## 3.0 POTENTIAL IMPACTS AND PROPOSED MITIGATION

### 3.1 Geology, Soils and Topography

**Comment 3.1-1 (Deputy Mayor Yagel, Public Hearing Transcript, June 4, 2009):** The applicant is probably going to disturb 113.7-acres, and 46.1 acres will be impervious surface. They'll probably have to do some blasting.

> ***Response 3.1-1:*** *The blasting which is anticipated is discussed in Section 3.1.3 of the DEIS and is depicted on Figure 3.1-5 of the DEIS. Blasting will be conducted in accordance with applicable restrictions according to the Town of Ramapo Blasting Code.*

**Comment 3.1-2 (Ms. Shapiro, Scenic Drive, Public Hearing Transcript, June 4, 2009):** 80 percent of the unencumbered land would be stripped and filled to a depth of two and-a-half feet. That's 450,000 cubic yards that will be disturbed on this land.

> ***Response 3.1-2:*** *Page 3.1-8 of the DEIS indicates that earthwork is essentially balanced and approximately 225,000 cubic yards (cy) of soil will be cut and filled.*

**Comment 3.1-3 (Ms. Shapiro, Scenic Drive, Public Hearing Transcript, June 4, 2009):** The applicant makes no attempts whatsoever to build within the contours and other natural constrictions and characteristics of the land.

> ***Response 3.1-3:*** *Site layout and grading has been designed to "follow the contours" and other natural constrictions. Roads and driveways have been located and profiled to closely follow the natural topography. Finished floor elevations of homes rise and fall to parallel the topography both from side-to-side and from front-to-back.*

**Comment 3.1-4 (Mr. Saraceno, 125 Camp Hill Road, Public Hearing Transcript, June 8, 2009):** I see the hills, the slopes. And, as I said, I'm very familiar with development. And I see that as a major concern.

> ***Response 3.1-4:*** *Site layout and design has been prepared in a manner sensitive to steep slopes. Figure 3.1-6 in the DEIS is a Slope Disturbance Map which shows how the site layout avoids steep slopes and provides a breakdown summarizing disturbance by slope range and indicates that 87% of the site disturbance will occur on slopes less than 15%.*

**Comment 3.1-5 (Letter #5, Susan H. Shapiro, Attorney at Law, July 22, 2009):** At the Town Board presentation, Applicant grossly misrepresented the proposed grading. Applicant plans to strip or fill 80% of the unencumbered land, (i.e. other than wetlands, ponds, utility easements, buffer areas, steep slopes, etc., which by law, cannot be disturbed), 130 acres, to an average depth of 2.5 feet. The 61 acres proposed for MR-8 zoning would be far more drastically stripped and filled (probably to an average depth of 4-5 feet!).

> ***Response 3.1-5:*** *Proposed grading has been accurately represented in the DEIS including full-size 100 scale Grading and Drainage Plans which were attached to the bound DEIS Volumes I and II.*

**Comment 3.1-6 (Letter #5, Susan H. Shapiro, Attorney at Law, July 22, 2009):** Applicant makes no attempt whatsoever, to utilize the contours and other natural characteristics of the land, in contradiction to accepted basic good building practices and environmental considerations.

> ***Response 3.1-6:*** *Site layout and grading has been designed to "follow the contours" and other natural constrictions. Roads and driveways have been located and profiled to closely follow the natural topography. Finished floor elevations of homes rise and fall to parallel the topography both from side-to-side and from front-to-back. Environmental design considerations incorporated into this project include zero disturbance to freshwater wetlands and avoidance of steep slopes to the maximum extent practicable.*

**Comment 3.1-7 (Letter #12, Joseph LaFiandra, Engineer II, County of Rockland Sewer District No. 1, July 7, 2009):** PROJECT PLANS: Please provide a detailed site plan of the existing and proposed topography, drainage, soils, etc., and other features of the site.

> ***Response 3.1-7:*** *Rockland County Sewer District #1 (RCSD # 1) received a complete copy of the DEIS which includes detailed site plans, topography, drainage, soils, etc. The level of detail provided in that document is appropriate for this environmental review. Further details will be designed and provided to the RCSD #1 in the future when the project reaches the stage where Subdivision and Site Plan Applications are prepared and filed.*

**Comment 3.1-8 (Letter #12, Joseph LaFiandra, Engineer II, County of Rockland Sewer District No. 1, July 7, 2009):** EROSION AND SEDIMENTATION CONTROL (E&SC) PLANS: Please provide a complete erosion and sediment control plan for the entire site to protect the ESA wetland and floodplain both during and after construction (include standard notes and details).

> ***Response 3.1-8:*** *Rockland County Sewer District #1 (RCSD #1) received a complete copy of the DEIS which includes full-size 100 scale Erosion & Sediment Control Plans, Standard Details, and Standard Notes which were attached to the bound DEIS Volumes I and II.*

**Comment 3.1-9 (Letter #15, Salvatore Corallo, Commissioner, County of Rockland Department of Planning, July 24, 2009):** Soil impacts are discussed on Page 3.1-7. There are development limitations associated with each soil type found on the Patrick Farm site. Significant mitigation is required to deal with the wet soils and the steep, rocky soils. These soil limitations must be properly addressed and mitigated to ensure that future residents are not subject to flooding and drainage issues.

> ***Response 3.1-9:*** *Page 3.1-7 of the DEIS included a discussion of the construction techniques that are required when working with the soil limitations found at certain locations at the Patrick Farm site. The proposed construction techniques are considered standard engineering practices. Preliminary Grading & Drainage Plans included with the DEIS depict a preliminary design which will ensure that future residents are not subject to flooding and drainage issues.*

**Comment 3.1-10 (Letter #18, Shajan Thottakara, P.E., Rockland County Drainage Agency, July 30, 2009):** Please provide the RCDA with a soil permeability field test location map and test data for review.

***Response 3.1-10:*** *The in-situ hydraulic conductivity at each proposed recharge area was determined by performing "slug" tests at piezometers installed at each recharge area by the Consulting Groundwater Hydrogeologists, Leggete, Brashears and Graham. This data was utilized for preliminary designs of the recharge basins provided within the Stormwater Pollution Prevention Plan which appears as Appendix D of the DEIS.*

*Permeability data will be submitted to the Rockland County Drainage Agency (RCDA) in the future along with more detailed plans that will enable the RCDA to perform a detailed review of the project when the plans have been developed to the stage where Subdivision and Site Plan Applications are prepared and filed.*

**Comment 3.1-11 (Letter #19, John F. Lange, Senior Associate for Planning, Frederick P. Clark Associates, Inc.):** Cut and fill figure 3.1-7 shows that most of the site is either cut or fill. It is noted that the DEIS notes the sensitive nature of the site with streams, ponds and wetlands. It would appear that the design for the site should follow the contours — stepping up or down slopes as appropriate instead of such substantial grading. This is a major impact that can be mitigated. Please demonstrate why designs with less cut and fill could not be utilized.

***Response 3.1-11:*** *Minor changes in grade are necessary for construction because Rockland County is not flat. Figure 3.1-7 is a Cut & Fill Map which discounts "minor" grading (± 2 feet). Figure 3.1-7 indicates that the percentage of the site where grading more than "minor" (± 2 feet) will occur at approximately 24% of the site. In addition, it should be noted that 45% of the site will remain undisturbed. Site layout and grading has been design to "follow the contours" and to avoid streams, ponds, and wetlands. Finished floor elevations of homes rise and fall to parallel the topography both from side-to-side and from front-to-back. Roads and driveways have been located and profiled to closely follow the natural topography. Zero disturbance to freshwater wetlands is proposed, stream crossings will span the watercourse or provide a natural invert, and the only proposed disturbance at the pond will be reconstruction of the dam. Earthwork has been minimized and is essentially balanced meaning no soil will be imported to or exported from the site.*