3.2 SOILS AND TOPOGRAPHY COMMENTS AND RESPONSES

The Proposed Revised Plan

With the reduction in the number of proposed homes and elimination of the soccer field and its associated grading, the revised layout greatly reduces impacts on land and steep slopes. The project now includes one cul-de-sac roadway with the primary connection to Gay Ridge Road and emergency only access to Route 6, whereas the DEIS layout included notably longer roadways with two external connections and two cul-de-sacs. The number of homes proposed in the vicinity of the eastern property line where steep slopes exist has been reduced from 10 homes to eight homes, thereby reducing impacts to steep slopes. Three areas of potential blasting located on the northern portion of the site remain, as the roadway and house site grading in that vicinity has not changed significantly. Table 3.2-1, below, illustrates the reduction in steep slope disturbance between the Revised Plan and the DEIS layout.

Table 3.2-1 Disturbance Areas by Slopes: DEIS Layout Versus Revised Layout		
Slope Category	DEIS Layout	FEIS Layout
<10%	16.85 acres	14.64 acres
10% to 15%	5.44 acres	5.24 acres
15% to 20%	1.63 acres	1.49 acres
>20%	0.71 acres	0.71 acres
Total Site Disturbance	24.62 acres	22.08 acres
Total Site Acreage: 43.168 Source: Ralph G. Mastromonaco, P.E., P.C., 2004, 2007.		

Comment 3.2-1 (Letter 16, Alice Kiely, May 22, 2005): The developer notes on page 1-7 of the Executive Summary that a total of 24.7 acres of the site will be affected as a result of clearing and grading necessary..." If one looks at the Figure 2-4: Neighborhood Context, the area will be fully developed. Is the developer not counting the manufactured drainage pools that are to be placed in the northern area and south western areas that are undeveloped on this map? Is he not counting the altered frontage on Route 6? Is he not counting the unusable steep slopes in the southeast end of the property? Where is the remaining area? VS Construction does not show that the developed areas are the prime areas and the untouched areas are steep slopes surrounding the area and well interrupted wetlands.

Response 3.2-1: DEIS Table 3.4-3 indicates that the Water Quality Basins have been factored into the calculation of disturbed area. While the emergency entrance on Route 6 will alter some of the site's frontage on Route 6, other areas of the site abutting Route 6 located to the west of the entrance are to be left as open space for dedication to the Town. FEIS Figure 1-2 illustrates the proposed grading for the Revised Plan, which shows those areas of the site that are to be disturbed through grading or construction activities.

The project has been redesigned to minimize impacts on wetlands and steep slopes to the maximum extent practicable while achieving safe access and a moderate density of

development. Impact to the NYSDEC wetland is unavoidable for the construction of the Gay Ridge Road connection. Impact to a central strip of Town-regulated wetland is unavoidable to gain access to the gentlest developable areas of the property.

<u>Comment 3.2-2 (Letter 19, Daniel Kiely, May 22, 2005)</u>: There is nothing contained in the document that would indicate that the homeowners will be required to maintain their property in such a fashion as to keep soil erosion to a minimum. This should be a requirement for all property owners not just during construction phase.

Response 3.2-2: Approval of this application will require implementation of soil erosion prevention and minimization measures in accordance with the approved plans. Subsequent to construction and sale of the individual lots, the individual property owners would be subject to the same development and property maintenance regulations as all other homeowners in the area.

Comment 3.2-3 (Letter 19, Daniel Kiely, May 22, 2005): The DEIS assumes there may be blasting required for the deep cuts at the primary access to Route 6. The applicant should explore shifting the road eastward, reducing the need for such deep cuts thereby minimizing the need for blasting.

Response 3.2-3: The location of the emergency access from Route 6 was selected to limit the disturbance of the wetland corridor in the center of the site and the larger wetland corridor off-site to the east, among other safety-related considerations. A deep cut is necessitated by the required grading for a road access at this location. Potential adverse impacts associated with the rock removal, if it is found to be required, are proposed to be mitigated by mechanical ripping of rock if feasible, and if blasting is found to be necessary, application to the Town for a blasting permit that would require implementation of a written blasting plan prepared in accordance with Town Code §124.

Comment 3.2-4 (Letter 3, James D. Benson, New York City Department of Environmental Protection, June 14, 2005): Although the DEIS generally discusses the soil types found onsite, it does not fully address the impacts of disturbance of certain soil types found onsite within the New York City Watershed. Specifically, the Paxton soils found within the watershed present a severe erosion hazard according to the Natural Resource Conservation Service (NRCS) *Soil Survey for Putnam and Westchester Counties, New York.* In addition, these soils exhibit seasonally high groundwater, which must be considered in the development of any grading plans, erosion control plans, and construction sequencing.

Response 3.2-4: Soils on the Yorktown Farms site are typical of those found throughout Westchester County and found in developed areas in the vicinity of the project site. These soils do not impose any challenges to development that are unique or unusual to construction practices in the area. The Erosion and Sediment Control component of the Yorktown Farms SWPPP complies with NYSDEC, NYCDEP, and Town of Yorktown regulations and specifies practices that are common for this type of development. The SWPPP includes structural and non structural practices, a detailed construction sequence, and soil disturbance limits, that combined are designed to control erosion and prevent sedimentation during, and after, development of the property.

<u>Comment 3.2-5 (Letter 3, James D. Benson, New York City Department of Environmental</u> <u>Protection, June 14, 2005)</u>: The DEIS includes a general list of erosion control measures to

be implemented to mitigate the identified impacts and a preliminary erosion control drawing. However, significantly more detail relative to appropriate erosion control practices for specific soil types, dewatering and diversion procedures, specific construction sequencing and stabilization is necessary to demonstrate that the potential impacts can be adequately avoided or mitigated.

Response 3.2-5: The Erosion and Sediment Control Plan included in the SWPPP has been developed in accordance with the New York Standards and Specifications for Erosion and Sediment Control, April 2005, and provides standard details of all proposed erosion control practices, including construction sequencing and soil stabilization.

<u>Comment 3.2-6 (Letter 2, Bruce Barber, June 13, 2005)</u>: Applicant should provide detailed analysis with respect to why avoidance of impacts to steeply sloping land is not feasible.

Response 3.2-6: Limitations to development of the subject site are primarily associated with regulated wetlands, wetland buffers, and slopes. The only road access to the site that would not directly impact a wetland is located near the northeastern corner, from Route 6. That is the point of access of the proposed plan. Due to the existing topography and the Town's maximum road grade limitation, however, disturbance of small pockets of steep slopes is necessary to gain access from that point on Route 6 into the gentler sloping lands on the property. The central Town wetland and its buffer further limit the developable area in the southern interior of the property, necessitating some disturbance of steep slopes on the eastern side of the site to some extent. Following directions from the Town, the primary project access was added from Gay Ridge Road, thereby necessitating further disturbance of pockets of slopes. However, avoidance of steep slopes and wetlands to the maximum extent practicable is an integral design parameter of the project now proposed.

<u>Comment 3.2-7 (Letter 2, Bruce Barber, June 13, 2005)</u>: Applicant should cite correct and current erosion and sediment control manuals with respect to Phase II stormwater requirements. Please provide information why substantial cut operation cannot be avoided.

Response 3.2-7: The Erosion and Sediment Control Plan included in the Yorktown Farms SWPPP was prepared in accordance with the New York Standards and Specification for Erosion and Sediment Control, April 2005. See Responses 3.2-3 and 3.2-6.

<u>Comment 3.2-8 (Letter 2, Bruce Barber, June 13, 2005)</u>: Indicate if blasting permit will be required. Where are suspected areas of blasting to occur? Have existing conditions of surrounding properties been documented?

Response 3.2-8: As noted in Section 3.3 of the DEIS, the absence of bedrock outcrops on the site indicates that blasting may not be required, or if required, it will be limited. Soil borings or other geotechnical investigations have not yet been completed on the site, and therefore, the need for blasting has not yet been established. For the purposes of the assessment of impacts in the DEIS, it is assumed that blasting may be required in estimated areas of greater than 20 feet of material cut and, thus, may be required in two specific areas.

As further discussed in the DEIS, quantities of rock excavation cannot be determined from available information but subsurface investigations will be conducted to confirm the actual depths to bedrock prior to application to the Town for a blasting permit. The absence of this information does not affect the analysis of impacts included in the DEIS.

In areas where rock is encountered, ripping of the rock may be possible in lieu of blasting. Due to the nature of the rock based on Soil Survey description, it is anticipated that bedrock geology outside of the immediate construction area will not be significantly disturbed by the necessary rock removal for the proposed project. Any blasting will be carried out in accordance with the blasting mitigation plan described in the DEIS. It is anticipated that limited blasting will be required. In the event that blasting is necessary, a blasting permit from the Town of Yorktown will be required. Existing conditions adjacent to the project site are described in DEIS Section 2.0, Project Description.

<u>Comment 3.2-9 (Letter 2, Bruce Barber, June 13, 2005)</u>: A site specific soil analysis by a qualified soil scientist should be conducted and mapped.

Response 3.2-9: Soil boundaries on the project site, and throughout Westchester County, as depicted in the United States Department of Agriculture (USDA) Soil Survey of Westchester County, were mapped by a Certified Soil Scientist with the USDA. The Soil Survey includes an analysis of soil properties, and any limitations they impose on certain types of development. The Soil Survey mapping was confirmed in a site visit by the applicant's geologist. The descriptions in the Survey provide adequate information for project planning and assessment purposes and do not bias the assessment of potential environmental impacts, nor the development of appropriate mitigation.

<u>Comment 3.2-10 (Letter 2, Bruce Barber, June 13, 2005)</u>: The majority of the site consists of severely constrained Woodbridge, Ridgebury and Chatfield soils. Additionally, Paxton soil area is predominately steeply sloping. Applicant should provide detailed information and analysis regarding actual measures to be taken to account for these constraints. Ridgebury soil areas are wetland soils.

Response 3.2-10: As stated in the DEIS, the presence of identified soils constraints does not mean the land cannot be developed, nor are they a rating of construction potential. The ratings reflect the difficulty and relative costs of corrective measures that may be necessary for development. The primary limiting characteristic of Woodbridge soil (wetness / frost action) is proposed to be overcome by constructing an adequate permeable structural base underneath pavements and constructing subsurface drainage for pavements and foundations as needed. The primary limiting characteristic of Chatfield soil (depth to rock) is proposed to be overcome by the grading design that limits cut to shallow depths or avoids earth cut. The primary limiting characteristic of Ridgebury soil (wetness) is proposed to be overcome by constructing an adequate permeable structural base underneath in the two proposed wetland crossings of this soil type. The primary limiting characteristics of Paxton soil (wetness and slope) are proposed to be overcome by avoiding "hard" construction on these soil types as much as possible, and providing adequate erosion controls. See also Response 3.2-4.

<u>Comment 3.2-11 (Letter 2, Bruce Barber, June 13, 2005)</u>: Applicant should explain why excess cut operation cannot be avoided. A truck traffic routing plan should be submitted.

Response 3.2-11: See Responses 3.2-3 and 3.2-6. The largest cut in the proposed Revised Plan would result from the construction of the access from Route 6. This access is a requirement of the Town of Yorktown Subdivision Regulations, were no other point of access proposed. In the proposed Revised Plan, this roadway is a safety-related improvement providing for emergency vehicular access. A Work Permit from the New York State Department of Transportation will be required to make this connection to the State right of way. If required by NYSDOT, a truck traffic routing plan will be developed during that permitting process.

<u>Comment 3.2-12 (Letter 2, Bruce Barber, June 13, 2005)</u>: Complete investigation and submit complete report regarding need for blasting.

Response 3.2-12: See Response 3.2-8.