3.7 WETLANDS COMMENTS AND RESPONSES

Comment 3.7-1 (Letter 16, Alice Kiely, May 22, 2005; Letter 8, Frances and George Davis, May 20, 2005): The Yorktown Farms site has numerous wetland areas. The flow of water in these areas should not be interfered with. Different kinds of wetlands within this small area support and interact with each other in order to support the ecosystem living within it. People do not have the right to put more development in mother nature's way.

Response 3.7-1: *Three distinct wetland areas on the project site have been delineated and their ecological function described in the DEIS. Wetland A, part of New York State Department of Environmental Conservation (NYSDEC) mapped wetland A-4, is located parallel with the western property boundary and due to the location of the proposed primary access to the project via the extension of Gay Ridge Road, a crossing of this wetland area is necessary. No other encroachment into this wetland is proposed. Wetland B/C is a Town-designated wet area, across which the subdivision access road is proposed. No other encroachment into this wetland is proposed. Wetland D, part of NYSDEC mapped Wetland A-2, is located in the southeastern corner of the property and no encroachment into this wetland is proposed. There are no hydrologic connections among any of these three wetlands.*

The proposed disturbances of Wetlands A and B/C are limited to that which is necessary to gain access to the site. Site access alternatives presented in the DEIS and additional alternatives studied in response to comments on the DEIS plans, and in coordination with the Town Planning Department, Town Board, and NYSDOT, have shown that the most reasonable and safe alternative location for the project access road would not avoid crossing the wetlands in two locations on the site, all things considered. The road crossings that are proposed would be constructed with a porous base so that surface water flow would be maintained in the wetlands, and so that the current functions of the wetlands would be preserved. The wetland crossings are proposed to include a large sized culvert designed to accommodate the primary drainage channel in the wetland and several smaller pipes to allow small animals to pass through. The sides of the road section would be constructed of stone-filled gabions for structural support, while minimizing the width of the fill section. Gabions can be installed with minimal construction excavation. Sheet 4 of the accompanying engineering drawing set shows a typical section of the wetland fill section. No wetland encroachment other than that proposed with the two accesses to the site is proposed. The Applicant notes that, as seen in Table 3.7-1, since the acceptance of the DEIS, proposed wetland disturbances have been reduced from 0.72 acres to 0.25 acres.

Table 3.7-1
Wetland Disturbance

Wetland Area	DEIS (acres)	FEIS (acres)
Wetland "A"	0.25 (road)	0.19 (road)
Wetland "B/C"	0.14 (road) 0.33 (lots)	0.06 (road)
Wetland "D"	0.0	0.0
Total	0.72	0.25
Source: Tim Miller Associates, Inc., 2007.		

Comment 3.7-2 (Letter 16, Alice Kiely, May 22, 2005): Housing sites 11, 12, 13, 14, 16, 18, 20, 30, 31, 32, 33, 34, the ball field(s) and the ball field parking lot are literally built in the wetlands buffer. The Habitat Alteration map for the Yorktown Farms Subdivision Figure 3.4-2 shows that twelve houses on the west side of the development are sitting in the buffer of wetlands. Site 14 is sitting in the wetlands. This map also shows that the last four houses on the eastern side of Stonewall Court are not included in the cul-de-sac buffer accordinq to the map. Contrary to this, the wetlands do not end within this location on the map. The wetlands reach much farther to the south and easily encompass the back yards of these four houses, on the boarder of the proposed development. (Wetlands A) The houses on the east side of Stonewall Court have preexisting wetland conditions. Our house, and at least the two houses next door to us, all have severe water problems and sit in a high water table. In the winter, spring, summer, this water table (wetlands) very quickly rises leaving a foot to two feet of water in our basements in a matter of a half hour to an hour during a Northeaster storm. Water from a quick summer thunder storm rises quickly and floods the back yard, sending water into our basement. We can tell you from prior twenty years of experience that "a buffer" is not "a buffer," but wetlands.

> ***Response 3.7-2:*** *The proposed project has been revised to eliminate all proposed dwellings in any wetland or wetland buffer. The boundaries of Federal, State, and Town regulated wetlands were delineated by Tim Miller Associates, Inc. (TMA) by applying applicable vegetation, soil, and hydrology parameters. These boundaries were confirmed by the United States Army Corps of Engineers (ACOE), NYSDEC, and the Town of Yorktown for their respective jurisdictions. The wetland buffers regulated by the NYSDEC and the Town of Yorktown extend 100 feet beyond the limits of the wetlands and do not support wetland vegetation, soils, or hydrology.*

Comment 3.7-3 (Letter 16, Alice Kiely, May 22, 2005): Map 3.4-2 shows plans to place twelve houses, a soccer field and a parking lot in wetland buffer zones. Chemicals will be used to maintain this soccer field (in two wetlands buffers), or it will regress into a field of weeds. This water, already in the wetlands buffer, (i.e. wetlands) flows into designated wetlands. This soccer field may blacken underneath, due to excess water, probably causing the use of more chemicals, in an effort to solve the unknown problem. The fact that having to make copious drainage pits means that the land has been altered in a drastic way. This will have its consequences. The need for five drainage pools, shown on Map 3.4-2, even without any on the western border, says something big about the area being wetlands.

> ***Response 3.7-3:*** *See Response 3.7-2. As noted, no proposed dwellings are located in any wetland or wetland buffer and the soccer field and parking area have been eliminated from the proposed project. The field delineated wetlands on the project site do not include the areas where the proposed stormwater management ponds are sited. The proposed stormwater management basins are required by NYSDEC General Permit for Stormwater Discharges from Construction Site (GP-02-01), the Town of Yorktown, and New York City Department of Environmental Protection (NYCDEP), regulations to control post development changes in the rate of stormwater discharge and pollutant loads in stormwater.*

Comment 3.7-4 (Letter 3, James D. Benson, NYCDEP, June 14, 2005): DEP has designated the Muscoot Reservoir as phosphorous restricted. The stormwater analysis prepared for the DEIS shows an overall decrease in peak runoff rates for flow within the watershed. This decrease is highly significant for the smallest storm tabulated, the 2-year, 24-hour storm.

Changes in hydrology can have significant impacts on the wetlands found on site. More detail is necessary to determine the likely impacts of the reduced peaks and associated hydrographs on wetlands A-2 and to determine if these impacts can be avoided or adequately mitigated.

Response 3.7-4: *Stormwater runoff from less than 14 acres of the 43 acre project site discharges into Wetland A-2 located in New York City's Muscoot Reservoir watershed. As shown in FEIS Table 3.6-1, following construction of the project peak stormwater discharge rates for the two-year, twenty-four-hour rainfall event discharging to the wetland would be slightly reduced. However, the volume of runoff, which supports the wetland, would not be reduced.*

Comment 3.7-5 (Letter 3, James D. Benson, NYCDEP, June 14, 2005): As shown on the drawings, several sections of development within the Watershed (lots 6, 7, 8, 24, 25, 26) will not drain to any stormwater practices prior to discharge into the wetland buffer. The impacts of the increases in runoff and pollutant loads from this development on the wetlands should be discussed in greater detail.

Response 3.7-5: *Stormwater generated by the portion of the proposed project located in New York City's watershed would be treated by a proposed detention pond prior to being discharged. As detailed in the Yorktown Farms Stormwater Pollution Prevention Plan (SWPPP), FEIS Appendix D, following treatment of stormwater in the City's watershed, loads of Total Phosphorous, Total Nitrogen, Total Suspended Solids, and Biological Oxygen Demand would be reduced. These pollutant reductions in the watershed are summarized in Table 3.7-2, below.*

Table 3.7-2
Pollutant Removals in the New York City Watershed
Yorktown Farms Subdivision

	Total Suspended Solids	Total Phosphorus	Total Nitrogen	Biological Oxygen Demand
Total Watershed Existing (lb/day)	2,190.7	2.5	16.8	135.8
Total Watershed Proposed (lb/day)	2,170.6	1.9	16.4	125.9

Comment 3.7-6 (Letter 3, James D. Benson, NYCDEP, June 14, 2005): It appears that disturbance in and near the wetland buffer is not fully addressed. For instance, the proposed undisturbed areas shown in Figure 3.3-5 do not account for disturbance required to construct the sewer line or pump station immediately upslope of the buffer on lots 6, 7, 8, and 9. The figure also does not account for wetland buffer disturbance required to construct the proposed stormwater basin berm, since the grading for this berm extends to the edge of the buffer. The impacts of these disturbances on the wetlands should be considered.

Response 3.7-6: *All proposed site disturbances are shown on the revised plans that accompany this FEIS. The reductions in areas of disturbance of wetland buffers from the time the DEIS was issued are summarized in Table 3.7-3. The Applicant notes that no disturbance of NYCDEP-regulated Wetland D is proposed, nor is any disturbance within the NYCDEP-regulated limiting distance to the wetland.*

Table 3.7-3 Wetland Buffer Disturbance		
Setback by Jurisdiction	**DEIS (acres)**	**FEIS (acres)**
NYSDEC	0.73	0.13
Town	3.68	2.20
Total	4.41	2.33
Source: Ralph G. Mastromonaco, P.E., P.C., 2007.		

Comment 3.7-7 (Letter 3, James D. Benson, NYCDEP, June 14, 2005): The DEIS includes no provisions for conveying stormwater discharges from the detention basin through the wetlands. Discharges from the stormwater basin could cause erosion of the buffer and sedimentation within the wetlands. The impacts must be avoided or mitigation must be considered.

> ***Response 3.7-7:*** *Following detention in the stormwater management basin, stormwater would be discharged to the wetland at a non-erosive rate. In addition, outlet protection would be provided in the form of a rip rapped stabilized outlet at the discharge point to further reduce velocity and prevent erosion, and sedimentation of the wetland.*

Comment 3.7-8 (Letter 2, Bruce Barber, June 13, 2005): Explain how 13% reduction in groundwater recharge will affect hydrology of on-site as well as wetland systems which surround property on north, east and west.

> ***Response 3.7-8:*** *A slight reduction in groundwater recharge would be largely a result of the construction of impervious surfaces which would prevent a small volume of stormwater from infiltrating into the ground. Since acceptance of the DEIS, proposed impervious surfaces have been reduced from a total of 5.8 acres to 3.7 acres. Stormwater from those impervious surfaces would be conveyed to the proposed stormwater management ponds where it would be treated and released to the wetlands. Treatment by the ponds would ensure that the hydrology of the on-site wetlands, as well as wetlands to the north, east and west of the site, would be maintained by reducing increases in post construction peak rates of stormwater discharged to the wetland to below pre-construction rates.*

Comment 3.7-9 (Letter 2, Bruce Barber, June 13, 2005): Land type abutting and surrounding the site (including north of Route 6) should be more accurately described as predominately wetlands.

> ***Response 3.7-9:*** *As depicted in DEIS Figures 3.7-1, NYSDEC Freshwater Wetland Map, and 3.7-2, National Wetlands Inventory Map, both State and federally regulated wetlands abut the project site to the east and to the south, and on the north side of US Route 6.*

Comment 3.7-10 (Letter 2, Bruce Barber, June 13, 2005): The applicant proposes to fill a substantial portion of the central wetlands on the site, cross a NYSDEC wetland from Gay Ridge Road, and to locate at least one third of the homes, substantial areas of the soccer field, and substantial components of the stormwater basins in the wetland buffer area. The application does not comport with the major tenet of the Town of Yorktown Freshwater Wetlands Ordinance with respect to consideration or avoidance of wetland and wetland buffer

impacts. The applicant does also not consider the landscape location of this site as it is virtually surrounded by wetlands. As a result, a two-acre cluster alternative is requested which will demonstrate realistic avoidance of wetland and wetland buffer impacts.

Response 3.7-10: *The Applicant has revised the proposed subdivision plan to avoid disturbances to wetlands and wetland buffers to the greatest extent possible. Site access alternatives presented in the DEIS and additional alternatives studied in response to comments on the DEIS plans, and in coordination with the Town Planning Department, Town Board, and NYSDOT, have shown that the most reasonable and safe alternative location for the project access road would not avoid crossing the wetlands in two locations on the site, all things considered. See Response 3.7-1. Of the 1.56 acres of town-regulated wetland on the project site (Wetland B/C), only 0.1 acre would be disturbed by the preferred access road alternative. Similarly, 0.20 acres of NYSDEC Wetland A would be disturbed with the access road from Gay Ridge Road. Considering the lack of a better alternative, this is not a substantial amount of disturbance, and will be mitigated as described elsewhere.*

Through the redesign of the proposed project, wetland buffer encroachments have been minimized or avoided. All wetland buffer encroachments associated with the proposed residences have been avoided. The revised plan would disturb 2.33 acres of the 4.41 acres of wetland buffer on the site, most associated with road construction. As such, the proposed action complies with the primary impact avoidance goals of the Freshwater Wetlands provisions of the Code of the Town of Yorktown.

Comment 3.7-11 (Letter 2, Bruce Barber, June 13, 2005): The applicant provided their wetland functional analysis of the wetland area to be filled which did not completely consider impacts to the remaining wetland area(s) on-site and adjacent to the site.

Response 3.7-11: *The primary function and benefit of the Wetland A corridor is storm and flood water control, the modification of stream flow and its water quality (filtering). This wetland provides good habitat for wildlife species that utilize wetlands and transitional areas. This wetland also provides cover and saturated conditions for wetland dependent species, including salamanders and frogs. (DEIS page 3.7-3.) The proposed wetland crossing (0.19 acre disturbance) will have insignificant adverse effect on control of storm and flood water, and provision of habitat within the remaining, undisturbed portions of the wetland both on-site and off-site. Storm flows would be accommodated by the appropriately designed culverts under the road section, and normal hydrology would be maintained through the porous road section material that is proposed specifically for that purpose. "Critter crossing" pipes are proposed through the road section to allow small animal movement from one side of the road to the other.*

The primary function and benefit of Wetland B/C is the conveyance of storm flows, modification of groundwater discharge and the filtering of collected runoff resulting in improved water quality. Due to its small size and long narrow geometry, this area is not used as primary habitat nor as a significant corridor for wildlife. It does provide dense cover and nesting opportunities for bird species. The southern end of the wetland has only marginal wetland characteristics and serves as a temporary collection point for overland runoff and infiltration. (DEIS page 3.7-4.) The proposed wetland crossing (0.06 acre disturbance) will have insignificant adverse effect on storm flow, groundwater discharge or filtering of runoff due to the very small size of the affected area and provision of an adequately sized culvert that would allow for continued surface flow

through the narrow wetland corridor. The proposed plan would preserve existing habitat within the remaining, undisturbed portions of the wetland.

Wetland D performs functions related to stream and storm flow, modification of water quality, storm and flood water storage and filtering. (DEIS page 3.7-5.) No disturbance of Wetland D is proposed and no impacts on this wetland, either on or off the project site, are anticipated.

Other potential impacts to the remaining (undisturbed) wetland areas on-site and adjacent to the site are primarily associated with sedimentation during construction and post-development changes in runoff quantity or quality. In order to prevent these stormwater induced impacts, an Erosion and Sediment Control Plan, that includes appropriate construction sequencing, has been included in the Stormwater Pollution Prevention Plan (SWPPP) prepared for the Yorktown Farms project. The purpose of these plans is to design project-specific mitigation measures that will avoid or minimize significant adverse effects on downstream water resources. The project approval will require implementation of and conformance with these plans.

Comment 3.7-12 (Letter 2, Bruce Barber, June 13, 2005): The applicant has not provided any baseline analysis of wetland hydrology (pre and post construction hydrographs) so that short and long-term impacts to wetland hydrology cannot be analyzed.

Response 3.7-12: *Potential impacts on wetlands hydrology would be associated with direct (short term) effects of construction and long-term effects of post-construction changes in the flow of stormwater through the wetland. Short term effects would be mitigated by providing appropriate erosion and sedimentation control devices throughout the construction period, as well as careful construction practices in a limited corridor across the wetland during times of low flow. To maintain existing wetland hydrology in Wetland A over the long term, the access road fill section is proposed to be constructed with a porous base consisting of free draining stone with a series of culverts. The base would allow the uninterrupted movement of surface water through the fill section and thereby maintain the wetland's existing hydrology. These proposed measures would minimize significant adverse effects on wetland hydrology.*

Details of the proposed NYSDEC wetland crossing are included on Sheet 4 of the submitted plan set. The main culvert, designed to accommodate stormwater flow through the wetland, is proposed to be a 3.5 foot high x 15 foot wide concrete box culvert with a 1-foot depth of stone lining the bottom. The invert elevation of the culvert opening has been set at the existing low point of the wetland, 543.0 feet msl. Additionally, three 24"-diameter culverts are proposed to provide corridors for small animals to circulate above and below the road crossing, each with its invert set at the existing grade in the wetland. While there is not an established permeability or infiltration rate for the stone-filled gabions that are proposed as the base for the crossing, void space between the 4" to 12" size stones will be substantial enough to allow a significant amount of surface water flow to move through the crossing. These measures are proposed so that there should be no significant hydrological effect on the wetland since water flow will be maintained in the wetland.

Comment 3.7-13 (Letter 2, Bruce Barber, June 13, 2005): Applicant must provide clear, understandable field notes and calculations to support their functional assessment. Additionally, specific contributions of each wetland with respect to each functional assessment parameter must be detailed. The Applicant draws unsubstantiated conclusions. Additionally, the Applicant does not consider the function of these wetlands with respect to adjoining off-site wetlands.

Response 3.7-13: *In further support of the conclusions in the DEIS concerning existing wetland functions, and potential impacts on them, a January 2005 Wetland Functional Assessment accompanies this FEIS as Appendix E. The wetland scientists producing this functional analysis did not collect data from these wetlands other than the routine wetland data sheets prepared for the wetland delineation and the photos taken during the site walks. The data sheets are attached to Appendix E. This information was used to write the text for the DEIS, and follow up analysis was completed to revise this information as presented in Appendix E. These reports are based on numerous site walks by two wetland scientists and consultations with wetlands staff from the NYSDEC and the Army Corps of Engineers. Numerical modeling of wetlands values is of questionable use in evaluation of small, man-made wetland systems such as the central wetland on this site.*

Comment 3.7-14 (Letter 2, Bruce Barber, June 13, 2005): Applicant has not provided the design of the wetland crossings, wetland hydrology information or adequate biodiversity information, and as a result impacts of the crossings can not be assessed.

Response 3.7-14: *Design details for the two wetland crossings are included in the construction plans that accompany this FEIS (engineer's Sheet 4). The details specify a porous material road base that would allow for the uninterrupted flow of surface water through the two wetlands following construction. This design includes an oversized box culvert for conveyance of the main flow through the wetlands, and three additional culverts at each crossing to ensure that larger flows are conveyed over a broader area of the wetlands rather than being concentrated in one channel. The porous nature of the road base will also allow for the passage of sheet flow and shallow groundwater flow if it has not concentrated in the channel upstream of the crossing. Maintenance of water flow through the culverts in the proposed road crossing of the NYSDEC wetland will be the responsibility of the Town upon dedication of the road. Future maintenance requirements should be minimal, and would likely include only the removal of larger brush debris and accumulated leaves as necessary.*

Comment 3.7-15 (Letter 2, Bruce Barber, June 13, 2005): Applicant does not provide adequate analysis of wetland buffer impacts. A total of 18 percent (4.4 of the 24.7 acres) of total site disturbance is to wetland buffers and an additional 3 percent of the impacts is to wetlands. That represents a total of approximately 21 percent of the impacts of site disturbance is to wetlands and wetland buffers. This does not comply with the Town of Yorktown Freshwater Wetlands Ordinance.

Response 3.7-15: *The revised development plan for the project would result in a total of 22.1 acres of disturbance. Ten (10) percent of total site disturbance (2.3 of the 22.1 acres) is to wetland buffers and an additional 1 percent of the impacts is to wetlands. That total of approximately 11 percent of the impacts of site disturbance is to wetlands and wetland buffers. Revisions to the project have resulted in significant reductions to wetland and buffer impacts: a reduction in wetland buffer disturbance from 4.4 acres to 2.3 acres and a reduction in disturbance of wetlands from 0.72 acres to 0.25 acres.*

Given the limitations of alternative points of access into the project site (discussed in Response 3.7-10), the current Revised Plan provides the preferred access scheme with limited wetland disturbances.

Chapter 178 of the Town of Yorktown Code, Freshwater Wetlands (the Code), does not impose specific restrictions on the extent of wetland, and wetland buffer, disturbance, nor does it prohibit the proposed activity as the comment suggests. Instead, the Code requires that a permit be issued authorizing the activity prior to its being conducted. As noted, no reasonable and safe alternative to the proposed access road from Gay Ridge Road across the NYSDEC and Town regulated wetlands, and wetland buffers, is available to the Applicant. As such, the proposed project is consistent with Sections 178-12(A)(5) and 178(B)(1)(d) of the Code (Standards for Permit Decisions and Findings, respectively) that address alternatives.