ULSTER MANOR
FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)

TOWN OF ULSTER, ULSTER COUNTY, NEW YORK

Tax Map Identification:
Section 48.58, Block 7, Lots 21 & 22

Lead Agency: TOWN OF ULSTER PLANNING BOARD
Building, Planning & Zoning Dept.
584 Eastchester Street Bypass Kingston
#1 Town Hall
Lake Katrine, NY 12449

Contact Person: Mr. Frank Almquist, Chairperson
(845) 340-3885

Project Sponsor: ULSTER LAND PARTNERS HOLDING, LLC
c/o Regan Development Corp.
1055 Saw Mill River Road, Suite 204
Ardsley, NY 10502
(914) 693-6613

FEIS Prepared By: TIM MILLER ASSOCIATES, INC.
10 North Street
Cold Spring, New York, 10516
Attention: Bonnie Franson, AICP, PP
(845) 265-4400

Project Engineer: MEDENBACH & EGGERS
Civil Engineering & Land Surveying, P.C.
4305 US Highway 209
Stone Ridge, NY 12484
Attention: Barry Medenbach, P.E.
(845) 687-0047

Wetland Delineation: ECOLOGICAL SOLUTIONS, LLC
1248 Southford Road
Southbury, CT 06488
Attention: Michael Nowicki
(203) 264-8691

Cultural Resources: HARTGEN ARCHAEOLOGICAL ASSOCIATES, INC.
1744 Washington Avenue Ext.
Rensselaer, NY 12144
Attention: Adam T. Luscier
(518) 283-0534

Phase I Environmental Site Assessment:

Roger Gjone, P.E.
282 North Brigham Lane
Lake Katrine, NY 12449
Attention: Roger Gjone, P.E.
(845) 336-8903

Lead Agency Acceptance Date: December 15, 2008

December 19, 2008

ULSTER MANOR
Final Environmental Impact Statement (FEIS)

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1.0 INTRODUCTION

This Final Environmental Impact Statement (FEIS) has been prepared in accordance with the New York State Environmental Quality Review Act (SEQRA) and its implementing regulations, 6 NYCRR Part 617. The FEIS provides responses to public comments received by the lead agency on the Draft Environmental Impact Statement (DEIS). The lead agency for this action pursuant to SEQRA is the Town of Ulster Planning Board, to which the application described below has been made. SEQRA prescribes that the lead agency is responsible for the adequacy and accuracy of this FEIS.

The FEIS consists of this document and its appendices, accompanying maps, and referenced technical data and the accepted Ulster Manor DEIS, which is hereby incorporated by reference into this FEIS.

1.1 SEQRA Process

The Applicant, Ulster Land Partners Holding, LLC, prepared a Draft Environmental Impact Statement (DEIS) in response to a Positive Declaration adopted by the Town of Ulster Planning Board on August 1, 2005. The DEIS scope was established by a scoping outline developed by the Planning Board, acting as lead agency, in cooperation with all other involved agencies and interested parties. The Town of Ulster Planning Board adopted a Final Scoping Document for the DEIS on November 17, 2005.

The DEIS and revisions to it were submitted to the Town of Ulster on April 19, 2006, and September 13, 2006, respectively. The lead agency reviewed the DEIS for adequacy with respect to the document's scope and content for the purpose of public review. The Planning Board issued a Notice of Completion of the DEIS on September 21, 2006 and a public hearing was held on November 8, 2006. The lead agency held another public hearing on the DEIS on December 19, 2006, at which time the hearing was closed. The lead agency received written comments until 10 days following the close of the public hearing.

In accordance with SEQRA, this FEIS provides written responses to substantive and relevant public and agency comments on the DEIS received by the lead agency during the public review period, including oral testimony made at the public hearing. The public hearing transcript is included in Appendix B of this document; copies of comment letters are included as Appendix A. Correspondence received after the close of the comment period are included as Appendix C.

1.2 Summary of Proposed Action

The applicant, Ulster Land Partners Holding, LLC, is seeking the approval of a mixed residential development to be located east of Route 9W in the unincorporated Town of Ulster, Ulster County, New York (see Figure 1-1 Regional Location Map). The concept for development of the site would include 100 attached townhomes (fee simple), and 28 multifamily townhomes (condominiums) on an approximately 48-acre project site. The currently proposed project has been modified from the plan described and analyzed in the DEIS. The former site plan envisioned 124 attached townhomes and 25 4-bedroom single family homes. The 25 single family homes have been eliminated from the current plan in order to mitigate potential impacts disclosed during the DEIS review process. The current proposed action is described below, and a comparison of the current action to the former project is provided in Section 1.3 Modifications to the Proposed Site Plan.

The project site is located in three zoning districts: R-30, R-10, and OM. The subject property is identified on the Town of Ulster tax map as Section 48.058, Block 7, Lot 21.100, with a total size of 51.29 acres. Since 2005 and the preparation of the DEIS, tax lots under the same ownership were combined by the Town and have been given a new parcel number. Medenbach & Eggers surveyed the boundaries of the parcel to be developed and the size is 48.0 acres. The remaining 3.29 acres will be subdivided as part of the subdivision action, and will be retained in ownership by the Ferraro family.

The project site is situated in the eastern section of the Town of Ulster and maintains frontage on Memorial Drive. It is located east of US Route 9W and north of the City of Kingston boundary (see Figure 1-2 Local Setting). The City of Kingston boundary is located approximately 2,000 feet to the south of the site along Route 9W. Existing access to the site is from Memorial Drive. The 51.29-acre parent parcel extends to US Route 9W, however, future access is not proposed to be provided directly from Route 9W and the frontage would be eliminated by subdividing 3.29 acres to be retained by the Ferraro family.

The Ulster Manor site is situated in three (3) zoning districts, as follows.

- The Residential "R-30" zone encompasses 28.8 acres on the eastern side of the property. The project proposes 22 attached townhouse dwellings on fee-simple lots in the R-30 zone. The proposed residential development meets all required bulk requirements for townhomes in this district.
- The Office and Manufacturing "OM" zone encompasses 8.2 acres in the southwestern portion of the site, with frontage on Memorial Drive. The project proposes 28 multifamily townhomes in condominium ownership in this zone.
- The Residential "R-10" zone encompasses 11.0 acres in the northwest portion of the site. The project proposes 78 attached dwelling townhomes, each dwelling to be situated on a fee simple lot, in the R-10 zone.

The zoning districts, proposed development and density calculations are shown in Figures 1-3 Proposed Subdivision Plan, and 1-4 Proposed Site Plan.

Ulster Manor would gain primary access via Memorial Drive. Secondary, emergency access would be available from Quail Drive located north of the site, also a Town road. A "break away" gate would be installed to limit its use to this purpose. The entrance to Ulster Manor would be located approximately 400 feet west of the intersection of Memorial Drive with Route 9W.

The proposed private road that would serve the site has been designed to meet Town of Ulster road specifications, and would be maintained by the Ulster Manor Homeowners Association. The proposed road would temporarily dead end at a cul-de-sac. The cul-de-sac is 825 feet in length and complies with the Town of Ulster Code, which stipulates 1,200 feet as the maximum length of a cul-de-sac. A right-of-way for future connection to vacant lands to the east of the project site is proposed, as shown in Figure 1-3 Proposed Subdivision Plan. A left turn lane on Route 9W southbound will be constructed to allow project-generated traffic to enter Memorial Drive from a dedicated turning lane.

The proposed project would have an estimated water demand of 28,160 gallons per day and result in the generation of the same volume of wastewater. An on-site wastewater treatment collection system would be constructed. This collection system will connect to the municipal

sanitary sewer lines in Quail Drive. The proposed sanitary sewer collection system will be reviewed by the Town Engineer and Sewer District Superintendent to assure it conforms to Town specifications. The design details for the wastewater collection system will be provided to the Town during the site/subdivision plan review process. The water system would connect to the Town's system at two locations: the intersection of Quail Drive and Ledge Road, and at the proposed access road's intersection with Memorial Drive to provide a looped system. The new loop will improve pressure and fire flows for existing users in the vicinity of the adjacent Fox Run development. A booster pump will be installed to increase pressures to acceptable levels within the Ulster Manor development. The proposed pump will have a natural gas backup generator for use during power outages to ensure adequate water pressure, including fire flow to hydrants, during emergencies.

Based upon recent discussions with the consulting Town Engineer, Brinnier and Larios, P.C., the water distribution system for Ulster Manor will be privately owned and operated, with the exception of a proposed 10-inch water transmission line that crosses the site. The transmission line would form a new loop in the district, connecting the 10-inch main in Memorial Drive to an 8-inch main in Quail Drive. Privately owned water facilities would include pipes, booster pump station, meter pit and fire hydrants. Additional design details for the water distribution system will be provided to the Town during the site/subdivision plan review process.

Following the review and approval of the system by the Town's water district the applicant would legally transfer the 10-inch water main to the district. A homeowners association will be established to own and maintain the Ulster Manor facilities and grounds, including the water distribution system, sewer collection lines, the internal roads, and stormwater collection and treatment facilities.

According to the Town Engineer, the Town would prefer that the 10-inch water transmission line be located in a separate easement or on a separate land parcel instead of being co-located with privately owned utilities. The 10-inch water main will be in a separate area as the other utilities and have its own separate easement. The water main will lie outside of the pavement as much as possible enabling town access for maintenance and repair.

Drainage improvements will consist of catch basins, culverts, swales, forebays and detention ponds which will collect stormwater runoff generated from the proposed development (refer to (see attached Stormwater Management Plan). The stormwater management system will be privately owned and maintained by Ulster Manor homeowners association. The applicant and project engineer will provide the Town and applicable agencies stormwater management details and revisions during the site plan/ subdivision plan review process.

Collected runoff will be passively treated during passage and detention within four drainage basins that will have storage volumes ranging from approximately 3,700 to 37,000 cubic feet. Ulster Manor would result in minimal changes to existing spatial patterns of drainage from the site. The revised plan ensures that all disturbance for the construction and long-term operation of the stormwater management system will be completed outside of the regulated 100 foot area adjacent to the New York State Department of Environmental Conservation (NYSDEC) wetlands on the property.

The Applicant proposes to construct market rate town houses consistent with current market conditions and housing demand. Ulster Manor would increase a type of housing unit that is presently underrepresented in the community. The sales prices for the townhomes would be

approximately $275,000. The average market value for Ulster Manor residences would be $35,200,000. The applicant estimates that the project would introduce 18 new children to the Kingston City School District (see discussion below).

1.3 Proposed Modifications to the Site and Subdivision Plan

Revised Project

Since the submission of the preliminary Site and Subdivision Plan circulated with the accepted DEIS, revisions have been made to the project layout based upon discussions with the Planning Board, its consultants, as well as agency and public comment. The revised Site Plan is similar in scale and design to the "Impacts Mitigation Alternative" discussed in the DEIS (Section 5.4), but provides further reduction in the number of proposed units and the overall project "footprint". The current Site Plan proposes the elimination of the 25 single family residences. The total number of residential units has been reduced from 149 dwelling units to 128 units. All 128 units will be attached 2-bedroom townhouses. The currently proposed "mitigation" site plan substantially reduces the overall impacts of the project compared to the previously proposed plan.

The revised cluster subdivision plan and the density calculations are shown in Figure 1-4 Proposed Site Plan. The site layout and limits of disturbance are shown in Figure 1-5 Proposed Layout - Site Disturbance. A Full scale plan set with revised drawings accompany this FEIS. Notable changes to the project layout are summarized below and in Table 1-1 Alternative Impact Comparisons.

Demographics

The elimination of the 25 single family residences results in a reduction in the overall population that would be generated by Ulster Manor. Based upon the mutipliers used in the DEIS, the 128 2-bedroom townhomes would generate 265 persons (multiplier of 2.0685). The estimated Ulster Manor population would be reduced by 82 persons compared with the 347 persons that would have been introduced by the former plan. The estimated number of school children generated by the project would be reduced from 39 students for the former project to 18 students for the current project (using a multiplier of 0.1393 students per 2-bedroom townhome). As described in the DEIS (Section 3.11.1.2 Population), the multipliers used for population estimates were taken from the Development Impact Assessment Handbook published by the Urban Land Institute (1994). A representative from the Kingston City School District's business office indicated that the School District was comfortable with the multipliers used in the Development Impact Assessment Handbook.

The reduction in the projected population of the Ulster Manor project will reduce the project's overall demand for community services, and reduce the impact to the School District.

Site Disturbance

The length of the cul-de-sac in the eastern portion of the site has been reduced by approximately 1,000 feet. This modification to the site plan addresses several issues that were raised as concerns by the Lead Agency, other agencies and the public including the provision of adequate emergency access in the event of an emergency. Disturbance to wooded land that drains to the NYSDEC Wetland KE-10 would be substantially reduced. Overall site disturbance

would be reduced from 28.7 acres for the former action to 18.5 acres under the proposed action. Therefore, the loss of woodlands and on-site vegetation would be reduced by approximately 10 acres or 35 percent, comparing the former Site Plan to the current proposed action.

The project has been modified to eliminate all disturbance to the regulated 100 foot area adjacent to the NYSDEC Wetland KE-10. The previous site plan would have impacted approximately 1.52 acres of regulated 100 foot adjacent area, as a result of grading for stormwater treatment facilities and at the edges of the internal roadways.

Site grading necessary to construct the project would be reduced under the current proposal. The project engineer has estimated total in place cut would be approximately 45,518 cubic yards (including 14,915 cubic yards rock), and 48,182 cubic yards of fill. Therefore, the project would require approximately 2,664 cubic yards of off-site fill material. The former project involved 66,510 cubic yards of cut (including 25,800 cubic yards of rock cut) and 60,300 cubic yards of fill. The required rock removal has been reduced by over 40 percent, compared to the former project.

Traffic

The current project can be expected to introduce 63 vehicular trips during the weekday a.m. peak hour, a reduction of 25 a.m. peak hour trips compared to the previous proposal. The project would result in 73 vehicular trips during the weekday p.m. peak hour, a reduction of 29 p.m. peak hour trips compared to the previous project.

Utilities

As described above, the proposed project would have an estimated water demand of 28,160 gallons per day and result in the generation of the same volume of wastewater. This volume is a substantial reduction from the 38,280 gallons per day estimated for the former project. The elimination of the 25 four-bedroom single family residences would reduce the overall water usage and wastewater generation.

Fiscal

For the currently proposed project of 128 townhouses, the total project-generated tax revenues is estimated to be $819,991 annually. The Kingston City School District would benefit from the largest increase in revenues, approximately $471,886 annually. The Town of Ulster would receive $227,492 annually. Ulster County would receive approximately $120,613 annually. Annual property tax revenues that would accrue to the Town Highway Department would be $43,897 and the Town of Ulster Public Library would receive $5,731 annually. Ulster Fire #5 would receive approximately $29,301 in annual revenues, and Ulster Water and Sewer would receive $24,701 and $30,861 annually, respectively.

The reduction in the project from 124 townhouses and 25 single family homes to 128 townhouses results in a projected student population of 18 students, a reduction of 21 students from the previous proposal. The anticipated per student cost to be raised by property tax revenues is approximately $8,500. The total cost to educate the 18 students projected to reside at Ulster Manor is $153,000 annually. As stated above, the Kingston City School District would receive an estimated $471,886 in annual property tax revenues. Therefore, $318,886 in net

property tax revenues would accrue to the school district annually that could be used to aid in any capital construction program undertaken by the District.

The Town of Ulster and Kingston City School District, among other agencies and taxing jurisdictions, is likely to experience a net increase in tax revenues as a result of the construction of the proposed Ulster Manor project in comparison to the existing property tax revenues that are generated presently by the property.

Table 1-1 below compares project data for the former and the current project.

Table 1-1
Alternative Impact Comparisons

Area of Concern	***Currently Proposed Action*** *(128 attached residential units)*	***Former Proposed Action*** *(124 attached residential units/ 25 single family detached homes)*
Developed Area		
Single Family Detached Units	0	25
Attached Residential Units	128	124
Impervious Surfaces (acres)	7.9	12.8
Lawn/ Landscaping (acres) **	10.6	15.9
Open Space Resources (acres)	29.5	19.3
Wetlands	5.37***	5.1
Woods (uplands)	24.1	14.2
Natural Resource Impacts (acres)		
Total Construction Disturbance	18.5	28.7
Total Woodland Disturbance	18.5	28.7
ACOE Wetland Disturbance	0	0
NYSDEC Wetland Buffer Disturbance	0	1.52
Community Resources		
Population	265	347
Estimated School Children	18	39
Water Demand/Sewage Flow (gpd)	28,160	38,280
Revenues to School District	$471,886	$880,355
Revenues to Ulster County	$120,613 *(2005 tax rate)*	$114,833 *(2008 tax rate)*
Revenues to Town of Ulster	$227,492 *(2005 tax rate)*	$282,308 *(2008 tax rate)*
Revenues to School District per student	$26,216	$22,573
Traffic		
Traffic Generation * (Total AM Peak Hour Trips/ Total PM Peak Hour Trips/	63/ 73	88/ 102

Source: Tim Miller Associates, Inc., Medenbach & Eggers Civil Engineering and Land Surveying, P.C.

* Traffic generation numbers at proposed access drive.
** Includes areas of stormwater management basins.
*** Includes area of ACOE regulated wetland mapped in 2006.

1.4 FEIS Format

The transcript of the DEIS public hearing is included as Appendix B, as well letters read at the hearing. Substantive comments were raised by the following individuals at the DEIS public hearing:

- Robert Barton, Resident
- Unig Hoosing, Resident

- John Heitzman, Resident
- Steve Engelhardt, Resident
- Andy Willingham, David Clouser & Associates
- James G. Barbour, Ecological Consultant
- Karen Schneller-McDonald, Hickory Creek Consulting
- Barry Kaiser, Resident
- Janice Stell, Resident
- Marlene Engelhardt, Resident
- Petra Kaiser, Resident
- Christine Gerbasi, Resident

The following letters on the DEIS were received (see Appendix A):

Table 1-2
List of Letters with Authors and Dates

Letter #	Author	Date
1	Scott E. Sheely Deputy Regional Permit Coordinator, New York State Department of Environmental Conservation	11-30-06
2	J. G. Barbour Ecological Consultant	11-30-06
3	David Porter, Ph.D	12-18-06
4	Nancy Frances, Resident	12-19-06
5	Karen Schneller-McDonald Hickory Creek Consulting, LLC	12-21-06
6	Charles D. Silver Ph.D Office of the New York State Attorney General Environmental Protection Bureau	12-22-06
7	David B. Clouser, PE, LS David Clouser & Associates, Inc.	12-29-06
8	Jeffery Anzevino, Senior Regional Planner, Scenic Hudson	12-29-06
9	Paul A. Rubin Hydrologist, Hydroquest	12-29-06
10	Joseph E. Mihm, P.E. Senior Project Engineer, Brinnier and Larios, P.C.	01-05-07
11	Kenneth Wersted, P.E Project Engineer, Creighton Manning Engineering LLP	01-15-07
12	Paul H. Ciminello, President, Ecosystems Strategies, Inc.	01-31-07
13	Norbert Quenzer Jr., Vice President, Senior Ecologist, Bagdon Environmental	03-14-07
14	Dan Shuster, Shuster Associates	03-20-07

The FEIS is arranged in sections, with comment summaries and responses arranged by subject area similar to the DEIS. A comment summary, in some cases, may incorporate more than one individual comment on the same subject, followed by a response to that comment. The sources of each comment are referenced. The format of the comments and responses is as follows:

Comment # (Source): Comment summary text.

Response #: *Response text.*

Substantive and relevant comments taken from the letters and hearing transcript are marked with references to the FEIS comment/response numbers in the margins of Appendix A and B, respectively.

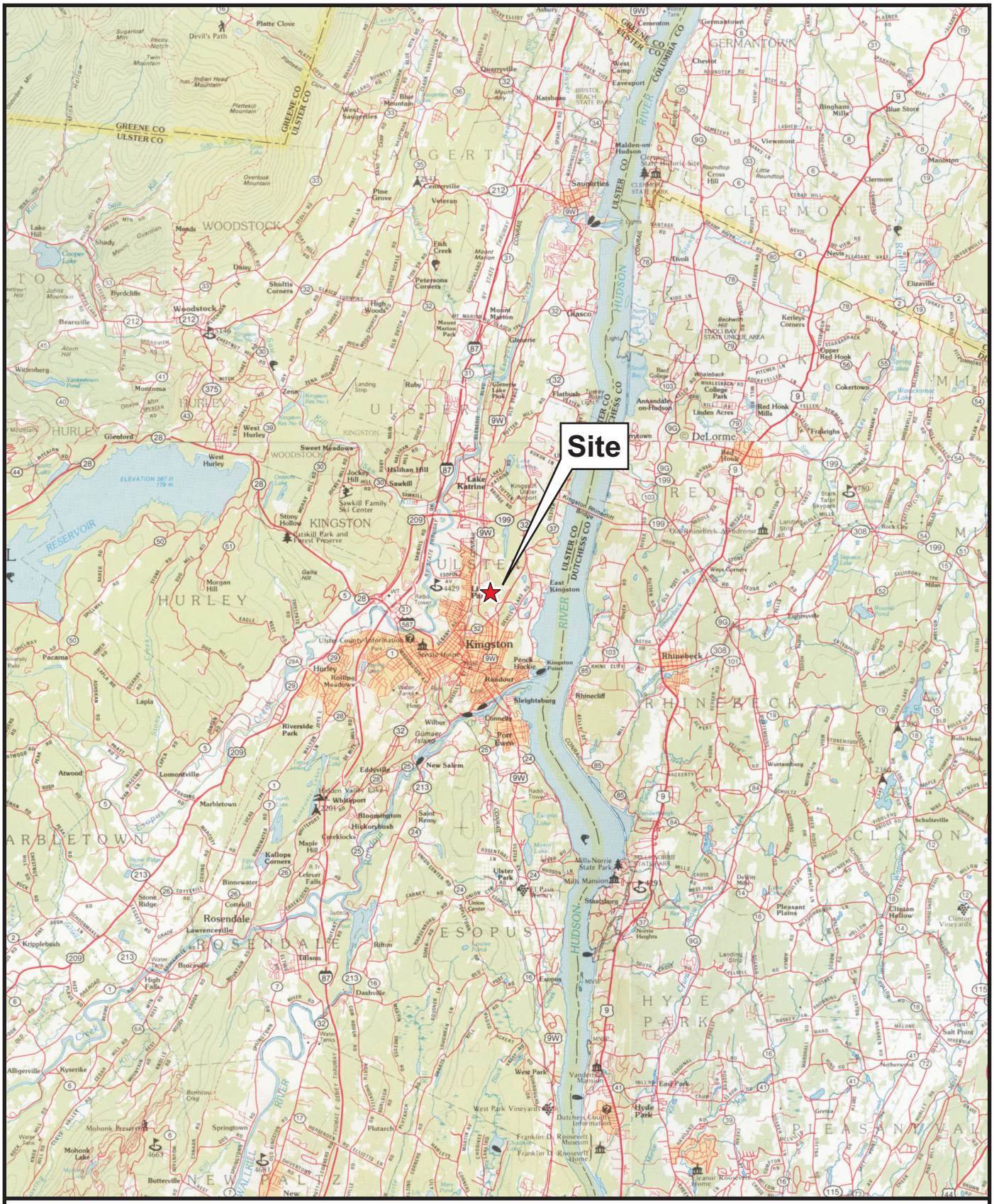

Figure 1-1: Regional Location Map

Ulster Manor

Town of Ulster, Ulster County, New York

Base Map: DeLorme

Scale: 1" = 3 mi.

File 05053 03/25/08
JS/05053

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

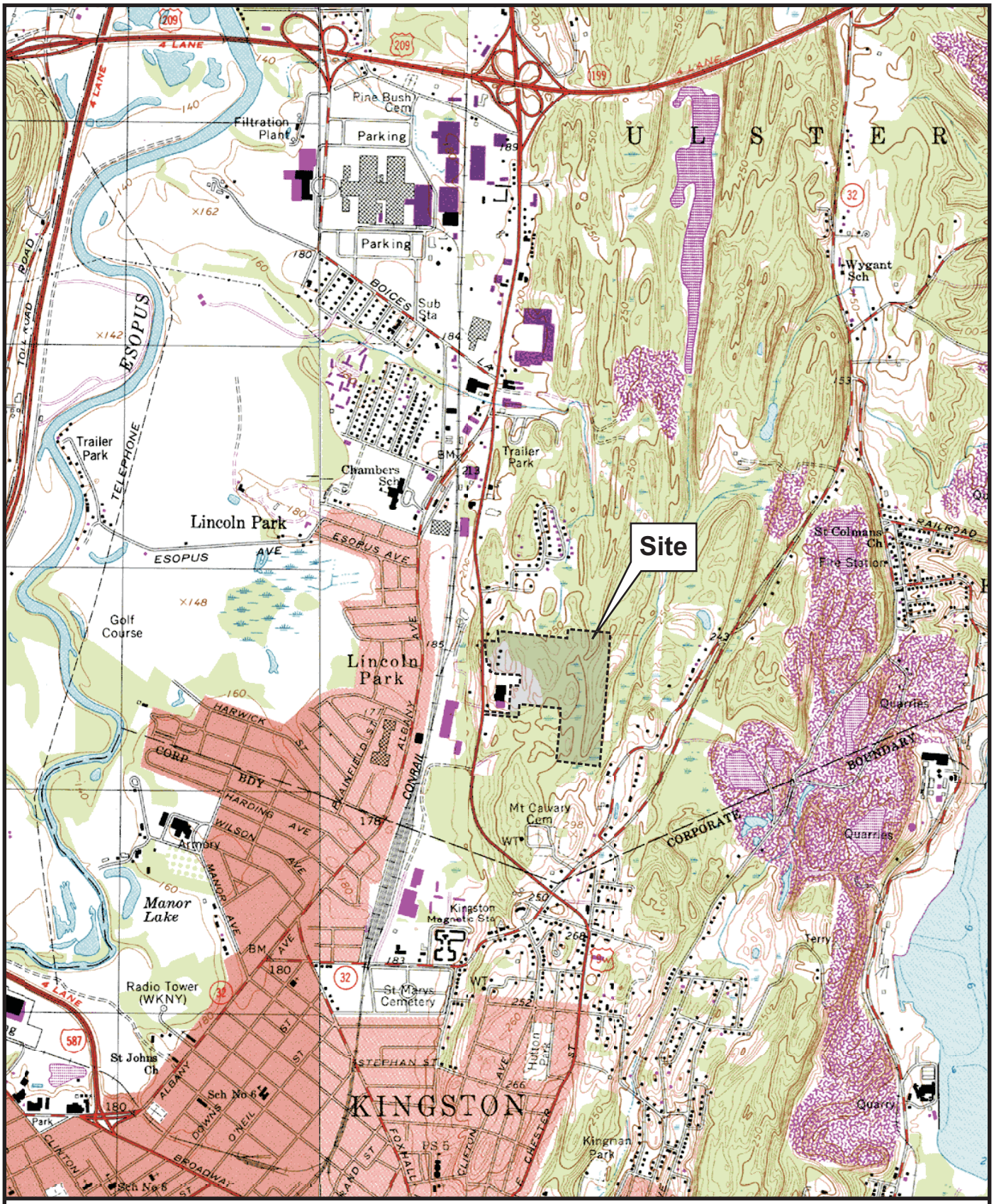

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Figure 1-2: Local Setting

Ulster Manor

Town of Ulster, Ulster County, New York

Base Map Source: USGS Topographic Map,
Kingston East and West Quads, 1980

Property Line Source: Medenbach & Eggers, 01/28/05

Scale: 1 inch = 2,000 feet

File 05053 03/25/08
JS/05053

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

AREA SUMMARY

TOTAL AREA OF SITE	= ±52.2 ACRES
AREA TO BE RETAINED BY FERRARO	= ±4.2 ACRES
DEVELOPMENT AREA	= ±48.0 ACRES
PROPOSED PUBLIC ROAD	= ±2.7 ACRES
AREA OF 100 ATTACHED TOWNHOUSE LOTS	= ±4.9 ACRES
AREA OF MULTIFAMILY TOWNHOUSES	= ±0.7 ACRES
AREA OF OPEN SPACE (INCLUDES ±5.11 ACRES WETLANDS)	= ±39.7 ACRES

NOTES:
1. Topography based on aerial survey performed by EASTERN TOPOGRAPHICS on 04/06/03.
2. Property lines based on deed references and field survey. Bearings and distances are subject to change as per final survey map.

100 0 100 200 300

Scale in Feet

Figure 1-3: Proposed Subdivision Plan
Ulster Manor
Town of Ulster, Ulster County, New York
Source: Medenbach & Eggers Civil Engineering & Land Surveying, P.C.
Date: August 9, 2007
Scale: As Shown

File 05053 1/24/08
JS/05053

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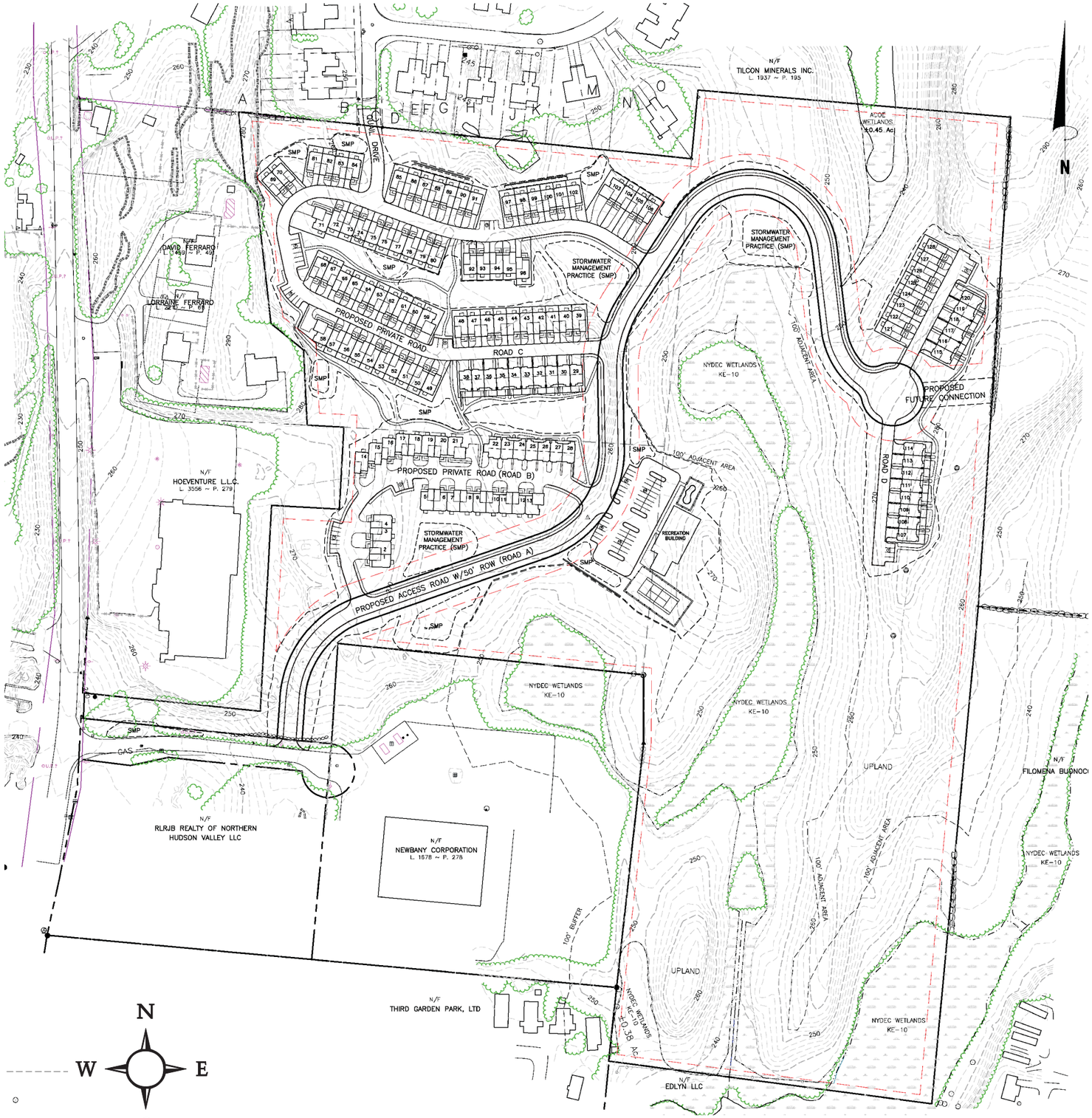

100 0 100 200 300

Scale in Feet

R-30 ZONE TOWNHOUSES (ATTACHED)

PROPOSED 22 UNITS	REQUIRED	PROVIDED
MINIMUM LOT AREA (22 UNITS)	±9.09 AC.	±28.8 AC
MINIMUM LOT WIDTH	100 FT.	
MINIMUM YARD SETBACKS		
FRONT	30 FT.	
SIDE	20 FT.	
REAR	25 FT.	
MINIMUM OPEN SPACE (2,400 SF/UNIT)	±1.21 AC.	±25.8 AC.
MAXIMUM BUILDING COVERAGE	N.A.	
MINIMUM GREEN SPACE	25%	94%

PARKING REQUIREMENTS

R-10 ZONE TOWNHOUSES (ATTACHED)
OM ZONE TOWNHOUSES (MULTIFAMILY)
R-30 ZONE TOWNHOUSES (ATTACHED)

PARKING REQUIREMENTS	REQUIRED
(2 SPACES PER UNIT)	
128 UNITS X 2 SPACES =	256 SPACES
(PLUS 1 SPACE PER 3 UNITS)	
128 UNITS/3 =	43 SPACES
	299 SPACES

PROVIDED*
SPACES PER UNIT
37 2 CAR GARAGE UNITS @ 4 SPACES = 148 SPACES
91 1 CAR GARAGE UNITS @ 2 SPACES = 182 SPACES
ADDITIONAL SPACES
(INCLUDING REC. BUILDING) 83 SPACES
413 SPACES
* INCLUDES PARKING IN GARAGES

DENSITY CALCULATIONS

ZONE	AREA	UNITS
R-30 ZONE	28.8 ACRES	22 ATTACHED TOWNHOUSES
R-10 ZONE	11.0 ACRES	78 ATTACHED TOWNHOUSES
OM ZONE	8.2 ACRES	28 MULTIFAMILY TOWNHOUSES
TOTAL	48.0 ACRES	128 UNITS

WETLANDS -5.11 ACRES
NET AREA 42.89 ACRES

REQUIRED AREA
TOWNHOUSES ATTACHED AND MULTIFAMILY
22 (TWO BEDROOM) UNITS @ .6
= 13.2 UNITS @ 30,000 SF. = 9.09 AC. (R-30)
106 (TWO BEDROOM) UNITS @ .6
= 63.6 UNITS @ 10,000 SF. = 14.60 AC. (R-10/OM)
TOTAL REQUIRED AREA 23.69 ACRES

OM ZONE TOWNHOUSES (MULTIFAMILY)

PROPOSED 28 UNITS	REQUIRED	PROVIDED
MINIMUM LOT AREA (28 UNITS)	±3.85 AC.	±8.2 AC
MINIMUM LOT WIDTH	75 FT.	
MINIMUM YARD SETBACKS		
FRONT	30 FT.	
SIDE	10 FT.	
REAR	15 FT.	
MINIMUM OPEN SPACE (2,400 SF/UNIT)	±1.5 AC.	±4.7 AC.
MAXIMUM BUILDING COVERAGE	50%	8.1%
MINIMUM GREEN SPACE	10%	66%

R-10 ZONE TOWNHOUSES (ATTACHED)

PROPOSED 78 UNITS	REQUIRED	PROVIDED
MINIMUM LOT AREA (78 UNITS)	±10.74 AC.	±11.0 AC
MINIMUM LOT WIDTH	75 FT.	
MINIMUM YARD SETBACKS		
FRONT	30 FT.	
SIDE	10 FT.	
REAR	15 FT.	
MINIMUM OPEN SPACE (2,400 SF/UNIT)	±4.3 AC.	±5.5 AC.
MAXIMUM BUILDING COVERAGE	N.A.	
MINIMUM GREEN SPACE	15%	62%

Figure 1-4: Proposed Site Plan
Ulster Manor
Town of Ulster, Ulster County, New York
Source: Medenbach & Eggers Civil Engineering & Land Surveying, P.C.
Date: August 9, 2007
Scale: As Shown

File 05053 1/24/08
JS/05053

Disturbance Summary

Cover Type	Existing Conditions	Area To Be Disturbed	Proposed Conditions
Buildings	± 0.00 Ac.	N/A	± 3.15 Ac.
Paved Impervious Area	± 0.00 Ac.	N/A	± 4.77 Ac.
Reclaimed Landscaped Area	± 0.00 Ac.	N/A	± 10.59 Ac.
Wooded	± 30.82 Ac.	±18.50 Ac.	± 12.32 Ac.
NYS DEC Wetland	± 4.93 Ac.	±0.00 Ac.	± 4.93 Ac.
NYS DEC Wetland Adjacent Area	± 11.80 Ac.	±0.00 Ac.	± 11.80 Ac.
ACOE Wetlands	± 0.45 Ac.	±0.01 Ac.	± 0.44 Ac.
Totals	±48.00 Ac.	±18.51 Ac.	±48.00 Ac.

Area To Be Disturbed (%) 38.5%

Net Loss of Vegetated Area (%) ± 7.92 Ac. (16.5%)

Figure 1-5: Proposed Layout - Site Disturbance
Ulster Manor
Town of Ulster, Ulster County, New York
Source: Medenbach & Eggers Civil Engineering & Land Surveying, P.C.
Date: August 9, 2007
Scale: As Shown

File 05053 1/24/08
JS/05053

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

2.0 PROJECT DESCRIPTION COMMENTS AND RESPONSES

Comment 2-1 (Ms. Marlene Engelhardt, Public Hearing, December 19, 2006; Mr. Steve Engelhardt, November 8, 2006 Public Hearing transcript and December 19, 2006 Public Hearing transcript): Throughout this DEIS document, the acreage is stated as being anywhere from 46 acres up to 60+ acres. Therefore I am submitting, for the record a copy of Tim Miller Associates Inc., letter dated June 28, 2005 to Ms. Tally Fisher, Ulster County Treasurer and copies of tax bills for 2005 for the two parcels: Section 48.58, Block 7 Lot 21= 46.6 acres and Section 48.58, Block 7, Lot 22 = 1.10 acres, found in Appendix B, Vol. II correspondence. I would also like to point out the information in the Phase I Environmental Site Assessment done by Roger Gjone, P.E. found in Appendix J, Vol. II, where he states that he did a title search back to 1940 and that land parcel Section 48.58, Block 7, Lot 21 is 46.6 acres. He also states that the property is irregular in shape and surrounds four residential properties just north of the Hoe Bowl parking lot. The existing property line has one of these homes as part of the property. In addition, it is apparent that the pool and pool house for the north most of the three surrounded residential properties is on this lot. And he presumes that the client is aware of these conditions and that the appropriate property line adjustments are being planned. A "hard look" should be given to the actual land size and what the land size of the proposed project site will be.

> ***Response 2-1:*** *According to the 2005 Town of Ulster Tax records the two subject tax parcels were 46.6 acres (Section 48.58, Block 7 Lot 21) and 1.10 acres (Section 48.58, Block 7, Lot 22). This provides a total site acreage of 47.7 acres. The 2007 Tax bill indicates a single parcel listed as 48.58-7-22.100 with a total size of 51.29 acres. Since 2005 and the preparation of the DEIS, tax lots under the same ownership were combined by the Town and have been given a new parcel number. Medenbach & Eggers surveyed the boundaries of the parcel to be developed and the size is 48.0 acres. The remaining 3.29 acres will be subdivided as part of the subdivision action, and will be retained in ownership by the Ferraro family. The project involves a total of 48.0 acres, as shown in the attached Site Plan drawings.*

Comment 2-2 (Ms. Marlene Engelhardt, Public Hearing, December 19, 2006; and December 19, 2006 Public Hearing transcript): In Volume III Appendix A SEQRA Documentation, a letter to scoping from Jeffery Anzevino, a Senior Regional Planner for Scenic Hudson, notes that the July 14, 2005 edition of the Kingston Times reports that the developers of the Ulster Manor were fined $4,000 by the DEC for draining an area of the property. I am submitting to the record a copy of the fully executed consent order, the violation, a copy of letter dated November 2, 2004 acknowledging the civil penalty was paid, and a copy of receipt of payment with copy of checks from Regan Development Corp. and North Jersey Realty Co., $2,000 each showing payments, and their "Pipe Removal Detail for Ulster Manor Estates". I am asking the board to find out what Mr. Regan's and Mr. Hirshberg's intentions were, the intended purpose behind the act of burying a 180 foot long 12 inch diameter culvert pipe draining the vernal pools, a part of the New York State protected KEIO freshwater wetlands, on to my property?

> ***Response 2-2:*** *Comment Noted. The Planning Board is fully aware of this incident and the circumstances surrounding it. The comment does not relate to any potential impact associated with the proposed plan.*

Comment 2-3 (Ms. Marlene Engelhardt, Public Hearing, December 19, 2006 and Steve Engelhardt, November 8, 2006 Public Hearing transcript): Now moving on to the completeness of this DEIS document. Where are the consultant reports or reviews on deeming this document complete? How did they come to their conclusions that this DEIS is complete? Where is the written verification, the computer printouts of the technical reviews of the steps, procedures, calculations done, computer programs used, thresholds that were met; and whatever other charts, graphs and methods used to deem it adequate, accurate... thus complete. The evidence, if you will, that a "Hard Look" was given to this document.

Mr. Chairman, I am requesting that these hard copies of ALL consultants reviews, reports speaking to their justification of deeming this DEIS document complete be made available for examination by myself and others**.** Not a copy of all their bills submitted to the Ulster Manor Escrow Fund Account for services rendered. I have seen those.

One in particular that screams of scrutiny is the Technical Review done by engineer consultant Brinnier and Larios. How exactly did they reach their conclusion that this DEIS document was adequate, accurate and complete? Or did they?

How did they verify the bulk and density calculations for the site plan? How did they verify that the size and design of the detention ponds in the sloped buffer areas of the protected freshwater wetlands were adequate and accurate and even feasible?

How did they verify the stormwater design plan? How did they verify that the runoff rates and volumes for pre and post development are correct without the HydroCAD calculations missing from Appendix A? How did they verify the treatment of the Water Quality Volume, which is a strict requirement under New York State Department of Environmental Conservation (NYSDEC) Phase II Stormwater regulations, without the water quality calculations of the Stormwater Plan not included in Appendix B of this document?

> ***Response 2-3:*** *Any memos and reports associated with the Town consultants' completeness review is part of the public record and available for review at Town Hall. The Stormwater Plan and calculations were omitted from the DEIS due to a printing error. They were subsequently provided to the Planning Board and its consultants, and these documents were available for review by the public at the Town Hall. Prior to the Town accepting the document as complete, the Town's consultants reviewed the DEIS for completeness; or whether the document met the requirements of the Scoping Document, and contained the, plans, technical studies, data and evaluation of project impacts, in order for the Lead Agency, other agencies and the public to fully evaluate the project and its environmental impacts. Once the DEIS was accepted as complete, and officially circulated a more thorough technical review of the DEIS was completed by the Lead Agency, its consultants, involved and interested agencies and the public. This FEIS provides a thoroughly revised Stormwater Management plan for the modified Site Plan.*

Comment 2-4 (Purposely ommitted for numbering)

Comment 2-5 (Ms. Marlene Engelhardt, Public Hearing, December 19, 2006): As the board knows, the intent of SEQRA legislation, is that all agencies conduct their affairs with an awareness that they are stewards of the air, water, land and living resources; and that they have an obligation to protect the environment for the use and enjoyment of this and all future

generations. SEQRA also authorizes local governments and a local agency, such as a planning board, to designate specific geographic areas within its boundaries having exceptional or unique environmental characteristics as a Critical Environmental Area. To red-flag them if you will, to conduct cumulative impact analyses, prepare generic environmental impact statements for environmental review, to anticipate and review future land use impacts in a more in-depth comprehensive manner.

> ***Response 2-5:*** *Comment noted. Section 671.1 of the regulations implementing SEQRA states that it is the intent of the Legislature that a suitable balance of social, economic and environmental factors be incorporated into the planning and decision making processes. At the time the DEIS was prepared, and during preparation of this FEIS, the subject property was not identified as a Critical Environmental Area. According to the SEQRA regulations, the implication of an area being designated a CEA is as follows: "...the potential impact of any Type I or Unlisted Action on the environmental characteristics of the CEA is a relevant area of environmental concern and must be evaluated in the determination of significance..." Regardless of whether the action is within a CEA, the Planning Board issued a Determination of Significance, i.e., Positive Declaration, and required that the applicant prepare a DEIS.*

Comment 2-6 (New York State Department of Environmental Conservation, Mr. Scott E. Sheeley, letter dated November 30, 2006): Based on the project information contained in the DEIS, it appears that the project will require the following permits/approvals:

1. Article 24, Freshwater Wetlands - A Freshwater Wetlands permit will be required for the proposed construction within the 100-foot adjacent area of State-designated Freshwater Wetland KE-10 (Class II).
2. Article 15, Title 15, Water Supply - According to the DEIS, the existing Town of Ulster Water District boundary will require a revision to serve the site. A Public Water Supply permit is required to extend the boundary of a water district.
3. Compliance with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-02-01). This SPDES General Permit is required for any project that disturbs greater than one acre of land area. When other DEC permits are necessary, the Stormwater Pollution Prevention Plan (SWPPP) required by the SPDES General Permit must be prepared and submitted for concurrent review with applications for the other DEC permits.
4. State 401 Water Quality Certification - May be required if a permit under Section 404 of the Clean Water Act is required from the U.S. Army Corps of Engineers for construction activities within federally-regulated wetlands on the site.

It is possible that the DEC permit requirements noted above may change based upon additional information received or as project modifications occur. We note that an application for an Article 24 Freshwater Wetland Permit and a SWPPP have been submitted to the Department by the project sponsor. Our review of the permit application and the SWPPP is ongoing.

> ***Response 2-6:*** *Comment noted. The DEIS lists these and other required permits in Chapter 1.0 Executive Summary. The SWPPP has been submitted for NYSDEC review. A State Section 401 Water Quality Certification is required since construction activities are proposed within the U.S. Army Corps of Engineers regulated wetland. These*

impacts are limited to 0.01 acres and would be addressed under a US ACOE Nationwide Permit.

A Public Water Supply permit is required to extend the boundary of a water district and a SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-02-01) is required for construction activities. A Freshwater Wetlands permit will not be required for the project since the current plan involves no construction within the 100-foot adjacent area of State-designated Freshwater Wetland KE-10 (Class II).

Comment 2-7 (Adjoining Property Owner, Mr. Steve Engelhardt, Public Hearing, December 19, 2006,): As previously brought to your attention appendices in the DEIS are missing, both online and in the hard copy. Have these appendices been located and are they now available. While on the subject of information available, there has been very little new information supplied to our planning office. I would like to think that upon request from lead agency or interested agencies any information generated and not on file with Town would be made available upon request including information from assistant project manager for Draft EIS.

Response 2-7: *See Response 2-3.*

Comment 2-8 (Ms. Marlene Engelhardt, Public Hearing, November 08, 2006): The Executive Summary 1-10 Vol I DEIS Stormwater Management states: Long term maintenance of all drainage structures, pipes and treatment devices would be the responsibility of the Homeowners Association. Only the drainage system within the proposed Town road will be dedicated to and maintained by the Town of Ulster. This would leave the Town of Ulster liable. I ask you does this sound reasonable? I think not. And to quote a text from Local Law 278: A lack of control or maintenance will result in deterioration of that area to the detriment of the entire community.

Response 2-8: *As described in Chapter 1.0 Introduction, the main access road will be privately owned and maintained by the Ulster Manor Homeowners Association. Therefore, the Association would be responsible for undertaking routine maintenance for the drainage structures in that roadway. The maintenance program for all portions of the stormwater management on the subject property would also be the responsibility of the Homeowners Association. This program would include an Inspection Program, Litter and Debris Removal, Erosion Control, and Long term maintenance measures. Maintenance schedules and procedures for the stormwater management facilities are provided in Appendix G of the revised SWPPP. The applicant is willing for the Town to own and maintain the stormwater facilities if it determines that said ownership is in the Town's best interests.*

Comment 2-9 (Ms. Marlene Engelhardt, Public Hearing, November 08, 2006): As to Executive Summary 1-16 cul de sac length, I question the rationale behind how a so-called 1,200 ft cul de sac from a so-called proposed future road connection on the site plan... will ensure the project's internal road network will comply with the current subdivision regulations; which specify that permanent cul de sacs will not be more than 1,200 feet in length. In reality, the proposed Town road is still a 3,200 foot dead end street and does not comply with subdivision regulations. And a second connection to an actual existing public street system is not provided as referenced in Town Planner, Dan Shusters January 25, 2005 letter to Marv

Hirschberg to this matter. * (*copy of letter attached). I do not accept the developer's rationalized explanation in this matter. It is not reasonable.

> ***Response 2-9:*** *Ulster Manor's design now complies with the Town's requirement for cul-de-sac length. As described in Chapter 1.0 Introduction, the project has been modified to eliminate 25 single family residences on the eastern portion of the site, allowing for the proposed cul-de-sac to be shortened to 825 feet in length. The Town Code specifies 1,200 feet as the maximum length of a cul-de-sac. A right-of-way for a future connection to vacant lands to the east of the project site is proposed, as shown in Figure 1-3 Proposed Subdivision Plan. In addition, and emergency access driveway with a gate is proposed along the northern property line, accessing Quail Drive*.

Comment 2-10 (David B. Clouser, PE, LS, David Clouser & Associates, letter dated December 29, 2006): As detailed in this memorandum, in our previous correspondence, and by other participants of the public comment period, there is a general gross lack of information submitted by the Applicant in the DEIS materials. Therefore, it is strongly recommended that a Supplemental Environmental Impact Statement (SEIS) be prepared by the Applicant to address the public's concerns.

We believe that the stormwater design is substantially incomplete and inaccurate as thoroughly discussed in our 11/08/06 memorandum. Additionally, the lot density has been calculated incorrectly and the Cluster provision was used improperly, resulting in a development that is too dense for the current zoning. The Supplemental DEIS would properly address these concerns, as well as many other valid concerns presented during the public review comment process.

The Board can not be expected to make a determination on the reasonableness of this project proposal, or what methods are needed to minimize potential significant adverse environmental impacts, without the necessary detailed information on which the Board must use to base its decision. Anything less than that results in a seriously flawed SEQRA review process and puts the community's natural assets at risk.

> ***Response 2-10:*** *The proposed action correctly calculated lot density in accordance with the Town's zoning. As indicated in the response to Comment 2-3, portions of the Stormwater Management Plan were omitted from the first DEIS submittal, due to a printing error. The complete Stormwater Plan was subsequently provided to the Town, involved and interested agencies and made available to the public. The studies provided in the DEIS were completed to professional standards and detail. The preparation of a Supplemental DEIS is not warranted, given that stormwater treatment and zoning compliance, among all other topics outlined in the Scoping Document, have been addressed in the DEIS and are extensively addressed in the corresponding sections of the Final Environmental Impact Statement ("FEIS").*
>
> *The NYSDEC has provided specific regulatory guidance on the need for an SEIS under SEQRA. An SEIS for a specific project will only be required to address "...the specific significant adverse environmental impacts not addressed or adequately addressed in the EIS."(6 NYCRR 617.9(7)(i)). These environmental impacts must arise from either "(a) changes proposed for the project; (b) newly discovered information; or (c) a change in circumstances related to the project," which must potentially cause a significant*

adverse environmental effect (Gerrard ET. AL., Environmental Impact Review in New York 3.13[2][a] (2004).

The purpose of the DEIS is to describe the proposed project to involved and interested agencies and the public, to solicit comments, and to assist the lead agency in determining the project's environmental impacts. The DEIS is a preliminary evaluation of the proposed project and it's potential impacts. As described above, the project has been modified from that described in the DEIS, in part, due to comments from the Lead Agency, other agencies and the public. Therefore, the SEQRA regulations contemplate that the FEIS will include a more detailed and extensive analysis, including discussion of issues that were not fully discussed or addressed in the DEIS.

An SEIS is not typically required for changes to the project, but rather for those changes that will cause a potentially significant adverse effect. There are no proposed changes to the Ulster Manor proposal that would allow a lead agency to require an SEIS. As described above, the proposed modifications to the project result in either a reduction or no change in environmental impacts and do not create any new impacts.

No newly discovered information, substantial omissions, or changes in circumstances have occurred since the circulation of the DEIS that would result in a significant adverse environmental impact. There is no informational need or legal basis for the lead agency to require an SEIS.

Comment 2-11 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Considerations that should be evaluated in the DEIS include:

a. Avoid all development on steep slopes where soils are thin.

b. Implement Low Impact Development practices, allowing natural infiltration to occur as close as possible to the original area of rainfall, offering a more cost effective way to address storm water management through site design modifications and best management practices (Low Impact Development Center; National Association of Flood and Stormwater Management Agencies). These practices include using permeable pavers instead of impermeable pavement, design modifications to reduce the size of impermeable surfaces, and distribution of runoff throughout the site rather than channeling it into large collection areas. These practices often reduce engineering costs of stormwater management.

c. Protect adequate forested cover throughout the watershed and especially in buffer areas.

d. Evaluate buffer size and vegetative conditions according to site conditions and management goals for water quality and habitat protection.

e. Reconfigure the site plan to keep development off the ridge and out of wetland buffers.

Response 2-11: *The resource protection measures and good planning practices listed above have been incorporated into the current site plan.*

Steep slopes have been avoided to the extent practical. The 25 single family units that were previously proposed along the eastern side of the site have been eliminated substantially reducing disturbance to slopes greater than 15% and those slopes adjacent to wetlands. Potential development on this "ridge line" has been mostly eliminated.

The revised Stormwater Management Plan for the project incorporates multiple small stormwater treatment facilities including nine bio-retention zones and two infiltration basins. These practices (filtering and infiltration) typically have the highest pollutant removal efficiencies out of all NYSDEC approved treatment practices. The revised plan reduces the area of impervious surface from 12.8 acres to 7.9 acres, compared to the previous plan. This is a 38 percent reduction in the proposed area of impervious surface.

Approximately 29 acres (approximately 60% of the site) would remain undisturbed in its existing wooded condition. In addition to the undisturbed woodland within the wetland buffer zones, the proposed plan leaves the upland area along the eastern side of the property undisturbed and includes several pockets of woodland between townhouse clusters on the western portion of the development.

The 100 foot wetland buffer surrounding the NYSDEC regulated wetland will not be disturbed, under the current plan. Previously, 1.52 acres of wetland buffer were to be disturbed.

The site plan has been substantially reconfigured to avoid slopes and wetland buffers.

Comment 2-12 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Many resources will be significantly affected by this project, which is located on a site that is part of a much larger complex of wetlands and habitats extending to Lake Katrine.

Response 2-12: *The DEIS prepared for the original project did not identify any significant impacts to wetlands or wildlife habitat, either on- or off-site. The proposed modified project substantially reduces disturbances to the site compared to the original project (see Chapter 1.0 Introduction, and Response 2-11, above).*

Comment 2-13 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): New York is a home rule state. Under SEQRA, Towns have the authority to protect the public interest by ensuring that environmental impacts are adequately mitigated. Despite stormwater and wetland regulations, water quality in our watersheds is declining and current levels of protection are inadequate. This is a significant regional issue. Local governments are responsible for monitoring the projects they review so that the natural resources of the town are adequately protected. This includes the protection of clean water supplies. Towns have the authority under SEQR to require larger buffers and other mitigation to protect water quality.

Response 2-13: *The revised site plan proposed in this FEIS conforms with the existing environmental regulations of the Town of Ulster, New York State, and the Army Corps of Engineers. These existing regulations and requirements will ensure the protection of water quality, both during construction and for the duration of the project. The NYSDEC Stormwater permit regulations and the NYSDEC 100 foot wetland buffer requirements are specifically required to protect water quality. Currently, no development is proposed within the 100-foot regulated area associated with the on-site NYSDEC wetland, and the impact to the Army Corps of Engineers regulated wetland is less than 0.01 acres and thereby subject to a Nationwide permit. The modified plan that is the subject of this FEIS is not anticipated to have a significant adverse impact on wetlands.*

According to the NYSDEC "the Freshwater Wetland Regulations (6 NYCRR Part 663) are being strictly adhered to during the review of this [Ulster Manor] proposed project. These regulations were developed specifically to preserve, protect and conserve freshwater wetlands and associated benefits" (see March 7, 2008 letter, Appendix C).

Comment 2-14 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): Of the 48 acre site, 19.35 acres, or 40% of the site, are either wetland or steep slopes exceeding 15%. This does not include the 100 foot wetland buffer, which would increase this percentage. The applicant is proposing a large development with 149 dwelling units on a site with many constraints. These constraints necessitate a 2,100-foot long cul-de-sac (exceeds Town subdivision regulations by 900 feet), blasting affecting 4.5 acres (9% of the site), an encroachment of 200 linear feet (6% of development roads) of roadway in the wetland buffer, and 66,510 cubic yards of cut and 60,310 cubic yards of fill. While the zoning code may allow 149 units, the Planning Board, as Lead Agency in this SEQRA review, may find that this density may result in unacceptable environmental and community impacts and, in order to reduce some of these impacts, require fewer units. (Note: The DEIS does not actually indicate the number of units permissible in the three zoning districts in which this project is proposed. The FEIS should provide a straightforward description of the number of units permitted.)

Response 2-14: *The project has been modified to eliminate the proposed development of 25 single-family detached dwellings on individual lots. The modified plan will result in the development of 128 attached townhome units, a reduction of 21 dwelling units. The site density requirements and calculations were provided in Sheet SP-1 Site Plan, attached to the DEIS. Density calculations and bulk requirements for the current plan are shown on Sheet SP-1 Site Plan. See Chapter 1.0 Introduction and Response 2-10 for a description of the modified site plan and reduction in the number of units. See Response 2-9 above regarding the length of the cul-de-sac and conformance with Town Subdivision requirements.*

Comment 2-15 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): Adherence to Section 161-18 of the Town's Subdivision Regulations. The DEIS (pg. 2-10) cites Section 161-18 of the Town's Subdivision Regulations, which state:

- Land to be subdivided shall be laid out and improved in reasonable conformity to existing topography in order to minimize grading and cut and fill, to retain, insofar as possible, the natural contours, to limit stormwater runoff and to conserve the natural cover and soil.
- Preservation of existing features that would enhance the attractiveness of the site of the community as a whole, such as trees, watercourses, ponds, historic places, and similar assets shall be preserved insofar as possible through harmonious design of the subdivision.

Based on our review of the DEIS, we must conclude that the Preferred Alternative is designed to maximize development potential of the site with little regard to the above referenced sections of the Town's Subdivision regulations, which seek to conform the project to the land. Conversely, the Preferred Alternative takes the opposite approach, by using a “heavy handed" engineering approach requiring cut and fill, blasting, construction of an excessively long cul-de-sac and siting stormwater detention facilities in wetland buffers. The project should be

substantially redesigned-with a reduction in density-to comply with the letter and spirit of these provisions of the Subdivision Regulations.

Response 2-15: *The modified plan addresses many of the issues in the comment and substantially adheres to the goals of the Town's Subdivision Regulations, as described above. The current plan has been laid out "*in reasonable conformity to existing topography in order to minimize grading and cut and fill to retain, insofar as possible, the natural contours, to limit stormwater runoff and to conserve the natural cover and soil*". The current proposal reduces grading, and site disturbance. Overall site disturbance would be reduced from 28.7 acres for the former action to 18.5 acres under the proposed action. Therefore, the loss of woodlands and on-site vegetation would be reduced by approximately 10 acres. The volume of cut and fill required for the current plan has been substantially reduced and the required rock removal has been reduced by over 40 percent, compared to the former project. The road network and location of residential structures have been situated to minimize site disturbance.*

*"*Existing features that would enhance the attractiveness of the site or the community as a whole, such as trees, watercourses...." *have been preserved to the extent possible, with the revised plan. Approximately 60 percent of existing trees and vegetation would be preserved under the revised plan, all NYSDEC wetlands and related 100 foot buffers on the property. The project would minimally alter the existing flow patterns that discharge through NYSDEC Wetland "KE-10", thus there would be no adverse impact to the flow characteristics of this surface water feature.*

Comment 2-16 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): First, Section 161-19 of the town's subdivision Regulations requires a minimum of 20 feet of pavement width. The applicant is proposing 25-foot wide roads. This results in 25% additional impervious surface in roads alone. Since the proposed road network would create four acres of impervious surface, this figure could be reduced by one full acre if the Town were to require the minimum width. Narrower roads would provide an additional benefit by keeping traffic speeds down.

Response 2-16: *A minimum pavement width of 20 feet would be reasonable for a rural road that is lightly traveled. For this project, the access road would serve 128 dwelling units - for safety purposes, it was determined that 25 feet is required to provide safe access. The applicant has proposed 25 foot wide internal roads for safety and ease of maintenance (winter snow removal). In modifying the site plan, impervious surface has been reduced by 4.9 acres or by 38 percent, compared to the previous plan. This plan modification reduces impervious surface but maintains project safety.*

Comment 2-17 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): ... the DEIS tries in several places to justify the excessively long cul-de-sac, rationalizing that a future road connection could be made to the property to the east. However, there is no guarantee that this road connection would ever be made. Further, relying on this connection would require that the alignment and environmental impacts of the construction were identified in the SEQRA process and those impacts would have to be avoided, minimized or mitigated to the extent practicable.

Response 2-17: *Comment noted. As described in Chapter 1.0 Introduction, the length of the cul-de-sac has been reduced to 825 feet and now conforms to the Town Code.*

The future road connection to the adjoining property to the east may or may not occur. The connection was shown, at the request of the Town, and as good planning practice to provide options for future connections to undeveloped parcels in the Town. The project is not dependent upon the connection.

Comment 2-18 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): Finally, 46 parking spaces are proposed at the recreation facility. Since the facility is centrally located in a fairly compact community with sidewalks, it would be reasonable to assume that it would be easy for residents to walk to the facility. Therefore, 46 spaces are excessive. While the applicant may desire-and future residents might expect that the clubhouse could be rented out for events such as weddings or other functions, the Town should not permit this use as it would result in excessive impervious surfaces in a project that already pushes the limit past the *maximum.* A minimum number of parking spaces-perhaps five or ten-should be permitted at this location.

Response 2-18: *In the modified plan, the number of parking spaces provided for the recreation facility has been reduced to 42. The amount of impervious surface has been further reduced by the elimination of approximately 600 feet of roadway on the eastern portion of the site and the elimination of 25 single family homes. The amount of impervious surface in the proposed plan is approximately 7.92 acres, compared to 12.8 acres in the previous plan. Use of the clubhouse will be restricted to residents of the Ulster Manor development and their guests.*

Comment 2-19 (Mr. John Heitzman, Public Hearing, November 08, 2006): I have one minor concern. The gentleman who gave the description before mentioned something about a breakaway gate. I'm not sure just what he means by a breakaway gate but I have a general idea of what it means is it can be opened for emergency purposes only. I hope it's not a crash gate that somebody can just drive through if they have to. I would think it would be better if somebody opened it rather than broke the gate in order to get through it.

Response 2-19: *A breakaway gate is a gate designed to discourage regular through traffic but would allow for emergency vehicles to break through the gate quickly in an emergency, without the need to unlock the gate. Should the gate be damaged in an emergency, it would be immediately replaced by the homeowners association.*

Comment 2-20 (Mr. Dan Shuster, Letter dated March 20, 2007): The DEIS is a well organized document which clearly follows the format and presents the vast majority of the material required under the Final Scope. By and large, the mapping is clear and readable at the scale presented.

Response 2-20: *Comment noted.*

3.0 SOILS AND GEOLOGY COMMENTS AND RESPONSES

Comments to the DEIS related to soils and geology included specific comments regarding stormwater treatment facilities, proposed construction and erosion control practices. These specific comments are responded to below.

Several comments requested additional information regarding on-site soils, geology and related groundwater movement through on-site soils and bedrock. Specifically, a letter dated December 29, 2006 by HydroQuest raised concerns regarding the on-site bedrock conditions and whether the site was located in a karst hydrogeologic setting. Although the letter was received after the close of the Public Comment period, the Planning Board and its consultants requested a review and applicant response to the letter.

Subsequent to the DEIS, additional on-site and literature studies were completed by the applicant to augment the information provided in the DEIS regarding on-site soil, geology and hydrogeologic conditions.

Geotechnical Testing

In December 2006 Zebra Environmental Corp., from Albany, New York conducted a geotechnical investigation for the Ulster Manor property. A total of 46 soil borings were completed with a GeoProbe drilling rig. In all locations the soil borings were drilled until bedrock was encountered and the soil core could not be further advanced. Description of the soil at each boring location was logged, and is provided on Drawing EC-1 Existing Conditions. Borings were completed in all areas of the site proposed for development and the information gathered was used to modify and improve the design of the stormwater management facilities.

On-site Soils and Geology

Soils

The soil borings completed on the project site, confirmed the description of the soils found in the Soil Survey of Ulster County (USDA Soil Conservation Service, 1970). On-site soils were fully discussed in Chapter 3.1 Soils and Geology, in the DEIS. In general, the soils on the property can be described as silty to sandy clay loam, sandy loam or clay loam.

Soils in the western portion of the site (B-1 through B-30) were primarily described as sandy loam. This description is consistent with the Soil Survey which maps Plainfield Rock Outcrop (PrC) soils on the entire western portion of the site, west of the New York State Department of Environmnetal Conservation (NYSDEC) regulated wetland (see Figure 3-1 Soils Analysis Map). As provided in the DEIS, the Soil Survey describes PrC soils as deep, excessively drained, gently sloping soils formed in fluvial or glacial outwash deposits that have a high content of medium and coarse sand. Permeability into the soil is rapid and run-off potential is low to medium. The erosion potential for these soils varies from slight to moderate, depending upon slopes.

The majority of the Ulster Manor development would be located in the western portion of the site and would involve the grading and distrubance of Plainfield soils. These soils have relatively good properties for construction, including good drainage and low potential for erosion. Due to the relatively high permeability, the soils may not be suitable for stormwater

detention. Therefore, the design of the water quality basins calls for a minimum of 12 inches of clay to be installed (see Drawings WQ-2 through WQ-6).

Soils found north of the NYSDEC wetland (B-31 through B-34) were described as clay loam or sandy loam overlying clay loam. These soil borings were completed in an area mapped as the Bath-Nassau Rock Outcrop Complex (BOD), which consist of the Bath Nassau soils and small areas of rock outcrop, according to the soil survey. Soils found east of the NYSDEC wetland (B-35 through B46) were primarily described as clay loam or gravelly clay loam. These soils were mapped as Bath-Nassau Complex (BnC) soils.

The Soil Survey describes the Bath-Nassau Complex (BnC) soils as: well drained Bath, gravelly silt loams and shallow somewhat excessively drained Nassau shaley, silt loams. A fragipan is described in the lower part of the Bath soils and shallow bedrock described in Nassau soils. The area of proposed development has been reduced in the Nassau-Bath soils and is limited to 22 town home residential units in the northeast corner of the site. The access road and a cul-de-sac are also located in the area of mapped Nassau-Bath soils.

The geotechnical investigation confirmed that bedrock is shallow on the property and soil cover is moderate to thin overlying the bedrock. The 46 soil borings provided an average depth of bedrock surface at 4.5 feet. The depth to bedrock varied from 1 foot to 11 feet. Shallow groundwater was encountered at a depth of 6 to 8 feet, in a single boring B-34, north of the NYSDEC wetland. As expected, bedrock was more shallow on low ridges or at the top of slopes and was deeper in topographic low areas found between the ridges.

Geology

Bedrock underlying the site is identified as Onandaga Limestone, according to the Geologic Map of New York, Lower Hudson Sheet (New York State Museum, 1970). North of Kingston, the Onandaga limestone is a north-south trending band of middle Devonian age limestone. The group is bordered by younger shales and sandstones of the Hamilton group to the west, west of the Esopus Creek. Older Helderberg Group limestone (lower Devonian age) and Austin Glen formation shale and greywacke rocks (Ordovician age) are located to the west of the site bordering the Hudson River. Locally, the limestone and shale rocks are extensively mined. A large mining operation known as the Callanan Industries, Inc. East Kingston Quarry is located directly east of the Ulster Manor site in the vicinity of Route 32.

Bedrock outcrops were observed on the property in two general locations, one in the vicinity of the proposed entrance on Memorial Drive and on steeper slopes in the eastern portion of the site. On site, the bedrock is grey to brown in color, and has bedding planes approximately 2 to 6 inches in thickness. The bedrock appears weathered, as expected since it is close to the ground surface and the road cuts have been exposed for many years.

Prominent bedrock outcrops are also present in road cuts on the east and west sides of Route 9. The outcrop on Route 9 directly west of the site and down slope from the adjacent bowling alley, clearly shows the local limestone bedrock. Based upon the exposed rock and local topography the bowling alley was constructed by removing large amounts of bedrock. At this location, the limestone is light to dark grey with prominent bedding planes 2 to 6 inches in thickness. Three to five inch chert layers are interbedded in the limestone. The limestone strikes generally in a north-south direction and dips towards the east at approximately 20 to 30 degrees. The bedrock at this location does not appear weathered except in the upper two to

four feet. Weathering and solution is visible along vertical fractures. This outcrop is shown in Figure 3-2 - Local Bedrock Photographs.

Large bedrock outcrops are exposed directly north of the site at a shopping center parking lot located on the east side of Route 9. This rock face is approximatley 2000 feet directly north of the site and in the same ridgeline and geologic formation as the project site. A north facing exposure of limestone is approximately 40 to 60 feet in height. At this location the limestone appears relatively massive (bedding planes 10 cm or greater) and unweathered except in the upper 3 to 5 feet or along vertical fractures (see Figure 3-2). There are no voids, cavities or caves in this large exposure of limestone bedrock.

Hydrogeology

As described in Chapter 3.2 Surface Water, Wetlands and Groundwater Resources of the DEIS, the property contains two wetland areas; a large wetland occupying the eastern portion of the site and an portion of a smaller wetland in the northeast corner of the property. The large wetland is identified on NYSDEC wetland maps as KE-10 and drains to the south and then towards the northeast, towards the Hudson River. The northern wetland drains towards the north and then towards the west and Esopus Creek.

The majority of soils on the site are sandy and well drained and the bedrock surface is relatively shallow (0 to 11 feet in depth). A portion of the precipitation on the property would drain via surface flow or sheet flow to low areas, including wetlands. Another portion of rainfall would infiltrate into soils and follow the bedrock surface flowing from ridges and high points to low areas on the property. This shallow groundwater flow would recharge wetlands and any standing water in those wetlands during periods of high precipitation. Finally, a portion of the precipitation reaching the property would infiltrate the soils as shallow groundwater and would infiltrate into the limestone bedrock through fractures at the bedrock surface.

Limestone Karst Conditions

The comment letter dated December 29, 2006 by Hydroquest, Inc. requests that the applicant discuss the potential for the site to contain karst features and conditions and if karst conditions are present on the property, an analysis of potential environmental impacts associated with karst conditions.

Karst conditions were investigated through a literature review, as well as an inspection of the property and environs by a professional geologist.

Background

Karst is defined as "a type of topography that is formed over limestone, dolomite, or gypsum by dissolving or solution, and that is characterized by closed depressions or sinkholes, caves and underground drainage" (*Dictionary of Geologic Terms, American Geological Institute, 1976).*

A description of the local geology and the potential for karst drainage or structural features is provided in a letter report for the Hudson Landing site prepared by Charles Merguerian, Duke Geological Laboratory, January 9, 2007 (see Appendix D).

The report describes the conditions required for the formation of karst features and the topographic and drainage indications of a karst landscape. Karst conditions are typically formed in areas of level carbonate rocks with temperate climate with high humidity and high levels of precipitation. Classic karst terrain is found in Florida, Puerto Rico, and areas of Kentucky and Tennessee. Three factors are generally required to produce karst landscape or drainage features, including: 1) massive limestone with well developed fractures or faults that appear at the surface, 2) adequate rainfall greater than 10 to 12 inches per year, and 3) vertical and underground circulation of groundwater.

The high precipitation and circulation of groundwater lead to dissolution of the limestone which results in underground drainage, caverns in the rock and the eventual collapse of these underground features which then produce sinkholes visible at the surface. A mature and extensive system of underground drainage and circulation will result in a landscape unique to karst topography, where there is a lack of surface drainage, and streams are non-existant or "disappear" to underground voids. For example, streams are not found in the karst terrain of the Yucatan Peninsula of Mexico, and the landscape is filled with circular closed depressions that have formed over collapsed carbonate rocks.

Karst Conditions on the Ulster Manor Site

Based upon a literature review and an inspection of the project site and environs, karst landscape features do not appear to be present, either on the Ulster Manor site or in the vicinity of the site.

Sinkholes

The December 29, 2006 letter from Hydroquest indicates that sinkholes are well developed on-site. No sinkholes on the property were identified either through examination of maps, through the geotechnical study or based upon surface topography and drainage.

The geotechnical investigation completed by Zebra Environmental Corp., indicates that surface topography closely reflects the limestone bedrock surface. Glacially derived sandy and silty soils, approximately 1 to 11 feet in thickness cover the bedrock surface. Voids or channels filled with sediment or shallow groundwater (sinkholes) were *not* encountered in the soil investigation. The deepest boring B-33, with a depth of 11.0 feet, was located at the northern end of Wetland KE-10. The location of wetland KE-10 appears to be a natural depression or low area between two topographic bedrock ridges. Greater soil thickness would be expected in such a depression, since soil would accumulate with stormwater run-off and the natural buildup of organic sediments in a wetland over time.

As indicated the USGS maps and observations, the on-site wetlands drain to off-site locations by surface water drainage, and do not have isolated or contained drainage, as would be expected with karst drainage conditions. The USGS map shows Wetland KE-10 draining toward the south to a larger wetland, and then to the northeast. Perennial stream channels are clearly marked on the USGS map indicating a year-round flow of surface water from the site to a considerable distance off-site, eventually to the Hudson River. The smaller USACOE regulated wetland flows off-site to the north joining other wetlands, eventually draining to the north and then west towards the Esopus River. Under classic karst conditions, surface water drainage would not be present, but rather stormwater would collect and be diverted underground in local depressions.

Approximately three closed depressions are present in the western portion of the site, within approximately 150 feet of the adjacent bowling alley. These depressions appear to be the result of excavation or shallow rock mining and are not "sinkholes" as characterized by Hydroquest. According to the Phase 1 Archeological Investigation, by Hartgen Archeological Associates, Inc., December 2004, "man made disturbance was observed along the entire western edge of the property area and along part of the north side of the project". The report indicates residential properties and the bowling alley border the site. According to the report "Grading and recontouring for the construction of the aforesaid buildings have produced the observed cut-and-fill disturbances. Conical shaped pits in a sandy area within the southwest corner of the project area evidence mining activities". These disturbed areas are shown in Map 8A of the Archeological Investigation and as "disturbed" areas in Figure 3-1.

Summary

Karst topography and drainage conditions do not appear to be present, either on the Ulster Manor site or in the Onandaga formation limestone found in the vicinity of the site.

- A study by Charles Merguerian, PhD of Duke Geological Laboratory, for the nearby Hudson Landing site (January 9, 2007) indicates "the hypothesis surrounding application of the term karst to the region is unjustifiable in light of the available geologic information" (see Appendix D).
- The USGS maps, NYSDEC Stream Index maps, and observations indicate surface water drainage patterns, including wetlands, perennial streams, and major rivers (Esopus Creek), formed in the glacially derived soils which overlie the local limestone bedrock. The NYSDEC indexes, classifies and regulates the streams in the vicinity of the site. Drainage features which are typical of karst conditions such as closed depressions, disappearing streams, or lack of perennial streams are not found on the property or in the vicinity of the site.
- The geotechnical study completed on the property did not find any indications of karst conditions, such as bedrock cavities or voids. The overlying soils and topography closely matched the bedrock surface. Depressions in the western portion of the site were identified as previously disturbed or excavated areas by the project archeologist.
- Observations of bedrock outcrops in road cuts and construction rock faces in the vicinity of the Ulster Manor site show no indications of major bedrock weathering, solution cavities, voids or caves. Outcrops adjacent to the site along NYS Route 9 and a large construction rock face, located 2000 feet north of the site were examined. The bedrock appears competent with only minor weathering and solution in the upper 3 to 5 feet below the ground surface, primarily along isolated vertical fractures.

Comment 3-1 (Adjoining Property Owner, Mr. Steve Engelhardt, Public Hearing, November 19, 2006.): A look at the limit of disturbance map 3.1-5 of the DEIS indicates encroachment on wetlands are more severe than originally indicated. This along with detention ponds in 100 ft adjacent areas should not be allowed. The importance of this cannot be over stated.

Response 3-1: *The revised site plan eliminates all disturbance to the NYSDEC regulated 100-foot adjacent area or wetland buffer. Please refer to Chapter 1.0 Introduction.*

Comment 3-2 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The Ulster Manor development involves the construction of a 3,161 feet long public road from Memorial Drive that terminates at a cul-de-sac which is described as a "temporary dead-end" (page 1-2). The project refers to a future connection to the vacant lands to the east. A "break away" gate would be installed to provide secondary, emergency site access via Quail Drive.

We recommend that the Planning Board give further evaluation to the configuration of the proposed 3.161 feet long public road. Chapter 161-19(I) of the Code of the Town of Ulster (2006) limits permanent dead-end streets to a length of 1.200 feet. The DEIS suggests compliance with this requirement based on a presumption of a future road connection to the adjacent eastern parcel. This should be evaluated further since the eastern parcel contains large NYSDEC regulated wetlands which may limit or prevent development of a future connector road. If the 1,200 feet limit were applied from the intersection with Proposed Townhouse Road B, it would result in the cul-de-sac at Lot 13 thereby reducing the number of single family dwellings from 25 to 20 (eliminating Lots 14 through 18). If a future connection road were to occur, these 5 lots could be developed at that time.

> ***Response 3-2:*** *Comment noted. As described in Chapter 1.0 Introduction, the proposed project has been modified to eliminate the 25 single family residences in the eastern portion of the site, allowing the proposed cul-de-sac to be shortened to 825 feet in length. As suggested above, the length of the cul-de-sac is measured from the intersection with Proposed Townhouse Road B. The right-of-way for a future connection with lands to the east of the property would still be provided in the current plan.*

Comment 3-3 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The road grade from approximately STA 0+50 to STA 2+00 is very steep with a 12% slope. Chapter 161-19(I) allows for a maximum grade of 8% on a Collector Street. We recommend redesigning the road to an 8% slope since all traffic for the Ulster Manor Development will use this for ingress and egress.

> ***Response 3-3:*** *The roadway from STA 0+50 to STA 2+00 was redesigned with a maximum grade of 8 percent. Road profiles are provided with the Site Plan Drawings as Drawings.*

Comment 3-4 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Provide a minimum radius of 50 feet paved roadway for the cul-de-sac at STA 31+61 in accordance with Chapter 161-19(E).

> ***Response 3-4:*** *A 50 foot radius of paved roadway is provided at the proposed cul-de-sac. See Drawing SP-1 - Proposed Layout.*

Comment 3-5 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): This lack of attention to detail (throughout the reviewed portions of the DEIS) is troubling as it makes me wonder how much of this DEIS is `boilerplate' and not reflective of this particular site's unique attributes. For example; it is unsettling that a reference to the town of Wawayanda is made in the soils section.

> ***Response 3-5:*** *The DEIS provides a detailed description of the Ulster Manor Project, and provided extensive studies and analysis of existing conditions on the property, and*

of the project's potential impacts. The reference to the Town of Wawayanda was a printing error.

Comment 3-6 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Water Quality Basins #3 and #4 need to be moved out of the wetland buffer. Water Quality Basins (WQBs) #3 and #4 are designed as Micropool Extended Detention Ponds (P-1), as noted in the NYS Stormwater Management Design Manual, August 2003. A micropool extended detention pool is a pond that treats the majority of the water quality volume through extended detention, and incorporates a micropool at the outlet of the pond to prevent sediment resuspension. WQB #3 is located inside a wetland buffer. This basin is located on hydrologic soil group "A" soil and will likely not hold water in the pool.

The Natural Resources Conservation Service (NRCS) has grouped soils into four distinct classes based on how they respond to water. The four classes are hydrologic soils group:

A: High Infiltration Rate (water "seeps" into the ground quickly)

B: Moderate Infiltration Rate

C: Slow Infiltration Rate

D: Very Slow Infiltration Rate (if the site is "flat" water is prone to form puddles, if the site is "hilly" the water will likely flow downhill)

(NRCS 2003 Part 618.35). Group A soils are often sandy, whereas Group D soils often have a high clay content or a restrictive layer (e.g., bedrock). WQB #3 has only 5.98 acres of drainage area - well below the 10 acre minimum for the practice. It does not meet the length to width ratio requirements between the inlets and the outlet. Outlet protection should be provided from the forebay road culvert to the micropool. In addition, it shows no anti-seep collar on the outlet pipe.

WQB #4 is proposed to be built inside the wetland buffer and should be relocated.

WQB #4, forebay #2 outlets down a 23% slope to the micropool. The rock outlet protection will have to be constructed all the way down to the bottom of the pool to prevent erosion on the slope and scour at the pool bottom. The overflow rock spillway should not be placed over the pipe outlet.

Response 3-6: *The proposed stormwater management and treatment facilities have been modified to reflect the revisions in the site plan, described above. Revised stormwater facilities are shown in Drawings WQ-1 through WQ-9. The drawings provide stormwater management practices locations, sizes of the drainage areas, plan and profiles, and details.*

Given the revisions to the stormwater management facilities, the above comments may not all apply to the current plans. All stormwater management facilities have been located outside of the 100-foot adjacent area or wetland buffer. The five (5) proposed water quality basins, designed as Micropool Extended Detention Ponds, have been designed with 12 inches of compacted clay liners to provide for adequate stormwater

detention. Please see attached Drawings WQ-1 through WQ-9 for specific construction details including outlet protection details.

Comment 3-7 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Infiltration wells are not a suitable practice for hydrologic soil group "C" soils. On DEIS page 3.1-9, a section describes the "Adequacy of Soils for Stormwater Infiltration." Infiltration practices are not an effective stormwater control practice on hydrological soil group C soils; the stormwater pollution prevention plan should be amended accordingly. For example, dry wells are proposed for the single family lots on the east side of the project site. Homesite Lot #1-25 calls for the installation of a drywell at each corner of the house for infiltration. However, the underlying soils at this location are classified as hydrologic soil group "C," which are not compatible with this practice due to their low infiltration rate. Soils in this section are clay, clay loam, and are "mottled". Bedrock is also shallow (1.5 feet) in spots. Therefore, infiltration wells are not a suitable practice for this location.

Response 3-7: *The 25 single family residences have been eliminated from the proposed action. Therefore, no drywells are proposed for the infiltration of stormwater. Stormwater from the developed eastern portion of the site would be treated in Water Quality Basin #5. Details of this stormwater facility are provide in Drawing WQ-6.*

Comment 3-8 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Site soils are not being used to control stormwater infiltration. There is a significant amount of hydrologic soil group "A" soil on site (25.5 acres). Much of the area supporting the hydrologic group "A" soil is to be intensely developed with townhouses and roads. Decreasing the development density in this area will reduce the amount of impervious area and increase infiltration. In other words, these hydrologic soil group "A" soils are very effective at infiltrating stormwater and recharging groundwater. However, placing impervious surfaces on top of these soils eliminates their stormwater infiltrating capabilities. In addition, allowing these soils to infiltrate effectively reduces the size requirement for downgradient stormwater basins and may eliminate encroachment into the 100' wetland buffer.

Response 3-8: *Comment noted. The majority of the site does consist of Plainfield Rock Outcrop Complex (PrC) which is a hydrologic group "A" soil, with good drainage characteristics and high permeability. Residences and roads are proposed for the western portion of the site, since it is the most level well drained portion of the property. Wetlands, regulated 100-foot adjacent areas, and steep slopes have been avoided to the extent possible. No development is now proposed in the NYSDEC regulated wetland and 100-foot adjacent area. The proposed area of disturbance and the area of impervious surface has been substantially reduced compared to the plan analyzed in the DEIS. Stormwater facilities have been carefully designed in the area of Group A soils to provide effective stormwater treatment for developed portions of the site.*

Comment 3-9.1 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Wet swales should not be located on hydrologic soil group "A" soils. A typical swale is a linear, flattish depression in the ground surface which conveys storm water. Water Quality Basins #1 and #2 are designed as "Wet Swales." WQB #1 is located on hydrologic soil group "A" soils, which are highly permeable. A wet swale is not appropriate here, as the underlying soil will

likely not hold water. No soil borings or other data was provided at this location to corroborate this proposed practice. WQB #2 is located in an area that shows bedrock at four feet below the ground surface. According to the DEIS, swales are to be constructed from two to three feet deep. Since this swale is proposed to be excavated below the ground surface, where the top of the swale is about 3 feet below the original ground surface, shallow bedrock and water capacity problems are expected. The water table is not shown on the site plan and is a design requirement for utilizing a wet swale (NYS Stormwater Management Design Manual, August 2003).

Response 3-9.1: *As described in the above comments and discussion, the stormwater management facilities have been re-designed based upon the new layout, and in response to Town and consultant comments. Please refer to Drawings WQ-1 through WQ-9.*

Water Quality Basins #1 and #2 are designed as pocket ponds, per NYSDEC design guidelines. The basins are located in Group "A" soils which are permeable. The basins were designed utilizing soil boring data, as provided in Drawing EC-1-Existing Conditions. The basins are designed utilizing 12 inches of compacted clay in both the forebay and in the micropool portion of the basin.

Comment 3-9.2 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Construction phasing should follow DEC guidelines. The General Permit at Part III.D.2(a)(4) requires the project sponsor to "provide a construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance." This provision further identifies the state-wide requirement that "there shall not be more than five acres of disturbed soil at any one time without prior written approval of the [DEC]." The New York State Standards and Specifications for Erosion and Sediment Control ("E&SC Standards"), that are the DEC recognized SPDES standards (see General Permit at Part III.D.1), also state that "[n]o more than 5 acres of unprotected soils should be exposed at any one time" and goes on to state that "[s]ite factors including topography, soil erosion potential, proximity to wetlands and water courses may require limiting the amount of raw earth that can be exposed at any one time to less than 5 acres." See E&SC Standards at Appendix A, Section E. 1. For this DEIS, the Construction Phasing Plan should be shown on the site development maps with their sequence of operations. Appendix C, Vol. II of II shows disturbed areas to be in many cases 5.0 acres +/- and 4.9 +/-. This type of approximating appears to exceed the five acre requirement. As stated above, the limit of disturbed soil is 5.0 acres, unless NYSDEC written approval is attained.

Response 3-9.2: *The Construction Sequencing Plan has been modified to reflect the current site plan and project layout. The Construction Sequencing Plan is provided in Appendix E. The current plan would result in the disturbance of a total 18.5 acres, a reduction of approximately 10 acres or 35 percent compared to the previous. Plan. As provide in the Sequencing Plan, no more than five acres of unprotected soils will be exposed at any one time.*

Comment 3-10 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): The construction drawings need to be updated. Although the DEIS is dated 9-21-06, the

construction drawings are most recently dated 4-18-06. As a result, a number of inconsistencies exist between the DEIS and the drawings (e.g., WQ-5 dated 4-18-06). These inconsistencies can result in contractor confusion and/or errors in the field. The construction drawings need updated notes to conform with the "NY Standards & Specifications for Erosion & Sediment Control" (August 2005) and to be consistent with the DEIS.

Response 3-10: *The site plan drawings have been updated from the plans distributed with the DEIS. The current plans are not strictly consistent with the DEIS, nor are they intended to be. Revisions to the drawings reflect modifications to the project design and layout, as well as comments from the Town, its consultants, other agencies and the public. The site plan drawings have and will continue to be updated and revised during the SEQRA, Site Plan review and permitting process.*

A Soil Erosion and Sediment Control Plan has not been provided with the current set of drawings based upon discussions with the Town and the town's consulting engineer. Once the overall project design and layout are agreed upon (number of units, roadway layout, stormwater management facilities), then a Soil Erosion and Sediment Control Plan consistent with the "NY Standards & Specifications for Erosion & Sediment Control" (August 2005), will be provided to the Town.

The intent is to provide a comprehensive highly detailed soil erosion and sediment control plan based on the construction phasing and installation of utilities. The time of the year during construction may influence this plan. At present, the development will be phased in four sections based on the 5-acre maximum disturbance criteria for each section. The soil erosion and sediment control plan may further break down the phasing into sub areas requiring stabilization prior to disturbance of the next sub area and will include details of clearing, storage of materials, construction routes, staging for building materials, concrete waste stationing, etc. These detailed plans will be submitted with final site plans to the Planning Board for review by their consultant and the NYSDEC for their review of the NOI and confirmation of coverage under the SPDES permit.

Comment 3-11 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Additional information is needed on the detailed site map: The Soil Survey Map boundaries should be shown on the detailed site map; as noted in GP-02-01.

Response 3-11: *Figure 3.1-3 Soil Analysis Map, provided in the DEIS is based upon the Soil Survey of Ulster County, New York prepared by the USDA Soil Conservation Service, Issued June, 1979. The soil units and boundaries shown in the Figure are consistent with the Soil Survey.*

Comment 3-12 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): The construction drawings lack critical information: There are no erosion and sediment control practices shown on the plan views of the construction drawings. This makes it impossible to evaluate resource protection (e.g., wetlands) or for any contractor to estimate their costs. The supplemental EIS we recommend should be submitted with this information.

Response 3-12: *See Response 3-10, above. A Soil Erosion and Sediment Control Plan has not been provided with the current set of drawings based upon discussions with the*

Town and the town's consulting engineer. Once the overall project design and layout are agreed upon, then a detailed Soil Erosion and Sediment Control Plan will be provided to the Town. The plan will be consistent with the "NY Standards & Specifications for Erosion & Sediment Control" (August 2005).

Comment 3-13 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Provide a detailed plan for the disposal of clearing and grubbing waste. The Environmental Assessment Form states 24.5 acres of forest will be removed; while the DEIS states 12.8 acres, what is actual amount of deforestation? The clearing and grubbing of the project site would generate large quantities of waste materials (e.g., brush, sod, and stumps). However, the manner in which this material will be managed is not addressed in the DEIS. If the waste material is to be buried onsite, an erosion and sediment control plan needs to be developed to account for additional deforestation associated with onsite burial and to address newly created stormwater concerns. In any event, the DEIS must provide a detailed plan for the disposal of clearing and grubbing waste.

Response 3-13: *Timber, tree stumps, brush and vegetation which is removed during the initial stages of construction will be collected and disposed of off-site. No vegetation, stumps or brush of any kind will be buried on the property. Such disposal can and would create future problems with settlement and drainage. Tree and brush removal can be addressed as notes on the Soil Erosion and Sediment Control Plan. The off-site disposal of vegetation cleared during construction is typically not considered an issue of environmental concern.*

Comment 3-14 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): A concrete truck washout station is needed. A concrete truck washout station should be provided to prevent concrete waste and slurry from being released offsite.

Response 3-14: *A concrete truck washout station and construction wheel wash will be provided on the Soil Erosion and Sediment Control Plan provided with the Site Plan drawings.*

Comment 3-15 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Haybales need to be repositioned to be effective. On DEIS page 3.1-10, haybale barriers should be used downgradient of silt fence to support the fence, not upgradient.

Response 3-15: *Haybales will be installed on the down-slope side of silt fencing, consistent with the "NY Standards & Specifications for Erosion & Sediment Control" (August 2005).*

Comment 3-16 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Haybales are not to be placed in ditches. General Erosion and Sediment Control practices that are to be used on site include "hay bale check dams" (page 3.1-11). Haybales are not to be used in ditches because they concentrate flow and cause erosion.

Response 3-16: *Hay-bale check dams are appropriate erosion control measures used to slow the velocity of stormwater in ditches. Since they are placed across ditches, flow is not concentrated but slowed, which results in less potential for erosion. The use of hay bales in the Soil Erosion and Sediment Control Plan, will be reviewed by the Town Engineer and the NYSDEC.*

Comment 3-17 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): The units associated with mulch need to be specified. On DEIS page 3-11, the rate of mulch application to assist in erosion control should be specified as tons per acre.

Response 3-17: *Mulch would be applied at rates and quantities to sufficiently cover exposed soils, at the direction of the construction manager.*

Comment 3-18 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): No mention is made to proposed actions to control dust even though blasting and substantial earth movement is proposed within 300 feet of residential properties. It is recommended that the developer be required to implement dust monitoring protocols consistent with NYSDEC and NYSDOH protocols and guidelines.

Response 3-18: *Mitigation measures to control dust have been added to the revised Blasting Mitigation Plan, provided in Appendix L. Dust control at construction site involves minimizing the area of exposed soils and the soil tracked onto roadway surfaces and equipment. Methods to control dust will include:*

- *minimizing the area of grading at any one time and stabilizing exposed areas with mulch and seed as soon as practicable;*
- *minimizing vehicle movement over areas of exposed soil, and covering all trucks transporting soil;*
- *unpaved areas subject to traffic would be sprayed with water to reduce dust generation;*
- *truck vehicle washing pads would be constructed at all construction entrances to avoid the tracking of soil onto paved surfaces.*
- *Dust control will be the responsibility of the project construction manager. The construction manager will determine when water spraying on exposed soils will be necessary, depending upon weather conditions, truck traffic, wind and/or areas of exposed soils close to adjacent residences. The Town Engineer or designated Town construction inspector can also require the implementing of dust control procedures, as listed above.*

Comment 3-19 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): No comment is made regarding the presence or absence of contaminants in soils proposed for (or subject to possible) off-site disposition. It is recommended that:

a. The developer provide a Soil Management Plan specifying procedures for managing soils proposed for off-Site disposition, including dust management strategies, proposed stockpiling and loading procedures and truck routes; and

b. The developer collect and have analyzed soil samples of soil proposed for off-Site disposition.

Response 3-19: *There is no evidence or indication that on-site soils have been impacted by petroleum or chemicals. The project site has never been developed according to the Phase 1b and Phase 2 Archeological reports. The historical resources reports and the Phase 1 Environmental Assessment indicated no evidence of prior commercial or industrial uses on the site. The Phase 1 Environmental Assessment indicated no evidence of spills or releases of petroleum or hazardous material, or organized dumping on the property.*

Based upon the current plan, no soil will require off-site disposal. All excavated soil will be utilized on-site and up to 2,664 cubic yards of soil will need to be imported into the site construct the proposed development. Since soil will largely be managed on-site using typical construction techniques a specific Soil Management Plan is not necessary. Dust management is described in Response 3-18 above and in the revised Blasting Mitigation Plan (Appendix L). On-site soil stockpiling locations will be provided in the Soil Erosion Control Plan. All construction traffic will utilize Route 9W and Memorial Drive. Construction traffic is further described in Section 3.6.20 Traffic From Construction Activity.

Since there is no evidence of petroleum or chemically impacted soil on the property, and all on-site soil will be reused on-site, no on-site soil sampling is necessary. Any soil imported to the site will have documentation regarding its source and its integrity (soil analytical results), consistent with NYSDEC protocols. This documentation will be provided to the Town Engineer.

Comment 3-20 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Blasting impacts detailed in Section 3.1.2 should be expanded to include noise and dust. Concurrently, the DEIS should be expanded to specify how both noise and dust impacts will be mitigated.

Response 3-20: *See Response 3-18. Additional information is provided in a revised Blasting Mitigation Plan regarding mitigation for noise and dust. Please refer to Appendix L.*

Comment 3-21 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): The DEIS references a Phase I Environmental Site Assessment (Phase I ESA) that is both outdated and was prepared in a manner inconsistent with the (then) applicable standard (E1527-00). As this document is relied upon by the DEIS "as evidence that there are no environmental hazards present on the project site" (paragraph 3.1-8), it is recommended that the Phase I ESA be updated consistent with current guidelines (E1527-05). It is the opinion of this office that the Lead Agency should not rely on the incomplete document.

Response 3-21: *The Phase 1 Environmental Site Assessment was not required by the Scoping Document, but rather was included to provide additional background information regarding the historic uses and environmental conditions on the property. Although the report referenced the ASTM Standard for 1994, the assessment was completed generally consistent with the ASTM E1527-00 Standards. The report was completed by an environmental professional with over 18 years of experience with*

property assessments. The conclusions of the assessment were based upon: a review of Town of Ulster property records, interviews with the property owners, a review of an environmental database and the NYSDEC Spills and Petroleum Bulk Storage database, and a detailed site visit. Historic uses of the property were further documented by the Phase 1B and Phase 2 Cultural Resource Survey.

If the property had a history of industrial or commercial uses, or evidence of routine and organized dumping, then environmental issues or potential soil impact would be a greater concern. Given the documented history that the site has always remained undeveloped, further environmental investigation on the site is not warranted.

Comment 3-22 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Truck routes for material proposed for removal should be clearly specified. "Likely" routes (see paragraph 3.1-9) should be discouraged.

Response 3-22: *As described in the Introduction, project modifications have resulted in no material requiring off site disposal. Construction traffic will utilize Route 9W and Memorial Drive, as discussed in Section 3.6.20 Traffic From Construction Activity.*

Comment 3-23 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): No dust monitoring and control plan is specified in the mitigation section (Section 3.1.3). A Plan protective of nearby residents should be included.

Response 3-23: *See Response 3-18, above.*

Comment 3-24 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Although not anticipated, a contingency plan for damage to nearby wells from blasting should be specified (blasting is estimated to occur no closer than 1,500 feet from these wells).

Response 3-24: *Per the Blasting Mitigation Plan pre-blast surveys will be conducted on buildings within 1,000 feet of the blasting area. These surveys will concentrate on buildings, building foundations, and if the property has an existing water supply well. All of these structures will be documented before any blasting occurs on the property. As stated in the Blasting Mitigation Plan, Appendix L, the condition of the wells will be monitored before any blasting, as well as the depth of casing and water table elevation will be measured and recorded before blasting. If it is proven that the blasting on the property has caused damage to the well it will be repaired by the applicant and if needed an alternative water supply will be provided, either by connection to the a public water supply or the drilling of a new well.*

Comment 3-25 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): The location and dimension of rock outcrops is not described in the DEIS. This is critical given the acknowledged Karst geology underlying this area. It is recommended that:

a. The applicant accurately locate rock outcrops.

b. The applicant provide detailed descriptions of site lithology (rock type) and Karst features.

c. The applicant show the percentage of exposed bedrock that will be removed through proposed cut and fill activities, with proposed measures to reduce impacts, if appropriate.

Response 3-25: *Rock outcrops, and a detailed discussion of site lithology and the potential for karst features are described in the introduction, above. A limited area of exposed bedrock at the entrance road, will require removal. The locations of bedrock removal are described in Section 3.1 of the DEIS.*

Comment 3-26 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): The DEIS refers to "natural non-wetland depressions" with "outlet" (Page 3.2 – 3). The applicant should determine if these areas are sinkholes, access the hydraulic connectivity of the "" and groundwater, and propose protective measures to prevent impacts, if applicable.

Response 3-26: *These features are not "sinkholes" but formerly excavated or mined areas on the property. A further discussion of on-site geology, topography and drainage is provided in the introduction, above.*

Comment 3-27 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Table 3.1.2 Soil Characteristics and Limitations (page 3.1-4) and last topic in section 3.1.2 Adequacy of Soils for Stormwater Infiltration (page 3.1-9) appears to be in conflict. Only the Plainfield is adequate; the other soil types exhibit decreasing percolation rates downward in the soil profile. The percolation rate of least magnitude is the limiting factor to infiltration. The Bath/Nassau soils have poor vertical infiltration and tend to pond and puddle as well as exhibit perched water table above fragipan.

Response 3-27: *The commentator is correct that zones of poor permeability do limit the overall infiltration rates of the soil unit. The Soil Survey describes the Bath-Nassau Complex (BnC) soils as: well drained Bath, gravelly silt loams and shallow somewhat excessively drained Nassau shaley, silt loams. A fragipan is described in the lower part of the Bath soils and shallow bedrock described in Nassau soils. As described in Chapter 1.0 Introduction, the area of proposed development has been reduced in the Nassau-Bath soils and is limited to 22 town home residential units in the northeast corner of the site. The access road and a cul-de-sac are also located in the area of mapped Nassau-Bath soils. All stormwater from the eastern portion of the site (Bath-Nassau-Rock Outcrop Complex (BOD)) will be directed to Water Quality Basin #5 which is located in the Bath-Nassau soils complex (BnC), as shown in Drawing WQ-1. This infiltration basin was designed using soil boring data collected at the location, and the design considered the soils properties at that location.*

Comment 3-28 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Section 3.1.2 indicates that crushed bedrock will be used as fill for roadways. Crushed rock forms a very stable fill, but is unfortunately very permeable due to the space between rock particles. The permeability of volumes of fill will effect groundwater infiltration and movement which is contrary to the conclusion that " project is not anticipated to impact local groundwater quality or quantity" (page 3.2-15). It is recommended that the applicant consider this issue carefully and modify the Proposed Action, if warranted.

Response 3-28: *Crushed stone is used and specified for virtually all modern roadway construction projects. The stone is used since is does form a stable fill which is*

permeable. It is necessary to provide a permeable base to drain any water from under the asphalt pavement. If water is trapped under the pavement it is subject freeze and thaw cycles and frost heaves in cold temperatures, which results in potholes and damaged pavement. Since the crushed stone is placed under the pavement, very little precipitation should reach this layer of stone. The overall impact of 6 to 12 inches of crushed stone under pavement is not expected to affect the contribution to groundwater from the 40.1 acres of the site that will be either natural undisturbed soils (29.5 acres) or graded soils converted to lawn or stormwater management facilities (10.6 acres).

Comment 3-29 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Comment #4 above states that the Phase ESA was not completed in conformance with applicable standards at that time (2003). No historic maps or aerial photographs are referenced. This assessment should be redone in accordance with current (2006) standards so that the claim that "no environmental areas of concern are located on the Site" can be made in full confidence.

Response 3-29: *See Response 3-21.*

Comment 3-30 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): The ESA references mounds on the Site, approximately warning that "mounds can conceal buried matter" (page 4 of 9). This should be clarified to confirm its absence as an area of concern.

Response 3-30: *The mounds discussed are small areas of soil that appear to be the remnants of construction of residences bordering the property. Due to their small size, and lack of other dumping on the property, there is no indication that any material is buried in the mounds.*

Comment 3-31 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): As requested by the Planning Board, Brinnier and Larios reviewed the December 29, 2006 HydroQuest comment letter on the Ulster Manor Draft Environmental Impact Study (DEIS). We concur that the geology of the site is not adequately defined in the DEIS by reference to published literature reports or by site specific data. Therefore the site geologic conditions should be evaluated further in a supplemental DEIS or final EIS. If it is determined that carbonate or karst conditions are present at the Ulster Manor site, the site's hydrogeologic conditions should also be defined.

Response 3-31: *The Introduction, above provides a more detailed discussion of on-site and local geologic and hydrogeologic conditions, including the potential for karst conditions.*

Comment 3-32 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): In the HydroQuest letter, much of the discussion is based on the presumption that the Ulster Manor site is underlain by carbonate and karst conditions. The HydroQuest letter also alleges the presence of sinkholes at the site. The DEIS Section 3.1.1 Soils and Geology states "... the project site is underlain by the Onondaga Limestone and Ulster Group ...". The presence or absence of carbonate and karst conditions is not stated in the DEIS and needs to be established.

Response 3-32: *Discussion of on-site geology and potential karst conditions are provided in the Introduction above.*

Comment 3-33 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The results of this additional geologic evaluation should also be factored into the management of runoff as presented in the Stormwater Pollution Prevention Plan (SWPPP).

Response 3-33: *The Stormwater Pollution Prevention Plan and the design of the stormwater treatment facilities were prepared using information and field data for on-site soil and bedrock conditions. A total of 46 soil borings were completed on the property in the January 2005 geoprobe testing program. The geoprobe testing provided detailed soils information and depth to bedrock at the 46 boring locations. For further discussion of on-site soil and geologic conditions, see introduction, above.*

SOIL ANALYSIS FOR ENTIRE SITE			
LEGEND	USDA SOIL TYPE	AREA (ACRES)	%
	NBF	1.37	2.85
	BnC	16.07	33.48
	PrC	25.50	53.13
	BOD	3.90	8.13
	Cd	1.16	2.41
TOTAL		48.00	100

Figure 3.1: Soil Analysis Map
Ulster Manor
Town of Ulster, Ulster County, New York
Source: Medenbach & Eggers Civil Engineering and Land Surveying, P.C.
Scale: 1 inch = 200 feet

File 05053 4/10/08
JS/05053

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

1) Limestone bedrock road-cut on Route 9W, near Memorial Drive, directly west of the site, facing northeast.

2) View of bedrock road-cut on Route 9W, directly west of site (facing east. Bedding and chert layers are visible. Solution is visible near rock surface.

Figure 3-2 Local Bedrock Photographs – Ulster Manor, Ulster, New York

3) Limestone bedrock exposure in parking lot cut, located 2000 feet directly north of the site, facing south. Bedrock is on the same ridgeline as Ulster Manor.

4) View of same bedrock exposure north of the site, facing south. Minor solution and weathering is visible in upper portion of exposure.

Figure 3-2 Local Bedrock Photographs – Ulster Manor, Ulster, New York

5) View of same bedrock exposure north of the site, facing south. Minor solution and weathering are visible near surface and along fractures.

6) View of same bedrock exposure north of the site, facing south. Note lack of solution and weathering.

Figure 3-2 Local Bedrock Photographs – Ulster Manor, Ulster, New York

4.0 WATER RESOURCES COMMENTS AND RESPONSES

Section 1.0 Introduction, describes modifications to the Ulster Manor project since the distribution of the DEIS. The proposed changes to the layout would reduce the overall potential impacts to post-development stormwater treatment and flow, potential impacts to wetlands and surface water resources, and potential impacts to groundwater resources. Specifically, site disturbance would be reduced from 28.7 acres to 18.5 acres as a result of the elimination of the single-family neighborhood that was proposed, and the shortening of the proposed cul-de-sac. Therefore, the loss of woodlands and on-site vegetation would be reduced by approximately 10 acres or 35 percent.

The length of the cul-de-sac in the eastern portion of the site has been reduced by approximately 1000 feet. Disturbances to areas that drain to the New York State Department of Environmental Conservation (NYSDEC) Wetland KE-10 have been reduced substantially. The amount of impervious surface area introduced by the project would decrease from 12.84 acres to 7.92 acres, a reduction of 38 percent. These changes would reduce stormwater volumes and lessen the amount of treatment required.

The project has been modified to eliminate all disturbance to the regulated 100 foot area adjacent to the NYSDEC Wetland KE-10. The previous site plan would have impacted approximately 1.52 acres of regulated 100 foot adjacent area, as a result of grading for stormwater treatment facilities and at the edges of the internal roadways.

The reduced area of impervious surface proposed with the current plan would allow a greater amount of precipitation to naturally recharge the local aquifer.

Comment 4-1 (Ms. Marlene Engelhardt, Public Hearing, November 08, 2006): Right now surface water flows naturally down and through the forested slopes and into the connected wetlands. This proposed development will increase the flow of stormwater runoff as a result of the creation of 12.84 acres of impervious surfaces. From the 12.8 acres of forest that has 5.1 acres, maybe more, of regulated state and federal wetlands, and steep slopes of 15% or greater. This stormwater runoff will drain into, unto and through my (KE-10) NYS Class II Freshwater wetlands; and on through to other connected KE-10 KE7 wetlands and eventually drain into the Hudson River, a 303d waterbody of the United States. It is my property right to enjoy these wetlands with their wildlife vegetation and fauna; and that right will be taken away because I believe that serious harm will come to these wetlands if they are not protected from this unreasonable project design and size.

> ***Response 4-1:*** *To mitigate potential impacts associated with Ulster Manor, the layout has been reconfigured and the impervious surface area of the development is now 7.92 acres, compared to the 12.84 acres originally proposed. In addition, no disturbance is proposed to the NYSDEC wetland 100-foot regulated area. The proposed multiple stormwater detention ponds/swales and infiltration practices identified in the project's Stormwater Management Plan address the potential adverse impacts on surface water resources associated with increases in stormwater volume and decreases in stormwater quality. These stormwater management facilities were selected, designed, and would be constructed, in accordance with NYSDEC design guidelines and regulations, including NYSDEC General Permit for Stormwater Discharges from Construction Activity GP-02-01, and EPA Phase II requirements.*

Comment 4-2 (Ms. Marlene Engelhardt, Public Hearing, November 08, 2006): The projects stormwater management Plan (3.2.3 Pg 3.28 Vol I DEIS) has four (4) water quality basins, three (3) of which are proposed to be located in the 100 ft adjacent buffer area of the delineated wetlands. Their discharge will be into the two (2) acres of vernal pools and other delineated DEC Jurisdictional wetlands which flows to and through my properties freshwater wetlands. This is unreasonable and unacceptable. To add insult to injury, the developer proposes that a Home Owners Association would be responsible and therefore liable for the proper function and maintenance of those water quality basins. The developer also proposes that the proposed public road portion (WQB4) be that of the Town of Ulster.

> ***Response 4-2:*** *The Ulster Manor SWPPP (see attached document), has been revised to locate all stormwater management areas, including the three (3) water quality basins mentioned in the above comment, outside of the 100 ft NYSDEC wetland adjacent areas. The Homeowners Association would own and manage the on-site stormwater management basins. The Town can create a back-up drainage district to ensure that it has the ability to enforce maintenance of the basins. The main access road would also be owned and maintained by the Homeowners Association.*

Comment 4-3 (Ms. Marlene Engelhardt, Public Hearing, November 08, 2006): The executive summary 1-10 Vol I DEIS Stormwater Management states: Long term maintenance of all drainage structures, pipes and treatment devices would be the responsibility of the Homeowners Association. Only the drainage system within the proposed Town road will be dedicated to and maintained by the Town of Ulster. This would leave the Town of Ulster liable. ask you does this sound reasonable? I think not. And to quote a text from Local Law 278. A lack of control or maintenance will result in deteriation[*sic*] of that area to the detriment of the entire community.

> ***Response 4-3:*** *Refer to Response 4-2. The Ulster Town Code was reviewed and it is unclear what Local Law the commentator has referenced. Homeowner Association fees would be utilized to fund maintenance of the community properties; activities would include snow removal, landscaping, mowing, and maintenance specific to the stormwater management facilities.*

Comment 4-4 (Ms. Marlene Engelhardt, Public Hearing, December 19, 2006): Now I would like to remind you that at the November 8th, 2006 public hearing I commented to the board of the unreasonableness of this project design and size. And especially to the unreasonableness of a Homeowners Association being responsible for the proper continual functioning, care and maintenance of the detention ponds located in the sloped adjacent buffer areas of the protected freshwater wetlands, where the top of the ridge is proposed to be blasted off to make subdivision lots between these protected freshwater wetlands.

The previous engineering questions coupled with the information provided by wetland specialist, Karen Schneller McDonald's written comments of November 8th 2006 about stormwater runoff pollutants and road salt contamination of wells and road salts affect on the other stormwater contaminants, enhancing the toxicity and the adverse environmental impacts of stormwater runoff.

The blastings effects on aquifers that could open cracks conducting pollutants to wells... Becomes a glaring issue of great concern. A public health matter to those of us with private wells living within the KEIO protected freshwater wetland watershed.

Response 4-4: *The use of road salt on the parking lots and roads of the proposed Ulster Manor development is unavoidable. Winter weather conditions in Ulster County typically require that sodium chloride (road salt) be applied to paved surfaces to provide safe conditions for motorists and pedestrians. The effects of road salt on the environment, however, can be reduced in many ways such as:*

- *reducing the accumulation of snow and ice on the roads, therefore eliminating the need for salt. This also includes taking measures, such as snow fencing or shrub rows, to prevent snow drifting from occurring on roads.*
- *better predicting of when and where salt needs to be applied, e.g. placing salt on roads at the beginning of ice storms to prevent the formation of ice.*
- *Improving the accuracy with which salt is placed on the roads and reducing the amount of salt lost to roadside shoulders and ditches. Salt cannot perform its function of preventing the bonding of snow and ice to the road surface if it is lost to the side of the road.*

While several alternatives to calcium chloride exist, the environmental effects of these chemicals are not well documented and are likely to have unforeseen effects. The use of road salt can be minimized by mixing in sand at a ratio of six parts sand to one part salt when practical.

Stormwater management facilities would function to reduce and mitigate the majority of pollutants found in stormwater run-off, including total phosphorus, total nitrate, total suspended solids and biological oxygen demand (BOD). The majority of plant damage caused by roadway deicing salts occurs immediately adjacent to the roadway where the concentrated application can fall upon the vegetation. With the extended detention of the calculated water quality volume, the winter runoff containing roadway salt is diluted to a much lower concentration and the stormwater management practice allows for a degree of treatment. It should be noted that the impervious surface resulting from the project represents a relatively small portion (4.8 percent) of the total wetland drainage area (see Response 4-31).

Comment 4-5 (Ms. Marlene Engelhardt, Public Hearing, December 19, 2006): With the water quality of the watershed on this property and adjacent properties, the human health issue if you will, at risk; and as Ecological Consultant Field Biologist James G. Barbour's comments/report of November 30, 2006 points out... that environmental degradation is highly likely and potentially far reaching with this proposed project; plus the existence of the rare mesophytic forests and NYS threatened terrestrial starwort plant species, the threatened eastern Box Turtle and the possibility of other rare plant and animal species and habitats that may be found when the proper on and off-site inspections are done; and the thousand year old pre-contact artifacts and relics found in places that they were left thousands of years ago, as mentioned in this DEIS document. The hydrological connected vernal pools, KEIO, KE7 freshwater wetlands with their adjacent buffer areas on this parcel and adjacent properties and the other freshwater wetlands all the way to Lake Katrine and eventually to the Hudson River, a 303d water body of the United States; more than meets the listed qualifications that are set forth in SEQRA where only one is needed to qualify as a Critical Environmental Area.

Response 4-5: *See response to Comment 2-5 with regard to critical environmental areas. According to the SEQRA regulations, the implication of an area being designated a CEA is as follows: "...the potential impact of any Type I or Unlisted Action on the environmental characteristics of the CEA is a relevant area of environmental concern and must be evaluated in the determination of significance..." The Planning Board issued a Positive Declaration and required that the applicant prepare a DEIS.*

The scope of the ecological and archaeological investigations required as part of the SEQRA review process were developed through the public scoping process conducted by the Town of Ulster. The potential for environmental impacts in these areas of concern were then identified through written correspondence with the appropriate state and federal agencies. The DEIS addresses the ecological, anthropological and hydrological concerns that were identified by the agencies. In those instances where impacts were considered to be unavoidable, mitigation was proposed. For example, the completion of a recovery and cataloging process for the prehistoric artifacts on the site by a professional archeological investigator.

Comment 4-6 (New York State Department of Environmental Conservation, Mr. Scott E. Sheeley, letter dated November 30, 2006): The site contains portions of State-designated Freshwater Wetland KE-10 (Class II). Based on the proposed site development plan, it appears that impacts to this wetland and its 100-foot adjacent area from building construction have been avoided. However, portions of the proposed roadway and stormwater management system components are proposed within the wetland adjacent area. These impacts must be avoided and minimized to the extent practicable. Specifically, the proposed public roadway should be relocated to avoid disturbance of the wetland adjacent area. In addition, further minimization of wetland adjacent area impacts may be possible by altering the sizes, design, or locations of the stormwater management components.

According to pages 3.6-14 and 3.7-11 of the DEIS, the sponsor proposes to satisfy the Town of Ulster's cul-de-sac length requirement by providing a future roadway connection across the eastern boundary of the site to an unspecified location. We note that Freshwater Wetlands KE-10 is also present on land east of the project site and may be impacted by a future roadway or development on the site. It is unclear whether a future roadway or development of the adjacent property could be approved by the Department without additional information concerning such development and the precise location and extent of Freshwater Wetland KE-10, none of which is provided in the DEIS. Accordingly, plans for the Ulster Manor site should also be developed without the presumption that a future roadway connection is feasible. Insofar as this approach would reduce the area of clearing and impervious surfaces involved, further minimization of impacts to the 100-foot adjacent area of Freshwater Wetland KE-10 from construction of the stormwater management system may also be possible and should be considered.

Response 4-6: *Refer to introduction above and Response 4-2. No development is proposed within the 100-foot regulated area. The length of the cul-de-sac has been reduced by approximately 1000 feet, but an easement for a potential future connection to the adjacent parcel has been retained. The cul-de-sac now meets Town Code requirements for maximum cul-de-sac length.*

Comment 4-7 (New York State Department of Environmental Conservation, Mr. Scott E. Sheeley, letter dated November 30, 2006): A Stormwater Pollution Prevention Plan (SWPPP),

prepared in accordance with the requirements of the SPDES General Permit GP-02-01, will be required for this project (see above). Sediment and erosion controls should be very aggressive in planning the construction phase of this development. The five acre disturbance limit , with accompanying detailed construction sequence for each phase, must be strictly adhered to, and all temporary and long term stormwater measures must be in full compliance with New York State SPDES standards. The Department has received a SWPPP for this project, which is currently under review along with the sponsor's application for a Freshwater Wetland permit.

Response 4-7: *Comment noted.*

Comment 4-8 (Old Flatbush Road Residents, Public Hearing, December 19, 2006): We are very concerned about all the pollutants and contaminants that will run runoff and drain into and through the wetlands from the impervious and less impervious surfaces from this proposed development.

A few examples of such pollutants and contaminants are:

- The chemicals in the fertilizers, herbicides and pesticides from lawns.
- Oil, grease, antifreeze and heavy metals from driveways and parking lots.
- Road salts from snow that is plowed and piled.

We remember what happened to the residents well water supply in the Cherry Hill Development off Sawkill Road. And, the Ulster County legislatures declared findings on pesticides alone shows that this is a Public Health concern.

Response 4-8: *See Response 4-4 for use of road salts within the community. Maintenance of the residential common areas will be the responsibility of the Ulster Manor Homeowners Association. Maintenance will be done by qualified maintenance contractors.*

All stormwater from impervious surfaces, i.e. driveways and parking lots, will be directed to NYSDEC approved stormwater management facilities that have documented evidence of pollutant removal, including heavy metals. As described above, the area of impervious surface has been reduced from 12.8 acres under the former plan to 7.9 acres.

Comment 4-9 (Adjoining Property Owner, Mr. Steve Engelhardt, Public Hearing, December 19, 2006; Steve Engelhardt, letter dated December 19, 2006; and November 8, 2006 Public Hearing transcript): It is important that you guys understand all stormwater discharged onto my property. The DEIS as it is now avoids this fact. It even goes one step farther by stating water flows south then east to exit property through a break in the ridgeline.

It is obvious to me and obviously the engineer of this project that this natural hydrological connection off the Ulster Manor project onto my property is a big problem. I know it's a big problem to me. I'm asking you to have these facts addressed in the DEIS. I'm also asking you as lead agency to have these wetlands redelineated so that they are accurate. A review of map 3.2-3 on site delineated wetlands will indicate this inaccuracy. Until this is done all other calculations will be inaccurate.

Response 4-9: *It is well documented that NYSDEC wetland KE-10 extends to the south and off-site. Water within wetland KE-10 indeed flows south through a break in the ridge line, onto Mr. Englehardt's property, from where it turns east and eventually flows northeast on property bordering the Ulster Manor site to the immediate east. The DEIS never discounts the fact that wetland KE-10 flows south onto adjoining property.*

NYSDEC wetland boundaries were delineated by Michael Nowicki and the boundaries were confirmed on October 27, 2005 by Michael R. Clancy of NYSDEC staff. Per the NYSDEC Freshwater Wetland Boundary Validation block signed by Michael R. Clancy and found on the Existing Conditions drawings (Sheet EC-1), "Wetlands boundary delineations as validated by the NYSDEC remain valid for 10 years unless existing exempt activities, area hydrology, or land use practices change."

ACOE wetland boundaries were delineated by Michael Nowicki. The ACOE wetland boundaries were field reviewed on October 27, 2005 by Brian Orzel of ACOE staff. A Jurisdictional Determination was issued on February 11, 2008 validating the mapped wetland boundary, as shown on the Existing Conditions drawings (Sheet EC-1).

Comment 4-10 (Adjoining Property Owner, Mr. Steve Engelhardt, Public Hearings November 8, 2006; and December 19, 2006*):* Vernal pools should not be allowed to be referred to as temperary[*sic*] ponding[*sic*] as stated previously by the A.G. Office vernal pools in themselves are an indangered[*sic*] species. 3.2-1 and 3.2-2.

Response 4-10: *During the field investigations conducted for the DEIS, the uppermost sections of KE10 were initially identified as being seasonal, or temporary, pondings. Subsequent investigations were undertaken in order to determine whether the hydroperiod of these sections of the wetland might be prolonged enough to allow them to function effectively as springtime breeding habitat for vernal pool amphibians. The results of those surveys, conducted during the spring of 2006, indicated that spotted salamanders, wood frogs, and spring peepers, all of which are common vernal pool indicator species, were present as breeding populations within this wetland.*

The NYS Natural Heritage Program (NHP), provides a general description of vernal pools as "...intermittently to ephemerally ponded, small, shallow depressions usually located within an upland forest. They are typically flooded in spring or after a heavy rainfall, but are usually dry during summer. Many vernal pools are filled again in autumn."

According to NHP, vernal pools have a State Rarity Rank of S3, meaning limited acreage or typically 21-100 occurrences throughout the state, and a Global Rarity Rank of G4, globally secure, but are afforded no protection at neither the State nor Federal level.

Comment 4-11 (Ms. Nancy Franco, letter dated December 19, 2006): I understand that the wells will be affected and that there will be many pesticides that we will be exposed to. What will our quality of life be due to these problems? I am also concerned about the wetlands that run through this area.

Response 4-11: *See Response 4-8, above*.

Comment 4-12 (Petra Kaiser, Public Hearing, December 19, 2006): We fear for the protected wetlands, for the living creatures, the returning geese, the beaver, rear bog turtles, the peepers and the plant life. We fear for our wells, our source of drinking water. Time and time again it is brought to our attention, the pollutant that will run into the protected wetlands and contamination of wells posing a threat to lives.

Response 4-12: *Refer to Responses 4-9 and 4-11.*

Comment 4-13 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Stormwater runoff from the majority of the developed site drains to the adjacent State Wetland KE10 to the southeast and the adjacent Federal Wetland to the northeast. The project proposes the construction of four (4) water quality basins to manage runoff. The stormwater management plan has a number of deficiencies as noted below. (Reference Section 3.2, Appendix E. and Sheet U-3). Appendices A and B of Appendix E were missing from the DEIS. This missing information prevented a complete technical review of the stormwater management plan and must be provided. Provide all of the HydroCAD outputs.

Response 4-13: *Appendix A: Drainage Area Maps and HydroCAD Calculations and Appendix B: WQV Calculations were not included with the initial submission due to a printing error but were subsequently submitted to the Planning Board. Revised HydroCAD and WQV calculations are provided in the revised Stormwater Management Plan, attached as Appendix G.*

Comment 4-14 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Provide the calculations for each of the following:

- the water quality volumes (WQ_v) given in the table on page 4 of Appendix E;
- the stream channel protection volumes (Cp,);
- the overbank flood control criteria (Q_p); and
- the extreme flood control criteria (Qf).

These will be reviewed to determine conformance with NYSDEC stormwater management requirements.

Response 4-14: *The previously omitted calculations for water quality volumes, stream channel protection volumes, overbank flood control and extreme flood control have been Included as Appendix A and B of the Stormwater Management Plan (see attached plan).*

Comment 4-15 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Provide the 100 year storm elevations for Water Quality Basin #1 and Water Quality Basin # 2.

Response 4-15: *The plans have been revised to show the 1, 10, and 100 year storm elevations for all water quality basins.*

Comment 4-16 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Water Quality Basin #2, #3 and #4 are located within the protected 100 feet wetland buffer area. Redesign these stormwater management areas outside

of the 100 feet buffer area. The redesigned basins should conform to the DEC geometry guidelines.

> ***Response 4-16:*** *The previously designed water quality basins located within the 100 foot adjacent wetland area have been relocated outside of the 100 foot adjacent wetland area. The revised plans do not involve any disturbance within the 100 foot adjacent area.*

Comment 4-17 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Due to the shallow soil cover above bedrock at the site, construction of the water quality basins is likely to result in the bottom of the basins in direct contact with bedrock or situated on highly permeable Hydrologic Soil Group A soils. In these situations, the water quality basins should be designed to include a bottom clay liner to provide adequate storage to allow water quality treatment.

> ***Response 4-17:*** *Soil borings have been performed in the vicinity of all proposed water quality basins and bedrock depths. Soil types have been recorded and added to the pond profiles. A 12 inch compacted clay liner has also been added to the profiles for ponds that are within one foot of bed rock or situated in areas with highly permeable soils.*

Comment 4-18 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Verify that the site soils on single family dwelling Lots 1 through 7 are suitable for the proposed individual home site stormwater treatment systems.

> ***Response 4-18:*** *The revised site design has eliminated all proposed single family dwellings. Therefore, the previously proposed individual stormwater treatment systems for the single family lots are no longer proposed.*

Comment 4-19 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Add drawings/sheets that provide the erosion and sediment control practice information. Provide construction sequencing details.

> ***Response 4-19:*** *The DEIS addresses project phasing and demonstrates that the project can be constructed in phases that will limit the total amount of site disturbance to less than five acres at any time during construction. In addition, the revised Stormwater Management Plan gives a description of soil erosion control measures that will be strictly adhered to and inspected by a licensed engineer or CPESC (Certified Professional in Erosion and Sedimentation Control) during construction. A construction inspection schedule for the proposed practices has also been added to the report (Appendix C). As part of the final construction drawings, a detailed erosion and sediment control plan in compliance with NYSDEC regulations will be prepared by a licensed engineer or CPESC for each phase.*

Comment 4-20 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Provide an engineering evaluation of the downgradient hydrologic/hydraulic conditions for the entire KE-10 drainage area to assess the potential impacts, if any, of the increased volume of runoff from the site (note, the SWPPP will control peak runoff rates to less than or equal to pre-development rates but the development is expected to result in greater volumes of runoff from the site).

Response 4-20: *Although the total volume of runoff from the site will increase after the development, it is not expected to have any impacts to down gradient conditions of the KE-10 wetland drainage area. The total area of the KE-10 wetland consists of approximately 32.6 acres. During a 100 year storm, the anticipated increase in the volume of runoff would be approximately 2.0 acre-feet, resulting in a 0.06 foot (approximately 0.75 inches) rise in the surface water of the wetland. This small increase for the 100 year event is not significant.*

Comment 4-21 (Andrew Willingham, P.E, David Clouser & Associates, Public Hearing November 08, 2006): Crucial portions of the *Stormwater Management Plan* have been omitted from the DEIS. Specifically, Appendix A (HydroCAD Calculations and Drainage Area Maps) and Appendix B (Water Quality Calculations) of the Stormwater Management Plan were not included in the DEIS. It cannot be understated how crucial this missing information is in considering the validity and accuracy of the proposed stormwater design and in determining conformance with NYSDEC Phase II Stormwater Regulations. The most important missing piece of information is the HydroCAD stormwater calculations. The HydroCAD computer model is the basis for the stormwater design, by determining the runoff rates and volumes for pre-development and post-development conditions as well as determining the required size for stormwater structures (e.g. stormwater ponds). Within the calculations, many parameters are assumed including time of concentration factors, watershed soil conditions, ground cover types and pond sizing calculations. These assumed parameters are crucial to the stormwater design but have not been included in the DEIS. The existing wetlands in the central portion of the property were also used in the stormwater model to detain large volumes of stormwater runoff. None of the assumptions with regard to modeling the wetlands as stormwater ponds were submitted (wetland volumes, outlets, elevations). Without the supporting HydroCAD calculations, the accuracy of the stormwater analysis and the subsequent sizing of stormwater detention basins cannot be verified. This information must be submitted to the Board before any meaningful review of the proposed stormwater design can occur. Additionally, Appendix B of the *Stormwater Management Plan* was omitted from the DEIS, which includes the calculations for Water Quality Volume (WQV). The treatment of the Qater[*sic*] Quality Volume is a strict requirement under NYSDEC's Phase II Regulations. Without this information, conformance with these regulations cannot be verified.

Response 4-21: *Refer to Response 4-13.*

Comment 4-22 (Andrew Willingham, P.E, David Clouser & Associates, letter dated November 8, 2006; and Public Hearing November 08, 2006): The stormwater design calculations were omitted from the Stormwater Management Plan. However, this office has recreated portions of the design calculations (at our client's expense) to determine the accuracy of the stormwater analysis. Specifically, we calculated the volume within each of the stormwater ponds (from the *Engineering Drawings)* to determine compliance with the Water quality Volume Requirement set by the NYSDEC. The Table titled "Required Treatment Volumes" on page 4 of the *Stormwater Management Plan* indicates that each pond properly detains the required Water Quality Volume. Our calculations show that the numbers in the table are incorrect and Water Quality Basins I , 2 and 3 cannot properly treat the Water Quality Volume as required by the NYSDEC.

Response 4-22: *See response 4-14 for omitted calculations. Furthermore, Section V of the Stormwater Management Plan gives a detailed summary of the required and*

provided water quality volumes for each stormwater practice and the methodology for calculating the volumes. The provided water quality volumes were obtained from the HydroCAD calculations in Appendix A and the required water quality volumes were obtained from Appendix B of the Stormwater Management Plan which provides detailed calculations for each of the proposed water quality treatment practices. All water quality volume calculations were performed in accordance with the methodology outlined in the New York State Stormwater Design Manual (NYSSDM) August 2003.

Comment 4-23 (Andrew Willingham, P.E, David Clouser & Associates, letter dated November 8, 2006; and Public Hearing November 08, 2006): The majority of the site runoff under current and proposed conditions drains to the network of wetlands in the central portion of the property, then discharging the site to the south to NYSDEC wetland KE-10. As the Board knows, in accordance with NYSDEC Regulations, the proposed project must not increase the rate of stormwater discharge for the 10-year and 100-year storm event at any point leaving the proposed site. After a review of the current design plans and the portions of the *Stormwater Management Plan* that were available within the DEIS, it is extremely unlikely that the current stormwater design can achieve this NYSDEC requirement.

The majority of the portion of the site to be developed is composed of A-type soils. Therefore, these areas are very well drained, allowing substantial quantities of rainfall to infiltrate into the soil under current conditions. The future construction large areas of impervious surfaces (12.8 acres in total) on top of soil that is very permeable will create a massive increase in stormwater runoff when compared to pre-development conditions. The total area draining to the central wetland complex is increased by approximately 20% with the dominant change in land use cover from wooded to impervious and landscaped areas. Our calculations show that the total volume draining to this wetland complex will approximately double for the 100-year storm event (from 260,000 +/- cubic feet to 510,000 +/- cubic feet) as a result of the proposed project. The proposed Water Quality Basins provide little relief for this additional volume, as mentioned above not even providing enough volume for the Water Quality Volume (which is typically less than a 1-year storm event).

The Stormwater Management Plan shows a decrease by 38% (10 year storm) and 25% (100 year storm) in discharge from the site at the southern discharge point from the existing wetland complex. However, common engineering practices and common sense supports that a development that doubles the volume of stormwater entering a wetland will increase the discharge existing from that wetland. As mentioned above, the calculations to support these figures was omitted from the DEIS and could not be verified. The future submittal of the stormwater calculations above would certainly show this discrepancy in the stormwater model.

Response 4-23: *Both the revised site plan and stormwater management plan comply with Section 4.4 and Section 4.5 of the NYSSDM and provides the required Overbank Flood and Extreme Storm protection for all discharge points leaving the property. Appendix A of the Stormwater Management Plan contains detailed HydroCAD calculations which analyze both pre and post development runoff from the site for the 1, 10, 25, and 100 year storm events. Furthermore, the HydroCAD calculations analyze the system of existing wetlands on the property in both the pre and post development analysis and concludes that there will be no increase in peak flow as a result of the development. The proposed stormwater basins have been designed to detain the Overbank Flood and Extreme Storm events and release them into the wetlands at a rate that will not increase the peak flow from the existing wetlands.*

In terms of impervious cover, the proposed development will result in approximately 7.9 acres of impervious area and a total disturbance of approximately 18.5 acres (approximately 38.5% of the total site area). Areas not covered by impervious surfaces will be reclaimed and re-vegetated, resulting in approximately 10.6 acres (57% of disturbed area) being re-vegetated. When possible, the revised Stormwater Management Plan will utilize infiltration practices (nine bio-retention zones and two infiltration basins) to recharge runoff. The infiltration practices are designed to capture runoff from several small watersheds (typically less than one acre) and recharge the runoff during more frequent small storms (one year and smaller). During larger storm events, excess runoff form these watersheds that is not infiltrated will be diverted to detention basins and released gradually to the system of wetlands on site.

Comment 4-24 (Andrew Willingham, P.E, David Clouser & Associates, Public Hearing November 08, 2006): The current Stormwater Management Plan utilizes the existing 0.32 acre portion of the NYSDEC wetland (located in the central southern portion of the property and identified as WL -3 in the stormwater analysis) as a stormwater detention structure. The majority of this wetland is located on the neighboring property to the south. Water Quality Basin #3 is undersized and cannot attenuate the large volume of stormwater discharging from the a highly impervious portion of the development. Therefore, the 0.32 acre wetland is used for stormwater detention within the proposed stormwater design. Our calculations show that the volume discharging to this wetland will approximately double (from 30,000 cubic feet to 60,000 cubic feet) as a result of the proposed development. Utilizing a neighbor's property for stormwater detention should not be an accepted practice unless written permission is obtained from such neighbor. There will also be an increase in discharge to the neighboring property for the 10 year and 100-year storm event which is a violation of the NYSDEC Phase 11 Regulations.

Response 4-24: *The Stormwater management Plan does not utilize any off site wetlands for storage of stormwater runoff. The HydoCAD node WL-3 represents a southern portion of the state wetlands located on the project parcel containing a natural outlet structure that discharges to an existing channel connecting the on site wetlands to the larger state wetlands on neighboring lands south of the project site. This is clearly identified on the pre and post development drainage maps.*

Comment 4-25 (Andrew Willingham, P.E, David Clouser & Associates, Public Hearing November 08, 2006): As shown on Page 6 of the *Stormwater Management Plan,* the proposed development will result in a massive increase in stormwater pollutants discharging to the central on-site wetland system and to the NYSDEC wetlands to the south of the property. As shown in the report the Total Phosphorus load at the discharge point at the southern end of the property will increase from 2.83 pounds per year to 63.88 pounds per year (22x increase) as a result of the development. Similarly, the Total Nitrogen will increase from 21.77 pounds per year to 355.56 pounds per year (16x increase). As the Board may know, phosphorus and nitrogen can greatly impair the health and function of wetlands, causing eutrophic conditions. The Board may wish to consider an assessment of this impact in greater detail and require additional mitigation measures to lessen this impact in the FEIS.

Response 4-25: *The revised site plan will involve significantly less land disturbance than the original proposal. Originally the proposed development involved the disturbance of approximately 28.5 acres of land. Of this original disturbance, 12.8 acres were*

proposed impervious surfaces such as roofs and roads and 15.7 acres were pervious surfaces such as lawns and landscaped areas. The revised plan has a total area of disturbance of approximately 18.5 acres, 7.92 acres of impervious surfaces and 10.59 acres of pervious surfaces. The proposed area of impervious surface has been reduced by 4.8 acres or an approximately 38 percent reduction, compared to the previous plan.

As a result of the decrease in land disturbance there will be a significant decrease in the pollutants generated from the proposed site. The decrease in stormwater pollutants would result from a decrease in proposed developed surfaces such as lawns, roofs and roads which are typically generate increased levels of nitrogen and phosphorus within a developed watershed. In addition, the proposed stormwater treatment practices selected for the site are designed in accordance with NYSDEC standards and therefore will meet at a minimum the pollutant removal goals set by NYSDEC. Eleven of the 15 practices selected for the site are either bio retention zones or infiltration basins (nine bio-retention zones and two infiltration basins). These practices (filtering and infiltration) typically have the highest pollutant removal efficiencies with respect to phosphorus and nitrogen out of all treatment practices approved by NYSDEC. The bio-retention zones (filtering practices) can have typical removal rates of phosphorus of up to 60% and up to 40% for nitrogen. Infiltration practices can have removal rates up to 70% for phosphorus and up to 50% for nitrogen. These two practices will be used to treat nearly 50% of the total site. The remaining treatment practices will consist of three wet ponds two of which will be constructed in series which improves pollutant removal rates and one wet swale. Typically ponds have a pollutant removal efficiency of 50% for phosphorus and 35% for nitrogen and wet swales have a removal efficiency of 40% for phosphorus and 50% for nitrogen. The revised stormwater management plan will implement the most efficient pollutant removal methods practical and the source of the pollutants will be reduced as a result of less land disturbance. Therefore, the proposed development is not expected to result in any significant water quality impacts to surface water on-site or flowing off-site. The project will also adhere to the practices that NYSDEC may require in conjunction with a SPDES permit.

Comment 4-26 (Andrew Willingham, P.E, David Clouser & Associates, Public Hearing November 08, 2006): Requirements for Channel Protection Volume CPv (providing 24-hour extended detention of the 1-year, 24-hour storm), as per Section 4.3 of the NYSDEC *Design Manual* was not met or even mentioned in the Stormwater Management Plan. If this condition cannot be met a *Downstream Analysis* must be performed as per Section 4.7 of the NYSDEC *Design Manual.*

Response 4-26: *Channel protection volumes (Cpv) are explained in great detail within Section III of the Stormwater Management Plan. Tables 1 and 2 give a detailed analysis of required and provided Cpv for each stormwater management practice proposed on site. Cpv will be provided per section 4.3 of the NYSSDM by either releasing the water volume of a 1 year storm event over a 24 hour period or by recharging the entire volume of a 1 year storm event.*

Comment 4-27 (David B. Clouser, PE, LS, David Clouser & Associates, letter dated December 29, 2006): The wetland area quantities denoted on the Site Plan Set appear to be incorrect. The areas of these wetlands should be verified by the Board prior to taking any action, since this is one of the most important significant adverse environmental impacts that may result from this proposed action.

Response 4-27: *Refer to Response 4-9 with regard to the ACOE and NYSDEC validation of wetlands located on the project site.*

Comment 4-28 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006): On page 4 of the Scoping Document, Section III, A, 1, d, it is stated that "Construction methods and best management practices that [*sic*] will be employed to lessen erosion and to prevent sediment from migrating off site or into nearby waterbodies and wetlands based on prevailing NYSDEC criteria." Yet the developer dug a 180-foot trench and installed a pipe to drain the upper level of state wetland KE- 10, and was charged with a violation of law and fined $4,000 by NYSDEC. Adding insult to this injury is the lack of any mention of the violation in the DEIS, only a labeling of the new and illegal drainage installation as an "existing pipe" on a map, with the implication that this pipe had been there before, and that the developer had nothing to do with it. The developer has no claim whatsoever to "best management practices" or a commitment to "lessen erosion," not to mention reducing the area of wetland on the site by draining a wetland.

Response 4-28: *Comment noted. The Planning Board is fully aware of this incident and all circumstances surrounding it. The comment does not relate to any potential impacts associated with the proposed development plan.*

Comment 4-29 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006): On page 5 of the Scoping Document, Section III, C, 3, none of the five requirements (a-e) have been adequately satisfied. Nothing in the DEIS or in the Wetland Delineation Report (Ecological Solutions) could be said to "describe the function, value and characteristics of on-site wetlands and waters" (a). The applicant was instructed to "Calculate the area of wetland disturbance, if applicable" (b). The DEIS projects no disturbance to wetlands, yet wetlands were already very seriously disturbed by an excavator on the instructions of the developer, as pointed out above. This area of disturbance was not calculated, or at least not given in the DEIS, as required by the Scoping Document. Potential impacts on wetlands (c) are not adequately addressed, instead simply dismissed as nonexistent. Mitigation measures to prevent soil erosion and sedimentation of wetlands (d) are not adequately described, nor is the effectiveness of these measures demonstrated. There are stormwater collection basins right against wetlands, a design almost guaranteed to cause erosion and sedimentation of the wetlands, both during and after construction. Required permits (e) have not been obtained so far as I can determine. The most recent correspondence relating to state permits is a letter from NYSDEC Deputy Regional Permit Administrator Scott Sheely advising project engineer Barry Medenbach that for state permits to be issued, "all outstanding enforcement issues related to this site must be resolved." Since there is a question as to whether these issues can be resolved and the permits obtained, the DEIS should not be considered complete at this time.

Response 4-29: *The commentator appears to make reference to the draft scoping outline and not the outline that was adopted by the Ulster Planning Board. The DEIS met the requirements of the adopted Scoping Outline. The wetland benefits (function and value) are described in Table 3.3-2. Section 3.2 of the DEIS noted that there would be no direct disturbances to wetlands. Other indirect disturbances were also described in this chapter of the DEIS. The revised site plan will involve no disturbance to NYSDEC regulated 100 foot adjacent areas. Construction of the roadway will result in the disturbance of 0.01 acres of USACOE regulated wetlands. The stormwater management and erosion control practices to minimize impacts to wetlands are*

described in the DEIS, this FEIS and the revised Stormwater Management Plan (attached). Once the SEQRA review process has been completed, an application will be made to the NYSDEC for all requisite wetlands and stormwater management permits, based on the final planning documents for the project. During that process, the project development team will work with the NYSDEC to satisfy all requirements necessary for obtaining said permits. The NYSDEC and the USACOE are Involved Agencies and will continue to review and comment on the project plans, as they are refined and finalized.

Comment 4-30 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006): On Wetland delineations on the Ulster Manor site are poorly documented in terms of methodology and procedures. It is uncertain which of the three major methods (flora and vegetation, soils, or hydrology) were used to determine boundaries when and where. This information should be available from the delineator's notes, but was not included in the Wetland Delineation Report.

Here is an example of a problem that might be illuminated by the inclusion of this information. The boundary of Canandagua silt loam (Cd) soil, a hydric or wetland soil series, does not match the wetland boundary of KE-10 at the southeast corner of the site at the boundary with the Engelhardt property. This discrepancy should be resolved. Since wetland delineation methodology is not described in WDR, there is no way to check the delineator's work. In the lower part of wetland KE-10 Steve Engelhardt, Karen Schneller MacDonald (Hickory Creek Consulting) and I observed wetland flags 20 feet or more from the edge of the water line on trees in several inches of water. The boundary was inaccurately delineated, and there is more wetland than is shown on the wetland map. Our observation also agrees more closely with the Cd soil boundary, as shown on the Ulster County Soil Survey (Tomes 1975).

The upper portion of KE-10 should also be redelineated when the developer's drainage damage is repaired and the original natural hydrology is restored. If the project is approved, delineation flags should be maintained during all phases of construction, and the site monitored weekly for damage to wetlands.

Response 4-30: *Refer to Response 4-9. In addition, NYSDEC regulated wetlands on the project site were delineated in accordance to the New York State Freshwater Wetlands Delineation Manual (Browne et al., 1996). Hydrophytic vegetation is the primary indicator of regulated wetlands in New York State, as most wetlands are recognized easiest by their vegetation. Signs of hydrology and the presence of hydric soils are used as supportive evidence when necessary, especially for delineating the wetland boundary in low-gradient landscapes (Tiner, 1999). Wetland boundaries are determined by vegetation changes where the topography changes abruptly. In other areas, the presence of hydric soils or other wetland hydrology indicators are used to identify the extent of hydrophytic vegetation, i.e. wetland (Tiner, 1999).*

To assume that NYSDEC wetland boundaries on the site coincide with soil boundaries as mapped on the Ulster County Soil Survey (Tomes 1975) is an unreliable practice. The Forward of the Ulster County Soil Survey states that the survey contains "predictions of soil behavior" and "great differences in soil properties can occur even within short distances". While countless field hours where spent in the preparation of the Soil Survey, every soil boundary was not field verified and discrepancies do exist. Wetland conditions and boundaries need to be confirmed by field tests (e.g. wetland delineation) to provide the most accurate representation of on-site conditions. Such a

delineation was completed at the Ulster Manor site, and confirmed by the regulatory agencies.

Comment 4-31 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006; and November 8, 2006 Public Hearing): The current plan for this project will have potential significant watershed impacts that are immediate, long term, cumulative, direct and indirect, on-site and off-site. Wetlands both on-site and off-site will be significantly affected; although they will not be filled in, their functions can very effectively be destroyed by other means-- such as disruption of seasonal water level fluctuations and drainage patterns, introduction of invasive species, and degradation of water quality. Wetland habitat can be destroyed if sufficient upland areas surrounding them are not protected. An analysis of the position of this site within the larger watershed, and the functions of on-site wetlands and groundwater as part of that watershed, is not provided in the DEIS. This information is critical for accurate impact assessment and should be added and evaluated.

Response 4-31: *The watershed or contributing drainage area for NYSDEC Wetland KE-10 is approximately 138 acres, based upon a review of the NYSDEC Wetland Map and USGS topographic maps. Approximately 32 acres or 23 percent of the watershed is located on the project site. The project site includes a north-south trending low area, which collects drainage from low ridges found west and east of the wetland. Due to the varied topography on the property, the on-site upland drainage area contributing to the on-site portion of KE-10 wetland is relatively small. The majority of the contributing watershed to Wetland KE-10 is located off-site, primarily on undeveloped land located to the east of property. Predevelopment drainage areas are shown in Figure 4-1.*

As described in the DEIS (Chapter 1.3.2) Wetland KE-10 drains towards the south, across the property line and then drains towards the northeast, eventually draining to NYSDEC regulated Wetland KE-7. Since bedrock is relatively close to the surface on the property, the on-site wetlands receive flow from surface drainage (sheet flow), as well as shallow groundwater which flows near the bedrock surface, following the local topography.

The Ulster Manor project would involve the disturbance or grading of approximately 15 acres, or 11 percent of the total area of Wetland KE-10 contributing area. The project would introduce a total of approximately 7.9 acres of impervious surface to the project site and approximately 85 percent of this area, or 6.7 acres would be introduced to the KE-10 contributing drainage area. Therefore, the project would involve converting approximately 4.8 percent of the total Wetland KE-10 drainage area (138 acres in size) to impervious surface. As described above, the great majority of wetland contributing area is located on undeveloped land east of the site. Post-development drainage areas are shown in Figure 4-2.

Grading and stormwater management for the project would modify the existing drainage area contributing drainage to wetland KE-10. Based upon pre-development and post-development drainage area analysis completed for the Stormwater Management Plan, the project would increase the area flowing to wetland KE-10 by approximately 6.0 acres. Therefore, the area draining to Wetland KE-10 would be increased by approximately 4.3 percent.

Although the size of the drainage area contributing to the wetland would be increased, and impervious surface would be introduced, these modifications to the drainage area are not expected to significantly impact long-term water contribution to Wetland KE-10. All stormwater captured by impervious surface on the property (roads, driveways, buildings, parking) would be directed to stormwater management facilities. Stormwater management facilities have been designed to function as multiple treatment zones, spread across the property. Stormwater management practices are shown in Drawing WQ-1 and details of the facilities are shown in Drawings WQ-2 through WQ-9. Stormwater management has been divided into 15 zones ranging in size from 0.2 acres to 4.1 acres. The average size of the treatment zones is 1.44 acres. Treatment practices, designed to NYSDEC standards include pocket ponds, infiltration basins, bio-retention zones, and a wet swale. These stormwater practices either release stormwater to shallow groundwater (bio-retention zones, infiltration basins) or to the 100 foot wetland buffer at controlled rates (pocket ponds). The benefit of multiple stormwater practices is that stormwater is retained and treated in multiple small areas and released to the subsurface or to existing undisturbed soils at controlled rates similar to natural conditions. Seasonal water level fluctuations in the wetland would not be altered or disrupted by the proposed drainage modifications.

All stormwater reaching lawn and landscaped areas in the contributing drainage area will continue to drain naturally through existing soils and eventually to the wetland via shallow groundwater flow. Stormwater flow rates are further discussed in this Response, below.
It should be noted that the proposed action will not disturb any wetland or any adjacent area (wetland buffer) with the reduced proposal. The 100 foot adjacent area provides protected, undisturbed upland area which allow for the preservation of vegetation, habitat, and contributing drainage area surrounding the existing wetland. Water quality for stormwater and groundwater flowing to the wetland will be maintained through the rigorous stormwater management program, described in this FEIS.

Proposed grading and the development of approximately 15 acres of existing woodland, would change a the vegetation and wildlife habitat in a portion of the wetland drainage area. As indicated above, the 100 foot undisturbed adjacent area will provide a buffer of existing vegetation between the wetland and developed portions of the site. This buffer would reduce the potential for the introduction of invasive species into the wetland.

Potential downstream flooding resulting from modifications to natural on-site drainage conditions is mitigated by the proposed multiple stormwater detention ponds/swales and infiltration practices identified in the project's Stormwater Management Plan. These stormwater management facilities were selected, designed, and would be constructed, in accordance with NYSDEC design guidelines and regulations, including NYSDEC General Permit for Stormwater Discharges from Construction Activity GP-02-01, and EPA Phase II requirements.

While there would be an increase in the volume of water discharged off-site, the post-development stormwater discharge rates, , would be below the pre-development flow rates. Peak stormwater flow rates for the 24 hour design storm are shown in Table 4-1, below. Pre and post-development flow modelling data is provided in the SWPPP. By reducing the post-development stormwater flow rates to pre-development levels,

potential impacts to down-gradient water resources related to potential stream bed and bank erosion have been addressed.

Table 4-1
Peak Flow Summary
24-Hour Design Storm (C.F.S.)

	1-Year		10-Year		25-Year		100-Year	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
Watershed 1	2.38	1.94	20.37	18.96	24.02	23.62	33.08	32.7
Watershed 2	8.01	6.51	23.71	22.03	27.15	25.43	37.79	35.7
Watershed 3	0	0	0.12	0.1	0.19	0.19	0.4	0.4
Watershed 4	0	0	0.02	0.04	0.04	0.11	0.32	0.85
Watershed 6	0.01	0	1.27	0.93	2.02	1.65	4.94	4.89

Source: Medenbach and Eggers, Civil Engineering and Land Surveying, P.C. 2007

Comment 4-32 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The DEIS is missing Appendices A and B within Appendix E, Stormwater Management Plan.

Response 4-32: *See Response 4-13. Appendices A and B have been added to Appendix E, along with all HydroCAD outputs.*

Comment 4-33 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006; and November 8, 2006 Public Hearing): This project will result in covering over 25% of the site with impervious surfaces. This dramatically increases the volume of stormwater runoff, and the amount of pollution it contains.

Disruption of drainage patterns and seasonal water levels, also associated with large areas of impervious surface, can lead to wetland loss and increased flooding problems - both on-site and off-site. The DEIS does not address these impacts directly, but assumes that it will all be `taken care' of by the project's Stormwater Pollution Prevention Plan (SWPPP). But this is not the purpose of SWPPPs; they are intended to manage stormwater after other mitigation measures have been implemented. Discussion of these other measures is not included in the DEIS and needs to be added.

Response 4-33: *See Responses 4-20 and 4-31, above. The project would involve the disturbance or grading of approximately 7.9 acres, or 16.5 percent of the project site. Impervious surface resulting from the project has been reduced from 12.84 acres to 7.92 acres, or by approximately 38 percent compared to the previous plan. The watershed or contributing drainage area for NYSDEC Wetland KE-10 is approximately 138 acres, based upon a review of the NYSDEC Wetland Map and USGS topographic maps. Approximately 25 acres or 18 percent of the watershed is located on the project site. The impervious surface introduced by the project would represent approximately 6 percent of the total area (138 acres) of Wetland KE-10 contributing area.*

The project layout and design as well as the Stormwater Management Plan have been completely updated and revised. The revised plan described in this FEIS is intended to reduce the project impacts, including potential impacts to stormwater and wetlands. This FEIS and the revised Stormwater Management Plan provide detailed analysis of

stormwater management, including stormwater flow rates and water quality. Stormwater runoff from the project, routed through the stormwater management facilities provides for pollutant reductions in percentages deemed acceptable by the NYSDEC (the regulatory agency responsible for accepting the SWPPP and protection the freshwater wetland). As previously noted in response 4-20 the increased stormwater runoff volume would cause a negligible increase in KE-10's ordinary and storm surge water elevations.

Comment 4-34 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006; and November 8, 2006 Public Hearing): Compliance with the design guidelines in the NYS Stormwater Management Design Manual does not ensure that water quality will be protected as mandated by the State Environmental Quality Review Act (SEQRA). In fact, the design of stormwater management facilities may have additional impacts on wetlands and watersheds, and these must be assessed and mitigated if necessary, as part of the DEIS. These impacts include: changes to hydroperiod and seasonal (including drought) availability of water in wetlands and streams, introduction of invasive species, buffer disturbance, and pollutant loading impacts on receiving waters (wetlands and watershed in this case). All of these potential impacts need to be assessed in the DEIS, and effective mitigation for them must be developed. In addition, if stormwater management facilities are not designed and built perfectly, and if they are not maintained scrupulously over time, their efficiency will decrease and more pollutants will reach receiving waters.

Response 4-34: *Modifications to on-site drainage and stormwater management facilities are discussed in Response 4-31, above. The response provides analysis of the potential impacts listed above, as follows:*

1) Changes to hydroperiod and seasonal availability of water in wetlands and streams The project is not expected to result in significant changes to hydroperiod or availability of water in the KE-10 regulated wetland and downstream watershed. Approximately 32 acres or 23 percent of the wetland watershed is located on the project site. *Stormwater management has been divided into 15 zones. The stormwater practices release stormwater to either shallow groundwater (bio-retention zones, infiltration basins) or to the 100 foot wetland buffer at controlled rates (pocket ponds). The benefit of multiple stormwater practices is that stormwater is retained and treated in multiple small areas and released to the subsurface or to existing undisturbed soils at controlled rates similar to natural conditions.*

2) Introduction of invasive species Proposed grading and the development of approximately 15 acres of existing woodland, would change the vegetation and wildlife habitat in a portion of the wetland drainage area. As indicated above, the 100 foot undisturbed adjacent area will provide a buffer of existing vegetation between the wetland and developed portions of the site. This buffer would reduce the potential for the introduction of invasive species into the wetland. Trees and shrubs used for project landscaping will be species native to the northeast to the extent possible.

3) Buffer disturbance The revised project will not involve any disturbance to the wetland buffer.

4) Pollutant loading impacts on receiving waters The proposed stormwater management practices are designed to NYSDEC design standards. The practices use the most

current design criteria and best available technology to reduce stormwater pollutants to the extent possible.

It is acknowledged that the operation and maintenance of the stormwater management facilities is critical to the effectiveness of the practices.

Comment 4-35 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Responsibility for maintenance of stormwater facilities should be provided by bond; Homeowner's Associations have proven to be much less effective in implementing adequate maintenance over time.

Response 4-35: *Comment Noted. The long term maintenance schedules for each of the stormwater facilities is included in Appendix G of the revised Stormwater Management Plan (SWPPP). The Town could create a back-up drainage district as an additional security to ensure the property operation of the stormwater basins.*

Comment 4-36 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006; and November 8, 2006 Public Hearing): It is not possible to capture 100% of all stormwater throughout an entire site, even with stormwater management facilities that meet Phase II stormwater regulation requirements. In addition, some of the homes in the project plan are excluded from the stormwater collection system and set on a system of dry wells, with potential to contaminate groundwater. Of the stormwater on-site that is captured, stormwater mangement [*sic*] facilities like retention ponds cannot remove all pollutants. The DEC Stormwater Management Design Manual lists fourteen common stormwater contaminants. Five of these are mentioned in the DEIS. Stormwater management facilities can remove up to the following amounts: suspended solids: 80-85 %; total Phosphorus: 40-50%; total Nitrogen: 35-50%; heavy metals: 60-70%, and fecal coliform bacteria: 0-70%. But the percentage of contaminants that are not removed is directed into wetlands. As a result, on-site wetlands are likely to receive a heavy load of pollutants, which can potentially damage wetland functions, lead to loss of sensitive species, encourage invasive species, and change plant and animal distribution and health. These impacts are not discussed in the DEIS; they should be added.

Response 4-36: *See Responses 4-18 and 4-25. The single family homes have been eliminated from the proposed action. The Stormwater Management Plan has been revised to incorporate several management practices in a series to improve pollutant removal rates. It is acknowledged in the DEIS and in this FEIS that stormwater treatment practices cannot remove all stormwater pollutants, but that if the facilities are properly designed, constructed and maintained, the majority of pollutants can be reduced, thereby protecting water quality in accordance with NYSDEC standards.*

Regardless of the stormwater treatment practices, the change in land use will cause an increase in pollutant loads to the wetland. The ability of a wetland to assimilate these pollutants of concern or for these pollutants to become a limiting factor are specific to the wetlands hydroperiod, size, vegetative makeup, among a number of other widely ranging variables.

Comment 4-37 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): This significant increase in pollutant loading is documented in the DEIS in Appendix E Stormwater Management Plan. According to data on pages 6 and C5, for drainage into the DEC wetlands south of the project site only (other drainages on-site are calculated

separately) the increases in several pollutants, from annual pre-development levels to annual treated post development levels, are: TSS: 1119.09 lbs pre/6954.71 lbs. post; TP: 2.83 lbs. pre/63.88 lbs. post; TN: 21.77 lbs. pre/355.56 lbs. post; Lead: .04 lbs. pre/.69 lbs. Post.

And yet on page 3.2-6 the DEIS states that " None of the ... wetlands present on the project site would be impacted by the proposed project." In fact, on-site wetlands as well as a significant acreage of DEC wetlands adjacent to the project site will certainly be impacted. And these impacts to water quality, and their implications for wetland biota, are not addressed in the DEIS. In addition, what are the effects of these pollutants over time, and how far will they disperse throughout the wetland system?

> ***Response 4-37:*** *As shown in the plans provided in this FEIS, there is no proposed direct disturbances to the NYSDEC regulated wetland or the 100 foot adjacent area. Approximately 0.01 acres of USACOE wetland will be disturbed for construction of the access road. It is acknowledged that the proposed development would result in an increase in pollutants discharged off-site as disclosed in the project SWPPP and DEIS. However, the Applicant has developed a comprehensive stormwater management plan, which provides water quality and quantity practices in conformance with the current NYS Stormwater Management Design Manual. The design, construction and implementation of these water quality facilities will allow the project to meet pollutant removal goals as required by the NYSDEC. It should be noted that the project site is not within a TMDL watershed and is not required to meet enhanced pollutant removal goals greater than what is required in the Manual. Refer to response 4-36.*

Comment 4-38 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006; and November 8, 2006 Public Hearing): Oil and grease, pesticides, herbicides and fertilizers, and road salt are among the other common constituents of stormwater runoff that must be considered in the DEIS. Pesticides and herbicides will be present in stormwater runoff, and will be likely to impact wetlands- no matter who is applying them. Some of these pollutants, like road salt, cannot be removed by stormwater management facilities and will be washed into receiving waters. Where snow is plowed and piled, the concentration of contaminants including road salt, can be quite high. How will this be mitigated? The DEIS needs to assess these impacts. The impact of road salt alone on aquatic systems is proven; cumulative effects on freshwater plants and animals may be severe. Also, road salts may affect other stormwater contaminants; for example by increasing the mobilization of metals, these salts may enhance the toxicity and adverse environmental impacts of road runoff. None of this is adequately addressed in the DEIS.

Both on-site and off-site wetlands (and watercourses) are likely to receive a heavy load of pollutants which may seriously compromise wetland functions. The DEIS does not contain information on the potential impacts of these contaminants on groundwater, either.

> ***Response 4-38:*** *Refer to Responses 4-4 and 4-8.*

Comment 4-39 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Effects of conversion of significant vegetated area to impervious surface thus increasing volume of stormwater runoff and affecting groundwater recharge-these are not adequately addressed in the DEIS. According the DEC Stormwater Management Design Manual, one acre of parking lot can produce sixteen times more stormwater runoff annually than a one acre meadow. Instead of being dispersed, this runoff will be concentrated into

specific stormwater management areas. What are the impacts of this concentration on wetlands, groundwater and water quality?

Response 4-39: *See Responses 4-18, 4-20 and 4-25. The Stormwater Management Plan is specifically designed and engineered to manage this increase in stormwater volume resulting from the introduction of impervious surface to the site. Again, the rate of stormwater flow will be maintained at or below pre-development levels. The stormwater facilities were designed to disperse the stormwater throughout developed portions of the site. Fifteen stormwater treatment facilities are proposed for the 18.5 acres of disturbed area. Furthermore, 11 of the 15 practices selected for the site are either bio retention zones or infiltration basins (nine bio-retention zones and two infiltration basins).*

Comment 4-40 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The DEIS mentions that 10 homes will have to run their stormwater runoff directly into dry wells, without treatment, and directly into groundwater- impacts not adequately described or addressed in the DEIS.

Response 4-40: *See Response 4-18. The single family residences have been eliminated from the revised plan presented in this FEIS.*

Comment 4-41 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006; and November 8, 2006 Public Hearing): These impacts don't stop at property lines another issue the DEIS fails to analyze. Pollutant loading at this site will be directed into wetlands, and subsequently watercourses including the Esopus, and the Hudson River, thus contributing to the cumulative effect of regional pollutant loading; this is not addressed in the DEIS. The wetlands on this site are all part of a larger connected watershed. Potential serious water quality degradation throughout the larger watershed system (including the Esopus, the Hudson, and a huge wetland complex that extends to Lake Katrine) is a very real threat. It may even extend to groundwater and wells. Building and blasting on steep slopes greatly increases the potential for water quality degradation from erosion and siltation. Impacts on aquifers may also result, as blasting could open cracks conducting pollutants to wells and municipal water sources. None of these potential impacts and cumulative impacts is adequately addressed in the DEIS.

Response 4-41: *Refer to Responses 4-31 and 4-37. The DEIS and FEIS analyzed on-site conditions and acknowledges that the on-site wetlands are part of a larger wetland complex and drainage area that extends off-site. The watershed or contributing drainage area for NYSDEC Wetland KE-10 is approximately 138 acres. Approximately 32 acres or 23 percent of the watershed is located on the project site. The Ulster Manor project would involve the disturbance or grading of approximately 15 acres, or 11 percent of the total area of Wetland KE-10 contributing area. Based upon the reduced project "footprint", stormwater management pollutant removal rates and preservation of wetland buffers, the project will not result in serious water quality degradation either on-site or throughout the larger watershed system.*

Geology, hydrogeology and the projects potential impacts to aquifers is discussed in Chapter 3.0 Geology Soils and Topography.

Comment 4-42 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The wetland delineation map included in the DEIS is not accurate. A small area in the southwest corner is noted as wetland but in fact is not wetland (I have examined the site), and DEC wetlands are under-delineated around the vernal pools and the larger wetland in the southeast corner of the property (for example wetland flagging was 25-30 feet out into the water in some places). A third area is missing its delineation flagging-- which was removed when an illegally placed drainage pipe was removed. This flagging was not replaced, and the result is a narrow straight line that corresponds to the placement of the removed drainage pipe. These inaccuracies affect the position of the 100 foot buffer and disturbances within the buffer. Wetland delineation boundaries must be verified and corrected.

Response 4-42: *Refer to Responses 4-2 and 4-9. It is noted that the commentator, representing an adjoining objector, did not request or receive permission from the property owner to examine wetlands found on the project site.*

Comment 4-43 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The impacts of on-site disturbance by installation and subsequent removal of a drainage pipe are not addressed in the DEIS. This area has not been restored to its original wetland condition and represents a pre-construction impact to natural drainage patterns and wetland configuration.

Response 4-43: *Refer to Response 4-28. The pipe temporarily altered the drainage patterns in a portion of a larger wetland complex. Following the removal of the pipe, drainage conditions and patterns have likely returned to pre-disturbance conditions, based upon topography and seasonal and storm related hydrologic factors. Wetland configuration and drainage conditions are continually evolving through natural factors including beaver activity, storm related scour or sediment deposits, and natural infilling from sediment and vegetation.*

Comment 4-44 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Impacts on groundwater recharge and discharge (including during drought years) are not sufficiently described and therefore a determination of the effectiveness of described mitigation cannot be made.

Response 4-44: *An analysis of groundwater recharge was provided in the DEIS (see Section 3.2.1). The analysis indicated that approximately 42,852 gallons per day or 29.8 gallons per minute are available to recharge the limestone aquifer which underlies the site. This recharge estimate allows that the majority of rainfall (60 to 80 percent), does not reach the bedrock aquifer but rather it flows off-site as surface water run-off, shallow subsurface flow, or is lost through evapotranspiration. The DEIS also described that groundwater recharge occurs on a regional basis and that bedrock fractures can extend for considerable distance.*

The introduction of 7.92 acres of impervious surface to the site would somewhat reduce the precipitation available to recharge the aquifer. The majority of precipitation falling on the impervious surface would be directed to stormwater management facilities were it could either percolate into the subsurface, eventually flow to surface water bodies or be lost through evapotranspiration. If it is estimated that all impervious surface was no longer available for groundwater recharge, then only 40.08 acres would be available on-site to recharge the aquifer (48.0 acres less 7.92 acres impervious surface).

Therefore, the area available for recharge would be reduced by 16.5 percent. A 16.5 percent reduction in the available water recharging the aquifer would result in 35,781 gallons per day or 24.8 gallons per minute available to recharge the aquifer. An extended drought may further reduce the precipitation available to recharge the aquifer by up to 20 percent. A further 20 percent reduction allowing for drought would result in 28,625 gallons per day (19.9 gallons per minute) available for recharge.

Comment 4-45 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): There are many ways to destroy wetland functions without actually filling in the wetlands; these impacts are not adequately addressed. They include: changes in wetland hydroperiod (not even mentioned) and subsequent changes in wetland vegetation, proliferation of invasive species as a result of site disturbance; wetland (vernal pool) habitat and critical adjacent upland habitat for protected species, and effects on all adjacent and otherwise connected wetlands and water courses that drain into the Hudson River or to Lake Katrine. Water quality impacts extend beyond the property lines, as previously discussed re: pollutant loading.

Response 4-45: *Wetland hydrology on the project site is not expected to be substantially altered as a result of the project. Undisturbed 100 foot adjacent areas surrounding the NYSDEC wetland would continue to contribute and filter the surface water and precipitation flowing to the wetland. The introduction of 7.92 acres of impervious surface would somewhat alter the volumes and rates of surface water flowing to the wetlands. Stormwater collected from the impervious surfaces would continue to flow to the wetlands after treatment in stormwater management facilities. The 12.3 acres of undisturbed woods and 1.8 acres of undisturbed adjacent area would continue to contribute water to the wetland following storms.*

The project is not expected to introduce invasive species into the wetland. As described in this FEIS, the undisturbed 100 foot adjacent area, and the preservation of existing vegetation on the eastern side of the wetland will preserve and maintain the habitat functions of the wetland. Water quality treatment is discussed in Response 4-22, 4-23 and 4-25.

Comment 4-46 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, November 8, 2006 Public Hearing and letter dated December 21, 2006): Analysis of adequate buffer sizes for water quality and habitat protection-and application of this information to the design of this project should be included in the DEIS. The use and effectiveness of buffer zones for mitigating the effects of specific impacts such as water quality and habitat should be discussed in the DEIS. Is 100 feet enough to protect water quality? How do slope, vegetation, and maintenance factor into planning for effective buffers? Buffer recommendations should be documented; the 100 feet required by DEC may not be sufficient to protect wetlands on this site according to research information.

Response 4-46: *The New York State DEC requires 100 foot buffers for any of their regulated wetlands, one of which, KE-10, exists on the project site. The Army Corps of Engineers does not require a buffer on any of their regulated wetlands. Since a buffers in excess of 100 feet are only suggested through research, and are not required by any state, local, or federal agencies, the applicant will comply with regulations that are set forth by regulating agencies.*

Comment 4-47 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The area of disturbance for this project includes almost the entire site and several wetland buffer areas. No mitigation for this, such as a reduction of the area of disturbance, is described in the DEIS.

Response 4-47: *The DEIS presented an alternative, identified as the Impacts Mitigation Alternative, that proposed a reduction in the area of disturbance. The revised plan that is the subject of the FEIS was prepared to reduce impacts associated with the project. Section 1.0 Introduction, and the introduction of this Section describe modifications to the site plan that substantially reduce the area of disturbance, compared to the previous plan. The loss of woodlands and on-site vegetation would be reduced by approximately 10 acres or 35 percent, comparing the former Site Plan to the current proposed action.*

Comment 4-49 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, November 8, 2006 Public Hearing and letter dated December 21, 2006): The DEIS does not adequately discuss mitigation for a number of potentially significant impacts, beyond implementation of the project's Stormwater Pollution Prevention Plan (SWPPP). This is not adequate mitigation, as noted above in the discussion of water quality. SWPPP's are not intended to be mitigation plans, but to improve stormwater conditions on sites where mitigation of impacts has already been implemented. Beyond a certain point, the only way to further reduce pollutant load is to reduce the area of impervious surface over which stormwater passes before it soaks into the ground or is intercepted by stormwater management structures/facilities. This should be discussed in the DEIS. It is possible to develop land and also avoid the serious impacts to natural resources that are associated with this project.

Response 4-49: *See Response 4-47.*

Comment 4-50 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): No building should occur in the NYSDEC 100 foot wetland buffer area. Stormwater Basin's #3 and #4 and part of the roadway are located inside the 100 foot buffer to the wetlands. These should be redesigned and placed outside the buffers.

Response 4-50: *See Response 4-2. Development is now placed outside the 100-foot regulated area.*

Comment 4-51 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): The DEIS does not provide critical stormwater information. Appendices A & B of Appendix E "Stormwater Management Plan" were not provided for review. Appendix A is the "Hydro Cad" calculation and Appendix B is the "Water Quality" calculation. Without this data, the reviewer can not determine the adequacy of the stormwater management plan or the accuracy of the runoff results published in the FEIS. The absence of this data undermines the credibility of the stormwater section. In other words, many of the numbers used in the stormwater calculations are missing, cannot be checked and therefore cannot be verified. A supplemental EIS should be submitted with this information.

Response 4-51: *See Responses 4-13 and 4-14 with regard to the stormwater data submission.*

Comment 4-52 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): Stormwater analysis for construction activities is absent in the DEIS. Stormwater runoff rates are tabulated in the DEIS for pre-developed and post-developed conditions (calculations not provided as noted), however, no mention is made of the high runoff during construction activities. These rates can easily exceed post-developed rates by 2.5 to 3 times based on the changes in the runoff curve numbers. These analyses should be used to. design the erosion & sediment control plan to assure adequate performance.

> ***Response 4-52:*** *Runoff rates during construction of the project are provided in the Stormwater Management Plan. Erosion and sedimentation controls are designed in accordance with these runoff rates and to NYSDEC standards. It should be noted that disturbed areas will be stabilized within 14 days of the last construction activity in that area. Disturbances will occur in phases to prevent high runoff rates from entering the erosion control practices. The stormwater management plan has been submitted to the NYSDEC for its review.*

Comment 4-53 (Charles Silver Ph.D., Environmental Scientist III, NYS Office of the Attorney General, Environmental Protection Bureau, letter dated December 22, 2006): The town should be responsible for the long term maintenance of the stormwater management system. According to the DEIS, a home owner's association (HOA) is to be responsible for the maintenance of stormwater facilities and operations, such as maintaining the stormwater basins, infrastructure, and water supply system, as well as trash removal. The lack of effective maintenance will cause stormwater controls to fill with sediment and otherwise decay over time. We strongly recommend that the town be responsible for the operation and maintenance of the system because most HOAs lack the necessary expertise, funding, and coordination to successfully implement this type of long term program.

> ***Response 4-53:*** *Comment noted. Refer to Response 4-35. The applicant will adhere to the Town's maintenance preference, i.e., HOA or Town-maintained.*

Comment 4-54 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): ... the wetlands on this site drain into an extensive wetland complex. Every effort must be made to protect water quality in this important series of wetlands. Detention ponds should not be permitted in wetland buffers. The road should be relocated outside the buffer.

> ***Response 4-54:*** *Comment Noted. See Response 4-2. In addition to the stormwater management areas being removed from wetland buffers, the road has also been relocated outside of the wetland buffer.*

Comment 4-55 (Mr. Robert Barton, Public Hearing, November 08, 2006): One of my other concerns now is the drainage because you're going to have buildings there now. Currently it is vacant land and it has a lot of water that can drain off and soak into the soil. With buildings put up through there now it's going to take -- the runoff is going to be more directed in other directions. There's streams and things there that are going to run and could potentially overflow. I know in back of me there's some streams that run back there. The whole thing needs to be looked at, where this water is going to be going, how much of a retention pond, if they have anything, where is it going.

Response 4-55: *See Response 4-31.*

Comment 4-56 (Ms. Jean Unig Hoosing, Public Hearing, November 08, 2006): My concern is water drainage in the back of my home and the two homes alongside of me. I will say that Mr. Regan, at that time he did send an engineer up who came to look over the property and the drainage, the runoff from what will be Ulster Manor, and he proposed what would be done. My question now is -- I have your proposals and I thank you for that -- will these be followed through? Our water problem is certainly not solved and it's this time of the year when you've got a lot of rain and snow and all that. I have no yard because of water but I'm blessed compared to one of my neighbors who can't even walk out his back door, it's just water there.

Response 4-56: *See Response 4-31. In addition, the Ulster Manor development will be implemented as approved by Town of Ulster and the NYSDEC. Once the NYSDEC approves the Stormwater Pollution Prevention Plan (SWPPP), weekly inspections will be performed by a qualified professional to ensure the practices and procedures being constructed on the project site are accurate as depicted on the DEC approved plans. The Town's engineering consultant would also conduct inspections during construction to ensure that construction is in accordance with the approved plans for Ulster Manor.*

Comment 4-57 (Mr. Barry Kaiser, Public Hearing, November 08, 2006; and Ms. Petra Kaiser, letter dated December 19, 2006): We're talking about blasting, runoff and pollution. My well is my one source of drinking water and there is a chance I could lose that. That's my concern. Plus I'd hate to see the ducks and geese and beaver disappear. They're right out back.

Response 4-57: *See Response 4-59, below. As discussed in the DEIS beginning on page 3.1-5 and 3.1-12 blasting activities are expected to occur in the western portion of the site. Given the varied topography and relatively shallow bedrock, blasting is necessary to construct the internal roads to Town Slope standards and to provide level areas for residences. A project-specific Blasting Protocol is provided in Appendix L. The plan describes methods, schedule, pre-blast surveys of nearby residences and structures, contractor's liability insurance. While unlikely that the blasting would cause any damage to nearby real property the blasting plan and permitting provides for a contingency should damage occur.*

Comment 4-58 (Ms. Janice Stell, Public Hearing, November 08, 2006): I would just like to say my concern is my well. It's our drinking water. If it gets polluted we're going to have problems. Also, it would be a shame to lose all the animals and stuff in the back. I really think they need to look into better as to how the runoff and the drainage is going to affect the properties around, which includes us on Old Flatbush road.

Response 4-58: *Refer to Response 4-59, below.*

Comment 4-59 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): The groundwater sections (Sections 3.2.1 through 3.2.3) are narrowly focused on groundwater as a source of water supply, reaching the conclusion that " project is not expected to substantially impact local groundwater quality or quantity" (paragraph 3.2-7). Because the analyses in the DEIS are cursory, this conclusion cannot be supported. A more detailed assessment of groundwater resources and the potential impacts of the proposed project on this resource should be conducted. Specific issues that warrant analysis are:

- What is the relationship of on-site wetlands to aquifer recharge in light of known on-site geology dominated by limestone and other more pervious strata (see paragraph 3.1-1)?
- How will nutrient loading, the likely result of runoff from lawns, building and pavement, affect the water quality in on-site wetlands and, subsequently, groundwater?
- What impacts will road salting have on wetlands and groundwater?
- What measures are appropriate to ensure that impacts identified from the above-referenced analyses are properly mitigated or eliminated?

Response 4-59: *The on-site wetlands likely contribute precipitation and collected surface water run-off to the bedrock aquifer. This collected water would percolate through the hydric soils underlying the wetland and then to fractures in the bedrock surface. The thickness of soil cover over bedrock in the area of the wetlands is not known, since borings were not completed in the wetland areas. The majority of surface water collected in the wetland (60 to 80 percent) would not recharge the bedrock aquifer, but would either flow off-site via surface water or shallow subsurface flow, or would be lost through evapotranspiration.*

Stormwater treatment and nutrient loading is described in Response 4-25 above, and is further detailed in the Stormwater Management Plan (attached). Although the majority of water quality parameters such as total phosphorus and nitrates would be removed through the stormwater treatment practices, the project would result in an increase in these parameters, over pre-development levels. The stormwater treatment facilities were designed to maintain surface water quality. In general, residential development utilizing municipal water and sewer services, such as proposed for Ulster Manor does not result in the degradation of groundwater quality. Typically, industrial uses, releases from underground petroleum storage tanks, or intensive farming uses can seriously impact water quality.

As described in Response 4-4, the salt use for winter road safety will be minimized to the extent practical. Given that there is not an extensive elevation change across the site, salt use on internal roads can be minimized. Again, the on-site use of salt, fertilizers and any pesticides under the direction and management of the Homeowners Association, would be minimized to protect surface water quality and wetlands. In the process of maintaining surface water quality, groundwater quality would also be maintained.

Comment 4-60 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): The DEIS claims no impact to groundwater resources, in part because recharge on the Site will be greater than the water demand of the project. Quality issues aside (see Comment 8, above), the germane question is what impact the proposed action will have on the expected volume of recharge (impervious surfaces reduce recharge), the rate of recharge (redirected water in surface impoundments may recharge at a different rate, depending on underlying soil and bedrock characteristics), and the spatial location of that recharge. None of these potential concerns are considered and analyzed. The groundwater section should be substantially revised, with a detailed discussion of mitigation measures considering drought and storm events.

Response 4-60: *See Response 4-44 regarding potential changes to aquifer recharge resulting from the project.*

Comment 4-61 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Section 3.2.2 (page 3.2.-6) and Figure 3.1.2 indicate the limit of soil disturbance, which appears to extend into a 100 foot buffer around the wetlands, Is it a 100-foot buffer provided around each wetland and, if not, please explain.

Response 4-61: *See Responses 4-2 and 4-54. The NYSDEC requires a 100-foot buffer around wetlands under their jurisdiction. The plans have been revised to eliminate any disturbance to these wetland buffers.*

Comment 4-62 (Paul H. Ciminello, President, Ecosystems Strategies, Inc., letter dated January 31, 2007): Section 3.2.3 Table 3.2-4 Pre- and Post-Development Storm Water Pollutant Load for Major Constituents indicates stormwater pollutant loadings will be significantly higher upon project completion compared to previous conditions. Since the stormwater pollutants will be infiltrating soils and underlying bedrock, that data is contrary to the conclusion that "The project is not anticipated to impact local groundwater quality or quantity" (page 3.2-15).

Response 4-62: *Refer to Response 4-59.*

Comment 4-63 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): I met with Bruce Friedmann of Tim Miller Associates, Inc., representing the applicant, on February 8, 2007 and conducted a fairly thorough site walkover. During our site walkover it was evident that beaver activity had significantly enlarged the wetland boundaries in some areas necessitating a re-delineation of wetlands. Since neither the DEC or ACOE have issued jurisdictional determinations of the previous wetland boundaries, it is appropriate to forward copies of the revised wetland delineation to these agencies for review. Accordingly, the revised wetland boundaries should be assessed for impacts to both wetlands and DEC adjacent area from the development plan.

Response 4-63: *Refer to response 4-9. The NYSDEC and ACOE have both confirmed the wetland lines as delineated. The recent beaver occupation is an invasive action by the animal and is not representative of natural drainage conditions. As discussed in response 4-9, a Jurisdictional Determination has been issued and wetland mapping signed off upon by the regulating agencies. It should be noted that the wetland water level change due to Beaver activity is contained within the adjacent area and will not affect the project.*

Comment 4-64 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): Wetland impacts from stormwater runoff appear to be potentially significant, at least on-site, due to the steep topography, required grading for development and limited ability of the stormwater management plan to remove pollutants (DEIS Page 1-12 Executive Summary). Based on my review of the information in the DEIS, it is difficult to ascertain the proposed level of pollutant removal and potential impact of the treated stormwater on the receiving wetlands and waterways.

Response 4-64: *The modifications to the project plan has resulted in a reduction of potential wetland and water quality impacts, compared to the DEIS plan. This reduction*

is related to the reduced area of disturbance, reduced impervious surface, and enhanced and redesigned stormwater management. The pollutant removal efficiencies are in accordance with current NYSDEC regulations and therefore the pollutant load associated with the change in land use is not considered a significant impact.

Comment 4-65 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): Revisions to stormwater facilities, as indicated by Mr. Friedmann, should include a detailed comparison of ambient water quality to projected water quality for all of the parameters likely to be associated with stormwater runoff. This analysis should be correlated with information on existing conditions to better assess actual impacts to the wetland and associated species.

Response 4-65: *Detailed comparisons of existing and potential future ambient stormwater quality are typically not completed for developments such as Ulster Manor. The adopted Scoping Document did not call for water quality sampling.*

Comment 4-66 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): The written public comments focus on impacts that could affect wetlands and rare plant and wildlife species. While some of these comments may be far-reaching in terms of the perceived potential impact both on and off-site, it is required by SEQRA that the applicant respond to each issue raised.

Response 4-66: *Comment noted, all comments received during the public hearing phase of SEQR are being addressed as appropriate.*

Comment 4-67 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): In terms of stormwater impacts, I believe there are going to be unavoidable impacts that will occur with almost any development of this site due to existing topography, soils and wetlands. The goal should be to minimize those impacts to the greatest extent possible to reduce impacts to receiving waters. However, there must be some level of compromise that accomplishes the applicant's development objectives without seriously jeopardizing the environment. Careful implementation of erosion controls and stormwater management facilities will help meet these objectives. The applicant should provide more detail on how these erosion control measures and stormwater management will work to avoid or minimize the concerns over stormwater impacts to wetlands and receiving waters. This discussion should include information on off-site, long-term and cumulative impacts.

Response 4-67: *The Applicant agrees that development projects may have environmental impacts. The intent of the SEQR process is to identify potential environmental impacts, minimize them as practicable and balance the social and economic needs of the Proposed Action.*

Comment 4-68 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): Based on my site walkover and review of the above public comments, several remaining issues need to be addressed by the project sponsor.

These include the following:

1. Re-delineate the wetlands due to beaver activity since the original delineation.

2. Obtain DEC and ACOE sign-off on the revised wetland boundaries.
3. Confirm whether additional studies, such as Indiana bat surveys, are going to be conducted.
4. Complete any proposed plan revisions and impact analyses.
5. Finalize the Stormwater Pollution Prevention Plan (SWPPP) and address potential stormwater impacts to the wetlands both on-site and off-site.

Response 4-68: *Refer to response 4-63. Recent beaver activity should not require re-delineation of the wetlands whose boundaries have already been agreed upon by the regulating agencies. The applicant has received NYSDEC and ACOE confirmation of wetland boundaries.*

A survey for Indiana bats was conducted on the nights of July 2 and July 3, 2007 by Bat Conservation and Management, Inc. The report from this survey is provided in Appendix H. Additional surveys for on-site flora were completed in 2007, as described in Chapter 5.0 Vegetation and Fauna.

The plan revisions are described in this FEIS.

The revised Stormwater Management Plan is attached (see Appendix G). Potential stormwater impacts for on-site and off-site wetlands are discussed throughout this chapter, above.

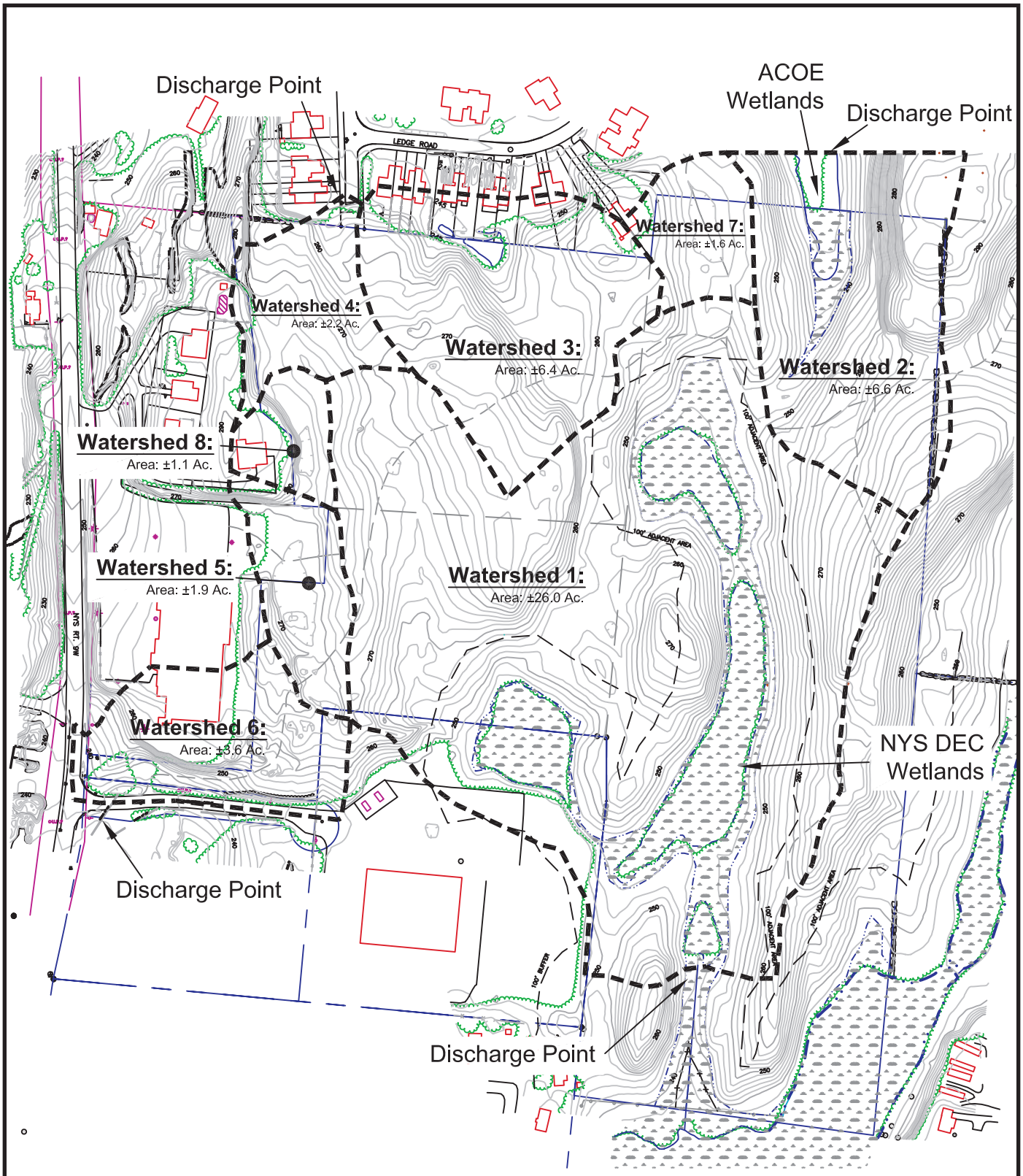

Figure 4-1: Pre-Development Watersheds
Ulster Manor
Town of Ulster, Ulster County, New York
Source: Stormwater Management Plan for Ulster Manor, Medenbach & Eggers, rev. 8/09/07
Scale: N.T.S.

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

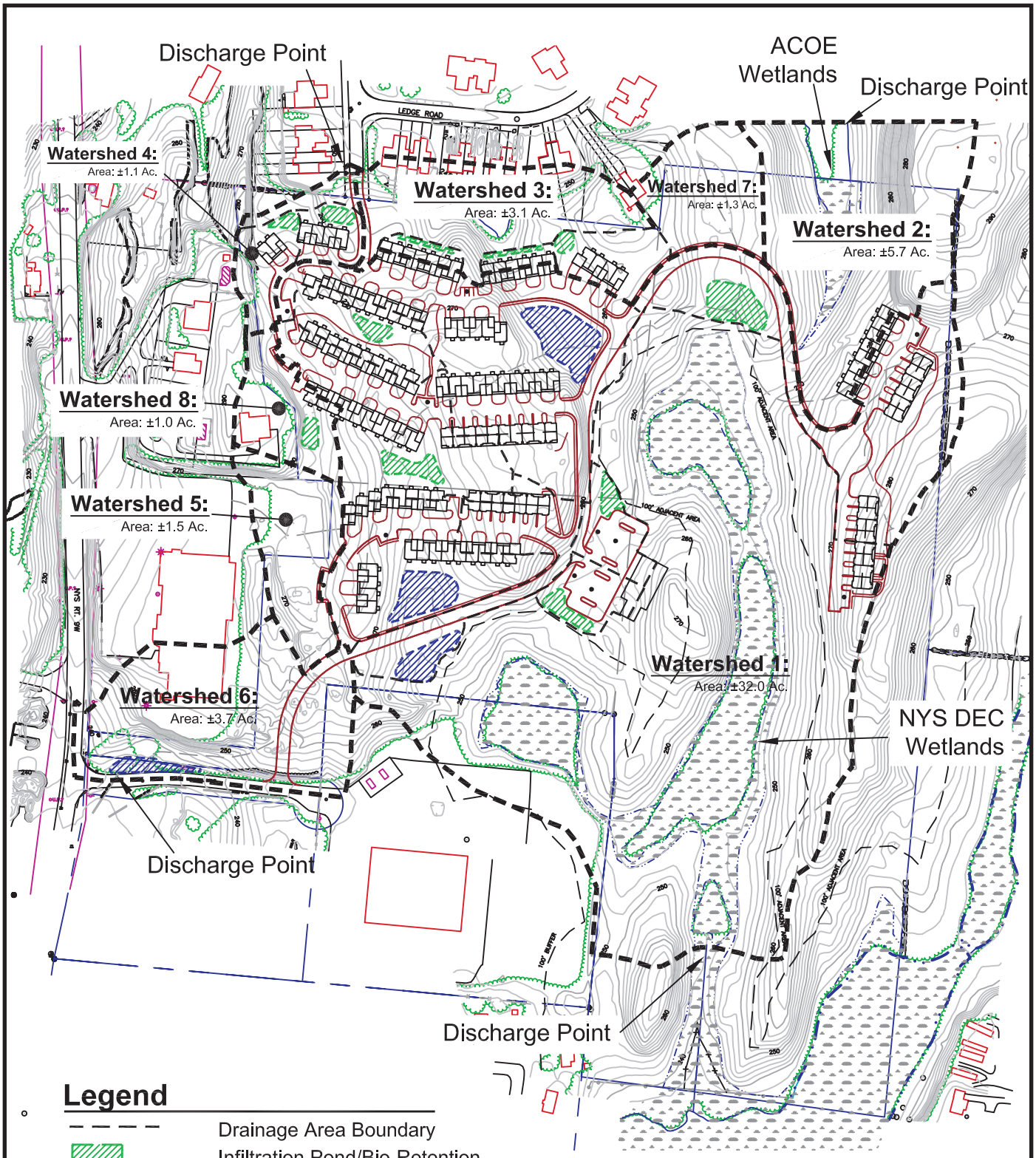

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Figure 4-2: Post-Development Watersheds
Ulster Manor
Town of Ulster, Ulster County, New York
Source: Stormwater Management Plan for Ulster Manor, Medenbach & Eggers, rev. 8/09/07
Scale: N.T.S.

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5.0 VEGETATION AND FAUNA COMMENTS AND RESPONSES

Comment 5-1 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006): The project's impacts on both on-site and off-site habitats and biota need to be fully assessed and mitigated. The site is up-drainage from large NYSDEC wetlands with high potential for rare species of plants and animals. As far as I can determine these nearby wetlands and their surrounding uplands have never been surveyed and assessed in terms of biological resources. Environmental degradation is highly likely, and potentially far-reaching. Pollutants, nutrients, and sediments from such a high-density development as the proposed Ulster Manor would be substantial, and would be carried down drainage into these mostly undisturbed wetland systems. Pollutant and sediment loads are likely to alter conditions to the detriment or even the extirpation of threatened and endangered species that may live in these off site wetlands, and also effect detrimental changes to water chemistry, soils and food webs. Yet there is no analysis of such impacts of this project on off site habitats. This is a serious omission that needs to be redressed before the DEIS can be considered complete.

> ***Response 5-1:*** *The Ulster Manor development proposes no impacts to wetlands, on or off of the project site. A Stormwater Management Plan has been designed by the applicant's engineer in accordance with the methodology outlined in the New York State Stormwater Design Manual to meet minimum removal goals set by the New York State Department of Environmental Conservation (NYSDEC). Furthermore, 11 of the 15 practices selected for the site are either bio-retention zones or infiltration basins (nine bio-retention zones and two infiltration basins). These practices filtering and infiltration) typically have the highest pollutant removal efficiencies with respect to phosphorus and nitrogen out of all NYSDEC approved treatment practices. The bio-retention zones (filtering) can have typical removal rates of phosphorus of up to 60% and up to 40% for nitrogen. Infiltration practices can have removal rates up to 70% for phosphorus and up to 50% for nitrogen. These two practices will consist of three wet ponds, two of which will be constructed in a series in which improves pollutant removal rates, and one wet swale. Typically ponds have a pollutant removal efficiency of 50% for phosphorous and 35% for nitrogen and wet swales have a removal efficiency of 40% for phosphorus and 50% for nitrogen.*

Comment 5-2 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006; November 8, 2006 Public Hearing and December 19, 2006 Public Hearing): Another problem is the absence in Section 3.3, Vegetation and Fauna, of any mention of over 50 rare plant and animal species documented by the New York Natural Heritage Program as occurring in the Town of Ulster, the City of Kingston, and neighboring towns of Hurley, Rosendale and Saugerties, any of which could possibly occur on the Ulster Manor site. The DEIS lists only two, bog turtle and Indiana bat, both Federally and State listed. Table I below lists all the state-listed rare, Endangered, Threatened and Special Concern species with potential to occur on the Ulster Manor site.

The developer requested Federal records *in the vicinity of the site,* not just the site itself. But an inquiry to NYSDEC requested only records of rare plants *on the Ulster Manor site,* an area of only 48 acres. Limiting the request for rare species records to such a small area is almost bound to turn up nothing, and avoids the issue of impacts to neighboring lands. Probably over 90% of development sites have never been surveyed for rare species, so there are no records, even if rare species are there. This is why developers are required to conduct on-site surveys.

I obtained records for 55 rare species by making a request to the New York Natural Heritage Program for rare species records from the Town of Ulster, City of Kingston and surrounding towns (Esopus, Hurley, Rosendale and Saugerties). This wider net approach is standard procedure in biological assessments of this kind, and should have been made to assess the potential for state-listed rare species on the Ulster Manor site. The vicinity of the site has records of 30 rare plants and 25 rare animals, as well as 8 rare community types, including vernal pools, which exist on the Ulster Manor site. A ninth rare community not in the Heritage Program records for the area, Rich (or Lowland) Mesophytic Forest, as the DEIS says (correctly), covers much of the site. The DEIS does not mention the rarity of this forest type, or assess the potential for rare species associated with this type of forest. Table 2 below lists rare and significant ecological communities on the Ulster Manor site.

I have concrete evidence that rare and protected species do in fact occur on the Ulster Manor site. These species apparently were not found in the surveys performed by the developer's consultsnt[*sic*]. Steve Englehardt and I found terrestrial starwort, a NYS Threatened plant species on the Ulster Manor site in July 2006. Eastern box turtle, a Special Concern species in New York, has been observed and photographed on and near the site by neighboring residents. There may be other rare species on the site or in the vicinity of the site for which the Natural Heritage Program and DEC have no records. This further supports the need for rare species surveys.

All of the rare species potentially occurring on the Ulster Manor site need to be evaluated in terms of the site's natural conditions, and those not ruled out for obvious reasons (such as plants associated with tidal wetlands, or grassland-breeding birds) should be looked for on the site in the appropriate season. The developer's team has agreed to perform some, but not all, of these surveys.

In addition to New York State and federal lists, the sources for rare species should also include Hudsonia's Biodiversity Assessment Manual for the Hudson River Estuary Corridor (Kiviat and Stevens 2001) The DEIS cites this reference as an additional guide to rarity of species and habitats with potential to occur on the site, and agrees to assess the site in terms of the manual's standards, procedures and rarity lists. Additional species from the Manual brings the number of rare species that should be assessed for the Ulster Manor site to XX.

> ***Response 5-2:*** *Inquiries made to the NYSDEC's Natural Heritage Program (NHP) request that they search the databases for rare or state-listed animals and plants, significant natural communities, and other significant habitats occurring on or within the vicinity of the site. Contact with Ms. Jean Petrusiak of the NHP on January 10, 2008 indicated the NHP surveys their databases for a radius of up to one mile from the requested project site. Also, multiple surveys have been performed by qualified professional scientists and ecologists from Tim Miller Associates (TMA) and have returned no evidence of rare or endangered species to exist on the project site.*
>
> *Much of the project site consists of Rich (or Lowland) Mesophytic Forest, a community listed by the NHP as having a State Rarity Rank of S2, vulnerable, but is not afforded any protection at either the state or federal level. Ulster Manor is a cluster development that will result in protection of an expanse of this woodland, especially due to project changes which further limit the development footprint.*

Multiple site surveys performed at various times of the year by qualified professionals from TMA staff have not returned evidence of any rare species on the project site that are associated with this community type. The site was investigated for the presence of vegetative and wildlife species on a number of dates from 2005 through 2007. Primary wildlife survey dates were June 27, 2005, September 21, 2005, November 14, 2005, April 1, 2006, April 6, 2006 and April 15, 2006. Additional observations were made on October 6, 2006, April 1, 2007 and April 8, 2007. As far as the commentator suggesting concrete evidence exists of a NYS threatened plant species (terrestrial starwort), there is no proof or documentation of this species occurring on the project site. It is noted that the commentator, representing an adjoining property owner, did not request or receive permission from the property owner to survey the site.

Comment 5-3 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006 ; and November 8, 2006 Public Hearing): Another puzzling deficiency of the DEIS is the absence of the report by the biological surveyor (Tim Miller Associates) in the appendices, where I expected to find it, in the company of other consultants' reports such as the report on the archeological study, which is very precise and thorough. The only reference to the biological survey is in Section 3.3 of the DEIS, with a brief list of which surveys were performed, plus tables of plant and animal species.

Surely this report must exist, and should be included in the appendices. The information obtained from the biological surveys of 2005 by Tim Miller Associates is essential to any assessment of the project's impacts on plant and animal species and their habitats, on the site and on adjacent lands, including state wetlands KE-10 and KE-7. Especially vital to impact assessment and mitigation is the data from the spring-breeding amphibian survey. In the DEIS we have no report of which species of amphibians were breeding in which wetland units (vernal pools and swamps), and what the numbers of adults, egg masses and larvae were. Based on such data obtained by direct observation, there should be an analysis of population numbers for each breeding species, and an analysis of the impacts on each species, and on the amphibian fauna in general. For the DEIS to be complete, it needs to include the full results and analysis of the various biological surveys, and an account of the methods and activities of the surveyors on each date of the survey.

In July 2006, in the large vernal pool in the center of the site (a unit of NYS Wetland KE10 measuring 4.23 acres on Figure 3.2-3, On-Site Delineated Wetlands, of the DEIS), I dip-netted in five locations along the shore, and in three samples found immature salamanders, probably spotted salamander *(Ambystoma maculata).* Spotted salamander is not rare, but its presence suggests that rare salamanders such as Jefferson salamander and blue-spotted salamander could also breed in waters of the site or neighboring pools and wetlands. Without a full accounting of the spring breeding amphibian survey performed by Tim Miller Associates, there is no way to review essential data needed to assess the quality of the survey. These data include survey techniques, dates, weather conditions, life stages of individual amphibians observed, numbers and locations of individuals, etc.

Response 5-3: *The results of multiple biological surveys conducted by TMA are provided in Chapter 3 of the DEIS since a separate biological survey report was not required by the final scoping document from the Town of Ulster.*

Amphibian surveys were conducted in rainy weather on the nights of April 1, 2006 and April 7, 2006 and consisted of flashlight and dip-net searches at night and identification

and photographing of egg masses. The site was walked, particularly the wetlands and adjacent areas, with a flashlight in random, zigzag transects to cover as much of the site as possible. A third survey was conducted during the daytime hours of April 15, 2006. During this survey, logs and rocks were overturned in the wetland adjacent areas to identify if any amphibians were inhabiting those areas during their inactive period of day. Species were identified by direct observation of adults, egg masses, spermatophores or frog breeding calls and noted. No instances of rare salamander species (such as the Jefferson salamander or blue-spotted salamander) were observed.

Comment 5-4 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006; and November 8, 2006 Public Hearing): Additional surveys are needed for rare species potentially occurring on the site; for ecologically significant resident animal groups such as breeding birds, butterflies, and damselflies and dragonflies; and for plant groups with high numbers of species, such as sedges, asters, goldenrods and mosses. The DEIS acknowledges the need for surveys of sedges, asters, goldenrods, and the biological consultant for the project has agreed to conduct these surveys in the appropriate season, presumably during the 2007 growing season. I strongly urge the planning board to require additional surveys in 2007 for the groups I mentioned, so that impacts on these biological resources can be adequately assessed. The species groups mentioned above include many rare species and species associated with wetlands. Since wetlands form a large habitat component of the site, and are part of an even larger wetland system off site, these surveys are important to the larger ecosystem surrounding the site.

Response 5-4: *See Responses 5-2 and 5-3. Visits to the site were made in October of 2006 and April of 2007 to coincide with the overlapping flowering periods of the several asters and goldenrods that would be expected to be present within the habitats found on this site. Most asters and goldenrods are found in old field habitats and the site is mostly void of such habitat except for limited areas of roadside habitat along Route 9W and Memorial Drive, areas where most of the specimens were collected. Within the wooded area that predominates on the site several common woodland species of asters and goldenrods were observed, although always in low numbers. Several of the goldenrods and asters were readily identifiable in the field, including the blue-stemmed, silverrod, Canada, gray, and wrinkle-leaved goldenrods and the white wood aster, calico aster, many-flowered aster, whorled aster and common heart-leaved aster. Specimens for these species were not pressed for later verification of their identifications. Several other plants were tentatively identified during the field visits and specimens of the tentatively identified species were pressed, along with their tentative IDs. These include tentative specimens of Lowrie's aster (A. lowrensis), narrow-leaved aster (A. sagittofolius) and a heath aster (A. pilosus). Yet other specimens of either goldenrods or asters were pressed without having completed a tentative identification. Many of these latter specimens were from plants with damaged structures or abnormal growth patterns as they were found in or along the ATV trails that transect the site.*

The site vegetation list has been revised to include these additional observations of the seasonally prominent or other less common plant species noted during these visits. Table 5-1 presents this list of additional site vegetation.

Table 5-1 FEIS - Addendum for Site Vegetation List	
Common Name (*Scientific Name*)	
HERBACEOUS PLANTS AND GRASSES	
Annual fleabane (*Erigeron annuus*)	New England aster (*Symphyotrichum novae-angliae*)
Beggar-ticks (*Bidens* spp.)	Panicled tick-trefoil (*Desmodium paniculatum*)
Blue-stem goldenrod (*Solidago caesia*)	Path rush (*Juncus tenuis*)
Bush clover (*Lespedeza* spp.)	Pearly everlasting (*Anaphalis margaritacea*)
Calico aster (*Symphyotrichum lateriflorum*)	Pennsylvania bittercress (*Cardamine pensylvanica*)
Canada goldenrod (*Solidago canadensis)*	Pigweed (*Chenopodium album*)
Canada mayflower (*Maianthemum canadense*)	Purpleleaf willowherb (*Epilobium coloratum*)
Common greenbriar (*Smilax rotundifolia*)	Queen Anne's lace (*Daucus carota*)
Common speedwell (*Veronica officinalis*)	Silverrod (*Solidago bicolor*)
Enchanter's nightshade (*Circaea lutetiana*)	Swamp beggar-ticks (*Bidens connata*)
False Solomon's seal (*Maianthemum racemosum*)	Sweet cicely (*Osmorhiza claytonii*)
Flattopped goldenrod (*Euthamia graminifolia*)	Tall hairy agrimony (*Agrimonia gryposepala*)
Great ragweed (*Ambrosia trifida*)	Threeseed mercury (*Acalypha virginica*)
Gray goldenrod (*Solidago nemoralis*)	Trailing bush clover (*Lespedeza procumbens*)
Heart-leaved aster (*Symphyotrichum cordifolium*)	White avens (*Geum canadense*)
Hog peanut (*Amphicarpaea bracteata*)	White baneberry (*Actaea pachypoda*)
Horse balm (*Collinsonia canadensis*)	White turtlehead (*Chelone glabra*)
Indian cucumber root (*Medeola virginiana*)	White vervain (*Verbena urticifolia*)
Japanese knotweed (*Polygonum cuspidatum*)	White wood aster (*Eurybia divaricata*)
Japanese stilt grass (*Microstegium vimineum*)	Whorled aster (*Oclemena acuminata*)
Many-flowered aster (*Symphyotrichum ericoides*)	Wrinkled-leaved goldenrod (*Solidago rugosa*)
Motherwort (*Leonurus cardiaca*)	
TREES AND SHRUBS	
American chestnut (*Castenea dentata*)	Hackberry (*Celtis occidentalis*)
Chokecherry (*Prunus virginiana*)	Prickly gooseberry (*Ribes cynosbati*)
Common buckthorn (*Rhamnus cathartica*)	
Plants identified during site visits: October 10, 2006; April 1, 2007; and April 8, 2007. Source: Tim Miller Associates, 2006, 2007.	

Comment 5-5 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006): Also on page 4 of the Scoping Document, Section III, C, 1, a, the requirement to request species records from the New York Natural Heritage Program was fulfilled by a letter of inquiry from Bruce R. Friedman (Tim Miller Associates, Inc.). The response to the inquiry from NYNHP Information Services Administrator Betty Ketchum (July 18, 2005) reports "no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site," omitting the record of Davis' sedge from the nearby AVR development site in the City of Kingston. Possibly this occurrence had not been submitted to the Natural Heritage Program by the date of the inquiry for Ulster Manor. Relevant to this, Ms. Ketchum advises Mr. Friedman "If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information." There is no evidence that a second inquiry for this updated information was submitted to NYNP. This should have been done as a matter of course.

Response 5-5: *A second letter was sent to the NYSDEC Natural Heritage Program requesting information on any rare or protected plant or animal species or significant*

wildlife habitat communities on the site or vicinity. The NHP response (see attached January 31,2008 letter, Appendix C) returned no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats on or in the vicinity of the site. Independent of the NYSDEC's involvement, the Applicant's consultant also conducted a habitat evaluation for State listed species in the DEIS.

Comment 5-6 (J.G Barbour, Ecological Consultant, letter dated November 30, 2006): Referring to page 5 of the Scoping Document, Section III, C, 2, b, the "field survey to determine existing vegetation" is missing (not included in the appendices), and the required "description of the findings" falls far short of professional standards and does not provide enough information to assess impacts to vegetation.

Response 5-6: *Refer to Responses 5-2, 5-3, and 5-4. On-site investigations of potential habitat for vegetative and wildlife species were conducted by a team of biologists led by Steve Marino of Tim Miller Associates, Inc. who is a Senior Biologist, a certified professional Wetland Scientist with a degree in Biology and has over 22 years of experience in the assessment of wetlands and terrestrial ecology. The site was investigated for the presence of vegetative and wildlife species on a number of dates from 2005 through 2007. Primary wildlife survey dates were June 27, 2005, September 21, 2005, November 14, 2005, April 1, 2006, April 6, 2006 and April 15, 2006. Additional observations were made on October 6, 2006, April 1, 2007 and April 8, 2007.*

Comment 5-7 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Impacts on biodiversity within the Town need to be addressed. They are not even mentioned, though loss of biodiversity and its implications for human health and welfare have become a growing concern within the Hudson Valley and the larger region. Changes in biodiversity from pre-construction forested habitat to post-construction landscape plantings and lawns are not addressed; this is an omission that needs to be corrected.

Response 5-7: *Refer to Responses 5-2, 5-3, and 5-4. It is beyond the scope of this analysis and the intent of SEQRA to address wide scale population dynamics on a regional scale. Based on the site work that has been concluded to date, no rare or unusual species were observed on or expected to utilize this site; the possible displacement of certain individuals of locally common species is not expected to have a regional impact on the population of these species.*

Comment 5-8 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The project will have significant effects on the vernal pool-breeding amphibians that require high water quality as well as adjacent critical upland habitat. State of the art research calls for at least a 750-ft protected area surrounding vernal pools- with the stipulation that-up *to* 25% of that area can be developed. Without this critical upland area, these species cannot be sustained in a vernal pool. In this case, 100 foot buffers are completely inadequate to protect the resource. Implementation of the project as currently described will almost certainly result in the virtual death of these pools as viable habitats.

Response 5-8: *The NYSDEC requires 100 foot buffers for any of their regulated wetlands, one of which, KE-10, exists on the project site. The Army Corps of Engineers does not require a buffer on any of their regulated wetlands. Since a buffer of 75 feet is only suggested through research, and is not required by any state, local, or federal*

agencies, the applicant will comply with regulations that are set forth by regulating agencies.

Comment 5-9 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The DEIS provides inadequate data on species of plants and animals that may be present on the site, or use the site during their life cycles. The N.Y.S. Natural Heritage Program (NYNHP) maintains records of known occurrences of rare species and significant natural communities but because most sites have never been surveyed by biologists, the presence or absence of rare species or significant communities is unknown. The DEIS does not supply this information nor does it provide adequate on-site survey information or to describe methodologies that produced the species lists it contains- nor does it describe species' status (e.g. Partners in Flight or Migrants in Jeopardy lists for birds).

Response 5-9: *See Responses 5-2 and 5-5.*

Comment 5-10 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Because of the potential for a number of species of concern to be present, a breeding bird survey should be conducted by a qualified professional in late spring/early summer so that impacts on particular species can be properly assessed.

Response 5-10: *A breeding bird survey, although mentioned as "may be warranted" in the final scoping document, was not required by the Town of Ulster to be included in the DEIS. As described above, wildlife surveys, including observations of bird species were conducted over multiple spring and early summer dates, over a three year period.*

Comment 5-11 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): In addition, an amphibian and reptile survey should be conducted, by a qualified professional, at the appropriate time of year. This survey must include adjacent DEC wetlands as species that are found in a portion of a wetland complex are likely to use similar habitat within that complex.

Response 5-11: *Refer to Response 5-3.*

Comment 5-12 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The Hudson Valley limestone and shale ridges comprise a unique and biologically significant area that extends from the Helderberg Escarpment northwest of Albany, to the Potic Mountain ridge and into northern Ulster County. The relationship of this site to this geologic formation may be significant in terms of rare species that may be present, and should be investigated in the DEIS. Limestone ridges (and wetlands) just north of the project site are known to contain more than twenty species of NYS threatened or endangered plants. Similar habitat may be present on the project site. Descriptions of wildlife should include all species that use this site for any portion of their life cycle, and include species that may be present based on the presence of suitable habitat.

Response 5-12: *See Responses 5-2, 5-3 and 5-4. It is beyond the scope of the DEIS analysis to address community types and vegetation species that occur outside of the project site. Numerous site visits have provided information on communities that exist on the site. This information, along with a list of wildlife species that are currently inhabiting or may potentially inhabit the site, is included in Chapter 3.3 of the DEIS.*

Comment 5-13 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): All development on the ridge will be directed into downslope wetlands on both sides. Impacts from this need to be evaluated in the DEIS.

> ***Response 5-13:*** *Impacts related to stormwater runoff from the development and stormwater affects on the wetlands are fully evaluated in Chapter 3.2: Surface Water, Wetlands and Groundwater Resources of the DEIS.*

Comment 5-14 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Because wetlands on this site are connected to an extensive wetland complex, species that are listed as threatened, endangered or special concern that are found in adjacent or otherwise connected areas should also be described. For example, bog turtle habitat may not be found on-site, however, project impacts on water quality in the larger watershed system (eg adjacent wetlands) where habitat may exist, could have an impact if suitable habitat exists in these areas.

> ***Response 5-14:*** *See Response 5-1.*

Comment 5-15 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): A number of protected species are already known to use this site or nearby similar sites; these should all be included in the DEIS with discussion of potential occurrence on-site and specific habitat needs if they do use this site. All species of conservation concern (threatened, endangered, special concern, rare, exploitably vulnerable (plants), and for birds, Migrants in Jeopardy, Partners in Flight, and similar designations) should be described. The DEIS does not provide this information. The DEIS lists "warblers" for example, without listing species; this is incomplete and meaningless: certain species of warblers have special concern designation and specific habitat requirements.

> ***Response 5-15:*** *See Responses 5-2, 5-4, 5-7, 5-12 and 5-22. No State listed rare, threatened or endangered species were observed on the property, following multiple surveys over a three year period. A summer woodland bat survey did identify several eastern small footed bats on the property (see Appendix H). The eastern small footed bat is listed as a species of Special Concern in New York State. While considered uncommon to rare in New York, the bat does not have the legal protection afforded endangered or threatened species. This survey and mitigation measures are further described in Response 5-29, below.*

Comment 5-16 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Limestone ridges (and wetlands) just north of the project site are known to contain more than twenty species of NYS threatened or endangered plants. Similar habitat may be present on the project site. The suitability of on-site habitat should be evaluated for these species, which include but are not limited to the following threatened or endangered species; additional rare species may be present.

Woodland agrimony, Puttyroot, Green rock-cress, Downy wood mint, Rocky mountain sedge, Glaucous sedge, Reflexed sedge, Ram's head ladyslipper, Smooth tick clover, Northern stickseed, Water marigold, Smooth cliff brake, Northern wild comfrey, Sweet coltsfoot, Hooker's orchid, Erect knotweed, Georgia bulrush, Stiff leaf goldenrod, Marsh valerian.

> ***Response 5-16:*** *See Response 5-2, 5-3, 5-4 5-12 and 5-22.*

Comment 5-17 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Descriptions of wildlife should include all species that use this site for any portion of their life cycle, and include species that may be present based on the presence of suitable habitat. Because wetlands on this site are connected to an extensive wetland complex, species that are listed as threatened, endangered or special concern that are found in adjacent or otherwise connected areas should also be described. List species with their associated habitats so that habitat loss can be correlated with potential impacts on particular species. A number of protected species are already known to use this site or nearby similar sites; these should all be included in the DEIS with discussion of potential occurrence on-site and specific habitat needs if they do use this site. These species include:

Cricket frog (NYS endangered), Marbled salamander (NYS SC), Jefferson salamander (NYS SC), Blue-spotted salamander (NYS SC), Spotted turtle (NYS SC), Eastern box turtle (NYS SC), Wood turtle (NYS SC), Eastern hog-nosed snake (NYS SC), Indiana bat (NYS endangered), Eastern small footed myotis (NYS SC), Sharp-shinned hawk (NYS SC), Red-shouldered hawk (NYS SC), Coopers hawk (NYS SC), Whip-poor-will (NYS SC), Golden-winged warbler (NYS SC). Cerulean warbler (NYS SC), American bittern (NYS SC), Least bittern (NYS threatened), King rail (NYS threatened), Osprey (NYS SC), Bald eagle (NYS threatened).

Response 5-17: *See Responses 5-2, 5-5, and 5-9 and 5-22.*

Comment 5-18 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The site is located within a rapidly shrinking island of habitat, encroached upon by roads and additional proposed developments. Aerial photos show the site as containing a significant portion (approx. one-third) of the remaining forested/ undeveloped habitat within the area bounded by Routes 209, 9W, and 32- all of which support significant commercial development within this area. Impacts on natural resources described in the DEIS must be evaluated within this larger context.

Response 5-18: *The natural resources on the site were evaluated both as site specific, but also in the context that the on-site State regulated wetland (wetland KE-10), extends off-site and is part of a larger drainage area. More than 53 percent of the existing vegetation, including mature trees and wetland vegetation, would be undisturbed by the project.*

Comment 5-19 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Mitigation of impacts should include significant forested habitat on-site- mature forests are disappearing from the landscape and affecting species distribution and watersheds. On-site forested areas are important in that they are part of a larger forested area that includes wetland and ridge habitats as well.

Response 5-19: *Comment noted.*

Comment 5-20 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): The DEIS does not attempt to mitigate the loss of large trees within the area of disturbance, which includes most of the site. This information should be included.

Response 5-20: *The Ulster Manor Stormwater Management Plan (FEIS Attachment) has been revised to locate all stormwater management areas outside of the 100 ft*

NYSDEC wetland adjacent areas and the project has also been scaled back from 149 to 128 residential units in a clustered development. Overall site disturbance would be reduced from 28.7 acres to 18.5 acres under the current proposal. The loss of woodlands and on-site vegetation would be reduced by approximately 10 acres or 35 percent, comparing the current plan to the former plan. No more disturbance is proposed than is absolutely necessary to implement the proposed plan and develop the land consistent with the Town's zoning designation of the subject site. It should be noted that the 18.5 acres of disturbance includes approximately 15.9 acres that are proposed to be revegetated and would be available as wildlife habitat, albeit altered from its existing condition, post-development.

Comment 5-21 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Over time, it is more cost effective to protect significant resources from degradation and loss than to attempt to restore them once they have been damaged or destroyed -if this is even possible. An evaluation of the costs of **not** protecting the natural resources on this site should be part of the DEIS, and should be added.

Response 5-21: *An evaluation of the type suggested by the commentator was not required by the Final Scoping document from the Town of Ulster. It is a given that when developing a site, some natural resources will be lost to accommodate the development.*

Comment 5-22 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): From a substantive analysis, the DEIS is lacking in sufficient detail on issues of ecological impacts and wetland impacts. In my submittal of September 11, 2006 (review of July 28, 2006 DEIS Revisions), I noted two areas that needed to be addressed in the environmental review process. These include the need for additional plant surveys by a qualified botanist and a definitive determination on additional studies for the endangered Indiana Bat (*Myotis sodalis*). The applicant has agreed to have additional plant surveys conducted on the site for inclusion in an FEIS. However, the issue of whether additional surveys for Indiana bats will be conducted is still unclear.

Response 5-22: *See Response 5-4 for dates of additional plant surveys and a table of the findings. A survey for the endangered Indiana Bat was performed on the nights of July 2 and July 3, 2007 by Bat Conservation and Management, Inc. The report from this survey can be seen in Appendix H.*

While no endangered Indiana bats were identified on the site, several eastern small footed bats (Myotis leibii) were captured in mist nets, identified and released. The small footed bat is listed as a species of Special Concern in New York State. This bat is considered uncommon to rare in the State, but does not have the legal protection afforded endangered or threatened species. The New York State Natural Heritage Program (NYSNHP) lists the bat as "G3S2" for rarity in New York. This designation is described as follows:

G2,S2: Imperiled because of rarity (6-20 occurrences or few remaining acres, or miles of stream) or factors demonstrably making it very vulnerable to extinction (global) or extirpation from New York.

G3,S3: Either uncommon or local, typically with 21 to 100 occurrences, limited acreage or miles of steam range wide (global) or in New York.

Again, although uncommon to rare in New York, this species is not listed with the legal protected status of Endangered or Threatened.

The proposed development of the site would potentially reduce the available habitat for the eastern small footed bat. In winter the bat roosts in caves and in summer it prefers to roost in crevices in cliffs, talus piles and even road cuts with solar exposure (Summer Woodland Bat Survey, Bat Conservation and Management, August 21, 2007). Based upon its preferred roosting locations, it is unlikely the bat utilizes the site year-round, since there are no caves on the Ulster Manor site. The project site does not contain any habitat or features that are unique for eastern small footed bats.

The proposed development of the site would preserve 29.5 acres or 60 percent of the existing vegetation, including all NYSDEC wetlands and 100 foot buffers. The majority of the eastern portion of the site, which connects to undeveloped, wooded lands to the north, south and east would remain as potential nocturnal foraging habitat for the eastern small footed bat.

Comment 5-23 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): The DEIS presents several short narratives on ecological issues along with tables, however, it would be more appropriate to have a comprehensive ecological report appended to the DEIS and referenced in the text. This report should contain a description of the existing ecological conditions; survey methodology; survey results (in narrative and species list format); conclusions on existing conditions, impacts and mitigation; references and qualifications of ecologists conducting the various surveys.

Response 5-23: *Refer to Response 5-3.*

Comment 5-24 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): In regard to potential impacts to rare species, the applicant has conducted studies on the site that should address many of these concerns, Additional studies are being considered based upon previous public comments and input from the New York State Department of Environmental Conservation (NYSDEC) and the United States Fish & Wildlife Service (USFWS). These include additional studies for rare plants and the Indiana bat.

Response 5-24: *See Responses 5-4 and 5-22.*

Comment 5-25 (Norbert Quenzer Jr., Vice President, Senior Ecologist, letter dated March 14, 2007): Mr. Barbour states in his comment letter that he had observed a NYS-listed threatened plant species, terrestrial starwort (*Callitriche terrestris*), on the site in July 2006. Any observations of rare species should be thoroughly documented with the exact location, date and photographs to verify the record. This information should be provided to the applicant by Mr. Barbour to assess potential impacts and mitigation.

Response 5-25: *Refer to Response 5-2.*

6.0 CULTURAL RESOURCES COMMENTS AND RESPONSES

Comment 6-1 (New York State Department of Environmental Conservation, Mr. Scott E. Sheeley, Inc., letter dated November 30, 2006): According to the DEIS a Phase III archaeological investigation was conducted on the site in accordance with guidance from the New York State Parks Recreation and Historic Preservation (OPRHP) and numerous artifacts were excavated, which are being further analyzed and catalogued. The letter dated June 23, 2005 from OPRHP directs the sponsor to complete the analysis and provide a final report by June 30, 2006. It does not appear that the report has been provided to OPRHP since the DEIS (dated September 21, 2006) indicates that this report "will be submitted by July, 2006" (page 3.4-4). The sponsor should fully comply with the directions of the OPRHP regarding the final disposition and reporting of the artifacts discovered at this site, and present any additional correspondence from OPRHP in the final EIS.

> ***Response 6-1:*** *The final Phase III Report has not yet been completed by the applicant's cultural resource consultant. As directed by the OPRHP, the report will be finalized and submitted to the OPRHP and the Lead Agency.*

Comment 6-2 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): Evaluation of the loss of significant archaeological resources/site on the ridge should be provided in the DEIS. Simply removing the artifacts and isolating them from the site on which they were produced devalues the historical significance of the ridge within the Township. This should at least be discussed in the DEIS.

> ***Response 6-2:*** *Cultural resource investigations are divided into three levels: Phases I, II and III. A project may receive OPRHP approval after the completion of any of these phases by a qualified archaeologist, based on the determination that the project site has undergone sufficient investigation to eliminate the probability of significant artifacts being recovered at that location. These three phases have been completed to the satisfaction of OPRHP, which issued a letter of response dated June 23, 2005 stating that the project can proceed as proposed.*
>
> *Hand and mechanical excavation of 141.5 square meters of the Manor site was undertaken. Several archeaological features were identified and thousands of artifacts were recovered that have been relocated to the cultural resources consultant's laboratory for processing, analyzing, and cataloguing. Phase III artifact recovery is an acceptable means of documenting, analyzing and interpreting the cultural resources found at a property. The Phase III Report provides the NY State Office of Parks Recreation and Historic Preservation (OPRHP) and the Town of Ulster with data and analysis of a particular and unique cultural remnant. This information can be used in the study and interpretation of other sites in the Town and Statewide. The Phase III process does not devalue the historical significance or context of the material found.*

7.0 VISUAL RESOURCES COMMENTS AND RESPONSES

Comment 7-1 (Mr. Dan Shuster, Letter dated March 20, 2007): The applicant's analysis of potential visual impacts demonstrates that there will be no significant impacts due to the project on sensitive receptors in the vicinity of the site – i.e. historic sites, parks, scenic roads, schools or other places of public assembly. Limited views of the site from adjacent land uses may result but these will be primarily from major streets, commercial uses, or neighboring residences of similar character.

Response 7-1: *Comment noted.*

8.0 TRANSPORTATION COMMENTS AND RESPONSES

Introduction

An initial traffic study, dated November 4, 2003, was prepared for the proposed Ulster Manor project by the Town's traffic consultants, Creighton Manning Engineering. During the time period November 2003 to November 2005 (when the final scoping document was adopted), the project was modified. To address plan modifications and present a traffic analysis based on current conditions, the Planning Board determined that the traffic study should be revised and updated as part of the environmental review of the project. The DEIS included a revised Traffic Study dated September 21, 2006.

Since publication of the DEIS and in response to public comment, Ulster Manor has been modified. Specifically, 25 single family homes were eliminated and the project now proposes 128 townhouse units. The cul-de-sac has been shortened to comply with the Town's regulations, but is still designed to allow a potential future access connection to the parcel to the east.

As shown in Table 8-1, the current project can be expected to introduce 63 vehicular trips during the weekday a.m. peak hour, a reduction of 25 a.m. peak hour trips and 73 vehicular trips during the weekday p.m. peak hour, a reduction of 29 p.m. peak hour trips compared to the previous proposal. As a result of this modified project, the traffic impacts associated with the proposed Ulster Manor have been reduced compared to the results described in the DEIS Traffic Analysis.

Table 8-1
Project Site Peak Hour Trip Generation

Land Use	Peak Hour Trips					
	A.M. Peak Hour			P.M. Peak Hour		
	IN (Trips)	OUT (Trips)	Total (Trips)	IN (Trips)	OUT (Trips)	Total (Trips)
Previous Project - 124 Townhouse & 25 Single Family Homes	17	71	88	67	35	102
Current Project - 128 units Townhouse Multifamily	11	52	63	49	24	73
Reduction in Trip Generation	(6)	(19)	(25)	(18)	(11)	(29)

SOURCE: Trip Generation, Institute of Transportation Engineers, 7th edition, Washington DC, 2003.
See Table 3.6-7 for trip rates.

A review of the roadway geometry at the intersection of Memorial Drive and US Route 9W indicated an existing wide turning radius on Memorial Drive which effectively allows left and right turning movements simultaneously onto US Route 9W. Memorial Drive is currently more than 30 feet in width, and flares out as it approaches US Route 9W. A revised analysis of Existing, No-Build and Build conditions, including the wide turn radius have been included in FEIS Supplemental Traffic Analysis (see Appendix I). The revised analysis allowing simultaneous left and right turning movements onto US Route 9W more accurately depicts the level of service for the intersection.

Comment 8-1 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): I write this letter to you, on behalf of local citizens of the Town of Ulster, to express concern about the inadequacy of the traffic impact information submitted by the 9W/Memorial Drive applicant for the Ulster Manor residential subdivision to you in this stage of project review. Because traffic to and from this proposed project will be using the major Rte. 9W north-south roadway and because lanes in that roadway's nearby signalized intersections with Rte. 32 and with Albany Ave.. Extension/Miron Lane are already at or near unacceptable levels of service, the additional peak hour traffic generated by this housing development may have a significant adverse environmental impact. This seems all the more probable if appropriate corrections are made to the inadequate traffic analysis submitted by the developer. The Planning Board should therefore require additional and sufficient data to assess that serious possibility and several other important issues.

> ***Response 8-1:*** *As described above, Creighton Manning Engineering conducted a Traffic Impact Study for this project dated November 4, 2003. The final Scoping document for the project was dated November 17, 2005. The Planning Board determined that a new traffic study be completed as part of the environmental review of the project. The DEIS, including the Traffic Study is dated September 21, 2006, and is based upon updated traffic conditions. In addition the FEIS Supplemental Traffic Analysis contains additional updates regarding the project proposal (see Appendix I). The traffic study has been conducted in accordance with industry methods and standards promulgated by the Institute of Traffic Engineers (ITE).*

Comment 8-2 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): According to CME's own analysis' (Table 4.2, p. 7), because of the proposed project two lane intersections in the area of the project will have traffic volumes/delays, after project completion and proposed mitigation, very close to the threshold between "D" (barely acceptable) and "E" (unacceptable) LOS (level-of-service). These lanes are: Southbound left turn (SB-LT) at the 9W/32 intersection, peak PM Westbound through (WB-T) at the 9W/Miron Lane/Albany Ave. Ext. intersection, peak PM.

In both cases, if appropriate corrections (see below) are made to the underlying volume data, it appears that both lanes will in fact move into the unacceptable "E" LOS because of the proposed project (including planned mitigation).

> ***Response 8-2:*** *The CME Traffic Impact Study was superseded by the TMA Traffic Analysis conducted as part of the DEIS. The TMA traffic analysis indicates that this intersection will operate at an overall level of service C during the a.m. peak hour and overall level of service D during the p.m. peak hour, in the Build condition. Further analysis was determined to be unnecessary according to the final scope.*

Comment 8-3 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): Date of project completion (design year) - In 2003, CME used 2005 as the date of project, a year which now appears too early because of delays in project approval. Assuming eventual project approval, a projected date of 2006 appears more realistic. Thus, another annual increment of background traffic should be added to the future "no build" scenario in order to estimate intersection congestion more accurately.

> ***Response 8-3:*** *The TMA Traffic Analysis (DEIS and FEIS) considered 2010 as the projected Build year.*

Comment 8-4 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): Good traffic analysis practice projects background volume estimates to the year after development completion. This practice would thus add an additional annual increment of background traffic, beyond the correction for a new year of completion, to the future "no build" scenario in order to estimate intersection congestion more accurately.

Response 8-4: *The TMA DEIS and FEIS traffic analysis addendum projected traffic to assess future 2010 No-Build Conditions. A two percent annual background growth was considered in assessing future traffic conditions.*

Comment 8-5 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): "Annual Growth" increment of background traffic - Contrary to the commonly-used conservative annual traffic growth rate of 2% in traffic analyses throughout the region, CME claims that volumes at the 9W stretch adjacent to the proposed project actually decreased by 2% yearly prior to the study. However, CME provides no data or explanation to justify this alleged anomaly. CME then uses a 4% annual growth rate from 2003 on to create its future "no-build" background volumes *for* its LOS assessments. However, CME provides no explicit and detailed basis *for* the arbitrary 4% figure except a claim that this should suffice to cover cumulative traffic increases on 9W due to the Benderson retail project under construction north of the project site and growth of the industrial area along Kiefer Lane just south of Memorial Drive.

Both of the cited retail and industrial developments are well-known entities with project details of their own (including big-box stores) undoubtedly well-documented in the planning board files. Instead of a general 4% annual growth figure to cover the cumulative background traffic from these two areas, a new annual growth figure of 2% should be used, as elsewhere, and more precise volume estimates given for both the Benderson and Kiefer Lane developments based on retail and industrial square footage formulas from the latest ITE manual for each type of specific use. Most likely, the overall combination of their [*sic*] new 2% general growth rate and the traffic generation figures from the ITE manual will show future background volumes considerably beyond the overall 4% growth rate used in this study.

Response 8-5: *In the TMA traffic analysis of the proposed project, an annual two percent compounded growth was added to the Existing Condition to project the 2010 No-Build Conditions. This annual growth was in addition to the site specific No-Build growth anticipated for the Kohl's Shopping Center, a multi use project on Boices Land, an 89 room Marriott Hotel and "The Landing" project anticipated to be built in Kingston.*

Comment 8-6 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): Weekday used for existing traffic counts -The CME report states that traffic intersection volumes for the study were counted on two Tuesdays in September. However, it is well-known, and verified in the ITE manual, that Friday PM has significantly greater traffic volumes than any other weekday PM, especially when substantial retail store-generated volumes are involved. For a reasonable worst-case analysis that a traffic study should be based on, the Friday PM volumes should be counted and substituted for those in the report. as the basis for new LOS assessments.

Response 8-6: *Traffic counts are conducted to assess "Typical Traffic Conditions". Based upon the residential nature of this project, counts were conducted on Thursday, November 7, 2005, from 6:30 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m. These*

counts represent typical weekday traffic conditions.

Comment 8-7 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): Season of year used for existing traffic counts - Similarly, it is well-known, and verified in the ITE manual, that the period between Thanksgiving and Christmas has significantly greater traffic volumes than any other season, especially when substantial retail store-generated volumes are involved. For a reasonable worst-case analysis that a traffic study should be based on, Friday PM volumes should be counted during the Thanksgiving to Christmas period and substituted for those in the report. as the basis for new LOS assessments.

Response 8-7: *ITE Trip Generation does indicate daily traffic volumes increase from Thanksgiving to Christmas. These increases are primarily due to longer hours of operation, increased off-peak traffic, increased pass-by traffic and increased weekend traffic. ITE Trip Generation indicates that seasonal weekday p.m. peak hour traffic is at a level similar to the rest of the year. The p.m. peak hour commuters continues to dominate during typical seasonal traffic.*

Comment 8-8 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): Underreported traffic counts in analysis - There are important discrepancies between actual numbers of peak PM northbound and southbound vehicles reported counted on 9W at the Memorial Drive intersection (Appendix A, chart of turning movement counts [file I.D. TM3127P3]) and those entered into the "Two-Way Control Summary" analysis page concerning the peak PM traffic at the same intersection for "2003-Existing." (Appendix B). The significantly lower figures used in the latter chart directly affect, favorably for the developer, the LOS assessment for the existing and future traffic scenarios in the report. There should be no such discrepancies.

Response 8-8: *The CME Traffic Impact Study was superseded by the TMA Traffic Analysis conducted as part of the DEIS. In the TMA study, the turning volumes shown in the figures and the volumes used in the capacity calculations are the same.*

Comment 8-9 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): CME asserts that a mere change in the timing of the traffic signal at the 9W/32 intersection will be enough to reduce the peak PM 208 seconds delay ("F' level) of eastbound through and right turn traffic (EB-TR) to merely 71.5 seconds ("E" level) while simultaneously reducing delays in other lanes or maintaining or only slightly increasing delays in others. A similar claim is made for a similar drastic mitigation effect by the same strategy for AM peak traffic in the same lane.

Such a claim defies credibility. It is simply not reasonable that a 9-second increase in green for one lane (with an overall changed light cycle of only one additional second) will result in improvements or only minor additional delays for other lanes. I have consulted with two professional engineers who share similar doubts about the logic involved. Surely, if the horrendous presently-existing "F" level LOS for the same lane could be altered with such beneficial effect through a mere adjustment of traffic signal timing, the DOT would make the adjustment on its own.

Given that this was the only mitigation suggested by the developer's traffic report for the project's negative effect on an already-unacceptable lane LOS, much more detailed data and

analysis of this issue is needed. It is not appropriate for a developer to make unacceptable traffic congestion even worse.

Response 8-9: *As indicated above, the CME Traffic Study was superseded by a more recent TMA traffic analysis. The TMA traffic analysis determined that the 9W/32 intersection is projected to operate with no movements at Level of Service F under the conservative No-Build Conditions (Refer to Response 8-5). Regarding the benefits of traffic signal timing, small changes in green time at a signal can result in overall improvements to a traffic movement, especially when the movement is at capacity. The green time is expressed in seconds per cycle, which, over a period of an hour can represent several minutes of shifted green time.*

Comment 8-10 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): The CME report recommends potential access between the proposed subdivision and the existing residential neighborhood to the north which has access to Rte. 9W via Van Kleeks Lane (p. 8), thus providing an alternative to Memorial Drive for Ulster Manor traffic to come from and go to the 9W roadway. Use of this alternative could have a significant adverse impacts on the traffic congestion, safety and community character of those already-existing neighborhoods and the nature and significance of such impacts should be analyzed.

Response 8-10: *During the environmental review of the Project, the Planning Board recommended that analysis of the Quail Drive Access Alternative, which would allow full access from Ulster Manor via Quail Drive and Van Kleeks Lane to US Route 9W, be evaluated to determine the relative benefits and impacts of this connection. The results of this analysis are included as FEIS Supplemental Traffic Analysis (see Appendix I).*

As described, the project has been reduced from 124 Townhouses and 25 Single Family homes to a total of 128 Townhouses. The resultant decrease in trip generation is shown in FEIS Supplemental Traffic Analysis. The traffic analysis conducted of the intersection of Van Kleeks Lane and US Route 9W indicates the intersection currently operates at level of service D or better during the a.m. and p.m. peak hour periods. A full connection between Ulster Manor and the residential areas to the north, via Quail Drive, would likely result in approximately 50 percent of the northbound traffic from Ulster Manor utilizing Van Kleeks Lane to make a right turn onto US Route 9W. This would equate to 14 trips in the a.m. and 6 trips in the p.m. Similarly 50 percent of the Ulster Manor site generated trips approaching from the north would likely utilize Van Kleeks Lane to exit US Route 9W. This equates to 3 trips in the a.m. and 13 trips in the p.m.

The proposed project includes construction of a southbound left turn lane from US Route 9W to Memorial Drive. This turn lane is being constructed to reduce delays and improve the safety of southbound vehicles making a left from US Route 9W. Southbound turning movements making a left at Van Kleeks would not benefit from the improved safety the proposed turn lane provides at Memorial Drive. Capacity calculations for these conditions are included in the FEIS Traffic Attachment One.

If the Quail Drive emergency access is opened to allow full access, a portion of the site generated traffic, i.e., 12 trips during the a.m. peak hour and 6 in the p.m. peak hour, would use Van Kleeks Lane to reduce travel time and travel distance. This shift would slightly reduce traffic and delays at the intersection of Memorial Drive and US Route

9W. The increase in average delay per vehicle using Memorial Drive is due to the fact that a greater proportion of those vehicles will be making left hand turns.

Existing traffic using the Van Kleeks Lane and US Route 9W intersection would experience slightly increased delays, however these delays would not be enough to cause a change in the level of service.

Comment 8-11 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): Table 4.2 (page 7) of the CME report presents a "Level of Service Summary" and thus is a basic reference tool for understanding the potential impacts of the proposed development. Nevertheless, a fundamental labeling flaw in the table can cause significant confusion in understanding existing and future LOS for the 9W/32 intersection. What are listed as the two westbound lanes at that intersection are actually the two eastbound lanes and vice versa. This is especially crucial since one of the lanes in question has the "F" LOS discussed above and is falsely stated as being the westbound-through/right turn lane on p. 9 of the analysis narrative.

Response 8-11: *The CME Traffic Impact Study was superseded by the TMA Traffic Analysis conducted as part of the DEIS. This has been correctly assessed in the TMA DEIS Traffic Analysis.*

Comment 8-12 (David Porter, Ph.D , letter dated December 18, 2004; Public Hearing December 19, 2006): The following example of an apparently erroneous statement in the report undermines its overall credibility and suggests that much more reason for the Planning Board to require a new and much more detailed and carefully-reasoned traffic analysis.

Table 4.2 and "Short Report" claims a lane delay reduction from "no-build" to "build" scenarios. This table and the two respective short reports in Appendix B state that there will actually be a delay reduction from the "2005 no-build" to the "2005 build" (before mitigation) context for the WB-TR [should be EB-TR] lane at the 9W/32 intersection in the AM peak hour. This highly unusual circumstance contradicts common sense logic and needs explanation if not simply a methodological error.

Response 8-12: *The CME Traffic Impact Study was superseded by the TMA Traffic Analysis conducted as part of the DEIS. Although it is counterintuitive, the average delay for a lane may be reduced, even with added traffic, if that traffic is primarily added to the movement with less delays. For example, the left turn movement into a busy traffic stream has typically longer delays than the right turn movement. If a greater proportion of vehicles are turning right than left in a future condition, the overall average delay for the lane will likely be reduced. Additional discussion of the concept of average delay is included in the FEIS Supplemental Traffic Analysis, with regard to the Quail Drive Access Alternative.*

Comment 8-13 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): DEIS section 3.6.1 includes a generic description of NYSDOT's traffic data collection program. While informative, this information is not specific to the project as no NYSDOT traffic data is presented. Please note the existing annual average daily traffic volumes (AADT) on the adjacent State highway segments.

Response 8-13: *The most recent published AADT, for 2004, indicates that the AADT*

on NYS Route 9W is 14,488 trips between NYS Route 32 and Boices Lane, increasing to 29,242 trips north of Boices Lane. The AADT on NYS Route 32 is 13,529 trips in the vicinity of the US Route 9W intersection.

Comment 8-14 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): The AM and PM peak hour No-Build traffic volumes for the northbound and southbound through movements at Route 9W and Kiefer Lane should be corrected on the HCS calculations.

Response 8-14: *The correction has been made. This change did not result in any change to the level of service, although the delays did increase slightly. The revised HCS analysis has been included in the FEIS Supplemental Traffic Analysis (Appendix I).*

Comment 8-15 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): No heavy vehicle percentages were used in the HCS signal calculations. The calculations should be updated based on the percentage of trucks observed, or estimated based on NYSDOT counts of the area.

Response 8-15: *Traffic volume counts included heavy vehicle classification which was inadvertently omitted from the HCS analysis for signalized intersections. The percentage of heavy vehicle traffic at signalized intersections has now been included. There is no change to the level of service at any of the approaches in the traffic analysis. The increase in delay is less than 1.0 seconds at all of the existing intersections studied. Revised HCS analysis has been included in the FEIS Supplemental Traffic Analysis (Appendix I).*

Comment 8-16 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): Drawing HIP-1 is referenced in the DEIS but was not located. Please note what section they can be found or provide them.

Response 8-16: *This Drawing was included with the full size plan set, and is labeled Highway Improvement Plan, prepared by Medenbach and Eggers, dated April 1, 2004. A copy has been included with the FEIS for review (see attached Drawings).*

Comment 8-17 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): The proposed mitigation includes the construction of a left turn lane Route 9W, which will provide a refuge area for vehicles to wait to turn left onto Memorial Drive. This improvement, as well as the proposed signal will require review and approval by NYSDOT. Should a traffic signal not be approved, an alternative improvement which would reduce delays on Memorial Drive includes the construction of a westbound right turn lane exiting Memorial Drive. This turn lane would allow right turn vehicles to bypass left turn vehicles waiting for gaps in the traffic flow on Route 9W.

Response 8-17: *A review of the roadway geometry at Memorial Drive indicates an existing wide flare approach, which in effect allows the right turn vehicles to by pass left turn vehicles waiting for gaps in the traffic flow. Based upon the project traffic volume, a separate right turn lane is not currently proposed.*

The applicant would be willing to transfer additional right-of-way from the site along Memorial Drive subject to the Town of Ulster approval. A traffic signal was examined in

the DEIS, but has not been proposed. Projected traffic volumes at the intersection of Memorial Drive and US Route 9W are too low and it is not anticipated that a signal would be approved for this project by NYSDOT.

Comment 8-18 (Robert Barton, Public Hearing, November 08, 2006): The traffic study in this report is years ago. We need an updated 2007 traffic plan.

Response 8-18: *The Creighton Manning study dated November 3, 2004 was superseded by the TMA traffic analysis included in the DEIS, and includes updated information. An additional analysis of the reduced trip generation as a result of the project modifications is included for the Build Condition. Counts were taken along US Route 9W to assess the impacts of connecting to Van Kleeks Lane. The 2007 counts indicate reduced traffic volumes along US Route 9W in the vicinity of the site access. (refer to Appendix I Revised Traffic Analysis, Figures 1 and 2).*

Comment 8-19 (Robert Barton, Public Hearing, November 08, 2006): Also, the development should have another exit other than onto 9W. Either Route 32 or Frank Sottile Boulevard would be an ideal way to take any of the added traffic off of 9W.

Response 8-19: *The project site does not directly abut NYS Route 32 or Frank Sottile Boulevard, thus no direct connection to either of these roadways is possible. The project, as proposed includes a potential access connection to the property to the east. In the future, if and when this property is developed, a connection to Frank Sottile Boulevard may be possible. An emergency access to Quail Drive is part of the project proposal.*

Comment 8-20 (Robert Barton, Public Hearing, November 08, 2006): There's been no traffic study with Van Kleeck Lane which has two developments in this area with Fox Run and Sunrise Park. It has the VFW building and the nursery building there which generate a lot of traffic. There should be an update.

Response 8-20: *Data was collected for the TMA Traffic Analysis on November 15, 2005. Fox Run and Sunrise Park were fully built out when the traffic counts were taken. Similarly, both the VFW building and the Augustine Landscaping & Nursery were fully operational at this time.*

9.0 LAND USE AND ZONING COMMENTS AND RESPONSES

Comment 9-1 (Adjoining Property Owner, Mr. Steve Engelhardt, Public Hearing, December 19, 2006; and Steve Engelhardt, letter dated December 19, 2006): Of all the calculations affected by this oversite[*sic*] the density calculation will be the most affected as we all get more familier[*sic*] with the bulk and density we find that these proposed projects are to big to meet our zoning law. Ulster Manor's footprint is to[sic] big to fit on this piece of land. I'm asking you as lead agency to have the engineer of this proposal recalculate density according to the three different zones, stop treating this property as one in regard to bulk and density, thru[*sic*] the fault of no one here. This property has three different zones R-10 -- R-30 --- and OM deal with this matter properly. Each zone must be dealt with independantly[*sic*] according to our zoning law.

This project as proposed now is to[*sic*] big thus directly adversely impacting my property. Asking me to accept all this stormwater in itself is enough to stop this process. I'm asking you to stop it. I'm asking you as lead agency to ask the developer to redesign this project meet our Town Zoning requirements with a conventional lot layout for the entire site. Do not allow density change.

> ***Response 9-1:*** *The calculations determining density were included on the site plan that accompanied the DEIS (Sheet SP-1). As discussed in Section 1.0 Project Description, the Ulster Manor project has been modified and reduced in size and scale, in response to comments from the Lead Agency, its consultants and the public. The density calculations were completed for each of the three zoning districts individually, using the specific requirements for each district and are provided on Sheet SP-1 of the site plan set accompanying the FEIS. See Responses 9-2, 9-3, and 9-4 below.*

Comment 9-2 (David B. Clouser, PE, LS, David Clouser & Associates, letter dated December 29, 2006): The applicant is proposing a Cluster Subdivision within the R-30 portion of the property (28.8 acres in the eastern portion of the property). In the design and implementation of a Cluster Subdivision, New York State Town Law §278 requires a very specific procedure to determine lot density. The number of "clustered" subdivision lots that are permitted cannot exceed the number that could be permitted, in the Planning Board's judgment, using a conventional lot layout (as the Board is aware, a conventional lot layout is a "standard" subdivision layout using the bulk requirements within the Town Code, and including considerations of development constraints that would reduce the number of "conventional" subdivision lots (e.g. wetlands, steep slopes, etc.).

The determination of permissible lot density is one of the most critical responsibilities of the Planning Board in this proposed development's review process. Allowable lot density is not determined by simply dividing the total usable lot area by the minimum lot density (as the Project Engineer may have used, based on the lot density information shown on the Subdivision Plans).

The applicant must submit a Conventional Subdivision Layout to realistically show how many lots could be implemented under current zoning regulations. The lot count determined from the Conventional Subdivision Layout (in compliance with the procedures and with the limitations of New York State Town Law §278) should then be applied to accurately determine the maximum number of lots that would be permissible in a Cluster Subdivision Layout.

After a review of SP-1 of the Site Plan Set, it is unclear what method was used to determination the number of lots to be permitted in the R-30 zone - but it is clear that the requirements of NYS Town Law §278 were not considered in this "calculation" of allowable lots. The plan simply says that smaller lots (10,000 square feet) instead of the bulk requirements under the R-30 district (30,000). It is not the intention of the Cluster Subdivision Laws to simply use smaller lots to get greater lot density. We urge the Board to review State Town Law §278 to ensure that the Cluster provision is being properly utilized for this project.

This office has prepared a preliminary sketch of a Conventional Subdivision Layout for the R-30 portion of this property - complying with the requirements of NYS Town Law §278 -- and concluded that a maximum of 16 lots would be able to be approved under current Town zoning. Therefore, as clearly described above, the Cluster Subdivision Layout should also not have more than 16 lots. By incorrectly determining the lot count, the Applicant is proposing to "gain" an additional 9 lots (25 lots shown on plan).

We strongly urge the Board to require the Applicant to use the NYS Town (Cluster) Laws for their intended use, which is to preserve open space - not to gain bonus density as is being proposed on the submitted plans. The Applicant has otherwise chosen to incorrectly use the Law to leverage additional lot density.

> ***Response 9-2:*** *The DEIS, Figure 5-1, illustrated a conventional subdivision layout including for the R-30 zoned area of the site. The Planning Board, as part of its planning review, was to determine whether the yield shown on the plan met the Town's zoning requirements. However, determining yield is no longer relevant, since the applicant is no longer proposing a cluster subdivision of 25 lots for single family homes on the 28.8 acre portion of the site zoned R-30. Instead, the revised layout proposes 22 attached townhouse dwellings on fee simple lots. The layout and subdivision of land in the R-30 zoning district is shown in Figure 1-3 Proposed Subdivision Plan. According to the density calculations developed by the project engineer, minimum lot area, open space and green space have all been exceeded with the proposed design. The proposed 22 residences on 28.8 acres in the R-30 zone yields a density of 0.76 units per acre. The proposed development meets all of the density and bulk requirements in the R-30 zone.*

Comment 9-3 (David B. Clouser, PE, LS, David Clouser & Associates, letter dated December 29, 2006): The Density Calculations shown on Sheet SP-1 of the Site Plan Set show a subtraction of "Wetlands" and "Roads" from the total lot area to determine the lot density. It is assumed that the wetlands have been subtracted because they are regulated and therefore not buildable.

The wetlands on site are regulated by the New York State Department of Environmental Conservation (NYSDEC), therefore a 100-foot buffer is also regulated. The 100-foot buffer is strictly regulated by the NYSDEC and therefore should not be considered buildable. The buffer area should be subtracted from the total area when determining lot density. The allowable unit density calculations should therefore be revised.

> ***Response 9-3:*** *Wetland areas were not included in the Density Calculations since development in wetlands is strictly regulated by the NYSDEC. It should by noted that per 190-25.F.(1) of the Town of Ulster zoning law, the number of units permitted is determined by dividing the gross area of the site by the minimum lot area provided in the three respective zones. The regulations do not require that wetlands, regulated buffers,*

steep slopes or other natural constraints be subtracted from the area used to determine residential density. The revised density calculations for the current Site Plan are consistent with the Zoning Code, as provided on Sheet SP-1.

Comment 9-4 (David B. Clouser, PE, LS, David Clouser & Associates, letter dated December 29, 2006): The Density calculations shown on the Site Plan Set do not account for the fact that the project site is included in three distinct zoning districts. Accordingly, each district's bulk zoning regulations apply to that land area within that particular zoning district. Using areas from an adjacent zoning district to meet area/density requirements for a different zoning district is not allowable by the Town Zoning Code. The total allowable density must be determined as the sum of individual zoning district bulk regulation / area requirement ratios, and not "lumped" together to increase total density as has been the case in this project proposal.

Response 9-4: *The density calculations shown on the Site Plan (Sheet SP-1) reflect the three different zoning districts, as indicated by the Town Planner's Site Plan review comments (see Comment 9-6, below). The density calculations were completed individually, for each of the three zoning districts, using the appropriate bulk requirements for each district.*

Comment 9-5 (Mr. Dan Shuster, Letter dated March 20, 2007): The proposed uses of the site are generally consistent with the land use pattern in the surrounding area and reflected in the Zoning Law. The site is bounded by residential uses, except for commercial uses on Route 9W and Memorial Drive, including townhouses, mobile home parks and single-family homes.

Response 9-5: *Comment Noted.*

Comment 9-6 (Mr. Dan Shuster, Letter dated March 20, 2007): The proposed distribution of land uses on the site reflects the three different zoning districts in which it lies and the physical constraints imposed by wetlands and steep slopes. Due to these constraints, the applicant has proposed quite intensive development of the remainder of the site. In fact, virtually all of the site beyond the limits of the regulatory wetlands and buffer will be disturbed so that little existing natural features will remain beyond the regulated wetlands, except for narrow strips of steep slopes along the project boundaries. The depth of cut and fill cannot be determined since no map indicating this data was provided, as required in the Final Scoping Document. The total area of the lands outside the regulated wetlands and buffer cannot be determined since the area of the 100 foot buffer was not calculated. However, the buffer area appears to be at least twice as large as the wetlands themselves. In that case, the total regulated area is approximately 15 acres and the non-regulated area 33 acres, of which almost 29 acres, or about 88%, will be disturbed by intensive development. As discussed below, we believe that one or a combination of the alternative plans will result in more appropriate development of this site.

Response 9-6: *Comment noted. As described in the Chapter 1.0 Introduction, the proposed project has been modified to address, in part, the above concerns regarding overall site density. The proposed plan is similar in scale and density to the Impacts Mitigation Alternative, described in the DEIS (see Section 5.4 Impacts Mitigation Alternative). Areas of regulated wetlands, buffers and proposed site disturbance are summarized in Figure 1-5 Proposed Layout - Site Disturbance. The area of regulated wetlands on the site is 5.38 acres, including both NYSDEC and ACOE regulated wetlands. The NYSDEC regulated 100-foot adjacent area consists of 11.80 acres.*

Therefore, the total area of wetlands and buffer is 17.18 acres. The revised project would involve the disturbance of 18.5 acres of the remaining 30.82 non-regulated, wooded acres of the site (approximately 60 percent). Following the proposed development, 17.17 acres of regulated wetlands and buffers would remain undisturbed as well as 12.32 acres of existing upland mature woods. Approximately 61 percent of existing vegetation and wildlife habitat would be remain on the site following development.

Comment 9-7 (Mr. Dan Shuster, Letter dated March 20, 2007): As proposed, the total site will be served by one access road and an emergency entrance. Although a future roadway connection to the east is proposed, there is no assurance as to if or when it can be provided nor have its impacts been evaluated. Consequently, the project must be considered as presented. We recognize that the applicant proposed Quail Drive as an emergency entrance only in response to objections from neighbors to the north. We encourage the Planning Board to require that this access be developed as a full service entrance. Connection between adjacent land uses of a similar nature will provide benefits to both areas by allowing more freedom of movement, improved access for emergency vehicles and relief from unnecessary trips on the adjacent major street. The impact on both uses will be minimal.

Even with a full service street connection to the north, the remainder of the cul-de-sac extending to the eastern side of the project will be some 2,000 feet long and, as proposed, serve 25 single-family homes. We do not believe the Planning Board should grant the waiver requested from the Subdivision Regulations for this cul-de-sac.

Response 9-7: *The revised plan proposes a cul-de-sac measuring 825 feet in length - the 25 single family homes have been eliminated from the plan. This length is in compliance with the Town Subdivision regulations, and would not require a waiver. The current plan would provide a right-of-way for a potential future connection with vacant lands to the east of the project.*

The current plan provides for the emergency access connection to Quail Drive. This FEIS provides an analysis of the traffic distribution using Quail Drive as a second site access. Discussion of the traffic analysis in provided in Chapter 8.0 Transportation. The development of Quail Drive as a permanent second site access is a decision to be made by the Planning Board, in consultation with Highway Superintendent and the Town Board.

Comment 9-8 (Mr. Dan Shuster, Letter dated March 20, 2007): The applicant proposes 25 lots in the R-30 District as a cluster development, as permitted in the Zoning Law (§190-16). The Zoning Law does not establish any specific standards and merely authorizes use of cluster development procedures as allowed under NYS Law. The DEIS states (Section 3.7.2.2) that, "The number of permissible lots in a cluster development is based on the number of lots that could be designed that meet the conventional bulk requirements of the R-30 Zoning District." This statement fails to include the qualifier in §278 of NYS Town Law which adds "conforming to all other applicable requirements". In other words, the number of lots allowed in a cluster development is the number that could actually be developed based not only on dimensional standards but also on other laws and physical constraints.

Review of the Conventional Layout Alternative (Figure 5-1) illustrates a plan for 25 lots, which conform to the basic dimensional standards of the R-30 District. However, the plan fails to take

into account the extensive wetlands and steep slopes in this portion of the site which would severely limit realistic development. Approximately half of the lots have more than 50% of their area in the designated wetland and buffer area. Several other lots are comprised predominantly of slopes of at least 25%. A more detailed plan must be prepared that establishes the exact number of lots that could feasibly be developed under all applicable requirements.

> ***Response 9-8:*** *See Response 9-2. A cluster subdivision of single family homes in the R-30 is no longer proposed by the applicant. The current plan proposes 22 attached townhomes in the R-30 District.*

Comment 9-9 (Mr. Dan Shuster, Letter dated March 20, 2007): Although the type of multi-family uses permitted in the R-10 District (attached townhouses) and OM District (apartments) is different, the standards for density and other factors are the same. Under the formula in §190-25.F.(1) of the Zoning Law, maximum density is based on gross site area and a single-family equivalency factor of 0.6 for the proposed two-bedroom units. Based on this formula, the maximum number of two bedroom units permitted in the 19.2 acres in these two districts is 139 units. A separate maximum density limit of eight units per acre is imposed which results in a maximum of 153 units. The applicant proposes a total of 124 units in these two districts.

This portion of the site contains only a small amount of wetlands, which are primarily in the R-30 District, and only limited areas of steep slope. However, 4.5 acres of this portion of the site, or 23%, will require blasting to remove bedrock. Virtually all of the area will be disturbed. The applicant should consider alternative site designs which preserve more of the natural features in this area and reduce the need for extensive rock removal and site disturbance.

> ***Response 9-9:*** *The current proposal would involve the construction of 106 attached townhouses in the 19.2 acres of the site zoned R-10 and OM. This proposed density is below the allowable maximum density of 139 units, as described above. The applicant has reduced the overall scale, density and site disturbance resulting from the project. Proposed development is concentrated in the more level and accessible portions of the site, and disturbances to wetlands, buffers and steep slopes in the eastern portion of the site have been minimized or eliminated. Due to the topography and shallow bedrock in the western portion of the site zoned R-10 and OM, blasting and grading is required and any impacts will be mitigated as described in the DEIS and this FEIS. The reduction of 18 residential units in the R-10 and OM zone would reduce the area of proposed blasting. According to grading estimates by the project engineer, the required rock removal has been reduced by over 40 percent, compared to the former project (14,915 cubic yards of rock cut, compared to 25,800 cubic yards of rock cut).*

Comment 9-10 (Mr. Dan Shuster, Letter dated March 20, 2007): While technically in compliance with the standards of the Subdivision Regulations the proposed plan fails to fully consider two important general conditions set forth in §161-18, namely:

"C. Preservation of natural cover. Land to be subdivided shall be laid out and improved in reasonable conformity to existing topography, in order to minimize grading and cut and fill, to retain, insofar as possible, the natural contours, to limit stormwater runoff and to conserve the natural cover and soil . . . . Any change of the natural slope of the land shall be permitted only by special consideration of the Planning Board."; and

"D. Preservation of existing features. Existing features which would enhance the attractiveness of the site or the community as a whole, such as trees, watercourses, ponds, historic places and similar irreplaceable assets, shall be preserved insofar as possible through harmonious design of the subdivision."

As noted above, nearly 90% of the entire site beyond the regulated wetland and buffers will be disturbed and virtually all of the land in the R-10 and OM Districts will require removal of all existing vegetation and natural features.

> ***Response 9-10:*** *The project has been modified to better conform to the general conditions provided in the Town Subdivision regulations, as described in Response 9-6, above. The revised project would involve the disturbance of 18.5 acres of the 30.82 non-regulated, wooded acres of the site (approximately 60 percent). Following the proposed development, 17.17 acres of regulated wetlands and buffers would remain undisturbed as well as 12.32 acres of existing upland mature woods. Approximately 61 percent of existing vegetation and wildlife habitat would be remain on the site following development.*
>
> *The project has been designed and "*laid out...in reasonable conformity to existing topography, in order to minimize grading and cut and fill, to retain, insofar as possible, the natural contours, to limit stormwater runoff and to conserve the natural cover and soil*". revisions to the project have resulted in a reduction in the required rock removal by over 40 percent, compared to the former project.*
>
> *The project design modifications would allow a greater preservation of existing features such as mature trees, wetlands and wetland buffers, consistent with the Town Code.*

Comment 9-11 (Mr. Dan Shuster, Letter dated March 20, 2007): As discussed above, the proposed cul-de-sac far exceeds the maximum length permitted and there is no assurance that a future connection will ever be made.

> ***Response 9-11:*** *See Response 9-7, above.*

Comment 9-12 (Ms. Christine Gerbasi, Public Hearing December 19, 2006): I bought that property where I am now cause its private...I didn't come up here to wake up one morning and see 65 major houses all around me...This is my house. I put a lot of money into it when I moved up here because I thought I could look out and see turkeys...I'm telling you right now, you're not going to knock down my trees so I would have to see other people living next to me when I don't have that now.

I know when they start blasting, I can see it now, my whole house shaking down after I just sank a fortune into it.

> ***Response 9-12:*** *The Ulster Manor project has been designed in compliance with the Town Zoning Code for the three zoning districts in which it is located. The project includes measures to mitigate the potential visual impacts to neighbors, especially on Ledge Road. A Tree Save Plan was prepared to preserved a buffer of existing vegetation and specific trees (see Drawing TP-1 Tree Save Plan). A buffer of existing vegetation averaging 55 feet between new residential units and the northern property line would be retained.*

The potential impacts to neighbors from blasting will be mitigated by a Blasting Mitigation Plan (see DEIS Appendix D). The plan includes the provision for preblast surveys of private homes within 1000 feet of proposed blasting. The plan also includes a formal process for neighbors to process blasting damage complaints.

10.0 COMMUNITY FACILITIES AND SERVICES COMMENTS AND RESPONSES

Comment 10-1 (Adjoining Property Owner, Mr. Steve Engelhardt, Public Hearing, November 8, 2006,): Open space provided by developer is virtually all wetland or adjacent area. This area should not be used as passive recreational space. The newly drafted zoning law deals with this directly. A hard look at this needs to be given.

> ***Response 10-1:*** *The Town of Ulster Code §190-25(2) requires for multiple dwelling sites "an area to include active or passive recreation facilities on the basis of two thousand four hundred (2,400) square feet of recreation area or open space per multiple-dwelling unit...Open space must be legally accessible to residents, free of hazards, and with a minimum width of twenty-five (25) feet."*
>
> *The revised Ulster Manor site plan provides over seven acres of active and passive recreational areas, in excess of the 307,200 square feet (128 units X 2,400 square feet), or approximately 6.6 acres required by the Town of Ulster Code. It will provide on-site active recreational facilities, which will include tennis courts, an outdoor swimming pool, and a recreational building with a gymnasium, fitness rooms and saunas on approximately an acre of land. These facilities would be available to residents of the development and their guests.*
>
> *A system of walking trails would be provided through pockets of green space distributed through the development. As shown on the plan, these pockets are more than 25 feet wide, as required by the Code, and are typically 75 - 100 feet wide. The trail though the site will link the various residential areas in the development with the recreational complex. In addition, the revised plan includes approximately four acres of wooded upland on the east side of the property comprising land adjacent to, but outside of, the NYSDEC wetland buffer, and adjacent to the ACOE wetland. This passive recreational space would be legally and safely accessible from sidewalks within the development, without entering the wetlands or the wetland buffer.*

Comment 10-2 (Mr. Dan Shuster, Letter dated March 20, 2007): In general, the potential impacts on community services, as evaluated in the DEIS, will not be significant. The increase in services required due to the project are not large and will be off-set by increased tax revenues to all taxing districts.

Potentially, the most significant impact will be due to increased school enrollment. It is estimated that 39 students will be added to the already crowded Kingston School District facilities. However, the projected net annual revenue to the School District of over $500,000 is more than sufficient to finance provision of any additional facilities required, although there is likely to be a lag time before such additional capacity can be provided.

> ***Response 10-2:*** *The revised plan for Ulster Manor reduces the number of units from 149 to 128 units, which would result in fewer estimated school children entering the Kingston School District as a result of the project. The modified plan eliminates the 25 single family homes. Single family homes average greater numbers of school children than 2-bedroom townhomes. Therefore, the elimination of single family homes from the proposed action significantly reduces the projected number of school children residing in the Ulster Manor development. Based upon the multipliers in the DEIS, the revised project is estimated to introduce 18 students to the Kingston School District. The*

estimated 18 students represents less than one percent of the school district's total enrollment. Distributed over 13 grades, Ulster Manor's students would add less than two students per grade. Until the District expands its facilities as anticipated for the middle and high school grades, it is expected that the additional students would contribute to capacity issues. Although the elementary school has experienced a decline in enrollment and currently has some space, as described in the DEIS, the District's Treasurer expressed some concern regarding potential crowding conditions at the elementary school level in the future.

With regards to the lag time between improvements in facilities and the introduction of new students, it should be noted that the proposed residences are expected to be constructed and sold over a multi-year period. The project is estimated to generate approximately $471,886 annual property tax revenue to the School District. These funds would be used to offset the costs associated with an increase in student enrollment, including staff, operational expenses and capital improvements. The Ulster Manor students would be introduced to the local schools gradually as residences are built, marketed, sold and occupied. In addition, the planned improvements to the District facilities discussed above would help alleviate impacts due to increased enrollment in the District.

Comment 10-3 (Karen Schneller-McDonald, Hickory Creek Consulting LLC, letter dated December 21, 2006): To protect the interests of the residents of the Town, an objective third party fiscal analysis should be conducted, comparing tax dollars generated with the total cost of all services that will be provided by the Town. Other towns that have done this find that dollar for dollar, the total cost of services may actually exceed tax revenue from new residential construction.

Response 10-3: *Comment noted. A fiscal analysis was provided in Section 3.11.2 of the DEIS. Revised fiscal analysis is provided in this FEIS (see Chapter 1.0 Introduction).*

11.0 UTILITIES COMMENTS AND RESPONSES

Comment 11-1 (New York State Department of Environmental Conservation, Mr. Scott E. Sheeley, letter dated November 30, 2006): According to page 3.9-3 of the DEIS, a "formal update of the water district map will be required to place the property fully within the water district's boundaries". Extension of the water district to serve the site will require a public water supply permit from the Department, as noted above.

Response 11-1: *Comment noted. Following the conclusion of the SEQRA process, the applicant will submit an application to the New York State Department of Environmental Conservation (NYSDEC) for a public water supply permit.*

Comment 11-2 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The project is partially within the Town of Ulster Water District and will utilize 38,280 gallons per day (gpd) of water. The project would form a new loop in the water district connecting the 10-inch main on Memorial Drive to the 8-inch on Quail Drive (Fox Run Development). The project would involve the installation of approximately 5.300 feet of water mains and one booster pump station. (Reference Section 3.9.2, page 3.12-5, Appendix F and the 28 drawing set)

Response 11-2: *Comment Noted. The revised project site plan has resulted in a modified layout for the proposed water distribution system. The modified water system is described in the Municipal Water Distribution System Report, Revised October 10, 2007 (see Appendix K). The majority of the water system will remained as described in the DEIS. That portion of the system formerly serving 25 single family residences on the eastern side of the property has been shortened and will now serve 22 townhouse units. The revised water demand is based upon serving 128 2-bedroom townhomes, each with an estimated demand of 220 gallons per day (gpd). Therefore, the total project daily demand will be 28,160 gpd. This is a reduction of approximately 10,000 gpd or 27 percent compared to the originally proposed project. The current plan would form a new water distribution loop connecting the 10-inch main on Memorial Drive to the 8-inch main on Quail Drive (Fox Run Development). The current proposal would involve the installation of approximately 4,300 feet of water mains and a booster pump station.*

Comment 11-3 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The Town of Ulster Water District has sufficient potable water capacity to supply the projected demand of 38.280 gpd for Ulster Manor.

Response 11-3: *Comment Noted. As described above, the current projected water demand is 28,160 gpd or 27 percent less than the originally proposed project.*

Comment 11-4 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The Town will have to formally revise the Town of Ulster Water District boundary to encompass the entire Ulster Manor property. Currently, the Town of Ulster Water District boundary does not include the proposed 25 single family lot portion of the project. The Applicant should establish an escrow account to cover the costs to modify the water district boundary including documentation required by NYSDEC.

Response 11-4: *Comment noted. The applicant is committed to provide any necessary escrow fees to cover the costs associated with revising the water district boundaries.*

Comment 11-5 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The WaterCAD hydraulic model of the proposed water system given in Appendix F has a number of deficiencies which limit a full assessment of the potential impacts on the water system. Revise the hydraulic model to include the following:

a. Add additional nodes to the hydraulic model at each of the topographic high points at the site and at each of the major withdrawal locations in the system. Provide output results for these additional nodes;

b. Add a leg to the model that simulates the 25 single family dwellings and associated model output results;

c. Demonstrate there will be adequate pressures/flow to the highest elevations of the 25 single family lots (FF Elev. 285.00 feet). Normal working pressures should be approximately 60 to 80 psi and not less than 35 psi (Ten States 8.1.1).

Response 11-5: *The revised Municipal Water Distribution Report provides updated information regarding hydraulic nodes, pipe elevations and water pressure (see Appendix K). As described above, the current project no longer includes the 25 single family residences, and therefore analysis of the water serving those locations is not necessary.*

Comment 11-6 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Appendix F states that a booster pump station is required to provide acceptable water pressures within the proposed development. Provide additional details on the proposed booster pump station including the following:

a. Location of the proposed booster pump station and meter pit;

b. Descriptions of the major components of proposed booster pump station and meter pit;

c. A general description of the modes of operation of the proposed booster pump station;

d. Provide information explaining how this new loop will integrate into the existing Town water distribution system (eg. will there be isolation valves and how will they operate, etc.).

Response 11-6: *The location of the booster pump is in the north-central portion of the project site, and is shown on Drawing U-1 Water Distribution System. A description of the booster pump, peak demand, and emergency back-up systems are provided in the Municipal Water Distribution System Report (Appendix K).*

Comment 11-7 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The preliminary results from the WaterCAD model given in Appendix F state that the proposed Ulster Manor Development utilizing a 10-inch diameter main will not have negative impacts on the existing Town water system but will improve the pressure and fire flows to the existing Fox Run Development. This finding will have to be verified after review of the additional information requested in Comment 3 and 4 above.

Response 11-7: *Comment Noted.*

Comment 11-8 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The Applicant will have to create a privately owned Ulster Manor Homeowner's Association to own.. operate and be responsible for maintaining the proposed booster pump station, meter pit and fire hydrants.

Response 11-8: *Based upon recent discussions with the consulting Town Engineer, Brinnier and Larios, P.C., the water distribution system for Ulster Manor will be privately owned and operated, with the exception of a proposed 10-inch water transmission line that crosses the site. The transmission line would form a new loop in the district, connecting the 10-inch main in Memorial Drive to an 8-inch main in Quail Drive. Privately owned water facilities would include pipes, booster pump station, meter pit and fire hydrants. Following the review and approval of the system by the Town's water district the applicant would legally transfer the 10-inch water main to the district. A homeowners association will be established to own and maintain the Ulster Manor facilities and grounds, including the water distribution system, the sewer collection lines, the internal roads, and stormwater collection and treatment facilities.*

Comment 11-9 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The project is within the Town of Ulster Sewer District. The Ulster Manor Development will generate 38.280 gpd of wastewater that would be pumped to an existing sanitary sewer manhole on Quail Drive. (Reference Section 3.9.1, page 3.12-4 and Sheet U-1). The Town of Ulster Sewer District has adequate capacity to treat the 38,280 gpd of wastewater from the Ulster Manor Development. The existing Town sewer system is capable of conveying the additional wastewater flow after adjusting certain existing valves to redirect sanitary flows from the Ulster Avenue Mall.

Response 11-9: *Comment noted. As described above, the current estimated wastewater daily flow would be 28,160 gpd or 27 percent less than the originally proposed project.*

Comment 11-10 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The Town of Ulster Sewer District No. 1 Boundary Map will have to be revised to fully encompass the southeastern portion of the Ulster Manor site. The Applicant establish an escrow account to cover the costs for revising the boundaries of the sanitary district.

Response 11-10: *Comment noted. The applicant is committed to provide any necessary escrow fees to cover the costs associated with revising the sanitary district boundaries.*

Comment 11-11 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): Provide a profile view of the sanitary sewer system from Pump Chamber #2 to the existing sanitary manhole at the intersection of Quail Road and Ledge Road as this information is not provided on any of the other road profile drawings.

Response 11-11: *A detailed Sanitary System report, including profiles from Pump Chamber #2 to the existing sanitary manhole at the intersection of Quail Road and Ledge Road, will be provided as part of the Site Plan drawings, during the Site Plan review process.*

Comment 11-12 (Joseph E. Mihm, P.E, Senior Project Engineer, Brinnier and Larios, P.C letter dated January 05, 2007): The Applicant will have to create a privately owned Ulster Manor Homeowner's Association to own, operate and maintain each of the following proposed sanitary sewer collection components:

- Low pressure individual sanitary pump station units for each of the 25 single family lots. The discharge from each of these individual units is directed to Pump Chamber #2;
- Pump Chamber # 1 which serves the 42 unit multi-family townhome complex and the Recreation Building; and
- Pump Chamber #2 which collects a large portion of the projects wastewater and pumps it to sanitary manhole SMH13.

Additional design details on the sanitary pump stations will be required as part of the site/subdivision plan review process for review and acceptance by the Sewer District Superintendent and Town Engineer.

> ***Response 11-12:*** *As indicated in the comment, the Applicant will create a privately owned Ulster Manor Homeowner's Association to own, operate and maintain the required sanitary sewer collection components, including Pump Chambers #1 and #2, and piping. Individual low pressure sanitary pump station units for the 25 single family homes will not be necessary, since these homes are no longer proposed. Further design details on the pump stations will be provided as part of the site plan review process. Such details will require review and approval by the Town Engineer and the Sewer District Superintendent.*

Comment 11-13 (Robert Barton, Public Hearing, November 08, 2006): Another concern I have is the water supply? Where is it going to be connected to? If it runs through the Fox Run up VanKleeck there should be some signed written document by the superintendent of the water district saying that there will be no effect on water pressure, the quality of the water and the amount of water that will be affected with this new development. I myself think there should be a separate connection brought in through 9W just for this development.

> ***Response 11-13:*** *The water distribution system for the Ulster Manor project is described in the Municipal Water Distribution System Report (see Appendix K). The project proposes to form a water distribution loop through the site, connecting to an existing 10 inch main on Memorial Drive to an 8 inch main in Quail Drive. The installation of a 10 inch main through the Ulster Manor site would create a new loop in the water district and eliminate one existing dead end, and shorten another within the existing network. The system is being designed in consultation with the Town Engineer. All project plans will require review and approval by the Town Water District Superintendent and the NYSDEC. Water pressure, volume and water quality will be maintained for existing residents on Quail Drive.*

Comment 11-14 (Robert Barton, Public Hearing, November 08, 2006): The sewer and the sewer treatment, there should be another written statement by the superintendent of the sewers to say where that connection is going to be made, if it's going to be made through Fox Run. Again, there should be some written documentation saying that the existing sewer pipe lines can handle the increased volume that would be there. Again, my own preference would be a separate connection to the sewer pipes that run along 9W.

Response 11-14: *The sewer collection system will require review and approval by the Town Sewer District Superintendent, and the Ulster County Department of Health.*

12.0 NOISE AND AIR RESOURCES COMMENTS AND RESPONSES

Comment 12-1 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): We agree with the results of the air quality screening in that a detailed microscale air quality analysis is not required. However, the statement on page 3.10-7 of the DEIS stating that as per the scoping document "where project trip generation will add less than 10% of the total No-Build volumes at an intersection, further analysis is not required unless specifically requested-by the Planning Board" and further indicates that there is no reed to analyze impacts on air resources is not accurate. An air quality screening analysis based on criteria outlined in the EPM was conducted for the project as outlined on Page 3.10-13 and in Appendix N. The statement on Page 3.10-7 is misleading as it is in reference to the traffic study section of the scope and should be modified or removed.

> ***Response 12-1:*** *Comment noted. The statement on page 3.10-7 in the DEIS is misleading, but is an accurate reflection of the scoping document. Although it was not required by the scoping document criteria, an air quality screening analysis was completed for the project and is provided in Appendix N of the DEIS.*

Comment 12-2 (Kenneth Wersted, P.E, Creighton Manning Engineering, letter dated January 15, 2007): A discussion of particulate matter (PM) was added to the DEIS on page 3.10-13. However, the statement that "The Ulster Manor project has been determined not to exceed the listed thresholds regarding traffic volumes thus a PM analysis is not warranted" needs to be further clarified. The PM guidance states that all projects with any increase in traffic that are not classified as a categorical exclusion or a Type II action require a detailed PM analysis. Additional clarification and/or analysis of PM is required.

> ***Response 12-2:*** *The above statement regarding traffic volumes related to PM analysis was based upon the assumption that if the air quality screening thresholds for CO are not met (based upon traffic volume) then a particulate matter (PM) analysis is not warranted. The New York State Department of Transportation (NYSDOT) Environmental Procedures Manual does not provide any specific criteria or screening process to determine the need for a PM analysis. Fine particulates are typically a concern in urban areas with heavy truck and bus traffic and high diesel emissions. The Environmental Procedures Manual (EPM, September, 2004) indicates:*
>
> *"PM impacts shall be estimated for all Department (NYSDOT) projects that exceed listed thresholds in this interim policy regardless of project location or attainment status. Initial project level assessment shall include consideration of both Federal and State environmental process review regulations (NEPA & SEQR). For Department (NYSDOT) projects classified as Categorical Exclusions (CE), as listed in FHWA's regulatory definition provided as 23 CFR 771.117(c) & (d), and determined to be Type II Actions as defined and listed in the NYSDOT SEQR regulations provided as 17 NYCRR § 15.14(d) & (e), no PM impact analysis for either fraction shall be required under this policy".*
>
> *"Additionally for projects that are determined not to be a Categorical Exclusion and/or a Type II Action but do not result in increased traffic volumes, no PM impact analysis is required. However, screening analysis of these projects shall consider changes in traffic patterns relative to potential increases in PM emissions. Such considerations may include higher percentages of diesel vehicles in the vehicle mix, construction of facilities that increase diesel vehicle idling, etc. Where these or similar types of traffic pattern*

changes exist that have potential to result in increased PM emissions, consultation with EAB should occur to determine if a PM air quality analysis is appropriate".

A Particulate Matter analysis is not warranted for the Ulster Manor project, given that Ulster County is not a nonattainment area, that the proposed project is residential, and given the relatively low traffic volumes.

13.0 SOCIOECONOMICS COMMENTS AND RESPONSES

There are no comments on demography and fiscal analysis.

14.0 CUMULATIVE IMPACTS COMMENTS AND RESPONSES

There are no comments on cumulative impacts.

15.0 ADVERSE ENVIRONMENTAL EFFECTS COMMENTS AND RESPONSES

There are no comments on adverse environmental effects.

16.0 ALTERNATIVES COMMENTS AND RESPONSES

Comment 16-1 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): Scenic Hudson is concerned that the proposed development at Ulster Manor is likely to result in serious impacts to surrounding wetlands, which feed tributaries of the Hudson River. Further, the Proposed Alternative would result in a large amount (60,000 cubic yards) of cut and fill, blasting (4.5 acres) vegetation clearing, and associated loss of habitat.

> ***Response 16-1:*** *Disturbance to wooded land that drains to the New York State Department of Environmental Conservation (NYSDEC) Wetland KE-10 would be substantially reduced as per the modified site plan described in this FEIS. Overall site disturbance would be reduced from 28.7 acres for the former proposal to 18.5 acres under the proposed action. Therefore, the loss of woodlands and on-site vegetation would be reduced by approximately 10 acres or 35 percent. The project has been modified to eliminate all disturbance to the regulated 100 foot area adjacent to the NYSDEC Wetland KE-10. The previous site plan would have impacted approximately 1.52 acres of regulated 100 foot adjacent area, as a result of grading for stormwater treatment facilities and at the edges of the internal roadways.*
>
> *Site grading necessary to construct the project would be reduced under the current proposal. The required rock removal has been reduced by over 40 percent, compared to the former project. The revised plan reduces the area of impervious surfaces from 12.8 acres to 7.9 acres.*

Comment 16-2 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): Based on the DEIS's comparison of the proposed action and other alternatives, Scenic Hudson suggests that a new alternative be developed that combines characteristics of the New Urban Design and Mitigation alternatives. This "hybrid" alternative should also contain a reduction in the number of dwelling units to further mitigate impacts that would result from stormwater runoff, infringement on the wetland buffer, traffic, archaeological resources, vegetation removal, etc.

> ***Response 16-2:*** *In response to Town, agency, and public comments, Ulster Manor has been modified as described in this FEIS. The revised project reduces the DEIS build out of 124 townhouses and 25 single family homes to 128 townhouses, which is consistent with the density and type of development proposed in the Mitigation Alternative. This alternative was designed to reduce the overall impact of the project, including site disturbance and vegetation removal, wetland buffer disturbance, stormwater run-off volumes, traffic, and a reduction in the estimated number of school children the project would generate.*

Comment 16-3 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): The Preferred Alternative includes 200 linear feet of road construction through a wetland buffer. This is unnecessary as the New Urban Design Alternative's road layout avoids the buffer area. Since the buffer area is intended to protect the adjacent wetland from polluted stormwater-and roads are a prime source of non-point source water pollution. Every effort must be made to protect water quality in this important series of wetlands, which drain southward off the property before turning back north and emptying into

the Hudson River. This includes reducing the proportion of impervious to pervious surfaces on the 48-acre site.

> ***Response 16-3:*** *Consistent with the DEIS New Urbanist Alternative, the road layout in the revised plan avoids impacts to the wetland buffer and reduces the area of impervious surfaces from 12.8 acres to 7.9 acres. A 38 percent reduction in the area of impervious surface would reduce the volume of stormwater flowing to stormwater treatment basins, as well as to on-site wetlands.*

Comment 16-4 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): New Urban Design and Mitigation Alternatives are preferable to the Preferred Alternative**.** Table 5.13 indicates that the Preferred Alternative would result in an additional 16% impervious area over the New Urban Design Alternative and additional 13% over the Mitigation Alternative. Likewise, the Mitigation Alternative would provide 21% additional open space over the Preferred Alternative. Compared to the Preferred Alternative, the Mitigation Alternative would result in 14% less water/sewer demand, 46% fewer school children, and 16% less traffic in the peak hour. Finally, the Mitigation Alternative would provide 22% additional revenues to the school district. Thus, based on the information provided in Table 5.13, the New Urban and Mitigation Alternatives provide definite advantages over the preferred alternative and, thus, should be used as the basis for the development of the site.

> ***Response 16-4:*** *The current proposal contains elements of both the New Urban Design Alternative and the Mitigation Alternative. The revised plan reduces the area of impervious surface to 7.8 acres and is therefore lower than the impervious surface shown in the New Urbanist Alternative (10.74) and the Mitigation Alternative (11.1). Impervious surface would be reduced by 38 percent compared to the previous plan. Overall site disturbance would be reduced from 28.7 acres for the former action to 18.5 acres under the proposed action, or a reduction of 35 percent. Water/sewer demand has been reduced from 38,280 to 28,160 gallons per day, well below the demand in either the New Urbanist or Mitigation Alternatives. As described in Chapter 1.0 Introduction, the projected student population would be reduced by 45 percent, compared to the previous plan.*

Comment 16-5 (Jeffrey Anzevino, AICP, Senior Regional Planner, Scenic Hudson, letter dated December 29, 2006): The DEIS indicates (page 5-6) that the New Urban Alternative would result in "a slight increase in the disturbance area, as several semi-attached units to the east are located in an area that would remain as open space under the proposed action." This could be addressed by moving the three buildings (six units) to the entrance road or, preferably, removing them entirely from the project.

> ***Response 16-5:*** *Comment noted. The three buildings described in the New Urbanist Plan, shown along the access road in the R-30 zone, have been shifted to the east, reducing potential areas of disturbance. The revised plan eliminates 21 units and decreases the area of disturbance from 28.7 acres to 18.5 acres.*

Comment 16-6 (Mr. Dan Shuster, Letter dated March 20, 2007): Conventional Subdivision - This alternative presents a plan for 75 single-family homes on individual lots of at least 30,000 sq. ft. in the R-30 District and 10,000 sq. ft. in the R-10 and OM Districts in accord with the lot sizes required in each district. Despite the applicant's statement that the conventional subdivision alternative was required only to justify the number of units proposed in the R-30

cluster plan, it was also required to depict the only "as of right" residential development allowed in the R-10 and OM Districts.

As noted earlier, we question the determination that 25 lots can actually be developed, in accord with all applicable laws and physical constraints, in the R-30 District. However, regardless of the number of lots, disturbance in the R-30 District would undoubtedly be greater under a conventional subdivision than a cluster. Since site disturbance in the R-10 and OM Districts, under the preferred plan, is almost total, there would be little difference under the conventional subdivision alternative, if such development were permitted.

While the number of lots that could be created under the conventional subdivision alternative may be overstated, there is no doubt that the number of school children generated would be greater and the amount of taxes produced significantly less. Therefore, the most significant impact of this alternative, as compared to the applicant's preferred plan, is that the net revenues to the school district will be substantially less and may even be a net loss.

Due to the different characteristics of single-family homes, the number of vehicle trips generated, total population, sewage disposal and water demand are approximately 80 to 90% of those under the preferred plan although the total number of dwelling units is only about 50%.

> **Response 16-6:** *Comment noted. The revised proposal reduces the density of development and eliminates the 25 single family detached units, thereby reducing the impact to the school district compared to the Conventional Subdivision still further. As described above, the reduction in the revised proposal would result in a projected student population of 18 students, a reduction of 45 percent, compared to the previous plan.*

Comment 16-7 (Mr. Dan Shuster, Letter dated March 20, 2007): New Urban Alternative - This alternative proposes the same number of dwelling units as the applicant's preferred plan with a different development pattern. Although the single-family cluster in the R-30 District is identical, the units in the R-10 District are two-family attached units rather than row houses and the multi-family row houses in the OM District are sited differently.

The primary difference in this plan is that several central "village greens" are the focal point of the development and the R-10 District is designed with a system of short local streets rather than long parking loops. Also, the main central access road has been designed to eliminate any disturbance to the wetland buffer. The result is a plan which creates more of an integrated neighborhood than the preferred plan. Since the number and type of dwelling units is essentially the same many of the impacts are identical, although the area of impervious surfaces is reduced by 16% and the net revenue benefit to the school district is increased by 14%.

> ***Response 16-7:*** *The New Urbanist Alternative proposes ten additional fee simple semi-detached dwellings resulting in $631,540 annually in net revenues to the School District as compared to $503,941 for the preferred action proposed in the DEIS. Because the revised plan reduces the number of units from 149 to 128 and eliminates ten semi-attached units it would generate an estimated $318,886 in net property tax revenues annually. The revised plan reduces the student population by 45%. The impervious surface area in the New Urbanist Plan is 10.74 acres, whereas the revised plan reduces this area to 7.9 acres. The applicant believes that the reduced size and*

more compact layout in the proposed plan provides a desirable balance between open space and built areas.

Comment 16-8 (Mr. Dan Shuster, Letter dated March 20, 2007): Mitigation Alternative - The Final Scoping Document required preparation of an alternative to mitigate potential impacts identified. Although the applicant has identified the impact on the school district as the impact to be mitigated under this alternative, several other impacts are mitigated by this plan as well.

The major variation in this alternative is in the R-30 District where attached row houses are proposed to replace the single-family homes proposed in the applicant's preferred plan. Not only are the number of school children decreased by almost 50% but, also, total site disturbance is decreased by almost 25%, impervious surfaces by 13% and the length of the cul-de-sac by 750 feet. Furthermore, the net revenue benefit to the school district increases by 22%.

Response 16-8: *Comment noted. Similar to the Mitigation Alternative, the revised site plan replaces the single family homes with attached townhouses, decreases the student population by approximately 45%. Total site disturbance is decreased by 36%, impervious surfaces by 38 %. The length of the cul de sac has been reduced as in the Mitigation Alternative. The current plan differs in that two short roadway spurs extend from it, and residential buildings are clustered along them instead of arrayed along the curved segment of the main roadway. The modified layout eliminates all disturbance to the regulated 100 foot area adjacent to the NYSDEC Wetland KE-10. As noted above, the net revenue benefit to the school district would decrease due to the change in unit type and the reduction in number of units.*

Comment 16-9 (Mr. Dan Shuster, Letter dated March 20, 2007): Affordable Housing Alternative - This alternative was requested to demonstrate possible designs and financing techniques which would provide housing opportunities for first time home buyers and/or senior citizens. The applicant's alternative plan proposes to add ninety rental units, in one four-story building, in the R-30 District portion of the site. Such an increase in density would require special Town Board approval as per §190-25.F. of the Zoning Law.

This alternative is heavy handed. The need to increase the number of dwelling units by 60% is unexplained. Selection of the R-30 District, the more remote and topographically constrained portion of the site to locate a large four-story structure (which would require a height variance) surrounded by extensive surface parking areas seems designed to demonstrate infeasibility. A location in the OM District would be closer to more intensive uses and would not require a height variance. The proposed alternative does not address first time home buyers.

A much more effective approach to achieve the objectives established for this alternative would be to incorporate affordable units, say 10% of the total, into the development plan in such a way that they are an integral part of the community rather than an obvious, isolated, outpost of a different type of housing and resident. While it is acknowledged that there is no specific requirement under the Zoning Law to provide affordable housing in this proposed project, the applicant was expected to provide a good faith effort to support the Town's objectives for such housing.

Response 16-9: *Section 190-25 of the Town of Ulster County zoning law states:*

"F. Multiple dwellings (including attached and condominiums)…..The Town Board may approve a greater density where the additional units are for low- to moderate income housing purposes."

The zoning law does not mandate the provision of affordable housing – this is left to the discretion of the applicant. Based on the zoning, the applicant concluded:

- *The total number of housing units would be in addition to, the dwellings shown on the proposed plan;*
- *The housing units must either be attached dwellings or multiple dwellings;*
- *The law is silent with regard to the total number and design of the additional housing units that would be allowed.*

Mr. Larry Regan was consulted to develop a meaningful and feasible potential affordable housing component to the Plan. In developing any affordable housing alternative, the applicant had to eliminate the higher-valued 25 single-family detached clustered dwellings to accommodate additional housing units.

Mr. Regan, a partner involved in the development of Ulster Manor, has substantial experience constructing affordable housing projects throughout New York State. See http://www.regandevelopment.com/current.html for relevant experience. During preparation of this alternative, Mr. Regan was consulted to assess the type of project that could be constructed to provide a feasible and realistic workforce housing development. Although the density may appear "heavy-handed", the number of units was based on what the applicant considered would be a feasible project to secure financing and utilize housing tax credits. The DEIS acknowledged that in its proposed location, a building height variance would be required. It was situated at the end of the cul-de-sac to provide attractive frontage of open space about the building. In addition, given the configuration of the site and constraints imposed by wetlands and wetland buffers, this location was best suited to accommodate the amount of parking that would be required for the building. The building, in the applicant's opinion, does represent a good faith effort to show how a building may be incorporated into the design of the project.

Another alternative would be to eliminate the single-family detached dwellings and construct additional attached dwellings extending to the end of the cul-de-sac. It is estimated that up to an additional 25 attached dwellings, in five buildings, could be accommodated on the project site. The 25 dwelling units would be dedicated to moderate income households and could be interspersed throughout the development. It is unlikely that the applicant would be able to secure financing to offset the cost of construction for this type of housing product. Therefore, the applicant would market these dwellings to moderate, not lower, income households. The market values would be higher than what would be offered in the multifamily building proposed in the DEIS. From the applicant's perspective, this alternative may not be a feasible option because it is unlikely that there would be any additional financing to offset the costs of affordable housing construction and the alternative may result in a net loss compared with pursuing the project which is the subject of the FEIS.

17.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES - COMMENTS AND RESPONSES

There are no comments on irreversible and irretrievable resources.

18.0 GROWTH-INDUCING ASPECTS COMMENTS AND RESPONSES

There are no comments on growth inducing aspects.

19.0 EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES - COMMENTS AND RESPONSES

There are no comments on the use and conservation of energy resources.