sand City/Hobart Beach and is being actively pursued by the Town Board for public acquisition as an inter-agency transfer from Suffolk County. Recent staff study which resulted in a retrospect of what has happened to lands originally mapped on the 1974 OSI found that the subject property was one of very few remaining underdeveloped sites that had received a Priority 1 rating. Most of the Priority 1 sites have benefited from some form of public protection.

Eatons Neck is quite limited in the amount of parkland that is available for public use. Other than beach areas with limited play equipment and boat ramps, there is no publicly-accessible recreational parkland. The subject site appears to be the only large holding remaining in the *unincorporated Town area* (certainly, the Morgan Estate to the northeast is unsurpassed, though it lies in the Village) that might potentially serve such purpose. It was formerly a camp property and could provide future recreational opportunities as such. Even though the limited density of development on Eatons Neck might be viewed as being in some way protective of open space resources, there is a real public need for park space. It would provide a base for further Town nature study programming, which has been exceptionally well received, and for which supply cannot meet demand at this time even with two active program sites (Crab Meadow Beach and Gold Star Battalion Beach/Coindre Hall).

The subject property contains a specific form of habitat that is not presently represented in the Town's parkland inventory—high bluff. While Geissler's Beach contains a small remnant (which was disturbed and greatly reduced during construction of the adjoining subdivision), this site could provide an opportunity to protect such a significant resource, a site to "curate" for public appreciation of the Town's biodiversity. Any DEIS that might be prepared for the subject site should incorporate consideration of the potential loss of this habitat type from the Town's potential open space inventory. The proposed preliminary plan which extends lot lines to the coast, through this critical area, in lieu of a commonly-held reserve area as shown on the earlier Map of Hogan Plat, may not serve its future stewardship in the most environmentally-sensitive manner. Even though covenants and restrictions have been difficult to enforce on developed/developing sites throughout the Town, potentially divisive ownership of this high bluff face may potentially threaten its uniform management.

Page 7-17 of the Huntington Comprehensive Plan specifies:

> "Lands in need of planned protection generally include: (1) parcels with significant environmental qualities, particularly those needed for the protection and maintenance of groundwater recharge areas, wetlands, sensitive coastal areas, and wildlife habitats, and (2) parcels with unique aesthetic, image and/or scenic qualities, particularly those associated with historic sits and structures and/or the buffering of existing uses."

The subject property qualifies for such protection in both categories and, in the absence of public acquisition, alternatives should be considered which would enable clustering of housing away from sensitive habitat areas (to be defined by the floral and faunal analysis) and require permanently-covenanted natural area to provide some mitigation.

The proposed action will result in a substantial reduction of open space. Although 7.33 acres are proposed for reservation, restrictions are limited in the 3.4 acre portion (along the Long Island Sound) and unknown in the 3.93 acres area (along North Creek Road). Consideration of alternative layouts configurations for maximizing open space will insure that the project is consistent with the Town Comprehensive Plan.

IMPACT ON CRITICAL ENVIRONMENTAL AREAS:

14. WILL PROPOSED ACTION IMPACT THE EXCEPTIONAL OR UNIQUE CHARACTERISTICS OF A CRITICAL ENVIRONMENTAL AREA (CEA) ESTABLISHED PURSUANT TO SUBDIVISION 6 NYCRR 617.14(G)?

No.

IMPACT ON TRANSPORTATION:

15. WILL THERE BE AN EFFECT TO EXISTING TRANSPORTATION SYSTEMS?

Yes. The action is estimated to generate 22 vehicular trips/hour [EAF, Part I,(B)(1)(g)]. This should not cause a significant increase in volumes on local roads. However, improvements to North Creek Road are only proposed from the limit of Town of Huntington jurisdiction to 80 feet north of the proposed entrance (Apple Place). The remaining approximately 600' of 18' wide

road is shown to be unimproved. The Village of Asharoken Planning Board has concerns that clearing and runoff from the property could flood and silt the unimproved sections of the road (Andrew R. Mendelsohn, P.E., letter dated 9/30/98). Mr. Mendelsohn notes:

> "The current plan shows that a significant section of North Creek Road within the development will be left in its current state as a narrow dirt and gravel road. If the Morgan property were to be developed in the future we would insist that the roadway adjacent to that property be improved. We would be left with a section of unimproved roadway between two improved sections. Please have the entire length of North Creek Road through the development improved".

Desirable development standards requires that a street be improved to the edge of the property. It is also desirable to obtain public input (Planning Board consensus) and comments from involved agencies (Town Highways and Engineering). The 1993 Town Comprehensive Plan Update (pg. 2-3) indicates that traffic volumes are expected to grow and recommends three management strategies for accommodating future development and for mitigating traffic safety and operational impacts: selective roadway improvements, transportation management and zoning and land use policies. If an Environmental Impact Statement is required, it should address these strategies, potential impacts and any mitigating measures.

IMPACT ON ENERGY:

16. WILL THE PROPOSED ACTION HAVE AN ADVERSE AFFECT ON THE COMMUNITY'S SOURCES OF FUEL OR ENERGY SUPPLY?

The proposal will have an effect on the community's sources of fuel, energy and water.

NOISE AND ODOR IMPACTS:

17. WILL THERE BE OBJECTIONABLE ODORS, NOISE OR VIBRATION AS A RESULT OF THE PROPOSED ACTION?

The proposed action will likely involve temporary noise impacts as a result of construction. Significant cut and fill operations may be necessary, posing noise and dust impacts to neighboring property owners. The applicant should identify the intensity and duration of noise generated with excavation as well as later stages of development and indicate what measures will be instituted in order to ensure safe, orderly and relatively unobtrusive development of the subject property.

IMPACT ON PUBLIC HEALTH:

18. WILL THE PROPOSED ACTION ADVERSELY AFFECT PUBLIC HEALTH AND SAFETY?

Yes, bluff slopes may fail suddenly and catastrophically due to the angle of repose, the water content and the type of earth material involved. Mass movements (landslides, mass wasting) are common on moderate to steep slopes and even gentle and flat-lying slopes where they are adjacent to bodies of water. The risk of failure is generally greater where earth materials are surficial soils, clays and silts that are liable to liquefaction. Slope failure takes place when the critical slope angle is exceeded. The angle depends on the frictional properties of the slope material and increases slightly with the size and angularity of the fragments. Dry, cohesionless

material will come to rest on similar material when the angle of repose ranges generally between 33° and 37° . For wet, cohesive materials underlain by frozen ground, downslope movement may occur on slopes as low as 1°. Adding weight naturally to slopes by rain, hail, snow and by human actions such as construction of buildings and other structures and wastewater from septic systems can increase the chances of failure. The Planning Board's condition with preliminary approval for Hogan Plat, prohibiting construction of any residential structures within 100 feet of the bluff will reduce these impacts. However, it is difficult to generalize on the significance of this mitigation because of the many parameters involved.

IMPACT ON SOLID WASTE DISPOSAL:

19. WILL THE PROPOSED ACTION GENERATE SIGNIFICANT QUANTITIES OF SOLID WASTES?

No.

20. WILL THE PROPOSED PROJECT INVOLVE THE DISPOSAL OF HAZARDOUS WASTES?

No.

IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD:

21. WILL THE PROPOSED ACTION AFFECT THE CHARACTER OF THE EXISTING COMMUNITY?

The proposed residential development of the site is consistent with current surrounding land use.

22. IS THERE, OR IS THERE LIKELY TO BE, PUBLIC CONTROVERSY RELATED TO POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS THAT MAY RESULT IF THE PROPOSED ACTION IS IMPLEMENTED?

Yes; there is potential for controversy based upon past geographically similar projects in the town (i.e. Alvernia Estates, a wooded, steeply sloped 13.9 acre site overlooking Centerport Harbor) and a recent news articles in The Observer, 1/21/99 and the Huntington News, 1/21/99).

RECOMMENDATION FOR SEQRA DETERMINATION:

To determine that an EIS will not be required for an action, the lead agency must determine either there will be no adverse environmental impacts, or that the identified adverse impacts will not be significant, or that all significant impacts will be adequately mitigated. SEQRA asks that the preparer of the EAF Part 3 to compare the impacts that may be reasonably expected to result from the proposed action against certain criteria (SEQRA §617.7):

- a substantial adverse change
- substantial increase or decrease in natural resources
- removal or destruction of large quantities of vegetation
- material conflict with Town Plans and Goals (e.g. 1993 Town Comprehensive Plan Update and the Open Space Index)
- impairment of character
- creation of a hazard

A lead agency must prepare a Positive Declaration if it finds, based on a review of the criteria that one or more potential impacts may be significant and the project, as proposed, does not include mitigating measures that would eliminate or reduce the potential impact to a point where it would no longer be considered significant. In its review of the September preliminary map, the Town of Huntington Conservation Board identified the potential for significant environmental impact to upland woodland, bluff, the Long Island Sound and decreased accretion of sand to Hobart Beach and Sand City Tern Colony. The Conservation Board "strongly" advised the Planning Board to issue a Positive Declaration for the action and require the preparation of an Environmental Impact Statement so that alternative site configurations and mitigative measures could be addressed [The Conservation Board was designated in accordance with Article 12-F, Section 239-Y of New York State General Municipal Law to assist the Town in the development of sound planning and to assure preservation of natural and scenic resources]. For the purposes of determining whether the proposed action may cause one of the above consequences, the significance of the following potential impacts should be considered:

1. Substantial removal of rock, earth and sand [Note: Since the applicant failed to indicate this information in the EAF Part I (B)(2) impacts may or may not be significant. However, based upon existing steep slope topography; the area proposed for development and the Town's grading requirements (1:3 slopes), it would be reasonable to conclude substantial amounts of material may be removed or moved to other parts of the site).
2. Substantial removal of existing mature vegetation on steep and highly erodible soils;
3. Substantial increase in short and long-term erosion and off-site sedimentation;
4. Accelerated erosion of the site's bluff (weight of structures and wastewater from septic systems; manipulation of stabilized surfaces and shoreline hardening) and subsequent impacts to natural processes, aesthetics, public recreational resources, habitats and water quality;
5. Creation of a landslide or mass wasting hazard by adding weight to the slope from construction of buildings, removal of existing structures (a residence proposed for demolition is shown approximately 40 feet from the bluff) and wastewater from sanitary systems;
6. Contamination to surface waters from human activities such as subsurface sanitary flows, lawn fertilization and pesticide applications;
7. Effect to significant habitat area with restriction of sand transport to down drift beaches due to shoreline hardening [indirect impact per SEQRA §617.7(c)(2)];
8. Loss of over 100 year old unique specimen trees;
9. Reduction of Town designated Open Space;
10. Effect from not improving the northerly 600' of North Creek Road along the subject property;
11. Impairment of aesthetic qualities with replacement and manipulation of the natural environment.

Due to the potential for significant adverse environmental impacts, pursuant to SEQRA Section 617.7, it is recommended that a positive declaration be issued for the proposed action and an Environmental Impact Statement be prepared for the proposed action. Alternative layouts and mitigative measures should be considered at a level of detail sufficient to permit a comparative assessment to the proposed action.

With preparation of any Environmental Impact Statement, the applicant should address the following:

1) Alternative layout configurations that consider maximization of open space; protection of slopes, bluff, surface waters, vegetation, aesthetic resources and retention of existing structures per Section 12, *Impact on Historic and Archeological Resources*, including, but not limited to:
   a) Full attached cluster
   b) Modified detached cluster
   c) Combination of full and modified cluster
   d) Reduced Yield
2) Parkland Dedication
3) Accelerated retreat of the bluff and potential loss of life, structures and natural resources.
4) Determine whether the 100' setback, required with Hogan Plat is sufficient for protecting proposed structures from the dangers of bluff erosion and mass wasting. Estimates can be based on a variety of factors including, but not necessarily limited to, the following:
   - The existing beach or bluff setback and predicted erosion rate
   - The location of the intersection of the projected failure plane and the bluff top
   - The angle of repose of the upper bluff and whether there is sufficient distance for the upper bluff to lay back without threatening the existing residence
   - The geologist's estimate of when the residence and accessory structures would be undermined or otherwise damaged
   - The foundation of the structure to be protected
   - Estimated wave run-up
5) A floral and faunal study to evaluate the ecological significance of the site and whether suitable mitigation can be incorporated. The study should include clearing and grading estimates for the proposed action as well as each alternative; a survey that maps each tree 8" in diameter and larger and its root zone that may be impacted by construction. Trees should be keyed to a location on a map and listed by species, diameter and condition.
6) Erosion impacts and mitigation measures.
7) Effect to significant habitat area from restricted transport of sand to down drift beaches with shoreline hardening.
8) Sanitary flows that may emerge into surface waters.
9) Any comments and/or further archaeological testing requirements by New York State Historic Preservation Office (OPRHP).
10) Best location for the site's recharge basin in terms of hydraulics and environmental preservation.
11) Rational for improving or not improving North Creek Road along the entire frontage.

12) Traffic, noise and dust impacts from construction equipment.
13. The Suffolk County Planning Commission resolved to approve the subject application subject to sixteen (16) conditions (see attached). Conditions 4, 5, 7, 8, 9, 10, 11 and 16 should be listed on the map. Condition 3 (i.e. flagging the "top of the bluff" by a qualified expert, verified by the appropriate regulatory agency, and noted as to date verified on all surveys and plans) should be fulfilled with the results shown on the preliminary map. Conditions 10 and 11 regarding beach access would need to be reworded to account for existing structures. Condition 16, which requires the applicant to "acknowledge in writing to the Planning Board that the creation of this subdivision in no way commits the Town of Huntington or the County of Suffolk to any program to protect this property from shoreline or bluff erosion through the construction of engineering or other works" should be submitted in a form acceptable to the Assistant Town Attorney.
14. Currently, beach access is proposed via a 14' wide strip. Will all residents have access to this strip and the beach? Since property lines terminate at the toe of the bluff, it would appear that residents could have unlimited access. Additional information should be provided on the map in the form of notes and details to address these questions. In particular, the beach and mean high water mark should be shown.
15. It is noted on the map that no building or structure shall be erected, trees removed or grading or excavation performed within the 3.4 acre, Natural Buffer Area on Lot #'s 3-10. This note as well as the conditions mentioned in comment 6 above and those required in the covenant for Hogan Plan should be listed on the map (and in any prospectus) under a heading entitled "Conditions". If similar conditions are intended for the 2.27 acre buffer area proposed along North Creek Road they should also be placed on the map.
16. Depiction of the landward limit of the Natural Protective Feature Area (Coastal Erosion Hazard Area Map, Photo No. 76-1033-83.
17. All existing structures shall be shown including the wood storage shed, boardwalk and wood stairway along the "beach access"; the gabions adjacent to the wood stairs and the parts of gabion basket wire further south.
18. The map notes that "All existing structures shall be removed except for shed and stairway to the beach". The map should indicate which of the site's two sheds are proposed for retention.

Date: March 3, 1999
Planning and Environmental Review Divisions
Huntington Town Department of Planning and Environment

Appendix A-11
Town Planning Board Resolution
and
Positive Declaration

(March 10, 1999)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF MARCH 10, 1999

VB MAR 19 1999

The following resolution was offered by R. Bontempi

and seconded by M. Sommer

PR

WHEREAS, Madeleine Hogan, 307 Burns Street, Forest Hills, New York, 11375, owner of fee title to land and William Kollmer Contracting, 74 Dogwood Lane, Northport, New York, 11768 applicant under contract, have submitted a subdivision application for the **Old Orchard Woods** property, prepared by Nelson and Pope, LLP, and located at the easterly terminus of North Creek Road in Eatons Neck, bordered by the Long Island Sound to the west and the Village of Asharoken to the east, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map, and.

WHEREAS, said preliminary application was received on September 9, 1998, for the subdivision of a 24.4 acre property into twenty-two (22) lots, zoned R-20 Residential, and was classified a **Type I Action** pursuant to 6 NYCRR PART 617 of the State Environmental Quality Review, Sections 617.4 (B) (5) (ii), and 617.4 (b) (10), and

WHEREAS, the Huntington Town Planning Board caused a review of the subdivision plan to be made, pursuant to the New York State Environmental Conservation Law, Article 8, SEQRA, and Part 617 of the implementation regulations (6 NYCRR Part 617), and

WHEREAS, the staff of the Huntington Town Department of Planning and Environment, Environmental Review Division at the direction of the Planning Board, has reviewed the information provided with Part I of the Full Environmental Assessment Form and the preliminary map prepared by Nelson & Pope, LLP, dated August 1998 and received October 23, 1998, and has prepared a Parts II and III on behalf of the Planning Board, and,

WHEREAS, the Huntington Town Planning Board has conducted a complete review of all aspects of the Environmental Assessment Form Parts I, II and III and the facts presented thereby and the most recent plans; now therefore be it

RESOLVED, that the Huntington Town Planning Board hereby adopts the Full EAF (Parts I, II and III) prepared for the action and finds from the facts therein that there may be significant environmental impacts resulting from the implementation of the proposed plan and hereby issues a **Positive Declaration**, pursuant to the SEQRA regulations, and be it further

RESOLVED, that the Huntington Town Planning Board hereby directs the Director of the Department of Planning and Environment to file Notice of Determination of Significance, and be it further

RESOLVED, that the Huntington Town Planning Board hereby directs the applicant to prepare a Draft Environmental Impact Statement (DEIS), and be it further

RESOLVED, that Parts I, II and III of the Full Environmental Assessment Form are attached hereto and made a part hereof.

VOTE: 4 AYES: 4 NOES: 0
ACTING CHAIRMAN VOTING: W.G. Asher
ABSENT: T. Edwards
E. Pagano
H.J. VIrag
The resolution was thereupon declared to be duly adopted.

Appendix A-12

Town Department of Planning and Environment Letter

(March 12, 1999)

TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING AND ENVIRONMENT

Frank P. Petrone, ***Supervisor***

Richard Machtay, ***Director***

March 12, 1999

William Kollmer Contracting
74 Dogwood Lane
Northport, New York 11768

MAR 1 [illegible] VB

Re: **OLD ORCHARD WOODS**

Gentlemen:

On March 10, 1999 the Huntington Town Planning Board, as lead agency, issued a Positive Declaration for the above referenced subdivision, indicating that the action as proposed may have a significant adverse impact on the environment and that an environmental impact statement (EIS) will be required. Either the project sponsor or the lead agency; at the project sponsor's option may prepare the draft EIS. If you, as the project sponsor do not exercise the option to prepare the draft EIS, the Planning Board will prepare it, cause it to be prepared or terminate its review of the action. Fees may be charged by the Planning Board for preparation or review of an EIS pursuant to section 617.13 of the State Environmental Quality Review Act.

Also be aware that scoping may be requested. Scoping is the process that identifies relevant environmental effects of the action to be addressed in the draft EIS. The purpose is to narrow issues and to ensure that the draft EIS will be concise, accurate and complete for public review. Scoping may be initiated by the lead agency or by the applicant. If scoping is not conducted, the project sponsor may prepare a draft EIS for submission to the lead agency.

Although the Planning Board did not request scoping, it is the obligation of the lead agency to provide input reflecting their concerns and needs. It is the opinion of the Planning and Environmental staff that the Environmental Assessment Form, Part III (EAF), which was forwarded to you under separate cover should provide the necessary guidance in this respect. The EAF identifies the specific issues of concern to be addressed at a level of analysis that corresponds to that established in the scoping process.

If you have any questions or comments regarding the above, please contact me at 351-3196.

Very truly yours,

Scott Robin
Senior Environmental Analyst

for
Richard Machtay
Director

RM:SR:sr

cc: Madeleine Hogan
Nelson & Pope, LLP
S. Robin
A. Ducey-Ortiz
C. Bolton
M. Myles

Appendix A-13
Town Planning Board Resolution

(September 1, 1999)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF SEPTEMBER 1, 1999

The following resolution was offered by W.G. Asher

and seconded by K. Mackey

WHEREAS, William Kollmer Contracting petitioned the Huntington Town Planning Board to amend certain conditions that were imposed pursuant to the March 10, 1999 Positive Declaration for the Old Orchard Woods property located at the easterly terminus of North Creek Road in Eatons Neck, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map, and

WHEREAS, the Huntington Town Planning Board at their regular meeting of August 25, 1999 discussed the applicant's request to exclude the rendering of the attached cluster alternative from the Draft Environmental Impact Statement;

NOW, THEREFORE BE IT

RESOLVED, that the Huntington Town Planning Board hereby amends the Positive Declaration for the Old Orchard Woods project and directs the applicant to prepare a revised Draft Environmental Impact Statement in accordance with staff comments dated July 28, 1999, except for the rendering of the attached cluster alternative.

VOTE: 4 AYES: 4 NOES: 0
ABSENT: E. Pagano
H.J. Virag

The resolution was thereupon declared to be duly adopted.

Appendix A-14
Town Planning Board Resolution

(April 27, 2000)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF APRIL 26, 2000

The following resolution was offered by J. Tane

and seconded by M. Capodanno

WHEREAS, Madeleine Hogan, 307 Burns Street, Forest Hills, New York, 11375, owner of fee title to land and William Kollmer Contracting, 74 Dogwood Lane, Northport, New York, 11768 applicant under contract, have submitted a subdivision application for the **Old Orchard Woods** property, prepared by Nelson and Pope, LLP, and located on the northwest side of North Creek Road, 747.78 feet west of Eaton's Neck Road in Eatons Neck, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map, and

WHEREAS, said preliminary application was received on September 9, 1998, for the subdivision of a 24.21 acre property into twenty-two (22) lots, zoned R-20 Residential, and was classified a Type I Action, and

WHEREAS, the Huntington Town Planning Board caused a review of the subdivision map to be made, pursuant to the New York State Environmental Conservation Law, Article 8, State Environmental Quality Review Act (SEQRA), and Part 617 of the implementation regualtions (6NYCRR Part 617), and

WHEREAS, the Planning Board issued a Positive Declaration pursuant to SEQRA and the applicant submitted a Draft Environmental Impact Statement, which was eventually found acceptable by the Board, and

WHEREAS, the Planning Board held a public hearing on November 17, 1999 and substantive comments were received, and a draft Final Environmental Impact Statement (FEIS) was prepared by Nelson, Pope & Voorhis, LLC on behalf of the applicant, and

WHEREAS, comments from the Department of Maritime Services, Memorandum dated March 13, 2000 and the Department of Planning and Environment, Memorandum dated March 30, 2000 were received which contain information that are necessary for the integrity of the record, and

WHEREAS, as the Planning Board is responsible for the adequacy and accuracy of the FEIS, now therefore be it

RESOLVED, that the Planning Board hereby accepts the FEIS dated February 2000 (to include the Planning Board accepted DEIS and all its comments and attachments; an Addendum to the FEIS, dated April 2000; two (2) Town of Huntington Planning Staff Studies, dated April 20 & 24, 2000; an April 19, 2000 letter from the applicant's attorneys, Rieger, Walsh & McGinty

the Department of Maritime Services Memorandum, dated March 13, 2000 and the Department of Planning and Environment Memorandum, dated March 30, 2000) as satisfactory with regard to its scope, content and adequacy; and be it further

RESOLVED, that the Planning Board hereby directs the Environmental Review Division of the Planning and Environment Department to prepare and file a Final Impact Statement Notice of Completion in accordance with SEQRA, and be it further

RESOLVED, that the Planning Board hereby instructs the Environmental Review Division of the Planning and Environment Department to draft a Findings Statement on the FEIS no less than 10 days and no greater than 30 days after the filing of the FEIS pursuant to SEQRA section 617.11.

VOTE: 6 AYES: 5 NOES: 1 (M. Sommer)

The resolution was thereupon declared to be duly adopted.

14-12-8 (2/87)-9c

SEQR

617.21
Appendix H
State Environmental Quality Review

Notice of Completion of Final EIS

File Number: P1-472600-00093 **Date:** April 27, 2000

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

A Final Environmental Impact Statement [*to include the Planning Board accepted DEIS and all its comments and attachments; an Addendum to the FEIS, dated April 2000; two (2) Town of Huntington Planning Staff Studies, dated April 20 & 24, 2000; an April 19, 2000 letter from the applicant's attorneys, Rieger, Walsh & McGinty; Town of Huntington Department of Maritime Services Memorandum, dated March 13, 2000 and Town of Huntington Department of Planning and Environment Memorandum, dated March 30, 2000*] has been completed and accepted by the Huntington Town Planning Board, as lead agency, for the proposed action described below.

Name of Action: Old Orchard Woods [Resubdivision of Lot 1 - Map of Hogan Plat]

Description of Action: The proposed action involves the subdivision of a 24.21 acre property, zoned R-20 Residential (minimum lot size of 20,000 square feet) into twenty-two (22) modified lots for the subsequent construction/creation of new single-family homes, roadway; an approximate 62,000 square foot recharge basin and 5.7 acres of reserve area.

Location: The subject property is located on the northwest side of North Creek Road, 747.78 feet west of Eaton's Neck Road in Eatons Neck, designated as parcel 0400-001-01- 004.1 on the Suffolk County Tax Map.

Potential Environmental Impacts: Please refer to the Draft and Final Environmental Impact Statements accepted by the Planning Board.

A Copy of the Final EIS may be obtained from:

Contact Person:	Richard Machtay, Director of Planning and Environment, or Scott Robin, Senior Environmental Analyst, Environmental Review Division
Address:	Town of Huntington, Department of Planning & Environment, 100 Main Street, Huntington, New York 11743
Telephone Number:	(631) 351-3196
E-mail:	srobin@town.huntington.ny.us

A Copy of this Notice and the Final Environmental Impact Statement Sent to:

√ New York State Department of Environmental Conservation, 50 Wolf Road, Albany, New York 12233-0001
√ New York State Department of Environmental Conservation, Region I, SUNY, Building #40, Stony Brook, New York 11790-2356, Attn: Kevin Kispert, Division of Environmental Permits
√ Town of Huntington Supervisor Frank P. Petrone
√ Town of Huntington Planning Board
√ Town of Huntington, Office of the Town Clerk, Attn: Joanne Raia, Town Clerk
√ Madeleine Hogan, 307 Burns Street, Forest Hills, New York, 11375, owner of fee title to land
√ William Kollmer Contracting, 74 Dogwood Lane, Northport, New York, 11768, applicant under contract

All Involved Agencies:

√ Suffolk County Planning Commission, P.O. Box 6100, 100 Veterans Highway, Hauppauge, New York 11788, Attn: Andrew P. Freleng, AICP, Principal Planner
√ Suffolk County Department of Health Services, Wastewater Management Division, County Center, Riverhead, New York 11901, Attn: Stephen Costa, PE, Chief
√ Town of Huntington Highway Department, Attn: William Naughton, Superintendent,
√ Town of Huntington Department of Engineering Services, Attn: Thomas Mazzola, P.E. Director,
√ Suffolk County Water Authority, Administrative Services, P.O. Box 38, Oakdale, New York 11769-0901

All Interested Agencies:

√ Long Island Regional Planning Board, 20 Rabro Drive, Hauppauge, New York 11788
√ Incorporated Village of Asharoken Planning Board, One Asharoken Avenue, Asharoken , New York 11768, Attn: Andrew R. Mendelsohn, PE
√ Northport-East Northport School District #4, Laurel Road, East Northport, New York 11768
√ Eatons Neck Civic Association, 9 Argyle Drive, Eatons Neck, New York 11768, Attn: Joni Altner
√ Long Island Lighting Company, 175 East Old Country Road, Hicksville, NY 11801, Attn: Director of Government Relations
√ Town of Huntington Department of Maritime Services
√ Town of Huntington Conservation Board
√ Town of Huntington Fire Prevention Bureau

Copies of the Document can be Reviewed in:

√ Town of Huntington Department of Planning and Environment (Rm. 212), 100 Main Street, Huntington, New York 11743
√ Northport-East Northport Library, 151 Laurel Avenue, Northport, New York 11768

Appendix A-15
Findings Statement

(July 19, 2000)

TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING AND ENVIRONMENT

Frank P. Petrone, *Supervisor*

Richard Machtay, *Director*

Date: July 19, 2000

Re: **Old Orchard Woods**
State Environmental Quality Review ID # P1-472600-00093

To: All Involved and Interested Agencies

From: Town of Huntington Department of Planning and Environment

The SEQRA Certification of Findings that was previously sent to you for the subdivision **Old Orchard Woods** was inadvertently signed in the portion of the form to deny. Please find attached a corrected form, indicating certification to approve. Please replace the previous form with this corrected copy.

We apologize for any inconvenience this may have caused. If you have any questions, please call Scott Robin at (631) 351-3051.

Enclosure

Application Number P1-472600-00093

Name of Action Old Orchard Woods

CERTIFICATION OF FINDINGS TO APPROVE/FUND/UNDERTAKE

Having considered the Draft and Final EIS, and having considered the preceding written facts and conclusions relied upon to meet the requirements of 6 NYCRR 617.9, this Statement of Findings certifies that:

1. The requirements of 6 NYCRR Part 617 have been met;

2. Consistent with the social, economic and other essential considerations from among the reasonable alternatives thereto, the action approved is one which minimizes or avoids adverse environmental effects to the maximum extent practicable; including the effects disclosed in the environmental impact statement, and

3. Consistent with social, economic and other essential considerations, to the maximum extent practicable, adverse environmental effects revealed in the environmental impact statement process will be minimized or avoided by incorporating as conditions to the decision those mitigative measures which were identified as practicable.

4. (and, if applicable) Consistent with the applicable policies of Article 42 of the Executive Law as implemented by 19 NYCRR 600.5, this action will achieve a balance between the protection of the environment and the need to accommodate social and economic considerations.

TOWN OF HUNTINGTON PLANNING BOARD
Name of Agency

Signature of Responsible Official

RICHARD MACHTAY
Name of Responsible Official

DIRECTOR OF PLANNING AND ENVIRONMENT
Title of Responsible Official

JULY 19, 2000
Date

100 MAIN STREET, HUNTINGTON, NEW YORK 11743
Address of Agency

OR

CERTIFICATION OF FINDINGS TO DENY

Having considered the Draft and Final EIS, and having considered the preceding written facts and conclusions relied upon to meet the requirements of 6 NYCRR 617.9, this Statement of Findings certifies that:

1. The requirements of 6 NYCRR Part 617 have not been met;

2. Consistent with the social, economic and other essential considerations from among the reasonable alternatives thereto, the action denied is one which fails to adequately minimize or avoid adverse environmental effects to the maximum extent practicable; and/or

3. Consistent with social, economic and other essential considerations, to the maximum extent practicable, adverse environmental effects revealed in the environmental impact statement process cannot be adequately minimized or avoided by the mitigation measures identified as practicable.

4. (and, if applicable) Consistent with the applicable policies of Article 42 of the Executive Law, as implemented by 19 NYCRR 600.5, this action will not adequately achieve a balance between the protection of the environment and the need to accommodate social and economic considerations.

Name of Agency

Signature of Responsible Official

Name of Responsible Official

Title of Responsible Official

Date

Address of Agency

Other Involved Agencies and the Applicant

FINDINGS STATEMENT
OLD ORCHARD WOODS SUBDIVISION

[Resubdivision of Lot 1 – Map of Hogan Plat]

PROJECT LOCATION

The project site is located on the northwest side of North Creek Road, approximately 750 feet west of Eaton's Neck Road in the hamlet of Eaton's Neck, Town of Huntington, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map.

PROJECT DESCRIPTION

The action involves the modified subdivision of a 24.21 acre wooded, variably sloped, undeveloped, coastal site, zoned R-20, in order to construct twenty-two (22) new detached single-family homes; a standard 34-foot wide access roadway and an approximate 62,000 square foot recharge basin. A total of 5.7 acres of "Reserve Area" are proposed for preserving sensitive features of the site. Two reserve areas totaling 2.3 acres are proposed for dedication as passive Town of Huntington parkland. An existing 3.4-acre Reserve Area created with a previous subdivision (i.e. Hogan Plat) is proposed as privately-owned land and "Conservation Easement".

Except for a beach access stairway and shed at the northwest corner of the site, all existing structures are to be removed (i.e. principal residence, caretakers cottage, guest cottage, garage, sheds, pump houses, shacks, parking area and bituminous drive). A 14' wide easement is proposed to provide continued access to the beach between lots 9 and 10.

Improvements to North Creek Road are proposed from the limit of Town of Huntington jurisdiction to 80 feet north of the proposed entrance. The northerly, approximately 600' of North Creek Road along the site's frontage is proposed to remain unimproved.

PROJECT HISTORY

Old Orchard Woods is the re-subdivision of a previously filed map, known as Hogan Plat (Planning Board Final Approval 9/20/89, amended 10/25/89). The action involved a two (2) lot subdivision of 34 acres for the initial development of a single residence and garage on a 9.371 acre lot. No physical change was proposed at the time to the remaining 24.21 acres (now known as Old Orchard Woods) except that 3.4 acres of the property was required to be reserved along the Long Island Sound as open space and for bluff protection. A declaration of covenants, however, was approved by the Planning Board which included an exemption for bulk-heading and erection of docking facilities subject to approval by regulating agencies. It also has a provision that subdivision of the premises into two lots "...will satisfy any requirement that land be shown as a park upon this subdivision or any future subdivision of Lot 1 or Lot 2".

On March 10, 1999 the Planning Board, as lead agency issued a Positive Declaration on the action and directed the applicant to submit a Draft Environmental Impact Statement (DEIS). On June 25, 1999 a DEIS was submitted and found to be unacceptable by review staff. On September 1, 1999 the Planning Board amended the Positive Declaration and directed the applicant to prepare a revised EIS in accordance with staff comments, except for the rendering of the attached cluster alternative. A revised DEIS was submitted on September 29, 1999 and on

October 6, 1999 accepted as complete for public review. The hearing on the DEIS was held on November 17, 1999 with comments accepted to November 27, 1999. A Final EIS (FEIS) on the action was received on February 18, 2000 and accepted as complete on April 27, 2000.

YIELD AND LAYOUT

In order to establish the number of lots for the subdivision of land (i.e. yield), NYSTL §278 requires a layout that in the Planning Board's judgement is conforming to the minimum lot size and density requirements of the zoning ordinance and conforming to all other applicable requirements. Where modifications are proposed, the Planning Board may approve alternative layouts, buildings and structures, roads, utility lines and other infrastructure, parks and landscaping in order to preserve the natural and scenic qualities of open lands. NYSTL §277 also provides that the Planning Board may make a finding that "a proper case exits for requiring that a park or parks be suitable located for playgrounds or other recreational purposes within the town".

A key regulation relative to establishing yield is Town Zoning Code Article X, Steep Slope Ordinance. Any applications for subdivision approval of land in residential zoning districts classified R-20 with natural slopes of ten percent and greater are subject to a lot yield factor. Lots in an R-20 Residence District Zone, would typically establish yield based upon lots with areas of 20,000 square feet (minimum). However, due to the site's steep slopes an adjustment factor, pursuant to Article X was applied to limit building on slopes that may be too steep to accommodate a house.

On January 27, 1999 Planning Staff prepared a lot yield analysis which determined that twelve (12) lots one acre in size or larger were required in the hillside development area and that a total yield of 23 lots could be established. The study was based upon a layout that included a recharge basin and two (2) reserve areas totaling 7.1 acres. No parkland was shown.

Section 198-114 of the Zoning Code of the Town of Huntington allows the Planning Board to modify the zoning regulations "to encourage the most appropriate use of land consistent with the character thereof and with the general welfare of the community, to afford adequate facilities for the housing, circulation, convenience, safety, health and welfare of the population to safeguard the appropriate use and value of adjoining property; or to conserve the general character and value of property in the district. Unless otherwise specified in this Article, any modification of the zoning regulations made by the Planning Board in connection with plat approval shall be limited to size of lot, minimum yard dimensions, locations of buildings, location and extent of parking and loading areas and provision of public recreation areas, including parks and playgrounds, or public school sites."

Before SEQRA Review started the Planning Board discussed and decided yield, layout and parkland (meetings of 11/18/98, 12/2/98, 1/6/99 & 6/13/99). Of note was the Planning Board's meeting of January 6, 1999, where it was agreed to have the property lines extend into the 3.4-acre reserve area that was established with Hogan Plat. However, with the issuance of a Positive Declaration on March 10, 1999, the Planning Board determined that the proposed action would have significant impacts and alternatives had to be considered [SEQRA § 617.9(b)(5)]. Pursuant to Town Law §277(7), this can include the waiver "...when reasonable, any requirements or improvements for the approval, approval with modifications or disapproval of subdivisions submitted for its approval". An amendment was proposed by the applicant to eliminate a sizable

portion of the reserve area created with Hogan Plat and transfer it to the eastern border of the site (September 9, 1998 application). Although the applicant had offered to add reserve area, the Planning Board felt the proposal would lessen mitigation in an extremely sensitive area of the site and the amendment was withdrawn.

GEOLOGY, SOILS, TOPOGRAPHY AND INDIRECT IMPACTS

The DEIS estimates that approximately 8.91 acres of relatively flat and 4.03 acres of steeply sloped land will be impacted by the proposed action. Approximately 41,000 cubic yards of soil will be initially disturbed with up to 60,000 cubic yards of sand removed from the site. Tree removal, grading and excavation are required to accommodate:

- Improvements to North Creek Road.
- Homes and associated roads and driveways.
- Construction of the stormwater recharge basin.

Vegetated slopes are proposed to be protected by:

- Proposed reserve areas
- A 100' setback for all structures from the top of the bluff
- Conformance with the Town Steep Slope Ordinance and Coastal Erosion Management Regulations.

Other than the impacts to natural resources associated with clearing and grading, impacts such as dust and construction traffic would be short term in nature (less than 18 months). Soils that will be covered with impervious surfaces and permanently disturbed, total 2.84 acres (buildings and pavement). All disturbed areas that would not become impervious will be graded, reseeded and landscaped. Erosion and dust control will be undertaken in accordance with Town of Huntington's Subdivision Regulations, Erosion and Sediment Control Handbook and best management practices, to be determined and applied with Final Application.

Although the applicant's proposal retains the 3.4-acre reserve area created with Hogan Plat and adds a 2.3 acre buffer/reserve area along North Creek Road, it also has lots 3-10 encompassing the bluff down to the mean high water mark. This eliminates common ownership of the reserve area by incorporating a portion of the site's coastal frontage into each of these lots. This presents a number of problems, including rights of easement, protection of extremely steep hillside and biological diversity, less efficient use of potential waterfront infrastructure and decreased applicability of state coastal policy. The applicant is proposing a *Reciprocal Easement and Maintenance Agreement* to record against the eight lots along the bluff to provide a 'framework for the shared construction, maintenance and repair of any bulk-heading or other erosion control measures implemented at the toe of the bluff, if and when any of the owners of the eight residences along the bluff should deem said measures to be necessary in the future' (letter to Director, Department of Planning and Environment, dated 4/19/00). This Reserve Area would therefore remain in private ownership to be maintained by the individual lot owners, subject to proposed covenants and restrictions. The FEIS does not anticipate any activity in the Reserve Area other than normal pruning and clearing of dead brush. In addition to the 3.4-acre Reserve Area, a 100-foot setback from the crest of the bluff is proposed to restrict any construction within

that area. The applicant proposes to encompass this entire area in a conservation easement to allow the Town to monitor compliance. As no public access is proposed to this area, compliance and enforcement would be difficult. The applicant's attorney has further indicated that for further protection of the bluff and slopes his client is willing to setback all construction 125 feet from the bluff and covenant that there will be no construction by future homeowners in that area.

Sections 2.3 and 2.4 of the FEIS responds to concerns regarding bluff recession and the reduction of sand transport to areas south of the site. In anticipating future development of the subject property, the applicant for Hogan Plat had requested a clause in the covenant for the 3.4-acre reserve area that allows construction of bulkheads or similar structures or taking other measures for hardening the bluffs. Since shoreline hardening is likely to eventually be undertaken as a result of the project, SEQRA requires the lead agency to consider the potential impacts. The supplemental analysis and studies in the FEIS regarding bluff recession and coastal geology indicated the following:

- The 1.9 foot/year bluff recession rate presented in the DEIS was established and verified with additional measurements as a conservative estimate. If no shoreline hardening is considered, no structure at least 100 feet from the existing bluff would be in jeopardy for 50 years.
- If shoreline hardening structures are constructed it would result in a reduction of sand to beaches adjoining and downdrift of the site.

In a April 19, 2000 letter to the Director of Planning & Environment, the applicant's attorney stated: *"...the applicant has agreed to re-confirm the existing restrictions imposed by the Planning Board at the time of the subdivision of the property in 1989 by virtue of a new Covenant and Restriction and we have also agreed that each deed to the property owners along the bluff will contain a recital that the land is being conveyed specifically subject to the existing covenants and restriction. The applicant has also agreed to reference in each deed the additional rights intended to be given to the Town pursuant to the terms of that certain "Conservation Easement" forwarded to your staff for its review in November of last year. As you may recall, the offer of encumbering the bluff area with the added provisions contained in the Conservation Easement was made by the applicant in response to the staff's concerns that the Town has encountered difficulty in the past policing the covenants and restrictions on other projects. The recording of Conservation Easement and the specific reference to the same in each deed along the bluff is intended to address concerns as well as give the Town additional rights to monitor the adherence to the covenants and restrictions.. the offer of encumbering the bluff area with the added provisions contained in the Conservation Easement was made by the applicant in response to the staff's concerns that the Town has encountered difficulty in the past policing the covenants and restrictions on other projects.*

Although reserve areas and restrictive easements are proposed by the applicant for protecting geological resources, significant impacts (direct and indirect, short and long-term) are expected with the action, particular in regard to potential hardening of the bluff and the subsequent effect to littoral drift and beaches southward. The Planning Board can incorporate all appropriate measures in its decision that may be necessary to minimize or avoid adverse impacts. This can include substantive conditions in order to ensure the requirements of Part 617 are satisfied (The SEQRA Handbook, NYSDEC, 1992). A wider buffer along the bluff, owned and managed by a

Homeowners Association offers greater protection to natural resources than that proposed in the applicant's preferred plan. Organizations holding common areas typically provide better monitoring and enforcement; improved protection of landscape and biological diversity and more efficient use of infrastructure. Further protection can be provided with review and approval of a stabilization plan for mitigating potential increased erosion of the bluff. Specific review, approval and conditions regarding any future hardening of the bluff would be conducted at the time of application for such construction by NYSDEC, pursuant to State Tidal Wetlands Law, Coastal Erosion Management Regulations and Town Marine Conservation Law.

WATER RESOURCES, FLOODING & SANITARY WASTEWATER CONSERNS

The property falls within the "coastal area" and "watershed" as established by the New York State Coastal Management program; the Coastal Hazard Erosion Area and Coastal Wetland Area. These areas are characterized by bluffs, coastal shoal and littoral zone. There is also a perched water table along the western portion of the site, approximately 45 feet below grade. Seeps observed along the bluff face are believed to be the result of these perched water conditions.

Contamination of water resources can occur due to runoff from lands that carry pathogens and dissolved inorganic matter. Input from septic systems, lawn fertilizers and pesticides and pathogens in soils can also degrade water quality and overall ecosystem health. The creation of a buffer area along the site's coastal frontage and the proper disposal of all stormwater runoff and sanitary effluent can mitigate impacts to water resources by bio-filtering contaminants. Studies of contaminants deposited on and adjacent to roadways, carried by stormwater to recharge basins indicate considerable attenuation of heavy metals before reaching the water table.

Urban non-point pollution (street runoff, lawn chemicals, etc.) is a significant source of contamination in the Long Island Sound watershed (**The Long Island Coastal Management Program**). To reduce the amount of overland runoff and impact to the Long Island Sound the Draft EIS prepared by the applicant states roadside catchbasins will be installed to direct runoff to the on-site recharge basin and lawn chemicals will be kept from running downslope westward onto and down the bluff by the intervening 100-foot buffer which will retain and slow down and recharge overland flow of runoff. However, the Final EIS states that due to the perched water table along western boundary, water recharged within 120 feet inland of the crest of the bluff can flow and discharge through the bluff face.

Sub-surface sewage disposal systems for single-family residences in Suffolk County must be constructed and conform with standards for the Suffolk County Department of Health Services of Section 760-502 of Article 5 and Section 760-710 of Article 7 of the Suffolk County Sanitary Code. Sewage disposal systems cannot be located in areas where groundwater conditions are not conducive to the proper disposal of wastewater. Systems must be at least 65 feet from bluffs and 3 feet above high seasonal groundwater. A typical leaching pool consisting of a three leaching sections, chimney and cover extends to a maximum depth of 25 feet below grade. Based on these requirements sanitary systems could be placed anywhere in the site, except within 65 feet from the bluffs. The FEIS states that the nearest septic system to the western border of the site lies approximately 230 feet inland of the bluff crest.

There is concern from residents regarding the location and need for a recharge basin at the site.

would preserve approximately an additional 15 percent of oak-tulip forest. Subsurface leaching pools can be constructed in right-of-ways, under roadways, sidewalks and grass, reducing the area and clearing required for storm water recharge. However, leaching pools are highly dependent upon soil conditions and regular maintenance to function properly (**Stormwater Management/Tidal Water Quality Remedial Study for Town of Huntington, Fanning, Phillips & Molnar, 1992**). Leaching pools are generally used only in small drainage areas of less than eight acres (**Town of Huntington Subdivision Regulations and Site Plan Specifications, A-101.2**). There was concern from the Village of Asharoken Planning Board regarding potential flooding and the need for proper stormwater controls. The Village's concern is addressed with the construction of the recharge basin in the northwest corner of the site. Town conforming catch basins will be piped to the basin collecting runoff from the roads and surrounding hillsides. All recharge basin locations will be designed to meet the Town's 50% storage capacity requirement since positive overflow to a Town roadway or storage facility is not provided. Regardless of the final location of the recharge basin any overflow will eventually flow through the Village of Asharoken or private property. As stated earlier, *the applicant* proposes the recharge basin as mitigation for runoff and catchment for pollutants that may be present in stormwater runoff.

The potential for site development to significantly impact the quality of water resources in the area through stormwater runoff and sanitary waste generation will in part be mitigated with minimum buffers of 120 feet from the crest of the bluff and conformance to Suffolk County Department of Health Services and Standards and Town of Huntington Subdivision Regulations and Site Plan Specifications.

TERRESTRIAL AND AQUATIC ECOLOGY

The DEIS indicates that approximately 55.8 percent or 11.48 acres of native oak-tulip forest and 675 large trees (≥10" diameter) will be removed from the site under the applicant's proposed development plan.

The project site is one of the last remaining, privately owned, undeveloped, high bluff property left in the Town of Huntington. The combination of the varied topography, rich soils and location along the Long Island Sound has produced a highly diverse habitat seen in few sites of this size in the Town.

Development will largely take place in the central portion of the site with most of the woodland habitat remaining along the eastern and western property boundaries. A tree survey utilizing two approximate 100'X100' plots was conducted to determine the average density of large diameter species within the site. It was determined that the site contains many large specimen trees, with some having a diameter of over 30" DBH (Diameter at Breast Height). Based on the two plots an average of 20.56" DBH was estimated across the site. It has been generally agreed by foresters that an approximate forest cover of 65 percent is the *minimum* necessary to provide the benefits associated with urban forest habitat (**Tree City USA, Bulletin No. 31**). Benefits derived from urban forest habitat include:

- Energy conservation through transpirational cooling, shade, and wind reduction,
- Sequestering of air pollutants,

- Filtering dust,
- Noise buffering,
- Storm-water attenuation,
- Provision of wildlife habitat,
- Increased property value,
- Improved aesthetics, and
- Psychological well-being.

The FEIS states that that it is possible to preserve additional vegetation by decreasing clearing limits, particularly where lots are aligned with adjoining rear-yard setbacks and the use of twenty-four foot wide pavement areas within the right-of-way. Currently, 30-40 foot clearing limits during construction are proposed along rear yards. It is likely that following construction, individual homeowners will clear more vegetation creating yards 50-60 feet deep. Unless permanent clearing restrictions are provided or larger reserve areas are created, these measures would not provide any long term benefit.

Concerns relative to the potential presence of State Protected Wildlife Species (i.e. piping plover, least tern, common tern, northern harrier, osprey, eastern hognose snake, worm snake, spotted salamander, short-eared owl, common nighthawk and barnowl) were identified in the DEIS. The DEIS indicates Endangered and Threatened Species are associated with the beach and aquatic habitats on the site, which will remain natural and therefore any direct impacts to these species are not expected. Indirect impacts from shoreline hardening would be addressed at the time application is made to NYSDEC. Significant impact to Species of Special Concern are not expected as there is suitable habitat elsewhere in the vicinity. The DEIS includes a April 6, 1999 letter from the New York State Department of Environmental Conservation indicating no known occurrences of endangered, threatened or special concern wildlife species of rare plants, animals or natural communities or habitats on the subject site.

The applicant's proposal provides some mitigation in the way of vegetative preservation. Maximizing preservation of existing vegetation would allow a greater number of wildlife species to survive construction impacts. It is expected that some wildlife species will either die off or move to other sites. The Grading and Drainage Plan prepared for the project should provide for as little clearing as possible and try to allow for an area of forest that is continuous with adjoining forested areas in order that wildlife not be impeded in its movement.

TRAFFIC AND TRANSPORTATION

Vehicle access will be provided off North Creek Road, a private 50-foot wide access easement at the subject site's eastern property boundary. Improvements to North Creek Road are proposed from the limit of Town of Huntington jurisdiction to 80 feet north (past) the proposed entrance to Old Orchard Woods (i.e. Apple Place). The approximately northerly 600' feet of 18" wide road along the site's frontage, beyond Apple Place is to remain unimproved. All improved roadways are planned to be built and dedicated to Town of Huntington. If requested, the applicant has indicated a willingness to improve North Creek Road along the entire frontage of the site.

The entire frontage of the subject site is on a private portion of North Creek Road which the applicant proposes to improve. Said private road provides access to homeowners that live distil to the proposed development. Before improvement or dedication can take place ownership of the road and agreement by all involved must be obtained.
Traffic analysis for the 22 dwellings in the DEIS indicated that the project will generate an increase in traffic volume (17 vehicle trips in the AM peak hour and 22 in the PM peak hour). No change in Level of Service is anticipated from the proposed project. Town engineers have expressed concern that a fully conforming road from Eatons Neck Road to the new entrance (Apple Place) cannot be built unless bond improvements required for Hogan Plat are installed.[1] The applicant is prepared to coordinate and cause the Hogan Plat bond improvements to be completed simultaneously with the completion of the improvements to the Old Orchard Woods subdivision.

Another traffic concern is the sight distance to the southwest at the North Creek Road intersection with Eaton's Neck Road is 159 feet which is less than adequate for the current 30 MPH speed limit. Although the proposed subdivision will not directly effect sight distance, there were concerns and the DEIS and Final EIS recommended mitigating conditions including undertaking limited vegetative clearing, installation of traffic signs; reducing the speed limit to 25 MPH in this portion of the roadway [subject to Town Board approval] and use of a curved mirror. Inasmuch as road clearing along Eaton's Neck Road is not within the subject subdivision and is quite a distance away from the subdivision, *the applicant may not be able to mitigate the site distance concern.*

CONSTRUCTION IMPACTS

There is concern regarding potential impacts to the community (traffic, noise, dust) during the construction phase of the project. Movement of fill from the site will require trucks to travel across North Creek and Eaton's Neck Roads. A minimum of 18,000 cubic yards and up to another 42,000 cubic yards of fill may be removed resulting in a total of approximately 1,200 truck trips within a relatively short period of time.

The Town of Huntington Code § 141-2 prohibits "any person, firm or corporation to make, continue or cause to be made any loud, unnecessary or unusual noise or any noise which either annoys, disturbs, injuries or endangers the comfort, repose, health, peace or safety of others within the Town of Huntington". This includes the erection (including excavation) of any building other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, except in case of emergency, and then only with a permit from the Director of the Department of Engineering, Building and Housing [§ 141-3(J)]. Further §156-8 of Town Code states "No person shall create or cause to be created a hazard and/or nuisance to the health, safety or general welfare of the people of the Town of Huntington by excavating, filling, removing vegetation or *leaving construction works* unattended when the condition is declared to be a hazard and/or nuisance by the Director of Engineering, Building and Housing of the Town of Huntington. **Town inspectors will be monitoring activities for ensuring Town Code and approved plans are implemented. Mitigation for the noise and truck traffic during regular construction hours can not be mitigated.**

[1] Town of Huntington. Engineering Review Division, Memorandum dated March 30, 2000

LAND USE, ZONING & PLANS

The subject site is currently in private ownership and zoned for R-20 residential use. The proposed project is consistent with current zoning.

The proposed action will result in the permanent foreclosure of a future recreational opportunity and a major reduction of an open space important to the community (impact to a property listed on the Town Open Space Index). The subject property is a designated Town open space index parcel that provides attributes such as physical and psychological relief from the built environment, diversity of visual experience, protection of natural resources and groundwater recharge that will be impacted by the proposed action.

Based on the September 1974 Open Space Index for the Town of Huntington, the 24.2 acre subject site is part of a larger 56.4 acre Town designated Open Space Index Parcel (OSI # NE-1) that includes the Morgan Estate and others. These properties are described in the index as woodland, forest and second-growth woodland with bay or beach frontage with steep slopes having erosion potential. The Index defines priorities for insuring that open space is given the same consideration as other factors in granting or denying permits. Of six possible levels that can be assigned, the subject property was defined as "Priority 1", which carries the most immediate need of consideration. Recommendations call for affirmative action to preserve the property or to conserve its open space value and natural features.

Eaton's Neck is limited in the amount of parkland that is available for public use. Other than beach areas with limited play equipment and boat ramps, there is no publicly-accessible recreational parkland. The subject site appears to be the only large holding remaining in the *unincorporated Town area* that might potentially serve such purpose. Even though the limited density of development on Eaton's Neck might be viewed as being in some way protective of open space resources, there is a real public need for park space.

The subject property contains a specific form of habitat that is not presently represented in the Town's parkland inventory—high bluff. While Geissler's Beach contains a small remnant (which was disturbed and greatly reduced during construction of the adjoining subdivision), this site could provide an opportunity to protect such a significant resource, a site to "curate" for public appreciation of the Town's biodiversity. The proposed preliminary plan which extends lot lines to the coast, through this critical area, in lieu of a commonly-held reserve area as shown on the earlier Map of Hogan Plat, may not serve its future stewardship in the most environmentally-sensitive manner. Covenants and restrictions have been difficult to enforce on developed/developing sites throughout the Town. Divisive ownership of this high bluff face would threaten the subject site's uniform management and preservation.

In the absence of public acquisition, an alternative that maximizes housing away from sensitive bluff habitat, owned and managed as common area will minimizes projected impacts to the maximum extent practicable.

COMMUNITY SERVICES

For the subject property, community services include school, police protection, fire protection, water supply, electricity and maintenance of Town roads and drainage facilities. The DEIS

indicated the proposed action will increase the population of Eaton's Neck by 94. This increase is not expected to have an significant impact on the demographic characteristics of the area or any of the service districts. **Adequate provision of services (including school drop-off and pick-up activities) is questionable. Because of the lack of a proposed through street school buses will have a difficult time navigating subdivision roads and it may be impossible for such larger vehicles to turn-around.**

A significant portion of North Creek Road is a narrow, 18 feet wide, dirt and gravel roadway. The project proposes to improve the road to Town standards to a distance of 80 feet north of the proposed entrance to the site. The remaining 600 feet along the site is shown to be unimproved and could limit access to drainage facilities and emergency vehicles to the community to the north. Although the action proposes the dedication of this 600 feet as a right-of-way to the Town for maintenance, without standard improvements the Town is not likely to accept dedication of the road. NYSL states a standard road must be 3 rods wide or 49.5 feet. It is customary and common practice of the Town to require a 50 foot wide right-of-way with 34 feet of pavement. Any less is not recommended for dedication.

CULTURAL RESOURCES

Cultural resources typically include historic, archaeological and visual resources. Important prehistoric and historic period resources were noted in and near Eaton's Neck. Due to the indicators of potential historic and prehistoric sensitivity of the property, the Department of Planning and Environment requested the applicant to prepare a Stage I Cultural Resources Assessment and a Stage IB field reconnaissance. However, no culturally significant recoveries were found as a result of the investigations.

Clearing of site vegetation and replacement with dwellings, roadway and lawn pose impacts to aesthetic qualities as viewed from the west and adjoining properties. Although, the proposed conservation easement and retention of peripheral buffers mitigates these impacts, potential clearing for water views remains a concern given the limited restrictions associated with the 100 setback from the bluff. Construction is prohibited, but clearing and replacement with lawn and landscaping may occur. **Maximum retention of natural vegetation will maintain views and vistas as well as improve stormwater recharge and reduce fertilizer and pesticide needs.**

ALTERNATIVES

The DEIS examined a range of four (4) alternatives development scenarios under the existing zoning requirements and which differ from the proposed action. The following provides a summary of each:

Alternative 1 - No Action

The site remains in its existing use and condition. If left undisturbed, the site will generate little traffic, solid waste or wastewater; it would use a minimal amount of potable water and would not generate employees or new residents. The site has been recommended for public purchase by the Town of Huntington EOSPA Committee. The applicant is aware of this recommendation and is open to entertaining offers for such a purchase. However, as of the date of this Findings Statement, neither the Owner nor the Applicant has been contacted by any Town, County or State agency.

Alternative 2 -The site is developed similar to the proposed project, but with front yard setbacks conforming to Town Code.
This alternative is almost identical to the proposed action, except dwelling units would be moved ten feet further to the rear of each lot. Generally, the same disturbance and overall site clearing would result. Impervious area would increase slightly with a proportionate decrease in landscaping due to longer driveways. There would also be a decreased level of protection to bluff resources as dwellings on the westerly lots would be moved ten feet closer to the west.

Alternative 3 - Relocated Recharge Basin
This alternative is similar to the proposed action, except the recharge basin is moved to the northeastern corner (lowest portion) of the site.

Alternative 4 - Development with Increased Open Space Preservation
This alternative is similar to Alternative 3, except the cul-de-sac at the southerly end of Peach Court has been eliminated and lots revised for providing additional open space.

CONCLUSIONS

Analysis of the draft and final EIS and comments received during the SEQRA process have shown that the proposed project will result in adverse environmental impacts. Adverse impacts include:

- Loss of open space and visual resources
- Removal of native oak-tulip forest.
- Permanent alteration of the natural topography.
- Displacement and/or loss of wildlife species.
- Erosion and off-site sedimentation.
- Increase in sanitary flows.
- The potential for future shoreline hardening of the bluff and subsequent loss in sand to beaches adjoining and downdrift of the site.
- Positive storm water overflow from the site to private properties in the Village of Asharoken.
- Stormwater flows from landscaped surfaces to Long Island Sound.
- Increase in vehicle trips to local roadways.
- Increase in the number of residents and demand for community services.
- Temporary increase in construction traffic, fugitive dust and noise during construction.
- Possible increase of traffic hazard at the intersection of North Creek and Eaton's Neck Roads.

The DEIS examined a range of development scenarios permissible under the existing zoning requirements and which differ from the specific development. The FEIS introduced two additional alternatives, known as alternatives 5 & 6, which were designed to address many of the concerns expressed in relation to the proposed development. These new alternatives, however were not compared and evaluated in the FEIS at the same level of detail as the four alternatives in the DEIS. Pursuant to 617.11(d) of SEQRA the Planning Board as lead agency has:
given consideration to the relevant environmental impacts, facts and conclusions disclosed in the EIS;
weighed and balanced the relevant environmental impacts with social, economic and other considerations;

- provided a rational for its decision;
- certified that the requirements of this Part have been met;
- that in the absence of a detailed evaluation of alternatives 5 & 6, the Planning Board has determined only the four alternatives in the DEIS will be considered, relative to the proposed action.

Although there remain impacts that can not be fully mitigated, short of the no-action alternative, and from among the development alternatives considered in the FEIS, Alternative 4 may be supported, incorporating as conditions to the decision the following mitigative measures (EIS-identified and verbally volunteered by the applicants attorney to the Planning Board at the Planning Board regular meeting of June 28, 2000):

1) No new structures including sanitary systems are to be located within 125-feet of the crest of the bluff. To keep the integrity of the lots this will require shifting the entire layout to the east, reducing the two (2) reserve areas proposed for dedication to the Town as parkland along North Creek Road. As a result this reserve area would not qualify as parkland under NYSTL and therefore shall be owned and maintained by the proposed Homeowners Association. All reserve and covenanted areas shall be common, owned and managed by the proposed Homeowners Association.
2) Implementation of Conditions 6, 7, 9, 10 11, 14c, & 16 of Suffolk County Planning Commission's Resolution of October 7, 1998 as listed in Suffolk County's Department of Planning's letter of the same date, attached and made a part hereto.
3) A limit of clearing during construction not to exceed 40 feet behind depicted building footprints.
4) Retaining walls in side and rear yards to minimize the removal of natural vegetation.
5) A stabilization plan for mitigating potential increased erosion of the bluff.
6) Lot widths of ±115 for lots south of Apple Place for maximizing forest cover and habitat.
7) A Grading and Drainage Plan shall be submitted with Conditional-Final application that locates all trees 16" in diameter and larger within construction limits, by type, size and condition. The map shall be designed to protect the critical root zones of specimen trees and stands of importance to the maximum extent practicable.
8) North Creek Road along the subject site's frontage and all interior subdivision roads shall be improved to Town standards. Road widths less than Town standards will be considered by the Planning Board upon submission and review of formal engineering drawings provided such improvements, including the proposed storm water collection system and recharge basin are privately owned and maintained by the Homeowners Association. Hogan Plat bond improvements shall be drawn against or paid for the applicant under the prior subdivision to insure a fully improved conforming improved roadway. All roads to be dedicated to the Town will be subject to comments by the Highway Superintendent.
9) Site distance concerns along Eaton's Neck Road shall be addressed to the satisfaction of the Town Highway Department.
10) The FEIS did not address the Town Board-adopted Principles of Smart Growth and Livability, which were adopted on October 5, 1999 after a DGEIS had been accepted by the Planning Board, a public hearing held (November 17, 1999), and the public comment period on the EIS. *Should the subdivision proceed, it is anticipated that the project will incorporate certain amenities that will facilitate pedestrian movement and provide special aesthetic*

design elements within the complex that will enhance its livability. It may result in a decrease in traffic generation compared to development as proposed. That the project is not fully consistent with the Town Board's policies to promote Smart Growth and Liveability is primarily attributable to site zoning and not the proposal. It is not a downtown or neighborhood center location, the more ideal target area for such new development. The existing separation of the site from a mix of uses essential to daily life of the residents (e.g., hops, services, and civic facilities reduces the project's potential to facilitate pedestrian accessibility or diminish automobile dependency.

11) During construction, the applicant shall provide dust control measures to mitigate air pollutant impacts to the surrounding community.
12) No construction vehicles (cars or trucks) shall be parked or stored on North Creek Road.
13) The developer will be required to install all sediment and erosion control measures and make sure that they are in place and functioning throughout the entire construction process.
14) A flagman will be stationed at the point of crossing at the intersection of North Creek and Eaton's Neck Roads during removal of fill for safety. Town road surfaces will be cleaned daily to remove tracked soil from truck movements. Any damage caused by construction traffic on local roads will be repaired at the applicant's expense.

Impacts that will be mitigated with Alternative 4 and the above conditions include:

- Loss of open space and visual resources as viewed from the west.
- Removal of native oak-tulip forest
- Permanent alteration of the natural topography.
- Displacement and/or loss of wildlife species.
- Erosion and off-site sedimentation
- Traffic (construction and post-construction)

Adverse impacts that cannot be avoided include:

- Increase in sanitary flows
- The potential for future shoreline hardening of the bluff and subsequent loss in sand to beaches adjoining and downdrift of the site.
- Positive storm water overflow from the site to private properties in the Village of Asharoken.
- Storm water flows from landscaped surfaces to Long Island Sound.
- Increase in vehicle trips to local roadways.
- Increase in the number of residents and demand for community services.
- Temporary increase in construction traffic, fugitive dust and noise during construction.

Appendix A-16
Town Planning Board Resolution

(July 12, 2000)

HUNTINGTON TOWN PLANNING BOARD

MEETING OF JULY 12, 2000

The following resolution was offered by W.G. ASHER

and seconded by M. CAPODANNO

WHEREAS, Madeleine Hogan, 307 Burns Street, Forest Hills, New York, 11375, owner of fee title to land and William Kollmer Contracting, 74 Dogwood Lane, Northport, New York, 11768 applicant under contract, have submitted a subdivision application for the Old Orchard Woods property, prepared by Nelson and Pope, LLP, and located on the northwest side of North Creek Road, 747.78 feet west of Eaton's Neck Road in Eatons Neck, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map, and

WHEREAS, said preliminary application was received on September 9, 1998, for the subdivision of a 24.21 acre property into twenty-two (22) lots, zoned R-20 Residential, and was classified a Type I Action; and

WHEREAS, the Planning Board having been established as Lead Agency per SEQRA section 617.6 has caused a review of the proposed subdivision to be made, pursuant to the New York State Environmental Conservation Law, Article 8, State Environmental Quality Review Act (SEQRA), and Part 617 of the implementation regulations (6 NYCRR 617), and has completed the review, including acceptance of a Final Environmental Impact Statement and has accepted written findings; and

WHEREAS, based on the adopted findings, the Planning Board concludes that if the subdivision is approved all mitigating measures and conditions stated in the findings are warranted pursuant to SEQRA 6 NYCRR 617.3(b) to diminish potential impacts to the existing environmental setting and future homeowners to the greatest extent practicable;

NOW THEREFORE BE IT

RESOLVED, that the Town of Huntington Planning Board hereby APPROVES/~~DECLINES TO APPROVE~~ the OLD ORCHARD WOODS SUBDIVISION APPLICATION, based on the Findings Statement adopted by the this Board in a previous resolution.

VOTE: 6 AYES: 4 NOES: 2 ABSTENTIONS: 0
ABSENT: T. EDWARDS L. SANTOIANNI
M. SOMMER

THE RESOLUTION WAS THEREUPON DECLARED DULY ADOPTED.

Appendix A-17
Town Board Resolution

(July 25, 2000)

2000-559

RESOLUTION SCHEDULING A PUBLIC HEARING TO CONSIDER ADOPTING LOCAL LAW INTRODUCTORY NUMBER 32 - 2000 AMENDING THE ZONING MAP AND HUNTINGTON TOWN CODE §198-7, AND IN ACCORDANCE WITH HUNTINGTON TOWN CODE §198-126 ET SEQ., CONSIDERING ZONE CHANGE #2000-ZM-329 TO CHANGE THE ZONE FROM R-20 TO R-80 ON THE TOWN BOARD'S OWN MOTION FOR PROPERTIES LOCATED ON NORTH CREEK ROAD, EATON'S NECK

Resolution for Town Board Meeting Dated: July 25, 2000

The following resolution was offered by Supervisor Petrone
Councilman Cuthbertson
COUNCILWOMAN SCARPATI-REILLY
COUNCILMAN ISRAEL

and seconded by COUNCILWOMAN BUDD

WHEREAS, the Town Board wishes to more fully consider potential rezoning from R-20 to R-80 Residence District properties located on the east and west sides of North Creek Road in Eaton's Neck, indicated as parcels 0400-001-02-001.002, 0400-001-02-004.1, and part of 0400-001-02-004.2 on the Suffolk County Tax Map, and

WHEREAS, all three of the subject parcels directly adjoin lands zoned R-80 Residence District, one being already zoned partially R-80, and rezoning of the properties would be consistent with the pattern of existing area zoning and development; and

WHEREAS, the Comprehensive Plan Summary Chapter states on page 6 that "the overall environmental planning goal for the town is to assure that additional growth and development are compatible with or enhance the town's natural resources" and in furtherance of this goal, the document recommends that certain strategies be pursued, including: "update zoning, design guidelines and other land use controls as a means of regulating the intensity and type of development in critical resource areas;" and

WHEREAS, the Environmental Conditions Section in the Comprehensive Plan states on page 3-13 that "there are a number of conditions that constrain development in the Town of Huntington; the constraints imposed by natural resources, which are relatively fixed, and those imposed by infrastructure, which are more easily modified " and the composite map of environmental constraints (figure 3-8) identifies the subject properties as containing severe constraints, and page 3-12 states that "development of these areas would create unavoidable adverse impacts;" and

WHEREAS, the Parks, Open Space and Historic Resources Section of the Comprehensive Plan states on page 7-17 that lands in need of planned protection generally include: (1) parcels with significant environmental qualities, particularly those needed for the protection and maintenance of groundwater recharge areas, wetlands, sensitive coastal areas, and wildlife habitats and (2) parcels with unique aesthetic, image and/or scenic qualities..." and the subject properties proposed for rezoning meet these criteria; and

WHEREAS, the Town Board finds that the proposed rezoning is consistent with the low-density residential classification recommended for the subject properties in the Comprehensive Plan, as well as with the other policy recommendations identified above; therefore, the proposed rezoning of the three subject properties from R-20 Residence District to R-80 Residence District has sufficient merit to schedule a public hearing on its own motion; and

WHEREAS, the Huntington Town Board, is Lead Agency for the purpose of complying with the New York State Environmental Quality Review Act (6 NYCRR 617.6(b)(1)) as the action does not involve another agency, and hereby determines that the proposed change of zone (2000-ZM-329) is classified an Unlisted action; and

WHEREAS, an Environmental Assessment Form (EAF), including a Planning Staff Study, must be prepared in connection with the action proposed on the Town Board's own motion (2000-ZM-329), and prior to any Town Board action on the rezoning, a determination of significance must be made, based on an environmental review that discusses potential impacts and the mitigation thereto pursuant to SEQRA; and

WHEREAS, while SEQRA recommends that review ensue in the earliest stages of consideration of an action, the scheduling of a public hearing is not an action as defined by 6 NYCRR 617.2(b) that may affect the environment directly as the decision to hold a public hearing in no way commits the Town Board to an approval of the requested rezoning, which determination shall follow the completion of the SEQRA review; consequently no review is required at this time;

NOW THEREFORE

BE IT RESOLVED, that the Director of the Department of Planning and Environment is hereby charged to prepare a full Environmental Assessment Form to meet the requirements for a SEQRA review, which considers the planning and environmental consequences of the proposed action, as well as any other planning studies that may be necessary; and

BE IT FURTHER RESOLVED, that the Town Board hereby schedules a public hearing for the 29 day of August, 2000, at 6 p.m. at Town Hall, 100 Main Street, Huntington, New York to consider adopting Local Law Introductory No. 32 -2000 amending the "Amended Zoning Map of the Town of Huntington, as referenced in Chapter 198 (Zoning) §198-7 of the Huntington Town Code, thereby rezoning from R-20 to R-80 the subject premises; as follows

BE IT ENACTED BY THE TOWN BOARD OF THE TOWN OF HUNTINGTON AS FOLLOWS:

LOCAL LAW INTRODUCTORY
NO. 32 - 2000
AMENDING THE CODE OF THE
TOWN OF HUNTINGTON
CHAPTER 198 (ZONING)

2000-559

Section 1. Amendment to Chapter 198 (Zoning) TO READ AS FOLLOWS:

§ 198-7 Zoning Map
The boundaries of the districts enumerated in § 198-6 of this Chapter are hereby established as shown on the map designated as the "Amended Building Zone Map of the Town of Huntington." The said map, together with all notations, references and every other detail shown thereon shall be as much a part of this chapter as if the map and every other detail shown thereon was fully described therein. Section-55 contains symbols on the map for the aforesaid districts.

All the premises located east and west sides of North Creek Road in Eaton's Neck, presently zoned R-20 Residence District, designated as parcels 0400-001-02-001.002, 0400-001-02-004.1, and part of 0400-001-02-004.2 on the Suffolk County Tax Map, containing approximately 32.5 acres.

Section 2. Severability

If any clause, sentence paragraph, subdivision, section or other part of this Local Law shall for any reason be adjudged by any court of competent jurisdiction to be unconstitutional or otherwise invalid, such judgment shall not affect, impair, or invalidate the remainder of this local law, and it shall be construed to have been the legislative intent to enact this local law without such unconstitutional or invalid parts therein.

Section 3. Effective Date

This Local Law shall take effect immediately upon filing in the Offices of the Secretary of State of New York.

VOTE: AYES: 5 NOES: 0 ABSTENTIONS: 0

Supervisor Frank P. Petrone	AYE
Councilwoman Marlene L. Budd	AYE
Councilman Mark A. Cuthbertson	AYE
Councilman Steve J. Israel	AYE
Councilwoman Susan J. Scarpati-Reilly	AYE

THE RESOLUTION WAS THEREUPON DECLARED DULY ADOPTED.

Appendix A-18
Town Board Resolution

(October 10, 2000)

2000-757

ENACTMENT: ADOPT.
LOCAL LAW INTRODUCTORY NUMBER 32-2000 AMENDING THE ZONING MAP AND HUNTINGTON TOWN CODE §198-7, PURSUANT TO ZONE CHANGE APPLICATION #2000-ZM-329 TO CHANGE THE ZONE FROM R-20 TO R-80 ON THE TOWN BOARD'S OWN MOTION FOR PROPERTIES ON NORTH CREEK ROAD IN EATON'S NECK

Resolution for Town Board Meeting Dated: October 10, 2000

The following resolution was offered by SUPERVISOR PETRONE
COUNCILMAN CUTHBERTSON
COUNCILWOMAN SCARPATI-REILLY

and seconded by: COUNCILWOMAN BUDD

WHEREAS, the Town Board held a public hearing on August 29, 2000 to consider potential rezoning on their own motion from R-20 to R-80 Residence District properties located on the east and west sides of North Creek Road in Eaton's Neck, indicated as parcels 0400-001-02-001.002, 0400-001-02-004.1, and part of 0400-001-02-004.2 on the Suffolk County Tax Map, and

WHEREAS, the Town Board having been established as Lead Agency per SEQRA section 617.6 has caused a review of the proposed rezoning to be made, pursuant to the New York State Environmental Conservation Law, Article 8, State Environmental Quality Review Act (SEQRA), and Part 617 of the implementation regulations (6 NYCRR 617), and

WHEREAS, a full Environmental Assessment Form (EAF) has been prepared in connection with the action proposed on the Town Board's own motion (00-ZM-329), dated September 26, 2000, which provides planning and zoning analyses and evaluates consistency with local, state and federal comprehensive plans;

NOW THEREFORE, upon due deliberation of the completed Environmental Assessment Form on file in the offices of the Town Clerk and the Planning Department, the Town Board determines the action will not have a significant effect upon the environment because the rezoning action will diminish potential impacts to sensitive natural resources and protect community; additionally, any subdivision resulting therefrom will require its own determination of significance, following SEQR assessment of the specific project's environmental consequences,

THE TOWN BOARD HEREBY, Issues a Negative Declaration based on the full EAF and finds that the requirements for a SEQRA review have been met; and

HEREBY ADOPTS:

Local Law Introductory No. 32-2000, as follows:

BE IT ENACTED BY THE TOWN BOARD OF THE TOWN OF HUNTINGTON AS FOLLOWS:

LOCAL LAW
NO. 29 -2000

AMENDING THE CODE OF THE
TOWN OF HUNTINGTON
CHAPTER 198 (ZONING)

Section 1. Amendment to Chapter 198 (Zoning) TO READ AS FOLLOWS:

§ 198-7 Zoning Map
The boundaries of the districts enumerated in § 198-6 of this Chapter are hereby established as shown on the map designated as the "Amended Building Zone Map of the Town of Huntington." The said map, together with all notations, references and every other detail shown thereon shall be as much a part of this chapter as if the map and every other detail shown thereon was fully described therein. Section-55 contains symbols on the map for the aforesaid districts.

All the premises to be rezoned from R-20 to R-80 located east and west sides of North Creek Road in Eaton's Neck, presently zoned R-20 Residence District, designated as parcels 0400-001-02-001.002, 0400-001-02-004.1, and part of 0400-001-02-004.2 on the Suffolk County Tax Map, containing approximately 32.5 acres.

Section 2. Severability

If any clause, sentence paragraph, subdivision, section or other part of this Local Law shall for any reason be adjudged by any court of competent jurisdiction to be unconstitutional or otherwise invalid, such judgment shall not affect, impair, or invalidate the remainder of this local law, and it shall be construed to have been the legislative intent to enact this local law without such unconstitutional or invalid parts therein.

Section 3. Effective Date

This Local Law shall take effect immediately upon filing in the Offices of the Secretary of State of New York.

VOTE: AYES: 5 NOES: 0 ABSTENTIONS: 0

Supervisor Frank P. Petrone	AYE
Councilwoman Marlene L. Budd	AYE
Councilman Mark A. Cuthbertson	AYE
Councilman Steve J. Israel	AYE
Councilwoman Susan J. Scarpati-Reilly	AYE

THE RESOLUTION WAS THEREUPON DECLARED DULY ADOPTED.

Appendix A-19

US Army Corps of Engineers Letter

(May 25, 1999)

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

May 25, 1999

REPLY TO
ATTENTION OF
Eastern Permits Section

SUBJECT: Application No. 1999-06460-L4 by Madeleine Hogan

Madeleine Hogan
c/o Steven J. McGinn
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747

Dear Ms. Hogan:

On May 24, 1999, the New York District, U.S. Army Corps of Engineers, received a request for Department of the Army authorization to perform work associated with a 22-lot residential subdivision to be known as Old Orchard Woods. All work would occur atop an existing bluff, landward of the spring high tide line of Long Island Sound located at Eatons Neck, Town of Huntington, Suffolk County, New York.

Our review indicates that the proposed work does not appear to include dredging or construction activities in or over any navigable waters of the United States, the placement of any dredged or fill material in any waters of the United States (including coastal or inland wetlands) or the accomplishment of any work affecting the course, location, condition or capacity of such areas. Therefore, a Department of the Army permit will not be required.

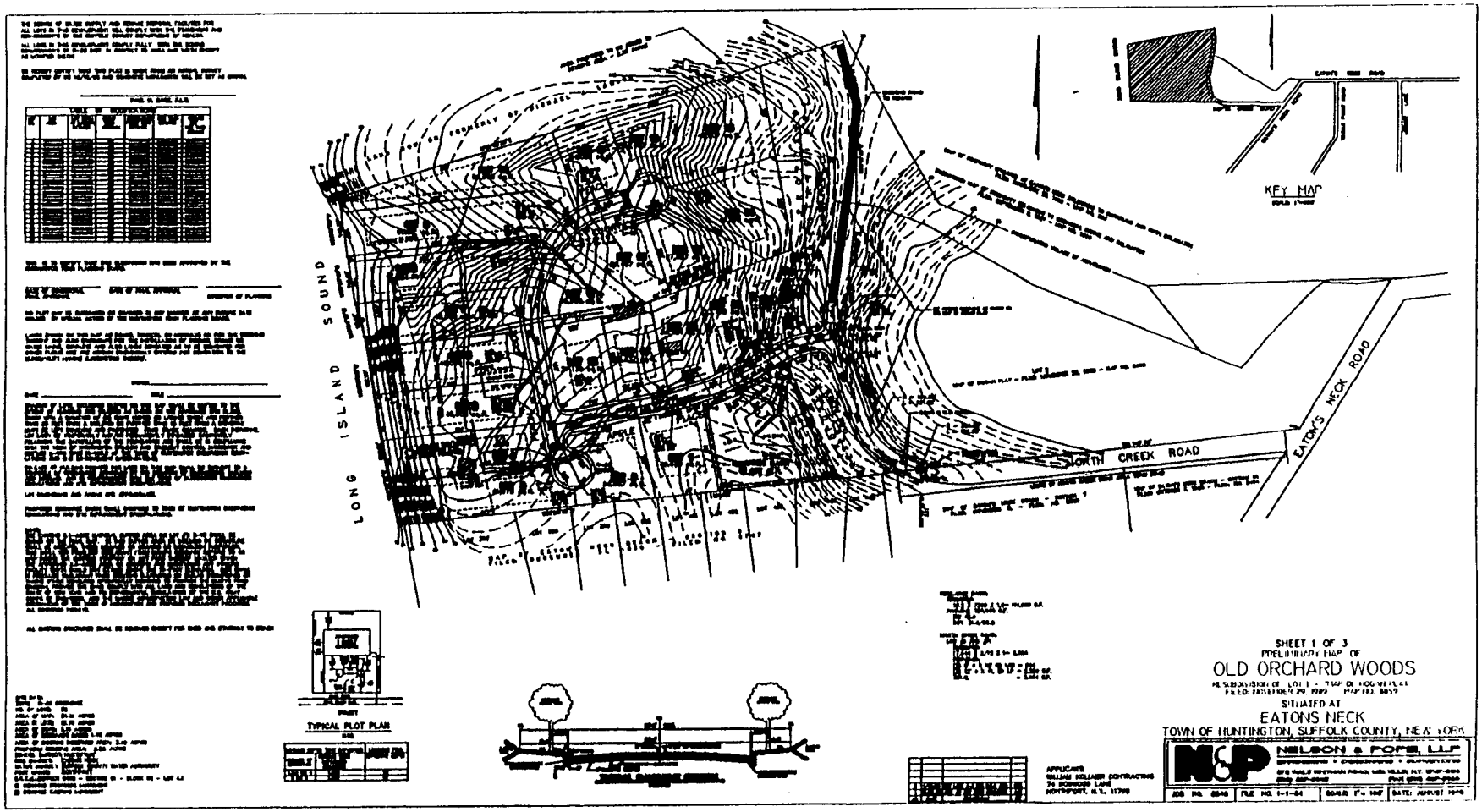
Care should be taken so that any fill or construction materials, including debris, do not enter the waterway to become a drift or pollution hazard.

If any questions should arise concerning this matter, please contact Denise Butts, of my staff, at (212) 264-3913.

Sincerely,

James W. Haggerty
Chief, Eastern Permits Section

Enclosure


LONG ISLAND SOUND
NORTH CREEK ROAD
EATON'S NECK ROAD
KEY MAP
TYPICAL PLOT PLAN
SHEET 1 OF 3
PRELIMINARY MAP OF
OLD ORCHARD WOODS
SITUATED AT
EATONS NECK
TOWN OF HUNTINGTON, SUFFOLK COUNTY, NEW YORK
NELSON & POPE, LLP

Page 1 of 1

Appendix A-20
NYSDEC Tidal Wetlands Permit

New York State Department of Environmental Conservation

Notice of Incomplete Application - This is NOT a Permit

Applicant MADELEINE HOGAN
307 BURNS ST
FLUSHING NY 11375

Facility HOGAN PROPERTY
NORTH CREEK RD, EATON'S RD
11768 NY

Owner ID 1354903

Batch Number 416019

Application ID 1-4726-01219/00001

Permit(s) Applied 1 • ARTICLE 25: TIDAL WETLANDS

Project is located in HUNTINGTON IN SUFFOLK COUNTY.

Your application for Permit is incomplete, the following items are required:

- It has been determined pursuant to the State Environmental Quality Review Act (SEQR) that the project may have a significant effect on the environment. A draft environmental impact statement must be prepared and accepted by the Lead Agency.

Additional Information:

ENCLOSED PLEASE FIND A COPY OF THE OPRHP LETTER STATING THEIR OPINION THAT YOUR PROJECT WIL HAVE NO IMPACT UPON CULTURAL RESOURCES.

Please submit requested information by .
No further action can be taken until all of these materials are received.

Contact Person:
KEVIN A KISPERT
NYS Dept of Environmental Conservation
Division of Environmental Permits
Region 1 NYSDEC REGION 1 HEADQUARTERS
SUNY @ STONY BROOK BUILDING 40
STONY BROOK 11790-2356

Signature: _____

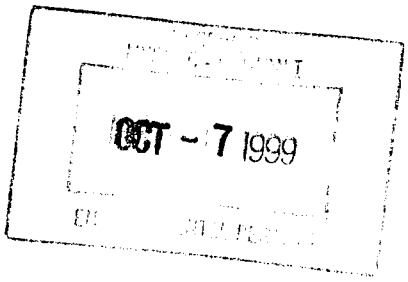
Date: OCTOBER 07, 1999

Telephone Number: (516) 444-0365

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643

September 30, 1999



Kevin Kispert
NYS Department of Environmental Conservation
Bldg. 40, SUNY
Stony Brook, New York 11790-2356

Dear Mr. Kispert:

Re: CORPS/DEC 1-4726-01219/00001
Hogan Property/Old Orchard Woods Subdivision
Eatons Neck
Huntington, Suffolk County
99PR2440

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Based upon this review, it is the OPRHP's opinion that your project will have No Impact upon cultural resources in or eligible for inclusion in the State and National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont
Director

RLP:bsd

New York State Department of Environmental Conservation
Division of Environmental Permits, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0365 • FAX: (631) 444-0360
Website: www.dec.state.ny.us

October 27, 2000

Ms. Madeleine Hogan
307 Burns Street
Forest Hills, NY 11375

RE: 1-4726-01219/00001

Dear Permittee:

In conformance with the requirements of the State Uniform Procedures Act (Article 70, ECL) and its implementing regulations (6NYCRR, Part 621) we are enclosing your permit. Please read all conditions carefully. If you are unable to comply with any conditions, please contact us at the above address.

Also enclosed is a permit sign which is to be conspicuously posted at the project site and protected from the weather.

Very truly yours,

Darleen M. Gerbino
Environmental Analsyt

DMG/ls
Enclosure

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER 1-4726-01219/00001	PERMIT Under the Environmental Conservation Law	EFFECTIVE DATE October 27, 2000
FACILITY/PROGRAM NUMBER(S)		EXPIRATION DATE(S) October 27, 2005

TYPE OF PERMIT ■ New ☐ Renewal ☐ Modification ☐ Permit to Construct ☐ Permit to Operate

- ☐ Article 15, Title 5: Protection of Waters
- ☐ Article 15, Title 15: Water Supply
- ☐ Article 15, Title 15: Water Transport
- ☐ Article 15, Title 15: Long Island Wells
- ☐ Article 15, Title 27: Wild, Scenic and Recreational Rivers
- ☐ 6NYCRR 608: Water Quality Certification
- ☐ Article 17, Titles 7, 8: SPDES
- ☐ Article 19: Air Pollution Control
- ☐ Article 23, Title 27: Mined Land Reclamation
- ☐ Article 24: Freshwater Wetlands
- ■ Article 25: Tidal Wetlands
- ☐ Article 27, Title 7; 6NYCRR 360: Solid Waste Management
- ☐ Article 27, Title 9; 6NYCRR 373: Hazardous Waste Management
- ☐ Article 34: Coastal Erosion Management
- ☐ Article 36: Floodplain Management
- ☐ Articles 1, 3, 17, 19, 27, 37; 6NYCRR 380: Radiation Control

PERMIT ISSUED TO	TELEPHONE NUMBER
Madeleine Hogan	
ADDRESS OF PERMITTEE	
307 Burns Street, Forest Hills, NY 11375	
CONTACT PERSON FOR PERMITTED WORK	TELEPHONE NUMBER
Shana Lacay, Nelson, Pope & Voorhis, LLC, 572 Walt Whitman Road, Melville, NY 11747-2188	(516) 427-5665
NAME AND ADDRESS OF PROJECT/FACILITY	
Hogan property, North Creek Road	
LOCATION OF PROJECT/FACILITY	
Northport	

COUNTY	TOWN	WATERCOURSE	NYTM COORDINATES
Suffolk	Huntington	Long Island Sound	

DESCRIPTION OF AUTHORIZED ACTIVITY:

Subdivide a 24.21 acre parcel into 22 residential lots. The property landward of the topographic crest of the bluff greater than 10 ft. in elevation, as shown on "Plate 3/Alternative 5 – Alternate Layout of Old Orchards Woods" prepared by Nelson & Pope, LLP last revised on 8/20/99, is beyond Article 25 jurisdiction. All work is to be done in accordance with the attached plans stamped NYSDEC approved.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (see page 2 & 3) and any Special conditions included as part of this permit.

PERMIT ADMINISTRATOR:	ADDRESS	
George W. Hammarth (DMG)	Bldg. #40, SUNY, Stony Brook, NY 11790-2356	
AUTHORIZED SIGNATURE George W. Hammarth	DATE October 27, 2000	

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, agents, and assigns for all claims, suits, actions, damages, and costs of every name and description, arising out of or resulting from the permittee's undertaking of activities or operation and maintenance of the facility or facilities authorized by the permit in compliance or non-compliance with the terms and conditions of the permit.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

GENERAL CONDITIONS

General Condition 1: Facility Inspection by the Department

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

General Condition 2: Relationship of this Permit to Other Department Orders and Determinations

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

General Condition 3: Applications for Permit Renewals or Modifications

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

The permittee must submit a renewal application at least:

a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities (HWMF), major Air Pollution Control (APC) and Solid Waste Management Facilities (SWMF); and

b) 30 days before expiration of all other permit types.

Submission of applications for permit renewal or modification are to be submitted to:

NYSDEC Regional Permit Administrator, Region 1, SUNY Bldg #40, Stony Brook, NY 11790-2356

General Condition 4: Permit Modifications, Suspensions and Revocations by the Department

The Department reserves the right to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a) the scope of the permitted activity is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations is found;

b) the permit was obtained by misrepresentation or failure to disclose relevant facts;

c) new material information is discovered; or

d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

ADDITIONAL GENERAL CONDITIONS FOR ARTICLES 15 (TITLE 5), 24, 25, 34 AND 6NYCRR PART 608

(TIDAL WETLANDS)

1. If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

2. The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

3. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, U.S. Coast Guard, New York State Office of General Services or local government which may be required.

4. All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

5. Any material dredged in the conduct of the work herein permitted shall be removed evenly, without leaving large refuse piles, ridges across the bed of a waterway or floodplain or deep holes that may have a tendency to cause damage to navigable channels or to the banks of a waterway.

6. There shall be no unreasonable interference with navigation by the work herein authorized.

7. If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

8. If granted under 6NYCRR Part 608, the NYS Department of Environmental Conservation hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306 and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.

9. At least 48 hours prior to commencement of the project, the permittee and contractor shall sign and return the top portion of the enclosed notification form certifying that they are fully aware of and understand all terms and conditions of this permit. Within 30 days of completion of project, the bottom portion of the form must also be signed and returned, along with photographs of the completed work and, if required, a survey.

10. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or his agent as part of the permit application.

    Such approved plans were prepared by: Nelson & Pope, LLP last revised 8/20/99

SPECIAL CONDITIONS

1. There shall be no principal structures constructed seaward of the crest of the bluff.

2. There shall be no alteration to the topography or vegetation seaward of the crest of the bluff.

3. Any construction seaward of the crest of the bluff on lots 5 through 12 will require an Article 25, Tidal Wetlands permit.

4. There shall be no discharge of runoff or other effluent on, in or down the bluff face or onto the beach.

5. The storage of construction equipment and materials shall be confined to upland areas landward of the crest of the bluff or hill.

6. The permittee shall incorporate the following language as a notice covenant to the deed of lots 5 through 12:

"Regulated tidal wetlands associated with the Long Island Sound are located at North Creek Road, Northport, County Tax Map Number: District , Section , Block , Lot , otherwise known as the properties of Madeleine Hogan and her heirs, assigns, or successors. This property is subject to the provisions of New York State Environmental Conservation Law (ECL) Article 25 or its successor, and the conduct of regulated activities may occur only pursuant to ECL Article 25 if prior approval is given by the New York State Department of Environmental Conservation (NYSDEC) or its successor. Regulated activities include, but are not limited to the erection of any structure(s); excavation; dredging grading and filling; clearing of vegetation; and application of chemicals."

This deed covenant shall be recorded with the Clerk of Suffolk County within 90 days of the issuance of this permit. A copy of the covenanted deed or other acceptable proof of record, along with the number assigned to this permit, shall be sent within one calendar year of the issuance of this permit to: NYSDEC, Regional Manager, Bureau of Habitat, SUNY Building 40, Stony Brook, New York 11790-2356.

APPENDIX B

GEOLOGY-RELATED DOCUMENTS

Appendix B-1

"A Review of Coastal Processes at the Old Orchard Woods Property"

First Coastal Corporation

(February 4, 2000)

FIRST Coastal

Thursday, February 17, 2000

Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747-2188

RE: Old Orchard Woods
Eaton's Neck, Town of Huntington

Gentlemen:

I am a Coastal Geologist with 20 years experience studying and practicing on the north and south shores of Long Island. I have a Master of Science from the University of Delaware and have published numerous technical papers describing coastal processes, coastal geology, shoreline protection and restoration, environmental management, and environmental regulations. I have appeared and presented expert testimony to both Village and Town Boards, Zoning Boards of Appeals, Planning Boards, and Conservation Boards throughout Long Island.

I have presented expert testimony on these subjects in both New York State and Federal Court. I am a member of many professional and technical peer societies, including American Shore and Beach Preservation Association and the Coastal Education Research Foundation. I am on the Board of Directors of several professional societies, including the Northeast Shore and Beach Preservation Association.

I reside and work in Westhampton Beach, New York and am a lifelong resident of Long Island. My curriculum vitae is attached for reference.

I have reviewed the physical site known as Old Orchard Woods and reviewed pertinent technical literature. I conclude the following based on my professional training and experience:

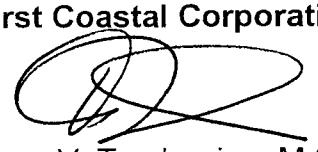
A. The proposed building setbacks exceed the requirements of Local and State Law and are more protective than required.

First Coastal Corporation
P.O. Box 1312 • Westhampton Beach, NY 11978
Voice: (516) 288-1579
FAX: (516) 288-1584
E-Mail: mail@firstcoastal.net
Website: www.firstcoastal.net

B. The littoral drift is from north to south and the subject site is in littoral cell #2 of 3 littoral cells. The primary beach sediment source is from dredging of the boat basin and the bluffs supply little compatible sediment. The littoral cells are segregated and have little impact on adjacent cells.

C. The shoreline is protected by numerous and varied shoreline protection structures, including substantial structures on the subject parcel. The maintenance and enhancement of shoreline protection structures at the subject site would have little, if any, impact on the beach.

Sincerely,
First Coastal Corporation



Aram V. Terchunian, M.Sc.
Coastal Geologist

AVTsls

enclosure

2-3-00NelsonPope.wpa

ARAM V. TERCHUNIAN, M. Sc.
Curriculum Vitae

Areas of Expertise

* Geomorphology, coastal processes, and erosion analysis
* Coastal hazard area policy analysis and coastal hazard area management
* Project permitting and erosion control construction
* Environmental science and resource management
* Endangered species monitoring

Experience

* 1990 to Present, First Coastal Corporation - **President**

Responsible for all aspects of the firms consulting and construction services for coastal property owners, municipalities, and associations.

* 1988 to 1990 Coastal Stabilization, Inc. - **Regional Manager of Development** -Market development and technical sales for the development of a proprietary beach stabilization product. Prepared and executed marketing strategy, prepared and presented technical results at national and international conferences, and presented proposals and RFP responses to local, State, and Federal agencies.

* 1984 to 1988, New York State, Department of State, Division of Coastal Resources - **Coastal Hazards Supervisor** Responsible for review and recommendations for improvement of existing coastal hazard area management programs in New York State, including coastal erosion hazard areas, flood protection, and disaster relief. Represented the Secretary of State in post coastal disaster survey, assessment, and evaluation teams. Reviewed erosion control and coastal area development actions within coastal hazards areas in New York's coastal zone.

* 1982 to 1983, University of Delaware and Ecuadorean Remote Sensing Agency

Technical Advisor Instructed Ecuadorean nationals in the use of remote sensing techniques for natural resources mapping including mangroves, coastal erosion, sea surface temperatures, and Amazon land use changes. Prepared grant application for Space Shuttle Imaging Radar mission.

Education

* M. Sc. Marine Studies (Coastal Geology), University of Delaware, 1984
M. Sc. Thesis: Hen and Chickens Shoal, Delaware: Evolution of a Modern Tidal Shoal

* B. S. Environmental Science and Resource Management (Geology), Lehigh University, 1980

Publications

* Terchunian, A.V., and J.A. Smith, 1998, An Economic Snapshop of Long Island's Barrier Island System, Shore and Beach, October 1998, V66, No. 4, pp 9-11.

* Spencer, R., and Terchunian, A.V., 1997, The Sand Theives of Long Island's South Shore, Shore and Beach, July 1997, V65, No. 3, pp 4-12.

* Terchunian, A.V., and C.L. Merkert, 1995, Little Pikes Inlet, Westhampton, New York, Journal of Coastal Research, V 11, n 3, pp 697-703.

* Terchunian, A. V., 1990, Performance of Beachface Dewatering: The STABEACH System at Sailfish Point (Stuart), Florida, In Proceedings of the 1990 Conference on Beach Preservation Technology, St. Petersburg, FL.

* Ball, Sally, F., P. R. Lanza, and A. V. Terchunian, 1989, Coastal Hazard Area Management in New York State, in Proceedings of Coastal Zone '89, Charleston, South Carolina, pp. 4749 - 4760.

* Terchunian, A. V., 1988, Can Seawalls and Beaches Coexist?, in Journal of Coastal Research, Special Issue 4, Autumn, 1988 Kraus, N. and O. H. Pilkey (eds.)

* Terchunian, A. V., and C. H. Fletcher, III, 1984, Current and Shoreline Effects of Shore Perpendicular Structures, in Proceedings of the 10th Annual Coastal Society Conference, Atlantic City, NJ

* Terchunian, A. V., V. Klemas, A. Alverez, B, Vasconez, and L. Guerrero, 1984, The Effect of Shrimp Pond Development on Mangroves, In Environmental Management, v10 n3 .

Professional Affiliations

American Shore and Beach Preservation Association, Member
American Littoral Society, Member
Association of State Floodplain Managers, Member
Coastal Education Research Foundation, Member
Florida Oceanographic Society, Member
Florida Shore and Beach Preservation Association, Member
Group for the South Fork, Member
Long Island Coastal Alliance, Member
Long Island Shore and Beach Preservation Association, President
Northeast Shore and Beach Preservation Association, Board of Directors
Peconic Land Trust, Member
Surfrider Foundation, Member
The Coastal Society, Member
The Nature Conservancy, Member
The Cousteau Society, Member

A Review of Coastal Processes at the Old Orchard Woods Property Eaton's Neck, Town of Huntington Suffolk County, New York

Prepared by
Aram V. Terchunian, M.Sc.
Coastal Geologist
First Coastal Corporation
P.O. Box 1212
Westhampton Beach, New York

Prepared for
William Kollmer Contracting Ltd.
74 Dogwood Lane
Fort Salonga, NY 11768

February 4, 2000

TABLE OF CONTENTS

1. Location and Scope of Report

The project site is a sub-division located on the west side of Eaton's Neck in the Town of Huntington, Suffolk County, New York (see Figure 1). The subject shoreline consists of a sand and gravel beach backed by a bluff system and contains several different existing shoreline protection devices.

The scope of this analysis is to 1) evaluate the project in light of the prevailing coastal erosion management regulations, 2) review the general coastal processes of the subject site, 3) review the potential shoreline protection options and impacts, and 4) offer a professional opinion on the impact of the proposed development on the coastal processes. A number of readily available scientific and geological studies were used as reference in this analysis and a site inspection was conducted on January 20, 2000. Moreover, a series of aerial photographs, a site survey, and other technical documentation was utilized in the review process.

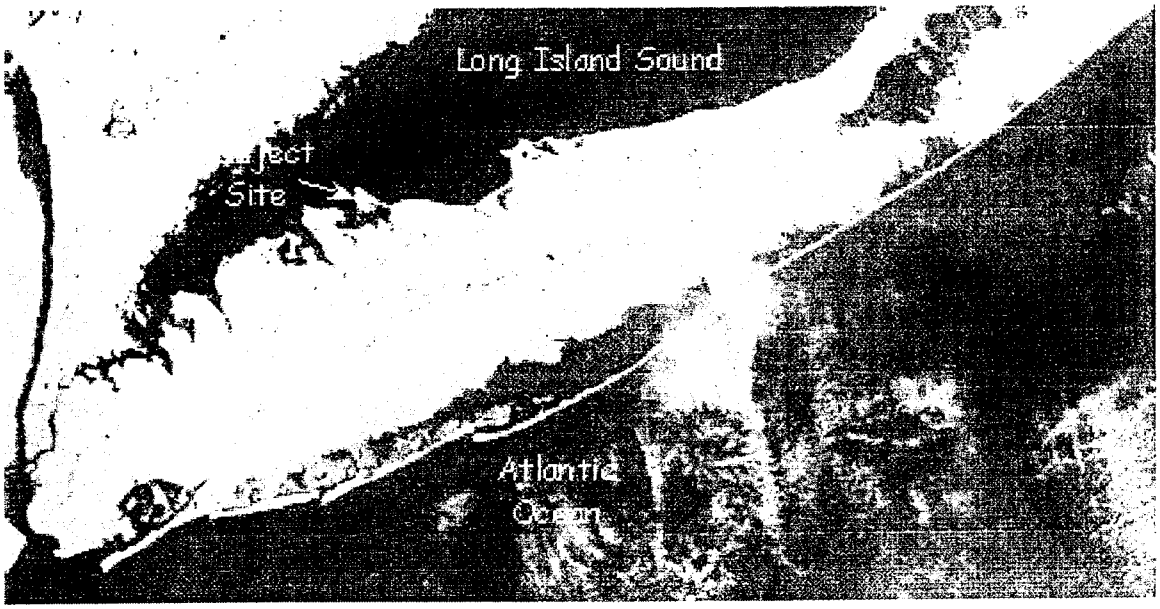


Figure 1: Location Map of the Old Orchard Woods Site

2. Coastal Erosion Regulatory Evaluation

The project site was evaluated for compliance with Article 34 of Environmental Conservation Law (The Coastal Erosion Law) and it's local implementing legislation. The Town of Huntington implements Article 34 through Local Law No. 7-1989 (Coastal Erosion Management Regulations) through local home rule. Pursuant to LL#7-1989, the Town of Huntington has established a "natural protective feature" on the subject property, under Section 2.1 of LL#7-1989. Specifically, the Town adopted the boundaries on the final map prepared by the NYSDEC under Section 34-0104, including Map 2 of 5 containing the subject parcel (Figure 2).

A review of the map shows the prevailing Coastal Erosion Line to be approximately 30 feet seaward of the most seaward building existing on the subject site. By comparison, the owner has proposed a building setback approximately 80 feet landward of the prevailing required coastal erosion setback under LL#7-1989. In other words, the proposed building setback line by the owner is more protective of the bluff and Natural Protective Feature than required by Local or State Law. Accordingly, I concur that the proposed activity exceeds the required standard and is more protective of the bluff.

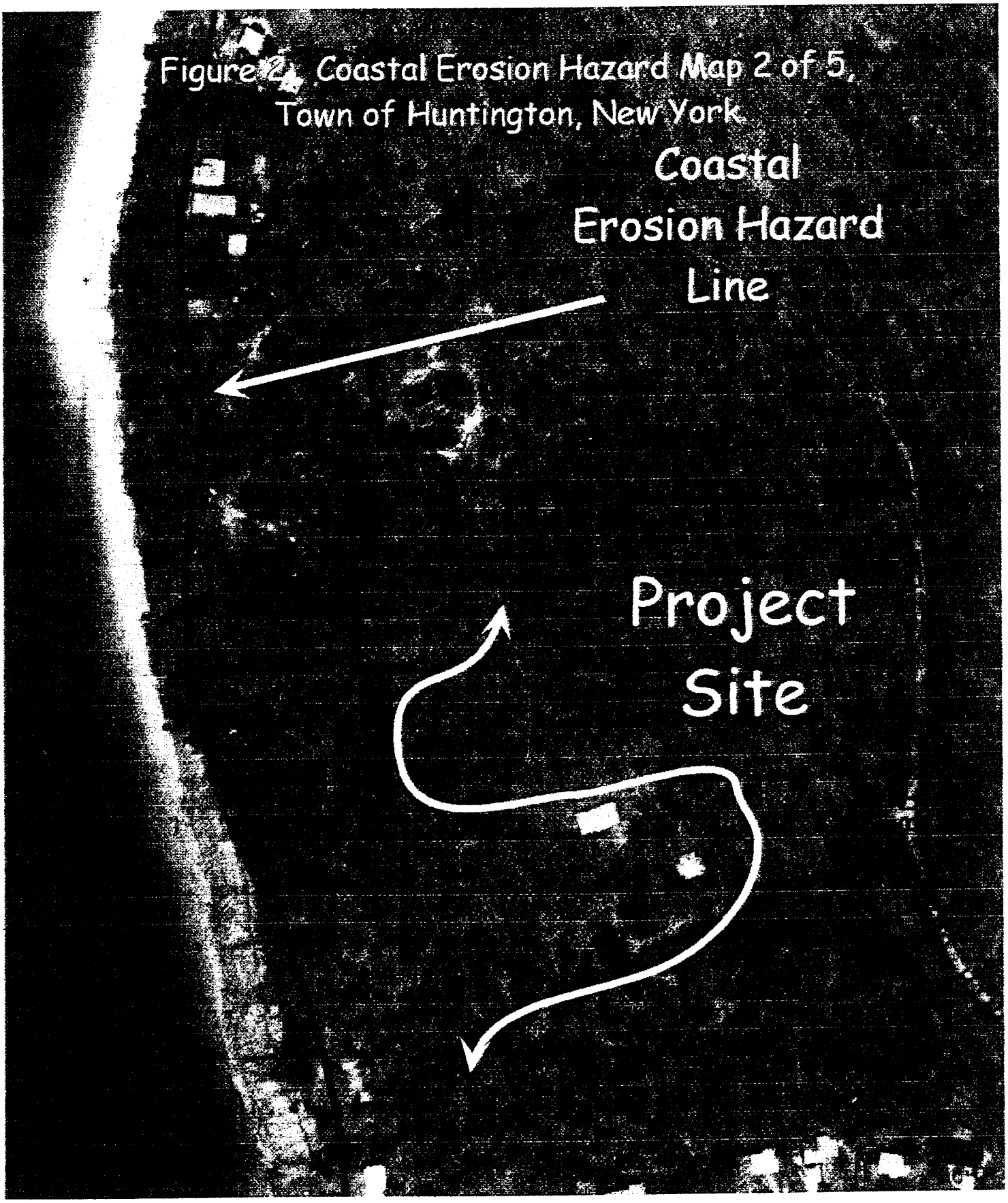


Figure 2. Coastal Erosion Hazard Map 2 of 5, Town of Huntington, New York

3. Regional and Local Coastal Processes and Sediment Budget

The regional sediment budget for the west side of Eaton's Neck can be divided into three compartments, including:

1. Eaton's Neck Point to the Eaton's Neck Boat Basin Inlet.
2. Eaton's Neck Boat Basin Inlet south to Argyle/Birmingham Drive.
3. Argyle/Birmingham Drive south to the end of the spit at West Beach.

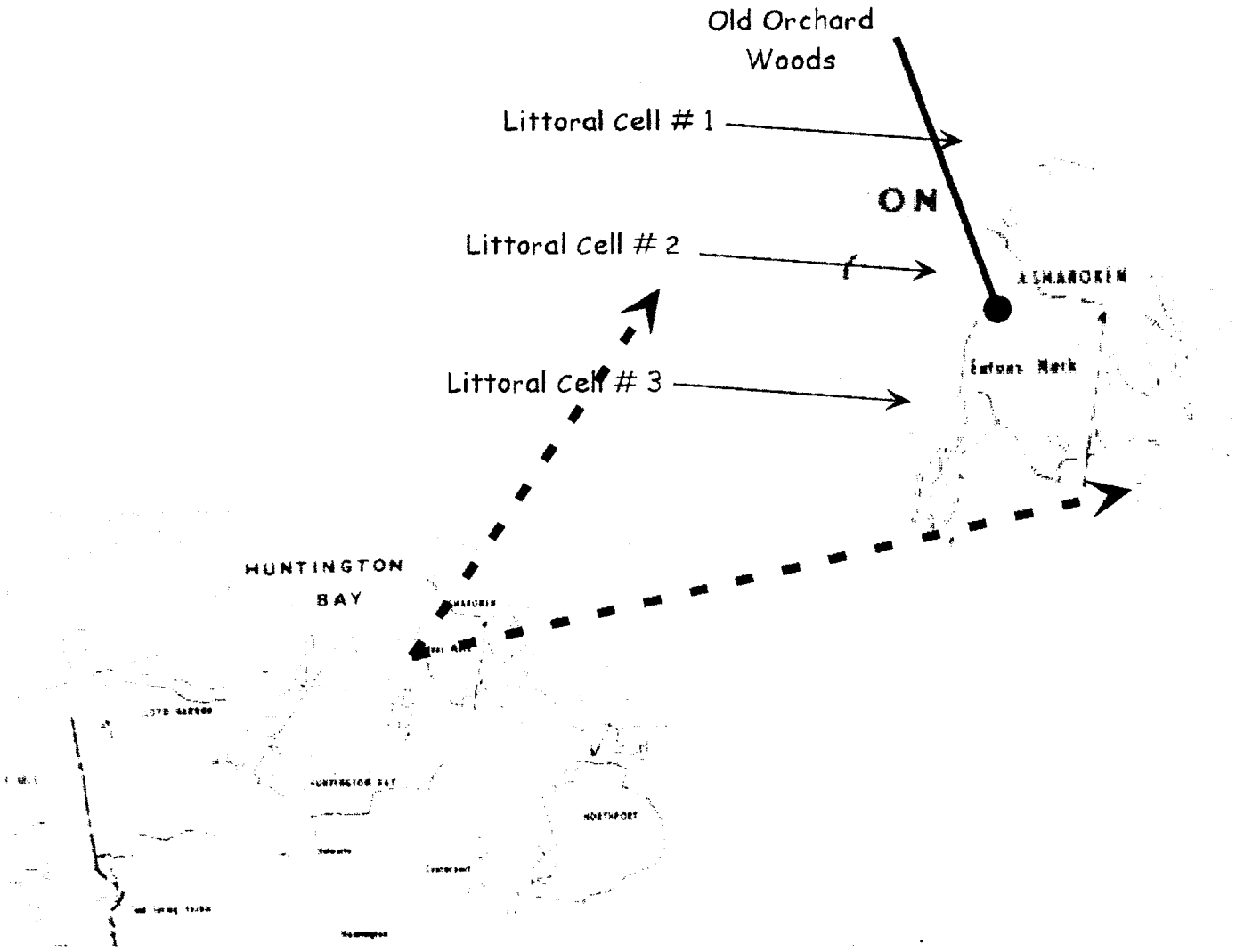


Figure 3: Littoral Drift direction and littoral compartments. From Davies, Axelrod, & O'Conner, 1973, The Erosion of the North Shore of LI, MSRC Research Report #18

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These individual littoral cells or reaches operate independently, but are also links in the regional sedimentary transport system (See Figure 3). The direction of littoral transport is from north to south (see Davies, Axelrod, & O'Connor 1973, Erosion of the North Shore of Long Island, Marine Science Research Center, State University of New York, Technical Report Series #18, Littoral Drift Map #9). The reason for transport to the south is that the longest fetch or (distance across open water) is to the north, northwest. These winds produce waves that push sand to the south.

These cells or reaches are defined by geomorphic or man-made interruptions in the littoral transport system. For example, the inlet into the Eaton's Neck Boat Basin is a natural littoral barrier that has been artificially enhanced by periodic dredging. Similarly, the numerous and substantial groins located in the Argyle/Birmingham Drive area to the north part of West Beach completely block sand transport to the south. Therefore, activities in one littoral cell will not have a significant impact on adjacent cells.

The largest input of beach compatible sediment along this shoreline is from littoral cell #1 (Eaton's Neck Point to Eaton's Neck Boat Basin Inlet). Moreover, the bluffs provide little if any sediment to the littoral system. A review of three (3) aerial photos from 1976, 1988, and 1996 clearly illustrate this process (see Figures 4, 5, and 6). In 1976 the beach is very narrow along the entire shoreline from the Boat Basin inlet to Argyle/ Birmingham Drive. Simultaneously, the bluff at the extreme north of this section is exposed to direct wave action. Thus, although the bluff is eroding the beaches to the south are very narrow. In stark comparison, the 1988 and the 1999 aerials show a wide beach both at the north of littoral cell #2 and along this whole section. This is a direct result of periodic dredging of the Boat Basin inlet and channel, and deposition of these sands and gravels on the north shoreline of littoral cell #2. The waves and tides gradually spread this sediment south increasing the width of the beaches. The progression of this process can be seen by comparing the 1988 and 1996 aerial photos.

The beach widening occurs through a process called sand bar "migration" and sand bar "welding". Sand bars are formed and migrate by waves eroding the artificial fill and depositing it along the shoreline in a linear shore parallel sand bar. As more sand is eroded and deposited, the sand bar "migrates" farther downdrift (or south) and eventually "welds" onto the beach.

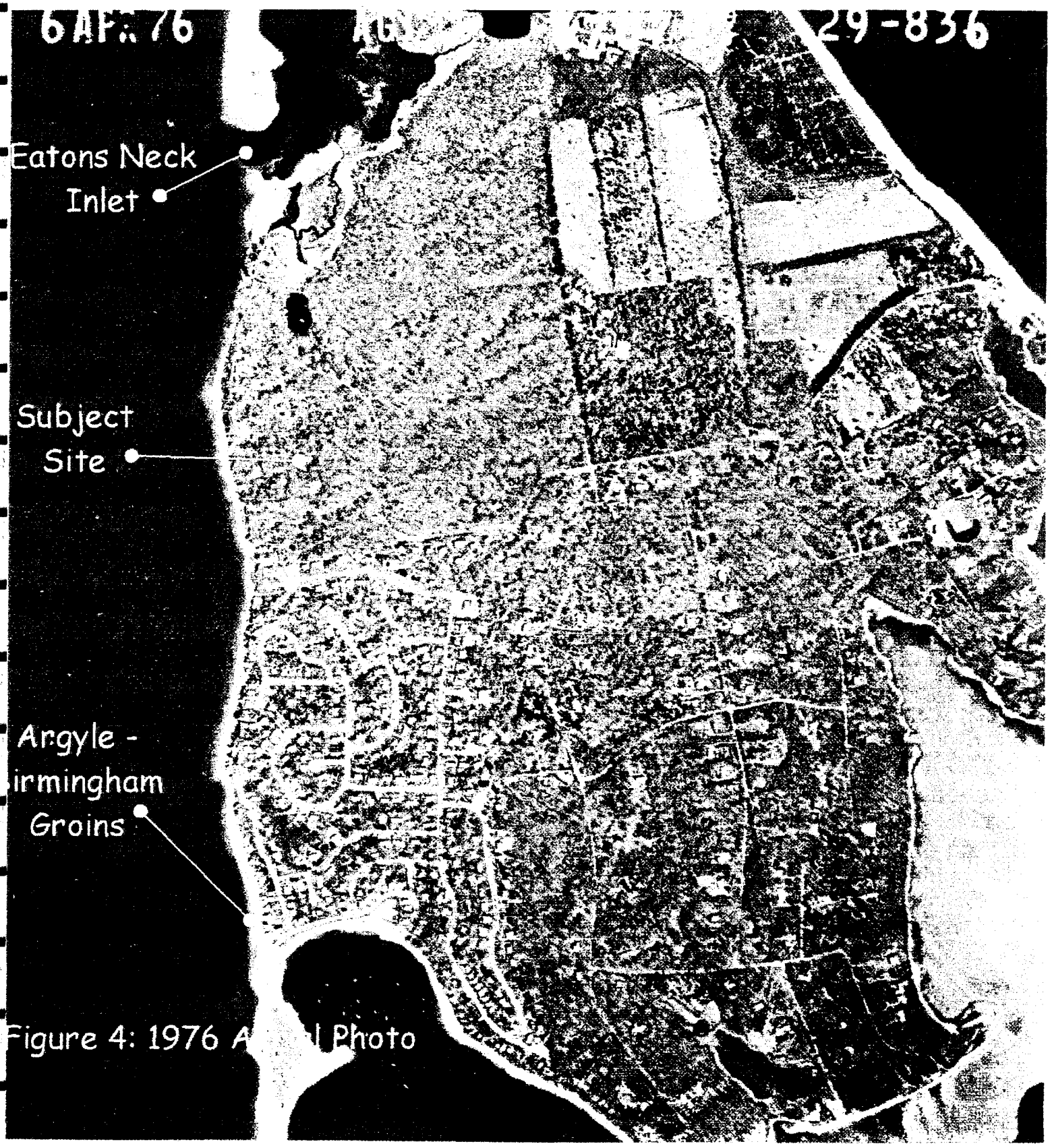

Figure 4: 1976 A l Photo

Figur 1988 Ae [illegible] beach
in front [illegible]

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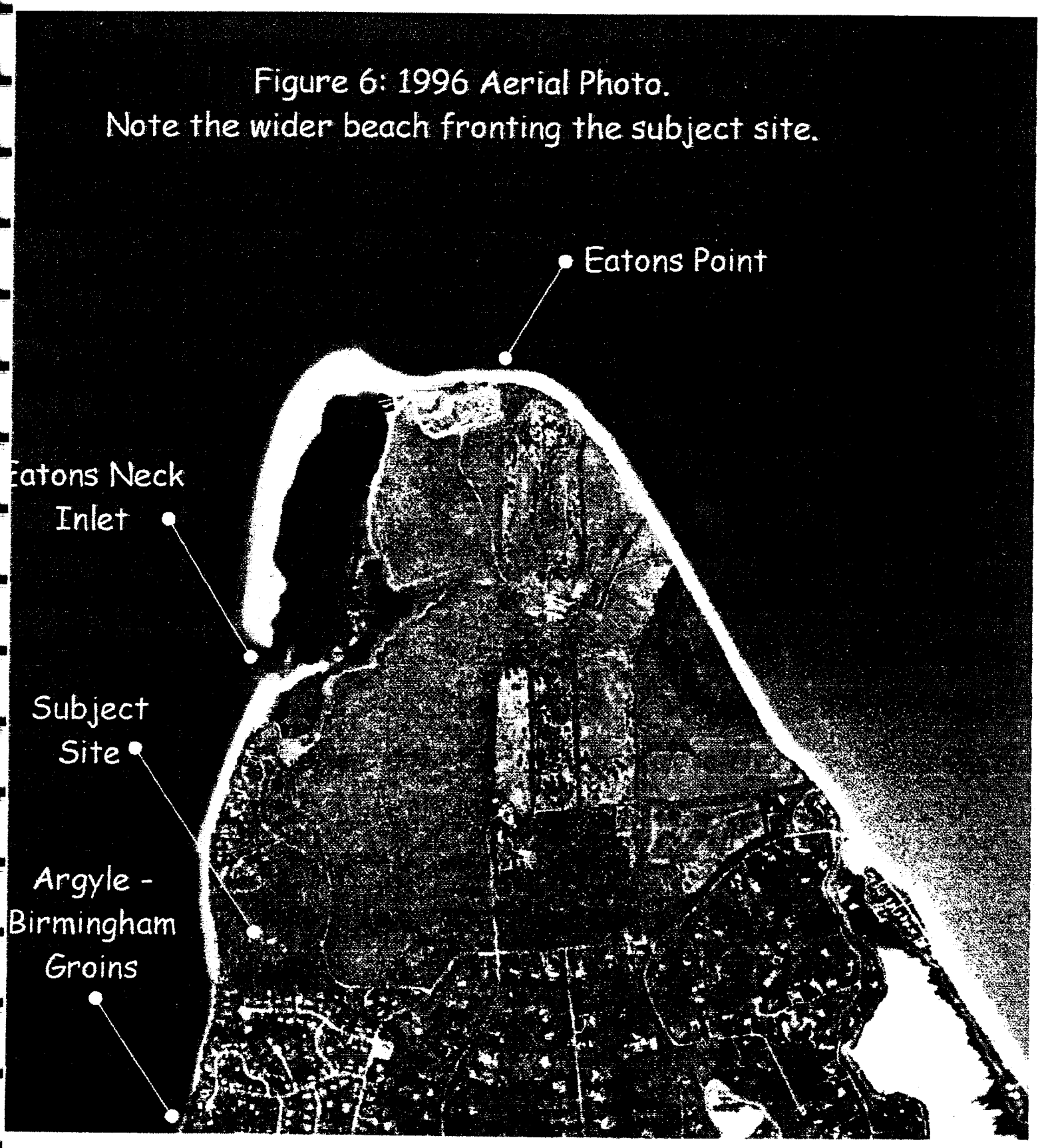
Figure 6: 1996 Aerial Photo.
Note the wider beach fronting the subject site.



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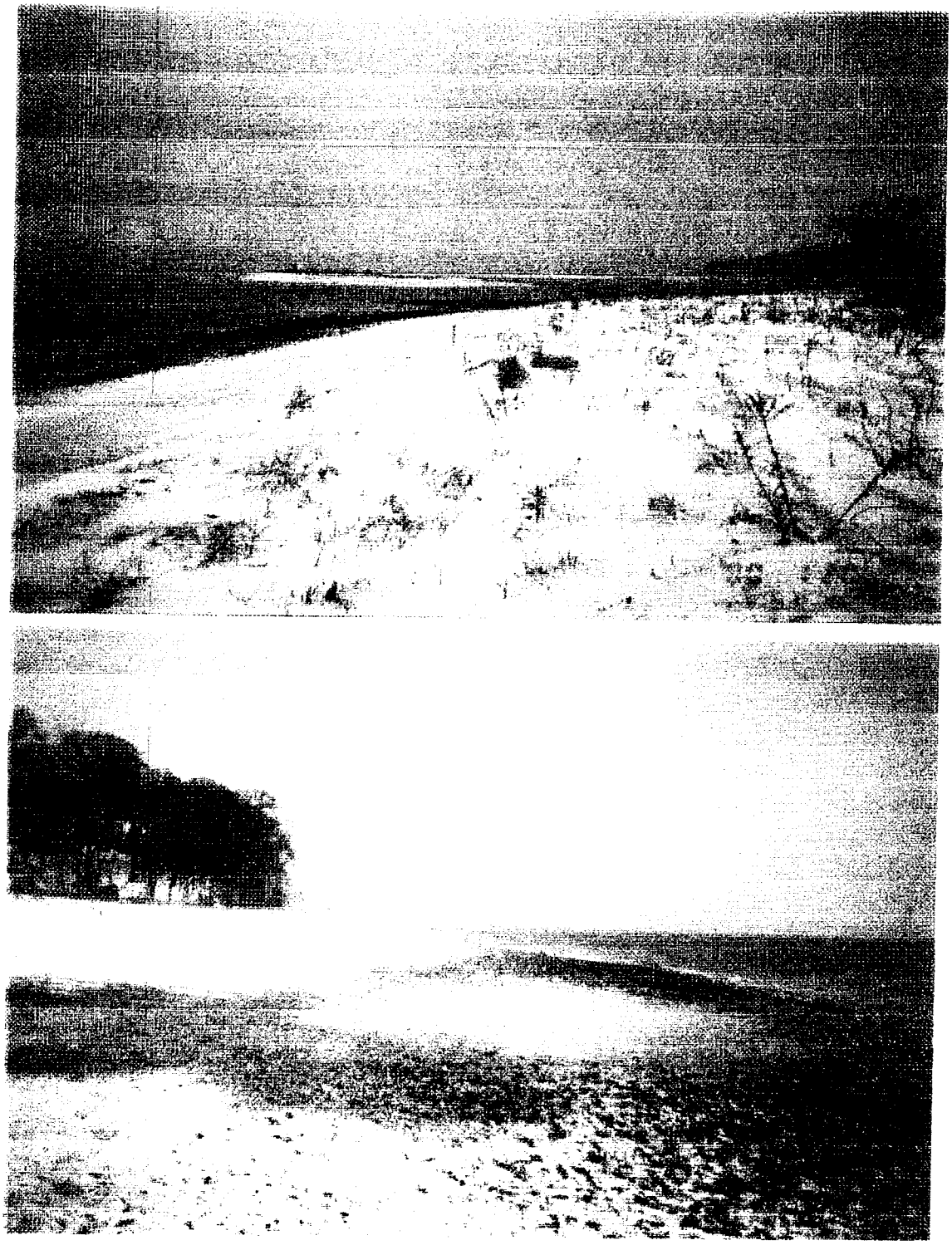

Figure 7 A (top) and B (bottom): A is looking north across Eatons Neck Inlet and B is looking south from the northernmost point of the Littoral Cell # 2. Note the gravel and cobble lag deposit in Figure B.

Figure 8 A & B: Both are looking north from the dredged material deposition area from dredging Eatons Neck Inlet. Erosion of the material is enriching the beaches to the south. This is the primary sediment source for the beaches in Littoral Cell # 2.

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Figure 9: Close Up of the material in the dredged disposal area. It is a very good match to the beach sediments and provides the most important sediment input in the littoral transport.

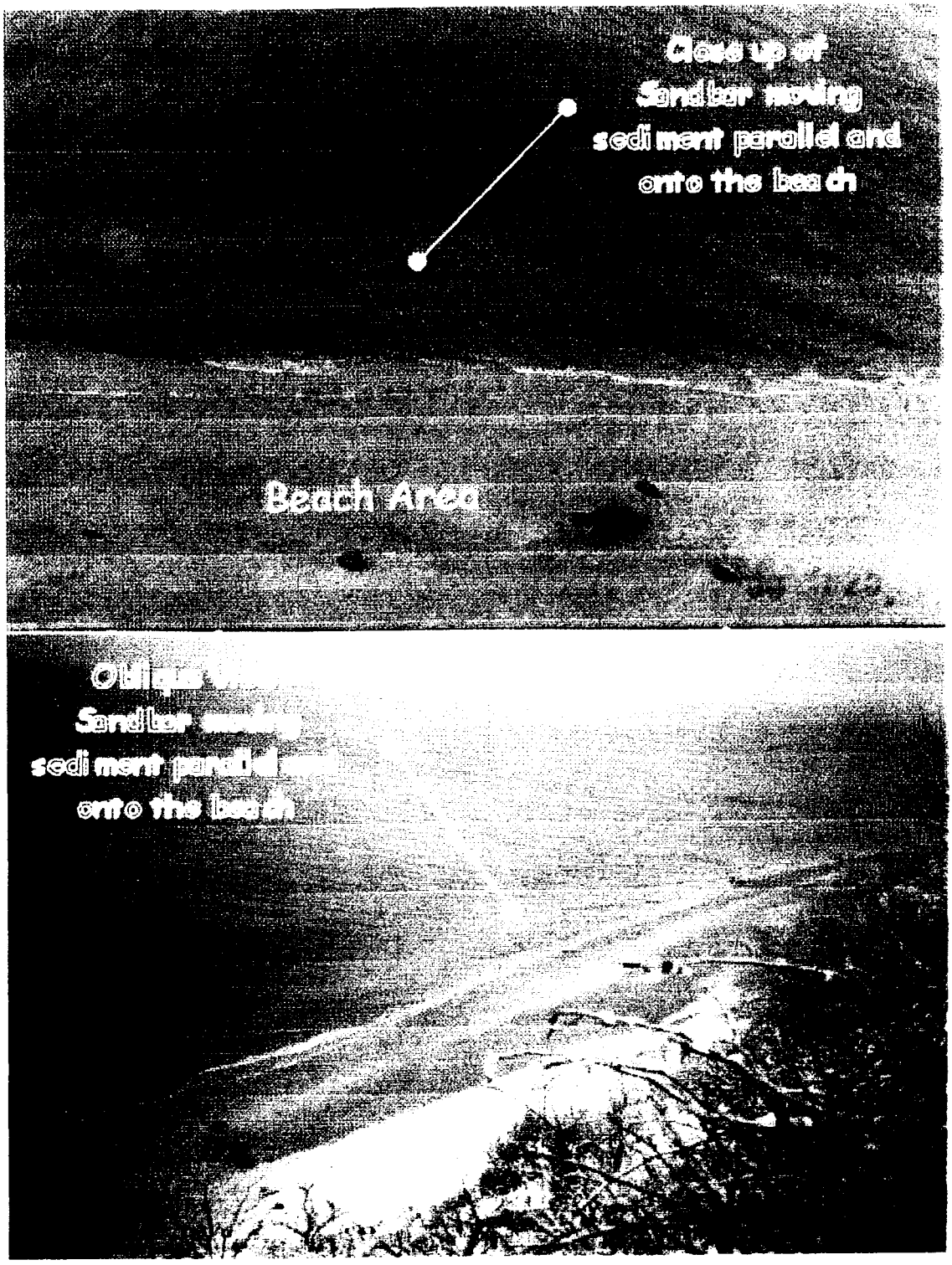

Figure 10 A & B: View to the north and west from the top of the bluff, showing the sandbar bringing sand from the north of Littoral Cell # 2 and building the beach in front of the subject site.

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4. Shoreline Protection Measures and Impacts

The shoreline from Eaton's Neck Point to West Beach contains many significant shoreline protection measures, the largest of which have been mentioned above including the groins at Argyle / Birmingham. The subject property and immediate surrounding area also contain significant shoreline protection structures, including groins, gabions, bulkheads, and revetments. Immediately to the south of the subject property timber bulkheads and rock revetments have secured the upland bluff (see Figure 11). Immediately north of the subject property the shoreline is protected with a rock gabion structure (see Figure 11).

At the southerly end of the property, the toe of bluff is protected by a naturally occurring clay outcrop approximately 5' high. This resistant clay layer protects the less consolidated bluff sediments from direct wave attack and thus acts as a natural erosion protection. Additional clay outcroppings occur in the vicinity of the wooden walkway on the north side of the subject beach/bluff. Although there is evidence of recent bluff slumping, the bluff face shows signs of rapid revegetation. Within the subject property, there are both groins and rock gabions. (see Figure 12) Portions of these structures are still functional, whereas other portions have been destroyed or are in need of rehabilitation.

The bluff in littoral cell #2 does not appear to provide significant sediment to the beach. Thus, construction of additional erosion protection structures is not likely to adversely impact the sandy beach at the subject site or adjacent areas.

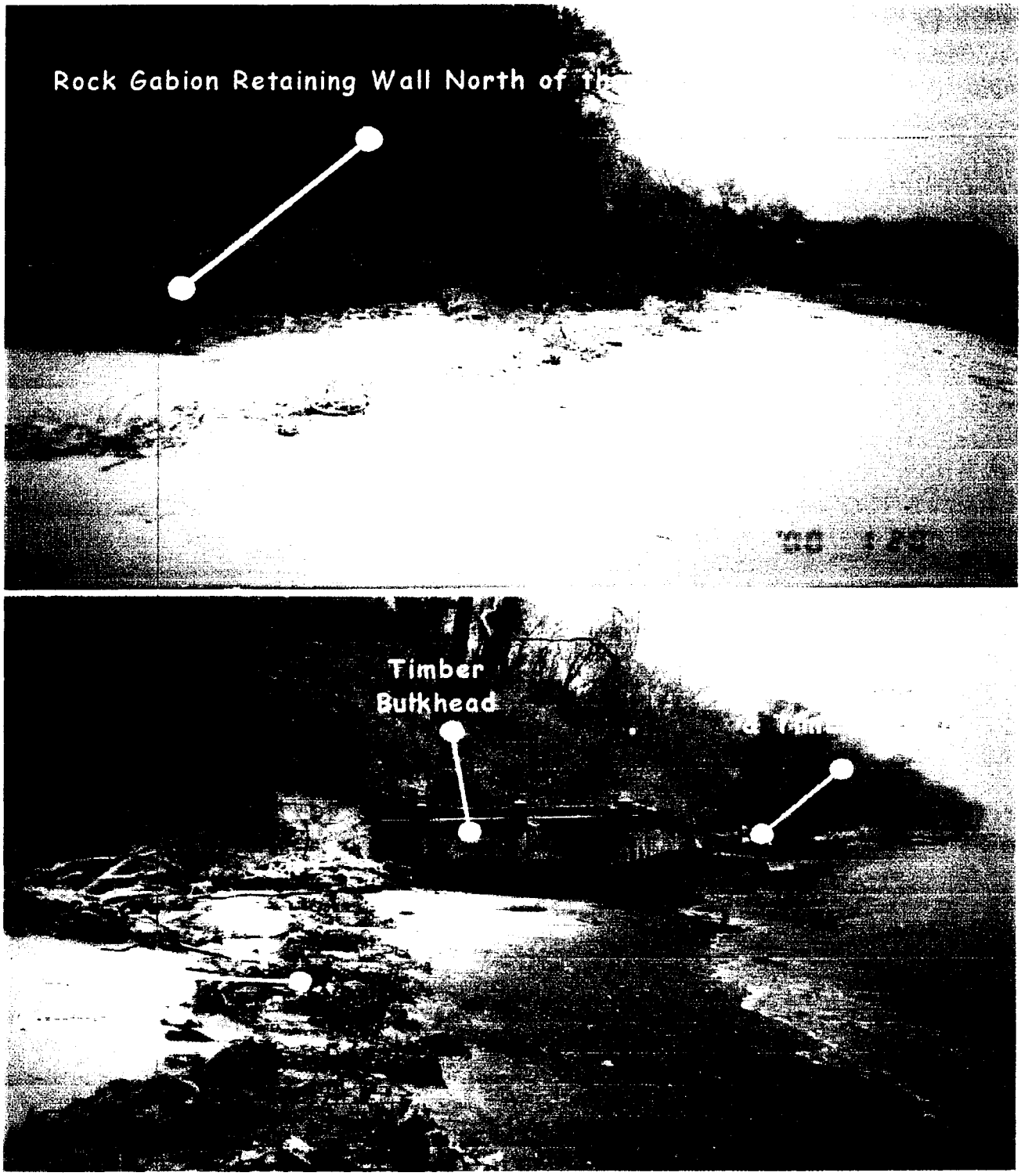

Figure 11 A & B: Views immediately to the North (A) and South (B) of the subject site illustrating existing shoreline protection structures, including gabions, revetments, bulkheads, & groins

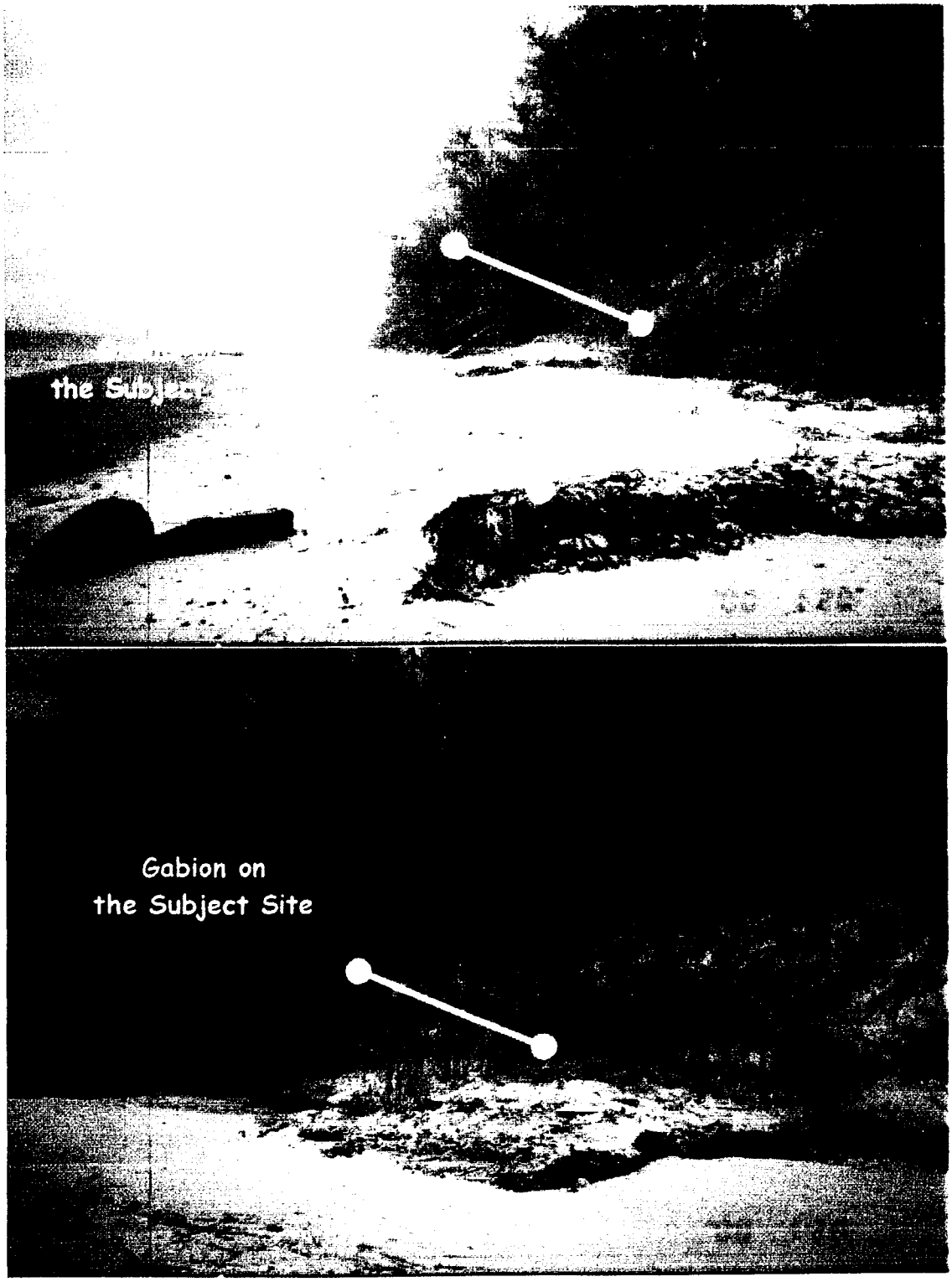

Figure 12 A & B: Shoreline protection structures at the subject site, including groins and gabions.

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5. Summary and Conclusions

I have reviewed the physical site known as Old Orchard Woods and reviewed pertinent technical literature. I conclude the following based on my professional training and experience:

A. The proposed building setbacks exceed the requirements of Local and State Law and are more protective than required.

B. The littoral drift is from north to south and the subject site is in littoral cell #2 of 3 littoral cells. The primary beach sediment source is from dredging of the boat basin and the bluffs supply little compatible sediment. The littoral cells are segregated and have little impact on adjacent cells.

C. The shoreline is protected by numerous and varied shoreline protection structures, including substantial structures on the subject parcel. The maintenance and enhancement of shoreline protection structures at the subject site would have little, if any, impact on the beach.

Appendix B-2
Soil Borings

McDONALD GEOSCIENCE
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ev

TEST HOLE DATA SHEET

Name: Nelson, Pope, Voorhis Kollmer Bl 72'

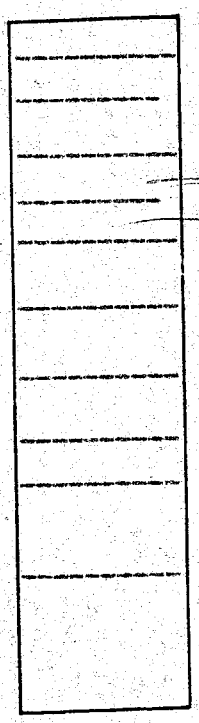
Surveyor: N&P

Location: Eatons Neck

Tax Map Number: 400-1-2-4.1

Project Description: Eng

Date: 4/5/99



0.5'	Dark brown sandy loam OL
3'	Brown loamy sand SM
8'	Brown fine to medium sand SP
12'	Brown silty sand (sand fine) SM
13'	Brown clay CH
25'	Brown clayey sand with 10-20% gravel (sand fine to coarse) SC
35'	Greyish brown sandy clay CL
43'	Brown fine to coarse sand (trace fines) SW
46'	Brown silty clay CL
59'	Water in brown silty clay CL
75'	Water in grey clay CH

Comments: Water encountered 46' below surface

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TEST HOLE DATA SHEET

Name: Nelson, Pope, Voorhis Kollmer B2 80

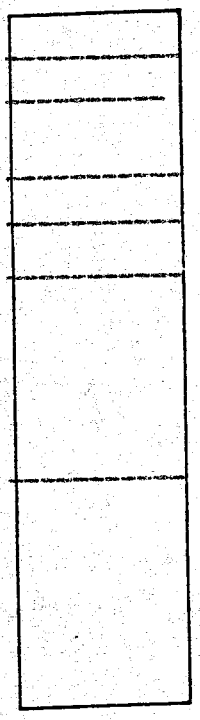
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 4/5/99



0.5' Brown sandy loam OL

3' Brown loamy sand SM

9' Brown fine to medium sand SP

12' Brown fine sand SP

15' Brown silty sand (sand fine) SM

Brown clayey sand with 5-10% gravel (sand fine to medium) SC

46' Brown silty clay CL

69'

Comments: No water encountered

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TEST HOLE DATA SHEET

Name: Nelson, Pope, Voorhis Kollmer B3 BB

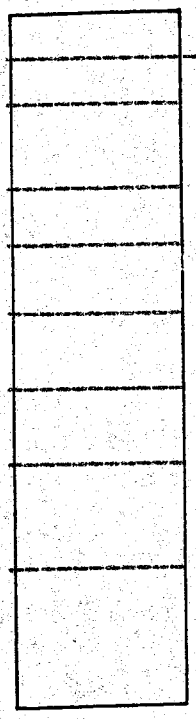
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 4/5/99



1'	Dark brown sandy loam OL
2.5'	Brown loamy sand SM
9'	Brown fine sand SP trace fines
16'	Brown fine to coarse sand SW
26'	Brown fine sand SP trace fines
38'	Pale brown fine to coarse sand SW
50'	Brown silty sand with 10% gravel (sand fine) SM
65'	Brown sandy silt (sand fine) ML
75'	Brown silt ML

Comments: No water encountered

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TEST HOLE DATA SHEET

Name: Nelson, Pope, Voorhis Kollmer B4 38

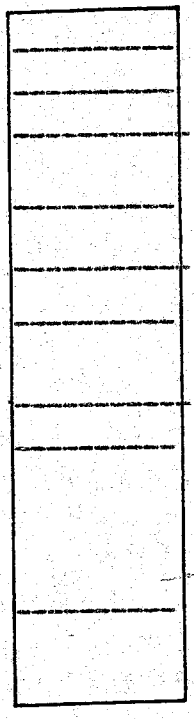
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 4/5/99



1'	Dark brown clayey loam OL
3'	Brown loamy clay CL
4'	Brown sandy clay CL
9'	Pale brown fine sand SP
15'	Brown silty sand (sand fine) SM
19'	Pale brown fine SP
35'	Brown silty sand (sand fine) SM slight silt
36'	Brown fine to medium sand SP trace fines
65'	Water in brown fine to medium sand SP trace fines
75'	Water in very pale brown sandy clay CL

Comments: Water encountered 36' below surface

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TEST HOLE DATA SHEET

Name: NP&V Old Orchard Woods B5

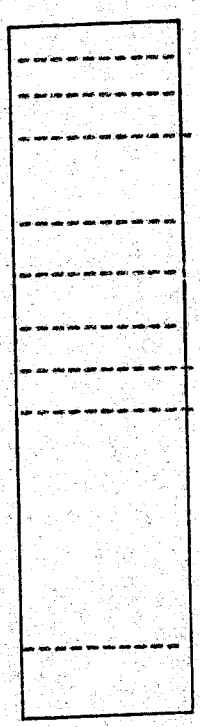
Surveyor: N&P

Location: Eatons Neck

Tax Map Number: 400-1-2-4.1

Project Description: Eng

Date: 1/3/00



1'	Dark brown sandy loam OL
3'	Brown loamy sand SM
6'	Brown silty sand SM
	Pale brown fine sand with trace fines SP
18'	Brown clayey sand (sand fine) SC
23'	Brown silty sand (sand fine) SM
29'	Pale brown fine to medium sand SP
32'	Water in pale brown fine to medium sand SP
34'	
	Water in brown silty sand and sandy silt SM & ML
60'	
	Water in brown sandy clay CL
75'	

Comments: Water encountered 32' below surface

EA w/Back-up

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TEST HOLE DATA SHEET

Name: NP&V Old Orchard Woods B6

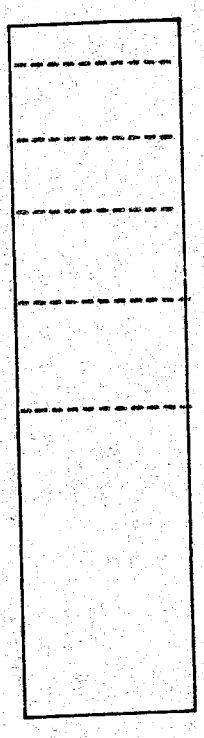
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 1/3/00



Dark brown sandy loam OL

Brown sandy clay CL

Pale brown silty sand (Sand fine) SM

Pale brown fine sand with trace fines SP

Pale brown and brown silty sand (sand fine) SM

Water in pale grey and brown sandy silt ML

Comments: Water encountered 44' below surface

McDONALD GEOSCIENCE
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TEST HOLE DATA SHEET

Name: NP&V Old Orchard Woods B7

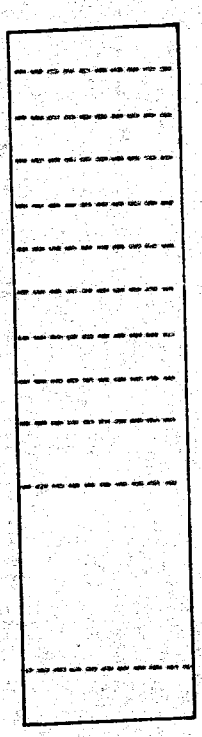
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 12/29/99



1'	Dark brown loam OL
3'	Brown loamy sand SM
5'	Brown silty ML
7'	Brown silty sand (sand fine) SM
9'	Brown fine sand SP
14'	Pale brown fine to coarse sand SW
17'	Brown fine sand SP
22'	Brown silty sand (sand fine) SM
26'	Brown clayey sand (sand fine) SC
39'	Brown silty sand with 20-30% gravel (sand fine to medium) SM
70'	Brown sandy clay CL
75'	Water in brown sandy clay CL

Comments: Water encountered 70' below surface

McDONALD GEOSCIENCE
Box 1000 • Southold, New York 11971 • (516) 765-3677

TEST HOLE DATA SHEET

Name: NP&V Old Orchard Woods B8

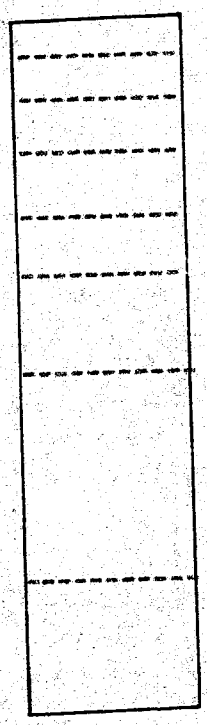
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 12/29/99



1' Dark brown loam OL

3' Brown loamy silty sand SM

9' Brown sandy silt ML

18' Brown silty sand (sand fine to medium) SM

24' Brown fine to medium sand SP

45' Brown clayey sand (sand fine) SC

68' Brown silty clay CL

XB 75' Brown clayey sand SC

Comments:

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TEST HOLE DATA SHEET

Name: NP&V Old Orchard Woods B9

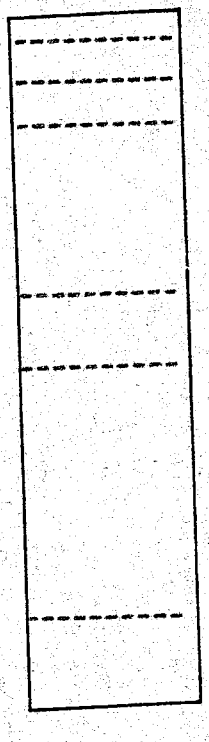
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: XX 1/3/00



1' Dark brown sandy loam OL

2.5' Brown loamy sand SM

6' Brown silty XXXX sand (sand fine) SM

Brown fine sand SP

25'

Brown silty sand (sand fine) SM

32'

Brown and pale brown silty sand (sand fine to medium) SM

64'

Brown sandy silt ML

75'

Comments:

McDONALD GEOSCIENCE
Box 1000 • Southold, New York 11971 • (516) 765-3677

TEST HOLE DATA SHEET

Name: NP&V OLd Orchard Woods B10

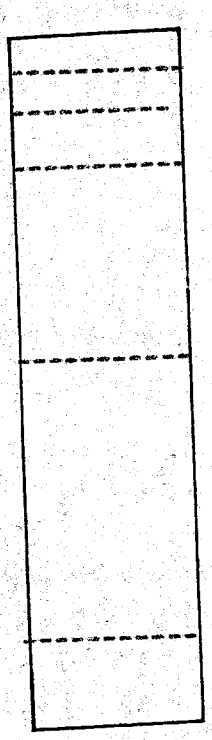
Surveyor:

Location:

Tax Map Number:

Project Description:

Date: 1/3/00



1'	Dark brown loam OL
3'	Brown loamy sand SM
8'	Brown silty sand SM
	Brown fine to medium sand SP
30'	
	Brown silty sand (sand fine to medium) SM
66'	
	Brown sandy clay CL
75'	

Comments:

Appendix B-3
Bluff Face Groundwater Seepage Test Results

(September 13, 1999)

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
NYSDOH ELAP# 11693

September 13, 1999

Eric Arnesen
Nelson, Pope & Voorhis
572 Walt Whitman Road
Melville, New York 11747

Re: Old Orchard Woods, Huntington, NY

Dear Mr. Arnesen:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on August 25, 1999. Long Island Analytical Laboratories analyzed the samples on September 13, 1999 for the following:

CLIENT ID	ANALYSIS
Bluff Discharge	Total E. Cole Bacteria, Nitrate as Nitrogen, Ammonia as Nitrogen, Total Phospate

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Client: Nelson, Pope & Voorhis	Client ID: Old Orchard Woods, Huntington (Bluff Discharge)
Date received: 8/25/99	Laboratory ID: 9913068
Date extracted: 8/30, 9/11, 9/13/99	Matrix: Liquid
Date analyzed: 8/30, 9/11, 9/13/99	ELAP #: 11693

ANALYTICAL PACKAGE

Parameter (s)	Results
E. Coli	3,000 cfu
Fecal	<2.0 mg/L
Ammonia (As N)	2.6 mg/L
Nitrite (As N)	<1.0 mg/L
Phosphate	0.41 mg/L

Michael Venditti

Laboratory Director

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
101-4 Colin Drive • Holbrook, New York 11741
Phone (516) 472-3400 • Fax (516) 472-8505 • Email: mikeatlial@msn.com

Appendix B-4
Bluff Erosion Rate documents

Technical Report No. 18

EROSION OF THE NORTH SHORE OF LONG ISLAND

D. S. Davies

E. W. Axelrod

J. S. O'Connor

Prepared with support from the

Nassau-Suffolk Regional Planning Board

and

New York State Sea Grant Program

Marine Sciences Research Center
State University of New York
Stony Brook, New York 11790

Table 3-3. BLUFF RECESSION RATES, NORTH SHORE, LONG ISLAND, N.Y.

Location	Period of Record	Recession Rate (m/yr)	Recession Rate (ft/yr)
Oak Neck Point	1915-1922[a]	0.3	1.0
East Fort Point	1833-1883[a]	0.9	3.0
Eatons Neck	1933-1966[b]	0.5	1.6
West Fort Salonga	1933-1966	0.5	1.6
Crane Neck Point	1911-1945[c]	0.8	2.6
Old Field Point	1933-1966[b]	1.6	5.2
	1911-1945[c]	0.8	2.6
	1886-1955[d]	0.3	1.0
Belle Terre	1933-1961[b]	0.3	1.0
	1933-1966	0.2	0.8
Miller Place	1948-1955[d]	0.6	2.0
Rocky Point	1933-1966	0.2	0.8
Wading River	1933-1966	0.5	1.6
Wildwood State Park	1933-1966	0.0	0.0
Oregon Hills	1933-1966	0.5	1.6
Horton Point	1933-1966	0.2	0.5
	1933-1960[b]	0.5	1.6
Mulford Point	1933-1960[b]	0.3	1.0
0.7 mi. west of Orient Point	1933-1960[b]	0.6	2.0

[a]Johnson (1925).

[b]McClimans, R. J. 1970. Suffolk County bluff and shore recession. U.S. Department of Agriculture, Soil Conservation Service, Riverhead, New York. Unpublished manuscript. 2 p.

[c]Joint Legislative Committee Studying the Problems of Checking Erosion along the North Shore of Long Island (1947).

[d]U.S. Army Corps of Engineers (1969), Appendix L.

protective structures (groins, etc.) was determined from Table F1, U.S. Army Corps of Engineers (1969).

Bluffs and Dunes

The existence of bluffs and dunes as well as bluff height was determined from field studies, topographic maps, aerial photographs and the station profiles (Plates 29 to 40 in U.S. Army Corps of Engineers, 1969).

Our bluff recession data was determined by comparing 1933 series (approximate scale of 1:7200) and 1970 series (approximate scale of 1:4800) aerial photographs of the Nassau-Suffolk Regional Planning Board. Because erosion of 50 ft is represented by only 1/8 inch on the 1970 aerial photographs, a slight tilt or distortion in an aerial photograph would invalidate any measurement.

Bluff recession could be determined for a stretch of coast only if, first - in order to determine scale - there were adequate reference points on a 1933 aerial photograph and its corresponding 1970 aerial photograph and topographic quadrangle map and, second, there was no apparent scale variation within both the 1933 and 1970 aerial photographs. Five steps were then taken to determine bluff recession:

1. A straight line, approximately parallel to the coast, was drawn between two points on the 1970 aerial photograph.
2. A straight line was drawn between the same two points on the 1933 aerial photograph.
3. Equivalent perpendiculars to the lines were constructed on the 1933 and 1970 aerial photographs.
4. The lengths of the perpendiculars were determined.
5. The true difference in length was then the amount of bluff recession.

Grain Size Analysis

Grain size analysis followed the methods described by Galehouse (1971).

Beach Access

Beach access was determined on location at each field station.

Beach Profiles

Beach profiles were determined by the method of Emery (1961).

APPENDIX C

GROUNDWATER-RELATED DOCUMENTS

Appendix C-1
SONIR Model User Guide

APPENDIX C-1

SONIR MODEL USER GUIDE

for

Old Orchard Woods

Eatons Neck, Town of Huntington, New York

Simulation of Nitrogen in Recharge (SONIR)
Charles Voorhis Microcomputer Model

INTRODUCTION

SONIR is a microcomputer model developed by Charles Voorhis for use by Nelson, Pope & Voorhis, LLC in order to simulate the hydrologic water budget of a site and determine total nitrogen and nitrogen present in recharge in connection with land use projects. The model was developed on the Microsoft Excel Spreadsheet (trademark of Microsoft Products) for IBM (trademark of International Business Machines, Inc.) or compatible Personal Computers capable of running Excel.

Nitrogen has been identified as a source of contamination primarily from sanitary discharge and lawn fertilization. Nitrogen is of concern as a drinking water contaminant, and there is an established health limit of 10 milligrams per liter (mg/l) in drinking water. Nitrogen is also of concern in surface water, as it is a nutrient that when present in high concentrations can cause algal blooms, resulting in biological oxygen demand as algae is biologically decomposed. Depleted oxygen in surface waters causes conditions unfavorable to fish species and can result in extremely undesirable aesthetic impacts, primarily related to odors. Accordingly, it is necessary to understand the concentration of nitrogen recharge as related to a proposed site development.

Utilizing a mass-balance concept, and applying known hydrologic facts and basic assumptions, it is possible to predict the concentration of nitrogen in recharge to the shallow aquifer underlying a given site. This prediction can in turn be used to determine impacts and significance of impacts in consideration of hydrogeologic factors. 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 (**Hughes and Pacenka, 1985**). SONIR is intended to provide a more versatile model based upon the BURBS Mass-Balance concept. SONIR allows for use of the model to predict nitrogen impact from many sources including sewage treatment plants, and further allows for determination of a wider variety site

recharge components under the hydrologic water budget section. SONIR has more versatility in the input of information, and also provides a printout of each step performed by the model, in order for regulatory agencies and review entities to understand how values are derived.

This text describes in detail the definition of terms, supported by referenced information regarding input of data for the simulation. The concept of determining the concentration of nitrogen in recharge involves a predication of the weight of nitrogen introduced to the site, as compared to the quantity of recharge resulting from precipitation and wastewater water discharge. Losses due to evapotranspiration and runoff must be accounted for in the simulation. The values and relationship associated with these parameters determines the quantity of recharge which enters the site. The prediction is generally annualized due to the availability of average annual hydrologic data; however, data input can be determined on a seasonal basis if information is available.

The model includes four (4) data sheets identified as follows:

* Data Input Field - Sheet 1
* Site Recharge Computations - Sheet 2
* Site Nitrogen Budget - Sheet 3
* Nitrogen in Recharge Output Field - Sheet 4

All information required by the model is input in Sheet 1 - Data Input Field. Sheets 2 and 3 utilize data from Sheet 1 to compute the Site Recharge and the Site Nitrogen Budget. Sheet 4 utilizes the total values from Sheets 2 and 3 to perform the final Nitrogen in Recharge computations. Sheet 4 also includes tabulations of all conversion factors utilized in the model.

It should be noted that the simulation is only as accurate as the data which is input into the model. An understanding of hydrologic principles is necessary to determine and justify much of the data inputs used for water budget parameters. Further principles of environmental science and engineering are applied in determining nitrogen sources, application and discharge rates, degradation and losses, and final recharge. Users must apply caution in arriving at assumptions in order to ensure justifiable results.

SITE RECHARGE COMPUTATIONS

Overview

SONIR utilizes the basic hydrologic equation for determining the quantity of recharge anticipated by subtracting recharge losses from total precipitation. The quantity of recharge resulting from a given site is determined using the hydrologic budget equation **(Koszalka, 1984; p. 19):**

$$R = P - (E + Q)$$

where:

R = recharge
P = precipitation
E = evapotranspiration
Q = overland runoff

The quantity of recharge must be determined for each type of land use existing on a site, in order to determine the resultant site recharge. Surfaces commonly considered include: impervious surfaces; turfed areas; and natural areas; however, SONIR allows for a variety of landcover types to be considered in the model. In addition, site recharge occurs as a result of irrigation and wastewater discharge. In cases where water is imported to a site via a public water system, this quantity of recharge must be considered as additional water recharged on site. SONIR allows for all of these recharge components to be included in the simulation. Many sites have fresh surface water in the form of lakes and ponds. Precipitation falls upon these surfaces; however, such features generally act as a mechanism for water loss as a result of evaporation. SONIR includes a Water Area Loss component in determining the site Hydrologic Water Budget and in computing recharge nitrogen.

Data Input - Sheet 1

The following provides a discussion of data sources and assumptions associated with the hydrologic water budget, corresponding to the Data Input Field in Sheet 1 of SONIR:

1. *Area of Site* - The total area of the site (in acres) which is capable of recharging precipitation is entered in this data cell. For sites which include tidal wetlands, the area which is inundated by tidal waters should be excluded, as recharge from these areas should not be considered in the context of nitrogen simulation. For sites which include surface water, the area can be included, provided evaporative water loss from surface water is considered by entering the acreage of surface water in Data Cell 15 noted below.

2. *Precipitation Rate* - Precipitation in the form of rainfall and snowmelt is determined using long term recorded values from local weather stations. Cornell University maintains the Northeast Regional Climate Center, from which long term precipitation data for Long Island weather stations is available. Monthly precipitation averages are published for the period 1951-1980 in Thornthwaite and Mather's Climatic Water Budget Method **(Snowden and Pacenka, 1985).** A tabulation of monthly and annual precipitation averages excerpted from this reference is included in the table cited for Evapotranspiration values. Data entry is in inches.

   For the subject parcel, the Mineola station is nearest the site, therefore a rate of 43.65 inches per year is used.

3. *Acreage of Lawn* - The total area of lawn (in acres) is entered in this Data Cell. This area includes all lawn area whether it is irrigated, fertilized or unmaintained. If there is no lawn area, a value of zero (0) is entered.

4. *Fraction of Land in Lawn* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Lawn by dividing the lawn area by total area.

5. *Evapotranspiration from Lawn* - Evapotranspiration is the natural water loss attributed to evaporation and plant utilization. Rainwater which is evaporated and transpired by plants is returned to the atmosphere as vapor. There are various methods for determining evapotranspiration, including direct measure and calculation. A commonly recognized method is the Thornthwaite and Mather Climatic Water Budget Method. Evapotranspiration rates for various locations on Long Island have been determined by the U.S. Geological Survey as documented in Ground-Water-Recharge Rates in Nassau and Suffolk Counties, New York **(Peterson, 1987; p. 10).** The following general rates as a percent of total precipitation are excerpted from that reference:

Location	Soil Type	Vegetation	ET(in)	ET(%)
Bridgehampton	sandy loam	shallow root	21.2	46.6
	silt loam	shallow root	21.4	47.2
LaGuardia	sand	shallow root	24.2	52.9
	clay loam	shallow root	25.4	55.5
	sandy loam	moderate root	26.2	57.2
JFK Airport	sand	shallow root	22.5	53.8
	clay loam	shallow root	23.9	57.3
	sandy loam	moderate root	25.0	60.0
Mineola	sand	shallow root	22.4	47.8
	sand-silt	shallow root	23.8	51.0
	sandy loam	moderate root	25.1	53.7
	sandy loam	orchards	25.5	54.5
Patchogue	fine sand	mature forest	25.5	53.5

Riverhead	sandy loam	shallow root	22.4	49.3
		orchards	24.8	54.7
Setauket	sandy loam	mature forest	26.8	57.9
Upton	silt loam	deep root	23.9	48.4
	sandy loam	moderate root	23.0	46.5

For the project site, evapotranspiration was varied as follows: 25.50 for wooded areas, and 23.80 for lawn areas.

6. *Runoff from Lawn* - Runoff is the quantity of water which travels overland during a precipitation event. Soil infiltration capacity is the critical factor in determining runoff; however, factors such as slope and vegetation also determine runoff characteristics to a lesser extent on Long Island because of soil conditions. Less urbanized areas of Long Island with characteristically dry soils with groundcover will have a low runoff percentage as a function of total precipitation, as compared to the more urbanized portions of western Long Island. Peterson **(1984; p. 14)** estimates runoff as a percent of total precipitation for Nassau County (2.1 percent); Suffolk County (0.7 percent), and Long Island in general (1.0 percent). If an average precipitation rate of 45 inches per year is assumed, runoff will vary from 0.31 to 0.94 inches. Lawn areas would be expected to be in the lower end of the range. Judgements of higher and lower runoff can be made on a site specific basis depending upon slope and groundcover types.

7. *Acreage of Impervious* - The total area of impervious surface (in acres) is entered in this Data Cell. This area includes paved driveways, parking areas, roofs, roads, etc. If there are no impervious surfaces, a value of zero (0) is entered.

8. *Fraction of Land Impervious* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Lawn by dividing the lawn area by total area.

9. *Evaporation from Impervious* - Impervious surfaces will allow water to evaporate, particularly during summer months. There is no vegetation, therefore there is no transpiration by plants. Evaporation from Impervious is estimated to be approximately 10 percent of total precipitation **(Hughes and Porter, 1983; p. 10).** This value accounts for evaporation from parking lots and other surfaces during summer months, averaged over the entire year. This indicates that recharge/runoff would comprise the remaining 90 percent of precipitation. This assumption coincides with most drainage computations required by Code Subdivision Regulations for determined leaching pool capacity.

10. *Runoff from Impervious* - The approximation of Evaporation from impervious would indicated that recharge/runoff would comprise the remaining 90 percent of precipitation as there are no other losses from impervious surfaces. In consideration of paved areas, runoff is not transported off the site or to surface water as a loss. Runoff is diverted to leaching pools and allowed to re-enter the hydrologic system beneath a given site.

Therefore, in terms of site recharge computations, the value for Runoff from Impervious is zero (0).

11. *Acreage of Unvegetated* - The total acreage of unvegetated area is entered in this Data Cell. This area includes sand, barren soils, and porous drives and trails. If there is no unvegetated area, a value of zero (0) is used.

12. *Fraction of Land Unvegetated* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Unvegetated by dividing the unvegetated area by total area.

13. *Evapotranspiration from Unvegetated* - Evapotranspiration from Unvegetated areas is determined in the same manner as described for Data Cell 5 above.

14. *Runoff from Unvegetated* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to unvegetated areas on a site specific basis. Runoff in the middle to higher end of the range (0.7 to 2.1 percent of precipitation) are expected due to lack of groundcover vegetation.

15. *Acreage of Water* - SONIR considers evaporation from surface water in the computation of site recharge. Surface water, particularly groundwater fed lakes and ponds are a source of water loss in the water budget. The quantity of fresh surface water (in acres) is entered in this Data Cell.

16. *Fraction of Land in Water* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Water on the site by dividing the unvegetated area by total area.

17. *Evaporation from Water* - Surface water features will cause evaporation of water in excess of normal evapotranspiration as documented by **Warren et al, 1968,** Hydrology of Brookhaven National Laboratory and Vicinity Suffolk County, New York. It is estimated that the upper limit of evaporation from a large free-water surface is approximately 30.00 inches per year **(Warren et al, 1968; p. 26).** This value is entered in Data Cell 17 as the most accurate approximation.

18. *Makeup Water* - SONIR allows for consideration of the impact of man-made lakes on site recharge. Lakes are generally lined with an impermeable material. Evaporation occurs from the surface of the lake at a rate of 30.00 inches per year. In order to maintain a constant water level, an on-site well is generally installed to provide make-up water to the lake or pond. The quantity of make-up water is equivalent to the quantity of evaporation, given the fact that the function of the well is to replace water which is evaporated. Therefore, for cases where make-up water is used to maintain a constant water level, a value of 30.00 inches per year is entered in Data Cell 18.

19. *Acreage of Natural* - The total quantity of natural area (in acres) is entered in this Data Cell. This area includes naturally vegetated areas such as woodland, meadow, etc. If there is no unvegetated area, a value of zero (0) is entered.

20. *Fraction of Land Natural* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Natural by dividing the unvegetated area by total area.

21. *Evapotranspiration from Natural* - Evapotranspiration from Natural areas is determined in the same manner as described for Data Cell 5 above.

22. *Runoff from Natural* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to unvegetated areas on a site specific basis. Generally lower values in the range of 0.7 percent of precipitation are expected due to groundcover and canopy vegetation.

23. *Acreage of Other Area* - This is a general category which can be used to include additional groundcover types in the simulation. Acreage of Other Area is entered (in acres). This Data Cell can be used to include site recharge considerations from a portion of the site which has different hydrologic properties, such as a moist hardwood forest or vegetated freshwater wetland, where evapotranspiration would be high and runoff would be extremely low.

24. *Fraction of Land in Other Area* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Other Area by dividing the unvegetated area by total area.

25. *Evapotranspiration from Other Area* - Evapotranspiration from Other areas is determined in the same manner as described for Data Cell 5 above. Value can be varied depending upon the hydrologic properties of the groundcover type.

26. *Runoff from Other Area* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to Other Areas on a site specific basis. Value can be varied depending upon the hydrologic properties of the groundcover type.

27. *Acreage of Land Irrigated* - Imported water for irrigation purposes is an additional site recharge component not considered in any of the Data Cells above. The quantity of land irrigated on a given site is entered in this Data Cell (in acres).

28. *Fraction of Land Irrigated* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Irrigated by dividing the unvegetated area by total area.

29. *Irrigation Rate* - The rate of irrigation must be entered in this Data Cell (in inches). Hughes and Porter **(1983; p. 10)** have indicated that lawn irrigation is estimated to be

about 5.5 inches per year. This value is entered in Data Cell 28 as the most accurate approximation.

30. *Number of Dwellings* - The number of dwellings is entered in this Data Cell in order to allow for computation of wastewater disposal from residential use. Wastewater imported to a site, or even withdrawn from on site wells and recharged through sanitary effluent is an additional recharge component which must be considered. If the project is for a commercial use or utilizes a denitrification system, the number of dwellings should not be entered in the Data Entry Field, as the wastewater flow will include recharge and nitrogen components.

31. *Water Use per Dwelling* - The water use should correspond to the total site non-irrigation water use, divided by the number of units.

32. *Wastewater Design Flow* - No entry need be made in this Data Cell. SONIR will compute the Wastewater Design Flow by multiplying the Number of Dwellings by the Water Use per Dwelling.

33. *Commercial/STP Design Flow* - SONIR permits the consideration of recharge from commercial projects, denitrification systems and sewage treatment plants. The Commercial/STP Design Flow is entered in this Data Cell as per County DPW or engineering design standards.

Site Recharge Computations - Sheet 2

Once data entry is complete for Site Recharge Parameters, SONIR will complete a series of detailed Water Budget computations for the overall site. The following describes the computations which are performed by the model:

A. *Lawn Area Recharge* - Lawn Area Recharge is determined by use of the basic Hydrologic Budget Equation [R = P - (E + Q)] as defined previously. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Lawn Area to determine the component of Lawn Area Recharge in overall site recharge.

B. *Impervious Area Recharge* - Impervious area recharge is also determined using the Hydrologic Budget Equation; however, the value for runoff is zero (0) due to the fact that runoff is controlled by conveyance to on site leaching facilities or is allowed to runoff into depressions where runoff is recharged on site.

C. *Unvegetated Area Recharge* - Unvegetated Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Unvegetated Area to determine the component of Unvegetated Area Recharge in overall site recharge.

D. *Water Area Loss* - The Hydrologic Budget Equation is modified to consider Water Area Loss. This is particularly useful in water quantity stressed areas of Long Island. If runoff (Q) is considered be zero (0), then lake storage/recharge without make-up water would be Precipitation minus Evaporation (P - E). The resultant quantity of lake storage/recharge is then reduced by the amount of make-up water (M). The final quantity of loss is then multiplied by that portion of the site occupied by water to determine the component of water loss as related to the overall site water budget.

E. *Natural Area Recharge* - Natural Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Natural Area to determine the component of Natural Area Recharge in overall site recharge.

F. *Other Area Recharge* - Other Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Other Area to determine the component of Other Area Recharge in overall site recharge.

G. *Irrigation Recharge* - Irrigation recharge is an additional recharge component artificially added on sites where irrigation occurs. This quantity is determined in the same manner as the Hydrologic Water Budget except that the irrigation rate (in inches) is substituted for

precipitation. The resultant recharge is multiplied by the area of the site which is irrigated in order to determine the Irrigation Recharge in overall site recharge.

H. *Wastewater Recharge* - Wastewater is also a recharge component artificially added to a site. SONIR annualizes the wastewater design flow and assumes it is applied over the entire by multiplying Wastewater Design Flow by the Area of the Site, resulting in a per foot measure of wastewater over the site. This is converted to inches to be included in overall site recharge.

Once the eight (8) series of Site Recharge Computations are complete, SONIR totals each individual component to determine Total Site Recharge. The sum of these recharge contributions, is that quantity of water which is expected to enter the site on an annual basis due to precipitation, after the development is completed. This value is important in determining the concentration of nitrogen in recharge, and is important as a means of determining hydrologic impacts of a project in terms of changes to site recharge.

SITE NITROGEN BUDGET

Overview

The total nitrogen released on a given site must be determined in order to provide a means of simulating nitrogen in recharge. Nitrogen sources include: sanitary nitrogen; fertilizer nitrogen; pet waste nitrogen; precipitation nitrogen; and water supply nitrogen (wastewater and irrigation). The total of these quantities represents total site nitrogen.

Data Input - Sheet 1

The following provides a discussion of data sources and assumptions associated with the nitrogen budget, corresponding to the Data Input Field in Sheet 1 of SONIR:

1. *Persons per Dwelling* - The number of persons per dwelling is a demographic multiplier used in the determination of human population of a site. Based on multipliers listed in "The New Practitioner's Guide to Fiscal Impact Analysis", **(Rutgers, 1985)**, the average number of residents is calculated at 4/unit (Existing Conditions), and will be 4.031/unit (Proposed Conditions).

2. *Nitrogen per Person per Year* - Annual nitrogen per person is a function of nitrogen bearing waste in wastewater. For residential land use the population of the development is determined and the nitrogen generated is assumed to be 10 pounds per capita per year **(Hughes and Porter, 1983; p. 8).**

3. *Sanitary Nitrogen Leaching Rate* - For normal residential systems, Porter and Hughes report that 50 percent of the nitrogen entering the system is converted to gaseous nitrogen and the remainder leaches into the soil **(Porter and Hughes, 1983; p. 14).**

4. *Area of Land Fertilized 1* - The area of land fertilized is input in Data Cell 4. This value may correspond to the Acreage of Lawn and/or the Acreage of Land Irrigated, but does not necessarily have to be the same value. This entry should be determined on a site-specific basis.

5. *Fertilizer Application Rate 1* - Fertilizer nitrogen is determined by a fertilizer application rate over a specified area of the site. The fertilizer application rates vary depending upon the type of use. The following table indicates the rate of fertilization as a function of use as excerpted from the Nonpoint Source Management Handbook **(Koppelman, 1984; Chapter 5, p.6):**

Residential	2.3 lbs/1000 sq ft
Commercial	3.5 lbs/1000 sq ft

Golf Course	3.5 lbs/1000 sq ft
Sod Farms	4.0 lbs/1000 sq ft
Recreational Lands	0.2 lbs/1000 sq ft

A commercial landscaping firm has been interviewed to determine trends in commercial fertilizer application. Various fertilizer formulations are used including 10-6-4, 16-4-8 and 20-10-5 (nitrogen-phosphate-potash) depending upon season. Heavier nitrogen application rates are generally used in the spring. Fertilizer used is 50 percent organic nitrogen. This is applied in a dry form approximately 3 times per year, and 50 pound bag is applied over approximately 16,000 square feet. Based on this rate if 20- 10-5 nitrogen were applied in the spring, and 16-4-8 were applied during summer and fall, this would result in an application rate of 2.1 pounds per 1000 square feet. This is a conservative value based on three applications of relatively high nitrogen fertilizer, which will be used for nitrogen in recharge simulation.

In addition, it is noted that the Nonpoint Source Management Handbook indicates that application rates as low as 1.0 lb/1000 sq ft can be achieved with proper fertilizer management control.

6. *Fertilizer Nitrogen Leaching Rate 1* - Nitrogen applied as fertilizer is subject to plant uptake (20 to 80%; 50% on average) and storage in thatch and soils (36 to 47%), thereby reducing the total amount of nitrogen leached. The percentage of plant uptake and storage are based on studies cited in the LIRPB's Special Groundwater Protection Area PLan. Based on those studies, a conservative nitrogen leaching rate of 14 percent has been applied in the model.

7. *Area of Land Fertilized 2* - More than one fertilizer nitrogen input is provided in order allow consideration of mixed use and/or golf course projects where land is fertilized at different rates.

8. *Fertilizer Application Rate 2* - Fertilizer Application Rates for this entry can be determined based upon Data Cell 5 above.

9. *Fertilizer Nitrogen Leaching Rate 2* - Fertilizer Nitrogen Leaching Rates can be determined based upon Data Cell 6 above.

10. *Pet Waste Application Rate* - Pet Waste Nitrogen results from the excretion of domestic pets in the outside environment. There is relatively little definitive information concerning this nitrogen source; however, several references were located and are analyzed herein. The 208 Study provides a table of nitrogen concentration in manure for various animals, not including dogs or cats. Total nitrogen values in the range of 0.30-0.43 lbs/day/1000 lbs live weight are reported for cattle, sheep and horses **(Koppelman, 1978; Animal Waste report p. 3).** It is assumed that dogs constitute the major source of animal waste

which would be present in the yards of residential developments. Cat waste would be significantly less due to the lesser live weight of cats and the fact that many cat owners dispose of cat waste in solid waste by using an indoor litter box. If an average of 0.35 lbs of nitrogen is assumed for dogs, and an average of 25 pounds live weight is assumed per dog, then the total annual nitrogen per pet would be 3.19 lbs/year. The only other reference located which approximates nitrogen in pet waste is Land Use and Ground-Water Quality in the Pine Barrens of Southampton **(Hughes and Porter, 1983; p. 10).** This reference assumed an application rate of 6.5 lbs/acre of nitrogen. Pet waste was assumed to be deposited evenly over all turf. This assumption was not correlated to population density or pet density, but only to turfed acreage. In comparison of the two values, the per pet value corresponds to approximately 2 turfed acres. For the purpose of this model, the value of 3.19 lbs/pet/year is considered to be the most justifiable value for pet waste and is entered in this Data Cell.

11. *Pet Waste Nitrogen Leaching Rate* - Pet waste is also subject to a leaching rate factor whereby, 50 percent of the nitrogen applied to the ground is removed as a gas.

12. *Area of Land Irrigated* - No entry need be made in this Data Cell. This value is the same as Data Cell 27 of the Site Recharge Parameters and SONIR will transfer the data entry to this Cell.

13. *Irrigation Rate* - No entry need be made in this Data Cell. This value is the same as Data Cell 27 of the Site Recharge Parameters and SONIR will transfer the data entry to this Cell.

14. *Irrigation Nitrogen Leaching Rate* - Hughes and Porter **(1983; p. 10)** indicate that "plant uptake and gaseous losses are assumed to remove 85% of the nitrogen entering in precipitation". Irrigation nitrogen would be expected to be subject to the same losses, therefore, a leaching rate of 15% is entered in this Data Cell.

15 *Nitrogen in Precipitation* - Groundwater nitrogen is partially derived from rainwater. Nitrate-nitrogen concentrations in precipitation have been reported to be on the order of 1-2 mg/l in Nassau and Suffolk Counties **(SCDHS, 1987; p. 6-4).**

16. *Precipitation Nitrogen Leaching Rate* - As indicated above, a nitrogen leaching rate of 15% is applied to precipitation nitrogen.

17. *Nitrogen in Water Supply* - The concentration of Nitrogen in Water Supply determines the quantity of nitrogen which enters the site as a result of irrigation nitrogen and wastewater flow. Local water supply data should be utilized if available, otherwise a value of between 1 and 2 mg/l could be utilized.

18. *Nitrogen in Commercial/STP Flow* - This data entry allows SONIR to compute the quantity of nitrogen resulting from commercial discharge, denitrification systems and/or sewage treatment plants. Total nitrogen in community wastewater is identified as having a total nitrogen concentration of 15 mg/l in weak effluent; 40 mg/l in medium strength effluent, and 60 mg/l in strong effluent **(Canter and Knox, 1985; p. 47).** It is recommended that a value of 40 mg/l be used for total nitrogen concentration in commercial sanitary systems. Properly functioning denitrification systems and sewage treatment plants are capable of reducing total nitrogen to less than 10 mg/l in accordance with discharge limitations. A value of 10 mg/l can be entered in this data cell for such systems. The SONIR model computes the number of pounds of nitrogen in sanitary discharge as a function of concentration. The absolute nitrogen is utilized in the model; however, it must recognized that from the discharge point, nitrogen is nitrified through conversion of ammonia to nitrate in the leaching area beneath the discharge point. Further natural transformation in the form of denitrification occurs as a result of bacteria. This causes release of nitrogen gas and may account for further reduction of 50 percent or more subsequent to discharge **(Canter and Knox, 1979; pp. 77-78; Hughes and Porter, 1983; p. 14).** As a result SONIR is conservative in predicting the concentration of nitrogen in recharge, and when natural denitrification of sanitary effluent is considered, actual concentration would be less.

Site Nitrogen Budget - Sheet 2

Once data entry is complete for Nitrogen Budget Parameters, SONIR will complete a series of detailed computations to determine the individual component of nitrogen from each source and the total nitrogen for the overall site and use. The following describes the computations which are performed by the model:

A. *Sanitary Nitrogen - Residential* - SONIR establishes the site population using the number of units on the site, and the demographic multiplier. The nitrogen load factor is then applied and reduced by the leaching rate, resulting in the total residential nitrogen component. If the project is for a commercial use or utilizes a denitrification system, the number of dwellings should not be entered in the Data Entry Field, in which case the total nitrogen from this source will be zero (0).

B. *Pet Waste Nitrogen* - The pet waste nitrogen was determined on a per pet basis; however, the number of pets for a given residential project must be determined. In order to correlate the number of pets to human population, a ratio was determined using information contained in the 208 Study, wherein it was estimated that there is 1 dog per 5 residents in suburban areas and 1 dog per 7 residents in urban areas **(Koppelman, 1978; Animal Waste Report, pp. 6).** This results in an average number of dogs based upon of 17 percent of the human population. Accordingly, this multiplier is used based upon the population of a land use project in order to estimate the nitrogen waste from pets. The pet waste nitrogen is subject to reduction as a function of the leaching rate, leading to the total pet waste nitrogen in pounds.

C. *Sanitary Nitrogen (Commercial/STP)* - SONIR utilizes the Commercial/STP Flow which is converted to liters and multiplied by the nitrogen concentration in waste. This provides a weight of nitrogen in milligrams which is converted to pounds for the total nitrogen from this component.

D. *Water Supply Nitrogen* - SONIR utilizes the residential wastewater design flow to compute the weight of nitrogen contributed from the water supply. The method of calculation is the same as Sanitary Nitrogen (Commercial/STP). For commercial projects, this value is accounted for in the Commercial/STP Flow.

E. *Fertilizer Nitrogen 1* - This calculation utilizes data entry from the Area of Land Fertilized 1, in the Data Input Field, to determine the weight of fertilizer nitrogen applied to the area. The area is multiplied by the application rate and reduced by the leaching rate documented previously to arrive at total weight.

F. *Fertilizer Nitrogen 2* - If fertilization rates vary, the Area of Land Fertilized 2, is utilized to determine nitrogen from this source.

G. *Precipitation Nitrogen* - Nitrogen in precipitation is considered by determining the liters of Natural Recharge entering the site, multiplied by the concentration of nitrogen in precipitation. SONIR uses the sum of natural recharge components from the Site Recharge Computations to establish the natural recharge. A precipitation nitrogen leaching rate of 15% is utilized as referenced above.

H. *Irrigation Nitrogen* - Although a very small component, the Irrigation Nitrogen is determined using the Irrigation Recharge R(irr) computed in the Site Recharge Computations, over the irrigated area of the site to produce a volume of irrigation recharge. The Irrigation Recharge value is used in order to account for reduction of recharge due to evapotranspiration, since this component is only intended to determine nitrogen leaching into soil as a result of irrigation nitrogen in the water supply. This value is converted to liters and multiplied by the concentration of nitrogen in irrigation water supply. The Irrigation Nitrogen Leaching Rate (expected to the same as for precipitation), is applied to the weight to determine the total nitrogen from this source.

Once the eight (8) series of Site Nitrogen Budget computations are complete, SONIR totals each individual component to determine the Total Site Nitrogen. This value is used in determining the weight per volume ratio of nitrogen in recharge as computed in Sheet 4 of the SONIR model.

FINAL COMPUTATIONS AND SUMMARY

SONIR utilizes data generated in Sheets 2 and 3 of the model to compute a mass/volume ratio for nitrogen in recharge. Nitrogen in recharge is converted from pounds to milligrams in order to provide units compatible for mass/volume concentration. Likewise, the quantity of site recharge is applied over the site in order to determine an overall volume number for site recharge. This is then converted to liters. The final computation divides the total weight of nitrogen in milligrams, by the total volume of recharge in liters, to arrive at the Nitrogen in Recharge ratio in milligrams per liter (mg/l). This concentration represents the Final Concentration of Nitrogen in Recharge which is highlighted on Sheet 4.

Sheet 4 also provides a site recharge summary in order to compare recharge between natural conditions, a proposed project and/or alternatives. Total Site Recharge is presented in both inches, and as a volume in cubic feet/year, gallons/year and million gallons/year (MGY).

The final field summarizes the Conversions Used in SONIR. Conversions are standard conversion multipliers as found in standard engineering references.

SONIR is a valuable tool allowing for versatile determination of site recharge as determined from many components of site recharge. SONIR determines the weight of nitrogen applied to a site from a variety of sources as well. SONIR is a fully referenced model utilizing basic hydrologic and engineering principals, in a simulation of nitrogen in recharge. Input data should be carefully justified in order to achieve best results. SONIR can be used effectively in comparing land use alternatives and relative impact upon groundwater due to nitrogen. By running the model for Existing Conditions, Proposed Project conditions and/or alternative land uses comparison of impacts can be made for consideration in land use decision-making. Questions, comments or suggestions concerning this model should be addressed to Nelson, Pope & Voorhis, LLC, 572 Walt Whitman Road, Melville, New York 11747.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

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Appendix C-2
SONIR Results, Existing Conditions/Alternative 1

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT **OLD ORCHARD WOODS**

DATA INPUT FIELD **Existing Conditions** **SHEET 1**

A	*Site Recharge Parameters*	*Value*	*Units*
1	Area of Site	24.21	acres
2	Precipitation Rate	43.65	inches
3	Acreage of Lawn	0.86	acres
4	Fraction of Land in Lawn	0.036	fraction
5	Evapotranspiration from Lawn	22.40	inches
6	Runoff from Lawn	0.31	inches
7	Acreage of Impervious	0.40	acres
8	Fraction of Land Impervious	0.017	fraction
9	Evaporation from Impervious	4.37	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	2.37	acres
12	Fraction of Land Unvegetated	0.098	fraction
13	Evapotrans. from Unvegetated	20.00	inches
14	Runoff from Unvegetated	0.7	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	20.58	acres
20	Fraction of Land Natural	0.850	fraction
21	Evapotrans. from Natural Area	25.50	inches
22	Runoff from Natural Area	0.31	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	23.60	inches
26	Runoff from Other Area	0.31	inches
27	Acreage of Land Irrigated	0.00	acres
28	Fraction of Land Irrigated	0.000	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	1	units
31	Water Use per Dwelling	300	gal/day
32	Wastewater Design Flow	0	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	*Nitrogen Budget Parameters*	*Value*	*Units*
1	Persons per Dwelling	5.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	Sanitary Nitrogen Leaching Rate	50	percent
4	Area of Land Fertilized 1	0.00	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	3.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	14	percent
10	Pet Waste Application Rate	0.00	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50	percent
12	Area of Land Irrigated	0.00	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15	percent
15	Nitrogen in Precipitation	1.50	mg/l
16	Precipitation Nitrogen Leaching Rate	15	percent
17	Nitrogen in Water Supply	5.63	mg/l
18	Nitrogen in Commercial/STP Flow	10.00	mg/l

C	*Comments*
1)	Please refer to user manual for data input instructions.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Existing Conditions

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.036	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.31	inches
5	R(l) = P - (E + Q)	20.94	inches
6	R(L) = R(l) x A	0.74	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.017	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	4.37	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	39.29	inches
6	R(I) = R(i) x A	0.65	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.098	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	0.70	inches
4	Q = Runoff Rate	0.00	inches
5	R(u) = P - (E + Q)	42.95	inches
6	R(U) = R(u) x A	4.20	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	13.65	inches
7	R(W) = R(w) x A	0.00	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.850	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	25.50	inches
4	Q = Runoff Rate	0.31	inches
5	R(n) = P - (E + Q)	17.84	inches
6	R(N) = R(n) x A	15.17	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	23.60	inches
4	Q = Runoff Rate	0.31	inches
5	R(o) = P - (E + Q)	19.74	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.000	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evaptranspiration Rate	2.82	inches
4	Q = Runoff Rate	0.31	inches
5	R(irr) = I - (E + Q)	2.37	inches
6	R(IRR) = R(irr) x A	0.00	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	300	gal/day
2	WDF = Wastewater Design Flow	14,639	cu ft/yr
3	A = Area of Site	1,054,588	sq ft
4	R(ww) = WDF/A	0.01	feet
5	R(WW) = Wastewater Recharge	0.17	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**20.93**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Existing Conditions

SHEET 3

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	1	units
2	Persons per Dwelling	5.00	capita
3	P = Population	5.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50	percent
6	N(S) = P x N x LR	25.00	lbs
7	N(S) = Sanitary Nitrogen	25.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	0.00	lbs/pet
2	Human Population	5	capita
3	Pets = 17 percent of capita	1	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	10.00	mg/l
4	N(S) = CF x N	0	milligrams
5	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen*		
1	WDF = Wastewater Design Flow	300	gal/day
2	WDF = Wastewater Design Flow	414,458	liters/yr
3	N = Nitrogen in Water Supply	5.63	mg/l
4	N(WW) = WDF x N	2,333,396	milligrams
5	N(WW) = Wastewater Nitrogen	5.15	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	0	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F1) = A x AR x LR	0.00	lbs
5	N(F1) = Fertilizer Nitrogen	0.00	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	3.00	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.73	feet
2	A = Area of Site (sq ft)	1,054,588	sq ft
3	R(N) = R(n) x A	1,824,660	cu ft
4	R(N) = Natural Recharge (liters)	51,674,365	liters
5	N = Nitrogen in Precipitation	1.50	mg/l
6	LR = Leaching Rate	15	percent
7	N(ppt) = P(S) x N x LR	1,162,673	milligrams
8	N(ppt) = Precipitation Nitrogen	2.56	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	2.37	inches
2	R = Irrigation Rate (feet)	0.20	feet
3	A = Area of Land Irrigated	0	sq ft
4	R(I) = R(irr) x A	0	cu ft
5	R(I) = Site Precipitation (liters)	0	liters
6	N = Nitrogen in Water Supply	5.63	mg/l
7	LR = Leaching Rate	15	percent
8	N(irr) = R(I) x N x LR	0	milligrams
9	N(irr) = Irrigation Nitrogen	0.00	lbs

Total Site Nitrogen	
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)
N=	**32.71** lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

OLD ORCHARD WOODS
Existing Conditions

SHEET 4

FINAL COMPUTATIONS

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	32.71	lbs
2	N = Total Nitrogen (milligrams)	14,849,810	milligrams
3	R(T) = Total Recharge (inches)	20.93	inches
4	R(T) = Total Recharge (feet)	1.74	feet
5	A = Area of Site	1,054,588	sq ft
6	R = R(T) x A	1,839,299	cu ft
7	R = Site Recharge Volume	52,088,942	liters
9	NR = N/R	0.29	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

0.29

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	20.93	inches/yr
2	R = Site Recharge Volume	1,839,299	cu ft/yr
3	R = Site Recharge Volume	13,758,911	gal/yr
4	R = Site Recharge Volume	13.76	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

Appendix C-3
SONIR Results, Proposed Action

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT **OLD ORCHARD WOODS**

DATA INPUT FIELD **Proposed Project (per R-80 Yield Map)** SHEET 1

A	*Site Recharge Parameters*	*Value*	*Units*
1	Area of Site	24.21	acres
2	Precipitation Rate	43.65	inches
3	Acreage of Lawn	3.00	acres
4	Fraction of Land in Lawn	0.124	fraction
5	Evapotranspiration from Lawn	22.40	inches
6	Runoff from Lawn	0.31	inches
7	Acreage of Impervious	2.50	acres
8	Fraction of Land Impervious	0.103	fraction
9	Evaporation from Impervious	4.37	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	1.96	acres
12	Fraction of Land Unvegetated	0.081	fraction
13	Evapotrans. from Unvegetated	20.00	inches
14	Runoff from Unvegetated	0.7	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	16.75	acres
20	Fraction of Land Natural	0.692	fraction
21	Evapotrans. from Natural Area	25.50	inches
22	Runoff from Natural Area	0.31	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	23.60	inches
26	Runoff from Other Area	0.31	inches
27	Acreage of Land Irrigated	3.00	acres
28	Fraction of Land Irrigated	0.124	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	10	units
31	Water Use per Dwelling	300	gal/day
32	Wastewater Design Flow	3,000	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	*Nitrogen Budget Parameters*	*Value*	*Units*
1	Persons per Dwelling	4.20	persons
2	Nitrogen per Person per Year	10.0	lbs
3	Sanitary Nitrogen Leaching Rate	50	percent
4	Area of Land Fertilized 1	3.00	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	3.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	14	percent
10	Pet Waste Application Rate	0.00	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50	percent
12	Area of Land Irrigated	3.00	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15	percent
15	Nitrogen in Precipitation	1.50	mg/l
16	Precipitation Nitrogen Leaching Rate	15	percent
17	Nitrogen in Water Supply	5.63	mg/l
18	Nitrogen in Commercial/STP Flow	10.00	mg/l

C	*Comments*
1)	Please refer to user manual for data input instructions.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Proposed Project (per R-80 Yield Map)

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.124	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.31	inches
5	R(l) = P - (E + Q)	20.94	inches
6	R(L) = R(l) x A	2.59	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.103	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	4.37	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	39.29	inches
6	R(I) = R(i) x A	4.06	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.081	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	0.70	inches
4	Q = Runoff Rate	0.00	inches
5	R(u) = P - (E + Q)	42.95	inches
6	R(U) = R(u) x A	3.48	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	13.65	inches
7	R(W) = R(w) x A	0.00	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.692	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	25.50	inches
4	Q = Runoff Rate	0.31	inches
5	R(n) = P - (E + Q)	17.84	inches
6	R(N) = R(n) x A	12.34	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	23.60	inches
4	Q = Runoff Rate	0.31	inches
5	R(o) = P - (E + Q)	19.74	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.124	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evaptranspiration Rate	2.82	inches
4	Q = Runoff Rate	0.31	inches
5	R(irr) = I - (E + Q)	2.37	inches
6	R(IRR) = R(irr) x A	0.29	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	6,600	gal/day
2	WDF = Wastewater Design Flow	322,059	cu ft/yr
3	A = Area of Site	1,054,588	sq ft
4	R(ww) = WDF/A	0.31	feet
5	R(WW) = Wastewater Recharge	3.66	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**26.43**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Proposed Project (per R-80 Yield Map)

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	10	units
2	Persons per Dwelling	4.20	capita
3	P = Population	42.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50	percent
6	N(S) = P x N x LR	210.00	lbs
7	N(S) = Sanitary Nitrogen	210.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	0.00	lbs/pet
2	Human Population	42	capita
3	Pets = 17 percent of capita	7	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	10.00	mg/l
4	N(S) = CF x N	0	milligrams
5	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen*		
1	WDF = Wastewater Design Flow	6,600	gal/day
2	WDF = Wastewater Design Flow	9,118,065	liters/yr
3	N = Nitrogen in Water Supply	5.63	mg/l
4	N(WW) = WDF x N	51,334,706	milligrams
5	N(WW) = Wastewater Nitrogen	113.19	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	130,680	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F1) = A x AR x LR	42.08	lbs
5	N(F1) = Fertilizer Nitrogen	42.08	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	3.00	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.87	feet
2	A = Area of Site (sq ft)	1,054,588	sq ft
3	R(N) = R(n) x A	1,974,845	cu ft
4	R(N) = Natural Recharge (liters)	55,927,617	liters
5	N = Nitrogen in Precipitation	1.50	mg/l
6	LR = Leaching Rate	15	percent
7	N(ppt) = P(S) x N x LR	1,258,371	milligrams
8	N(ppt) = Precipitation Nitrogen	2.77	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	2.37	inches
2	R = Irrigation Rate (feet)	0.20	feet
3	A = Area of Land Irrigated	130,680	sq ft
4	R(I) = R(irr) x A	25,783	cu ft
5	R(I) = Site Precipitation (liters)	730,163	liters
6	N = Nitrogen in Water Supply	5.63	mg/l
7	LR = Leaching Rate	15	percent
8	N(irr) = R(I) x N x LR	616,623	milligrams
9	N(irr) = Irrigation Nitrogen	1.36	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**369.41**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

OLD ORCHARD WOODS

Proposed Project (per R-80 Yield Map)

SHEET 4

FINAL COMPUTATIONS

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	369.41	lbs
2	N = Total Nitrogen (milligrams)	167,710,483	milligrams
3	R(T) = Total Recharge (inches)	26.43	inches
4	R(T) = Total Recharge (feet)	2.20	feet
5	A = Area of Site	1,054,588	sq ft
6	R = R(T) x A	2,322,704	cu ft
7	R = Site Recharge Volume	65,778,988	liters
9	NR = N/R	2.55	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

2.55

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	26.43	inches/yr
2	R = Site Recharge Volume	2,322,704	cu ft/yr
3	R = Site Recharge Volume	17,375,037	gal/yr
4	R = Site Recharge Volume	17.38	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

Appendix C-4

SONIR Results, Alternatives 2 & 3

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT **OLD ORCHARD WOODS**

DATA INPUT FIELD Alternative 2 **SHEET 1**

A	*Site Recharge Parameters*	*Value*	*Units*
1	Area of Site	24.21	acres
2	Precipitation Rate	43.65	inches
3	Acreage of Lawn	7.78	acres
4	Fraction of Land in Lawn	0.321	fraction
5	Evapotranspiration from Lawn	22.40	inches
6	Runoff from Lawn	0.31	inches
7	Acreage of Impervious	2.67	acres
8	Fraction of Land Impervious	0.110	fraction
9	Evaporation from Impervious	4.37	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	2.17	acres
12	Fraction of Land Unvegetated	0.090	fraction
13	Evapotrans. from Unvegetated	20.00	inches
14	Runoff from Unvegetated	0.7	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	11.59	acres
20	Fraction of Land Natural	0.479	fraction
21	Evapotrans. from Natural Area	25.50	inches
22	Runoff from Natural Area	0.31	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	23.60	inches
26	Runoff from Other Area	0.31	inches
27	Acreage of Land Irrigated	7.78	acres
28	Fraction of Land Irrigated	0.321	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	22	units
31	Water Use per Dwelling	300	gal/day
32	Wastewater Design Flow	6,600	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	*Nitrogen Budget Parameters*	*Value*	*Units*
1	Persons per Dwelling	4.27	persons
2	Nitrogen per Person per Year	10.0	lbs
3	Sanitary Nitrogen Leaching Rate	50	percent
4	Area of Land Fertilized 1	7.78	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	3.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	14	percent
10	Pet Waste Application Rate	0.00	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50	percent
12	Area of Land Irrigated	7.78	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15	percent
15	Nitrogen in Precipitation	1.50	mg/l
16	Precipitation Nitrogen Leaching Rate	15	percent
17	Nitrogen in Water Supply	5.63	mg/l
18	Nitrogen in Commercial/STP Flow	10.00	mg/l

C	*Comments*
1)	Please refer to user manual for data input instructions.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Alternative 2

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.321	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.31	inches
5	R(l) = P - (E + Q)	20.94	inches
6	R(L) = R(l) x A	6.73	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.110	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	4.37	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	39.29	inches
6	R(I) = R(i) x A	4.33	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.090	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	0.70	inches
4	Q = Runoff Rate	0.00	inches
5	R(u) = P - (E + Q)	42.95	inches
6	R(U) = R(u) x A	3.85	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	13.65	inches
7	R(W) = R(w) x A	0.00	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.479	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	25.50	inches
4	Q = Runoff Rate	0.31	inches
5	R(n) = P - (E + Q)	17.84	inches
6	R(N) = R(n) x A	8.54	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	23.60	inches
4	Q = Runoff Rate	0.31	inches
5	R(o) = P - (E + Q)	19.74	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.321	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evaptranspiration Rate	2.82	inches
4	Q = Runoff Rate	0.31	inches
5	R(irr) = I - (E + Q)	2.37	inches
6	R(IRR) = R(irr) x A	0.76	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	6,600	gal/day
2	WDF = Wastewater Design Flow	322,059	cu ft/yr
3	A = Area of Site	1,054,588	sq ft
4	R(ww) = WDF/A	0.31	feet
5	R(WW) = Wastewater Recharge	3.66	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**27.88**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Alternative 2

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	22	units
2	Persons per Dwelling	4.27	capita
3	P = Population	93.94	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50	percent
6	N(S) = P x N x LR	469.70	lbs
7	N(S) = Sanitary Nitrogen	469.70	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	0.00	lbs/pet
2	Human Population	94	capita
3	Pets = 17 percent of capita	16	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	10.00	mg/l
4	N(S) = CF x N	0	milligrams
5	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen*		
1	WDF = Wastewater Design Flow	6,600	gal/day
2	WDF = Wastewater Design Flow	9,118,065	liters/yr
3	N = Nitrogen in Water Supply	5.63	mg/l
4	N(WW) = WDF x N	51,334,706	milligrams
5	N(WW) = Wastewater Nitrogen	113.19	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	338,897	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F1) = A x AR x LR	109.12	lbs
5	N(F1) = Fertilizer Nitrogen	109.12	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	3.00	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.95	feet
2	A = Area of Site (sq ft)	1,054,588	sq ft
3	R(N) = R(n) x A	2,061,010	cu ft
4	R(N) = Natural Recharge (liters)	58,367,793	liters
5	N = Nitrogen in Precipitation	1.50	mg/l
6	LR = Leaching Rate	15	percent
7	N(ppt) = P(S) x N x LR	1,313,275	milligrams
8	N(ppt) = Precipitation Nitrogen	2.90	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	2.37	inches
2	R = Irrigation Rate (feet)	0.20	feet
3	A = Area of Land Irrigated	338,897	sq ft
4	R(I) = R(irr) x A	66,863	cu ft
5	R(I) = Site Precipitation (liters)	1,893,557	liters
6	N = Nitrogen in Water Supply	5.63	mg/l
7	LR = Leaching Rate	15	percent
8	N(irr) = R(I) x N x LR	1,599,109	milligrams
9	N(irr) = Irrigation Nitrogen	3.53	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**698.44**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT **OLD ORCHARD WOODS**

Alternative 2

SHEET 4

FINAL COMPUTATIONS

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	698.44	lbs
2	N = Total Nitrogen (milligrams)	317,091,580	milligrams
3	R(T) = Total Recharge (inches)	27.88	inches
4	R(T) = Total Recharge (feet)	2.32	feet
5	A = Area of Site	1,054,588	sq ft
6	R = R(T) x A	2,449,932	cu ft
7	R = Site Recharge Volume	69,382,061	liters
9	NR = N/R	4.57	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

4.57

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	27.88	inches/yr
2	R = Site Recharge Volume	2,449,932	cu ft/yr
3	R = Site Recharge Volume	18,326,762	gal/yr
4	R = Site Recharge Volume	18.33	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT **OLD ORCHARD WOODS**

Alternative 3 (per Revised R-80 Yield) **SHEET 1**

DATA INPUT FIELD

A	*Site Recharge Parameters*	*Value*	*Units*
1	Area of Site	24.21	acres
2	Precipitation Rate	43.65	inches
3	Acreage of Lawn	3.01	acres
4	Fraction of Land in Lawn	0.124	fraction
5	Evapotranspiration from Lawn	22.40	inches
6	Runoff from Lawn	0.31	inches
7	Acreage of Impervious	2.46	acres
8	Fraction of Land Impervious	0.102	fraction
9	Evaporation from Impervious	4.37	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	1.96	acres
12	Fraction of Land Unvegetated	0.081	fraction
13	Evapotrans. from Unvegetated	20.00	inches
14	Runoff from Unvegetated	0.7	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	16.78	acres
20	Fraction of Land Natural	0.693	fraction
21	Evapotrans. from Natural Area	25.50	inches
22	Runoff from Natural Area	0.31	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	23.60	inches
26	Runoff from Other Area	0.31	inches
27	Acreage of Land Irrigated	3.01	acres
28	Fraction of Land Irrigated	0.124	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	10	units
31	Water Use per Dwelling	300	gal/day
32	Wastewater Design Flow	3,000	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	*Nitrogen Budget Parameters*	*Value*	*Units*
1	Persons per Dwelling	4.20	persons
2	Nitrogen per Person per Year	10.0	lbs
3	Sanitary Nitrogen Leaching Rate	50	percent
4	Area of Land Fertilized 1	3.01	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	3.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	14	percent
10	Pet Waste Application Rate	0.00	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50	percent
12	Area of Land Irrigated	3.01	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15	percent
15	Nitrogen in Precipitation	1.50	mg/l
16	Precipitation Nitrogen Leaching Rate	15	percent
17	Nitrogen in Water Supply	5.63	mg/l
18	Nitrogen in Commercial/STP Flow	10.00	mg/l

C	*Comments*
1)	Please refer to user manual for data input instructions.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

Alternative 3 (per Revised R-80 Yield) SHEET 2

SITE RECHARGE COMPUTATIONS

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.124	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.31	inches
5	R(l) = P - (E + Q)	20.94	inches
6	R(L) = R(l) x A	2.60	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.102	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	4.37	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	39.29	inches
6	R(I) = R(i) x A	3.99	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.081	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	0.70	inches
4	Q = Runoff Rate	0.00	inches
5	R(u) = P - (E + Q)	42.95	inches
6	R(U) = R(u) x A	3.48	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	13.65	inches
7	R(W) = R(w) x A	0.00	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.693	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	25.50	inches
4	Q = Runoff Rate	0.31	inches
5	R(n) = P - (E + Q)	17.84	inches
6	R(N) = R(n) x A	12.36	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	43.65	inches
3	E = Evapotranspiration Rate	23.60	inches
4	Q = Runoff Rate	0.31	inches
5	R(o) = P - (E + Q)	19.74	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.124	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evaptranspiration Rate	2.82	inches
4	Q = Runoff Rate	0.31	inches
5	R(irr) = I - (E + Q)	2.37	inches
6	R(IRR) = R(irr) x A	0.29	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	6,600	gal/day
2	WDF = Wastewater Design Flow	322,059	cu ft/yr
3	A = Area of Site	1,054,588	sq ft
4	R(ww) = WDF/A	0.31	feet
5	R(WW) = Wastewater Recharge	3.66	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**26.40**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Alternative 3 (per Revised R-80 Yield)

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	10	units
2	Persons per Dwelling	4.20	capita
3	P = Population	42.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50	percent
6	N(S) = P x N x LR	210.00	lbs
7	N(S) = Sanitary Nitrogen	210.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	0.00	lbs/pet
2	Human Population	42	capita
3	Pets = 17 percent of capita	7	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	10.00	mg/l
4	N(S) = CF x N	0	milligrams
5	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen*		
1	WDF = Wastewater Design Flow	6,600	gal/day
2	WDF = Wastewater Design Flow	9,118,065	liters/yr
3	N = Nitrogen in Water Supply	5.63	mg/l
4	N(WW) = WDF x N	51,334,706	milligrams
5	N(WW) = Wastewater Nitrogen	113.19	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	131,116	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F1) = A x AR x LR	42.22	lbs
5	N(F1) = Fertilizer Nitrogen	42.22	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	3.00	lbs/1000 sf
3	LR = Leaching Rate	14	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.87	feet
2	A = Area of Site (sq ft)	1,054,588	sq ft
3	R(N) = R(n) x A	1,971,844	cu ft
4	R(N) = Natural Recharge (liters)	55,842,621	liters
5	N = Nitrogen in Precipitation	1.50	mg/l
6	LR = Leaching Rate	15	percent
7	N(ppt) = P(S) x N x LR	1,256,459	milligrams
8	N(ppt) = Precipitation Nitrogen	2.77	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	2.37	inches
2	R = Irrigation Rate (feet)	0.20	feet
3	A = Area of Land Irrigated	131,116	sq ft
4	R(I) = R(irr) x A	25,869	cu ft
5	R(I) = Site Precipitation (liters)	732,597	liters
6	N = Nitrogen in Water Supply	5.63	mg/l
7	LR = Leaching Rate	15	percent
8	N(irr) = R(I) x N x LR	618,678	milligrams
9	N(irr) = Irrigation Nitrogen	1.36	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**369.55**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

OLD ORCHARD WOODS

Alternative 3 (per Revised R-80 Yield)

SHEET 4

FINAL COMPUTATIONS

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	369.55	lbs
2	N = Total Nitrogen (milligrams)	167,774,305	milligrams
3	R(T) = Total Recharge (inches)	26.40	inches
4	R(T) = Total Recharge (feet)	2.20	feet
5	A = Area of Site	1,054,588	sq ft
6	R = R(T) x A	2,319,771	cu ft
7	R = Site Recharge Volume	65,695,929	liters
9	NR = N/R	2.55	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

2.55

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	26.40	inches/yr
2	R = Site Recharge Volume	2,319,771	cu ft/yr
3	R = Site Recharge Volume	17,353,097	gal/yr
4	R = Site Recharge Volume	17.35	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

APPENDIX D

ECOLOGY-RELATED DOCUMENTS

Appendix D-1
Natural Heritage Program Letter

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E.
• CHRISTOPHER W. ROBINSON, P.E.

February 19, 1999

Jean Petrusiak, Director
Informational Services
NYSDEC Significant Habitat Unit
New York State Department of Environmental Conservation
Wildlife Resources Center
700 Troy-Schenectady Road
Latham, New York 12110-2400

Re: Request for Significant Habitat Program/Natural Heritage Program File Review and Breeding Bird Survey Census Block Data for a ±24 acre site located on the west side of North Creek Road in Eaton's Neck, Town of Huntington, Suffolk County, N.Y.

Dear Ms. Petrusiak:

My firm has been retained by the owner of the above referenced parcel to investigate the environmental resources associated with the site. The site is currently forested and contains 3 residences and several sheds. The proposed project involves a 22 lot subdivision. In particular, the Town has requested that we determine whether any protected, threatened and/or endangered wildlife species are active in the vicinity of the site.

It would be beneficial to consult the Significant Habitat Program and Natural Heritage Program files for any information you may have regarding unique habitats, and/or species of vegetation and wildlife. We would also like to obtain data from the 1988 Breeding Bird Survey for the census block containing the project site. Enclosed is a portion of the Lloyd Harbor 7.5 minute quadrangle with the location of the project site superimposed. Please provide any information you may have on this specific site or other unique ecological features within the vicinity, as well as a list of breeding birds that were identified within the census block for the 1988 survey. Your attention to this request would be greatly appreciated. Please do not hesitate to call if you have any questions regarding this correspondence.

Thank you,
Nelson, Pope & Voorhis

Shana M. Lacey

enc.: map

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Wildlife Resources Center - New York Natural Heritage Program
700 Troy-Schenectady Road, Latham, New York 12110-2400
Phone: (518) 783-3932 FAX: (518) 783-3916

John P. Cahill
Commissioner

September 2, 1998

Ms. Shana Lacey
Nelson, Pope & Voorhis
572 Walt Whitman Road
Melville, NY 11747

Dear Ms. Lacey:

We have reviewed the New York Natural Heritage Program files with respect to your recent request for biological information concerning the proposed 24.4-acre residential subdivision located in the Town of Huntington, Suffolk County.

Enclosed is a computer printout covering the area you requested to be reviewed by our staff. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

Your project location is within, or adjacent to, a designated Significant Coastal Fish and Wildlife Habitat. This habitat is part of New York State's Coastal Management Program (CMP), which is administered by the NYS Department of State (DOS). The DOS reviews projects that may impact the habitat for consistency with the CMP. For more information regarding this designated habitat and applicable consistency review requirements, please contact:

Greg Capobianco or Steven C. Resler - (518) 474-6000
NYS Department of State
Division of Coastal Resources and Waterfront Revitalization
162 Washington Avenue, Albany, NY 12231

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data that have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. Please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the address enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State Law.

If this proposed project is still active one year from now we recommend that you contact us again so that we can update this response.

Sincerely,

Teresa Mackey

Teresa Mackey, Information Services
NY Natural Heritage Program

Enclosures
cc: Reg. 1, Wildlife Mgr.
Reg. 1, Fisheries Mgr.

SIGNIFICANT HABITATS

DATE : 09/01/98

REPORT ID#	NAME OF AREA	TYPE OF AREA	COUNTY	TOWN OR CITY	QUADRANGLE	LATITUDE (DEG MIN SEC)	LONGITUDE
SW 52-057	Eaton's Neck Point	Tern Nesting Area	Suffolk	Huntington	Lloyd Harbor	40 57 09	73 24 11
SW 52-529	Huntington Bay	Tern Nesting Area	Suffolk	Huntington	Lloyd Harbor	40 54 59	73 23 49

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL PERMITS REGIONAL OFFICES

REGION	COUNTIES	NAME	ADDRESS AND PHONE NO.
Region 1	Nassau Suffolk	Robert Greene Permit Administrator	Loop Road, Bldg. 40 SUNY Stony Brook, NY 11790-2356 (516) 444-0365
Region 2	New York City	George Danskin Permit Administrator	Hunters Point Plaza 4740 21st Street Long Island City, NY 11101-5407 (718) 482-4997
Region 3	Dutchess Orange Putnam Rockland, Sullivan Ulster, Westchester	Margaret Duke Permit Administrator	21 South Putt Corners Road New Paltz, NY 12561-1696 (914) 256-3059
Region 4	Albany Columbia Delaware Greene, Montgomery, Otsego Rensselaer, Schenectady, Schoharie	William J. Clarke Permit Administrator	1150 N. Westcott Road Schenectady, NY 12306-2014 (518) 357-2234
Region 5	Clinton Essex Franklin Fulton, Hamilton Saratoga, Warren, Washington	Richard Wild Permit Administrator	Route 86 Ray Brook, NY 12977 (518) 897-1234
Region 6	Herkimer Jefferson Lewis Oneida, St. Lawrence	Randy Vaas Permit Administrator	State Office Building 317 Washington Street Watertown, NY 13601 (315) 785-2246
Region 7	Broome Cayuga Chenango Cortland, Madison, Onondaga Oswego, Tioga, Tompkins	Ralph Manna, Jr. Permit Administrator	615 Erie Blvd. West Syracuse, NY 13204-2400 (315) 426-7439
Region 8	Chemung Genesee Livingston Monroe, Ontario, Orleans Schuyler, Seneca, Steuben Wayne, Yates	Albert Butkas Permit Administrator	6274 East Avon-Lima Road Avon, NY 14414 (716) 226-2466
Region 9	Allegany Cattaraugus Chautauqua Erie, Niagara, Wyoming	Steven Doleski Permit Administrator	270 Michigan Avenue Buffalo, NY 14203-2999 (716) 851-7165

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Wildlife Resources Center – New York Natural Heritage Program
700 Troy-Schenectady Road, Latham, New York 12110-2400
Phone: (518) 783-3932 FAX: (518) 783-3916

John P. Cahill
Commissioner

April 6, 1999

Shana M. Lacey
Nelson, Pope & Voorhis
572 Walt Whitman Rd
Melville, NY 11747-2188

Dear Ms. Lacey:

We have reviewed the New York Natural Heritage Program files with respect to your recent request for biological information concerning the proposed 24 acre parcel subdivision, site as indicated on your enclosed map, located in the Town of Huntington, Suffolk County.

We have no records of known occurrences of endangered, threatened, or special concern wildlife species, of rare plants, animals, or significant natural communities, or of other significant habitats on your site, nor in the immediate vicinity of your site.
Enclosed is the Breeding Bird Atlas data you requested.

The absence of data does not necessarily mean that rare or endangered species, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files currently do not contain any information which indicates the presence of these. Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of species, habitats or communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. Please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the address enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State Law.

Sincerely,

Carole Flood

Carole L. Flood, Information Services
NY Natural Heritage Program

Encs.
Cc: Reg. 1, Wildlife Mgr..

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL PERMITS REGIONAL OFFICES

REGION	COUNTIES	NAME	ADDRESS AND PHONE NO.
Region 1	Nassau Suffolk	Robert Greene Permit Administrator	Loop Road, Bldg. 40 SUNY Stony Brook, NY 11790-2356 (516) 444-0365
Region 2	New York City	George Danskin Permit Administrator	Hunters Point Plaza 4740 21st Street Long Island City, NY 11101-5407 (718) 482-4997
Region 3	Dutchess Orange Putnam Rockland, Sullivan Ulster, Westchester	Margaret Duke Permit Administrator	21 South Putt Corners Road New Paltz, NY 12561-1696 (914) 256-3059
Region 4	Albany Columbia Delaware Greene, Montgomery, Otsego Rensselaer, Schenectady, Schoharie	William J. Clarke Permit Administrator	1150 N. Westcott Road Schenectady, NY 12306-2014 (518) 357-2234
Region 5	Clinton Essex Franklin Fulton, Hamilton Saratoga, Warren, Washington	Richard Wild Permit Administrator	Route 86 Ray Brook, NY 12977 (518) 897-1234
Region 6	Herkimer Jefferson Lewis Oneida, St. Lawrence	Randy Vaas Permit Administrator	State Office Building 317 Washington Street Watertown, NY 13601 (315) 785-2246
Region 7	Broome Cayuga Chenango Cortland, Madison, Onondaga Oswego, Tioga, Tompkins	Ralph Manna, Jr. Permit Administrator	615 Erie Blvd. West Syracuse, NY 13204-2400 (315) 426-7439
Region 8	Chemung Genesee Livingston Monroe, Ontario, Orleans Schuyler, Seneca, Steuben Wayne, Yates	Albert Butkas Permit Administrator	6274 East Avon-Lima Road Avon, NY 14414 (716) 226-2466
Region 9	Allegany Cattaraugus Chautauqua Erie, Niagara, Wyoming	Steven Doleski Permit Administrator	270 Michigan Avenue Buffalo, NY 14203-2999 (716) 851-7165

Appendix D-2
Wildlife Habitat Model - Species List

PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE (POWER)

NELSON, POPE & VOORHIS, LLC, MICROCOMPUTER MODEL

SPECIES LIST

Appendix D-2

INTRODUCTION

This appendix has been included to present the results of a computer model used to investigate the various wildlife species which can be expected to be found on the site considering the habitats established. This model was developed by for use by Nelson, Pope & Voorhis, LLC using available information and references for the various species. The model utilizes the Lotus 1-2-3 spreadsheet to identify wildlife species commonly found in various Long Island habitats, based upon thorough research of available literature. The habitats investigated consisted of Moist Oak Forest (Oak-Tulip Forest) and Beach. Some of the species listed in this model would not be expected on the property given the surrounding development, but are present in similar habitats.

The first column identifies the common name of the species, presented with the main common name in alphabetical order (for example: red-tailed hawk would come before blue jay). The scientific name of particular species is in second column. The third column shows the legal status of the species, of which there are four possible entries (Endangered, Threatened, Special Concern and Local Concern). The fourth column indicates the seasons during which the species might be expected to be present and the and fifth column, of particular importance to the environmental setting, contains information on frequency of the species in the habitat (abundant, common, rare and non expected); the species activity in the habitat (nesting, hunting and resting). References are provided with the reference list provided at the end of the appendix. The printout contained in this appendix, coupled with the discussions provided in the main body of the report, provides significant information of the wildlife found, or expected to be found on site.

Moist oak Forest Species - Inventory and Characteristics

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			Winter	Spring	Summer	Fall		
Birds	**Birds**							
black capped chickadee	*Parus atricapillus*	none	X	X	X	X	A / N,F	4 11
brown creeper	*Certhia familiaris*	none		X	X	Early	C / N,F	4 9
American crow	*Corvus brachyrhynchos*	none	X	X	X	X	A / N,H	4 11
black-billed cuckoo	*Coccyzus erythropthalmus*	none		Late	X		R / N,F	4 11
yellow-billed cuckoo	*Coccyzus americanus*	none		Late	X		R / N,F	4 12
common flicker	*Colaptus auratus*	none	X	X	X	X	C / N,F	4 14
Acadian flycatcher	*Empidonax virescens*	none		Late	X		R / N,F	4 15
great-crested flycatcher	*Myiarchus crinitus*	none		Late	X		C / N,F	4 15
blue-grey gnatcatcher	*Polioptila caerulea*	none		X	X		R / N,F	4 7
common grackle	*Quiscalus quiscula*	none	X	X	X	X	C / N,F	4 6
rose-breasted grosbeak	*Pheucticus ludovicianus*	none		Late	X	Early	C / N,F	4 20
broad-winged hawk	*Buteo platypterus*	none		X	X		R / N,H	4 16
Cooper's hawk	*Accipiter cooperii*	special concern		X	X		N / N,H	4 17
red-tailed hawk	*Buteo jamaicensis*	none	X	X	X	X	C / N,H	4 16
sharp-shinned hawk	*Accipiter striatus*	none	X	X	X	X	N / N,F	4 16
blue jay	*Cyanocitta cristatta*	none	X	X	X	X	A / N,F	4 10
Northern (dark-eyed) junco	*Junco hyemalis*	none		X	X	Early	N / N,F	4 21
golden-crowned kinglet	*Regulus satrapa*	none	X	X		X	R / N,H	4 7
ruby-crowned kinglet	*Regulus calendula*	none	X	X		X	R / N,H	4 7
white-breasted nuthatch	*Sitta carolinensis*	none	X	X	X	X	A / N,F	4 9
northern oriole	*Icterus galbula*	none		Late	X		C / N,F	4 6
common screech owl	*Otus asio*	none	X	X	X	X	C / N	4 17
great-horned owl	*Bubo virginianus*	none	X	X	X	X	C / N,H	4 17
long-eared owl	*Asio otus*	none	X	X	X	X	C / N,H	4 17
American robin	*Turdus migratorius*	none		X	X	Early	A / N,F	4 7
yellow-bellied sapsucker	*Sphyrapicus varius*	none		Late	X	Early	C / N,F	14
European starling	*Sturnus vulgaris*	none	X	X	X	X	C / N,F	4 23
scarlet tanager	*Piranga olivacea*	none		X	X		C / N,F	4
brown thrasher	*Toxostoma rufum*	none		X	X	Early	R / N,F	4 9
hermit thrush	*Catharus guttatus*	none	X	X	X	X	C / N,F	4 7
wood thrush	*Hylocichla mustelina*	none		X	X	Early	C / N,F	4 7

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			Winter	Spring	Summer	Fall		
tufted titmouse	*Parus bicolor*	none	X	X	X	X	C / N,F	4 11
veery	*Catharus fuscescens*	none		Late	X		C / N,F	4 7
red-eyed vireo	*Vireo olivaceus*	none		Late	X		C / N,F	4 23
yellow throated vireo	*Vireo flavifrons*	none		Late	X		C / N,F	4 23
blue-winged warbler	*Vermivora pinus*	none		Late	X		R / N,F	4 14
cedar waxwing	*Bombycilla cedrorum*	none		X	X	Early	C / N,F	4 23 32
Eastern wood-peewee	*Contopus virens*	none		X	X		C / N,F	4 15
American woodcock	*Philhela minor*	none		X	X	X	C / N,F	4 30
downy woodpecker	*Picoides pubescens*	none	X	X	X	X	A / N,F	4 14
hairy woodpecker	*Picoides villosus*	none	X	X	X	X	C / N,F	4 14
red-bellied woodpecker	*Melanerpes carolinus*	none	X	X	X	X	C / N,F	4 14
house wren	*Troglodytes aedon*	none		Late	X	Early	R / N,F	4 9
Mammals								
big-brown bat	*Eptesicus fuscus*	none	X	X	X	X	C / N,F	1 29
hoary bat	*Lasiurus borealis*	none			Late	Early	C / N,F	45
Keen's bat	*Myotis keenii*	none			X	Early	R / N	1 29
little-brown bat	*Myotis lucifugus*	none	X	X	X	X	C / N,F	1 29
red bat	*Lasiurus borealis*	none		Late	X	Early	C / N,F	1 29
Eastern pipistrelle	*Pipistrellus subflavus*	none		X	X	Early	R / N,F	1 29
silver-haired bat	*Lasionycteris noctivagans*	none			X		R / N,F	1 29
Eastern chipmunk	*Tamis striatus*	none	X	X	X	X	C / N,F	1 29
Eastern cottontail	*Sylvilagus floridanus*	none	X	X	X	X	C / N,F	1 29
white-tailed deer	*Odocoileus virginianus*	none	X	X	X	X	C / N,F	1 25 29
red fox	*Vulpes vulpes*	none	X	X	X	X	C / H	1 29
Eastern mole	*Scalopus aquaticus*	none	X	X	X	X	R / N,F	1 29
meadow-jumping mouse	*Zapus hudsonicus*	none	X	X	X	X	R / N,F	1 29
white-footed mouse	*Peromyscus leucopus*	none	X	X	X	X	C / N,F	1 29
Virginia opossum	*Didelphis virginiana*	none	X	X	X	X	C / N,F	1 29
racoon	*Procyon lotor*	none	X	X	X	X	C / N,F	1 29
masked shrew	*Sorex cinereus*	none	X	X	X	X	C / N,F	1 29
short-tailed shrew	*Blarina breuicauda*	none	X	X	X	X	A / N,F	1 29
striped skunk	*Mephitis mephitis*	none	X	X	X	X	N / N,F	1 29
Eastern gray squirrel	*Sciurus carolinensis*	none	X	X	X	X	A / N,F	1 29
southern-flying squirrel	*Glaucimys volans*	none	X	X	X	X	C / N,F	1 29

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			Winter	Spring	Summer	Fall		
meadow vole	*Microtus pennsylvanicus*	none	X	X	X	X	R / N,F	29 45
pine vole	*Microtus pinetorum*	none	X	X	X	X	C / N,F	1 29
long-tailed weasel	*Mustela frenata*	none	X	X	X	X	R / N,H	1 29
Herptiles								
common gray treefrog	*Hyla versicolor*	none	X	X	X	X	C / N,F	33 37
wood frog	*Rana sylvatica*	none	X	X	X	X	R / N,F	33 37
red-spotted newt	*Notophthalmus viridescens*	none	X	X	X	X	C / F	36 38
spring peeper	*Hyla crucifer*	none	X	X	X	X	C / N,F	33 35 38
red-backed salamander	*Plethodon cinerus cinerus*	none	X	X	X	X	C / N,F	34 36
spotted salamander	*Ambystoma maculatum*	special concern	X	X	X	X	R / N,F	34 36 38
marbled salamander	*Ambystoma opacum*	none	X	X	X	X	R / N,F	34 36 38
Eastern garter snake	*Thamnophis sirtalis*	none	X	X	X	X	C / N,F	38 40
eastern milk snake	*Lampropettis d. triangulum*	none	X	X	X	X	C / N,F	38 39
Northern brown snake	*Storeria dekayi*	none	X	X	X	X	C / N,H	38
Northern ringneck snake	*Diadophis punctatus*	none	X	X	X	X	C / N,H	38

Beach Species : Inventory and Characteristics

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			winter	spring	summer	fall		
Birds								
fish crow	*Corvus ossifragus*	none	X	X	X	X	C / H	4 11
short-billed dowitcher	*Limnodromus griseus*	none		X	X	Early	R / F	32
gadwall	*Anas strepera*	none		Late	X	X	N / N,F	4 27
Bonaparte's gull	*Larus philadelphia*	none	X	X		X	R / F	24
great-black-backed gull	*Larus marinus*	none	X	X	X	X	C / N,F	4 24
herring gull	*Larus argentatus*	none	X	X	X	X	C / N,F	4 24
ring-billed gull	*Larus delawarensis*	none	X	X	X	X	N / N,F	4 24
little-blue heron	*Egretta caerulea*	none		Late	X		R / N,F	4 26
yellow-crowned night-heron	*Nycticorax violaceus*	none	X	X	X	X	C / H	4 26
common loon	*Gavia immer*	special concern	X			X	C / N,F	31 32
red-throated loon	*Gavia stellata*	none	X			X	R / N,F	32 42
red-breasted merganser	*Mergus serrator*	none	X	X	X	X	R / N,F	4 27
merlin	*Falco columbarius*	none				X	R / H	32 17
osprey	*Pandion haliaetus*	threatened		X	X	Early	C / N	4 16
short-eared owl	*Asio flammeus*	special concern	X	X	X	X	N / N,H	4 17
American oystercatcher	*Haematopus palliatus*	none	X	X	X	X	C / N,F	4 31
black-bellied plover	*Pluvialis squatarola*	none		Early	X	Early	N / F	31 32
piping plover	*Charadrius melodus*	endangered		X	X		C / N,F	4 31 32
semipalmated plover	*Charadrius semipalmatu*	none		Late	X	Early	C / F	31 32
sanderling	*Calidris alba*	none	X		Late	X	C / F	30 32
semipalmated sandpiper	*Calidris pusilla*	none		X	X	Early	C / F	32
spotted sandpiper	*Actitus macularia*	none		X	X	Early	C / N,F	4 31 32
black skimmer	*Rynchops niger*	none		Late	X		C / N	4 24
Savannah sparrow	*Passerculus sandwichen*	none		X	X	Early	C / N,F	4 21
seaside sparrow	*Ammodramus maritimus*	none	X	X	X	X	C / F	4 21
European starling	*Sturnus vulgaris*	none	X	X	X	X	R / N,F	4 23
common tern	*Sterna hirundo*	threatened		Late	X		C / N,F	4 24
least tern	*Sterna antillarum*	endangered		Late	X		C / N,F	4 24
roseate tern	*Sterna dougallii*	endangered		Late	X	Early	R / N,F	4 24
ruddy turnstone	*Arenaria interpres*	none	X				C / F	31 32
willet	*Catoptrophorus semipal*	none		X	X	Early	C / F	4 31

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			winter	spring	summer	fall		
Mammals								
Keen's bat	*Myotis keenii*	none			X	Early	R / N	1 29
little-brown bat	*Myotis lucifugus*	none	X	X	X	X	C / H	1 29
red bat	*Lasiurus borealis*	none		Late	X	Early	R / F	1 29
silver-haired bat	*Lasionycteris noctivagan*	none			X		R / N,F	1 29
Eastern cottontail	*Sylvilagus floridanus*	none	X	X	X	X	R / F	1 29
white-tailed deer	*Odocoileus virginianus*	none	X	X	X	X	C / F	1 25 29
red fox	*Vulpes vulpes*	none	X	X	X	X	C / N,H	1 29
mink	*Mustela vison*	none	X	X	X	X	C / N,F	1
Eastern mole	*Scalopus aquaticus*	none	X	X	X	X	R / N,F	1 29
house mouse	*Mus musculus*	none	X	X	X	X	R / N,F	1 29
meadow-jumping mouse	*Zapus hudsonicus*	none	X	X	X	X	R / N,F	1 29
white-footed mouse	*Peromyscus leucopus*	none	X	X	X	X	R / F	1 29
Virginia opossum	*Didelphis virginiana*	none	X	X	X	X	C / F	1 29
racoon	*Procyon lotor*	none	X	X	X	X	R / N,F	1 29
Norway rat	*Rattus norvegicus*	none	X	X	X	X	C / N,F	1 29
masked shrew	*Sorex cinereus*	none	X	X	X	X	C / N,F	1 29
Eastern gray squirrel	*Sciurus carolinensis*	none	X	X	X	X	N / F	1 29
pine vole	*Microtus pinetorum*	none	X	X	X	X	R / N,F	1 29
long-tailed weasel	*Mustela frenata*	none	X	X	X	X	R / N,H	1 29
Herptiles							\	
Fowler's toad	*Bufo woodhousei fowleri*	none	X	X	X	X	C / F	33 37

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Appendix D-3
NYSDEC Breeding Bird Survey

New York State
Breeding Bird Atlas

The enclosed data from the New York State Breeding Bird Atlas represents a cumulative effort from 1980-1985. These data are the result of on-site surveys within each block conducted by numerous volunteers. The intensity level and effort in data collecting varies throughout the State. Some blocks have been more thoroughly searched than others. For these reasons, we cannot provide a definitive statement concerning the absence of a breeding record for a species not listed in a block. We can only provide a listing of species known to be breeding or suspected of breeding in each block.

The highest level of confirmation of breeding recorded during the Atlas was retained in this listing. For example, a record of probable nesting "T2" (Bird Holding Territory) in 1983 would be retained over a possible nesting "X1" (Species Observed in Possible Nesting Habitat) in 1984 and over a probable nesting "P2" (Pair Observed in Suitable Nesting Habitat) in 1985 since "T2" is the highest level of breeding evidence in this example.

Atlas block boundaries can be identified by the New York Transverse Mercator (NYTM) grid, a modification of the Universal Transverse Mercator (UTM) grid. Coordinates for the block are included in the heading on page 1 of each printout. These coordinates correspond to tick marks found on United States Geological Survey (USGS) and New York State Department of Transportation (NYSDOT) 7.5' quadrangles. In New York west of 78 degrees longitude and in extreme eastern Long Island, east of 72 degrees longitude (Montauk Point and Mystic quadrangles) the NYTM grid differs from the UTM grid. In these areas tick marks are accurate only on the NYSDOT quadrangles. Do not use USGS quadrangles to identify Atlas block boundaries in these areas.

Political jurisdiction(s) within each Atlas block are also included in the heading on page 1. County(ies) and Town(s) or City(ies), American Indian lands, neighboring states and/or Canada are listed if more than five percent (5%) of the area within the block occurs in the jurisdiction. In addition, an estimated percentage of the block area within each jurisdiction is included.

Definitions of the New York State legal status and the Natural Heritage Program (NHP) State ranking are provided on the enclosed sheet entitled "New York State Breeding Bird Atlas Species Status." The NHP rank reflects "believed" rarity within the State. It does not confer any legal protection to the species and is meant only as a "working" list, subject to frequent changes based upon the most recent data available.

New York State Breeding Bird Atlas
Species Status

New York State Legal Status

Endangered - any species which meet one of the following criteria:

1) Any native species in imminent danger of extirpation or extinction in New York.

2) Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

Threatened - any species which meet one of the following criteria:

1) Any native species likely to become an endangered species within the foreseeable future in New York.

2) Any species listed as threatened by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11, and not listed as endangered in New York.

Protected-Special Concern - those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York and are Federally protected wild birds.

Protected-Game Species - species classified as small game in New York by Environmental Conservation Law, may have an open season for part of the year and are protected at other times.

Protected - those species listed as wild game, protected wild birds, and endangered species as defined in the Environmental Conservation Law.

Unprotected - species which may be taken at any time without limit; however, a license to take may be required.

NEW YORK STATE BREEDING BIRD ATLAS
KEY TO BREEDING EVIDENCE

CODE DEFINITION OF CRITERIA

Possible Breeding

X1 Species observed in possible nesting habitat but no other indication of breeding noted, or singing male(s) present (or breeding calls heard), in breeding season (based upon one visit).

Probable Breeding

P2 Pair observed in suitable habitat in breeding season.

S2 Singing male present (or breeding calls heard) on more than one date in the same place.

T2 Bird (or pair) apparently holding territory.

D2 Courtship and display, agitated behavior or anxiety calls from adults suggesting probable presence nearby of a nest or young; well-developed brood-patch or cloacal protuberance on trapped adult. Includes copulation.

N2 Visiting probable nest site. Nest building by wrens and woodpeckers.

B2 Nest building or excavation of a nest hole.

Confirmed Breeding

DD Distraction display or injury-feigning.

UN Used nest found.

FE Female with egg in the oviduct.

FL Recently fledged young (including downy young of precocial species - waterfowl, shorebirds).

ON Adult(s) entering or leaving nest site in circumstances indicating occupied nest.

FS Adult carrying fecal sac.

FY Adult(s) with food for young.

NE Identifiable nest and eggs, bird setting on nest or eggs, identifiable eggshells found beneath nest, or identifiable dead nestling(s).

NY Nest with young.

NEW YORK STATE BREEDING BIRD ATLAS

PAGE : 1 BLOCK : 6253D COMPLETE BLOCK LISTING

---------- NYTM COORDINATES IN METERS ----------

NORTH : 4535000 SOUTH : 4530000 EAST : 635000 WEST : 630000

---------- JURISDICTION (COUNTY-TOWN/CITY,PERCENT) ----------

1) Suffolk Co. - Huntington 100%

COMMON NAME	SCIENTIFIC NAME	BREEDING CODE	YEAR	NEW YORK LEGAL STATUS	NATURAL HERITAGE PROGRAM STATE RANK
Green-backed Heron	Butorides striatus	X1	81	Protected	S5
Snowy Egret	Egretta thula	X1	81	Protected	S2S3
Black-crowned Night-Heron	Nycticorax nycticorax	X1	81	Protected	S3
Yellow-crowned Night-Heron	Nyctanassa violaceus	N2	83	Protected	S2
Mute Swan	Cygnus olor	NE	81	Protected	SE
Canada Goose	Branta canadensis	NY	83	Game Species	S5
Mallard	Anas platyrhynchos	NY	81	Game Species	S5
Red-tailed Hawk	Buteo jamaicensis	T2	83	Protected	S5
Osprey	Pandion haliaetus	X1	82	Threatened	S4
American Kestrel	Falco sparverius	X1	81	Protected	S5
Northern Bobwhite	Colinus virginianus	FL	81	Game Species	S4
Ring-necked Pheasant	Phasianus colchicus	FL	81	Game Species	SE
Clapper Rail	Rallus longirostris	N2	84	Protected	S3
Piping Plover	Charadrius melodus	NY	81	Endangered	S2
American Woodcock	Scolopax minor	D2	82	Game Species	S5
Common Tern	Sterna hirundo	NY	81	Threatened	S3
Least Tern	Sterna antillarum	NY	81	Endangered	S3
Mourning Dove	Zenaida macroura	NY	83	Protected	S5
Yellow-billed Cuckoo	Coccyzus americanus	S2	83	Protected	S5
Common Barn-Owl	Tyto alba	X1	83	Protected-Special Concern	S3
Eastern Screech-Owl	Otus asio	NY	83	Protected	S5
Great Horned Owl	Bubo virginianus	T2	83	Protected	S5
Common Nighthawk	Chordeiles minor	X1	83	Protected-Special Concern	S4
Chimney Swift	Chaetura pelagica	N2	83	Protected	S5
Belted Kingfisher	Ceryle alcyon	ON	81	Protected	S5
Northern Flicker	Colaptes auratus	FY	83	Protected	S5
Red-bellied Woodpecker	Melanerpes carolinus	ON	84	Protected	S5

Hairy Woodpecker	Picoides villosus	N2	81	Protected	S5
Downy Woodpecker	Picoides pubescens	NY	83	Protected	S5
Eastern Kingbird	Tyrannus tyrannus	FL	81	Protected	S5
Great Crested Flycatcher	Myiarchus crinitus	NY	83	Protected	S5
Eastern Phoebe	Sayornis phoebe	S2	81	Protected	S5
Eastern Wood-Pewee	Contopus virens	FL	84	Protected	S5
Horned Lark	Eremophila alpestris	FL	82	Protected	S5
Bank Swallow	Riparia riparia	ON	81	Protected	S5
Barn Swallow	Hirundo rustica	NY	83	Protected	S5
Blue Jay	Cyanocitta cristata	NY	83	Protected	S5
American Crow	Corvus brachyrhynchos	NY	83	Game Species	S5
Fish Crow	Corvus ossifragus	S2	81	Protected	S4
Black-capped Chickadee	Parus atricapillus	NY	83	Protected	S5
Tufted Titmouse	Parus bicolor	NY	83	Protected	S5
White-breasted Nuthatch	Sitta carolinensis	B2	83	Protected	S5
Brown Creeper	Certhia americana	P2	82	Protected	S5
House Wren	Troglodytes aedon	NY	83	Protected	S5
Carolina Wren	Thryothorus ludovicianus	NY	84	Protected	S5
Northern Mockingbird	Mimus polyglottos	NY	83	Protected	S5
Gray Catbird	Dumetella carolinensis	NY	81	Protected	S5
Brown Thrasher	Toxostoma rufum	P2	83	Protected	S5
American Robin	Turdus migratorius	NY	81	Protected	S5
Wood Thrush	Hylocichla mustelina	NY	84	Protected	S5
European Starling	Sturnus vulgaris	NY	81	Unprotected	SE
Red-eyed Vireo	Vireo olivaceus	NY	83	Protected	S5
Warbling Vireo	Vireo gilvus	X1	81	Protected	S5
Worm-eating Warbler	Helmitheros vermivorus	X1	81	Protected	S4
Blue-winged Warbler	Vermivora pinus	X1	81	Protected	S5
Yellow Warbler	Dendroica petechia	NE	81	Protected	S5
Ovenbird	Seiurus aurocapillus	T2	84	Protected	S5
Common Yellowthroat	Geothlypis trichas	D2	83	Protected	S5
American Redstart	Setophaga ruticilla	N2	81	Protected	S5
House Sparrow	Passer domesticus	NY	81	Unprotected	SE
Bobolink	Dolichonyx oryzivorus	S2	83	Protected	S5
Eastern Meadowlark	Sturnella magna	FY	84	Protected	S5
Red-winged Blackbird	Agelaius phoeniceus	NY	81	Protected	S5
Northern Oriole	Icterus galbula	NE	81	Protected	S5
Common Grackle	Quiscalus quiscula	NY	82	Protected	S5

Brown-headed Cowbird	Molothrus ater	FL	83	Protected	S5
Scarlet Tanager	Piranga olivacea	S2	84	Protected	S5
Northern Cardinal	Cardinalis cardinalis	NY	83	Protected	S5
Indigo Bunting	Passerina cyanea	X1	82	Protected	S5
House Finch	Carpodacus mexicanus	NY	82	Protected	SE
American Goldfinch	Carduelis tristis	FY	82	Protected	S5
Rufous-sided Towhee	Pipilo erythrophthalmus	D2	83	Protected	S5
Song Sparrow	Melospiza melodia	NY	83	Protected	S5

Appendix D-4

Wildlife Habitat Model - Species Adaptability

PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE (POWER)

NELSON, POPE & VOORHIS, LLC, MICROCOMPUTER MODEL

SPECIES ADAPTABILITY

Appendix D-4

This portion of the appendix has been included to present the results of a computer program to identify "Species Adaptability". This list is another component of the program developed for use by Nelson, Pope & Voorhis, LLC used for the preparation of **Appendix D-2,** however, in this application the "Adaptability" of the observed and expected species are shown. The "adaptability" as indicated in the table, refers to whether an individual species may potentially benefit from (+) a habitat change from natural to urban/suburban setting; or, be impacted (-), or remain constant (=), as a result of this change. These values are not intended to represent the dynamics of actual species on the subject site under post-development conditions. The column entitled "Comments" provides relevant information which was obtained from the literature, as regards special habits of the particular species, such as adaptability, nesting, food, etc. This column is particularly important in assessing the potential impacts to the species as a result of the proposed project. The preceding text considers the site specific aspects of the proposed development in regard to individual species. This Appendix is included to provide the reader with the benefit of what the literature which was consulted in connection with the Habitat Suitability Model suggests, in terms of generalized species dynamics resulting from land use. References are those used in previous appendix.

Moist Oak Forest Species - Adaptabilty and Comments

Common Name	Scientific Name	Adapt.	Comments	References
Birds				
black capped chickadee	*Parus atricapillus*	=	abundant around parks, urban and suburban areas	4 11
brown creeper	*Certhia familiaris*	-	prefers predominantly deciduous wooded areas	4 9
American crow	*Corvus brachyrhynchos*	=	extremely adaptable; omnivorous	4 11
black-billed cuckoo	*Coccyzus erythropthalmus*	-	avoids human activities	4 11
yellow-billed cuckoo	*Coccyzus americanus*	-	avoids heavy urban areas; prefers wooded open or edges for nests	4 12
common flicker	*Colaptus auratus*	=	abundant around parks, suburban and urban areas	4 14
Acadian flycatcher	*Empidonax virescens*	-	prefers cool, damp, mature hardwood forests	4 15
great-crested flycatcher	*Myiarchus crinitus*	-	prefers deciduous forests and deciduous open woodland	4 15
blue-grey gnatcatcher	*Polioptila caerulea*	=	prefers dense foliated trees along water ways	4 7
common grackle	*Quiscalus quiscula*	=	adapts well to urban and suburban habitats	4 6
rose-breasted grosbeak	*Pheucticus ludovicianus*	=	mainly found on north shore	4 20
broad-winged hawk	*Buteo platypterus*	-	avoids humans; nests only in dense forests; prefers to be near water	4 16
Cooper's hawk	*Accipiter cooperii*	-	no atlas sightings (non-breeder) on LI; needs extensive woodland	4 17
red-tailed hawk	*Buteo jamaicensis*	-	needs 100 foot radius undisturbed area for nest	4 16
sharp-shinned hawk	*Accipiter striatus*	-	avoids humans; nests in heavily forested areas	4 16
blue jay	*Cyanocitta cristatta*	=	extremely adaptable to human activity and other stresses	4 10
Northern (dark-eyed) junco	*Junco hyemalis*	-	prefers forested area with elevation >300 meters; no LI atlas record	4 21
golden-crowned kinglet	*Regulus satrapa*	-	prefers spruce vegetation; no atlas sightings on Long Island	4 7
ruby-crowned kinglet	*Regulus calendula*	-	occurs as non-breeding species; present during migration	4 7
white-breasted nuthatch	*Sitta carolinensis*	=	abundant in parks, urban and suburban areas	4 9
northern oriole	*Icterus galbula*	=	prefers deciduous woodland and shade trees	4 6
common screech owl	*Otus asio*	=	nocturnal; nests in hollow trees, abandoned buildings, nest boxes	4 17
great-horned owl	*Bubo virginianus*	-	nocturnal; rare in wooded areas of less than 20 acres	4 17
long-eared owl	*Asio otus*	-	nocturnal; prefers dense forested areas near water	4 17
American robin	*Turdus migratorius*	=	very adaptable; abundant in parks; nests in man-made structures	4 7
yellow-bellied sapsucker	*Sphyrapicus varius*	=	nests in tree cavity; found in parks, yards and gardens	14
European starling	*Sturnus vulgaris*	+	extremely adaptable to human activity; considered a pest	4 23
scarlet tanager	*Piranga olivacea*	-	rare in wooded area of less than 50 acres; affected by fragmentation	4
brown thrasher	*Toxostoma rufum*	=	common in parks, suburban areas, wooded edges, dry open areas	4 9
hermit thrush	*Catharus guttatus*	=	not common on Long Island; when present, prefers pine barrens	4 7
wood thrush	*Hylocichla mustelina*	=	prefers vacant wood (trees >40 feet); may adapt of wooded suburban	4 7

Common Name	Scientific Name	Adapt.	Comments	References
tufted titmouse	*Parus bicolor*	=	common in suburban areas	4 11
veery	*Catharus fuscescens*	-	prefers damp forest with undergrowth; affected by fragmentation	4 7
red-eyed vireo	*Vireo olivaceus*	=	found in parks, suburban areas w/shade trees, and undergrowth	4 23
yellow throated vireo	*Vireo flavifrons*	-	sensitive to fragmentation and urbanization	4 23
blue-winged warbler	*Vermivora pinus*	-	primarily abandoned and overgrown field, and thickets	4 14
cedar waxwing	*Bombycilla cedrorum*	+	prefers open woodlands, orchards and residential areas	4 23 32
Eastern wood-peewee	*Contopus virens*	=	prefers suburban areas, parks and villages with shade trees	4 15
American woodcock	*Philhela minor*	-	prefers moist woodland and thicket near open fields	4 30
downy woodpecker	*Picoides pubescens*	=	found in parks and suburban areas	4 14
hairy woodpecker	*Picoides villosus*	=	found mainly in deciduous forests	4 14
red-bellied woodpecker	*Melanerpes carolinus*	=	prefers forest openings; mostly found on Long Island north shore	4 14
house wren	*Troglodytes aedon*	=	found in suburban areas and gardens; nests in crevices of buildings	4 9
Mammals				
big-brown bat	*Eptesicus fuscus*	+	roosts in structures; found throughout LI; hunts over water	1 29
hoary bat	*Lasiurus borealis*	=	roosts in trees, sometimes found in parks	45
Keen's bat	*Myotis keenii*	+	roosts in buildings, crevices and bark; more common on eastern LI	1 29
little-brown bat	*Myotis lucifugus*	+	roosts in buildings and man made structures; hunts over water	1 29
red bat	*Lasiurus borealis*	-	feeds in marsh area; nests within 1000 yards of marsh in trees	1 29
Eastern pipistrelle	*Pipistrellus subflavus*	=	found near water in open woods, also found in buildings	1 29
silver-haired bat	*Lasionycteris noctivagans*	-	prefers wooded areas near water, primarily during summer months	1 29
Eastern chipmunk	*Tamis striatus*	=	prefers open woods, thickets, and rocky areas	1 29
Eastern cottontail	*Sylvilagus floridanus*	=	will adapt to suburban areas, if there is sufficient cover	1 29
white-tailed deer	*Odocoileus virginianus*	-	requires range of one-half square mile	1 25 29
red fox	*Vulpes vulpes*	-	builds den in wooded areas with loose-sandy soil and good drainage	1 29
Eastern mole	*Scalopus aquaticus*	=	tunnels underground	1 29
meadow-jumping mouse	*Zapus hudsonicus*	=	found around water in pine barrens; prefers open areas with grasses	1 29
white-footed mouse	*Peromyscus leucopus*	=	common to most all habitats; does not adapt well to human activity	1 29
Virginia opossum	*Didelphis virginiana*	=	common in suburban areas, woods, marsh and coastal areas	1 29
racoon	*Procyon lotor*	+	nocturnal; very adaptive; found in urban and forest areas	1 29
masked shrew	*Sorex cinereus*	=	tunnels underground; common in wood and wet habitats	1 29
short-tailed shrew	*Blarina breuicauda*	=	tunnels underground; abundant in a variety of habitats	1 29
striped skunk	*Mephitis mephitis*	=	prefers mixed wood & brush within 2 miles of water; not expected on LI	1 29
Eastern gray squirrel	*Sciurus carolinensis*	=	found in parks, urban and suburban areas; very adaptable	1 29
southern-flying squirrel	*Glaucimys volans*	-	common in deep mixed, deciduous and coniferous woods	1 29
meadow vole	*Microtus pennsylvanicus*	=	tunnels underground; prefers open woodland	29 45
pine vole	*Microtus pinetorum*	=	tunnels underground; prefers sandy soil in woods and field; can swim	1 29

Common Name	Scientific Name	Adapt.	Comments	References
long-tailed weasel	*Mustela frenata*	-	prefers dense wood, but may appear in all land habitats near water	1 29
Herptiles				
common gray treefrog	*Hyla versicolor*	-	prefer mossy trees near ponds	33 37
wood frog	*Rana sylvatica*	-	prefers leafy pools and transient pools in wooded areas	33 37
red-spotted newt	*Notophthalmus viridescens*	-	prefers shallow ponds in wooded areas; open moist woods	36 38
spring peeper	*Hyla crucifer*	=	prefers pools/marsh near woodland; found high in trees in summer	33 35 38
red-backed salamander	*Plethodon cinerus cinerus*	-	terrestrial, prevelent in moist situations	34 36
spotted salamander	*Ambystoma maculatum*	-	will breed in pond or vernal ponds in late March, early April	34 36 38
marbled salamander	*Ambystoma opacum*	=	moist to sandy areas; lays eggs in fall in low spots wet by rain	34 36 38
Eastern garter snake	*Thamnophis sirtalis*	=	occupies a variety of habitats	38 40
eastern milk snake	*Lampropettis d. triangulum*	=	occupies a variety of habitats	38 39
Northern brown snake	*Storeria·dekayi*	=	prefers fresh marsh, moist woods, but, adapts to urban environment	38
Northern ringneck snake	*Diadophis punctatus*	=	prefers secluded moist areas under logs/stones; can adapt to suburb	38

Beach Species : Adaptability and Comments

Common Name	Scientific Name	Adapt.	Comments	Refernces
Birds				
fish crow	*Corvus ossifragus*	=	maritime species; prefers coniferous vegetation; less often inland	4 11
short-billed dowitcher	*Limnodromus griseus*	-	on-breeding species found in summer; some during winter months	32
gadwall	*Anas strepera*	-	observed in south shore bays; may occupy pond and river areas	4 27
Bonaparte's gull	*Larus philadelphia*	=	occurs as non-breeding species during winters	24
great-black-backed gull	*Larus marinus*	=	prefers to nest in impacted & dredge spoil areas; rare on north shore	4 24
herring gull	*Larus argentatus*	-	prefers to nest in impacted & dredge spoil areas; rare on north shore	4 24
ring-billed gull	*Larus delawarensis*	=	no breeding records for Long Island; generally not expected in locale	4 24
little-blue heron	*Egretta caerulea*	-	prefers protected areas without human activity (sanctuaries, islands)	4 26
yellow-crowned night-hero	*Nycticorax violaceus*	-	nests in low coastal shrubbery; prefers islands	4 26
common loon	*Gavia immer*	-	prefers bay and ocean areas	31 32
red-throated loon	*Gavia stellata*	-	rarely winters on eastern LI; prefers oceans rather than bay area	32 42
red-breasted merganser	*Mergus serrator*	-	nests in shrubs and/or under driftwood, close to water	4 27
merlin	*Falco columbarius*	-	migrates in fall through coastal areas	32 17
osprey	*Pandion haliaetus*	-	associated with seacoast, sometimes lakes and rivers	4 16
short-eared owl	*Asio flammeus*	-	coastal species; nests on sand beaches and beach grass, south shore	4 17
American oystercatcher	*Haematopus palliatus*	-	prefers salt marsh islands, dredge spoil islands, high sandbars	4 31
black-bellied plover	*Pluvialis squatarola*	-	non-breeder on LI; may forage during summer, occasionally winter	31 32
piping plover	*Charadrius melodus*	-	found in dry, bare sandy areas; nests in sand and beach grass	4 31 32
semipalmated plover	*Charadrius semipalmatus*	-	non-breeder on LI; may forage during summer, occasionally winter	31 32
sanderling	*Calidris alba*	-	more pronounced in ocean beach and sandbar areas	30 32
semipalmated sandpiper	*Calidris pusilla*	-	prefers south shore of Long Island	32
spotted sandpiper	*Actitus macularia*	-	nests on ground in grassy areas	4 31 32
black skimmer	*Rynchops niger*	-	not expected on north shore, feeds in bays and inlets	4 24
Savannah sparrow	*Passerculus sandwichensis*	-	found in shore areas; not expected inland	4 21
seaside sparrow	Ammodramus maritimus	-	not expected on Long Island north shore	4 21
European starling	*Sturnus vulgaris*	+	extremely adaptable to human activity; considered a pest	4 23
common tern	*Sterna hirundo*	-	prefers to nest on islands, locally common on north shore	4 24
least tern	*Sterna antillarum*	-	prefers to nest on islands, locally common on north shore	4 24
roseate tern	*Sterna dougallii*	-	very fragile, not very adaptable, prefers isolated areas	4 24
ruddy turnstone	*Arenaria interpres*	-	more abundant during autumn months	31 32
willet	*Catoptrophorus semipalmat*	-	common on Long Island south shore	4 31
ruddy turnstone	*Arenaria interpres*	-	more abundant during autumn months	31 32

Common Name	Scientific Name	Adapt.	Comments	Referencs
Mammals				
Keen's bat	*Myotis keenii*	+	roosts in buildings, crevices and bark; more common on eastern LI	1 29
little-brown bat	*Myotis lucifugus*	+	roosts in buildings and man made structures; hunts over water	1 29
red bat	*Lasiurus borealis*	-	feeds in marsh area; nests within 1000 yards of marsh in trees	1 29
silver-haired bat	*Lasionycteris noctivagans*	-	prefers wooded areas near water, primarily during summer months	1 29
Eastern cottontail	*Sylvilagus floridanus*	=	will adapt to suburban areas, if there is sufficient cover	1 29
white-tailed deer	*Odocoileus virginianus*	-	requires range of one-half square mile	1 25 29
red fox	*Vulpes vulpes*	-	builds den in wooded areas with loose-sandy soil and good drainage	1 29
mink	*Mustela vison*	-	prefers wetlands surrounded by forested areas	1
Eastern mole	*Scalopus aquaticus*	=	tunnels underground	1 29
house mouse	*Mus musculus*	+	lives in association with man, not expected away from buildings	1 29
meadow-jumping mouse	*Zapus hudsonicus*	=	found around water in pine barrens; prefers open areas with grasses	1 29
white-footed mouse	*Peromyscus leucopus*	=	common to most all habitats; does not adapt well to human activity	1 29
Virginia opossum	*Didelphis virginiana*	=	common in suburban areas, woods, marsh and coastal areas	1 29
racoon	*Procyon lotor*	+	nocturnal; very adaptive; found in urban and forest areas	1 29
Norway rat	*Rattus norvegicus*	+	nocturnal; usually associated with human activity	1 29
masked shrew	*Sorex cinereus*	=	tunnels underground; common in wood and wet habitats	1 29
Eastern gray squirrel	*Sciurus carolinensis*	=	found in parks, urban and suburban areas; very adaptable	1 29
pine vole	*Microtus pinetorum*	=	tunnels underground; prefers sandy soil in woods and field; can swim	1 29
long-tailed weasel	*Mustela frenata*	-	prefers dense wood, but may appear in all land habitats near water	1 29
Herptiles				
Fowler's toad	*Bufo woodhousei fowleri*	-	found in suburban areas, gardens; breeds in shallow permanent ponds	33 37

APPENDIX E

COMMUNITY SERVICES CORRESPONDENCE

'98 CURRENT 1, 1 TAX SYSTEM -- TAX MASTER FILE SCREEN 1 OF 3
ITEM NUMBER 010002310 COUNTY MAP 0400 001.00 02.00 004.001 YEARS: 98/99
LAST CHANGE:

*** OWNER INFORMATION ***
HOGAN, MADELEINE M

307 BURNS ST
FOREST HILLS NY 11375

*** BANK INFORMATION ***
BANK NUMBER: -
MORTGAGE #:

*** BILL-TO INFORMATION ***
HOGAN, MADELEINE M

307 BURNS ST
FOREST HILLS NY 11375

*** THIRD-PARTY INFORMATION ***

*** TAX INFORMATION ***
TAX CODE: 226 SCHOOL DIST: SC004 29000 FULL 24200 LAND ARREARS: N O
EX. STAR: NONE 0.00 AMT STOP PYMT: N O
AD. LD004 GA001 LATE (NO) .00
0000028 BILL # DATE PD RECEIPT METHOD NAME OF PAYER (IF NOT OWNER)
20946.79 1ST 122298 122298 0500381 CHK/MAIL M HOGAN
43 DEP 0.00 PENALTY AMT (0) COMMENT:
20946.78 2ND
DEP (0) COMMENT:
41893.57 TOTAL TAX.....TRUE TAX: 41893.57 RELEVY: N O

ITEM/PF DIST: SEC: BLK: LOT:
PF1=PRE PG,2=NEXT PG,3=PRINT DUP,4=NAME,5=ST,6=ZP/ST,7=(-1),8=HIST(+1),12=MENU

'98 CURRENT 1, 1 TAX SYSTEM -- TAX MASTER FILE SCREEN 2 OF 3
ITEM NUMBER 010002310 COUNTY MAP 0400 001.00 02.00 004.001 YEARS: 98/99

	DISTRICT DESCRIPTION	EXEMPTS	TAXABLE	RATE	TAX AMOUNT	
SC004	SCHOOL DIST - NORTHPORT		29000	78.9340	22890.86	54.7%
LD004	LIBRARY DIST - NORTHPORT		29000	6.5910	1911.39	4.6%
D006	COUNTY TAX/TAX REFUNDS		29000	5.9530	1726.37	4.2%
D008	COUNTY POLICE DISTRICT		29000	21.3710	6197.59	14.8%
D007	TOWN/PART TOWN/OPEN SPACE		29000	9.7040	2814.16	6.7%
D009	HIGHWAY TAX		29000	7.3760	2139.04	5.1%
GA001	REFUSE DISTRICT				371.08	.8%
D020	LIGHTING DIST. - TOWN WIDE		29000	.8690	252.01	.6%
D038	FD - EATONS NECK		29000	12.3830	3591.07	8.5%

TAX RATE: 143.1810 41893.57...TOTAL TAX

ITEM/PF DIST: SEC: BLK: LOT:

PF1=PRE PG,2=NEXT PG,3=PRINT DUP,4=NAME,5=ST,6=ZP/ST,7=(-1),8=HIST(+1),12=MENU

FOR INFORMATION ONLY

*98 CURRENT 1, 1 TAX SYSTEM -- TAX MASTER FILE SCREEN 3 OF 3
ITEM NUMBER 010002310 COUNTY MAP 0400 001.00 02.00 004.001 YEARS: 98/99

*** PROPERTY INFORMATION *** ***DUPLICATE BILL INFORMATION ***
22 N CREEK RD DATE OPER REQUESTOR (OTHER THAN OWNER)
NORTHPORT NY 11768
PROPERTY DESCRIPTIONS
COP UNITS
240 1.00
ACREAGE
24.210
SPLIT/MERGE NUMBER DATE TYPE COMMENT OPERATOR
FROM:
TO:

* * * E X E M P T I O N S * * *

CODE AMOUNT TYP DESCRIPTION CODE AMOUNT TYP DESCRIPTION

ITEM/PF DIST: SEC: BLK: LOT:
PF1=PRE PG,2=NEXT PG,3=PRINT DUP,4=NAME,5=ST,6=ZP/ST,7=(-1),8=HIST(+1),12=MENU

OWNER: Madeline Hogan TAX YEAR: 98/99

PROPERTY LOCATION: 22 N. Creek Rd. NPT.

UNOFFICIAL

FOR INFORMATION ONLY

ESTER BIVONA
RECEIVER OF TAXES
100 MAIN STREET
HUNTINGTON, NY 11743

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E.
• CHRISTOPHER W. ROBINSON, P.E.

March 22, 1999

Northport-East Northport Union Free School District
110 Elwood Road
Northport, New York 11768
Attn: Superintendent Dr. William Brosnan

Re: Draft EIS Impact Analysis
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-01-4.1

Dear Dr. William Brosnan,

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are currently preparing an Environmental Impact Statement for a 22 lot subdivision on the above referenced parcel. The proposed project involves the development of 22 single family dwellings zoned R-20. The site presently contains 3 residences with the remainder of the lot consisting of woodland vegetation. I am writing to obtain information in regards the Northport-East Northport Union Free School District facilities, services, and capabilities which may be pertinent to the project. Specifically, I am requesting the following:

- Analyze anticipated project impacts with regards to redistricting.
- Is there a projected lack of classroom space?
- How a new influx of school-age children impact the school district?

It is estimated that there will be an approximate increase of 20-25 students as a result of the proposed project. Your responses will be included in the Draft EIS for review by the Town; if you have any additional information which would be pertinent, please include it. Finally, if you feel that this project may have an adverse impact on the Department's ability to provide services, or may require additional equipment purchases or firefighter training, please indicate this.

If you should have any questions or require additional information, please do not hesitate to contact me. Thank you.

Sincerely,

Shana Lacey

Shana M. Lacey

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620

NORTHPORT - EAST NORTHPORT UNION FREE SCHOOL DISTRICT

OFFICE OF THE SUPERINTENDENT

110 Elwood Road
Northport, New York
Telephone (516) 262-6604
Fax (516) 262-6635

Mailing Address:
Post Office Box 210
Northport, New York 11768

April 5, 1999

Ms. Shana M. Lacey
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747-2188

APR 07 1999 SL
NELSON, POPE, LLP

Re: Draft EIS Impact Analysis
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-01-4.1

Dear Ms. Lacey:

Thank you for the opportunity to comment upon the proposed subdivision referenced above. As it turns out, we have just presented to the Board of Education a report indicating that we are having severe space difficulties across the district. At the elementary level, it appeared as though we had almost reached the worst "crunch." New housing would increase that projection and create additional problems. Additionally, we already will need to add space at both the middle school (Northport Middle School) and the high school (Northport High School) to which this area will send children, before any additional subdivision. Consequently, additional houses will put additional demands on our already tight space, at the elementary level, the middle school level, and the high school level.

I am enclosing for your information a copy of the space report that we recently sent to the Board of Education. It provides a great deal of detail. Additionally, we have an enrollment analysis conducted each October by the Regional Planning Service of our local Board of Cooperative Educational Services (BOCES). If a copy of that report would be helpful to you, we would be more than happy to provide that. I am not certain who provided you with the estimate that an additional 19 homes would bring an average of 20-25 students. I would anticipate a higher number of children than that. Even using only 1.5 school children per household, the number would be around 30. The additional cost of these children to the taxpayers is readily

identifiable through a number calculated by the State Education Department, the "approved operating expenditure per pupil." In our case, that amount is just under $10,000 per year per pupil. If 20 additional pupils were to enroll in the school district, we would need to increase our budget by approximately $200,000; if an additional 30 children were enrolled, the figure would be around $300,000. These figures would increase the annual tax rate to the entire community some place in the range of 0.3% - 0.5%. Additionally, depending upon the grade levels at which these children were enrolled, it is likely that we would need to construct additional space.

In closing, our elementary facilities are saturated, our current elementary children will not fit in either our existing middle schools or our existing high school without additional construction. If we grow due to a new subdivision, the additional children will put an additional burden on our school district's taxpayers.

I hope this responds adequately to your request. Please let me know if there is anything else that you might find helpful.

Sincerely,

William J. Brosnan
Superintendent of Schools

WJB:ad
Enclosure

Northport-East Northport School District
Northport, NY

MEMORANDUM

TO: Board of Education

FROM: William J. Brosnan,
Superintendent of Schools

RE: Enrollment and Space

DATE: March 8, 1999

BACKGROUND

Elementary. Our elementary enrollment has climbed 507 children (23%) from its low point of 2181 in 1990 to its current point of 2,688 this year. According to BOCES, we are nearing our high point, which is projected to be 2,713 next year, and we are projected to fall slightly and stabilize in the years ahead.

Middle School. Our middle school enrollment has climbed 76 children (6.5%) from its low point of 1,164 in 1993 to the current enrollment of 1,240 this year. According to BOCES, we should expect to see the enrollment climb steadily over the next five years by another 268 students, to 1,508 in the year 2002, after which it will fall slightly and stabilize in the years following.

High School. Our high school enrollment has been very stable in the last five years, hovering around 1,550 - 1,590. The high school is expected to experience the enrollment increase slowly over the next two to three years, and dramatically after that. The current projection is that the high school should expect to hit a maximum of 1,924 in 2005, which is an increase of 376 students over the current enrollment of 1,548, or a 24% increase.

When the school district was in years of declining enrollment, thought was given to closing schools and, in fact, one elementary school was closed (Larkfield) and one of the three middle schools was closed (originally the facility on Middleville Road, but with the increased enrollment, this was changed and the Laurel Avenue facility, the smallest of the three, was closed). Thought had been given to closing Dickinson Avenue Elementary School but, fortunately, the decision was to allow it to remain open. Thought had also been given to selling off the closed middle school but, fortunately, it was decided to hold onto the property until more information became available.

Now, in the midst of an enrollment increase that is not only local, but is also being experienced across Long Island, across the state, and even across the nation, we are faced with finding ways of accommodating the additional children, and providing to them the same level of service that was provided to their parents and their older siblings. Given the wise decisions not to close Dickinson and not to sell Laurel Avenue, we have been able to accommodate the elementary growth with relatively minor adjustments. We are, according to BOCES, nearing the top of the elementary enrollment curve. We need to address some problems in the next year or two but, working under the assumption that the BOCES projections are accurate, we should be in a good position in a few years, once we get past the high point.

We now face the enrollment increase moving into our middle schools, and we will shortly face the enrollment increase moving into our high school.

The purpose of this report is to present to the Board of Education and the community the status of these important issues, as well as our latest thinking. We will need to keep this issue "on the front burner" through the next few years, to ensure that we are appropriately adjusting the school district's response, should the actual enrollment patterns be different from the BOCES projections.

METHOD OF DETERMINING NEED

At the elementary level, the BOCES projections from November 1998 provide ample information to draw tentative conclusions, so they have been used in this analysis. However, at this stage of the school year, the school district has even better information about next year than is available to BOCES in November. Therefore, for next year, the district's current information has been substituted for the BOCES November numbers.

At the middle and high school levels, the BOCES information was expanded, and tailored to the needs of our district. The method of analysis was as follows:

1. Develop "Growth Factors." Take the current enrollment for each grade, compare it to the BOCES projection for each of the next ten years, and develop a "growth factor." (For example, if the current 11th grade is 400 and the projected 11th grade in five years is 500, the "growth factor" for that year would be 25%.)

2. Project Each Course Enrollment 10 Years Into The Future.

   A. Take each course currently run, and disaggregate the enrollment by grade. (For example, in a high school art course in which 100 students are enrolled, determine how many of the current students are 9th graders, how many are 10th graders, how many are 11th graders, and how many are 12th graders.)

   B. Apply the "growth factor" determined in paragraph 1 above to each of the current grade level enrollments in the course, for each of the next ten years.

   C. Re-total the grade level enrollments, to obtain total course enrollments for the next ten years.

2. Calculate Room Use by Course. For example, if 100 students are currently divided into five sections of 20, and if the course enrollment is projected to be 160 in seven years, it is projected that there will be eight sections at that time.

3. Inventory Current Use Room Type. Different educational programs require different types of space. English and math are taught, for example, in rooms categorized as "general purpose classrooms," whereas science must be taught in a specialized room. Science at the middle schools is more general in nature, so the science rooms at the middle school are considered as one type of room. At the high school, however, the different purposes require different room configurations, for example, a high school chemistry room is very different from a high school physics room.

4. Combine Course Room Use by Room Type. Take the number of course sections arrived at in paragraph 3 above, and combine the courses when they use the same type of room.

(For example, add together all of the needs for English, math, science, social studies, and second language under "general purpose classrooms.")

5. Divide the Needs by Reasonable Scheduling Expectations. If, six years from now, a particular type of room will be needed 45 periods each day for a particular course, how many physical classrooms will be needed? If one expected every room to be used all nine (at the high school) periods per day, 45 divided by 9 would yield five classrooms. However, scheduling a school is much more complicated than this simple division. Space experts have generally stated that 90% room use is about as high as any school can ever get. In a school like Northport High School, where there are many "singletons" (courses with a single section), scheduling is extremely difficult. In order to obtain final data with this analysis, the assumption was made that rooms at the high school would be used between 8 and 8.5 periods per day, on average. At the middle school, the assumption was made that, of the 8 periods in a day, rooms would be used between 7 and 7.5 periods of the day. This assumption yields an extremely conservative estimate of needs, because it would be very challenging to schedule at this level of precision. However, we felt, on the first analysis, it would be better to estimate conservatively.

OPTIONS WHEN NEEDS EXCEED AVAILABLE SPACE

When the need for classroom space is greater than the number of rooms, three basic options are available to address the problem.

1. Create Additional Space Within Existing Exterior Walls

   - Relocate districtwide programs into other facilities, for example, move Pre-K program from Fifth to another school or to Laurel, move gifted and talented programs to another building, move district offices from high school to Laurel.

   - Move interior walls to redesign space, for example, move interior walls to create smaller rooms for small group instruction, freeing up the remaining space for other uses.

   - Deliver educational programs in different ways, for example, sending elementary art teachers into the regular classroom, and use the existing art room as a regular classroom.

2. Add space

   - Portable classrooms (leased or purchased)

   - New construction

3. Relocate students to another location

CONCLUSIONS

1. ELEMENTARY

Three problems loom. The longest term one is at Bellerose. BOCES projects a one room shortage in about five years. This needs to be monitored.

The second problem is at Fifth. We are anticipating a room shortage in 2000-01. This problem can be addressed by moving the district special education pre-K program over to Laurel Avenue. This will free up two classrooms which, according to BOCES, will enable us to get over the high point. This problem appears to be addressable.

A more difficult problem may be at Ocean. This coming year, 1999-2000, there is a need for one more classroom. Earlier this year, in reviewing options, it was decided that we could move out the special education kindergarten program, most likely to Dickinson. However, this will not be necessary, since the enrollment is down for next year. Under the law, this program may have no more than 12 children per room. This year, we have 28 total, in three centers. Next year, we anticipate 18, so we will need only two centers. We will not need the room at Ocean, so this will free up the one room we need. (Actually, this will entail some interior wall moves, since the current program uses a 3/4 sized room, and there is a need for a full sized room, but all can be ready for September, with no problem.)

It is the following year, 2000-01, that we anticipate a possible problem at Ocean. The most classrooms we can create at Ocean is 25 (assuming we run our current educational program). BOCES projects a need for 25 classrooms at Ocean, beginning next year (1999-2000), and continuing for a period of three years, at which time an enrollment drop is projected. We have the 25 rooms; that is not a problem. The problem is that, while it has not been projected by BOCES, it looks to us as though we might need a **26th** room in 2000-01. BOCES projects Ocean's 2000-01 fifth grade at four sections of 24.8, which is a large class size for our district. For next year, that group of children will be in the fourth grade. Right now, we are projecting for them as fourth graders *five sections* at 20.4 in each class. Also, at Ocean, from the fourth to the fifth grade, there has historically been a small *increase*. If there are five fourth grade sections next year, there will most likely be five fifth grade sections the following year. That would leave us short one room. The only way it appears to us that we might have enough room for that class is if the first grade comes in at four sections, rather than the five projected by BOCES. (This is a possibility, since the district currently projects next year's kindergarten at four sections of 17, for a total of 68. Over the last five years, the average growth from kindergarten to first grade at Ocean has been 11 children; the highest growth was 15. If the 68 holds for kindergarten, and if it grows by even 15 to first grade, we will have 83 first graders, which calls for four sections of 21. Thus, it is possible that Ocean will pass this high point without a need for additional space.)

The Superintendent believes we need to (a) plan for the move of the pre-K program from Fifth to Laurel, (b) monitor Ocean closely and be prepared to lease a portable classroom if the 26th room is needed, and (c) monitor the Bellerose situation closely.

PROJECTED ROOM USE NEEDS -- ELEMENTARY SCHOOLS

SCHOOL	98-99 Rooms	Rooms Needed									
		99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09
BELLEROSE	21	21	20	20	21	21	22	22	22	22	22
DICKINSON	19	18	18	17	17	17	17	17	17	17	17
FIFTH	22	22	23	21	21	22	22	22	22	22	22
NORWOOD	21	20	19	20	20	20	19	19	19	19	19
OCEAN	24	25	25	25	24	24	23	23	23	23	23
PULASKI	22	22	22	21	22	22	22	22	22	22	22
		Rooms Short									
		99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09
BELLEROSE							1	1	1	1	1
DICKINSON											
FIFTH			1								
NORWOOD											
OCEAN		1	1	1							
PULASKI											

NOTE: Based on November, 1998 BOCES enrollment projections and room use analysis, updated with March, 1999 district figures for 99-00.

2. MIDDLE SCHOOL

At this point, it appears that East Northport Middle School will be able to accommodate its expected highest enrollment (677 in 2002-03) by modifying the current use of some of its space, and by making some internal changes. The analysis indicates that the school will be short only two rooms (one music and one general purpose) for only one year (2002-03). The shortage is, in reality, only a couple of periods per day. The principal feels this can be accommodated with careful scheduling, and possibly some minor room modifications.

It is at Northport Middle School that a more serious problem is anticipated. The need begins to be felt this coming year, with the shortage of one general purpose room and one physical education teaching station. The principal and the staff are working on solutions to the physical education problem, by redesigning the program to make greater use of a room near the gym. For the additional general purpose room, we have planned this summer for internal reconstruction that will create one additional space. For next year, the problem is resolved.

For the following year, 2000-01, at Northport Middle School, the problem expands from one classroom to four classrooms. As noted above, the first room will be built this coming year. The principal has come up with a way of moving interior walls that will create a second full sized classroom. There may be a way to use space in the music wing to create a third classroom. As of this writing, though, we have not found a way to create a fourth classroom within the existing walls. Additional space may be necessary.

For the year after that, 2001-02, the problem at Northport Middle School expands by an additional two rooms, to six rooms total. The year following that, 2002-03, there is a projected need for yet another room, a seventh room. Also, there is a projected need for additional space in art as well as in family/consumer science.

At this point, it would appear that a solution to the problem would be as follows:

For 99-00	Move walls, create one additional classroom
For 00-01	Move walls, create second classroom Construction in music area, creating a third classroom Install a portable for the fourth classroom
For 01-02	Construct either four or six classrooms at the ends of the existing corridors, and remove the portable. (We know four will be needed; it is conceivable that six will be needed, to help absorb some of the problems with art and family/consumer science.)

If six rooms are constructed by 2001-2002, it would appear that the space problem at Northport Middle will be solved for the foreseeable future, based on the BOCES projections.

PROJECTED ROOM USE NEEDS – MIDDLE SCHOOLS

	98-99 Rooms AVAILABLE	Rooms Short									
		99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09
EAST NORTHPORT MS											
General Purpose	21				1						
Science	6										
Music	3				1						
Technology	3										
Art	2										
Family/Consumer Science	3										
Phys Ed Stations	2										
Reading/Small Group	6										
NORTHPORT MS											
General Purpose	24	1	4	6	7	5	5	4	5	5	5
Science	4										
Music	2										
Technology	3										
Art	2			-1	1	1	1	1	1	1	1
Family/Consumer Science	2				1	1	1	1	1	1	1
Phys Ed Stations	2	1	1	1	1	1	1	1	1	1	1
Reading/Small Group	2										

NOTE: Based on analysis by building principals, using November, 1998 BOCES enrollment projections.

3. HIGH SCHOOL

At this point, the high school is fairly tightly scheduled. For example, there is no rehearsal space for the orchestra; the group rehearses in the cafeteria (which is why there is a reported shortage of one music room throughout the analysis). There are, though, rooms that are "dedicated" for a particular purpose, e.g., electronics, and that are not used heavily at this time. As we experience growth, these dedicated rooms will be used more during the day, but we will not need more of them. The strongest need is for general purpose classrooms, and for science rooms. Even now, both types of rooms are heavily scheduled. We can address the need for general purpose rooms by relocating the school district's central offices (personnel, accounting, payroll, district duplicating, etc.) to Laurel Avenue. The high school's analysis shows a need for eight general purpose rooms in 2006-07; there are eight rooms being used for the district offices. The analysis shows a shortage of three science rooms in 2006-07. The only option envisioned at this point is the construction of additional space.

PROJECTED ROOM USE NEEDS -- HIGH SCHOOL

NORTHPORT HS ROOMS	98-99 Rooms *AVAILABLE*	Rooms Short									
		99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09
General Purpose	39		1	1	3	4	7	8	8	8	8
Science -- Earth Science	4										
Science -- Biology	5					1	1	1	1		
Science -- Chem	4								1	1	
Science -- Physics	2					1	1	1	1	1	1
Music	3	1	1	1	1	1	1	1	1	1	1
Technology	5										
Art	9					1	1	1	1	1	1
Family/Consumer Science	2										
Business -- Computers	2					1	1	1	1	1	1
Phys Ed Stations	6										
Large Stage Area (or similar)	1					1	1	1	1	1	1
Small Group	11										

NOTE: Based on analysis by building principal using November 1998 BOCES enrollment projections.

SUMMARY – AND A CAUTION

At this point, it appears that we will be able to accommodate the projected elementary enrollment growth with existing facilities, or perhaps with a portable classroom or two. At the middle school, it appears we will need to build additional space onto Northport Middle School. At the high school, it appears we will need to relocate the central offices to Laurel Avenue, and also build additional space, at least for the science program, and possibly for other programs.

The "caution" is that enrollment growth can be very difficult to project. We saw in the early 1990's serious projection errors in all school districts. The errors were caused by the fact that the projections are based on the assumption that current conditions will remain relatively stable. What had occurred in the late 1980's and the early 1990's is that there was a slowdown in the economy and a slowdown in the housing market, resulting in almost constant enrollment from year to year. The projections based on that trend called for a continuation of stable enrollment. However, when the economy turned around, so did the housing market, and more families with children moved into the school district. The projections were proven wrong; unanticipated growth occurred.

The conclusions in this report are based on the enrollment projections prepared by BOCES, which has been extraordinarily accurate in developing projections for our district in the past. However, a few years ago, BOCES was projecting growth, followed by somewhat of a decline, followed by stability. Now, BOCES is projecting growth, followed by a very slight decline, followed by stability. These projections are subtlety different. It is conceivable that the "curve is shifting," which could mean additional changes in the future. This needs to be monitored very closely, each year, to see if changes occur.

RECOMMENDATIONS

Elementary. Authorize the administration to plan for program moves to ensure adequate space at Fifth for 2000-01. Monitor closely the Ocean situation for 2000-01, and consider the possibility of a portable classroom if necessary. Monitor the situation at Bellerose to see if the growth projected for the future begins occurring.

Middle School. Authorize the administration to begin reviewing options for adding space at Northport Middle School, with a followup report back to the Board by October.

High School. Authorize the administration to begin planning for the relocation of the district offices from the high school to the Laurel Avenue facility, and also to begin reviewing options for adding additional space to the facility, with a report back to the Board next spring.

Long Range Planning. Update this report annually, until the enrollment begins to level and to decline as projected.

APPENDIX A

ELEMENTARY SCHOOLS

BELLEROSE AVENUE SCHOOL

BOCES PROJECTIONS:

Current space used is 21 classrooms. This will stabilize until school year 2004-2005.

NEEDS:

None at the present time.

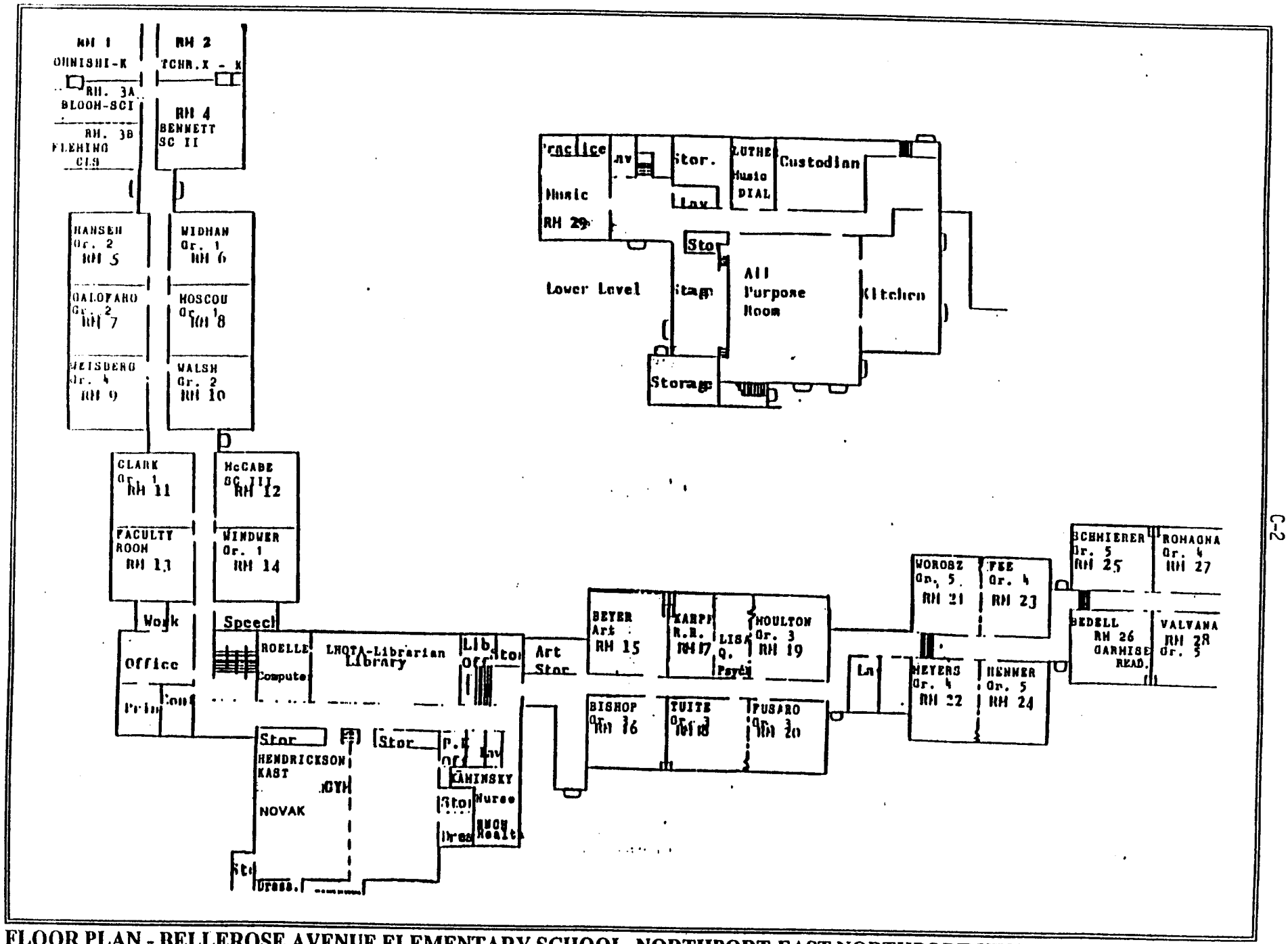
CURRENT THINKING:

Monitor enrollment patterns closely over the coming years.

K - 5 Sectional Analysis Bellerose	1998 current	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Kindergarten	53	60	59	58	58	58	58	58	58	58	58
sections	3	3	3	3	3	3	3	3	3	3	3
section size	17.7	20.0	19.7	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
First	73	66	74	74	72	73	73	73	73	73	73
sections	4	4	4	4	4	4	4	4	4	4	4
section size	18.3	16.5	18.5	18.5	18.0	18.3	18.3	18.3	18.3	18.3	18.3
Second	64	75	68	76	76	74	74	74	74	75	75
sections	3	4	3	4	4	4	4	4	4	4	4
section size	21.3	18.8	22.7	19.0	19.0	18.5	18.5	18.5	18.5	18.8	18.8
Third	74	62	74	66	75	74	73	73	73	73	73
sections	4	3	4	3	4	4	4	4	4	4	4
section size	18.5	20.7	18.5	22.0	18.8	18.5	18.3	18.3	18.3	18.3	18.3
Fourth	85	75	64	75	67	76	76	74	74	75	75
sections	4	4	3	4	3	4	4	4	4	4	4
section size	21.3	18.8	21.3	18.8	22.3	19.0	19.0	18.5	18.5	18.8	18.8
Fifth	80	87	78	65	77	69	78	77	76	76	76
sections	4	4	4	3	4	3	4	4	4	4	4
section size	20.0	21.8	19.5	21.7	19.3	23.0	19.5	19.3	19.0	19.0	19.0
Total enrollment	429	424	417	414	425	425	432	430	429	429	430
Total sections	22	22	21	21	22	22	23	23	23	23	23
Avg Section Size	19.5	19.4	20.0	19.9	19.4	19.4	18.8	18.7	18.6	18.7	18.7
Rooms Needed	21	21	20	20	21	21	22	22	22	22	22

NORTHPORT-EAST NORTHPORT UFSD: BELLEROSE AVENUE ELEMENTARY SCHOOL (1966)
1998/99 FACILITY ANALYSIS WORKSHEET

FLOOR	ROOM	SQUARE FOOTAGE	ROOM USAGE		COMMENTS
ALL ROOMS CONTAINING AT LEAST 550 SQUARE FEET, EXCEPT FOR MAIN OFFICE, NURSE, FACULTY					
1	01	1,029	KINDERGARTEN		BATHROOM
1	02	1,029	KINDERGARTEN		BATHROOM, DESIGNED AS K ROOM
1	05	783	SECOND		BATHROOM
1	06	783	FIRST		BATHROOM
1	07	783	SECOND		BATHROOM
1	08	783	FIRST		BATHROOM
1	09	744	FOURTH		BATHROOM
1	10	783	SECOND		BATHROOM
1	11	783	FIRST		BATHROOM
1	14	783	FIRST		BATHROOM
1	16	769	THIRD		
1	18	769	THIRD		
1	19	769	THIRD		
1	20	769	THIRD		
1	21	769	FIFTH		
1	22	769	FOURTH		
1	23	769	FOURTH		
1	24	769	FIFTH		
1	25	769	FIFTH		
1	27	769	FOURTH		
1	28	769	FIFTH		
SUPPORT ROOMS CONTAINING AT LEAST 550 SQUARE FEET					
1	03A	515	SCI		BATHROOM, DESIGNED AS K ROOM
1	03B	515	CLS		
1	04	1,029	SCI		BATHROOM
1	12	783	SC II		BATHROOM
LL	29	1,202	GENERAL MUSIC		CONTAINS 2 STORAGE/PRACTICE RMS
1	15	769	ART		
1	26	737	READING/CLS		ROOM 26 DIVIDED (Reading/CLS)
TOTAL ROOMS OVER 550 SQUARE FEET =		27			
TOTAL ROOMS USED FOR CORE INSTRUCTION =		21			78%
TOTAL ROOMS USED FOR SUPPORT INSTRUCTION=		6			22%
INCLUDING ONE ROOM AS 2 STATIONS					
25% SUPPORT ROOMS =		7		6.75	
AVAILABLE FOR INSTRUCTION =		20		20.25	
SUPPORT ROOMS CONTAINING LESS THAN 550 SQUARE FEET					
1	17B	461	RESOURCE		ROOM 17 DIVIDED
1	COMPUTER	390	COMPUTER		WAS TEACHER WORKROOM
LL	MUSIC	364	MUSIC		WAS FACULTY DINING RM
1	17A	307	PSYCHOLOGIST		RM 17 DIVIDED
1	SPEECH	276	SPEECH		
1	WORKROOM	120	COUNSELOR		
CORE/COMMON FACILITIES					
1	GYM	3,550	PHYSICAL ED (2 STTNS)		
LL	All purpose rm	2,860	LUNCH, ASSSEMB, REHRSL		4 LUNCH, ASSEMBLY, ORCHESTRA, CHORUS
1	LIBRARY	1,690	LIBRARY		CONTAIN PRIMARY READING CENTER
LL	KITCHEN	812	FOOD PREP		
LL	STAGE		STAGE (ALL PURPOSE)		
NON-INSTRUCTIONAL SPACE					
1	13	783	FACULTY ROOM		WAS CLASSROOM
1	MAIN OFFICE	552	MAIN OFFICE		
1	HEALTH	323	SCHOOL NURSE		
1	ART STORAGE	299	ART STORAGE		
1	CONF	233	CONFERENCE		
1	PRINC	216	PRINCIPAL		
1	LIB OFF	148	LIBRARY OFFICE		
1	LIB STR	96	LIBRARY STORAGE		
1	PE OFFICE	94	PE OFFICE		
1	LOCKER		DRESSING RM.		
LL	CUSTODIAN		CUSTODIAN		
LL	STORAGE		STORAGE (2 ROOMS)		
1	STORAGE		STORAGE (4 ROOMS)		
1	LOCKER		DRESSING RM.		



FLOOR PLAN - BELLEROSE AVENUE ELEMENTARY SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

DICKINSON AVENUE SCHOOL

BOCES PROJECTIONS:

Current space used is 19 classrooms. This will drop to 17, and then stabilize. (NOTE: If unexpected growth should occur at either grade 3 or grade 5 next year, the number of rooms needed could increase.)

NEEDS:

None at the present time.

CURRENT THINKING:

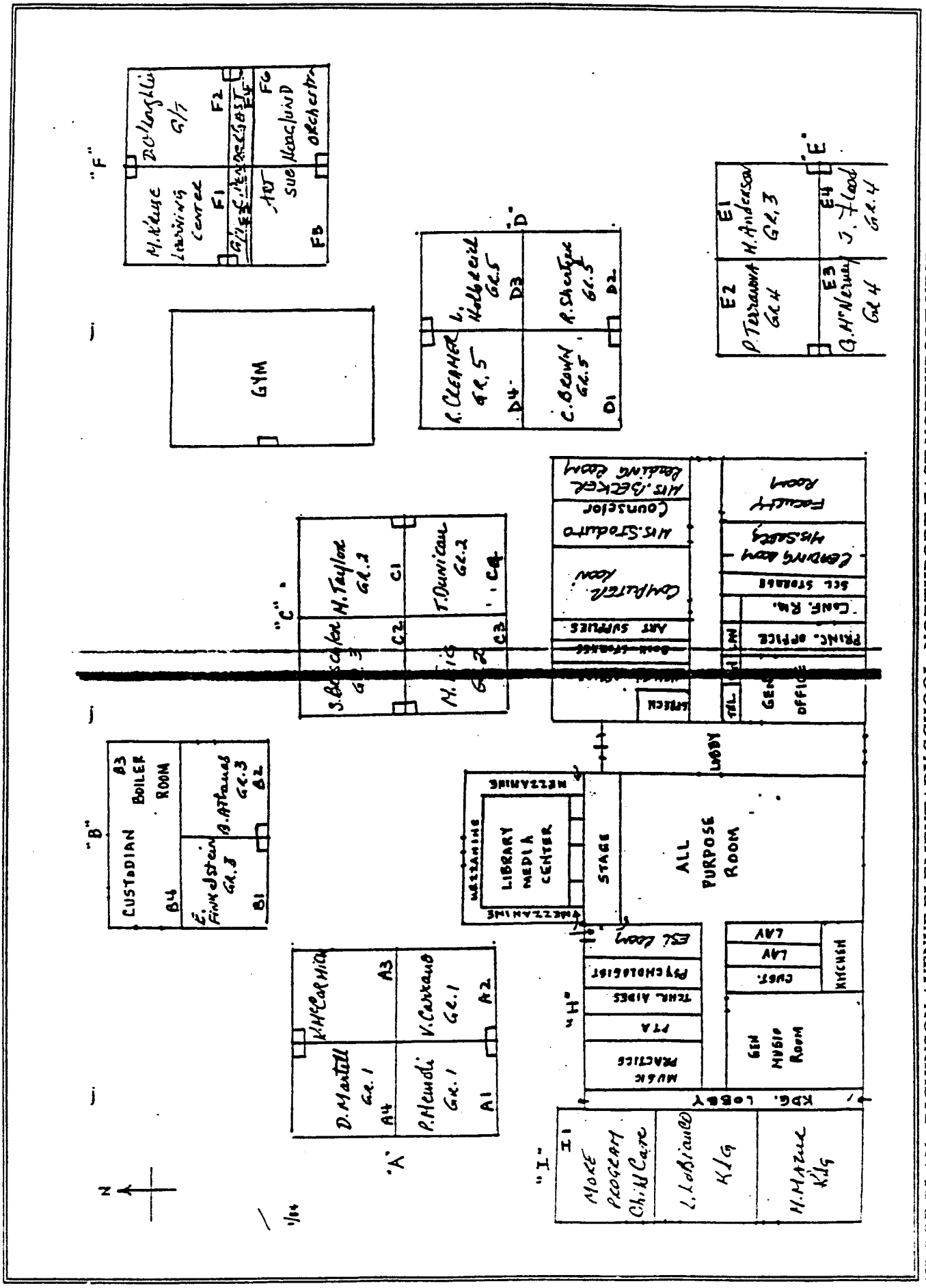
Consider Dickinson as a location to which to move other programs, if needed. Additional space can be gained by moving out the child care component of the kindergarten program, and moving it to the Laurel Avenue School as we did with the other component this year.

K - 5 Sectional Analysis

Dickinson	1998 current	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Kindergarten	52	55	54	53	53	53	53	53	54	54	54
sections	3	3	3	3	3	3	3	3	3	3	3
section size	17.3	18.3	18.0	17.7	17.7	17.7	17.7	17.7	18.0	18.0	18.0
First	59	61	63	63	62	62	62	62	62	62	62
sections	3	3	3	3	3	3	3	3	3	3	3
section size	19.7	20.3	21.0	21.0	20.7	20.7	20.7	20.7	20.7	20.7	20.7
Second	66	58	60	63	62	61	61	61	61	61	61
sections	3	3	3	3	3	3	3	3	3	3	3
section size	22.0	19.3	20.0	21.0	20.7	20.3	20.3	20.3	20.3	20.3	20.3
Third	80	66	58	60	62	62	61	61	61	61	61
sections	4	3	3	3	3	3	3	3	3	3	3
section size	20.0	22.0	19.3	20.0	20.7	20.7	20.3	20.3	20.3	20.3	20.3
Fourth	69	83	68	61	63	65	64	63	63	63	63
sections	3	4	3	3	3	3	3	3	3	3	3
section size	23.0	20.8	22.7	20.3	21.0	21.7	21.3	21.0	21.0	21.0	21.0
Fifth	75	68	82	67	60	62	64	63	62	62	62
sections	4	3	4	3	3	3	3	3	3	3	3
section size	18.8	22.7	20.5	22.3	20.0	20.7	21.3	21.0	20.7	20.7	20.7
Total enrollment	401	391	386	367	362	364	365	364	363	363	364
Total sections	20	19	19	18	18	18	18	18	18	18	18
Avg Section Size	20.1	20.6	20.3	20.4	20.1	20.3	20.3	20.2	20.2	20.2	20.2
Rooms Needed	19	18	18	17	17	17	17	17	17	17	17

NORTHPORT-EAST NORTHPORT UFSD: DICKINSON AVENUE ELEMENTARY SCHOOL (1954, 1970)
1998/99 FACILITY ANALYSIS WORKSHEET

FLOOR	ROOM	SQUARE FOOTAGE	ROOM USAGE		COMMENTS
ALL ROOMS CONTAINING AT LEAST 550 SQUARE FEET, EXCEPT FOR MAIN OFFICE, NURSE, FACULTY					
1	A1	902	First		BATHROOM
1	A2	902	First		BATHROOM
1	A4	902	First		BATHROOM
1	B1	869	Third		BATHROOM, FORMER DIST B & G
1	B2	875	Third		BATHROOM, FORMER DIST B & G
1	C1	886	Second		
1	C2	886	Third		
1	C3	886	Second		
1	C4	886	Second		
1	D1	902	Fifth		
1	D3	902	Fifth		
1	D4	902	Fifth		
1	E1	886	Third		
1	E2	886	Fourth		
1	E3	886	Fourth		
1	E4	886	Fourth		
1	D2	902	Fifth		
1	K1	995	Kindergarten		BATHROOM
1	K2	995	Kindergarten		BATHROOM
SUPPORT ROOMS CONTAINING AT LEAST 550 SQUARE FEET					
1	A3	902	CLS/Resource Room		BATHROOM
1	F1	825	Learning Center		
1	I1	995	MORE		BATHROOM, SA CHILDCARE
1	F4	930	GIFTED/TALENTED (HABITAT)		
1	F3	930	GIFTED/TALENTED (HABITAT)		
1	F2	825	GIFTED/TALENTED		
1	F6	825	ART/ORCHESTRA		
1	F5	825	ART		
1	COMPUTER	777	COMPUTER LAB		
1	GEN MUSIC	738	GENERAL MUSIC ROOM		
1	LIB MEZZANINE	550	Resource		UPSTAIRS FROM LIBRARY
1	LIB MEZZANINE	550	CLS		UPSTAIRS FROM LIBRARY
TOTAL ROOMS OVER 550 SQUARE FEET =		31			
TOTAL ROOMS USED FOR CORE INSTRUCTION =		19			61%
TOTAL ROOMS USED FOR SUPPORT INSTRUCTION=		12			39%
INCLUDING 3 ROOMS FOR G/T, 1 ROOM FOR MORE					
25% SUPPORT ROOMS =		8		7.75	+3 ROOMS FOR G/T, 1 RM FOR MORE = 11 RMS
AVAILABLE FOR INSTRUCTION =		23		23.25	WITH CONSIDERATION OF ABOVE = 20 ROOMS
SUPPORT ROOMS CONTAINING LESS THAN 550 SQUARE FEET					
1	READING	408	READING		STORAGE & CHAIRPERSONS OFFICE
1	COUNSELOR	384	SCHOOL COUNSELOR		
1	READING	384	READING		
1	MUSIC PRACTICE	198	INSTRUMENTAL		
1	SPEECH	80	SPEECH RX		
1	ESL	76	ESL		
1	PSYCHOLOGIST	76	PSYCHOLOGIST		
CORE/COMMON FACILITIES					
1	GYM	3,869	PHYS ED (2 STATIONS)		
1	all purpose rm	2,704	LUNCH, ASSEMB, REHRSLS		LUNCH, ASSEMBLIES, CHORUS/BAND REHEARSALS
1	LIBRARY	1,872	LIBRARY MEDIA CENTER		
1	LOCKER RMS (2)	136	BOYS/GIRLS PHYS ED DRESS		
1	STAGE		STAGE (ALL PURPOSE)		CHORUS/BAND REHEARSALS, ASSEMBLIES
1	KITCHEN		FOOD PREPARATION		
NON-INSTRUCTIONAL SPACE					
1	FACULTY	748	FACULTY ROOM		ONCE A CLASSROOM
1	MAIN OFFICE	697	GENERAL OFFICE		
1	HEALTH OFFICE	304	SCHOOL NURSE		
1	PRINC	247	PRINCIPAL OFFICE		
1	CONF	216	CONFERENCE ROOM		ATTACHED TO PRINCIPAL'S OFFICE
1	TEACHER AIDES	153	TEACHER AIDES (DUPLICATING)		
1	PTA	112	PTA		
1	B4		CUSTODIAN		
1	STORAGE		STORAGE (2 CLOSETS-ART/BK)		
1	B3		BOILER ROOM		
1	SCI STORAGE		STORAGE		



FLOOR PLAN - DICKINSON AVENUE ELEMENTARY SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

FIFTH AVENUE SCHOOL

BOCES PROJECTIONS;

Current space use is 22 classrooms. BOCES did project that this will drop to 21 next year. However, our third grade is currently showing five sections, not the four projected by BOCES. Therefore, we will need the 22nd room next year. For the following year, BOCES is projecting the need for one more room, 23, followed by a slight drop in future years.

NEEDS:

None at the present time, provided the current grade level enrollments hold. However, there will almost certainly be a need for an additional room in 2000-2001. (For 1999-2000, while the need is not projected, it should be noted that the second and fifth grade classes, while well within guidelines, could become problematic if additional children enroll. If either of these two grades were to require an additional class, the school would be short room next year.)

CURRENT THINKING:

The current thinking is to move out the pre-school disabled program, probably into the Laurel Avenue School, to create additional space at Fifth Avenue in 2000-2001.

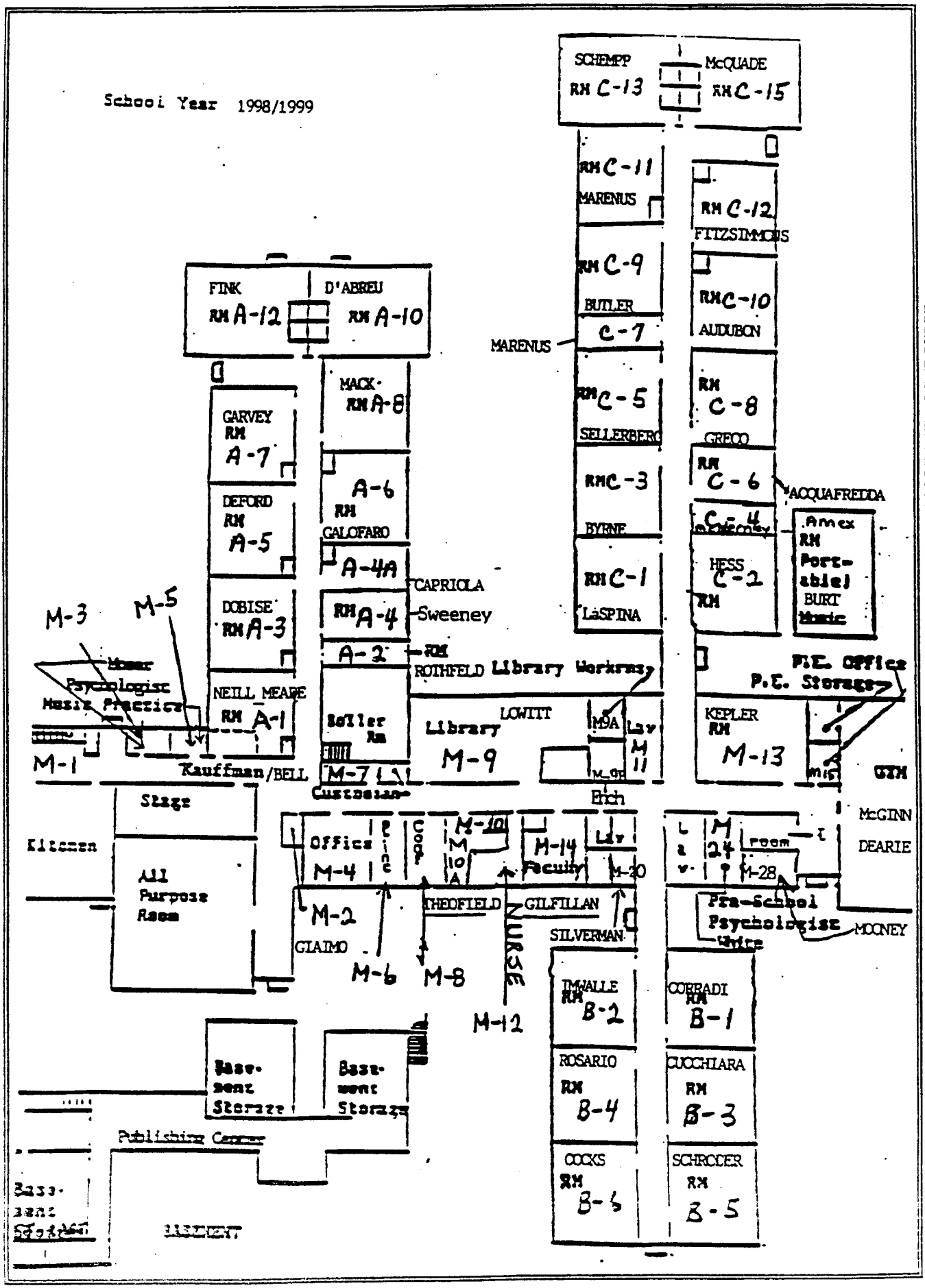
K - 5 Sectional Analysis

Fifth	1998 current	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Kindergarten	61	65	64	63	63	63	63	63	63	63	63
sections	3	3	3	3	3	3	3	3	3	3	3
section size	20.3	21.7	21.3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
First	69	76	81	80	78	78	79	79	79	79	79
sections	3	4	4	4	4	4	4	4	4	4	4
section size	23.0	19.0	20.3	20.0	19.5	19.5	19.8	19.8	19.8	19.8	19.8
Second	98	68	75	80	79	78	78	78	78	78	78
sections	5	3	4	4	4	4	4	4	4	4	4
section size	19.6	22.7	18.8	20.0	19.8	19.5	19.5	19.5	19.5	19.5	19.5
Third	79	100	70	78	82	81	80	80	80	80	80
sections	4	4	4	4	4	4	4	4	4	4	4
section size	19.8	25.0	17.5	19.5	20.5	20.3	20.0	20.0	20.0	20.0	20.0
Fourth	93	75	97	67	75	80	79	77	78	78	78
sections	4	4	5	3	4	4	4	4	4	4	4
section size	23.3	18.8	19.4	22.3	18.8	20.0	19.8	19.3	19.5	19.5	19.5
Fifth	84	95	77	99	68	76	81	80	79	79	79
sections	4	4	4	4	3	4	4	4	4	4	4
section size	21.0	23.8	19.3	24.8	22.7	19.0	20.3	20.0	19.8	19.8	19.8
Total enrollment	484	479	464	466	446	456	459	457	456	457	457
Total sections	23	22	24	22	22	23	23	23	23	23	23
Avg Section Size	21.2	21.8	19.4	21.3	20.4	19.9	20.0	19.9	19.9	19.9	19.9
Rooms Needed	22	21	23	21	21	22	22	22	22	22	22

Prepared by Western Suffolk BOCES Office of School Planning Research

NORTHPORT-EAST NORTHPORT UFSD: FIFTH AVENUE ELEMENTARY SCHOOL (1959, 1968)
1998/99 FACILITY ANALYSIS WORKSHEET

FLOOR	ROOM	SQUARE FOOTAGE	ROOM USAGE	COMMENTS
ALL ROOMS CONTAINING AT LEAST 550 SQUARE FEET, EXCEPT FOR MAIN OFFICE, NURSE, FACULTY				
1	A8	884	Second	BATHRM
1	A5	884	First	BATHRM
1	A6	884	Second	BATHRM
1	A3	884	First	BATHRM
1	C3	860	Fourth	
1	C5	860	Fourth	
1	C8	860	Third	
1	C9	860	Second	BATHRM
1	C10	860	Third	BATHRM
1	C12	860	Third	BATHRM, LEARNING DISABLED
1	B2	702	Fourth	
1	B1	865	Fourth	
1	B4	702	Fifth	
1	B3	860	Fifth	
1	B6	702	Fifth	
1	B5	702	Fifth	
1	A10	983	Kindergarten/Prekindergarten	BATHRM, 2 HALF-DAY SESSIONS
1	A12	983	Kindergarten	BATHRM, 2 HALF-DAY SESSIONS
1	C15	869	Second	BATHRM, RM ADDED IN 1968
1	C13	869	Second	BATHRM, RM ADDED IN 1968
1	A1	786	First	BATHRM,WAS MUSIC
SUPPORT ROOMS CONTAINING AT LEAST 550 SQUARE FEET				
1	A7	884	Prekindergarten	BATHRM
1	A4A	442	Reading	BATHRM
1	A4	442	Special Ed Inclusion Gr 1	
1	C11	860	Special Ed Inclusion Gr 2/3	BATHRM, MULTI-HANDICAPPED
1	C1	860	COMPUTER	
1	M13	775	ART	
1	PORTABLE	682	MUSIC	NO BATHROOM, WALKWAY TO MAIN BLDG
1	C4	641	SPECIAL ED GR 3 INCLUSION	
TOTAL ROOMS OVER 550 SQUARE FEET =		28		
TOTAL ROOMS USED FOR CORE INSTRUCTION =		21		75%
TOTAL ROOMS USED FOR SUPPORT INSTRUCTION=		7		25%
INCLUDING PREK, ONE ROOM AS TWO STATIONS				
25% SUPPORT ROOMS =		7		7 + PK = 8
AVAILABLE FOR INSTRUCTION =		21		21 WITH CONSIDERATION OF ABOVE = 20 ROOMS
SUPPORT ROOMS CONTAINING LESS THAN 550 SQUARE FEET				
1	C2**	543	Third	**general instruction room - but contains less than 550 sq. ft.
1	C6	543	SPECIAL ED GR 5 INCLUSION	
1	M10A/M10	200	COUNSELOR	
1	C7	120	SPECIAL ED GR 2 INCLUSION	
1	A2	120	SPEECH	
1	M3	80	PSYCHOLOGIST	
1	ART ROOM	80	ART	
1	M5	80	MUSIC PRACTICE (BAND)/ORCHESTRA	
1	M28	80	SPECIAL ED GR 4 INCLUSION	
1	M24	80	PRE-SCHOOL PSYCHOLOGIST	
1	M20	80	SPEECH/PRE-K	
CORE/COMMON FACILITIES				
1	GYM	3,744	PHYS ED (2 STATIONS)	
1	ALL PURP. RM.	2,800	ALL PURPOSE ROOM	LUNCH, RECESS, BAND, ORCHESTRA
1	LIBRARY	1,768	LIBRARY	
1	STAGE		STAGE	
1	KITCHEN		KITCHEN	
NON-INSTRUCTIONAL SPACE				
B	Basement strg	924	STORAGE	NO FIRE ESCAPE
1	M4	741	MAIN OFFICE	
1	M14	470	FACULTY LOUNGE	
1	M6	615	PRINCIPAL OFFICE	
1	M8	291	CONFERENCE ROOM	
1	M12	273	SCHOOL NURSE	
1	M9A	120	LIBRARY WORKROOM	
1	M7	80	COPY ROOM	
B	HALL		PUBLISHING CENTER	
1	PE STORAGE		P.E. STORAGE	
1	PE OFFICE		P.E. OFFICE	
B	BOILER		HEATING PLANT	
1	M2		SCHOOL STORE	
1	M1		CUSTODIAN SUPPLIES	
B	Basement strg		STORAGE	
1	M9B	120	HEALTH CLOSET	



FLOOR PLAN - FIFTH AVENUE ELEMENTARY SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

NORWOOD AVENUE SCHOOL

BOCES PROJECTIONS:

Current space used is 21 classrooms. This will drop to 20 and then stabilize at 19.

NEEDS:

None at the present time.

CURRENT THINKING:

Consider Norwood as a location to which to move other programs, if needed.

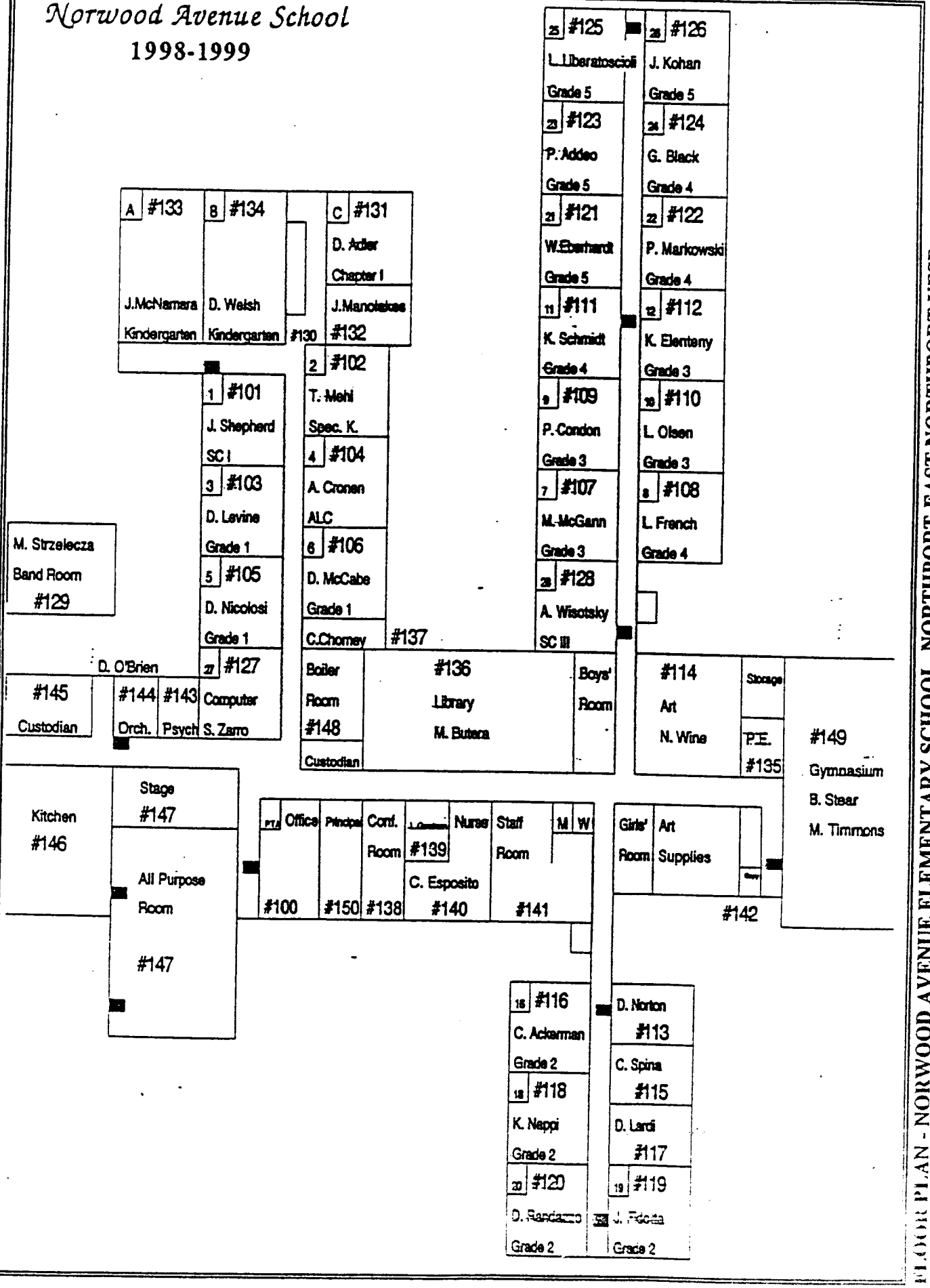
K - 5 Sectional Analysis

Norwood	1998 current	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Kindergarten	59	57	57	56	56	56	56	56	56	56	56
sections	3	3	3	3	3	3	3	3	3	3	3
section size	19.7	19.0	19.0	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7
First	60	63	61	61	60	60	60	60	60	60	60
sections	3	3	3	3	3	3	3	3	3	3	3
section size	20.0	21.0	20.3	20.3	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Second	79	66	69	67	67	65	66	66	66	66	66
sections	4	3	3	3	3	3	3	3	3	3	3
section size	19.8	22.0	23.0	22.3	22.3	21.7	22.0	22.0	22.0	22.0	22.0
Third	72	83	69	73	71	70	69	69	69	69	69
sections	4	4	3	4	4	4	3	3	3	3	3
section size	18.0	20.8	23.0	18.3	17.8	17.5	23.0	23.0	23.0	23.0	23.0
Fourth	78	76	88	73	77	75	74	73	73	73	73
sections	4	4	4	4	4	4	4	4	4	4	4
section size	19.5	19.0	22.0	18.3	19.3	18.8	18.5	18.3	18.3	18.3	18.3
Fifth	74	82	79	92	76	80	78	77	76	76	76
sections	4	4	4	4	4	4	4	4	4	4	4
section size	18.5	20.5	19.8	23.0	19.0	20.0	19.5	19.3	19.0	19.0	19.0
Total enrollment	422	427	424	422	406	406	402	401	400	400	401
Total sections	22	21	20	21	21	21	20	20	20	20	20
Avg Section Size	19.2	20.4	21.2	20.1	19.5	19.4	20.3	20.2	20.2	20.2	20.2
Rooms Needed	21	20	19	20	20	20	19	19	19	19	19

NORTHPORT-EAST NORTHPORT UFSD: NORWOOD AVENUE ELEMENTARY SCHOOL (1959, 1962)
1998/99 FACILITY ANALYSIS WORKSHEET

FLOOR	ROOM	SQUARE FOOTAGE	ROOM USAGE	COMMENTS
ALL ROOMS CONTAINING AT LEAST 550 SQUARE FEET, EXCEPT FOR MAIN OFFICE, NURSE, FACULTY				
1	03	884	First	
1	05	884	First	
1	07	867	Third	
1	08	884	First	
1	06	867	Fourth	
1	09	867	Third	
1	10	867	Third	
1	11	867	Fourth	
1	12	867	Third	
1	16	884	Second	
1	18	867	Second	
1	19	867	Second	
1	20	867	Second	
1	21	870	Fifth	
1	22	870	Fourth	
1	23	842	Fifth	
1	24	842	Fourth	
1	25	851	Fifth	
1	26	851	Fifth	
1	A	988	Kindergarten	BATHROOM, COAT AREA
1	B	988	Kindergarten	BATHROOM, COAT AREA
SUPPORT ROOMS CONTAINING AT LEAST 550 SQUARE FEET				
1	01	884	SC I	
1	02	884	SPECIAL KINDERGARTEN	
1	04	884	ALC (HEARING IMPAIRED)-SC	
1	C	884	Chapter I	
1	14	925	Art	
B	29	924	Band Room/Rehearsal, Instruction	
1	113	575	Reading	
1	115	575	G/T	
1	117	575	Resource	
1	27	786	Computer	
1	28	780	SC III	ADDED, WAS PART OF COURTYARD
TOTAL ROOMS OVER 550 SQUARE FEET =		32		
TOTAL ROOMS USED FOR CORE INSTRUCTION =		21		
TOTAL ROOMS USED FOR SUPPORT INSTRUCTION= INCLUDING ALC, SPECIAL K		11	--	66% 34%
25% SUPPORT ROOMS =		8		
AVAILABLE FOR INSTRUCTION =		24		8 + 2 ROOMS (SPECIAL K & ALC) = 10 24 WITH CONSIDERATION OF ABOVE = 22 ROOMS
SUPPORT ROOMS CONTAINING LESS THAN 550 SQUARE FEET				
1	137	120	Speech	
1	139	100	ESL	WAS PART OF NURSE OFFICE
1	144	94	Orchestra Lessons	
1	143	94	Psychologist	
CORE/COMMON FACILITIES				
1	GYM	3,744	GYM (2 STATIONS)	
1	ALL-PURP.	3,121	ALL-PURPOSE ROOM	
1	LIBRARY	1,570	LIBRARY	
1	KITCHEN	1,017	KITCHEN	
1	STAGE		ORCHESTRA REHEARSAL	
NON-INSTRUCTIONAL SPACE				
1	OFFICE	741	MAIN OFFICE	
1	141	315	FACULTY	
1	PRINC	315	PRINCIPAL'S OFFICE	CONTAINS STOVE, REFRIDGE, AIDE RM ADDED
1	NURSE	273	SCHOOL NURSE	
1	LIBRARY	291	LIBRARY OFFICE	
1	GYM	162	P.E. STORAGE	
1	135	124	P.E. OFFICE	
1	BOILER		HEATING PLANT	
1	XEROX		XEROX,KILN,STORAGE	
1	CUSTODIAN		CUSTODIAN	
1	ART STORAGE		ART STORAGE	
1	CONFERENCE		CONFERENCE RM	

Norwood Avenue School
1998-1999



FLOOR PLAN - NORWOOD AVENUE ELEMENTARY SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

OCEAN AVENUE SCHOOL

BOCES PROJECTIONS:

Current space used is 24 classrooms. BOCES projects an increase of one room to 25 rooms next year, remaining at 25 rooms for three years, and then dropping back to 24 rooms and, eventually, 23 rooms.

NEEDS AND CURRENT THINKING:

An extended discussion of the needs and current thinking is included in the major part of this report.

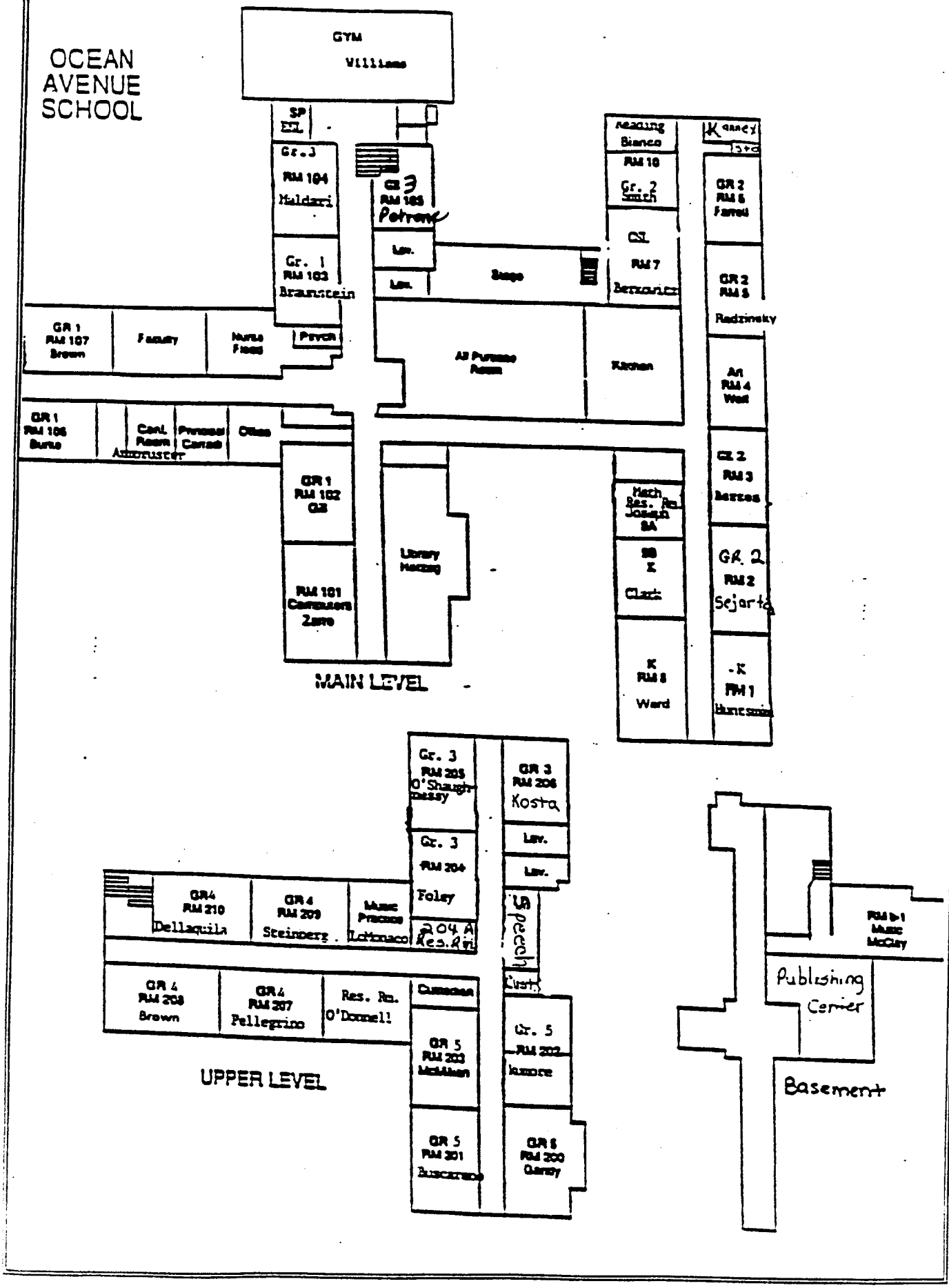
K - 5 Sectional Analysis

Ocean

	1998 current	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Kindergarten	89	80	79	78	78	78	78	78	78	78	78
sections	4	4	4	4	4	4	4	4	4	4	4
section size	22.3	20.0	19.8	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
First	75	100	90	89	87	87	88	88	88	88	88
sections	4	5	5	5	4	4	4	4	4	4	4
section size	18.8	20.0	18.0	17.8	21.8	21.8	22.0	22.0	22.0	22.0	22.0
Second	100	77	103	92	91	90	90	90	90	90	90
sections	5	4	5	4	4	4	4	4	4	4	4
section size	20.0	19.3	20.6	23.0	22.8	22.5	22.5	22.5	22.5	22.5	22.5
Third	98	104	80	107	96	95	93	93	93	94	94
sections	5	5	4	5	5	5	5	5	5	5	5
section size	19.6	20.8	20.0	21.4	19.2	19.0	18.6	18.6	18.6	18.8	18.8
Fourth	85	98	104	80	107	96	95	93	93	93	93
sections	4	5	5	4	5	4	4	4	4	4	4
section size	21.3	19.6	20.8	20.0	21.4	24.0	23.8	23.3	23.3	23.3	23.3
Fifth	75	86	99	105	80	107	96	95	94	94	94
sections	4	4	4	5	4	5	4	4	4	4	4
section size	18.8	21.5	24.8	21.0	20.0	21.4	24.0	23.8	23.5	23.5	23.5
Total enrollment	522	544	554	550	539	553	539	537	536	537	537
Total sections	26	27	27	27	26	26	25	25	25	25	25
Avg Section Size	20.1	20.2	20.7	20.5	20.8	21.4	21.7	21.6	21.6	21.6	21.6
Rooms Needed	24	25	25	25	24	24	23	23	23	23	23

NORTHPORT-EAST NORTHPORT UFSD OCEAN AVENUE ELEMENTARY SCHOOL (1937)
1998/99 FACILITY ANALYSIS WORKSHEET

FLOOR	ROOM	SQUARE FOOTAGE	ROOM USAGE	COMMENTS
ALL ROOMS CONTAINING AT LEAST 550 SQUARE FEET, EXCEPT FOR MAIN OFFICE, NURSE, FACULTY				
1	001	840	Kindergarten	BATHROOM
1	002	840	Second	BATHROOM
1	003	840	Second	BATHROOM
1	005	840	Second	BATHROOM
1	006	840	Second	BATHROOM
1	008	1,056	Kindergarten	BATHROOM
1	009B	605	Kindergarten	BATHROOM, RMS 9A/9B
1	010	690	Second	BATHROOM, RMS 10/7 WERE CAFE
1	102	749	First	
1	103	640	First	
1	104	640	Third	
1	105	717	Third	
1	106	827	First	
1	107	852	First	
2	200	816	Fifth	
2	201	704	Fifth	
2	202	672	Fifth	
2	203	704	Fifth	
2	204	717	Third	
2	205	717	Third	
2	206	717	Third	
2	207	802	Fourth	
2	208	809	Fourth	
2	209	820	Fourth	
2	210	854	Fourth	
SUPPORT ROOMS CONTAINING AT LEAST 550 SQUARE FEET				
B	B1	880	Music	
1	4	840	Art	
1	101	773	Computer	
1	7	585	CSL	BATHROOM, RMS 10 & 7 WERE CAFE
TOTAL ROOMS OVER 550 SQUARE FEET =		29		
TOTAL ROOMS USED FOR CORE INSTRUCTION =		25		86%
TOTAL ROOMS USED FOR SUPPORT INSTRUCTION=		4		14%
25% SUPPORT ROOMS =		7	7.25	
AVAILABLE FOR INSTRUCTION =		22	21.75	
SUPPORT ROOMS CONTAINING LESS THAN 550 SQUARE FEET				
1	9A	317	Math/Resource	RMS 9A & 9B WERE ONE RM
1	Resource Room	290	Resource	
2	READING	252	Reading	
2	MUSIC PRACTICE	204	MUSIC LESSONS	
1	Speech	180	Speech	
1	ESL	113	ESL	WAS PHYS ED CHANGING ROOM
2	204A	98	Resource room	
	PSYCHOLOGIST	90	Psychologist	WAS PART OF NURSE OFFICE
CORE/COMMON FACILITIES				
1	GYM	3,960	PHYS. ED. (2 STATION)	
1	APR	2,840	LUNCH,REHERSL,ASSMBLY	WAS GYM
1	LIBRARY	1,104	LIBRARY	LONG & NARROW, LIMITED SPACE IN LAYOUT, + WRKRM
1	KITCHEN		KITCHEN	
NON-INSTRU	STAGE		STAGE	
1				
1	FACULTY	584	FACULTY ROOM	
1	OFFICE	288	MAIN OFFICE	
1	CONFERENCE	264	CONFERENCE ROOM	
1	K ANNEX	252	K ANNEX	WAS GANG BATHROOMS
1	HEALTH	194	NURSE'S OFFICE	
1	OFFICE	160	PRINCIPAL'S OFFICE	
1	OFFICE		PE OFFICE	
B	CLOSETS		CUSTODIAL SUPPLIES	
B	PUBLISHING		PUBLISHING CENTER	
	STORAGE		SUPPLIES	



FLOOR PLAN - OCEAN AVENUE ELEMENTARY SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

PULASKI AVENUE SCHOOL

BOCES PROJECTIONS:

Current space used is 22 classrooms. This will remain the maximum for the next ten years.

NEEDS:

None at the present time.

CURRENT THINKING:

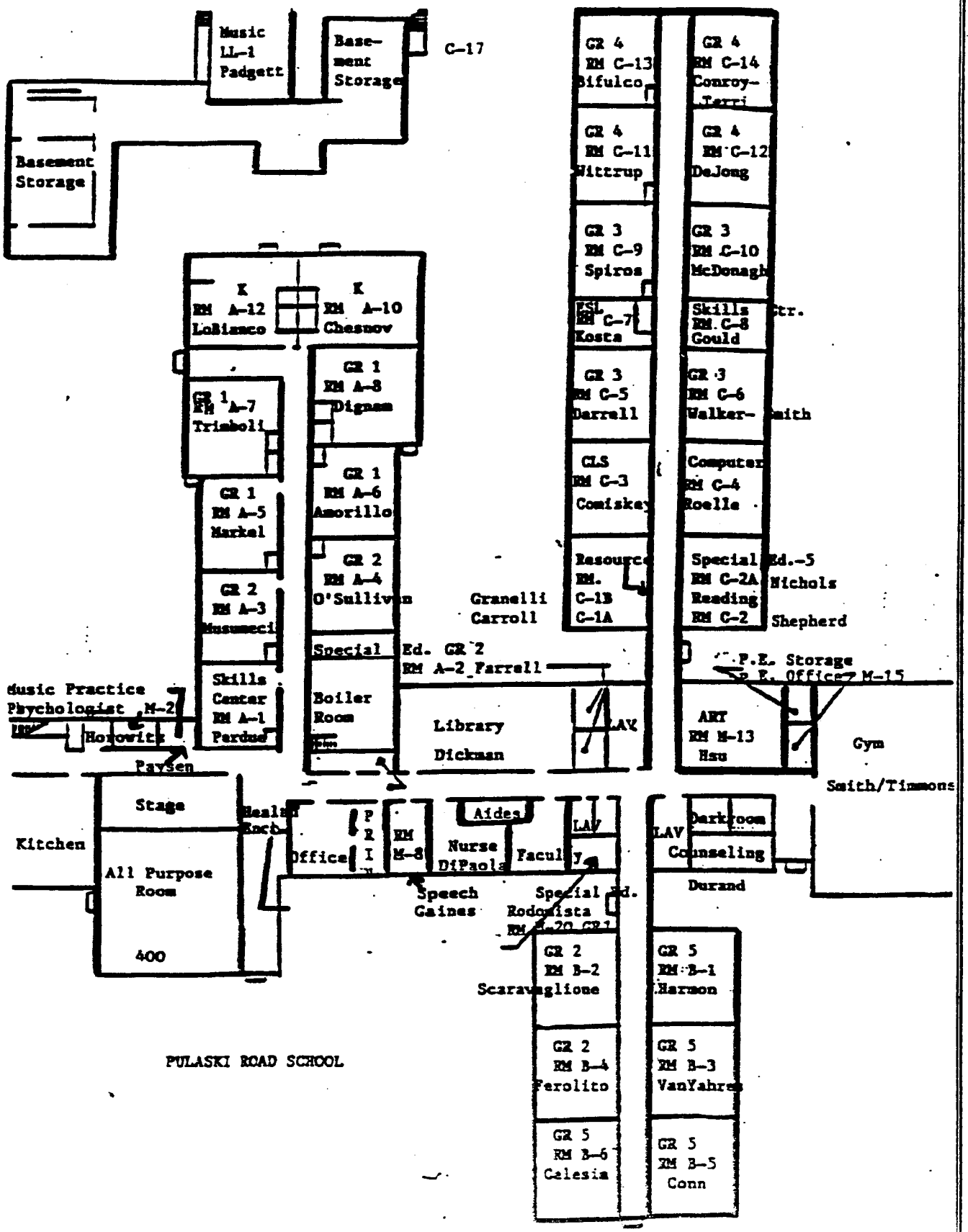
Monitor enrollment patterns closely over the coming years.

K - 5 Sectional Analysis

Pulaski	1998 current	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Kindergarten	66	67	67	65	66	66	66	66	66	66	66
sections	3	4	4	3	3	3	3	3	3	3	3
section size	22.0	16.8	16.8	21.7	22.0	22.0	22.0	22.0	22.0	22.0	22.0
First	72	76	77	77	75	75	75	76	76	76	76
sections	4	4	4	4	4	4	4	4	4	4	4
section size	18.0	19.0	19.3	19.3	18.8	18.8	18.8	19.0	19.0	19.0	19.0
Second	71	73	77	79	78	77	77	77	77	77	77
sections	4	4	4	4	4	4	4	4	4	4	4
section size	17.8	18.3	19.3	19.8	19.5	19.3	19.3	19.3	19.3	19.3	19.3
Third	75	72	75	79	80	79	78	78	78	78	78
sections	4	4	4	4	4	4	4	4	4	4	4
section size	18.8	18.0	18.8	19.8	20.0	19.8	19.5	19.5	19.5	19.5	19.5
Fourth	79	77	74	77	81	83	82	80	80	80	81
sections	4	4	4	4	4	4	4	4	4	4	4
section size	19.8	19.3	18.5	19.3	20.3	20.8	20.5	20.0	20.0	20.0	20.3
Fifth	67	80	78	75	78	82	83	83	81	81	81
sections	4	4	4	3	4	4	4	4	4	4	4
section size	16.8	20.0	19.5	25.0	19.5	20.5	20.8	20.8	20.3	20.3	20.3
Total enrollment	430	446	448	451	458	461	461	459	458	459	459
Total sections	23	24	24	22	23	23	23	23	23	23	23
Avg Section Size	18.8	18.5	18.7	20.8	20.0	20.2	20.1	20.1	20.0	20.0	20.0
Rooms Needed	22	22	22	21	22	22	22	22	22	22	22

NORTHPORT-EAST NORTHPORT UFSD: PULASKI ROAD ELEMENTARY SCHOOL (1959)
1998/99 FACILITY ANALYSIS WORKSHEET

FLOOR	ROOM	SQUARE FOOTAGE	ROOM USAGE	COMMENTS
ALL ROOMS CONTAINING AT LEAST 550 SQUARE FEET, EXCEPT FOR MAIN OFFICE, NURSE, FACULTY				
1	A3	884	Second	BATHROOM
1	A4	884	Second	BATHROOM
1	A5	884	First	
1	A6	884	First	BATHROOM
1	A7	889	First	BATHROOM, DESIGNED AS K ROOM
1	A8	889	First	BATHROOM, DESIGNED AS K ROOM
1	A10	983	Kindergartan	BATHROOM
1	A12	983	Kindergartan	BATHROOM
1	B1	857	Fifth	
1	B2	857	Second	PARTITION BETW 7/9
1	B3	860	Fifth	PARTITION BETW 8/10
1	B4	857	Second	PARTITION BETW 7/9
1	B5	857	Fifth	PARTITION BETW 8/10
1	B6	857	Fifth	
1	C5	860	Third	
1	C6	860	Third	
1	C9	860	Third	BATHROOM
1	C10	860	Third	
1	C11	860	Fourth	BATHROOM
1	C12	860	Fourth	PARTITION BETW RM 22/24
1	C13	860	Fourth	BATHROOM
1	C14	860	Fourth	PARTITION BETW RM 22/24
SUPPORT ROOMS CONTAINING AT LEAST 550 SQUARE FEET				
1	M13	925	Art	
B	LL1	924	Music	
1	C4	860	Computer	
1	A1	786	Skills Center I	BATHROOM
1	C1B	555	Resource	ROOM DIVIDED
1	C1A	315	Resource	ROOM DIVIDED
1	C2	430	Reading	
1	C2A	430	Special Ed Gr 5	
TOTAL ROOMS OVER 550 SQUARE FEET =		28		
TOTAL ROOMS USED FOR CORE INSTRUCTION =		22		79%
TOTAL ROOMS USED FOR SUPPORT INSTRUCTION=		6		21%
INCLUDING 2 ROOMS AS 4 STATIONS				
25% SUPPORT ROOMS =		7		7
AVAILABLE FOR INSTRUCTION =		21		21
SUPPORT ROOMS CONTAINING LESS THAN 550 SQUARE FEET				
1	C3	520	CLS	
1	C8	435	Skill Center	DESIGNED AS SERIES OF 5 CONFERENCE ROOMS
1	C7	336	ESL Room	DESIGNED AS STORAGE
1	COUNSELOR	319	SCHOOL COUNSELOR	
1	M8	291	Speech Rx	
1	M20	181	Special Ed Grade 1	DESIGNED AS FACULTY WORK ROOM
1	A2	120	Special Ed Grade 2	
1	PRACTICE	92	Music Practice	
1	PSYCH	92	Psychologist	DESIGNED AS MUSIC PRACTICE ROOM
CORE/COMMON FACILITIES				
1	GYM	3,744	PHYS ED (2 STTNS)	
1	all purpose rm	3,121	All Purpose Room	LUNCH, REHEARSALS, ASSEMBLY
1	LIBRARY	1,570	Library	
1	KITCHEN	1,017	Kitchen	
1	STAGE		Stage	BAND, ORCHESTRA, REHEARSALS
NON-INSTRUCTIONAL SPACE				
1	OFFICE	741	Main Office	
1	NURSE	615	School Nurse	
1	FACULTY	470	Faculty	
1	DARKRM	319	Darkroom	CLOSET
1	PRINC	315	Principal	
1	Library Workrm	162	Library Workrooms (2)	EACH ROOM = 165 SQ FT
1	PE OFFICE	124	PE Office	
1	PE STORAGE	124	PE Storage	
1	AIDE	101	TEACHER AIDE WRKRM	INCLUDES MEDICAL TESTING AREA SPACE
1	COPY		Copy Room	
1	HEALTH		Health Storage	
B	STORAGE		Basement Storage	
B	STORAGE		BOILER/HEARING PLANT	



FLOOR PLAN - PULASKI ROAD ELEMENTARY SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

APPENDIX B

MIDDLE SCHOOLS

SPACE - ENMS - Updated February 1, 1999

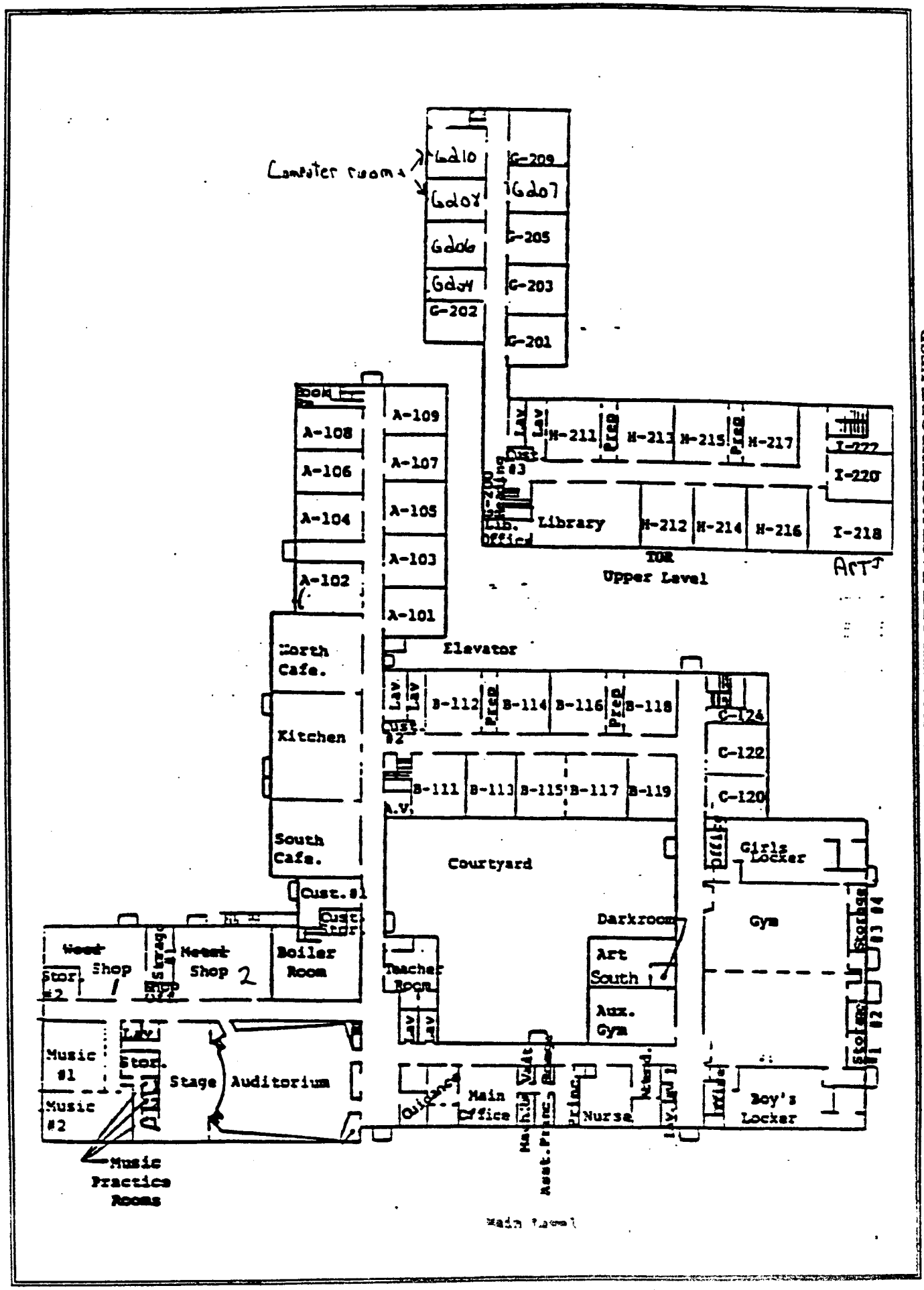
Room Type	1999 Pds/Day Needed	2000 Pds/Day Needed	2001 Pds/Day Needed	2002 Pds/Day Needed	2003 Pds/Day Needed	2004 Pds/Day Needed	2005 Pds/Day Needed	2006 Pds/Day Needed	2007 Pds/Day Needed	2008 Pds/Day Needed
1. General Purpose										
English 7 & 8	18	19	21	22	22	20	19	20	20	20
Math 7 & 8	18	19	21	21	22	20	20	20	20	20
Social Studies 7 & 8	18	19	21	22	22	20	19	20	20	20
LOTE	18	18	21	23	23	21	21	23	23	22
Language Arts 6	10	11	11	11	10	10	11	10	10	10
Reading 6	10	11	11	11	10	10	11	10	10	10
Math 6	10	11	11	11	10	10	11	10	10	10
Social Studies 6	10	11	11	11	10	10	11	10	10	10
Health 6 & 8	12	12	12	13	12	13	12	12	12	12
English Literacy 7 & 8	2	2	2	2	2	2	2	2	2	2
Business Express	1	-	-	1	1	1	-	-	-	-
Total Periods Needed	127	133	142	148	144	137	137	137	137	136
Total Rooms Needed	19	19	21	22	21	20	20	20	20	20
Rooms Available in 1998	21	21	21	21	21	21	21	21	21	21
2. Science Classrooms										
Science 6	10	11	11	11	10	10	11	10	10	10
Science 7	9	10	11	11	11	9	10	10	10	10
Science 8	7	6	7	8	8	8	7	8	8	8
Earth Science & Lab	4	4	4	4	4	4	4	4	4	4
Total Periods Needed	30	31	33	34	33	31	32	32	32	32
Total Rooms Needed	5	5	5	5	5	5	5	5	5	5
Rooms Vailalbe 1998	6	6	6	6	6	6	6	6	6	6
3. Music Classrooms										
Music 6	10	11	11	11	10	10	11	10	10	10
Music 7	10	9	10	11	11	11	9	10	10	10
Total Periods Needed	20	20	21	22	21	21	20	20	20	20
Total Rooms Needed	3	3	3	4	3	3	3	3	3	3
Rooms Available 1998	3	3	3	3	3	3	3	3	3	3

SPACE - ENMS - Updated February 1, 1999

Room Type	1999 Pds/Day Needed	2000 Pds/Day Needed	2001 Pds/Day Needed	2002 Pds/Day Needed	2003 Pds/Day Needed	2004 Pds/Day Needed	2005 Pds/Day Needed	2006 Pds/Day Needed	2007 Pds/Day Needed	2008 Pds/Day Needed
4. Technology Rooms										
Tech 6 (1/4)	14/4=4	15=4	15=4	15=4	13=4	14=4	15=4	14=4	14=4	14=4
Tech 7 (1/4)	11/4=3	12=3	13=4	13=4	13=4	12=3	13=4	13=4	13=4	13=4
Tech 8 (1/2)	12/2=6	11=6	12=6	13=7	13=7	13=7	12=6	13=7	13=7	13=7
Wood (1/2)	2=1	2=1	2=1	2=1	2=1	2=1	2=1	2=1	2=1	2=1
Comp. (1/2)	-	-	1=1	1=1	1=1	1=1	-	1=1	1=1	1=1
Total Periods Needed	14	14	16	17	17	16	15	17	17	17
Total Rooms Needed	2	2	3	3	3	3	3	3	3	3
Rooms Available 1998	3	3	3	3	3	3	3	3	3	3
5. Arts										
Art 6 (1/4)	14=4	15=4	15=4	15=4	13=4	14=4	15=4	14=4	14=4	14=4
Art 7 (1/2)	11=6	12=6	13=7	13=7	13=7	12=6	13=7	13=7	13=7	13=7
Arts & Crafts	1	1	1	1	1	1	1	1	1	1
Art & Studio	1	1	1	1	1	1	1	1	1	1
Total Periods Needed	12	12	13	13	13	12	13	13	13	13
Total Rooms Needed	2	2	2	2	2	2	2	2	2	2
Rooms Available 1998	2	2	2	2	2	2	2	2	2	2
6. Family & Consumer Science										
Family & Consumer 6 (1/2)	14=7	15=8	15=8	15=8	13=7	14=7	15=8	14=7	14=7	14=7
Family & Consumer 7 (1/4)	11=3	12=3	13=4	13=4	13=4	12=3	13=4	13=4	13=4	13=4
Chefs 8 (1/2)	3	3	3	3	3	3	3	3	3	3
Total Periods Needed	13	14	15	15	14	13	15	14	14	14
Total Rooms Needed	2	2	3	3	2	2	3	2	2	2
Rooms Available 1998	3	3	3	3	3	3	3	3	3	3
7. Physical Education										
PE 6	9=5	10=5	10=5	10=5	9=5	10=5	10=5	9=5	9=5	9=5
PE 7	8=4	9=5	10=5	10=5	10=5	9=5	9=5	9=5	9=5	9=5
PE 8	8=4	8=4	9=5	10=5	10=5	10=5	9=5	9=5	9=5	9=5
Total Periods Needed	13	14	15	15	15	15	15	15	15	15
Total Rooms Needed	2	2	2+	2+	2+	2+	2+	2+	2+	2+
Rooms Available 1998	2	2	2	2	2	2	2	2	2	2

SPACE - ENMS - Updated February 1, 1999

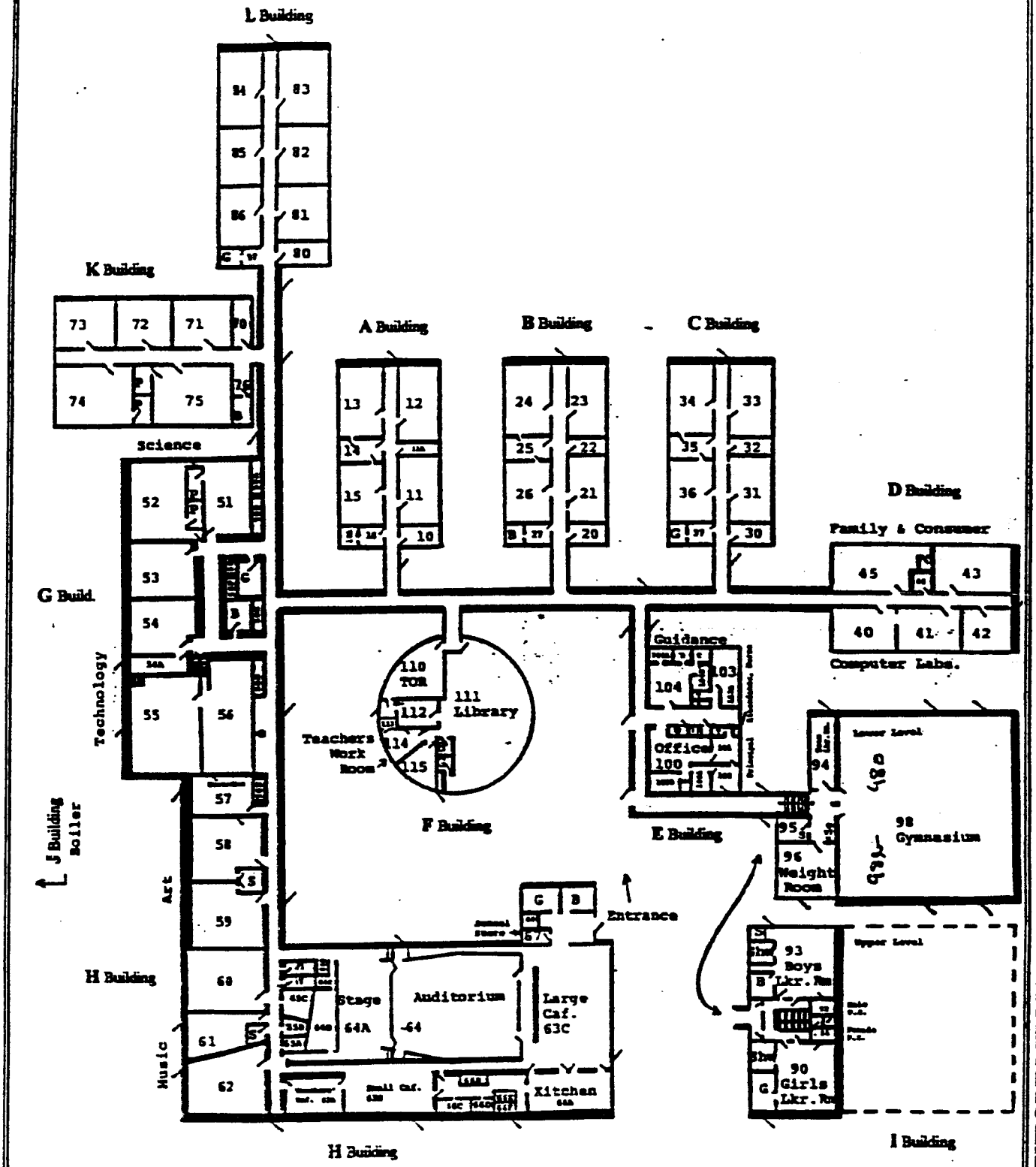
Room Type	1999 Pds/Day Needed	2000 Pds/Day Needed	2001 Pds/Day Needed	2002 Pds/Day Needed	2003 Pds/Day Needed	2004 Pds/Day Needed	2005 Pds/Day Needed	2006 Pds/Day Needed	2007 Pds/Day Needed	2008 Pds/Day Needed
8. Remedial										
Reading 6, 7 8	7	7	8	9	10	9	9	9	10	10
PSEN Math 6, 7 8	6	7	8	8	7	6	6	6	6	6
Study SKills 6, 7 8	22	22	24	24	23	23	23	24	24	24
Total Periods Needed	35	36	40	41	40	38	38	39	40	40
Total Rooms Needed	5	6	6	6	6	6	6	6	6	6
Rooms Available 1998	6	6	6	6	6	6	6	6	6	6



FLOOR PLAN - EAST NORTHPORT MIDDLE SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

Room Type	1999 Pds/Day Needed	2000 Pds/Day Needed	2001 Pds/Day Needed	2002 Pds/Day Needed	2003 Pds/Day Needed	2004 Pds/Day Needed	2005 Pds/Day Needed	2006 Pds/Day Needed	2007 Pds/Day Needed	2008 Pds/Day Needed
1. General Purpose										
English 6	11	13	13	13	11	12	12	12	12	12
Language Arts 6	11	13	13	13	11	12	12	12	12	12
math 6	17	20	20	20	17	18	18	18	18	18
reading 6	11	13	13	13	11	12	12	12	12	12
science 6	11	13	13	13	11	12	12	12	12	12
English 7 & 8	20	22	25	26	26	24	23	26	25	25
math & math labs 7 & 8	24	26	29	30	30	28	27	30	29	29
social studies 7 & 8	20	22	25	26	26	24	23	26	25	25
L.o.t.E. 7 & 8	21	22	24	25	25	24	22	23	23	23
health ed. 6 & 8	11	13	14	14	13	13	12	13	13	13
Total Periods Needed	157	177	189	193	181	179	173	184	181	181
Total Rooms Needed	22	25	27	28	26	26	25	26	26	26
Rooms Available in 1998	21	21	21	21	21	21	21	21	21	21
Additional Rooms Needed	1	4	6	7	5	5	4	5	5	5
reading labs										
Total Periods Needed	11	12	12	13	13	11	11	11	11	11
Total Rooms Needed	2	2	2	2	2	2	2	2	2	2
Rooms Available in 1998	2	2	2	2	2	2	2	2	2	2
Additional Rooms Needed	0	0	0	0	0	0	0	0	0	0
2. science										
Total Periods Needed	22	24	27	28	28	26	25	28	27	27
Total Rooms Needed	4	4	4	4	4	4	4	4	4	4
Rooms Available in 1998	5	5	5	5	5	5	5	5	5	5
Additional Rooms Needed	0	0	0	0	0	0	0	0	0	0
3. music										
Total Periods Needed	9	12	13	13	12	10	11	12	11	11
Total Rooms Needed	2	2	2	2	2	2	2	2	2	2
Rooms Available in 1998	2	2	2	2	2	2	2	2	2	2
Additional Rooms Needed	0	0	0	0	0	0	0	0	0	0

4. technology										
Total Periods Needed	18	19	20	22	21	22	20	22	22	20
Total Rooms Needed	3	3	3	3	3	3	3	3	3	3
Rooms Available in 1998	3	3	3	3	3	3	3	3	3	3
Additional Rooms Needed	0	0	0	0	0	0	0	0	0	0
5. art										
Total Periods Needed	13	13	16	16	17	17	16	17	17	17
Total Rooms Needed	2	2	2 or 3	2 or 3	3	3	2 or 3	3	3	3
Rooms Available in 1998	2	2	2	2	2	2	2	2	2	2
Additional Rooms Needed	0	0	1	1	1	1	0 or 1	1	1	1
6.family & consumer science										
Total Periods Needed	14	15	15	17	16	16	17	17	17	17
Total Rooms Needed	2	2 or3	2 or 3	3	2 or 3	2 or 3	3	3	3	3
Rooms Available in 1998	2	2	2	2	2	2	2	2	2	2
Additional Rooms Needed	0	0 or 1	0 or 1	1	0 or 1	0 or 1	1	1	1	1
physical education										
Total Periods Needed	18	18	20	21	20	19	18	20	19	19
Total Rooms Needed	3	3	3	3	3	3	3	3	3	3
Rooms Available in 1998	2	2	2	2	2	2	2	2	2	2



RGS 4/15/97

FLOOR PLAN - NORTHPORT MIDDLE SCHOOL, NORTHPORT-EAST NORTHPORT UFSD

APPENDIX C

HIGH SCHOOL

Room Type	# of Rms	98-99 Pds.	99-00 Pds.	00-01 Pds.	01-02 Pds.	02-03 Pds.	03-04 Pds.	04-05 Pds.	05-06 Pds.	06-07 Pds.	07-08 Pds.	08-09 Pds.
1. General Classroom	39											
Business		9	8	8	8	8	8	8	8	9	9	9
English		81	80	83	84	88	93	97	100	103	103	101
Family & Consumer Science		3	3	2	2	3	3	3	3	3	3	3
Health		7.5	8	7.5	7.5	8	8	8.5	9.5	9.5	9.5	9
Health Infusion		13.5	13.5	14	14	14.5	15.5	16	17	16.5	16.5	16.5
L.O.T.E.		44	43	44	43	48	50	52	54	51	50	53
Math		78	78	79	80	82	83	91	94	92	91	92
Social Studies		70.5	69.5	74.5	72.5	75.5	78.5	84.5	86.5	87.5	86.5	86.5
Special Education		3	3	3	4	4	4	4	4	4	4	4
Total Rooms Needed		39	39	40	40	42	43	46	47	47	47	47
2. Theatre - English	1	2	2	2	2	2	2	2	2	2	2	2
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
3. Child Ed (Preschool) - Family & Consumer	1	4.5	4.5	5	5	5	5.5	5.5	6	5.5	5.5	5.5
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
4. Kitchen Room	1	2.5	2.5	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5	3.5
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
5. ½ Room (Resouce Room)-Special Ed	8	29	30	30	29	31	32	33	37	37	37	35
L.O.T.E. - ESL		5	5	5	5	5	5	5	5	5	5	5
English		4	4	4.5	4	4.5	5	5.5	5.5	5.5	5.5	6
Hearing Impaired		9	9	9	9	9	9	9	9	9	9	9
Total Rooms Needed		6	6	6	6	6	7	7	7	7	7	7

Room Type	# of Rms	98-99 Pds.	99-00 Pds.	00-01 Pds.	01-02 Pds.	02-03 Pds.	03-04 Pds.	04-05 Pds.	05-06 Pds.	06-07 Pds.	07-08 Pds.	08-09 Pds.
6. 3/4 Room - Special Ed	3	11	11	11	11	11	11	12	15	12	11	11
English		2	2	2	2	2	2	3	3	3	3	3
Total Rooms Needed		2	2	2	2	2	2	2	2	2	2	2
7. Main Gym	1	10.5	11	11	10.5	11	11.5	12	13	13.5	13.5	12.5
Total Rooms Needed												
8. South Gym	1	13.5	13.5	14	13.5	14.5	14.5	15	16.5	17.5	17.5	16
Total Rooms Needed												
9. Weight Room	1	15	14.5	15.5	16	16.5	18	17.5	19	17.5	17.5	18
Total Rooms Needed												
10. Wrestling Room	1	14.5	14	15	15.5	16	17.5	18	18	17	17	17.5
Total Rooms Needed												
11. Stage - Music	1	5	5	5	5	5	6	6	5	5	5	5
Physical Education		4	4	4	4	4	4.5	5	5	5	5	5
Total Rooms Needed		1	1	1	1	1	2	2	2	2	2	2
12. Courtroom - Social Studies	1	4	4	4	4	4	4	4	5	5	5	5
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
13. Biology Room - Science	5	34	32.5	34	35.5	35.5	41	41	41	41	39.5	39.5
Total Rooms Needed		5	5	5	5	5	6	6	6	6	5	5
14. Chemistry Room - Science	4	26.5	26.5	26.5	26.5	28	28	29.5	32	33.5	33.5	28.5
Total Rooms Needed		4	4	4	4	4	4	4	4	5	5	4
15. Earth Science Room - Science	4	24	24	27	25.5	28.5	30	30	31	28	29.5	29.5
Total Rooms Needed		3	3	3	3	3	3	3	3	3	3	3

Room Type	# of Rms	98-99 Pds.	99-00 Pds.	00-01 Pds.	01-02 Pds.	02-03 Pds.	03-04 Pds.	04-05 Pds.	05-06 Pds.	06-07 Pds.	07-08 Pds.	08-09 Pds.
16. Physics Room - Science	2	15	15	15	15	15	16.5	16.5	18	18	18	18
Total Rooms Needed		2	2	2	2	2	3	3	3	3	3	3
17. Auto Shop - Technology	1	2.5	2.5	2.5	2.5	2.5	3	3	3.5	3.5	3.5	3
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
18. Woodshop - Technology	1	4	4	4	4	4	4	4	5	5	4	4
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
19. Construction Lab(Jewelry, Studio Craft) Art	1	3	3	3	3	3	3	3	3	3	3	3
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
20. Drawing Lab (CAD) - Technology	1	4	4	4	4	4	5	5	5	4	4	4
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
21. Electronics - Technology	1	4	4	4	4	4	4	4	5	4	4	4
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
22. General All Purpose Art - Art	3	14	14	15	14	16	17	18	19	19	19	18
Total Rooms Needed		2	2	2	2	2	2	3	3	3	3	3
23. Media Photo - Art	3	23	23	23	24	26	28	29	29	28	28	29
Total Rooms Needed		3	3	3	3	3	4	4	4	4	4	4
24. Sculpture Room - Art	1	7	7	7	7	7	8	7	8	8	8	8
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
25. Video Room - Art	1	7	7	7	7	7	8	8	9	9	9	8
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
26. Computer Art Room - Art	1	4	4	4	5	5	5	5	5	5	5	5
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						376	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	376	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	486	28%	485	27%	495	30%	492	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	379	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment – Total				###						1545	-1%	1593	2%	1591	1%	1661	6%	1777	13%	1832	17%	1924	23%	1909	22%	1889	20%	1877	20%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
ENGLISH																													
English 9	1	5	Y	185	5	0	0	190	10	188	10	215	11	203	11	225	12	245	13	244	13	249	13	216	11	235	12	238	13
English 10	1	5	Y	0	275	5	0	280	13	261	12	258	12	296	14	279	13	309	14	337	16	335	16	341	16	299	14	323	15
English 9 Honors	1	5	Y	88	0	0	0	88	4	87	4	100	5	94	4	105	5	114	5	113	5	115	5	101	5	109	5	110	5
English 10 Honors	1	5	Y	0	108	0	0	108	5	100	5	100	5	114	5	107	5	119	6	130	6	129	6	132	6	115	5	125	6
English 11 Honors	1	5	Y	0	0	110	0	110	5	117	5	109	5	108	5	124	6	116	5	128	6	141	6	140	6	143	7	125	6
AP English	1	5	Y	0	0	0	36	36	2	36	2	41	2	38	2	38	2	43	2	41	2	45	2	49	3	49	3	50	3
Project Advance	1	5	Y	0	0	0	30	30	2	30	2	32	2	30	2	30	2	34	2	32	2	36	2	39	3	39	3	39	3
Literary Traditions	1	5	Y	0	0	0	84	84	4	85	4	90	4	84	4	83	4	96	5	90	4	100	5	109	5	108	5	110	5
Regents Review S	1	5	S					0	3	0	4	0	4	0	4	0	5	0	4	0	5	0	6	0	6	0	6	0	5
Myths F	1	5	S	0	0	11	9	20	1	21	1	21	1	20	1	21	1	22	1	23	1	25	1	26	1	26	1	24	1
Myths S	1	5	S	0	0	19	26	45	2	47	2	47	2	45	2	47	2	50	3	50	3	55	3	58	3	58	3	56	3
Poetry S	1	5	S	1	4	5	10	20	1	20	1	21	1	20	1	21	1	22	1	23	1	24	1	25	1	25	1	25	1
Shakespeare S	1	5	S	0	0	8	7	15	1	16	1	15	1	15	1	16	1	16	1	17	1	19	1	19	1	19	1	18	1
Short Stories F	1	5	S	0	0	21	13	34	2	36	2	35	2	34	2	37	2	37	2	39	2	42	2	44	2	44	2	44	2
Short Stories S	1	5	S	0	0	19	20	39	2	40	2	40	2	39	2	41	2	43	2	44	2	46	2	50	3	50	3	48	2
Mystery & Detection F	1	5	S	0	0	18	21	39	2	40	2	40	2	39	2	41	2	43	2	44	2	46	2	50	3	50	3	48	2
Sports Literature S	1	5	S	0	0	20	14	34	2	35	2	35	2	34	2	36	2	37	2	38	2	42	2	44	3	44	3	41	2
American Literature	1	5	Y	0	0	114	3	117	5	125	5	116	5	115	5	131	6	124	5	137	6	150	6	149	6	152	6	133	6
Composition F	1	5	S	1	0	35	20	56	3	58	3	57	3	55	3	60	3	61	3	64	4	70	4	72	4	72	4	67	4
Composition S	1	5	S	4	0	6	5	15	1	15	1	16	1	15	1	16	1	17	1	18	1	19	1	19	1	19	1	18	1
Journalism 1/2	1	5	Y	0	3	4	10	17	1	17	1	17	1	17	1	17	1	19	1	19	1	21	1	22	1	21	1	21	1
Let's Write F	1	5	S	0	0	9	13	22	2	23	2	23	2	22	2	23	2	24	2	24	2	27	2	28	2	28	2	27	2
Creative Writing 1F	1	5	S	0	0	18	24	40	2	41	2	42	2	40	2	42	2	44	2	44	2	49	3	51	3	52	3	50	3
Argument & Debate S	1	5	S	0	0	15	20	35	2	36	2	36	2	35	2	37	2	39	2	39	2	43	2	45	3	45	3	44	2
College Prep F	1	5	S	0	0	0	71	71	4	72	4	76	4	71	4	70	4	81	4	76	4	84	4	92	5	91	5	93	5
Film Criticism 1F	1	5	S	0	0	14	50	64	3	65	3	68	3	64	3	65	3	72	3	70	3	77	4	83	4	82	4	81	4
Film Criticism 2S	1	5	S	0	0	0	23	23	1	23	1	25	1	23	1	23	1	26	1	25	1	27	1	30	2	30	2	29	1
Mass Media F	1	5	S	0	0	5	13	18	1	18	1	19	1	18	1	19	1	20	1	20	1	22	1	23	1	23	1	23	1
Speech S	1	5	S	0	0	6	43	49	2	50	2	52	2	49	2	49	2	55	3	53	3	59	3	63	3	63	3	61	3
Verbal Analysis F	1	5	S	0	0	85	2	87	4	93	4	86	4	85	4	98	5	92	4	102	5	111	5	111	5	113	5	99	5
Verbal Analysis S	1	5	S	0	0	68	0	68	3	72	3	67	3	67	3	77	3	72	3	80	4	87	4	87	4	88	4	87	3
English 9 Humanities	1	5	Y	88	0	0	0	88	4	87		100		94		105		114		113		115		101		109		110	

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

Theatreworks	2	5	Y	12	7	1	0	20	1	19	1	21	1	21	1	22	1	24	1	25	1	25	1	24	1	24	1	24	1
Theatre Troupe 1 & 2	2	5	Y	0	6	3	1	10	1	10	1	10	1	10	1	10	1	11	1	12	1	12	1	12	1	12	1	12	1
Mystery & Detection S	1	5	S	0	0	25	16	41	2	43	2	42	2	41	2	44	2	45	2	46	2	51	2	53	3	53	3	49	2
Mass Media S	1	5	S	0	0	26	33	59	3	61	3	61	3	59	3	62	3	65	3	66	3	73	4	76	4	76	4	73	4
Study Skills 9	1	5	S	16	1	1	0	18	2	18	2	20	2	19	2	21	2	23	3	23	3	23	3	21	3	22	3	22	3
Study Skills 10	6	5	S	0	10	0	0	10	2	9	2	9	2	11	2	10	2	11	2	12	2	12	2	12	2	11	2	12	2
PSEN F & S	6	5	Y	6	0	0	1	7	1	7	1	8	1	7	1	8	1	9	1	9	2	9	2	8	2	9	2	9	2
Learning Centers F	5	5	S	1	1	0	2	4	2	4	2	4	2	4	2	4	2	5	3	5	3	5	3	5	3	5	3	5	3
Learning Centers S	5	5	S	5	0	0	4	9	5	9	5	10	6	9	5	10	6	11	6	11	6	11	6	11	6	11	6	12	7
Writing Lab F	5	5	S	3	0	0	0	3	1	3	1	3	1	3	1	4	1	4	1	4	2	4	2	3	2	4	2	4	2
Year Courses									58		57		60		61		64		67		70		71		71		71		72
Semester Courses									61		62		63		62		66		71		75		79		85		85		[illegible]
Change in # of "Full Room" periods													3		1		4		4		8		3		3				1
Change in # of "3/4 Room" periods																			2										
Change in # of Learning Center periods													1		1		1		2										
																	2002-3 another full				2004-5 another full				2006-7 another full				

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	498	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	498	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	485	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	493	30%	491	29%	501	31%
Enrollment – total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	19%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
ART																													
Studio Art 1	22	5	S	11	5	0	3	19	1	19	1	20	1	20	1	21	2	23	2	23	2	24	2	23	2	23	2	24	2
Studio Art 1Y	22	5	Y	63	8	1	2	74	4	73	4	82	5	79	4	86	5	94	5	94	5	96	5	88	5	91	5	92	5
Studio Craft	19	5	Y	20	5	1	3	29	2	29	2	32	2	31	2	33	2	36	2	36	2	37	2	34	2	35	2	36	2
AP Art History	22	5	Y	0	3	2	10	15	1	15	1	16	1	15	1	15	1	17	1	17	1	18	1	19	1	19	1	19	1
Studio Media	23	5	Y	171	21	3	2	197	10	194	10	219	11	210	11	229	12	250	13	251	13	256	13	228	12	241	12	245	13
Animation 1	26	5	Y	0	14	4	3	21	1	20	1	20	1	22	2	21	2	23	2	25	2	25	2	28	2	24	2	25	2
Drawing Painting 1Y	22	5	Y	0	34	14	8	56	3	55	3	54	3	58	3	57	3	61	3	66	4	68	4	70	4	65	4	66	4
Drawing Painting 2Y	22	5	Y	0	0	23	7	30	2	32	2	30	2	30	2	33	2	32	2	35	2	38	3	38	3	39	3	35	2
Sculpture 1	24	5	S	1	5	5	11	22	2	22	2	23	2	22	2	23	2	25	2	25	2	27	2	28	2	27	2	27	2
Sculpture 1Y	24	5	Y	0	25	2	6	33	2	31	2	31	2	34	2	33	2	37	2	39	2	40	2	41	2	37	2	39	2
AP Art General	22	5	Y	0	0	2	19	21	1	21	1	22	1	21	1	21	1	24	2	23	2	25	2	27	2	27	2	27	2
AP Art Drawing	22	5	Y	0	0	2	11	13	1	13	1	14	1	13	1	13	1	15	1	14	1	18	1	17	1	17	1	17	1
Sculpture 2Y	24	5	Y	0	2	12	16	30	2	31	2	31	2	30	2	31	2	33	2	34	2	37	2	38	2	38	2	37	2
Sculpture 3Y	24	5	Y	0	0	0	20	20	1	20	1	22	1	20	1	20	1	23	2	21	1	24	2	26	2	26	2	26	2
Advanced Visual Art	23	5	Y	0	0	0	17	17	1	17	1	18	1	17	1	17	1	19	1	18	1	20	1	22	1	22	1	22	1
Photography 1Y	23	5	Y	0	81	11	12	104	5	99	5	98	5	109	5	105	5	115	6	123	6	125	6	128	6	116	6	122	6
Photography 2Y	23	5	Y	0	1	30	12	43	2	45	3	44	2	43	2	47	3	47	3	49	3	54	3	55	3	55	3	51	3
Photography 3Y	23	5	Y	0	0	3	20	23	2	23	2	24	2	23	2	23	2	28	2	25	2	28	2	30	2	30	2	30	2
Creative Video 1Y	25	5	Y	0	51	14	9	74	4	71	4	71	4	77	4	75	4	81	5	87	5	90	5	92	5	84	5	87	5
Creative Video 2Y	25	5	Y	0	0	29	3	32	2	34	2	32	2	31	2	36	2	34	2	37	2	41	3	41	3	42	3	37	2
Creative Video 3Y	25	5	Y	0	0	0	12	12	1	12	1	13	1	12	1	12	1	14	1	13	1	14	1	16	1	15	1	16	1
Jewelry 1/2	29	5	Y	0	6	4	4	14	1	14	1	14	1	14	1	14	1	15	1	16	1	17	1	18	1	17	1	17	1
Computer Art 1Y	26	5	Y	0	18	11	5	34	2	33	2	33	2	35	2	35	2	37	2	40	2	42	2	42	2	40	2	40	2
Computer Art 2	26	5	Y	0	0	7	8	15	1	16	1	16	1	15	1	16	1	17	1	17	1	18	1	19	1	19	1	18	1
Fashion Design 1/2	22	5	Y	0	11	5	2	18	1	18	1	17	1	19	1	19	1	20	1	21	1	22	1	22	1	21	1	21	1
Photography 1	23	5	S	1	20	11	8	40	3	39	2	39	2	41	3	41	3	44	3	47	4	49	4	50	4	47	4	47	4

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	448	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
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Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	486	28%	485	27%	496	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	379	-1%	435	14%	408	7%	464	19%	485	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
BUSINESS																													
Intro to Occ	1	5	s	3	2	5	6	16	1	16	1	17	1	16	1	17	1	18	1	19	1	20	1	20	1	20	1	20	1
Key Word Proc 1	32	5	s	100	32	14	9	155	6	153	6	167	9	164	8	175	9	190	10	193	10	198	10	183	9	188	10	190	10
Key Word 2/3	32	5	s	2	4	5	4	15	1	15	1	15	1	15	1	16	1	17	1	18	1	19	1	19	1	18	1	18	1
Key Wpr 1/2	32	5	Y	31	9	1	1	42	2	41	2	46	2	45	2	48	2	52	3	53	3	54	3	49	3	51	3	52	3
Sports Market/Manage	1 & 32	5	Y	0	49	12	3	58	3	61	3	60	3	67	3	65	3	70	3	76	3	77	3	79	3	72	3	74	3
Game of Business	1 & 32	5	Y	7	4	5	2	18	1	18	1	19	1	19	1	20	1	21	1	22	1	23	1	22	1	22	1	22	1
AOF Accounting	32	5	Y	0	26	0	0	26	1	24	1	24	1	26	1	26	1	29	1	31	1	31	1	32	1	26	1	30	1
AOF Economics/World Info	1 & 32	5	S	0	0	20	0	20	1	21	1	20	1	20	1	23	1	21	1	24	1	26	1	25	1	26	1	23	1
AOF Banking & Credit	1 & 32	5	S	0	0	0	13	13	1	13	1	14	1	13	1	13	1	15	1	14	1	15	1	17	1	17	1	17	1
AOF International Finance	1 & 32	5	S	0	0	0	13	13	1	13	1	14	1	13	1	13	1	15	1	14	1	15	1	17	1	17	1	17	1
AOF Financial Planning	1 & 32	5	S	0	0	0	13	13	1	13	1	14	1	13	1	13	1	15	1	14	1	15	1	17	1	17	1	17	1
AOF College Accounting	32	5	Y	0	0	20	0	20	1	21	1	20	1	20	1	23	1	21	1	24	1	26	1	25	1	26	1	23	1
Business Computer 1	32	5	S	15	16	3	5	39	2	38	2	40	2	41	2	42	2	46	2	47	2	49	3	47	2	46	2	47	2
Business Computer 2	32	5	S	2	13	0	2	17	1	16	1	16	1	16	1	17	1	19	1	20	1	21	1	21	1	19	1	20	1
College Accounting	32	5	Y	0	1	7	9	17	1	17	1	16	1	17	1	16	1	19	1	19	1	21	1	22	1	22	1	21	1
College Business Law	1	5	Y	0	0	6	18	24	1	25	1	25	1	24	1	25	1	27	1	28	1	29	1	31	2	31	2	30	2
									27		27		28		27		28		30		30		31		30		31		31

Room Type	# of Rms	98-99 Pds.	99-00 Pds.	00-01 Pds.	01-02 Pds.	02-03 Pds.	03-04 Pds.	04-05 Pds.	05-06 Pds.	06-07 Pds.	07-08 Pds.	08-09 Pds.
27. Chorus - Music	1	9	9	9	9	9	9	9	9	9	9	9
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
28. Band - Music	1	9	9	9	9	9	9	9	9	9	9	9
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
29. Music Composition - Music	1	6	6	6	6	6	6	6	7	6	6	6
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
30. Orchestra - Music	0	2	2	2	2	2	2	2	2	2	2	2
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
31. Business Computers - Business	2	17	17	17.5	17	17.5	19.5	19.5	20	19	19.5	19.5
Total Rooms Needed		2	2	2	2	2	3	3	3	3	3	3
32. Environment Team	1	4	4	4	4	4	4	4	4	4	4	4
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
33. Math Computers - Math	1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Rooms Needed		1	1	1	1	1	1	1	1	1	1	1
Time-Out Room	1											
Global Communications Center	1											
Communications Center	2											

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	448	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						408	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	495	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment – Total				####						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
FAMILY & CONSUMER SCI																													
Eat Smart	4	5	S	7	3	1	0	11	1	11	1	12	1	12	1	12	1	13	1	14	1	14	1	13	1	13	1	13	1
International Food	4	5	S	14	10	5	8	37	2	37	2	39	2	38	2	40	2	44	3	44	3	46	3	45	3	45	3	45	3
Culinary Arts	4	5	S	15	10	3	7	35	2	34	2	37	2	37	2	38	2	42	3	42	3	44	3	42	3	42	3	43	3
Child Ed 0-3	3	5	S	46	29	6	6	87	5	85	5	91	5	92	5	96	5	89	5	98	5	100	5	102	6	96	5	98	5
Child Ed 3-6	3	5	S	43	29	5	4	81	4	79	4	85	5	86	5	89	5	98	5	100	5	102	6	96	5	96	5	98	5
Child Psychology/Dev	1	5	Y	0	1	36	22	59	3	62	3	60	2	56	2	63	3	64	3	67	3	73	3	76	3	76	3	71	3

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	488	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	448	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	495	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	379	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
L.O.T.E.																													
French 3Y/3R/4R	1	5	Y	0	49	1	0	50	2	47	2	46	2	53	2	50	2	55	2	60	3	60	3	61	3	53	2	58	3
French 2/2(9th)	1	5	Y	62	4	0	0	66	3	65	3	74	3	71	3	78	3	85	4	85	4	86	4	76	3	81	4	82	4
AP French	1	5	Y	0	0	0	17	17	1	17	1	18	1	17	1	17	1	19	1	18	1	20	1	22	1	22	1	22	1
Advanced French	1	5	Y	0	0	26	1	27	1	29	2	27	1	27	1	30	2	29	2	32	2	34	2	34	2	35	2	31	2
German 3R	1	5	Y	0	17	0	0	17	1	16	1	16	1	18	1	17	1	19	1	20	1	20	1	21	1	18	1	20	1
AP/Advanced German	1	5	Y	0	1	1	5	7	1	7	1	7	1	7	1	7	1	8	1	8	1	8	1	9	1	9	1	9	1
German 2(8th)	1	5	Y	19	1	0	0	20	1	20	1	23	1	21	1	24	1	26	1	26	1	26	1	23	1	25	1	25	1
Spanish 1Y	1	5	Y	36	0	2	0	38	2	38	2	43	2	40	2	45	2	49	2	49	2	50	3	44	2	47	2	47	2
Spanish 2Y	1	5	Y	22	25	3	0	50	3	48	2	51	2	53	3	54	3	59	3	62	3	63	3	59	3	58	3	60	3
Spanish 3Y	1	5	Y	0	32	10	0	42	2	40	2	39	2	44	2	43	2	46	2	50	2	51	2	52	2	47	2	48	2
Spanish 3R	1	5	Y	0	128	9	0	137	6	128	6	127	6	144	6	137	6	151	7	165	7	164	7	167	7	148	6	158	7
Spanish 4R	1	5	Y	0	0	17	3	20	1	21	1	20	1	20	1	22	1	21	1	23	1	25	1	26	1	26	1	23	1
AP Spanish	1	5	Y	0	0	3	32	35	2	38	2	37	2	35	2	35	2	40	2	38	2	42	2	45	2	45	2	45	2
Spanish 2(9th)	1	5	Y	145	8	1	0	154	7	152	7	173	8	164	7	181	8	198	9	197	9	201	9	177	8	190	9	192	9
Advanced Spanish	1	5	Y	0	1	73	5	79	4	84	3	79	3	78	3	88	4	84	4	92	4	101	4	101	4	102	4	90	4
Italian 2/2(9th)	1	5	Y	46	3	0	0	49	2	48	2	65	3	52	2	58	3	63	3	63	3	64	3	56	3	60	3	61	3
Italian 3Y/3R/4R	1	5	Y	0	49	0	0	49	2	46	2	45	2	52	2	49	2	54	2	59	2	59	3	60	3	52	2	57	3
Advanced Italian	1	5	Y	0	0	25	1	26	1	26	1	26	1	26	1	29	2	26	1	30	2	33	2	33	2	34	2	30	2
Italian 5	1	5	Y	0	0	0	20	20	1	20	1	22	1	20	1	20	1	23	1	21	1	24	1	26	1	26	1	26	1
Japanese 1/2/3	1	5	Y	2	3	11	5	21	1	22	1	21	1	21	1	23	1	23	1	24	1	26	1	26	1	28	1	25	1
ESL	5	5	Y	1	5	4	4	14	5	14	5	14	5	14	5	15	5	16	5	16	5	17	5	18	5	17	5	17	5
									44		43		44		43		48		50		52		54		51		50		53
L.O.T.E.									5		5		5		5		5		5		5		5		5		5		5
ESL																													

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	486	27%	496	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	436	14%	408	7%	454	19%	496	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1869	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
MATH																													
Math 2R	1	5	Y	3	208	15	2	228	10	214	9	212	9	240	11	229	10	251	11	274	12	274	12	279	12	247	11	284	12
Math 3R	1	5	Y	0	4	165	23	192	9	203	10	192	9	189	9	213	10	205	10	223	10	243	11	245	11	248	11	222	10
Math 1R Ext	1	5	Y	58	4	6	0	68	5	66	5	76	6	72	5	80	6	86	6	86	6	89	7	79	6	84	6	84	6
Math 1-2R Ext	1	5	Y	0	67	8	1	76	5	72	5	71	5	80	5	77	5	84	6	91	6	91	6	93	6	83	5	88	6
Math 2R Ext	1	5	Y	0	1	42	10	53	4	56	4	53	4	52	4	58	4	57	4	81	5	87	5	66	5	68	5	82	5
Intro Course 2F	1	5	S	0	12	0	0	12	2	11	2	11	2	13	2	12	2	13	2	14	2	14	2	15	2	13	2	14	2
Math 1-2R Ext S	1	5	S	0	11	0	0	11	2	10	2	10	2	12	2	11	2	12	2	13	2	13	2	13	2	12	2	13	2
Math 1R	1	5	Y	205	1	0	1	207	9	205	9	235	10	221	10	245	11	268	12	266	12	271	12	237	10	257	11	260	11
Math Course 1E	1	10	Y	19	1	0	0	20	2	20	2	23	2	21	2	24	2	26	3	26	3	26	3	23	2	25	3	25	3
Math 2	1	5	Y	0	1	4	12	17	1	17	1	18	1	17	1	17	1	19	1	19	1	21	1	22	1	22	1	21	1
Math 3	1	5	Y	0	0	4	12	16	1	16	1	17	1	18	1	16	1	18	1	18	1	19	1	21	1	21	1	20	1
Math 3R Ext	1	7.5	y	0	0	7	22	29	2	30	2	31	2	29	2	30	2	32	2	32	2	35	2	37	3	37	3	37	3
Calculus	1	5	y	0	0	7	93	100	5	101	5	107	5	100	5	100	5	113	6	108	5	119	6	129	6	129	6	130	7
Pre Calculus	1	5	y	0	0	1	43	44	3	45	3	47	3	44	3	44	3	50	3	47	3	52	3	57	3	57	3	58	3
Math 9 Honors	1	5	y	29	0	0	0	29	2	29	2	33	2	31	2	34	2	38	2	37	2	38	2	33	2	36	2	36	2
Math 10 Honors	1	5	y	1	24	0	0	25	1	23	1	23	1	26	1	25	1	28	1	30	2	30	2	30	2	27	1	29	1
Math 11 Honors	1	5	y	0	2	38	0	40	2	42	2	39	2	39	2	45	2	42	2	47	2	51	2	51	2	51	2	45	2
Math 9A	1	5	y	60	0	0	0	60	3	60	3	68	3	64	3	71	4	78	4	77	4	79	4	69	3	75	4	75	3
Math 10A	1	5	y	0	76	0	0	76	3	71	3	70	3	80	3	75	3	84	4	91	4	91	4	93	4	81	3	88	4
Math 11A	1	5	y	0	0	52	0	52	3	55	3	51	3	51	3	59	3	55	3	61	3	67	3	68	3	68	3	59	3
Calculus AB	1	5	y	0	0	0	38	38	2	38	2	41	2	38	2	38	2	43	2	41	2	45	2	49	3	49	3	50	2
AP Statistics	1	5	y	0	0	1	40	41	2	41	2	44	2	41	2	41	2	47	2	44	2	49	2	53	3	53	3	54	3
Computer 1/3	33	5	F	20	22	4	3	49	3	48	3	50	3	52	3	53	3	58	3	60	3	61	3	59	3	57	3	59	3
Computer 2/4	33	5	S	19	17	3	2	41	2	40	2	42	2	43	2	45	2	49	2	51	2	51	2	48	2	48	2	49	2
AP computers	33	5	y	0	0	1	5	6	1	6	1	6	1	6	1	6	1	7	1	7	1	7	1	8	1	8	1	8	1
Comp Math	1	5	y	4	3	2	0	9	1	9	1	9	1	9	1	10	1	11	1	11	1	11	1	11	1	11	1	11	1
Calculus BC	1	5	y	0	0	2	14	16	1	16	1	17	1	16	1	16	1	18	1	17	1	19	1	21	1	21	1	21	1

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	448	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				361						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	486	27%	495	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	495	30%	491	28%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Courses	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
MUSIC																													
Musical Theatre Y & F/S	11	5	Y	10	2	2	0	14	2	14	2	15	2	15	2	16	2	17	2	18	3	18	3	16	2	17	2	17	2
Advanced Music Perf Y- Stage	11	5	Y	2	4	7	4	17	2	17	2	17	2	17	2	18	2	19	2	20	2	21	2	21	2	21	2	20	2
Comp Music	29	5	Y	1	6	8	6	21	1	21	1	21	1	21	1	22	1	23	1	24	1	26	1	26	1	26	1	25	1
Guitar/Piano Workshop	29	5	Y	10	8	4	4	26	2	26	2	27	2	27	2	28	2	31	2	31	2	33	3	31	2	31	2	32	2
AP Music	29	5	Y	0	3	1	5	9	1	9	1	9	1	9	1	9	1	10	1	10	1	11	1	11	1	11	1	11	1
Advanced/Electronic Music	29	5	Y	5	18	2	6	29	2	28	2	29	2	30	2	30	2	33	2	34	2	35	2	36	2	34	2	35	2
Chorus 9th	27	5	Y	64	0	0	0	64	1	63	1	73	1	68	1	76	1	83	1	82	1	84	1	73	1	80	1	80	1
Women's Ensemble	27	5	Y	0	53	0	0	53	1	49	1	49	1	56	1	53	1	58	1	64	1	63	1	65	1	56	1	61	1
Concert Choir	27	5	Y	0	10	45	35	90	1	93	1	95	1	90	1	95	1	98	1	102	1	111	1	115	1	114	1	108	1
Band	11&30	5	Y	58	63	45	29	195	2	212	2	240	3	240	3	245	3	245	3	234	2	243	3	238	2	235	2	235	2
String Orchestra	30	5	Y	29	9	0	0	38	1	50	1	55	1	60	1	65	1	70	1	48	1	48	1	44	1	48	1	47	1
Symphony Orchestra	30	5	Y	0	8	14	12	34	1	34	1	40	1	45	1	48	1	50	1	39	1	42	1	43	1	42	1	41	1
Studio in Music	29	5	Y																										
Band Lessons	28	5	Y																										
Orchestra Lessons	30	5	Y																										
Choir Lessons	27	5	Y																										
										Based on current Grade 8 - 11 program enrollments								Based on current Grade 4 program enrollments											

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment -- Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment -- Gd 10				407						378	-7%	378	-8%	431	6%	404	-1%	448	10%	490	20%	486	19%	496	22%	433	6%	410	15%
Enrollment -- Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	495	30%	432	13%
Enrollment -- Gd 12				362						366	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment -- Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment					No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
				9	10	11	12	Tot																					
PHYSICAL EDUCATION																													
Dance Fall	11	2.5	S	0	0	38	42	80	4	83	4	83	4	79	4	84	4	88	4	90	5	99	5	103	5	103	5	98	5
Dance Spring	11	2.5	S	28	51	0	1	80	4	76	4	80	4	85	4	85	4	94	5	98	5	99	5	96	5	90	5	95	5
Tigerettes	7	5	S	7	6	13	10	36	1	36	1	37	1	37	1	39	1	41	1	42	1	45	1	45	1	45	1	44	1
Archery	8	2.5	S	0	0	15	19	34	2	35	1	35	2	34	2	36	2	38	2	38	2	42	2	44	3	44	3	42	2
PE Fall 11-12)	7	2.5	S	0	0	279	222	501	20	522	21	515	21	496	20	534	21	548	22	585	23	621	25	643	26	648	26	608	24
PE Spring 11-12)	8	2.5	S	0	1	342	314	657	25	683	26	677	26	651	25	698	27	720	27	739	28	812	31	843	32	849	32	801	30
PE Fall 9-10)	9	2.5	S	361	357	0	1	719	30	691	29	741	31	765	32	784	33	883	36	895	37	901	38	850	35	830	35	866	36
PE S 9-10)	10	2.5	S	333	304	0	1	638	29	614	26	660	30	679	31	698	32	768	35	795	36	801	36	753	34	739	34	770	35

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment -- Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	488	29%	496	31%	483	28%	476	24%	474	25%
Enrollment -- Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	483	6%	476	15%
Enrollment -- Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	495	30%	432	13%
Enrollment -- Gd 12				382						386	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment -- Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
SCIENCE																													
AP Biology	13	7.5	Y	0	0	15	20	35	2	36	2	36	2	35	2	37	2	39	2	39	2	43	2	45	3	45	3	43	2
Biology R	13	7.5	Y	92	295	6	2	395	17	374	16	385	17	419	18	411	18	453	19	483	21	483	21	475	20	439	19	465	20
Earth Science R	15	7.5	Y	269	10	2	0	281	14	278	14	317	16	300	15	332	17	362	18	360	18	367	18	323	16	348	17	351	17
AP Chemistry	14	7.5	Y	0	1	12	3	16	1	17	1	16	1	16	1	17	1	17	1	19	1	20	1	20	1	21	1	19	1
Chemistry R	14	7.5	Y	0	72	193	8	273	12	261	12	266	12	274	12	297	13	293	13	322	14	343	15	344	15	336	15	312	14
Chemistry G	14	7.5	Y	0	0	17	8	25	2	26	2	25	2	25	2	27	2	27	2	29	2	31	2	32	3	32	3	30	2
AP Physics	16	7.5	Y	0	0	2	21	23	1	23	1	25	1	23	1	23	1	26	1	25	1	28	1	30	1	30	1	30	1
Physics R	26	7.5	Y	0	0	77	106	183	8	189	8	190	8	182	8	192	8	202	9	204	9	225	10	235	10	236	10	226	10
Physics G	26	7.5	Y	0	0	0	13	13	1	13	1	14	1	13	1	13	1	15	1	14	1	15	1	17	1	17	1	17	1
Landscaping	13	5	Y	0	3	4	3	10	1	10	1	10	1	10	1	10	1	11	1	12	1	12	1	13	1	12	1	12	1
Intro to Medicine	13	7.5	Y	0	0	0	18	18	1	18	1	19	1	18	1	18	1	20	1	19	1	21	1	23	1	23	1	24	1
Forensic Science	14	5	Y	0	2	38	57	97	4	100	4	101	4	98	4	101	4	107	4	108	4	119	5	125	5	125	5	120	5
Intro Marine Science	15	5	Y	0	7	18	31	56	3	57	3	58	3	58	3	58	3	62	3	63	3	68	4	72	4	71	4	69	4
Research Science 1/2/3	13	5	Y	15	9	6	2	32	3	32	3	33	3	33	3	35	3	38	4	39	4	40	4	38	4	39	4	39	4

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	488	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	488	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	486	27%	496	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
SPECIAL EDUCATION																													
Resource Room 227Y	5	5	Y	0	3	40	38	81	21	84	22	83	22	80	21	86	22	89	23	91	24	100	26	104	27	104	27	99	26
Resource Room 127Y	5	5	Y	15	10	0	0	25	6	24	6	26	6	27	6	28	7	30	7	31	7	32	8	29	7	29	7	30	7
Resource Rooms 327Y	1	5	Y	27	0	0	0	27	6	27	6	31	7	29	6	32	7	35	8	35	8	35	8	31	7	34	8	34	8
Resource Room 427Y	1	5	Y	0	25	0	0	25	4	23	4	23	4	26	4	25	4	28	4	30	5	30	5	30	5	27	4	29	5
Resource Room WT	5	2.5	Y	0	0	8	0	8	2	9	2	8	2	8	2	9	2	8	2	9	2	10	3	10	3	10	3	9	2
Project Success	6	5	Y	3	5	6	5	19	18	19	18	19	18	19	18	20	18	21	18	22	18	24	18	24	18	23	18	23	18
English 127	6	5	Y	13	8	1	0	22	2	21	2	23	2	23	2	25	2	27	2	28	3	28	3	26	2	26	2	27	2
English 227	6	5	Y	0	0	5	7	12	1	12	1	12	1	12	1	13	1	13	1	13	1	15	1	15	1	15	1	15	1
Global 9 127	6	5	Y	9	0	0	0	9	1	9	1	10	1	10	1	11	1	12	1	12	1	12	1	10	1	11	1	11	1
Global 10 127	6	5	Y	0	11	1	0	12	2	11	2	11	2	13	2	12	2	13	2	14	2	14	2	15	3	13	2	14	2
U.S. Government 227	6	5	Y	0	0	0	8	8	1	8	1	9	1	8	1	8	1	9	1	9	1	10	1	10	1	10	1	10	1
American History 227	6	5	Y	0	0	8	2	10	1	11	1	10	1	10	1	11	1	11	1	12	1	13	1	13	1	13	1	12	1
Science 127	6	5	Y	14	1	0	0	15	1	15	1	17	1	16	1	16	1	19	1	19	1	20	1	17	1	18	1	19	1
Science 10 127	6	5	Y	0	10	1	0	11	1	10	1	10	1	12	1	11	1	12	1	13	1	13	1	13	1	12	1	13	1

Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	496	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	438	14%	408	7%	484	19%	495	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
SOCIAL STUDIES																													
Global History 1	1	5	Y	280	6	4	0	290	13	268	13	328	15	310	14	343	15	374	17	372	17	360	17	333	15	360	16	363	16
Global History 2	1	5	Y	0	296	5	0	301	13	280	12	278	12	316	14	299	13	332	14	362	16	360	16	367	16	321	14	347	15
U.S. History	1	5	Y	0	0	75	7	82	4	87	4	82	4	81	4	91	4	87	4	96	5	104	5	105	5	106	5	94	5
U.S. History Law	1	5	Y	0	1	164	7	172	7	183	7	171	7	169	7	193	8	183	7	202	8	220	9	219	9	223	9	196	8
AP American History	1	5	Y	0	1	111	1	113	5	120	5	112	5	111	5	127	6	120	5	133	6	145	6	144	6	147	7	128	6
AP European History	1	5	Y	0	87	0	0	87	4	81	4	80	4	92	4	88	4	96	4	105	5	104	5	106	5	93	4	100	5
AP U.S. Politics	1	5	Y	0	0	0	56	56	3	57	3	60	3	58	3	58	3	64	3	60	3	67	4	73	4	72	4	73	4
Criminal Justice	12	5	Y	0	14	9	34	57	3	57	3	58	3	58	3	58	3	64	3	64	3	69	4	73	4	70	4	71	4
International Law	1	5	Y	0	0	0	20	20	1	20	1	22	1	20	1	20	1	23	1	21	1	24	1	26	1	26	1	26	1
Legal	12	5	Y	0	4	2	6	12	1	12	1	12	1	12	1	12	1	13	1	14	1	14	1	15	1	15	1	15	1
Lead	1	5	Y	0	0	0	41	41	2	41	2	44	2	41	2	41	2	47	2	44	2	49	2	53	3	53	3	54	3
Urban Studies	1	5	Y	0	0	5	149	154	7	156	7	165	8	154	7	153	7	175	8	165	8	183	8	199	9	198	9	201	9
Psychology	1	5	Y	0	1	4	157	162	7	164	7	174	8	162	7	161	7	184	8	174	8	193	8	210	9	208	9	212	9
Holocaust	1	5	S	0	15	1	5	21	1	20	1	20	1	22	1	21	1	23	1	25	1	25	1	26	1	24	1	25	1
Humanities 9 Global	1	5	Y	88	0	0	0	88	4	87	4	100	5	94	4	105	5	114	5	113	5	115	5	101	5	109	5	110	5

Northport High School
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DEPARTMENT:

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				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	495	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	378	-1%	435	14%	408	7%	454	19%	495	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment					No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
				9	10	11	12	Tot																					
TECHNOLOGY																													
Basic Electricity	21	5	Y	5	4	2	3	14	1	14	1	15	1	15	1	15	1	18	1	17	1	17	1	17	1	17	1	17	1
Digital/Computer Elec	21	5	S	12	6	7	2	27	2	27	2	28	2	28	2	30	2	32	2	33	2	34	3	33	2	33	2	33	2
Robotics	21	5	S	15	6	5	3	29	2	29	2	31	2	30	2	32	2	35	2	36	2	37	3	35	2	35	2	35	2
Project Advance Comp Engr	21	5	Y	0	0	2	9	11	1	11	1	12	1	11	1	11	1	12	1	12	1	13	1	14	1	14	1	14	1
Small Engines	17	5	S	8	8	0	2	18	1	17	1	19	1	19	1	19	1	21	2	22	2	22	2	22	2	21	2	22	2
Transportation Systems	17	5	S	2	4	6	5	17	1	17	1	17	1	17	1	18	1	19	1	20	1	21	2	21	2	21	2	20	1
Car Care	17	5	S	1	14	4	17	36	3	35	3	36	3	37	3	36	3	40	3	41	3	43	3	45	3	43	3	44	3
Design Draw/Production	20	5	Y	23	5	0	2	30	2	29	2	33	2	32	2	34	2	38	3	38	3	39	3	35	2	36	2	37	2
Technical Drawing	20	5	Y	0	11	1	2	14	1	13	1	13	1	15	1	14	1	15	1	17	1	17	1	17	1	16	1	16	1
Architectural Draw/Tech Illus	20	5	Y	0	1	6	3	10	1	10	1	10	1	10	1	11	1	11	1	11	1	12	1	13	1	13	1	12	1
Woodworking	18	5	Y	17	9	1	2	29	2	28	2	31	2	31	2	32	2	35	2	36	2	37	3	34	2	35	2	35	2
Furniture/Adv. Tech Study	18	5	Y	0	11	11	4	26	2	26	2	25	2	26	2	27	2	26	2	30	2	32	2	33	3	31	2	30	2
Construction Tech	19	5	S	2	4	2	5	13	1	13	1	13	1	13	1	14	1	15	1	15	1	16	1	16	1	16	1	16	1
Intro Occupations	21-18	5	S	4	3	9	2	18	1	18	1	18	1	18	1	20	1	20	1	21	1	23	1	22	1	22	1	21	1

Northport High School
Projected Enrollment and Projected Space Needs

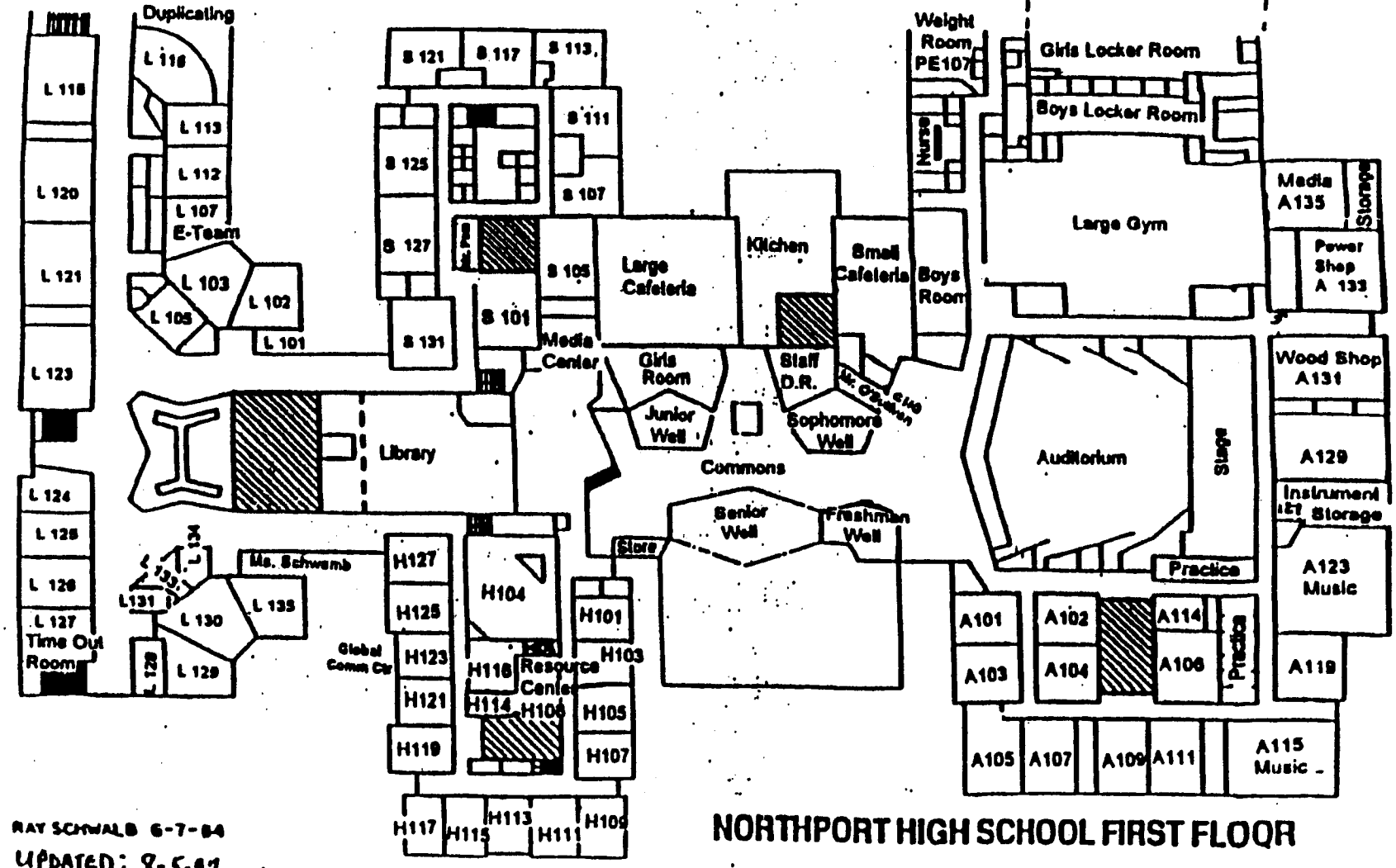
DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	433	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	376	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	433	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	486	27%	496	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	379	-1%	436	14%	408	7%	454	19%	488	30%	481	26%	501	31%
Enrollment – Total				848						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	16%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment 9	10	11	12	Tot	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
SPECIAL EDUCATION																													
Resource Room 227Y	5	5	Y	0	3	40	38	81	21	84	22	83	22	80	21	86	22	89	23	91	24	100	26	104	27	104	27	99	26
Resource Room 127Y	5	5	Y	15	10	0	0	25	6	24	6	26	6	27	6	28	7	30	7	31	7	32	8	29	7	29	7	30	7
Resource Rooms 327Y	1	5	Y	27	0	0	0	27	6	27	6	31	7	29	6	32	7	35	8	35	8	35	8	31	7	34	8	34	8
Resource Room 427Y	1	5	Y	0	25	0	0	25	4	23	4	23	4	26	4	26	4	28	4	30	5	30	5	30	5	27	4	29	5
Resource Room WT	5	2.5	Y	0	0	8	0	8	2	9	2	8	2	8	2	9	2	8	2	9	2	10	3	10	3	10	3	9	2
Project Success	6	5	Y	3	5	6	5	19	18	19	18	19	18	19	18	20	18	21	18	22	18	24	18	24	18	23	18	23	18
English 127	6	5	Y	13	8	1	0	22	2	21	2	23	2	23	2	25	2	27	2	28	3	28	3	28	2	28	2	27	2
English 227	6	5	Y	0	0	5	7	12	1	12	1	12	1	12	1	13	1	13	1	13	1	15	1	15	1	15	1	15	1
Global 9 127	6	5	Y	9	0	0	0	9	1	9	1	10	1	10	1	11	1	12	1	12	1	12	1	10	1	11	1	11	1
Global 10 127	6	5	Y	0	11	1	0	12	2	11	2	11	2	13	2	12	2	13	2	14	2	14	2	15	3	13	2	14	2
U.S. Government 227	6	5	Y	0	0	0	8	8	1	8	1	9	1	8	1	8	1	9	1	9	1	10	1	10	1	10	1	10	1
American History 227	6	5	Y	0	0	8	2	10	1	11	1	10	1	10	1	11	1	11	1	12	1	13	1	13	1	13	1	12	1
Science 127	6	5	Y	14	1	0	0	15	1	15	1	17	1	16	1	18	1	19	1	19	1	20	1	17	1	18	1	19	1
Science 10 127	6	5	Y	0	10	1	0	11	1	10	1	10	1	12	1	11	1	12	1	13	1	13	1	13	1	12	1	13	1

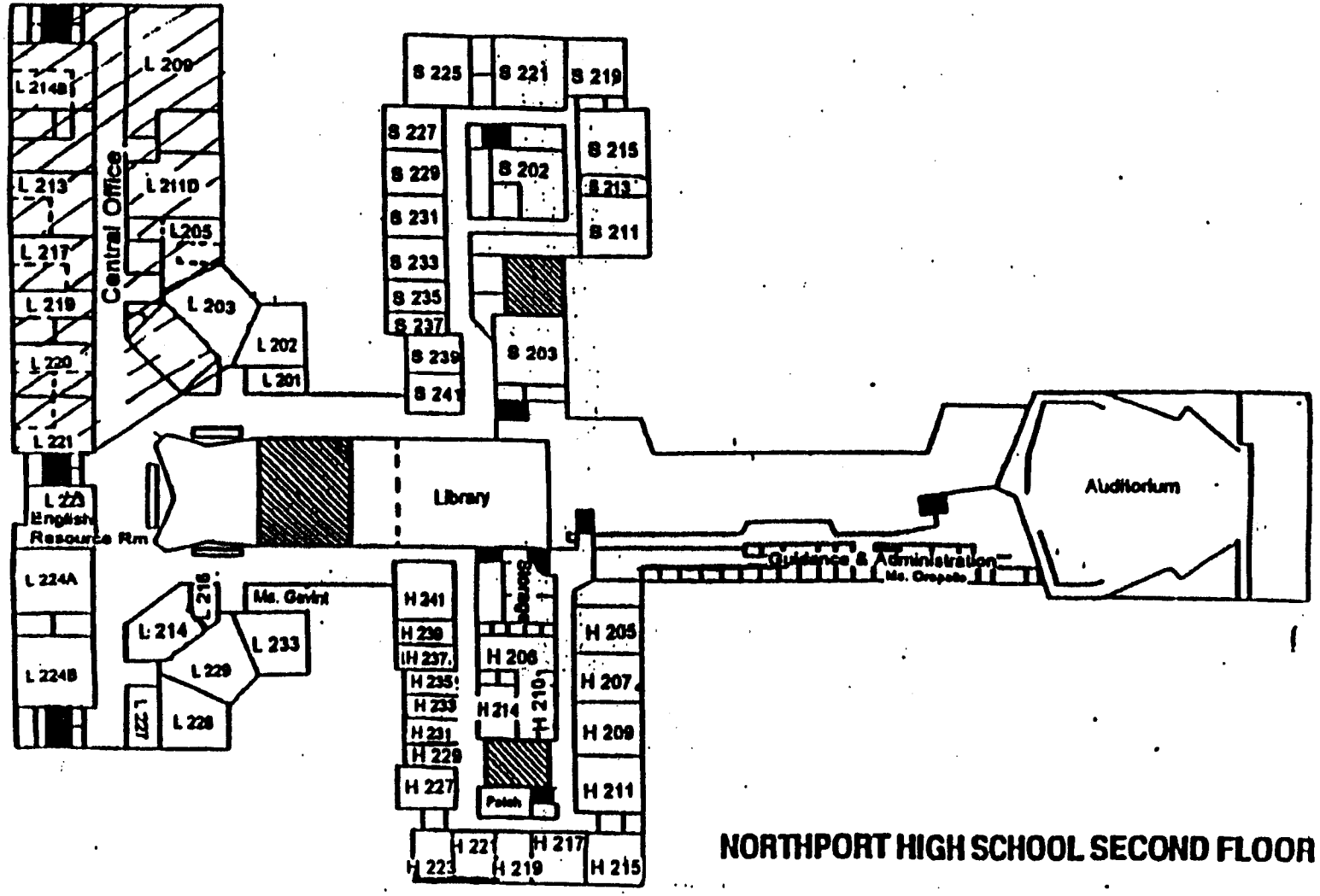
Northport High School
Projected Enrollment and Projected Space Needs

DEPARTMENT:

School Year:				1998-1999 – Actual						1999-2000 – Projected		2000-2001 – Projected		2001-2002 – Projected		2002-2003 – Projected		2003-2004 – Projected		2004-2005 – Projected		2005-2006 – Projected		2006-2007 – Projected		2007-2008 – Projected		2008-2009 – Projected	
				Students						No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998	No.	h over 1998
Enrollment – Gd 9				378						375	-1%	430	14%	404	7%	449	19%	490	30%	486	29%	496	31%	453	15%	470	24%	474	25%
Enrollment – Gd 10				407						378	-7%	375	-8%	431	6%	404	-1%	449	10%	490	20%	486	19%	496	22%	453	6%	470	15%
Enrollment – Gd 11				381						406	7%	377	-1%	374	-2%	429	13%	403	6%	448	18%	488	28%	485	27%	495	30%	432	13%
Enrollment – Gd 12				382						386	1%	411	8%	382	0%	379	-1%	435	14%	408	7%	454	19%	485	30%	491	29%	501	31%
Enrollment – Total				###						1545	0%	1593	3%	1591	3%	1661	7%	1777	15%	1832	18%	1924	24%	1909	23%	1889	22%	1877	21%
Course	Room Type	Pds/ Wk	S=Sem Y=Yr A=A/B	Enrollment					No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects	Enroll	No. Sects
				9	10	11	12	Tot																					
ENVIRONMENT TEAM																													
English	32	5	Y	0	0	4	28	32	1	33	1	34	1	32	1	32	1	36	1	35	1	38	1	41	1	41	1	41	1
U.S. Govt/Eco	32	5	Y	0	0	4	28	32	1	33	1	34	1	32	1	32	1	36	1	35	1	38	1	41	1	41	1	41	1
Science	32	5	Y	0	0	4	28	32	1	33	1	34	1	32	1	32	1	36	1	35	1	38	1	41	1	41	1	41	1
Art/Media	32	5	Y	0	0	4	28	32	1	33	1	34	1	32	1	32	1	36	1	35	1	38	1	41	1	41	1	41	1
HEALTH	1	5	S	0	0	200	182	382	15	397	16	394	15	378	15	406	16	419	16	430	17	472	19	490	19	494	19	465	18
BOCES HEARING IMPAIRED																													
Resource Room	5	5	Y	2	1	2	0	5	9	5	9	5	9	5	9	6	11	6	11	6	11	6	11	6	11	6	11	6	11
Health Infusion	1	2.5	S	378	407	381	382	###	27	1545	27	1593	28	1591	28	1661	29	1777	31	1832	32	1924	34	1909	33	1889	33	1877	33



FLOOR PLAN - NORTHPORT HIGH SCHOOL, NORTHPORT-EAST NORTHPORT UFSD, First Floor



FLOOR PLAN - NORTHPORT HIGH SCHOOL, NORTHPORT-EAST NORTHPORT UFSD, Second Floor

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E.
• CHRISTOPHER W. ROBINSON, P.E.

March 22, 1999

Suffolk County Police Department (SCPD)
Management Services Section
30 Yaphank Avenue
Yaphank, NY 11980
attn: Lieutenant Cornelius McKenna, Commanding Officer

Re: Draft EIS Impact Analysis
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-01-4.1

Dear Lt. McKenna:

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are preparing an Environmental Impact Statement for a 22 lot subdivision for the above referenced parcel. The site currently contains 3 residences with the remainder of the site consisting of woodland vegetation.

I am writing to obtain information in regard to SCPD facilities and services that may be pertinent to the project. Specifically, I am requesting the following:

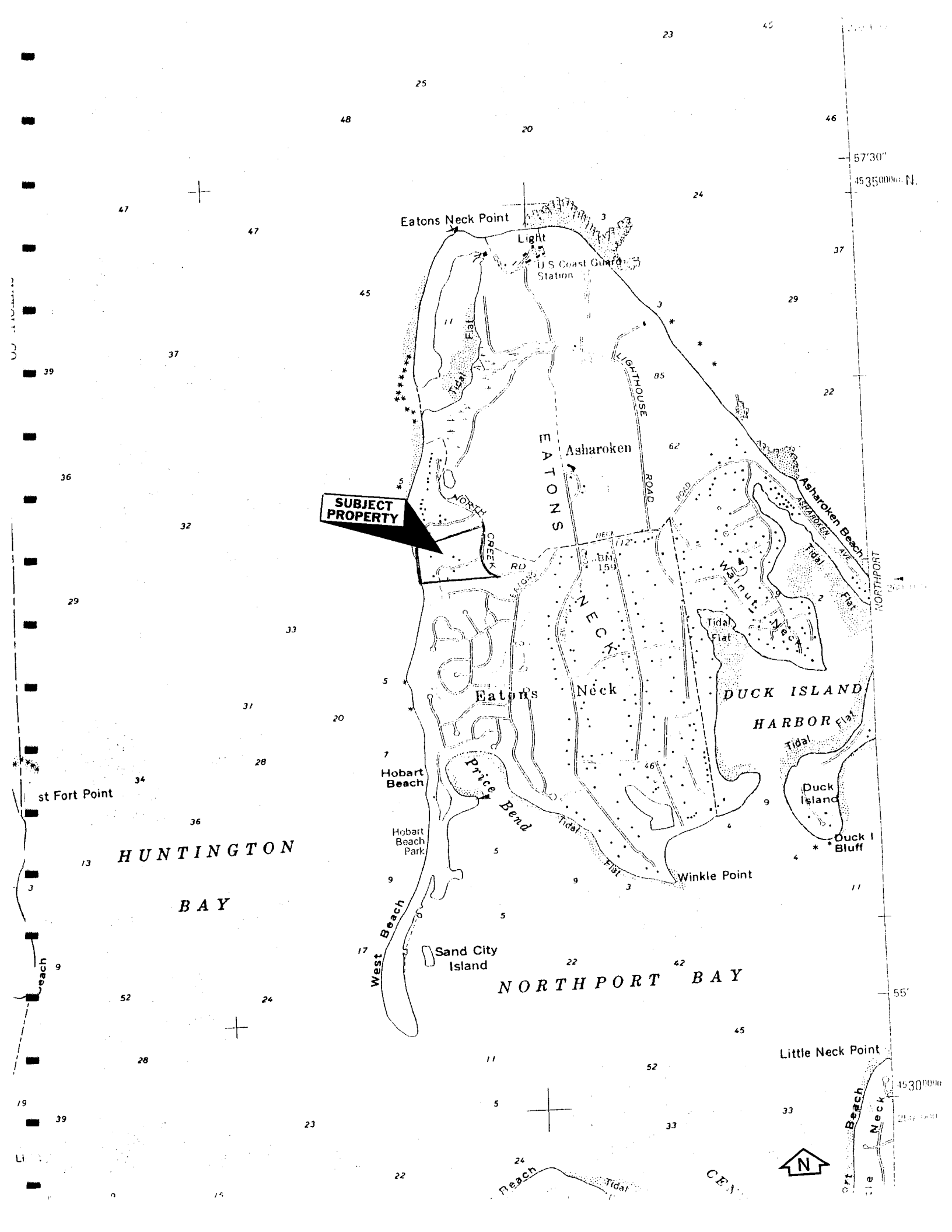
1. Precinct number
2. Station's address and phone number
3. Commanding officer of the precinct
4. Patrol sector that is assigned to the site
5. Expected impact of the proposed project on the department (i.e. Will there be a change in the amount of protection necessary with this change in land use? Is it expected that additional patrol cars will be necessary, or that additional personnel would be needed?)
6. Any other additional information related to the potential impact this project may have on the department.

If you should have any questions or require additional information, please do not hesitate to contact me. Thank you.

Sincerely,

Shana M. Lacey

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620


Eatons Neck Point
Light
U S Coast Guard Station
Flat
Tidal
LIGHTHOUSE ROAD
Asharoken
EATONS NECK ROAD
SUBJECT PROPERTY
NORTH CREEK RD
Asharoken Beach
ASHAROKEN AVE.
NORTHPORT
Tidal Flat
Walnut Neck
Eatons Neck
DUCK ISLAND HARBOR
Flat
Tidal
Duck Island
Duck I Bluff
Hobart Beach
Price Bend
Tidal
Flat
Hobart Beach Park
st Fort Point
HUNTINGTON BAY
Winkle Point
West Beach
Sand City Island
NORTHPORT BAY
Little Neck Point
Beach
Neck
Tidal
Flat
57'30"
4535000m N.
55'
4530000m
N

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
COUNTY EXECUTIVE

JOHN C. GALLAGHER
POLICE COMMISSIONER

POLICE DEPARTMENT

March 26, 1999

Shana M. Lacey
Nelson, Pope, and Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747-2188

Dear Ms. Lacey:

I am writing in response to your letter dated March 22, 1999, regarding the development of a 24 acre parcel of land into a 22 lot subdivision for residential construction located on the west side of North Creek Road, Eaton's Neck, Huntington, New York.

The project site is located in the Suffolk County Police Department's Second Precinct area. The Commanding Officer of the Second Precinct is Inspector Thomas L. Hamann. The sector car assigned to patrol the area is unit 216. The Second Precinct is located at 1071 Park Avenue, Huntington. The telephone number is (516) 854-8200.

The proposed construction would have an impact on the workload of the Second Precinct. However, the exact impact is difficult to determine because such factors as population, certain demographics, traffic patterns, police hazards, etc. impact and determine the police workload in various ways.

There is no single determining factor that is utilized to guide in the decision to deploy a set number of officers to a given area. Various factors, some of which are previously mentioned, are considered.

I hope that this information will be of assistance to you. If you need any further information, please do not hesitate to contact me at (516) 852-6562.

Sincerely,
Brian Butler P.O. 4669/2110

Brian Butler, P.O. 4669/2110
Management Services Section

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E.
• CHRISTOPHER W. ROBINSON, P.E.

March 24, 1999

Eaton's Neck Fire Department
55 Eaton's Neck Road
Eaton's Neck, NY 11768
Attn: Chief Phillip Whiter

Re: Draft EIS Impact Analysis
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-02-4.1

Dear Chief Phillip Whiter,

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are preparing an Environmental Impact Statement for a 22 lot subdivision on the above referenced parcel. The site is currently forested and contains 3 residences and several sheds.

I am writing to obtain information in regard to Eaton's Neck Fire Department facilities, services, and capabilities which may be pertinent to the project. Specifically, I am requesting the following:

- The location of the substation which would serve the site;
- A listing of the major pieces of firefighting equipment at the substation;
- The number of firefighters assigned to the substation;
- Indicate any specialized firefighting capabilities of the Department;
- Indicate whether the firefighters are volunteers or full-time;
- Indicate how the Department is funded.

Your responses will be included in the DEIS for review by the Town; if you have any additional information which would be pertinent, please include it. Finally, if you feel that this project may have an adverse impact on the Department's ability to provide services, or may require additional equipment purchases or firefighter training, please indicate this. If you should have any questions or require additional information, please do not hesitate to contact me. Thank you.

Sincerely,

Shana Lacey

Shana M. Lacey

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620

Eaton's Neck Fire Department

55 Eaton's Neck Road
Northport, New York 11768

Phone (516) 757-5662 Fax (516) 757-8953

NP&V, LLC
572 Walt Whitman Rd.
Melville, NY 11747
Attn.: Shana M. Lacey
Re: SCTM No. 0400-01-02-4.1

Ms. Lacey,

May 7, 1999

The following information is offered in response to your inquiry of March 24, 1999 as to the scope and capabilities of the Eaton's Neck Fire Department with regard to a proposed development of the Hogan property.

The subject property is located within the Eaton's Neck Fire District and is protected by the Eaton's Neck Fire Department. The Eaton's Neck Fire Department is a volunteer organization currently consisting of 54 active members. The fire house is located at 55 Eaton's Neck Rd., less that one mile from the site in question. We operate three (3) class A Engines, one (1) Rescue Truck and one (1) 4,500 gallon Tanker for fire operations. We also operate an ALS (advanced life support) Ambulance staffed by certified AEMT and EMT-D volunteers.

The Fire District is a municipality within the Township of Huntington and as such is funded through property tax assessment.

The area described in your inquiry is planned to have fire hydrants installed during development which is consistent with the rest of the developed property within the District. This organization is prepared and equipped to respond to any fire or emergency situation. Development of an additional 22 residences within the Fire District will not have an adverse impact to our operation.

One comment for consideration is that the proposed development is situated off a narrow private road. New development in this area and associated increased traffic and population will impede response to this area and would elevate to crisis in an evacuation scenario. It is strongly suggested that major improvement to North Creek Road are made contingent with approval of this development.

Sincerely,

Phil Whiter, Chief

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E.
• CHRISTOPHER W. ROBINSON, P.E.

March 22, 1999

District Manager
Western Region Office
Suffolk County Water Authority
260 Motor Parkway
Hauppauge, N.Y. 11978

Re: Service Availability Letter
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-01-4.1

Dear Sir or Madam:

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are preparing an Environmental Impact Statement for a 22 lot subdivision on the above referenced parcel. The site currently contains 3 residences with the remainder of the site consisting of woodland vegetation. Based on the proposed single family dwelling uses, the project would be expected to utilize approximately 6,600 gallons of water per day, as calculated from Suffolk County Design Flow Standards.

I would appreciate your consideration of the project and your assessment of the ability of the Water Authority to provide water to the proposed complex. The proposed project is in the planning stage, and your input will be important in design and review of the project. A location map is enclosed. Thank you for your time and consideration of this request.

Sincerely,
NELSON, POPE & VOORHIS

Shana Lacey

Shana M Lacey

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620

SUFFOLK COUNTY WATER AUTHORITY

Donald Slotnick
Director of Distribution

4060 Sunrise Highway, Oakdale, Long Island, New York 11769
Area Code (516) 589-5200

September 28, 1998

Suffolk County Department of Health
County Center
Riverhead, New York 11901

Attention: Mr. Joseph H. Baier, P.E.
Acting Director of Environmental Health Services

Gentlemen:

The proposed installation of an eight (8) inch main on Orchard Drive , an eight (8) inch main on Apple Court , and a six (6) inch main on Peach Court as shown on the map of Old Orchard Woods, located in the Town of Huntington, as prepared by Nelson & Pope, LLP , and dated November 29, 1989 (revised August, 1998) is adequate to supply water for domestic and fire protection purposes.

The Authority will undertake the installation of these water mains under the terms of its standard Construction Contract, but such agreement has not yet been executed by the Authority and the developer.

The time required for the completion of the proposed work is necessarily determined by the Authority's ability to obtain delivery of the required materials, easements for maintaining the mains in the streets that are private, weather conditions and the existence of adequate supply works at the time the work is to be done.

This letter of availability is not to be considered an Action by the Suffolk County Water Authority as defined by SEQRA regulations, and this response does not commit Suffolk County Water Authority to commence, engage or otherwise participate or approve an action where SEQRA is applicable until all aspects of the SEQRA process are complete and the Lead Agency has made a final determination and finding as related to the project.

Very truly yours,

Donald Slotnick, P.E.
Director of Distribution

Attachment
cc: C.J. Foy
E. Rosavitch
P. Ponturo

SUFFOLK COUNTY WATER AUTHORITY
260 Motor Parkway, Hauppauge, Long Island, New York 11788
Telephone 516-582-2211

October 6, 1998

Nelson & Pope, LLP
572 Walt Whitman Road
Melville NY 11747-2188
Attn: Doreen Fontana

Re: Water Availability - "Old Orchard Woods" at Eatons Neck

Dear Ms. Fontana:

In accordance with your request attached is one copy of a letter of availability addressed to the Suffolk County Department of Health and one map stating the availability of proposed water mains for "Old Orchard Woods" at Eatons Neck.

The installation of the proposed water mains is estimated to cost $48,000.00.

Please contact the Suffolk County Water Authority if you wish to have a contract prepared.

Very truly yours,

SUFFOLK COUNTY WATER AUTHORITY

C. J. Foy
Regional Manager
Western Regional Office

CJF:jm
Enclosure

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E.
• CHRISTOPHER W. ROBINSON, P.E.

March 22, 1999

Mr. Bob Parkenson
Western Suffolk Electric Design and Construction
Long Island Power Authority
1650 Islip Avenue
Brentwood, NY 11717

Re: Service Availability Letter
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-01-4.1

Dear Mr. Parkenson:

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are preparing an Environmental Impact Statement for a 22 lot subdivision on the above referenced parcel. The site currently contains 3 residences and several sheds. The remainder of the parcel is woodland.

I would appreciate your consideration of the project and any information you may have regarding your ability to provide electric service to the site following construction. The proposed project is in the planning stage, and your input will be important in design and review of the project. It is understood that future contact would be necessary to discuss specific utility needs. Thank you for your time and consideration of this request.

Sincerely,

Shana M. Lacey
Environmental Scientist

Enc. Location map

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620

KEYSPAN ENERGY

KeySpan Energy
1650 Islip Avenue
Brentwood, NY 11717

March 25, 1999

Nelson, Pope & Voorhis, LLC
Attn: Shana M. Lacey
572 Walt Whitman Rd.
Melville, NY 11747-2188

RE: SCTM No.0400-01-01-4.1 North Creek Rd.
LIPA Job # 93571-930

Dear Ms. Lacey,

As requested, please be advised that the Long Island Power Authority will provide service to the above referenced project in accordance with our filed tariff and schedules in effect at the time service is required.

Please feel free to contact Larry Wilburn at (516) 348-6297 if you require any further information.

Very truly use,

Robert S. Parkinson
Regional Supervisor
Western Suffolk Division

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
CHARLES J. VOORHIS, CEP, AICP • ARTHUR J. KOERBER, P.E. • VINCENT G. DONNELLY, P.E.
• VICTOR BERT, P.E. • JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR, P.E.
• CHRISTOPHER W. ROBINSON, P.E.

March 22, 1999

Mr. Chris Sing
Gas Marketing Department
Brooklyn Union Gas
1393 Veteran's Memorial Highway
Hauppauge, N.Y. 11788

Re: Service Availability Letter
24 acre parcel located on the west side of
North Creek Road, Eaton's Neck
Town of Huntington
SCTM No. 0400-01-01-4.1

Dear Mr. Sing:

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are preparing an Environmental Impact Statement for a 22 lot subdivision on the above referenced parcel. The site presently contains 3 residences with the remainder consisting of woodland vegetation.

I would appreciate your consideration of the project and any information you may have regarding your ability to provide gas service to the site following construction. I believe that gas is available in the vicinity of the property. The proposed project is in the planning stage, and your input will be important in design and review of the project. It is understood that future contact would be necessary to discuss specific utility needs. Thank you for your time and consideration of this request.

Sincerely,
NELSON, POPE & VOORHIS

Shana M. Lacey

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188
(516) 427-5665 FAX (516) 427-5620

APPENDIX F

PHASE IA CULTURAL RESOURCES ASSESSMENT

Archaeological Services, Inc.

(December 13, 1998)

CULTURAL RESOURCE ASSESSMENT

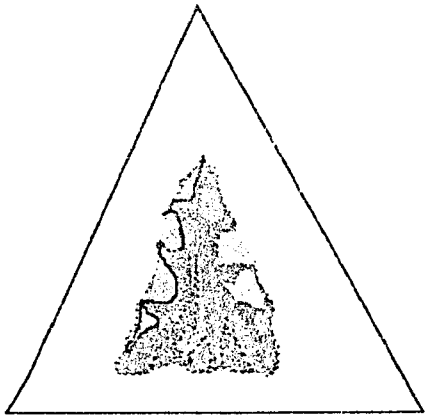
PHASE IA STUDY

LITERATURE SEARCH AND SENSITIVITY ASSESSMENT

FOR

OLD ORCHARD WOODS
PROPOSED SUBDIVISION

EATON'S NECK, NEW YORK



ASI

ARCHAEOLOGICAL SERVICES INC.
P. O. BOX 1522, ROCKY POINT, NEW YORK
and
11 WOODTHRUSH COURT
EXECUTIVE CIRCLE
MILLER PLACE, NEW YORK 11764

Old Orchard Woods,
Eaton's Neck, New York

Literature Search and Sensitivity Assessment

Date of initiation of this file: September,5 1998
Date of completion: 11-21-98

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Endorsement: Robert Kalin
Date: 12-13-98

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EXECUTIVE SUMMARY

The Old Orchard Woods proposed subdivision is former field and wood lot which was first occupied by the Hogan family and a children's camp early in the 20th century. Some of the standing residences and structures date to the early part of this century. The site has excellent potential to produce prehistoric evidences. Further study in the form of a Stage IB survey is indicated.

The Stage IB field reconnaissance survey should address the questions regarding presence or absence of ground level historic evidences and buried prehistoric evidences in those areas of modest slope where cultural evidences may have been preserved.

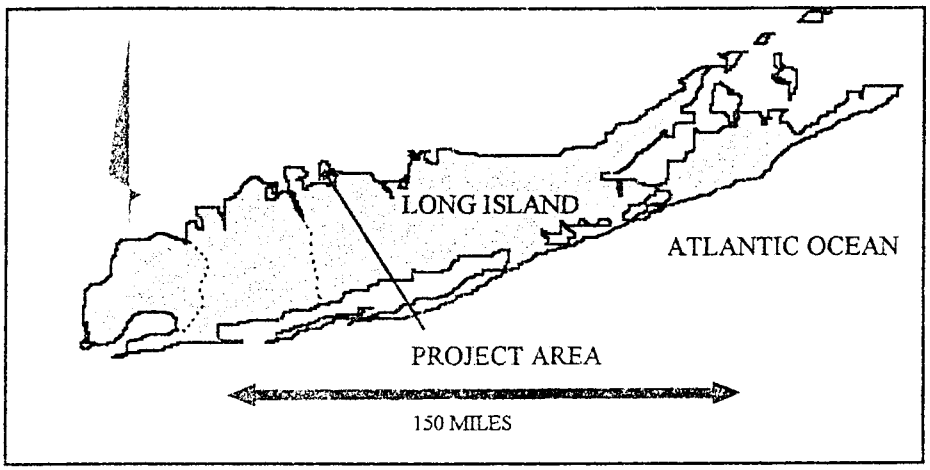

Figure 1. Map showing general location of the study area.

CONTENTS

INTRODUCTION

The following report is the result of a Phase IA cultural resources documentary search and field inspection study of the Old Orchard Woods proposed subdivision. The attractive wooded property comprising approximately 33.6 acres is located on the western shore of Eaton's Neck, in the Township of Huntington, Suffolk County, New York. The property is the location of a former children's summer camp and a more recently constructed late 20th century residence. Much of the parcel is steeply sloping former pasture and wood-lot. The former are long abandoned and grown to mature post-agricultural forest. The parcel had been divided into two Lots at an earlier time. Lot 2 on the east side of North Creek Road is comprised of nearly 9.4 acres of wooded sloping land, while Lot 1 is an area of approximately 24.2 acres of wooded land formerly used as children's camp. In addition, a steep buffer area on the escarpment facing Huntington Bay and comprised of about 3.4 acres is found along the western portion of the parcel. Lot 2 and the buffer or reserve area along the Sound shore are to remain undisturbed by this proposal. At the present time Lot 1 is proposed for subdivision into twenty-two residential lots. A number of structures related to the use of the site as a former summer residence and children's camp are found in Lot 1, while Lot 2 has no standing structures.

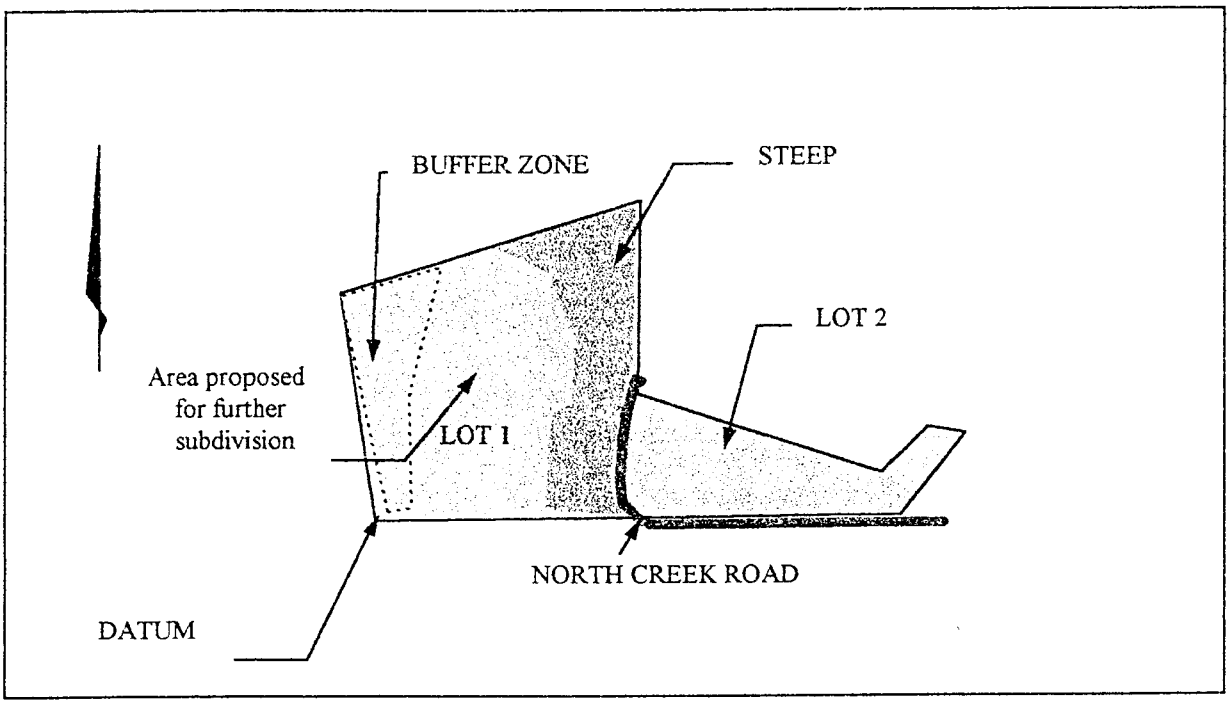

Figure 2. Map showing general vicinity of the study area.

OBJECTIVES

The primary objectives of this study are to identify cultural resources within the study area that may be affected by the project. Archaeological sites, man-made features, sacred areas, locations of former structures, structure sites, and standing structures that are more than fifty years old are to be identified by means of documentary research, local informant interviews and an inspection of the site.

DESCRIPTION OF STUDY AREA

The Old Orchard Woods site, comprising approximately 33.6 acres, is a wooded parcel with areas of steep slope which is located east of Huntington Bay, an arm of Long Island Sound; north of Eaton's Neck Beach, Section 6 and a portion of North Creek Road; and south of the lands (nor or formerly) of Michael Lawlor and those of the Incorporated Village of Asharoken. The parcel is accessed from North Creek Road and an internal paved driveway which leads to a caretakers cottage. Several cottages, additional cleared roads, former roads, road traces and foot trails are found throughout Lot 1.

DESCRIPTION OF PROPOSAL

A 24.4 acre section of Lot 1 is proposed for further subdivision into 22 residential lots which would range in size from 45,000 square feet to 22,000 square feet. Internal access roads, a beach footpath, as well as a surface water recharge basin are proposed to be located in the southeastern portion of the subdivision. Areas to be left in their natural state are the steep escarpment buffer facing Huntington Bay in the west, and the eastern extremity of Lot 1, including that portion of Lot 1 east of North Creek Road. Lot 2 is an out-parcel to remain in its natural present state.

ENVIRONMENTAL INFORMATION

TOPOGRAPHY

The topography of the proposed subdivision area is essentially that of a north-south trending elongate hill which rises at steeply from North Creek Road, has a gently sloping crest, and then falls off in slope towards the west as it approaches the bluffs which face Long Island Sound. This central area, of about nine (9) acres, has a slope of less than 10% grade and is the site of most of the subsurface testing. Here are planned to be located most of proposed Lots 1-6, 12,13, and 16-21. The remaining proposed Lots have portions which slope more steeply. These steep areas were not tested by subsurface probes. About 15 acres of the proposed subdivision area including areas of the escarpment and the eastern portions of Lot 1 have slopes greater than 15 %, and were not tested by subsurface probes. The average slope of this area is about 19% .

SOILS

The study area soils belong to the Riverhead and Carver Plymouth soil series. See Map 35, (Inset) Warner, et. al. 1974. Testing revealed most of the areas to have little evidence of plowing. Observations consequent to soil testing reveal the soil to grade from a dark to medium brown upper and middle zone into a brown or yellowish brown lower level. The texture of the soil appeared to be a fine sand with traces of silt mixed with varying amounts of coarser textured materials. The coarseness of the soil texture increased in general toward the east.

DRAINAGE

The parcel is well drained.

VEGETATION

The vegetation of the study area is comprised of patches of mature forest, and former cleared areas which are dominated by grapevines and greenbriar tangles which impeded passage of the field crew in some locations. A large number of mature well developed Tulip-trees (*Liriodendron tulipifera*) were observed. These are of a size and girth that deserve consideration for preservation. Also observed in the vicinity of proposed Lots 4, 5 and 6 were large numbers of fruits of the now rare American Chestnut tree (*Castanea dentata*). Apparently, numbers of these trees are growing in the forest here since large numbers of their spiny husk fruits were observed on the footpaths. They were probably here prior to 1900 when the Asian fungus bark disease struck this area killing off most of these formerly common woodland trees. Typically, after

infection and death of the tree the roots remain viable and continue to form shoots, some of which actually grow to s size that permit flowering and fruiting. The unusually large number and size of the fruits found here suggest that the trees may be of considerable age and size and may be possibly have within their group individuals that have some resistance to the Asian blight. These larger chestnut tree specimens also deserve consideration for preservation when planning development.

FOREST ZONE

The original forest zone was probably Northeastern Oak-Pine Forest (See Kuchler 1970).

ALTERATIONS

The parcel, formerly pasture and woodlot associated with a 19th century farm on Eaton's Neck, was first occupied for recreational purposes by the Hogan family, portions of the site were developed as a children's summer camp in the early part of this century. During this phase of its history portions of the site were cleared for construction of cabins and recreational structures. In 1970, an additional residence was constructed in the eastern Lot 1 (now the area of proposed Lots 17 and 19). Other alterations include a network of unpaved roadways (and former roadways) and several maintained footpaths. In recent decades clearings, probably at one time devoted to recreational purposes, have been permitted to grow into dense brush. The property has sustained very little alteration, excepting in those areas in close proximity to the residences other structures.

MAN-MADE FEATURES OBSERVED DURING SURFACE SURVEY

There are ten standing structures in varying stages of preservation on the site: four larger residential structures, two small cottages, two garages or storage buildings, and two pump houses. Further man-made features are clearings, roadways, a rustic gazebo, a vegetable and flower garden, footpaths, electric transmission lines and poles, and a rustic outdoor climbing gym ("monkey bars"). Most of these structures date to the period when the site was used for recreation and as a "get away" place by the Hogan family, and as a children's summer camp. Two of the structures were occupied at the time of the survey. One is a one-storey brick and frame, hip roofed residential building with garage underneath. It was apparently constructed in recent decades (1970). The remaining structures are of simple frame construction raised on concrete block footings with clapboard exteriors. These date to a period between 1920 and 1930. None are of architectural or historic interest. The rustic frame gazebo which has a pleasing view of Long Island Sound is located near the eastern end of the buffer zone. See Structure List below.

PREVIOUS FIELD RECONNAISSANCE STUDIES

There are no indications of earlier Phase I studies of this parcel.

DOCUMENTARY RESEARCH

I. TEXTS

C. All major references were reviewed, these included: W. Beauchamp (1900), A. Parker (1920), Ritchie (1969), Smith (1950), Ritchie and Funk (1973), local authors such as: Mary Voyse (1955), Gould and Klauber (1956), and others.

II. REFERENCED MAPS:

1. Johannis Van Kevlin 1686
2. Blunt Nautical Chart 1830
3. US Coastal Survey 1834-5 (Pub 1837)
4. Colton 1836
5. Colton 1852
6. Chase 1858
7. USCS Huntington Bay 1849 (Coast Corrections 1884)
8. Beers 1873
9. USCS Eaton's Neck 1887
10. Hyde 1896
11. Colton 1901
12. USGS Northport Quad. 1903
13. Dolph and Stewart 1929
14. USAMS Northport 1943
15. USGS 1966

III. PREHISTORIC SITE FILES AND EARLY RESIDENCE SITES

(a) Prehistoric

1 - A. C. Parker (1920) reports ACP Sites 1 and 2 on Lloyd Neck and at site 3 he reports a large shell heap on the Albert Arthur property in Huntington. No sites were noted by Parker on Eaton's Neck or in the immediate vicinity of the subject property. See below.

2- Gonzales and Rutch (1979) categorize the region of the subject property as an area of "intensive aboriginal activity". (Gonzales and Rutch 1979:13).

3- The New York State OPRHP Archaeological Sensitivity Map (updated March 1986) reported no prehistoric sites in the general study area.

A review of the NYSOPRHP listings, gleanings from other reports, and data graciously supplied by Ms Charla Bolton and her staff at the Huntington Town Planning Office indicate the following prehistoric and historic sites in the immediate vicinity.

Scattered prehistoric finds such as arrowheads, chips and flakes have been reported in various areas around Eaton's Neck including locations at Crab Meadow, Northport Harbor, West Neck and Lloyds Neck. The Skodneck Hills subdivision report indicates that prehistoric materials were recovered from that site on Winkle Point on Eaton's Neck.

Other sites in the general vicinity or on Eaton's Neck itself include:
SCAAI # 104, Walnut Point (Ketanomke's Village ?)
SCAAI # 105 Locust Grove Site (Eaton's Neck)
SCAAI # 101 and 102 Spring Hollow I and II near Centerport
SCAA I # 103 Waters Edge Site, Centerport
SCAAI # 100 Little Neck Site (Harrington)
SCAAI # 106 Crab Meadow Site
and others.

(b) Historic

1. The New York State OPRHP Archaeological Sensitivity Map(updated March 1986) indicates a number of historic sites in the general vicinity of the subject property.

The following historic structures occur on Eaton's Neck:

a) Eaton's Neck Lighthouse (1798).
b) N. J. Felix House at 235 Asharoken Avenue(1900).
c) Delamater-Baldwin House on Walnut Neck (post 1868).
Antoine de St. Exupery lived here during the 1940s.
d) Miner D. Crary Estate on Duck Island (1929).
e) Ingersoll-Reid House on Duck Island (1900).
f) Donnell House north of Winkle Point(1902).
g) Robinson-Borglum House, Bevin Road, Walnut Neck (1890).

MAP ANALYSIS

1. **Johannis Van Kevlin 1686**

On this early Dutch map of Long Island Eaton's Neck is not clearly indicated, though Oyster Bay where the Island was divided into English and Dutch spheres of influence by the Treaty of Hartford in 1650 is noted.

2. **Blunt Nautical Chart 1830**

Blunt's Nautical Chart indicates depths in fathoms in the vicinity of Huntington Bay and other regions. Note that the eroding bluffs on Huntington Bay at the project site are noted as is the Eaton's Point Lighthouse erected about three decades earlier.

3. **US Coastal Survey 1834-5 (Pub 1837)**

This map indicates the topography of the subject area, as well as the vegetation patterns, roads, and field lines. It indicates that the subject property was probably cleared for pasture land. A field line-possibly the boundary at a later date between the Jones property to the south and the Gardiner or Robinson parcel to the north is indicated. It was south of this line, in the Jones parcel, that the first parcel of the Hogan purchases was probably made. North of the line is an area that is wooded at the date of this map, probably serving as woodlot at that time. Only two residences are noted; a J. Gardiner resided near the Eaton Light and Ch. Gardiner just to the south. There were no residences or structures in the vicinity of the subject parcel.

4. **Colton 1836**

The Colton Map depicts Eaton's Neck during the fourth decade of the 19th century. No residences are indicated.

5. **Colton 1852**

The Colton Map depicts Eaton's Neck at mid-century. No residences are indicated.

6. **Chase 1858**

The Chase Map of 1858 reveal that C. W. Jones is the proprietor of a parcel in the southwest corner of the Neck a part of which will at a later period become the Old Orchard Woods parcel. The Jones residences seems to be in the southern part of the property in the vicinity of Winckle (sic) Point. No structures are indicated in the vicinity of the subject property.

7. **USCS Huntington Bay 1849 (Coast Corrections 1884)**

This map is a copy of the 1837 map. Though navigational notations were updated and corrected there are no notable differences indicated in the interior of the parcel.

8. Beers 1873

The 1873 Beers map of this area indicates a number of cultural changes. A school (#27) is found near the center of the Neck, the Beacon Stock Farm (W. Crozier residence) is noted in the north, and C. H. Jones continues to occupy a site in the southwest part of the Neck. (This may be the dairy farm noted in the oral interview with Mrs. M. Hogan.) The region of the study area remains unoccupied and probably was utilized as pasture.

9. USCS Eaton's Neck 1887

The map shows only the coastal zone and that region visible to mariners from sea. However, evidences of forest or woodland distribution along the coast (included to aid the navigator) seem to suggest that by this period parts of the former pasture lands may have been permitted to grow back to woodland.

10. Hyde 1896

At this period W. Godfrey is noted to have occupied the spit on the seaward side of Price's Bend, while D.H. Jones a son of C. W. Jones continues to occupy the farm—possibly a dairy—to the north of Winkle Point. At this time the Delamaters and Robinsons have residences on the eastern part of the Neck.

11. Colton 1901

The Colton map of the Long Island rail road indicates that the region was served by a rail line spur to Northport at this date. No doubt that this transportation improvement tended to increase the accessibility of the study area to the more affluent urbanites who resided in the west toward New York City and increased the number of summer visits by these people which in turn piqued their interest in purchasing recreational properties.

12. USGS Northport Quad. 1903

The map indicates clearly the topography of Eaton's Neck, the location of the Jones residence and those of the Delamater and Robinson families of this period.

13. Dolph and Stewart 1929

By this date Mary Jones occupied the Jones Farm located in the southwest part of the Neck. The Robinson Estate of about 1000 acres occupies much of the northern and eastern ends of the island, while Robinson and G. H. Robinson occupy the remainder.

14. USAMS Northport 1943

This map indicates the location of Camp Marshall Field (later known simply as Camp Field), its access road and buildings. It appears that Structures 2, 4, 3, 6, and 10 of this report all appear to have been part of the Camp Field

complement of buildings. However, no evidence of the Hogan residence which is found south of Structure 2 is noted. It may have been obscured by vegetation or in early stages of construction. In addition, a small building, probably a cottage, that occupied the area due north of Structure 2 has no representation on the present-day map and no manifestation of its location was recorded in the subsurface tests. It is possible that when the Hogan family purchased the Camp Field they may have moved one of these structures to the location that Structure 1 now occupies.

15. USGS 1966

The 1966 map which was produced by aerial photographic methods does not show some of the smaller structures which may have been partly obscured by overgrown by vegetation and thus may have been invisible form the air. This map indicates the location of Structures 1(Hogan Residence @1925) , 7 (Hogan new House @ 1970) and 8 (Caretakers Cottage 1924). The others were not reported.

CHRONOLOGY OF EVENTS RELATING TO THE SUBJECT PROPERTY

In prehistoric times this general area served as part of the resource exploitation area of the local native Americans who probably were settled on the southeastern part of the Neck. Known prehistoric finds and sites are common in the general region. The early natives may have been settled on the low lying coastal areas such as Walnut Neck and areas around Duck Harbor as well as at Winkle Point.

It was at Walnut Neck where a late contact period settlement known as Ketanomoke was located. Here the Matinicock Sagamore, Resoroken, met with Theophilus Eaton in 1646 to sell the peninsula that would become Eaton's Neck. Eaton, a wealthy London merchant, had arrived only seven years earlier in New Haven at the English colony on the Connecticut shore. In the short period of seven years Eaton had been appointed the governor of the colony and had acquired Eaton's Neck for his own. Eaton's rapid rise to a powerful position was evidence of his perception, skill and sagacity. His political position may have permitted him access to information or to influence events regarding the soon to be signed Treaty of Hartford (1650) which divided up desirable Long Island vacant lands into an English and Dutch spheres of influence. The boundary placed at Oyster Bay confined the Dutch to the west of the line and the English to the east. The Treaty placed Eaton's Neck in the English area. Eaton with his earliest of all Indian Deeds to Long Island lands had already established his ownership of a prized piece of Long Island territory prior to this date. The property of Eaton, soon fell to others however, and by the second half of the 17th century the ownership of Eaton's Neck was in the hands of George Baldwin (1663) and was briefly known as Baldwin's Neck. Later another powerful local family, the Gardiners, owned all or major parts of it in the late 18th century and early 19th century. It was this family that sold a portion of their property at the north end of the Neck for the erection of the Eaton Light in 1798.

By the third decade of the 19th century other less affuent and powerful families were to settle on the Neck. Sometime about mid 19th century a C. W. Jones purchased from the Gardiners a large plot of land on the southwest coast north of Winkle Point. Near the southwest coast north of Winkle Point, Jones built his home and farm. The Jones family was to occupy this isolated section of the Neck well into the third decade of the 20th century. However, by 1922 the senior male members of the Jones family were deceased, and with no male members to work the land the family fell into arrears on their taxes. The property continued to be owned by Mary Jones as late as 1929. However, to paay back taxes the northern parts of the property were taken by creditors according to Mrs M. Hogan (1998). In 1922 Mrs Hogan states that her father-in-law Mr John V. L. Hogan of Forrest Hills purchased a plot of land formerly owned by the Jones family on the western shore of Eaton's Neck. See Oral History in Addenda. Hogan was ultimately to purchase two more parcels in the area to put together a large estate. There were no structures on the parcel and the Hogan family, who resided in Forrest Hills, used the place for recreation by camping in a tent in the woods and swimming and sailing on the Bay. Several years later, in 1924 the parcel to the north was purchased by the Fields and developed as a children's camp known as Camp Marshall Field, where needy children from the city were exposed to fresh air and nature. On the Hogan's property a pleasnat summer bungalow overlooking the Bay was built in bout 1926 and was known later as "the old house" (Structure 1). By 1938 Camp Field was no longer functional and was sold. The Hogans purchased the wooded site and the cottages to the north of them to enlarge their holdings and insure privacy. At this time they may have moved or disassembled and rebuilt one or more of the small cottages from the Camp to the site of Structure 1 to expand their recreational home. Additional property in the vicinity became available in the early 1940s and this third parcel became the final purchase. In 1970 the new house, larger and of a one storey ranch style, was built in the eastern portion of the site. Since that time, the property has remained relatively unaltered from its original state.

CONCLUSIONS

The parcel was part of agricultural and wooded land from the early settlement of the site to the present day. Aside from the early clearing of the land for pasture in the 18th century, the cutting of roads and foot paths and the construction of a number of simple frame cottages and other low impact structures, and the construction of a modern residence late in the 20th century, the parcel has remained relatively unaltered.

SENSITIVITY ASSESSMENT

This parcel has a better than average potential to produce cultural evidence related to the prehistoric past. There appears to be little potential for evidences of early historic sites given the known history of the site. Evidences of early 20th century structures such as cottages, outbuildings or similar features-- may be located near the

existing buildings. The remainder of the parcel may have preserved evidences of the prehistoric past on the tops of knolls, and in small hollows or other relatively level areas.

RECOMMENDATIONS

A Stage IB field reconnaissance survey is recommended. Subsurface testing should address the questions regarding presence or absence of culturally significant subsurface or ground level prehistoric or historic evidences.

RATIONALE

This survey was based on through review of all existing documents.

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ADDENDA

ORAL HISTORY/INTERVIEW

Mrs.Madeleine Hogan
307 Burns St.
Forrest Hills, NY 11375.
December 12, 1998

On the history of property ownership:
It was my Father in law, John V L Hogan who originally purchased the parcel in about 1922. It was purchased in three parcels at different times.

On the purpose of the property:
It was strictly for recreation. My husband, John V. Hogan was interested in scouting and camping, and at first in the early days they camped out there. My father-in-law purchased that property from the estate of Rosealee Jones. She had died earlier and left a large piece of land. The County had taken it over for non-payment of taxes when it was purchased. There were no other residents near-by. As I understand it there was only a dairy farm some distance away. In those days there was no house there (on the project area) and they simply camped on the land. The purpose was to get away from it all. We lived in Forrest Hills and this was a lovely place to get away from the busy life of the City. It is the most lovely place we knew of...Eatons Neck. Then, about 1926 the old house (Structure 1) was built on the cliff overlooking the Bay. In 1924 Camp Marshall Field was built just to the north of my father-in-laws place and was there for many years. In about 1938 my father in law bought the parcel from the Camp when they left and moved to some other place. The about the time of WWII he bought the last piece. That is how the total parcel was put together. I have no remembrances of the camp since I came out there only for the first time in 1945 when I married. So the camp was long gone when I arrived. However, there is a good history of the area in the book by that fellow from Asharoken. Carr? Yes. His book will tell all about the Camp...though there are a few mistakes in it. It is mostly very good..

On the reason for selling:
At present I live here in Forrest Hills and I can't take care of two houses. So as much as I hate to do it I have to sell the place. I will miss it a great deal. At present Steve and Marlene Bayne and their two sons live in the cottage at the entrance. They have been the care-takers of the site for many years now. They are local people who were born and raised in the area just up the road. They will be sorry to leave also. Yes they would probably be able to answer some of your questions. Steve has a landscaping business so that he may not be home in the day time. I would give them a call first (516-262-6332).

On evidences of prehistoric activity:
I do not expect that you will find any arrowheads or things like that. I have never seen any. But my husband had groups of his friends out there for camping and Boy Scouting (which he was active in) ...and they were often doing projects for their merit badges...they scoured the place. If there was anything like that, I suspect that they may

have cleaned them all out. Except where there was plenty of poison ivy. Look under the poison ivy.. (laughter).. You may expect to find bones there though. Do not ascribe them to the ancients! We buried four good dogs on that property.

On the care-taker's cottage:
The larger place north of the Baynes cottage was used by the Camp as a councilor's residence and as a place to house people for weekend trips. It has been abandoned now for many years. There is also a maid's house and a garage there.

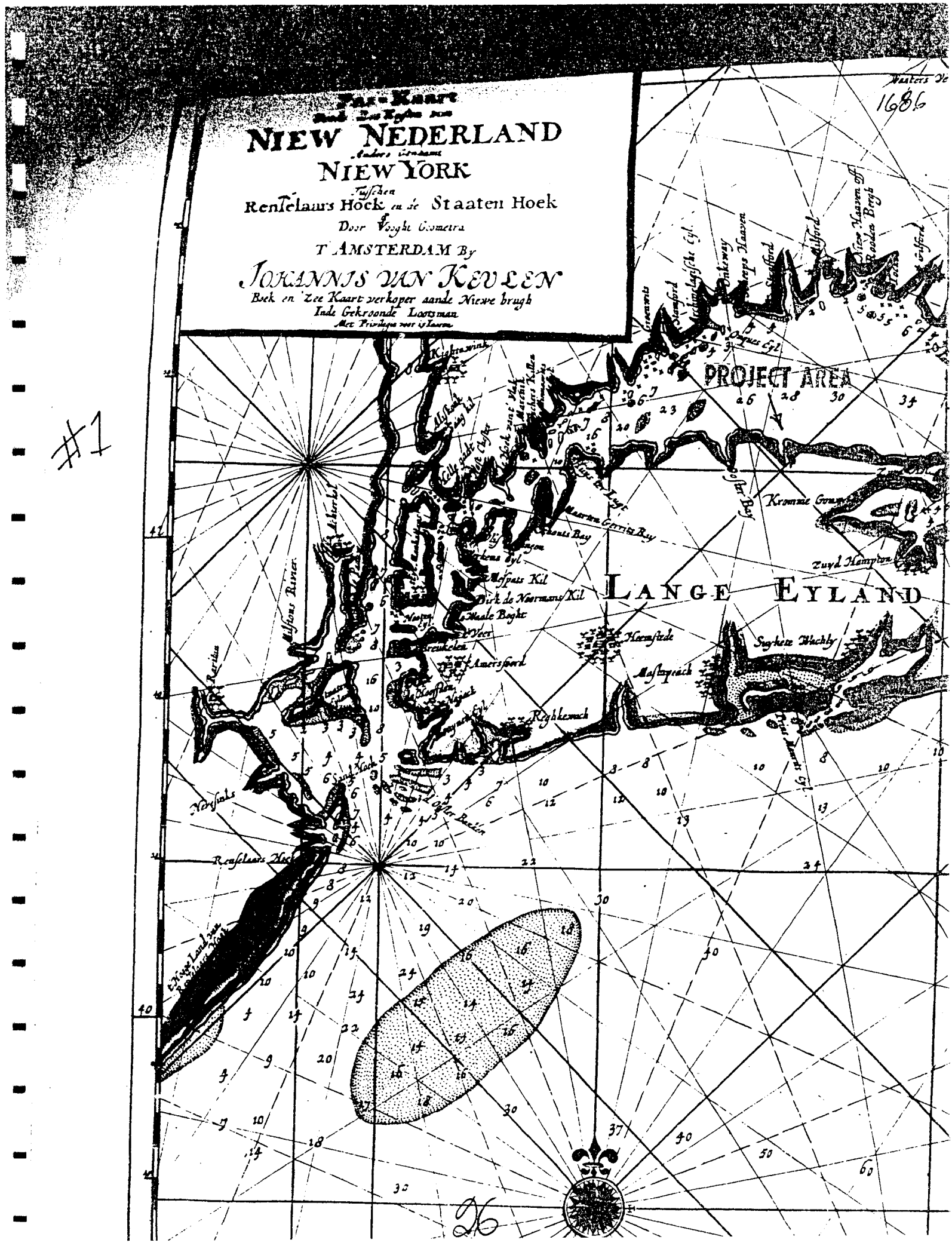
On native trees:
My father-in-law put in some nut trees in the early days and that may be what you have found there. He planted trees near the old house (Structure 1) and what you found may have sprung up from those plantings.

On family activities:
When I came out there we did mostly family things. Picnics, swimming, sailing were what we spent our time at. We have three sons and grandchildren that used the place like that too. The Boy Scouts were there too as guests of my husband. Those were our activities.

On the age of the new house:
We built the new house in 1970. It is a lovely place and I would like to keep it. I have an option to do that. It is to remain there between two lots and will be modified somewhat. The houses there are planned to be large and I have a large house already here in Forrest Hills. I would like to keep it as a small place.

SUPPORTING DATA

HISTORIC MAPS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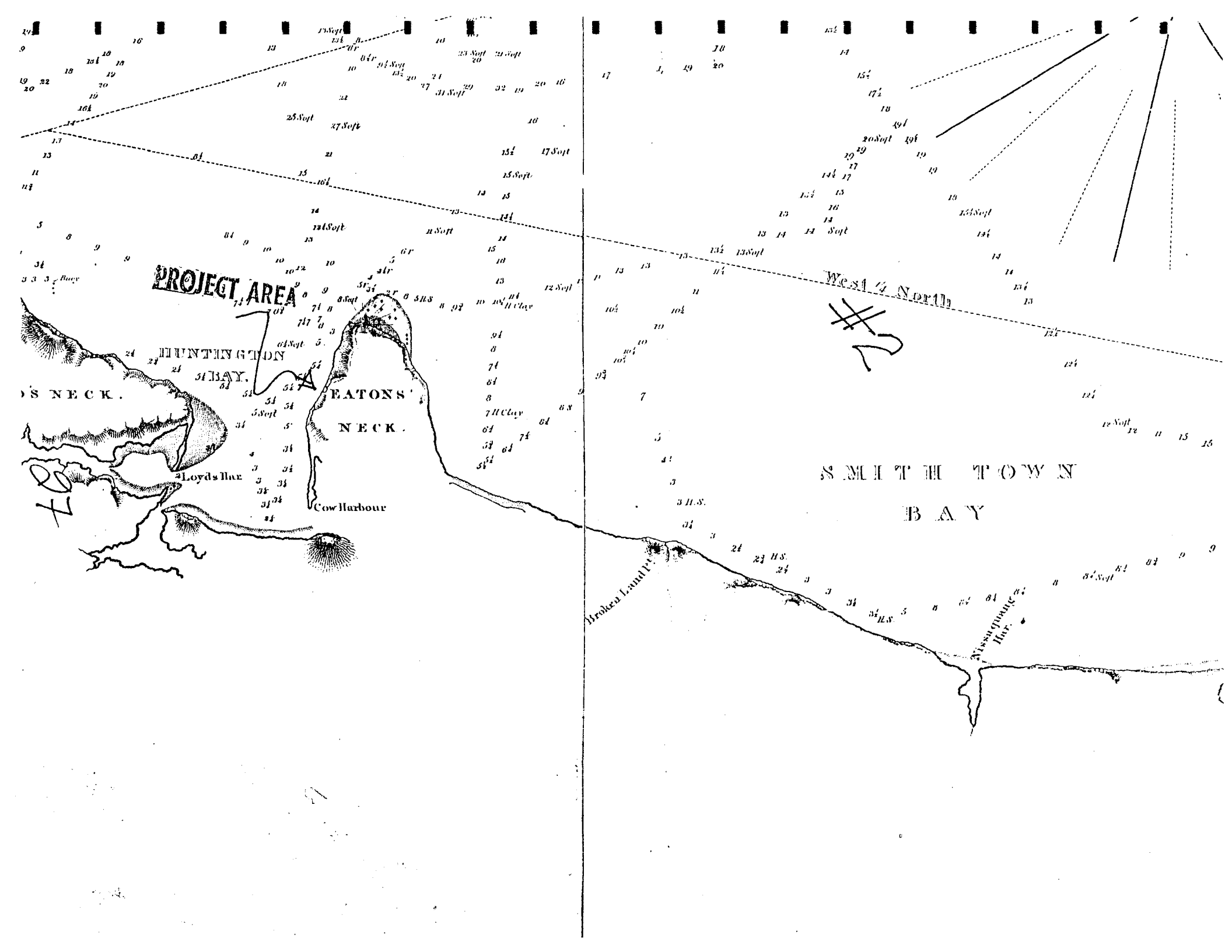
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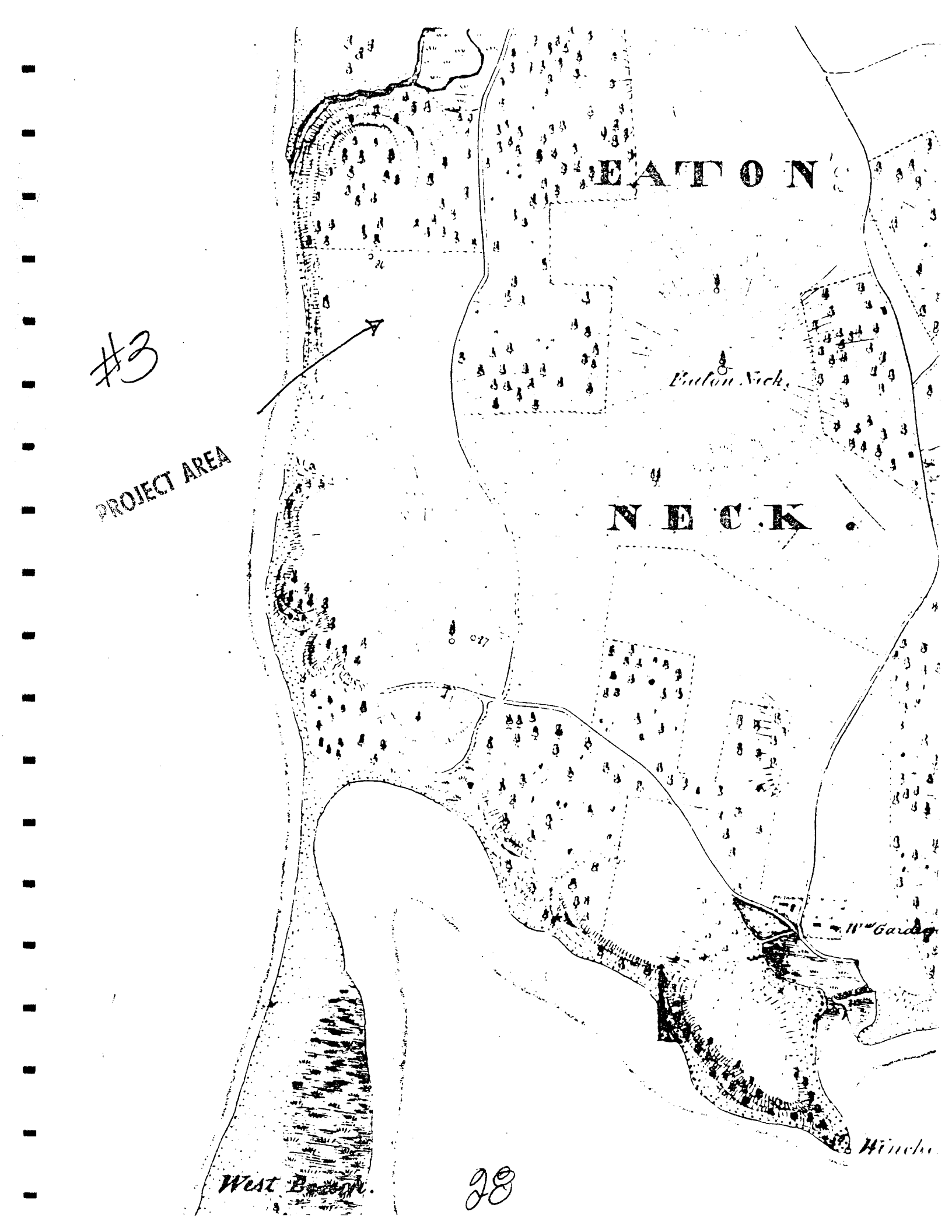
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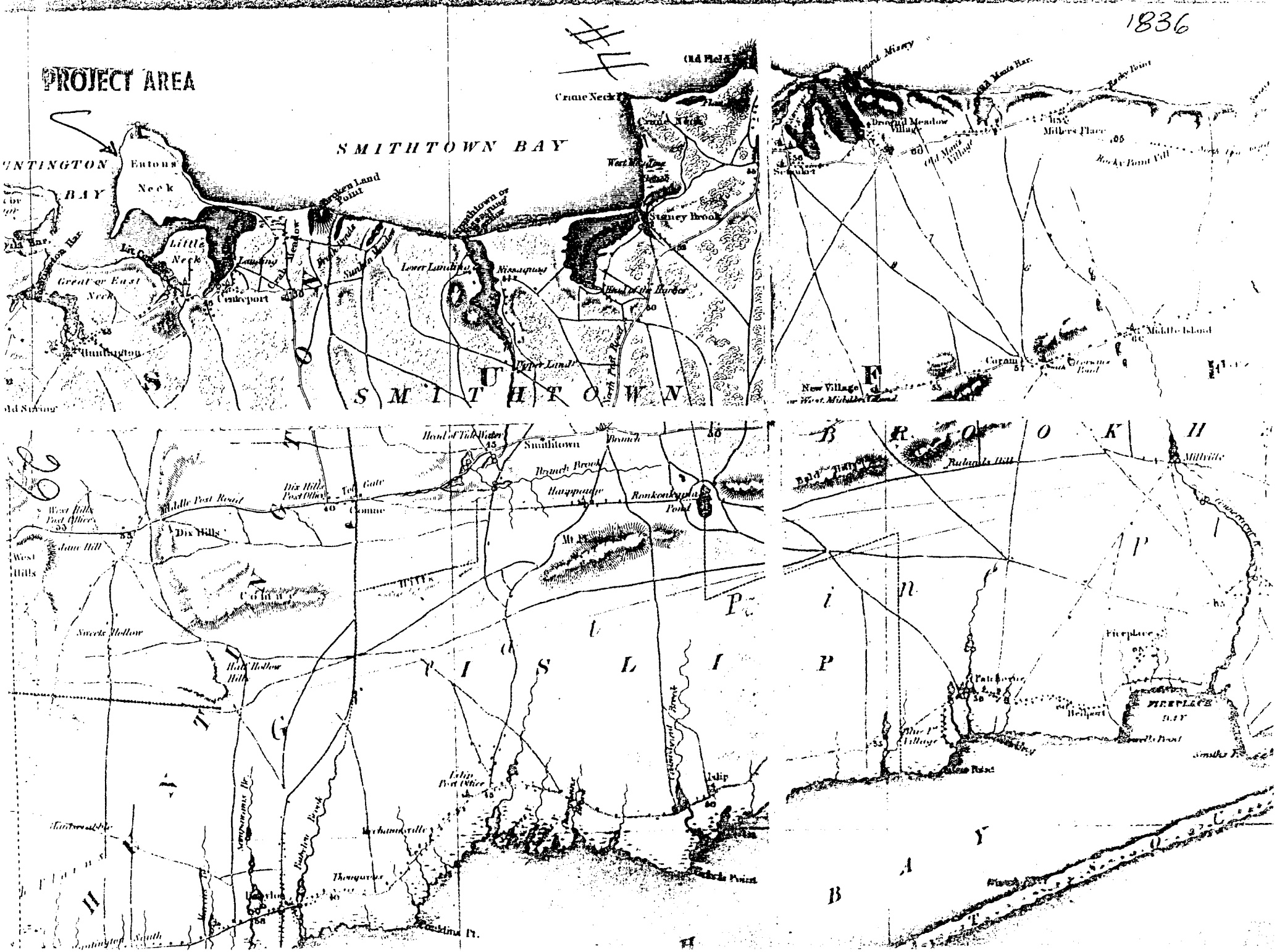
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PROJECT AREA
SMITHTOWN BAY
Eatons Neck
Little Neck
Great or East Neck
Centreport
Lloyd Harbor
Lloyd Neck
Crane Neck
Stony Brook
Nissaquogue
Lower Landing
Head of the Harbor
Smithtown
Smithtown Branch
Branch Brook
Hauppauge
Ronkonkoma Pond
Middle Post Road
Dix Hills Post Office
Toll Gate
West Hills Post Office
Dix Hills
West Hills
Sweets Hollow
Half Hollow Hills
Islip
Islip Post Office
Orchard Creek
Patchogue
Fireplace
Bellport
Millville
Rabbit's Hill
Middle Island
Coram
New Village
Old Mans Harbor
Millers Place
Roe Ay Point
Old Field
Crane Neck
Stony Brook
Nissaquogue
Lower Landing
Head of the Harbor
Smithtown
Branch
Branch Brook
Hauppauge
Ronkonkoma Pond
Middle Post Road
Dix Hills Post Office
Toll Gate
West Hills Post Office
Dix Hills
West Hills
Sweets Hollow
Half Hollow Hills
Islip
Islip Post Office
Orchard Creek
Patchogue
Fireplace
Bellport
Millville
Rabbit's Hill
Middle Island
Coram
New Village
Old Mans Harbor
Millers Place
Roe Ay Point

#5

TRAVELLERS MAP OF LONG ISLAND.

Published By J.H. Colton

NEW YORK.

1852

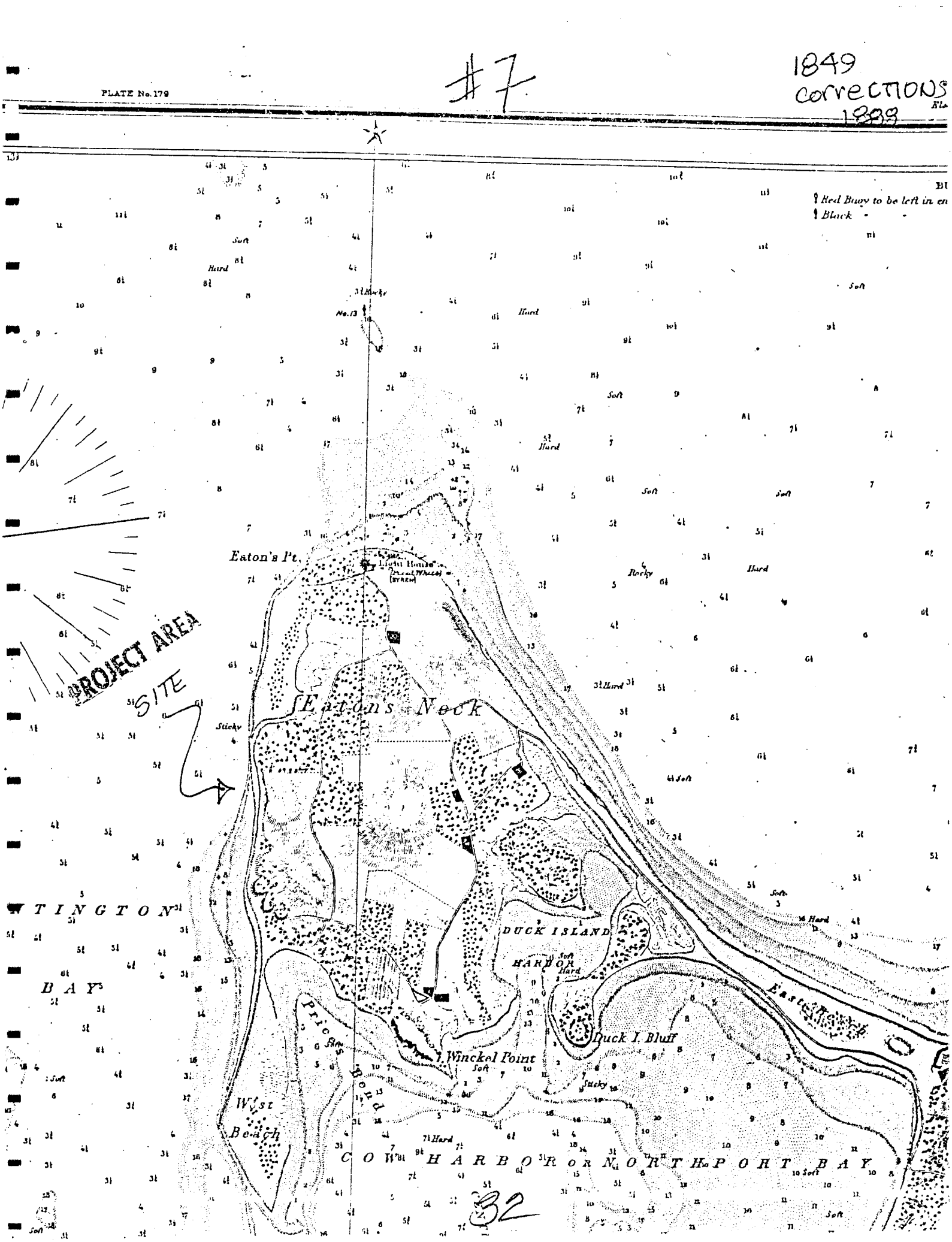
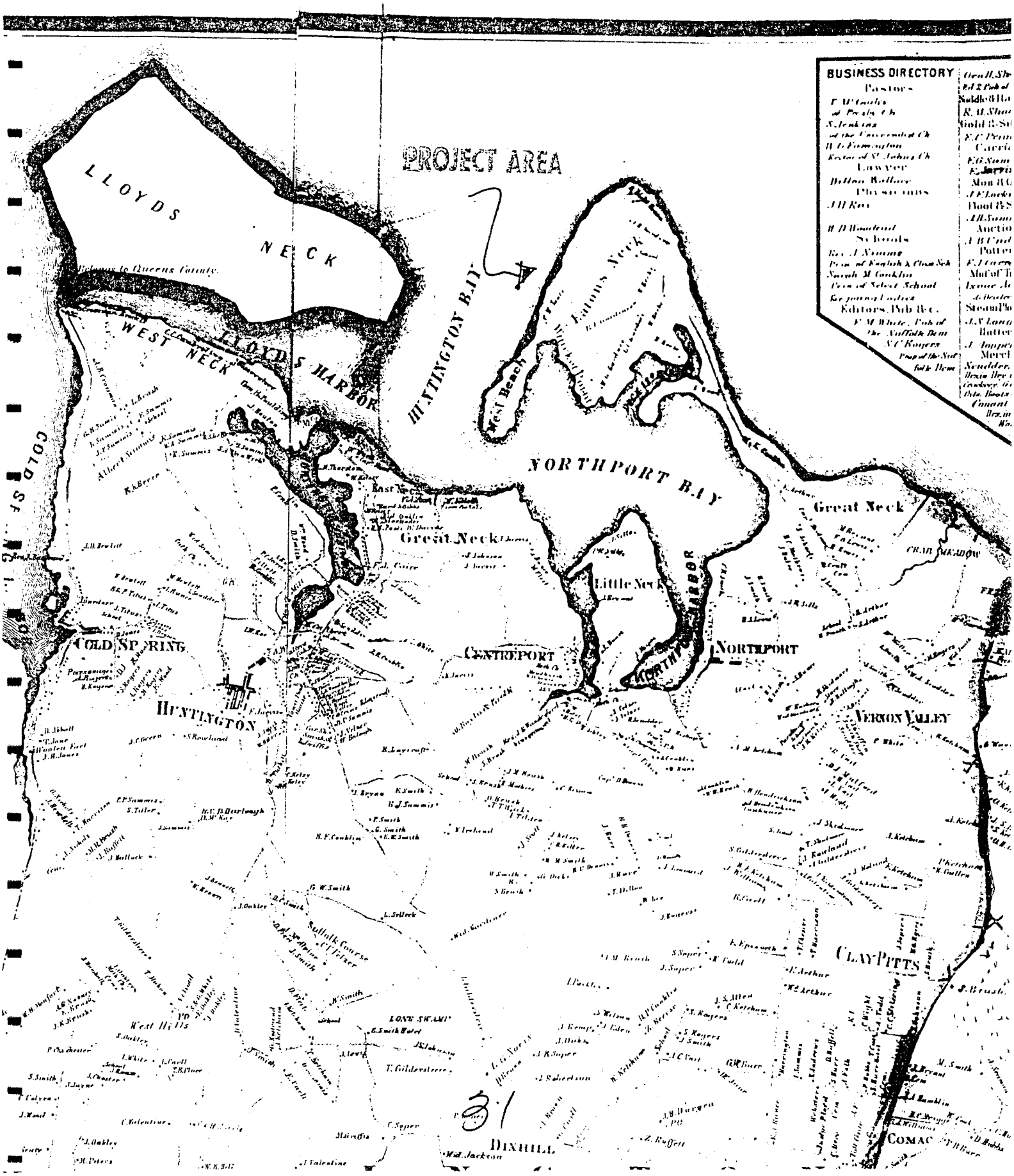


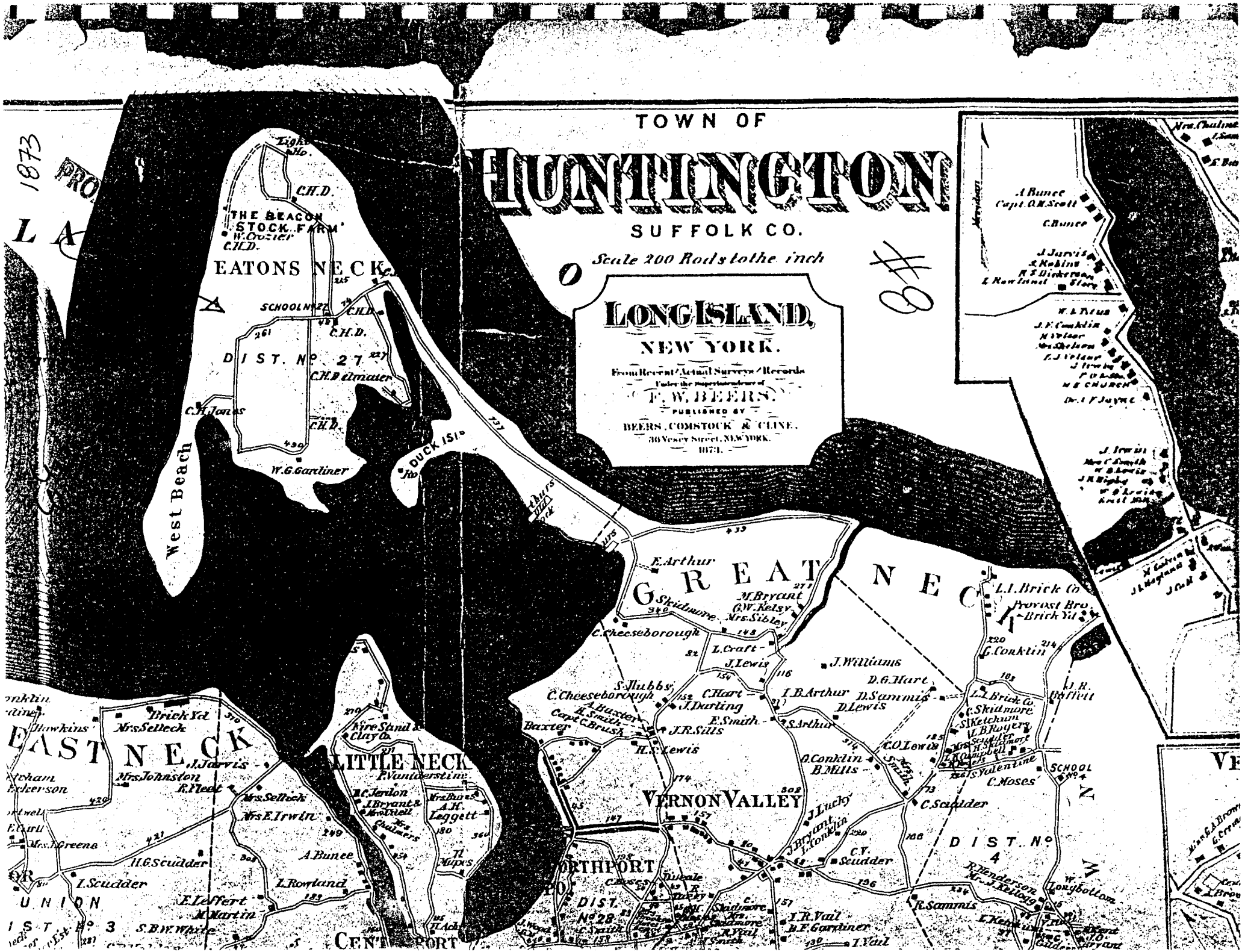
PLATE No. 179
#7
1849
corrections
1888
Red Buoy to be left in en
Black
Eaton's Pt.
Light House
(STEEL WHITE)
(STREAK)
PROJECT AREA
SITE
Eatons Neck
Eaton's Neck
TINGTON
BAY
DUCK ISLAND
HARBOR
Duck I. Bluff
Eastern Ck
Price
Bond
Winckel Point
West
Beach
COW HARBOR or NORTHPORT BAY
Rocky
Hard
Soft
Sticky
No. 13
32

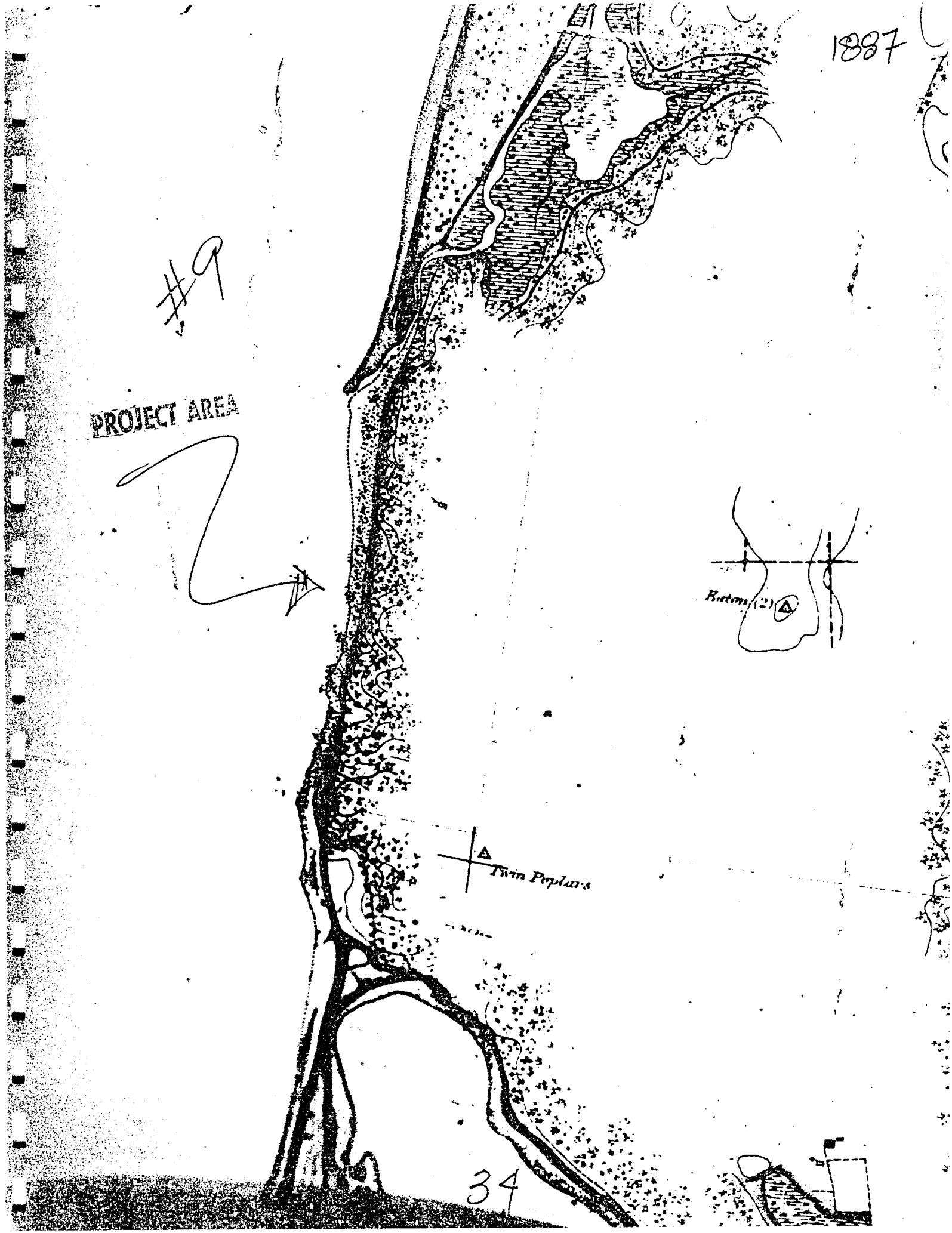
CHASE
1858

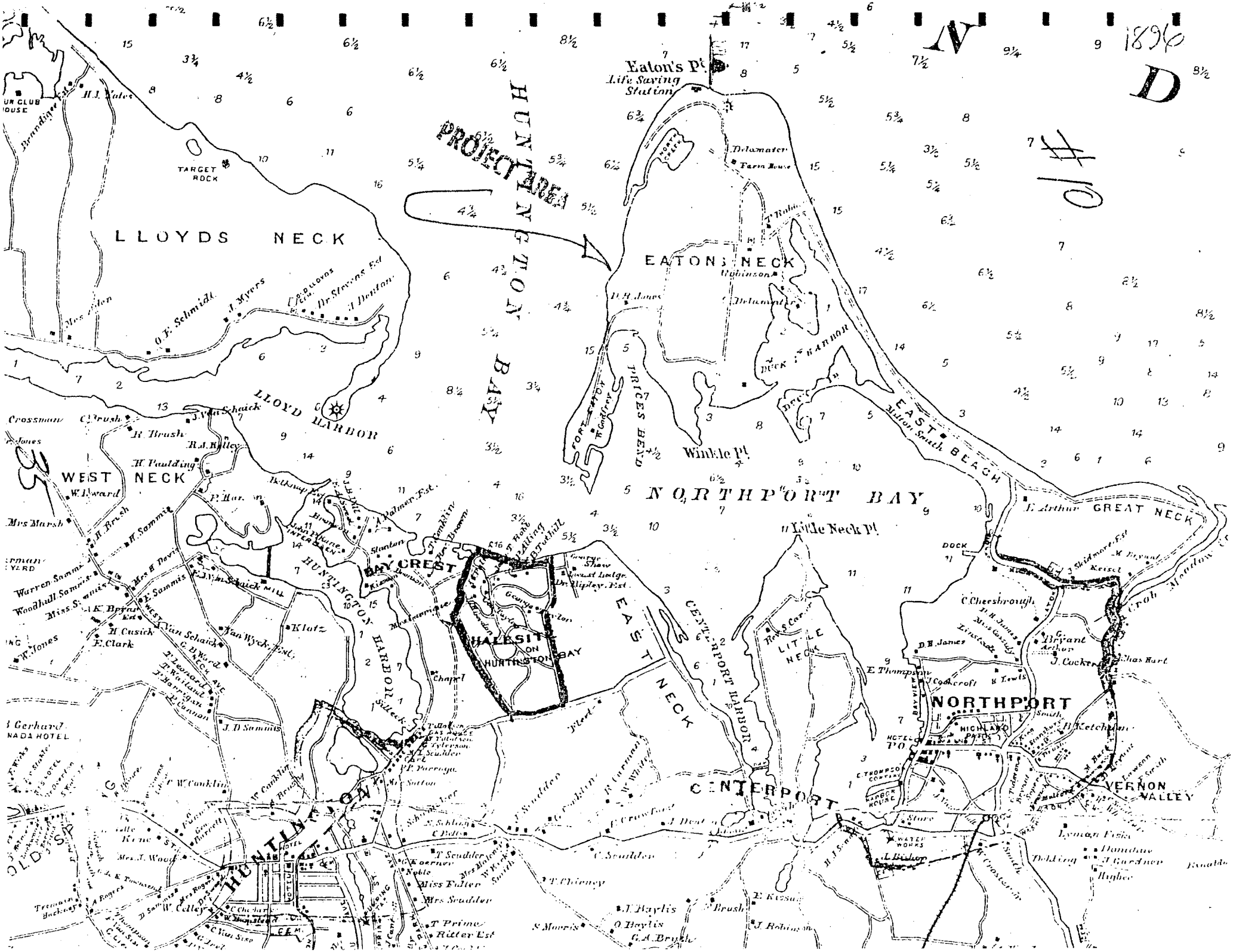
#6



31


TOWN OF
HUNTINGTON
SUFFOLK CO.
Scale 200 Rods to the inch
LONG ISLAND,
NEW YORK.
From Recent Actual Surveys & Records
Under the superintendence of
F. W. BEERS.
PUBLISHED BY
BEERS, COMSTOCK & CLINE.
30 Vesey Street, NEW YORK.
1873.
1873
EATONS NECK
DIST. No 27
C.H.D.
THE BEACON STOCK FARM
W. Crozier
SCHOOL No 2
C.H. Jones
W.G. Gardiner
West Beach
DUCK ISL
EAST NECK
Brick Yd
Mrs. Selleck
Hawkins
I. Jarvis
Mrs. Johnston
R. Fleet
Mrs. E. Irwin
A. Bunce
H.G. Scudder
I. Scudder
L. Rowland
E. Leffert
M. Martin
S.B.W. White
UNION
DIST. No 3
LITTLE NECK
Fire Stand & Clay Co.
P. Vanderstine
A.C. Jordon
J. Bryant & Mothrell
Mrs. Chalmers
Mrs. Bunce
A.H. Leggett
H. Mapes
NORTHPORT
DIST. No 28
CENTRE PORT
GREAT NECK
E. Arthur
G. Skidmore
M. Bryant
G.W. Kelsy
Mrs. Sibley
C. Cheeseborough
L. Craft
J. Lewis
S. Hubbs
C. Cheeseborough
C. Hart
J. Darling
A. Buxton
R. Smith
Capt C. Brush
Baxter
E. Smith
J.R. Sills
H.F. Lewis
J. Williams
D.G. Hart
I.B. Arthur
D. Sammis
D. Lewis
S. Arthur
C.O. Lewis
O. Conklin
B. Mills
VERNON VALLEY
J.J. Lucky
J. Bryant
I. Conklin
C.V. Scudder
C. Scudder
L.I. Brick Co
Provost Bro. Brick Yd
G. Conklin
D.H. Baffett
C. Skidmore
S. Ketchum
L.B. Rogers
C. Moses
SCHOOL No 4
DIST. No 4
R. Henderson
M.J. Kellogg
R. Sammis
W. Longbottom
J.R. Vail
B.F. Gardiner
J. Vail
A. Bunce
Capt. O.H. Scott
C. Bunce
J. Jarvis
S. Robins
H.S. Dickerman
L. Rowland
Story
J.F. Conklin
N. Wilson
Mrs. Sherlock
M.E. CHURCH
Dr. I.F. Jayne
J. Irwin
Mrs C. Smith
W. Lewis
J.R. Higby
W.B. Lewis
Knell Mfg


1887
#9
PROJECT AREA
Ruins (2)
Twin Poplars
34


1896
LLOYDS NECK
EATONS NECK
WEST NECK
LLOYD HARBOR
HUNTINGTON BAY
NORTHPORT BAY
EAST NECK
CENTERPORT HARBOR
CENTERPORT
HUNTINGTON
NORTHPORT
VERNON VALLEY
EAST NORTHPORT
BAY CREST
HALESITE
ON HUNTINGTON BAY
LITTLE NECK
GREAT NECK
Eaton's Pt
Life Saving Station
Winkle Pt
Little Neck Pt
TARGET ROCK
PROJECTED
TRICES BEND
FORT SALONGA
EAST MILTON SMITH BEACH
DOCK
HIGHLAND PARK
HOTEL
P.O.
WATER WORKS
HARBOR HOUSE
Delamater
Farm House
Robinson
D.H. James
Crossman
C. Brush
R. Brush
H. Paulding
W.L. Ward
H. Brush
H. Sammis
Mrs Marsh
Warren Sammis
Woodhull Sammis
Miss S. Willis
Mrs H. Davis
E. Sammis
H. Cusick
E. Clark
W. Jones
Van Schaick Mill
Van Wyck Est.
Klotz
J.D. Sammis
Chapel
Stanton
Brownson
Kissam
Georgia
Taylor
Dr. Ripley Est.
Mrs Ingraham
Crab Meadow
Kessel
Skidmore Est
W. Bryant
C. Chershrough
Mrs Cassidy
Linsbrough
G. Bryant
Arthur
J. Cockroft
Chas Hart
E. Thompson
B. Lewis
Smith
Ketcham
C. Thompson Company
Store
Lyman Fiske
Donahue
J. Gardner
Hughes
Ronalds
Brush
Robinson
Morris
Baylis
Bruckner
Chimney
Prime
Ritter Est
Miss Fuller
Mrs Scudder
Noble
Corner
Sutton
Conklin
Crowfoot
Hewlett
Harrigan
Leonard
Ward
Gerhard
Canada Hotel
Old Dispensary
Tremaine
Buchanan
Rogers
Cullen
Jewell
Wm. Sisco
Thompson
Jones
Rowe
Mrs. J. Wood
Fogarty
Smith
Cullen
Burrell
Hotel
Store
Depot
Bridge
Creek
Pond
Ditch
Road
Lane
Avenue
Walk
Path
Fence
Wall
Hedge
Trees
Shrubs
Flowers
Grass
Lawn
Garden
Orchard
Vineyard
Farm
Field
Meadow
Pasture
Woods
Forest
Swamp
Marsh
Beach
Shore
Bluff
Cliff
Rock
Stone
Sand
Gravel
Mud
Water
Sky
Cloud
Sun
Moon
Star
Wind
Rain
Snow
Ice
Fog
Mist
Dew
Frost
Heat
Cold
Light
Dark
Shadow
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Red
Orange
Yellow
Green
Blue
Indigo
Violet
White
Black
Gray
Brown
Pink
Purple
Gold
Silver
Copper
Iron
Steel
Wood
Glass
Paper
Cloth
Leather
Rubber
Plastic
Metal
Stone
Brick
Concrete
Asphalt
Tile
Slate
Thatch
Straw
Hay
Grain
Corn
Wheat
Oats
Barley
Rye
Rice
Potato
Tomato
Bean
Pea
Carrot
Onion
Cabbage
Lettuce
Spinach
Beet
Turnip
Radish
Cucumber
Pumpkin
Squash
Melon
Berry
Apple
Pear
Peach
Plum
Cherry
Grape
Orange
Lemon
Lime
Banana
Pineapple
Coconut
Date
Fig
Olive
Nut
Seed
Flower
Leaf
Root
Stem
Bark
Wood
Sap
Resin
Gum
Oil
Fat
Meat
Fish
Bird
Egg
Milk
Cheese
Butter
Cream
Honey
Sugar
Salt
Pepper
Spice
Herb
Tea
Coffee
Cocoa
Chocolate
Wine
Beer
Liquor
Water
Ice
Snow
Rain
Fog
Mist
Dew
Frost
Heat
Cold
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Color
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Orange
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Violet
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Rice
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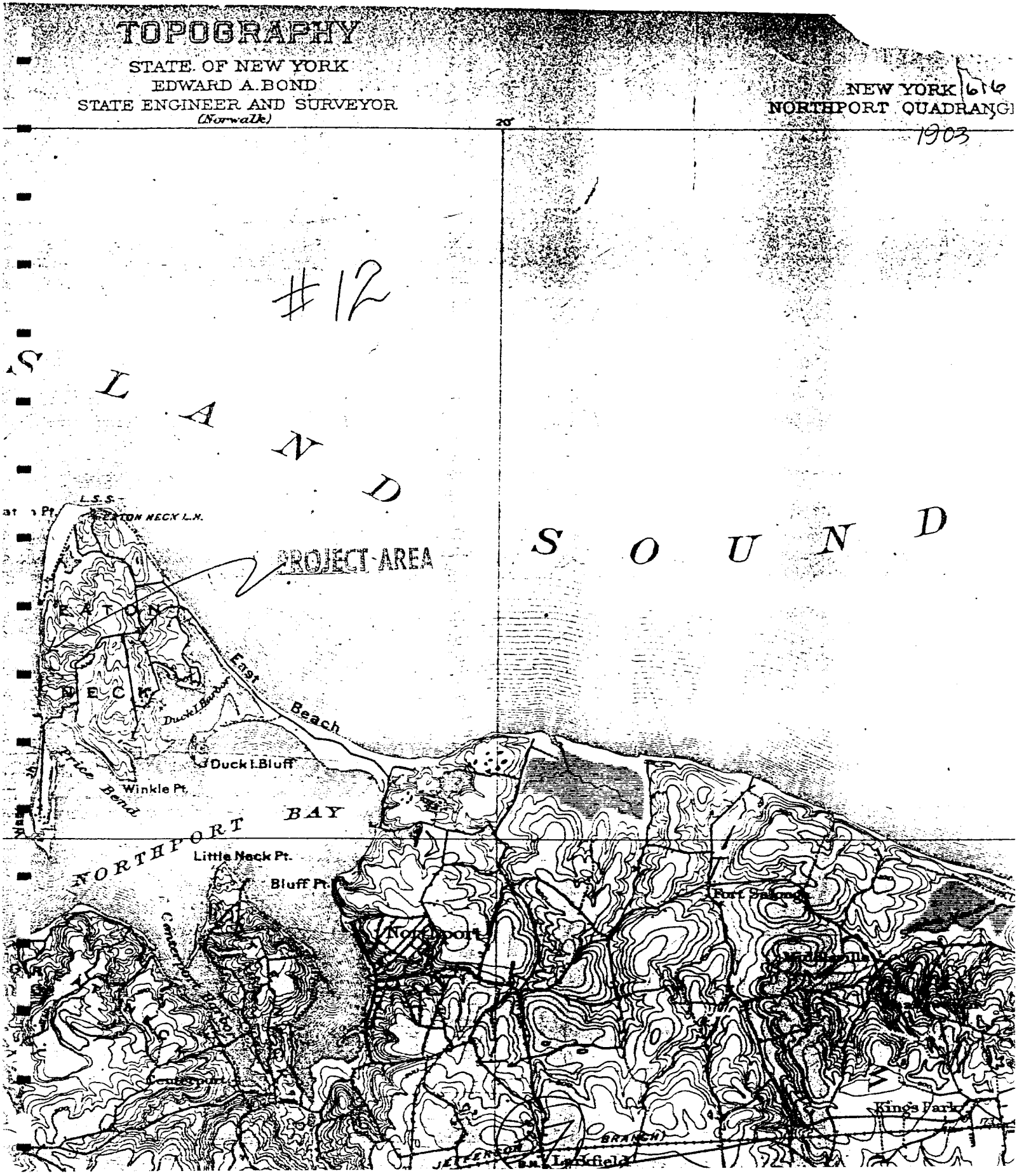
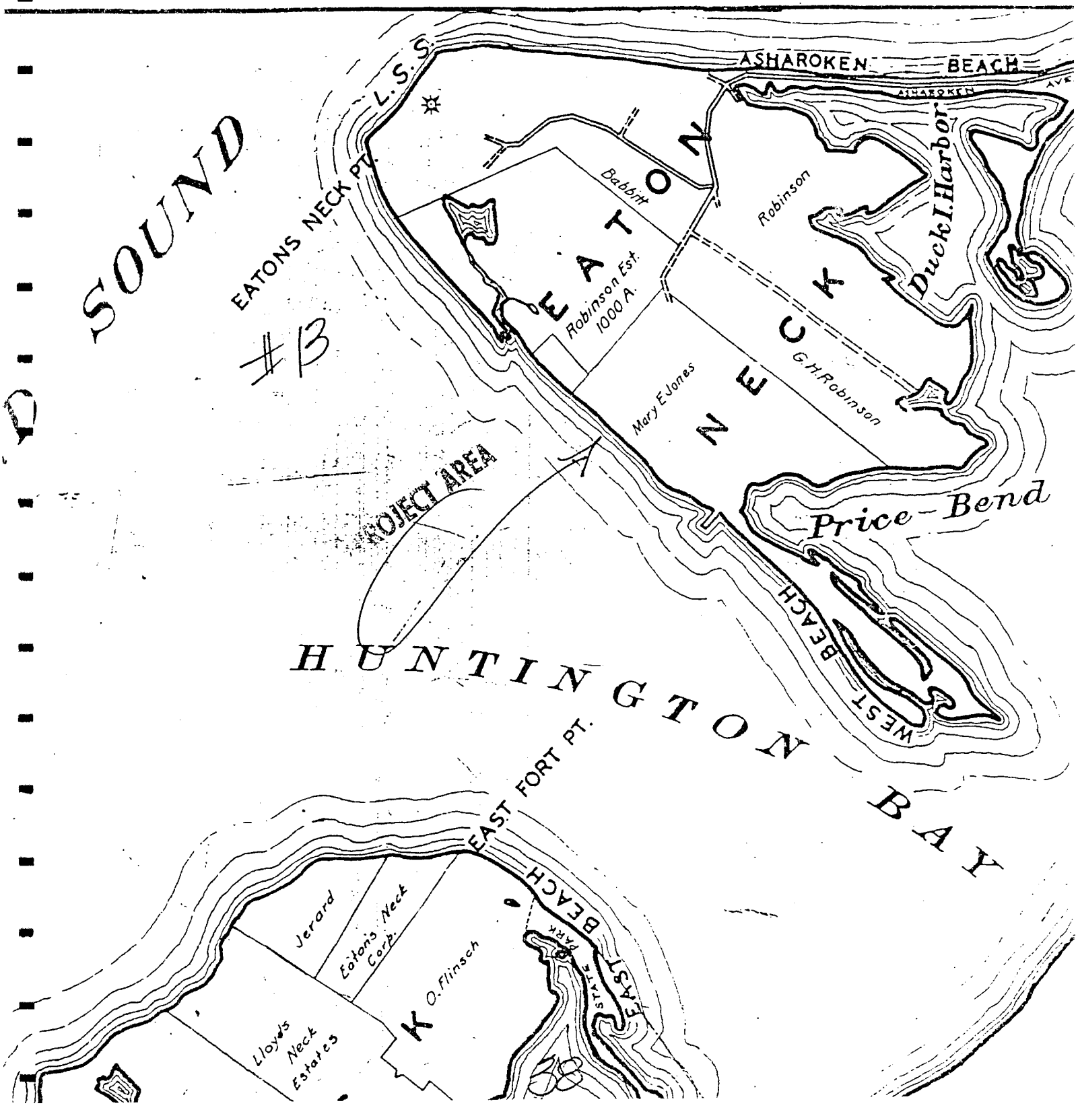
Tomato
Bean
Pea
Carrot
Onion
Cabbage
Lettuce
Spinach
Beet
Turnip
Radish
Cucumber
Pumpkin
Squash
Melon
Berry
Apple
Pear
Peach
Plum
Cherry
Grape
Orange
Lemon
Lime
Banana
Pineapple
Coconut
Date
Fig
Olive
Nut
Seed
Flower
Leaf
Root
Stem
Bark
Wood
Sap
Resin
Gum
Oil
Fat
Meat
Fish
Bird
Egg
Milk
Cheese
Butter
Cream
Honey
Sugar
Salt
Pepper
Spice
Herb
Tea
Coffee
Cocoa
Chocolate
Wine
Beer
Liquor

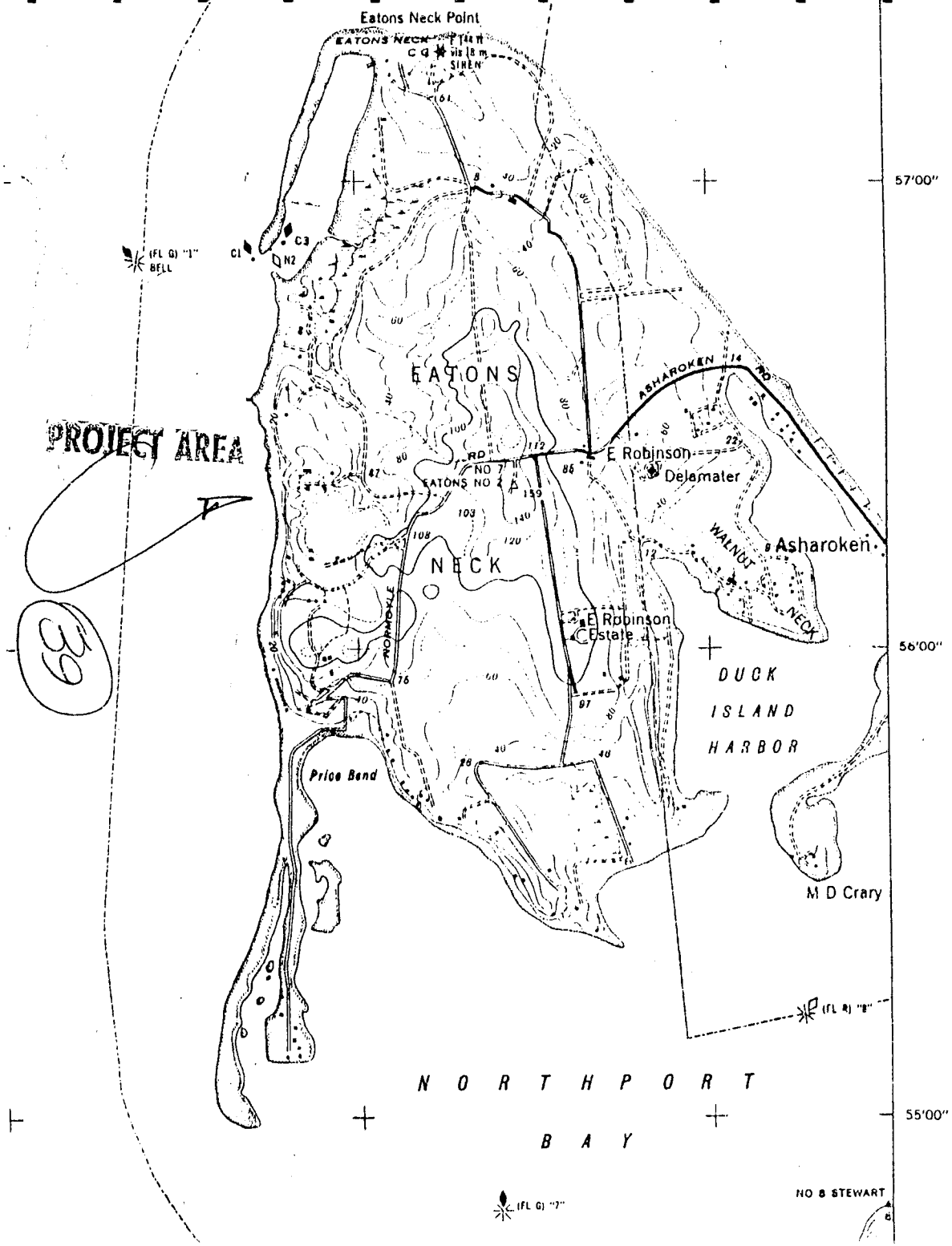

WESTPORT
NORWALK
Fairfield
Southport
Rock
Fairweather I.
Light Ho.
BLACK ROCK HAR.
LONGPORT HAR.
Long Beach
1901
Norwalk
Green Farms
Shoal Pt.
Westport
HARTFORD
Fairfield Bar
L.H.
Fairfield Beach
Pine Cr. Pt
Hensies Pt.
Burms Pt.
Sherwoods Pt.
South Norwalk
SAUGATUCK RIVER
Cedar Pt.
Sprite I.
Cockinoes I.
Cat Pasture Pt.
NORWALK RIV.
Five Mile R.
Norwalk
Rock Dundee
Goose I.
Hay I.
Chimons I.
Wilson's Pt.
Norton Pt.
Ram I.
Fish I.
Sheffield I.
NORWALK ISLANDS
Neck Pt.
Steamboat
Line
PROJECT AREA
Light
Eatons Pt.
HUNTINGTON BAY
Eaton's Neck
Neck
East Pt.
West Beach
Duck Pt.
Bluff
East Beach
Windle Pt.
NORTHPORT BAY
Great Neck
Crab Meadow
Ft. Salonga P.O.
SMITHTOWN
BAY
Crane Neck Pt.
Flax Cove
Old Field I.
Harbor Channel
East Beach Light
LLOYDS HARBOR
Neck
East Neck
Great Neck
Centerport Harbor
Little Neck
Northport Harbor
Northport P.O.
Vernon Valley
Fresh Pond P.O.
Stony Brook Beach
Stony Brook P.O.
BRANCH
Sunk Meadow Ck.
East Bar
Middleville
Nissequogue
Meadow Glen
KINGS COUNTY
FARM
Kings Park P.O.
Darlington
St James P.O.
St James
Centerport P.O.
Northport
Old Spring Harbor P.O.
Northport Junc.
Lockfield P.O.
Huntington P.O.
Gardiners I.
Northport (East Sta.)
Fairview
Hotel
Fairground P.O.
Greenlawn P.O.
Huntington
HUNTINGTON
SMITHTOWN
Smithtown
Branch P.O.
Hotel
Smithtown P.O.
Commack P.O.
Elwood P.O.
E. Hauppauge
#11
36

1903


TOPOGRAPHY
STATE OF NEW YORK
EDWARD A. BOND
STATE ENGINEER AND SURVEYOR
(Norwalk)
NEW YORK
NORTHPORT QUADRANGLE
1903
#12
LAND
SOUND
PROJECT AREA
EATON NECK L.H.
EATON NECK
East Beach
Duck I. Harbor
Duck I. Bluff
Prior Bend
Winkle Pt.
NORTHPORT BAY
Little Neck Pt.
Bluff Pt.
Centerport Harbor
Centerport
Northport
Fort Salonga
Kings Park
BRANCH
Lakefield

1929 (3B)


SOUND
L.S.S.
EATONS NECK PT.
#13
ASHAROKEN BEACH
ASHAROKEN AVE.
EATON NECK
Babbitt
Robinson Est. 1000 A.
Robinson
Duck I. Harbor
G.H. Robinson
Mary E. Jones
PROJECT AREA
Price-Bend
WEST BEACH
HUNTINGTON BAY
EAST FORT PT.
EAST BEACH
PARK
STATE
Jerard
Eatons Neck Corp.
O. Flinsch
Lloyds Neck Estates



PROJECT AREA

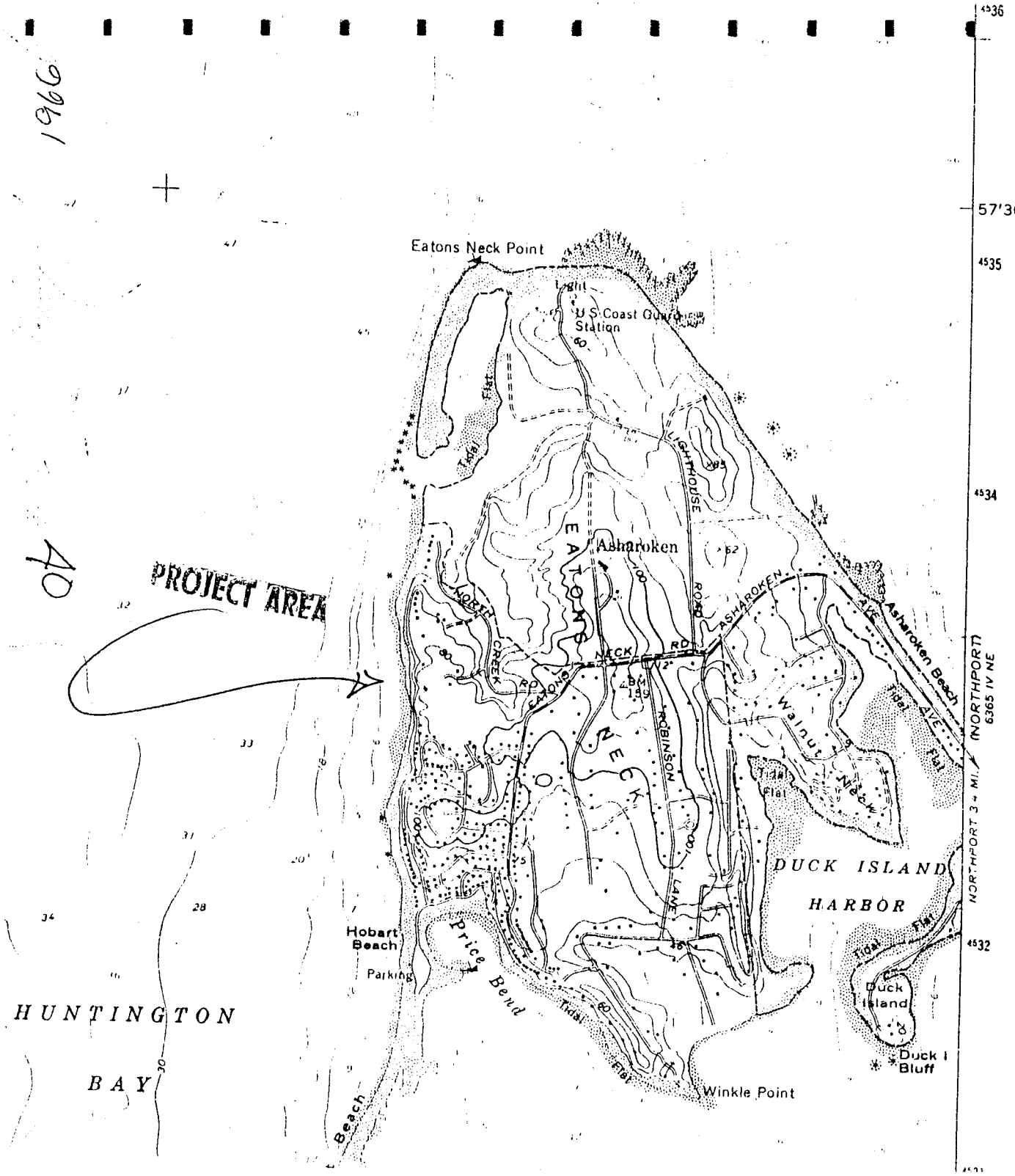
39

#14

1943

1966

#15



40

1966

TOWN OF HUNTINGTON, N.Y.
DEPARTMENT OF PLANNING AND ENVIRONMENT
Intra-Office Memorandum

DATE: September 30, 1998

TO: Anne Ducey-Ortiz, Planner
Scott Robin, Senior Environmental Analyst

FROM: Charla Bolton, AICP, Planner

RE: Old Orchard Woods Preliminary Subdivision
Cultural Resources Assessment

The proposed subdivision should be subjected to a Stage I Cultural Resources Assessment based on information available concerning other known prehistoric and historic sites on Eaton's Neck, as well as information regarding the subject site. I am attaching a section of the Stage IA for the Skodnek Hills subdivision, done by Clover Archeological Services, Inc. in 1991 which details historic and prehistoric sites in and near Eaton's Neck. The subject property, see attached map, contains old oak-tulip tree forest, a high plateau area overlooking Northport Bay/Long Island Sound, and extensive sheltered wetlands to the east and north. The favorable natural features may have afforded prehistoric native Americans opportunities for settlement and encampment. The Suffolk County Archeological Association Cultural Resources Inventory Map designates Eaton's Neck as an area of "intensive aboriginal habitation." There are sufficient indicators of sensitivity to warrant a full Stage I investigation.

I suggest that the Stage IA be focused on maps and other archival resources which will fully document site use both in the prehistoric and historic era. Generalized, non site-specific Stage IA archival material is already contained in the Skodnek Hills Stage I report. It should be noted that evidence of prehistoric occupation was found at Skodnek Hills, adding to the number of known archaeological sites on Eaton's Neck. Site areas to be shovel tested are those not ruled out by steep slopes of greater than 15% unless rock shelters, ledges, terraces or other feature is located on these slopes, nor those areas which the map indicates as reserve areas. The exact dimensions of these reserve areas, within which it is assumed no disturbance will occur, should be delineated and accepted by the Planning Department prior to the Stage IB investigation, so that it is clearly indicated where disturbance will occur pursuant to the subdivision plan. I am in touch with Edward T. Carr, the author of a recent, well received history of Eaton's Neck. He informs me that the estate once belonged to Evelyn Field the wife of Marshall Field. The Fields bought it to serve as a camp for needy children. I will provide the relevant pages from Mr. Carr's book to the project archeologist for further information regarding the site's history. The applicant should also clearly indicate on the subdivision plan, all of the structures presently contained on the property. This should be done so that the project archaeologist is able to evaluate these structures.

Because of the importance of the site, any resulting Stage I report will be sent to the State Historic Preservation Office in order to assure compliance with all standards as described in the New York Archeological Council standards for cultural resource investigations. In order that the state is fully informed of the site's potential, the Stage IA report should include the relevant portions of the Skodnek Hills report describing the non-site specific historic and prehistoric context of Eaton's Neck and surroundings.

CB/

EAST HUNTINGTON-- An undefined area to the east of Huntington Village. (6) 1977, p. 383.

EAST INDIAN SWAMP-- Located in Half Hollow Hills, origin unknown. (H) v.3, p. 347.

EAST NECK-- The large neck of land between Huntington Harbor and Centerport Harbor. Also known as GREAT NECK. (M) p. 52.

EAST NORTHPORT-- Formerly called CLAY PITTS [(B) v.1, p. 356.]. So named for the "new" railroad station built after 1867, which was to the east of the old Northport Station, when the railroad was extended to Wading River. Also known as LARKFIELD [(M) p. 56], GENOLA and FAIR VIEW [(C) p. 166].

(The) EAST OLD FIELD-- See Old Fields. (H) v.4, p. 912.

EASTWOODS-- A wooded area mostly in the eastern part of Oyster Bay; on the border between that town and Huntington, south of Cold Spring Harbor. (2).

EATONS MANOR-- See EATONS NECK. (F) p. 636fn.

EATONS NECK-- On the north-central shore of Huntington. Purchased by Theophilus Eaton, Governor of Connecticut, in 1647. Also called BALDWIN'S NECK after a later owner, George Baldwin (1663) [(U) p. 3]. Also called STONY NECK, GARDNERS NECK, and EATONS MANOR. (Q) p. 82.

EATONS NECK BASIN-- A cove on the northwest side of Eaton's Neck. (Q) p. 82.

EATONS NECK POINT-- The site of Eaton's Neck Lighthouse, at the north point of the neck. (Q) p. 82.

ELWOOD-- A school district and post office in the center of the Town of Huntington. Origin of the name unknown. (Q) p. 84.

H

Ed. Ruth B. Langhans
1988

Huntington
Place Names in the Town of Huntington

42

Town of Huntington

APPENDIX G

PHASE IB CULTURAL RESOURCES ASSESSMENT

Archaeological Services, Inc.

(December 13, 1998)

CULTURAL RESOURCES ASSESSMENT

PHASE IB

FIELD RECONNAISSANCE

OLD ORCHARD WOODS
PROPOSED SUBDIVISION

EATON'S NECK, NEW YORK

ARCHAEOLOGICAL SERVICES INC.
P. O. BOX 1522, ROCKY POINT, NEW YORK
and
11 WOODTHRUSH COURT
EXECUTIVE CIRCLE
MILLER PLACE, NEW YORK 11764
516-331-5980

OLD ORCHARD WOODS
Eaton's Neck, New York

Field Reconnaissance

Date of Completion of this file: December 11 , 1998
Revised and Edited: December 13, 1998

Author and principal investigator: Robert J. Kalin

Endorsement: Robert Kalin
Date: 12-13-98

Robert J. Kalin
U. S. Soil Conservation Service Certified Archaeologist

President
Archaeological Services Inc.
Rocky Point, New York
11778

516-331-980

Fax 516-331-5980

Email: darkvrakos@msn.com

Project Contacts:

Mr. Philip Malicki
Nelson Pope and Voorhis
Melville, New York

516-427-5665

EXECUTIVE SUMMARY

The following report documents the findings regarding a field reconnaissance survey of a 33.54 acre parcel proposed for subdivision into residential lots. Bounded on the west by the steep bluffs of Long Island Sound and nearly bifurcated by North Creek Road, on Eaton's Neck, in the Town of Huntington, Suffolk County, New York. The wooded, steep parcel, site of an early 20th century residence and structures associated with a children's camp of that period, as well as an occupied residence of recent construction and a care-taker' cottage, has been evaluated for presence of cultural resources. A protocol which included methodical surface observation of the entire property and systematic subsurface testing of the less steeply sloping areas of the parcel revealed no significant cultural evidences. No further study is proposed.

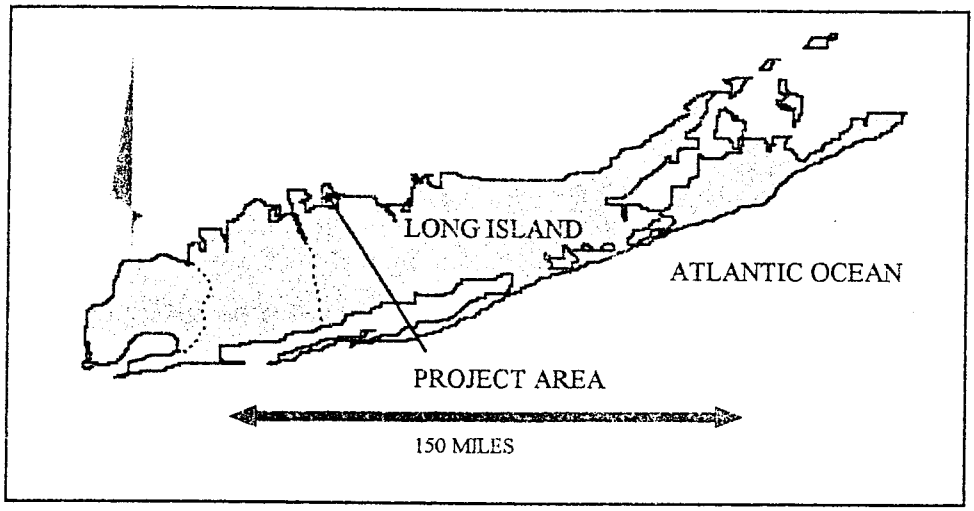


Figure 1. Map showing general location of the study area.

CONTENTS

INTRODUCTION

The following report is the result of a Phase IB cultural resources field reconnaissance study of the Old Orchard Woods proposed subdivision of Lot 1. The attractive wooded property comprising approximately 33.6 acres is located on the western shore of Eaton's Neck, in the Township of Huntington, Suffolk County, New York. The property is the location of an older residence (1920s), a former children's summer camp and a recently constructed (1920) residence. Much of the parcel is steeply sloping former pasture and wood-lot. The former pasture areas are long abandoned and have grown to mature post-agricultural forest. The parcel had been divided into two parcels. Lot 1 on the east side of North Creek Road is comprised of nearly 9.4 acres of wooded sloping land, while Lot 1 is an area of approximately 24.2 acres of wooded land with scattered cottages and buildings associated with a former children's camp. In addition, a steep buffer area of 3.4 acres is found along the western portion of the parcel which borders Huntington Bay, confluent with Long Island Sound. Lot 2 and the buffer or reserve area along the Bay shore are to remain undisturbed by this proposal. Lot 1 is to be subdivided into a twenty-two residential lots. A number of structures related to the use of the site a summer residence and as a former summer camp are found in Lot 1, while Lot 2 has no standing structures.

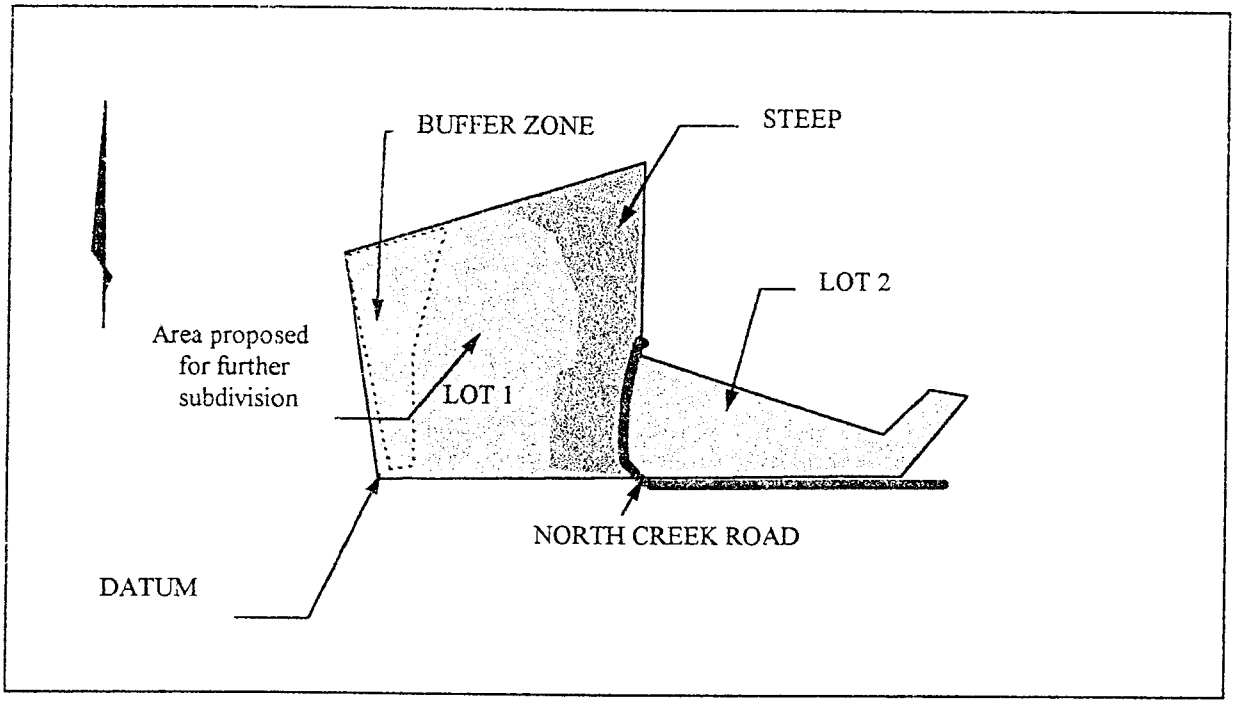


Figure 2. Map showing general vicinity of the study area. No scale. See formal ASI site plan map enclosed.

OBJECTIVES

The primary objectives of this study are to make an assessment regarding the actual physical *presence or absence* of significant cultural materials found within the subject property by means of methodical surface observations and subsurface testing.

DESCRIPTION OF STUDY AREA

The Old Orchard Woods site comprising approximately 33.6 acres is a mostly wooded parcel with areas of steep slope located east of Huntington Bay, an arm of Long Island Sound; north of Eaton's Neck Beach, Section 6 and a portion of North Creek Road; and south of the lands (nor or formerly) of Michael Lawlor and those of the Incorporated Village of Asharoken. The parcel is accessed from North Creek Road and an internal paved driveway which leads to a caretakers cottage. Additional cleared roads, former roads, road traces and foot trails are found throughout Lot 1.

DESCRIPTION OF PROPOSAL

The 24.4 acres of Lot 1 are proposed for subdivision into 22 residential lots which would range in size from 45,000 square feet to 22,000 square feet. Internal access roads, a beach footpath, as well as a surface water recharge basin to be located in the southeastern portion of the subdivision are planned for this site. Areas to be left in their natural state are the steep escarpment buffer area facing Huntington Bay in the west, and the eastern extremity of Lot 1, including that portion of Lot 1 east of North Creek Road. Lot 2 is an out parcel to remain in its present state.

ENVIRONMENTAL INFORMATION

TOPOGRAPHY

The topography of the proposed subdivision area is essentially that of a north-south trending elongate hill. The hill rises at steeply from North Creek Road, has a gently sloping crest, and then falls off in slope towards the west as it approaches the bluffs which face Huntington Bay and Long Island Sound. This central area, of about nine (9) acres, has a slope of less than 10% grade and is the site of most of the subdivision and the surface testing. Here are planned to be located most of proposed Lots 1-6, 12,13, and 16-21. The remaining proposed Lots extend into more steeply sloping areas, have portions which slope more steeply and were excluded from subsurface tests based on their slope. About 15 acres of the proposed subdivision area including areas of the escarpment and the eastern portions of Lot 1 have slopes greater than 15 %, and were not tested by subsurface probes. The average slope of this area is about 19% .

SOILS

The study area soils belong to the Riverhead and Carver Plymouth soil series. See Map 35, (Inset) Warner, et. al. 1974. Testing revealed most of the areas to have little evidence of plowing. Observations consequent to soil testing reveal the soil to grade from a dark to medium brown upper and middle zone into a brown or yellowish brown lower level. The texture of the soil appeared to be a fine sand with traces of silt mixed with varying amounts of coarser textured materials. The coarseness of the soil texture increases, in a general way, toward the east.

DRAINAGE

The parcel is well drained.

VEGETATION

The vegetation of the study area is comprised of mature forest, with scattered and former cleared areas which were, at the time of the survey, dominated by grapevines and greenbriar tangles. These were of the density which impeded passage of the field crew in some locations. A large number of mature well developed Tulip-trees (*Liriodendron tulipifera*) were observed. Many are of a size and girth that deserve consideration for preservation when the final plans for road cuts and house sites are made. Also observed in the vicinity of proposed Lots 4, 5 and 6 were large numbers of fruits of the now rare American Chestnut tree (*Castanea dentata*). Apparently, numbers of these trees are growing in the forest here since quantities of their spiny husked fruits were observed on the footpaths (See Photograph 19). They were probably growing at this site prior to 1900 when the Asian fungus bark-disease struck killing off most of these formerly common woodland trees. Typically, after infection and death of the above ground portions of the

tree, the roots remain viable and continue to form shoots, some of which actually grow to a size that permit flowering and fruiting. The unusually large number and size of the fruits found here suggest that the trees may be of considerable age and size and may be possibly have within their group individuals that have some resistance to the Asian blight. These larger chestnut tree specimens also deserve consideration for preservation when planning development. (Although, see oral history addendum.)

FOREST ZONE

The original forest zone was probably Northeastern Oak-Pine Forest (See Kuchler 1970).

ALTERATIONS

The parcel, a former pasture and woodlot in the 19th century, was first settled by the Hogan family which later purchased an adjoining parcel which had been developed as a children's summer camp in the early part of this century. Portions of the site were cleared for construction of cabins and recreational structures. More recently, a residence was constructed in eastern Lot 1 (now the area of proposed Lots 17 and 19). Other alterations include a network of unpaved roadways (and former roadways) and several maintained footpaths. In recent decades former clearings, probably devoted to recreational purposes, have been permitted to grow into brushy areas. The property has sustained very little alteration, excepting in those areas in close proximity to the residences and other structures.

MAN-MADE FEATURES OBSERVED DURING SURFACE SURVEY

There are ten standing structures in varying stages of preservation on the site: three larger cottages and a ranch style house, two small cottages, two garages or storage buildings, and two pump or utility sheds. Further man-made features are clearings, roadways, a rustic gazebo, a vegetable and flower garden, footpaths, electric transmission lines and poles, and a rustic outdoor climbing gym (or "monkey bars"). Most of these are situated on the former children's summer camp or were moved from that area. Two of the structures were occupied at the time of the survey. One is a one-storey brick and frame, hip roofed residential ranch style house with garage underneath. It was apparently constructed in recent decades (1970). The remaining structures are of simple frame construction raised on concrete block footings with clapboard exteriors. These date to a period prior to the mid 1920s. Most were abandoned and in ruin or poor state of preservation, while two are in good repair, none are of architectural or historic interest. The rustic frame gazebo which has a pleasing view of Long Island Sound is located near the eastern end of the buffer zone. See Structure List below.

PREVIOUS FIELD RECONNAISSANCE STUDIES

There are no indications of earlier Phase I studies of this parcel.

FIELD SURVEY DATES AND CONDITIONS

The field survey was conducted during several field days in September, October and November 1998. Conditions were stable during this period, and there were no circumstances encountered that could have altered the results of the study.

EXISTING STRUCTURES

There are eleven standing structures.

Structure 1. Two storey frame residence (southwest corner) @)S 50 E 75 (in feet) from datum. (Constructed 1924-5 as recreational summer residence by the Hogan family)

Structure 2. Frame cottage at S 60 E 160 (1924)

Structure 3. Frame cottage at S 125 E 380 (1924)

Structure 4. Frame garage at S125 E 160 (1924)

Structure 5. Frame pump house at S170 E E80 (1924)

Structure 6. Frame garage at S470 E175 (1924)

Structure 7. One storey brick residence (occupied) at S475 E 410 (1970)

Structure 8. One storey frame cottage with porch extension (occupied) at S540 E 175 (1924)

Structure 9. Frame pump house at S560 E 180 (1924)

Structure 10. Frame one storey residence at S600 E 315 (1924).

Structure 11. Frame gazebo, rustic construction, at N50 E300 (?)

FIELD TEAM

The principal investigator and author of the report supervised and led the field team. Mr. Eric Arnesen, and Mr Carlton Welch, both senior field technicians, employed by ASI dug test probes, recorded data, and made visual field observations.

AREAS EXCLUDED FROM SUBSURFACE TESTING

The entire parcel was visually surveyed in a systematic manner as described above. Subsurface testing was limited to those areas which had slopes equal to or greater than approximately 15%. Thus, those areas with equal or greater slopes were generally excluded. Parts of Lot 1 in the buffer zone, and those areas which were formally designated out-parcels (i.e.: parts of Lot 1) were excluded from subsurface testing. In addition, some areas were encountered where the character and density of the vegetation impeded passage were also excluded from testing. Furthermore , Lot 2, which is to remain in its present state, was not tested by subsurface test probes.

DISPOSITION OF CULTURAL EVIDENCES RECOVERED

Cultural materials removed from the study area for identification or further study are temporarily stored at the ASI facility at Miller Place, New York where they will remain until they are returned to the property owner or are submitted to a proper formal repository for cultural materials. With the permission of the owner, and if appropriate for preservation, these materials may be submitted to the New York State Archaeological Association Museum, Southold, New York, the Huntington Town Culture Center, or the State University of New York Anthropology/Archaeology Department or other similar formal repository for conservation and preservation. This site had few significant cultural evidences, however, these were cleaned, labeled, and packed for storage and curation.

METHODS AND RESULTS

A. SURFACE OBSERVATIONS

Systematic observations of the entire surface of the approximately 24 acre parcel were conducted by preparing a surface observation grid with grid lines spaced at 10 meter intervals. Field team members and the author walked systematically arranged grid lines and recorded all cultural materials, structures, rock alignments, depressions, pits, and other pertinent features. Particular attention was directed to all areas where the soil or subsoil was exposed, such as along road cuts, tree-root tip-ups, sides of pits and in

farm fields. All un-surfaced paths were closely inspected, distances calculated and counts of observed cultural evidences made.

1. RESULTS OF SURFACE OBSERVATIONS

Observed during the initial phase of the field survey were scattered debris such as paper, plastic, ceramics and metal that ws found near the structures described above and were probably associated with the occupation period of these buildings. Other than the structures and man-made features described above, no other significant surface observations were recorded.

B. SUBSURFACE STUDY

Soils evolve with the physical, climatic and human history of the site. Cultural and other evidences may be buried within the soil and preserved there. These materials, and the information they represent, may be retrieved by disinterrment and disengagement from the soil by sieving and cleaning. Subsequently, the recovered materials can be identified, counted and recorded, and finally analyzed and evaluated for historic and cultural significance.

1. TESTING STRATEGY

The objective of the soil testing protocol at the Old Orchard Woods site was to recover and analyze any cultural evidences preserved in the soil. To facilitate this, the property was stratified according to slope. Areas with slopes greater than 15% were generally excluded from subsurface tests as were those areas in Lot 1 which were not to be altered by the proposal. However, since it was impractical to test the entire soil mantle in the < 15% slope zones, soil sampling is necessary. At the subject property, shovel probes (hand dug shovel tests) were located within tested zones in an aligned systematic testing protocol designed to avoid sampling bias. The strategy consisted of preparing a 15 meter (@50 foot) test grid of north to south lines (alphabetically labeled) and numbered east to west lines to overly the test area; test probes were sited at the intersections of the grid lines and each probe (designated by a letter and number) was dug to culturally sterile soil. The data from these tests were analyzed and recorded on ASI field forms (included in the Addendum). This testing strategy attempted to provide a random representation of the soil and subsoil and their cultural content or lack of it in those zones selected for testing. From these data information concerning the level of disturbance and presence or absence of significant cultural materials within the solum of these areas of parcel may be generated. In some areas testing was impeded by vegetation and no tests were dug. In the eastern end of the parcel vegetation and slope made orientation difficult. Lines "I" and "J" were displaced east due to heavy brush and difficulty in orientation and consequently line "K" was displaced eastward 50 feet. Control on location was reestablished when structures were located on the map and the locations were corrected on the map.

2. FIELD METHODS

Field crew members followed designated transects along magnetic azimuths by means of hand-held Suunto or Silva compasses. Distances were estimated by standard pacing methods. Test holes were spaced at 15 meter (@ fifty 50 foot) intervals. Our strategy included a plan to assess dispersion of cultural materials in the subsurface by surrounding culturally positive test probes with additional probes dug at 3 - 5 foot intervals in the cardinal directions. Each of these cardinal test lines were planned to be dug at 3 -5 foot intervals until two consecutive tests were found to be negative.

Tests were dug at 15 meter intervals along transect grid lines designated "A, B, C...L"; the transects were separated by distances equal to the test hole interval. See Site Plan in Map Addendum. To facilitate alignment and location, transects were plotted along North-South or East-West azimuths. Workers followed magnetic azimuths by referencing hand-held Suunto or Silva compasses. A total of subsurface probes were dug in areas of more modest slope. The data from all tests are included in the Addendum.

Standard shovel probes of about 40-50 cm in diameter and approximately 50 cm or more deep were dug to undisturbed glacial, culturally barren subsoil. At each test the soil was excavated by natural soil levels. The excavated materials from each level was sieved through a 0.64 cm (1/4 inch) wire mesh screen. All cultural materials retained on a 1/4 inch wire mesh screen were counted and identified. All data was duly recorded at the time of recovery. The volume of soil screened was approximately consistent from test to test. The soil color and texture was recorded at each level. A measure of soil texture based on the volume percent coarser than 1/4 inch in diameter was recorded from the base level of each test. Soil stratigraphy was examined at each probe. Counts were made of all cultural materials recovered. All cultural evidences were bagged, labeled, and conserved for preservation, future study and analysis.

DATUM

A formal datum was established near the south western corner of the parcel at a point forty feet east of the break-of-slope of the escarpment. A stake and near-by tree were flagged at this point. All subsequent measurements were derived from this point.

SUMMARY OF SUBSURFACE TESTING

No culturally significant recoveries were found as a result of the subsurface testing at the Old Orchard Woods property. Of the 159 subsurface tests dug in the approximately nine acre subsurface test area, most were culturally barren. Twenty-six tests out of 159 revealed cultural evidences such as coal, metal, brick, plastic, etc. Thus 26 out of 159 or 26/159 or 16% of the tests were culturally positive with historic or contemporary materials. Tests were more likely to be positive in the vicinity of presently

or formerly occupied structures. The remaining tests were culturally barren (designated as "CN" on the data forms). The character of cultural materials recovered are commonly associated with soils in the vicinity of occupied residences, or are found in former gardens or agricultural fields which were fertilized by manure and domestic wastes. Their recovery can be ascribed to periods of human activity, past waste disposal or soil fertilization practices. No culturally significant recoveries were made from the subsurface at the Old Orchard Woods Site. Please see the formal survey map enclosed herein and copies of the actual field data forms in the Addenda Section.

FEATURES REPORTED

No features were reported.

PROBLEMS ENCOUNTERED

No problems were encountered that could have altered or influenced the conclusions.

CONCLUSIONS

A systematic surface survey and methodological subsurface study, and a protocol which included digging and analysis of one hundred fifty nine subsurface grid sited tests within the study area revealed no significant cultural evidences on the surface or within the subsurface. No further study is proposed or warranted.

RATIONALE

These conclusions are based on a thorough systematic visual and subsurface survey of the study area.

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Petrides, George A. 1972 — *A Field guide to Trees and Shrubs* Houghton Mifflin Co. , Boston

Ritchie, William A. 1971 (Rev) — *A Typology and Nomenclature for New York Projectile Points,* York State Museum, Albany, NY Bulletin # 384, April 1961.

Warner, John, et. al. 1974 — *Soil Survey of Suffolk County, New York* US Department of Agriculture, Soil Conservation Service, Washington, DC 20250.

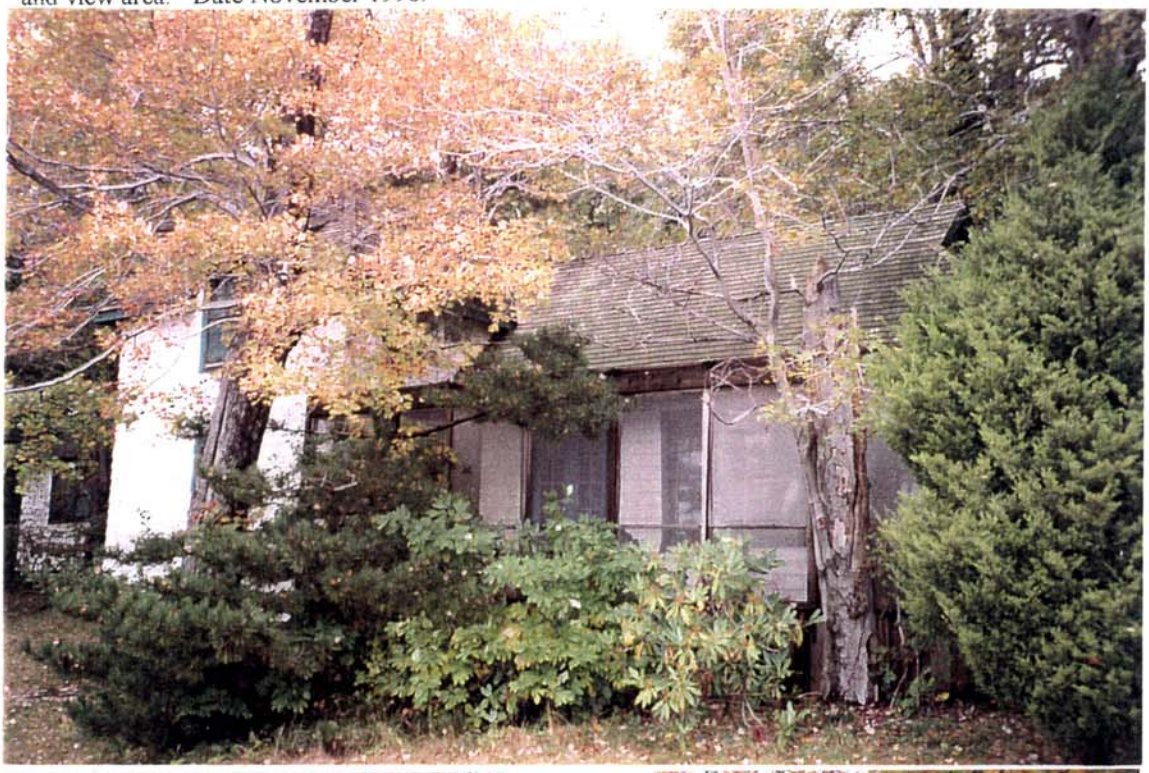
ADDENDA

1. Photograph Addenda
2. Field Data
3. ASI Site Plan Map with test grid and photograph locations.

PHOTOGRAPHIC ADDENDUM

Note: Please see Site Plan for location and view direction symbols for each of the photographs reproduced below. Also please note that ASI has supplied the Review Agency and the principals with fine quality color copies of the following photographs. ASI is not responsible for the quality of subsequent Xerox copies made from these originals.

1. View of southwest corner of a two-storey residence (Structure 1). See formal site plan for photo position and view area. Date November 1998.



2. View of east side of Structure 1. Note construction and architectural detail of roof line. See Map with Photograph Key.

3. View of southeast corner of frame cottage (Structure 2)..

3A. View of northwest corner of Structure 2. Note foundation construction.

4. View of north side of Structures 1 and 2 from position 4 (See Map).

5. View of the north side of cottage (Structure 3). The structure is overgrown with vegetation and vines and faces a road trace.

6. View of north side of the ruin of Structure 4 (which is a frame shed or garage).

7. View of northeast corner of pump house (Structure 5).

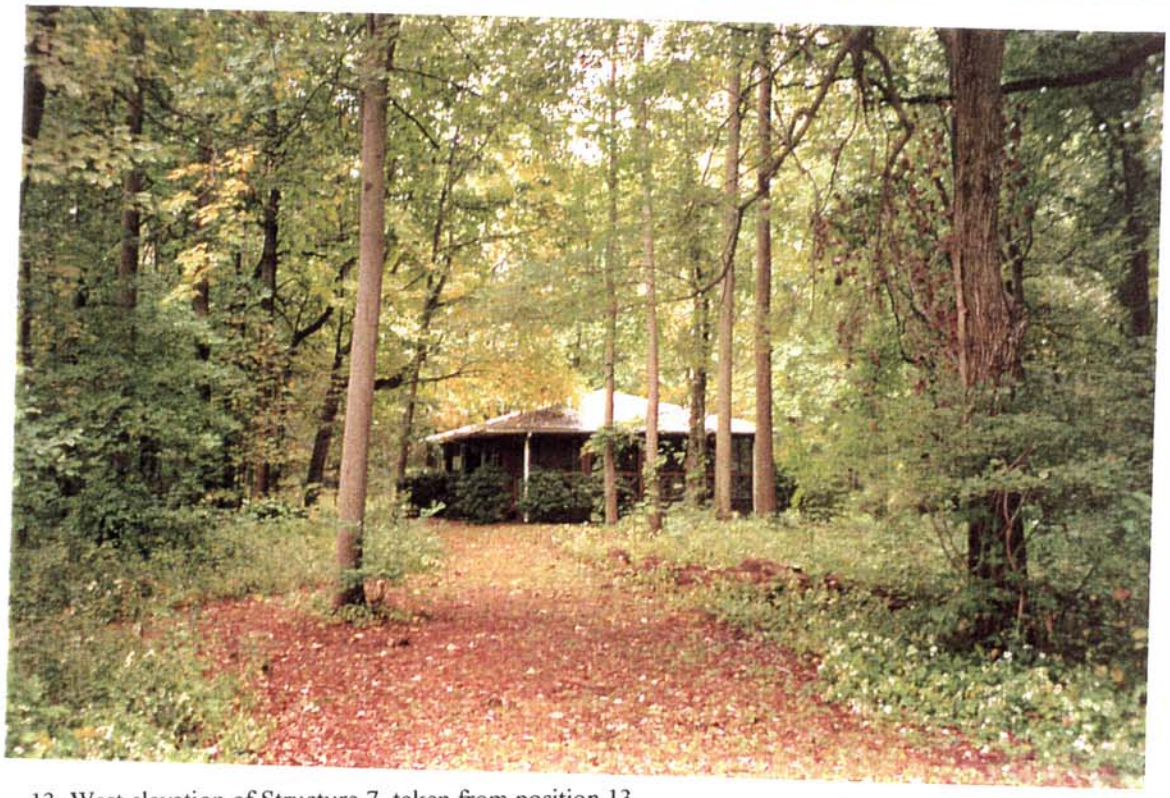
8. Structure 6, a two car garage with shed roof. View of northeast corner. Note large Tulip-trees in foreground.

9. View of orthwest corner of care taker occupied cottage near entrance to former camp (Structure 8). Cottage was occupied by caretaker at time of survey.

10. West side of Structure 10, an abandoned larger cottage in the woods between Structures 7 and 8.

11. South side of Structure 7 (west half) taken from position 11-12 (See Map). This is a contemporary hip roofed, frame and brick structure which was constructed in the last few decades.

12. South side of Structure 7 (east half) taken from position 11-12 (See Map). The house has a basement garage and was occupied at the time of the survey.



13. West elevation of Structure 7, taken from position 13.

14. Narrow dirt roadway on southern margin of parcel. View to the east at Position 14.

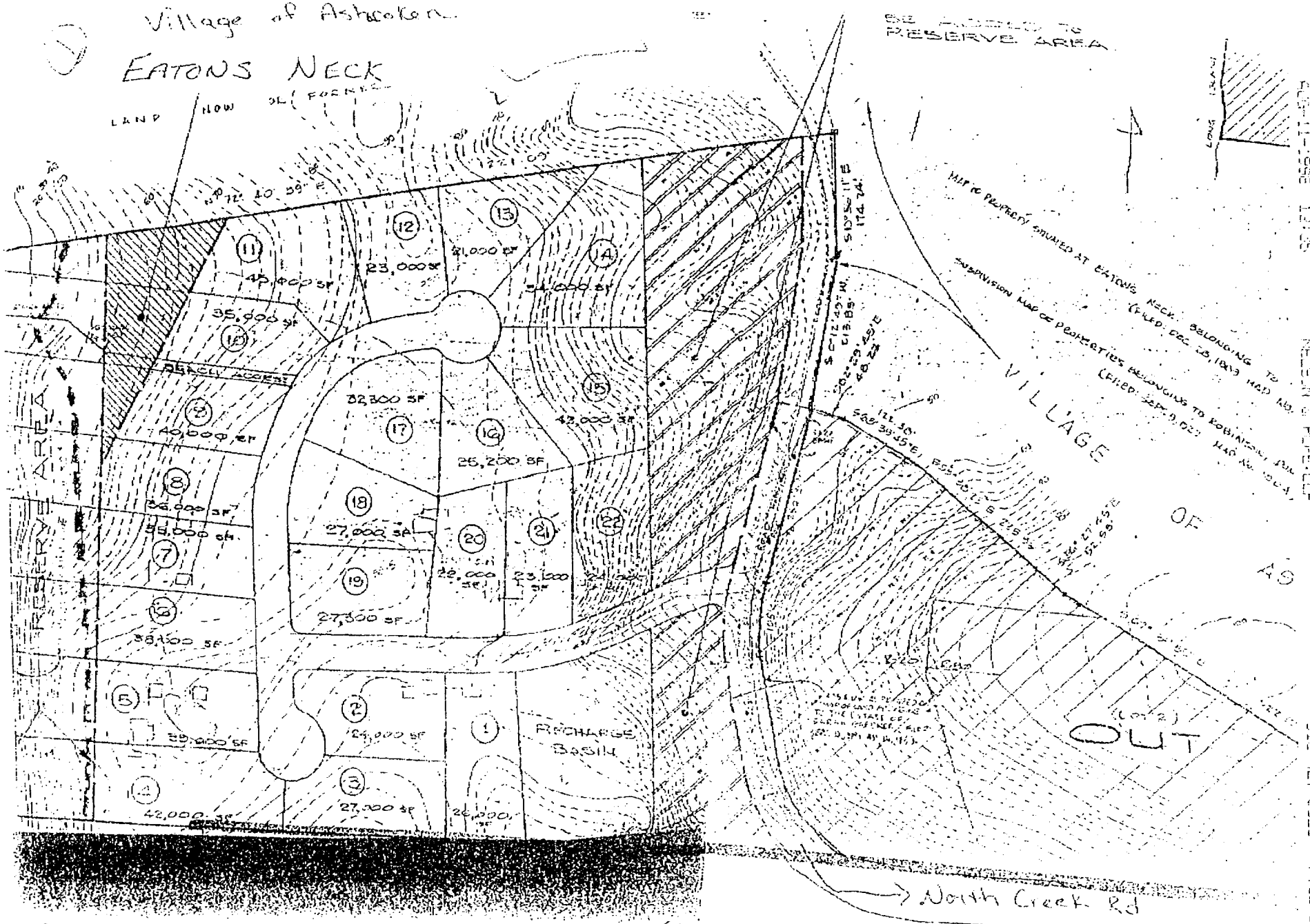
15. Typical woodland west of Structure 6 (garage). View to west from Position 15.

16. View of rustic gazebo (Positon 16) near break in escarpment on western portion of parcel. Pleasing view of Huntington Bay from this point.

17. View of beach and portion of Huntington Bay from approximate location designated as Position 17 on map.

18. View to the south of Huntington Bay and Crescent Beach from approximate Position 18.

19. View of a fallen and opened American Chestnut (*C. dentata*) spiny fruiting husk and large edible nut, with the author's wristwatch for scale. Each husk has several flattened (reddish colored) nuts. Many were apparently opened and consumed by squirrels.


Village of Ashwoken
EATONS NECK
LAND NOW
RESERVE AREA
PARCEL ACCESS
RECHARGE BASIN
VILLAGE OF
OUT
North Creek Rd
Area: 24.4 acres
S.C.T.M. 001-02-4.1
9 acres < 10% Slope
15 acres ≥ 10% / < 20% Slope (19% Average)
* minimum lot area - 20,000 s.f.

PROJECT NAME	OLD ORCHARD WOODS	DATE	10/24/98	PAGE #
TEST AREA				1
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	50'			
			COLLECTOR	
			EA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	A-1	0"	2"	DARK BROWN	FINE SAND	0%	Level 1 = CN
		3"	8"	BROWN	FINE TO MED SAND		Level 2 = COAL
		9'	18"	↓	↓		Level 3 = CN
2	A-2	0"	2"	LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	↓		Level 2 = ↓
		9'	18"				Level 3 = ↓
3	A-3	0"	2"	DARK BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	BROWN	↓		Level 2 = ↓
		9'	18"	↓			Level 3 = ↓
4	A-4	0"	2"	DARK BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	BROWN	↓		Level 2 = SUBSOIL
		9'	18"	↓			Level 3 = CN
5	A-5	0"	2"	LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	↓		Level 2 = ↓
		9'	18"				Level 3 = ↓
6	A-6	0"	2"	LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	↓		Level 2 = ↓
		9'	18"				Level 3 = ↓
7	A-7	0"	2"	LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	↓		Level 2 = SUBSOIL
		9'	18"				Level 3 = CN
8	A-8	0"	2"	DARK BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	BROWN	↓		Level 2 = SUBSOIL
		9'	18"	↓			Level 3 = CN
9	A-9	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	YELLOWISH BRN	↓		Level 2 = ↓
		9'	18"	↓			Level 3 = ↓
10	A-10	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	FN TO SILTY SAND OR GRAVEL	1%	Level 2 = ↓
		9'	18"		↓	1%	Level 3 = ↓
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

NOTES: IN AREA OF TEST PITS A-7 AND A-8 APPEARS TO BE LANDSCAPED WITH HOUSEHOLD AND CONSTRUCTION DEBRIS.

PROJECT NAME	Old Orchard Woods	DATE	10-24-95	PAGE #
TEST AREA				1
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	50'			
			COLLECTOR	
			CW	

NO.	STP	SD	ED	SOIL COL	SOIL TX.	%> 1/4" DIA	CULTURE
1	B-1	0"	2"	Lt. Brown	Fine Sand	0%	Level 1 = CN
		3"	8"	↓	↓	5%	Level 2 = 1 Ch
		9'	18"			↓	Level 3 = 5 ch
2	B-2	0"	2"	Lt Br	Fine Sand	0%	Level 1 =
		3"	8"	↓	↓	↓	Level 2 = CN
		9'	18"				Level 3 =
3	B-3	0"	2"	Br	FS	0%	Level 1 =
		3"	8"	↓	↓		Level 2 = CN
		9'	18"				Level 3 =
4	B-4	0"	2"	BR	FS	0%	Level 1 = CN
		3"	8"	↓			Level 2 = 2 Br - Red
		9'	18"				Level 3 = CN
5	B-5	0"	2"	DK Br	Sand	5%	Level 1 = CN
		3"	8"	↓	↓	10%	Level 2 = 3 Cement
		9'	18"			↓	Level 3 = CN
6	B-6	0"	2"	M. Brown	Fine Sand	0-5%	Level 1 = CN
		3"	8"	↓		↓	Level 2 = CN
		9'	18"				Level 3 = CN
7	B-7	0"	2"	Med. Br	FS	0-5%	Level 1 = 1 BR
		3"	8"	↓		↓	Level 2 = 3 Cement
		9'	18"				Level 3 = CN
8	B-8	0"	2"	LtBR	FS	0-5%	Level 1 = 2 GI - Clay
		3"	8"	Med Br		↓	Level 2 = CN
		9'	18"	↓			Level 3 = CN
9	B-9	0"	2"	m BR	FS	0-5%	Level 1 =
		3"	8"	m BR		↓	Level 2 = CN
		9'	18"	Yellow Br			Level 3 =
10	B-10	0"	2"	LtBR	FS	0-5%	Level 1 =
		3"	8"	↓		↓	Level 2 = CN
		9'	18"				Level 3 =
11	B-11	0"	2"	BR	FS	0-5	Level 1 =
		3"	8"	BR		↓	Level 2 = CN
		9'	18"	BR Orange			Level 3 =

PROJECT NAME		DATE		PAGE #
TEST AREA				2
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	N 50'			
			COLLECTOR	
			CW	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	B-12	0"	2"	LtBr.	FS	05	Level 1 = CW
		3"	8"	BR		1	Level 2 =
		9'	18"	BR		1	Level 3 = ∞
2		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME		DATE	PAGE #
TEST AREA			
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	N 50'		
		COLLECTOR	

NO.	STP	SD ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	C1	0" 2" 3" 8" 9' 18"	BR ↓	FS Fine Sand	0-5 ↓	Level 1 = Level 2 = CN Level 3 =
2	C2	0" 2" 3" 8" 9' 18"	BR ↓	FS	0-5 ↓	Level 1 = Level 2 = CN Level 3 =
3	C3	0" 2" 3" 8" 9' 18"	BR "	FS	0-5% ↓	Level 1 = Level 2 = CN Level 3 =
4	C4	0" 2" 3" 8" 9' 18"	BR BR	FS	0-5 ↓	Level 1 = CN Level 2 = Red 3-5 1 Level 3 = CN
5	C5	0" 2" 3" 8" 9' 18"	BR	FS	FS 5-10 0-5	Level 1 = CN Level 2 = Blk plastic? Level 3 = CN
6	C6	0" 2" 3" 8" 9' 18"	Lt. BR ↓	FS	0-5 15 5	Level 1 = Level 2 = CN Level 3 =
7	C7	0" 2" 3" 8" 9' 18"	BR BR/Red BR/Red	FS Sand Sand	5 15 15	Level 1 = Level 2 = CN Level 3 =
8	C8	0" 2" 3" 8" 9' 18"	BR ↓	FS	5-10 ↓	Level 1 = Level 2 = CN Level 3 =
9	C9	0" 2" 3" 8" 9' 18"	BR BR/Red "	FS	5-10 10-15 ↓	Level 1 = Level 2 = CN Level 3 =
10	C10	0" 2" 3" 8" 9' 18"	BR	FS	0-5 ↓	Level 1 = Level 2 = Level 3 = CN
11	C11	0" 2" 3" 8" 9' 18"	BR	FS	0-5 ↓	Level 1 = Level 2 = Level 3 = CN

PROJECT NAME [illegible] DATE 10/20/98 PAGE # 4

TEST AREA [illegible]

DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS N 50'

COLLECTOR CN

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	C12	0"	2"	BR/ORANGE	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
2	C13	0"	2"	LT BR/ DK BR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
3	C14	0"	2"	LT BR	FS	0-5	Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 = CN
4		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME OLD ORCHARD WOODS	DATE 10/24/98	PAGE # 2
TEST AREA		
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS N 50'		
	COLLECTOR	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	D-1	0"	2"	BROWN	FINE TO MED SAND TR. GRVL	1%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
2	D-2	0"	2"	BROWN	FINE TO MED SAND, TR GRVL	1%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
3	D-3	0"	2"	BROWN	FINE TO MED SAND AND GRVL	50%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
4	D-4	0"	2"	BLACK TO BROWNISH GRAY	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	BROWN	FINE TO MED SND TR GRVL	1%	Level 2 = ↓
		9'	18"	↓	↓	↓	Level 3 = ↓
5	D-5	0"	2"	DARK BROWN	FINE TO MED SAND LITTLE GRAVEL	10%	Level 1 = CN
		3"	8"	BROWN	↓	↓	Level 2 = ↓
		9'	18"	↓			Level 3 = ↓
6	D-6	0"	2"	BLACK	FN TO MD SAND TR GRVL	5%	Level 1 = CN
		3"	8"	DARK BROWN	↓	↓	Level 2 = BROWN
		9'	18"	BROWN			Level 3 = BRICK
7	D-7	0"	2"	BROWN	FINE TO MED SAND SOME GRAVEL	25%	Level 1 = CN
		3"	8"	SOMEWHAT BROWN	↓	↓	Level 2 = ↓
		9'	18"	↓			Level 3 = ↓
8	D-8	0"	2"	BROWN	FN TO MED SAND LITTLE GRAVEL	15%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
9	D-9	0"	2"	BROWN	FN TO MED SAND TR GRAVEL	10%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
10	D-10	0"	2"	DARK BROWN	FN TO MED SAND TR GRAVEL	2%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
11	D-11	0"	2"	DARK BROWN	FN TO MED SAND TR. GRAVEL	2%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓

PROJECT NAME	OLD ORCHARD WOODS	DATE	10/21/98	PAGE #
TEST AREA				3
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	N 50'			
			COLLECTOR	
			CA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	D-12	0"	2"	BROWN	FILTERED SND TR GRVL	2%	Level 1 = CU
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"	↓	↓	↓	Level 3 = ↓
2	D-13	0"	2"	BLACK DK BROWN	FINE TO SILTY SAND	0%	Level 1 = CU
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"	BROWN	↓	↓	Level 3 = ↓
3	D-14	0"	2"	BLACK	FINE TO SILTY SAND	0%	Level 1 = CU
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"	↓	↓	↓	Level 3 = ↓
4	D-15	0"	2"	BROWN	FINE SAND	0%	Level 1 = CU
		3"	8"	LT BROWN	↓	↓	Level 2 = ↓
		9'	18"	↓	↓	↓	Level 3 = ↓
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME	Old Cheatham Woods	DATE	10/24/90	PAGE #
TEST AREA				5
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	N 50'			
			COLLECTOR	
			BA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	E1	0"	2"	Gold Red Acres	Sandy Thorn Busks		Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
2	E2	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3	E3	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4	E4	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5	E5	0"	2"	"			Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6	E6	0"	2"	Lt. Br	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"			"	Level 3 =
7	E7	0"	2"	Lt. Br	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
8	E8	0"	2"	Lt. BR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
9	E9	0"	2"	BR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
10	E10	0"	2"	BR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"			"	Level 3 =
11	E11	0"	2"	BR	FS	0-5	Level 1 = CN
		3"	8"				Level 2 = CH
		9'	18"			"	Level 3 = CN

PROJECT NAME		DATE	10/24/98	PAGE #
TEST AREA				6
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS	N 50			
			COLLECTOR	
			SA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	E12	0"	2"	BR	FS	0-5	Level 1 = CN
		3"	8"				Level 2 = 3 nails
		9'	18"				Level 3 =
2	E13	0"	2"	BR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
3	E14	0"	2"	BR	FS	5-10	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
4	E15	0"	2"	BR	FS	5-10	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
5	E16	0"	2"	DKBR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
6	E17	0"	2"	BR	FS	0-5	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME (OLD) ORCHARD WOODS	DATE 10/25/99	PAGE # 4
TEST AREA		
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS N 50'		
	COLLECTOR EA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	F-1	0"	2"	COULD NOT ACCESS			Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
2	F-2	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3	F-3	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4	F-4	0"	2"	BROWN	LOAM FINE SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5	F-5	0"	2"	BROWN	LOAM FINE SAND	1%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6	F-6	0"	2"	BROWN LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 = CN
7	F-7	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8	F-8	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9	F-9	0"	2"	BROWN LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10	F-10	0"	2"	BROWN LT. BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11	F-11	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME: OLD ORCHARD WOODS	DATE: 10-5-02	PAGE # 5
TEST AREA		
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS: N 50'	COLLECTOR: SL	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	F-12	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	LT. BROWN	↓	↓	Level 2 = ↓
		9'	18"	↓			Level 3 = ↓
2	F-13	0"	2"	BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
3	F-14	0"	2"	BROWN	FINE SAND AND GRAVEL	<10%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
4	F-15	0"	2"	BROWN	FINE SAND LITTLE GRAVEL	10%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"	YELLOW BROWN			Level 3 = ↓
5	F-16	0"	2"	DARK BROWN	FINE SAND FR GRAVEL	2%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"	BROWN			Level 3 = ↓
6	F-17	0"	2"	DARK BROWN	FINE TO SILTY SAND	0%	Level 1 = CN
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME		DATE	11-7-98	PAGE #
TEST AREA	Old [illegible] Woods			
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS				
			COLLECTOR	
			CWI	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	G-1	0"	2"	BR	FS	0-5%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
2	G-2	0"	2"	DK BR	FS	0-5%	Level 1 =
		3"	8"	BR			Level 2 = CN
		9'	18"	BR			Level 3 =
3	G-3	0"	2"	BR	FS	0-5%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
4	G-4	0"	2"	DK BR	FS	0-5%	Level 1 = CN
		3"	8"				Level 2 = 1 metal door hitch
		9'	18"				Level 3 = CN
5	G-5	0"	2"	BR	FS	0-5%	Level 1 = CN
		3"	8"				Level 2 = 3 Ch, 1 Co
		9'	18"				Level 3 = CN
6	G-6	0"	2"	BR	FS	0-5%	Level 1 = CN
		3"	8"				Level 2 = 5 charcoal
		9'	18"				Level 3 = CN
7	G-7	0"	2"	BR	FS	0-5%	Level 1 =
		3"	8"	DK BR			Level 2 = CN
		9'	18"	DK BR			Level 3 =
8	G-8	0"	2"	DK BR	FS	0-5%	Level 1 = CN
		3"	8"	DK BR			Level 2 = clam pigeon
		9'	18"				Level 3 = CN
9	G-9	0"	2"	BR	FS	0%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
10	G-10	0"	2"	BR	FS	0%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
11	G-11	0"	2"	BR	FS	0-5%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =

PROJECT NAME		DATE	PAGE #
TEST AREA			
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS			
		COLLECTOR	
		MN	

NO.	STP	SD	ED	SOIL COL	SOIL TX	> 1/4" DIA	CULTURE
1	G-12	0"	2"	BY	FS	5%	Level 1 =
		3"	8"	BR			Level 2 = CN
		9'	18"	LT BR		10%	Level 3 =
2	G-13	0"	2"	DK BR	FS	5%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"			10%	Level 3 =
3	G-14	0"	2"	DK BR	FS	0-5%	Level 1 =
		3"	8"	BR			Level 2 = CN
		9'	18"	ORANGE			Level 3 =
4	G-15	0"	2"	DK BR	FS	0-5%	Level 1 =
		3"	8"	DK BR			Level 2 = CN
		9'	18"	ORANGE		✓	Level 3 =
5	G-16	0"	2"	DK BR	FS	0%	Level 1 =
		3"	8"				Level 2 = CN
		9'	18"				Level 3 =
6	G-17	0"	2"	DK BR	FS	0%	Level 1 =
		3"	8"	BR			Level 2 = CN
		9'	18"			✓	Level 3 =
7	G-18	0"	2"	DK BR	FS	0%	Level 1 =
		3"	8"	LT BR			Level 2 = CN
		9'	18"			✓	Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME		DATE		PAGE #
TEST AREA				
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS				
			COLLECTOR	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
2		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME					DATE		PAGE #
TEST AREA							
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS							
						COLLECTOR	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
2		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME OLD ORCHARD VILLAGE	DATE 11/2/92	PAGE #
TEST AREA		1
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS N 50'		
	COLLECTOR	
	EA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	I-18	0"	2"	DARK BROWN	LOAM	5%	Level 1 = CN
		3"	8"	BROWN	FINE SAND		Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
2	I-17	0"	2"	DARK BROWN	LOAM	1%	Level 1 = CN
		3"	8"	BROWN	FINE SAND		Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
3	I-16	0"	2"	DARK BROWN	LOAM	5%	Level 1 = CN
		3"	8"	BROWN	VERY FINE SAND	10%	Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
4	I-15	0"	2"	DARK BROWN	LOAM	1%	Level 1 = CN
		3"	8"	BROWN	FINE SAND		Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
5	I-14	0"	2"	DARK BROWN	LOAM	10%	Level 1 = CN
		3"	8"	BROWN	FINE SAND		Level 2 = CH
		9'	18"	↓	↓		Level 3 = ↓
6	I-13	0"	2"	BROWN	LOAM	1%	Level 1 = CN
		3"	8"		FINE SAND		Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
7	I-12	0"	2"	YELLOW BROWN	FINE SAND	10%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
8	I-11	0"	2"	YELLOWISH BROWN	FINE SAND	1%	Level 1 = CN
		3"	8"				Level 2 =
		9'	18"	↓	↓		Level 3 = ↓
9	I-10	0"	2"	YELLOWISH BROWN	FINE SAND	1%	Level 1 = CN
		3"	8"				Level 2 = COAL
		9'	18"	↓	↓		Level 3 = ↓
10	I-9	0"	2"	BROWN	FINE SAND + SILT	0%	Level 1 = CN
		3"	8"				Level 2 = CH
		9'	18"	↓	↓		Level 3 = CN
11	I-8	0"	2"	BROWN	FINE SAND + GRAVEL	50%	Level 1 = CN
		3"	8"				Level 2 = COAL
		9'	18"	↓	↓		Level 3 = ↓

PROJECT NAME OLD ORCHARD ROAD	DATE 11/7/94	PAGE #
TEST AREA		2
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS N 50'		
	COLLECTOR	
	EA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	I-7	0"	2"	BLACK	SILT TO GRAVEL	50%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = BASE + COAL
		9'	18"			V	Level 3 = COAL
2	I-6	0"	2"	BROWN	FINE SAND TO SILT	0%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"			V	Level 3 = ↓
3	I-5	0"	2"	DARK BROWN	FINE SAND + SILT	1%	Level 1 = CW
		3"	8"		↓	↓	Level 2 = ↓
		9'	18"			V	Level 3 = ↓
4	I-4	0"	2"	BROWN	FINE SAND + SILT	1%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"			V	Level 3 = ↓
5	I-3	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6	I-2	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7	I-1	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME		DATE		PAGE #
TEST AREA				
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS				
			COLLECTOR	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
2		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME		DATE	11-7	PAGE #
TEST AREA				
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS				
			COLLECTOR	
			[illegible]	

NO.	STP	SD ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	T-1	0" 2" 3" 8" 9' 18"	BR	FS	0-5	Level 1 = Level 2 = Level 3 = CN
2	T-2	0" 2" 3" 8" 9' 18"	BR	FS	0-5	Level 1 = Level 2 = CN Level 3 =
3	T-3	0" 2" 3" 8" 9' 18"	BR	FS	0-5	Level 1 = Level 2 = Level 3 = CN
4	T-4	0" 2" 3" 8" 9' 18"	DK BR	FS	0-5	Level 1 = Level 2 = CN Level 3 =
5	T-5	0" 2" 3" 8" 9' 18"	DK BR	FS	0-5%	Level 1 = Level 2 = Level 3 = CN
6	T-6	0" 2" 3" 8" 9' 18"	DK BR	FS	0-5%	Level 1 = Level 2 = CN Level 3 =
7	T-7	0" 2" 3" 8" 9' 18"	DK BR	FS	0-5%	Level 1 = Level 2 = Level 3 = CN
8		0" 2" 3" 8" 9' 18"				Level 1 = Level 2 = Level 3 =
9		0" 2" 3" 8" 9' 18"				Level 1 = Level 2 = Level 3 =
10		0" 2" 3" 8" 9' 18"				Level 1 = Level 2 = Level 3 =
11		0" 2" 3" 8" 9' 18"				Level 1 = Level 2 = Level 3 =

PROJECT NAME		DATE		PAGE #
TEST AREA				3
DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS				
			COLLECTOR	
			TA	

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	K-18	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
2		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
3		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
4		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
5		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
6		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
7		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
8		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
9		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
10		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11		0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =

PROJECT NAME OLD ORCHARD BEACH | DATE 11/2/93 | PAGE # 3

TEST AREA

DESCRIBE DIRECTION OF TRANSECT AND DISTANCE BETWEEN TESTS N 50'

COLLECTOR EA

NO.	STP	SD	ED	SOIL COL	SOIL TX	%> 1/4" DIA	CULTURE
1	L-13	0"	2"	DARK BROWN	FINE SAND	0%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
2	L-12	0"	2"	REDDISH BROWN	LOAMY FINE SAND	5%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
3	L-16	0"	2"	BROWN	LOAMY SAND	1%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
4	L-15	0"	2"	BROWN	LOAMY SAND	1%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
5	L-14	0"	2"	BROWN	LOAMY SAND	1%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
6	L-13	0"	2"	BROWN	LOAMY SAND	10%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
7	L-12	0"	2"	BROWN	LOAMY SAND	1%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
8	L-11	0"	2"	BROWN	LOAMY SAND	2%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
9	L-10	0"	2"	BLACK YELLOW BROWN	LOAMY SAND	5%	Level 1 = CW
		3"	8"	↓	↓	↓	Level 2 = ↓
		9'	18"				Level 3 = ↓
10	L-9	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =
11	L-8	0"	2"				Level 1 =
		3"	8"				Level 2 =
		9'	18"				Level 3 =