



**STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
STATE PLANNING COORDINATION**

November 30, 2007

Mr. James Willey  
George, Miles & Buhr, LLC  
206 West Main Street  
Salisbury, MD 21801

RE: PLUS review – PLUS 2007-10-08; Stony Creek

Dear Mr. Willey:

Thank you for meeting with State agency planners on October 31, 2007 to discuss the proposed plans for the Stony Creek project to be located on New Road between State Routes 20 and 54.

According to the information received, you are seeking site plan approval for 90 residential units on 47 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

The following are a complete list of comments received by State agencies:

**Office of State Planning Coordination – Contact: Bryan Hall 739-3090**

Because, the proposed project of Stony Creek is located with a State Strategy Investment Level 4 Area and within the Environmentally Sensitive Developing District as defined by the 2003 Sussex County, this office cannot support the development as proposed. If developed, this project will hinder the State's ability to effectively plan for future services and necessary infrastructure to assist the residents of Sussex County. Further more, the environmental resources are such in this area, that there is significant need for better design an environmental mitigation practices to ensure the lasting benefits of the variety of resources on this site. This office would encourage the developer to explore other option that would allow this parcel to be preserved and the owner to appreciate other forms of equity. If you have any questions, please contact this office.

**Division of Historical and Cultural Affairs – Contact: Terrance Burns 739-5685**

In reference to this particular parcel, the historic resources at State Historic Preservation Office of the Division of Historic & Cultural Affairs did show and indicate the following:

- There was no indication of a known Archaeological site or National Register listed property on or within parcel, but this parcel is still in a vicinity where it is a possibility that there could be a potential archaeological site on this parcel, or nearby it.
- The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out.
- Prior to any demolition or ground-disturbing activities, or before any type of construction proceeds the developer may want to hire an archaeological consultant to check or examine this parcel/property for the possibility of a cemetery here, or to see if there are any archaeological sites on it.

The State Historic Preservation Office of the Division of Historic & Cultural Affairs recommends and do hope that the developer will take these comments in to consideration. Also, if the developer would like to discuss this in further detail, contact Mr. Terence Burns, Information Resource Specialist, at the State Historic Preservation Office of the Division of Historic & Cultural Affairs at (302) 736-7400

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

Summer Hill Developments, Inc. seeks to develop 90 single-family detached houses on a 47-acre assemblage of parcels (Tax parcel 5-33-19.00-8.01 and 9.00). The land is located on the west side of New Road (Sussex Road 391). The land is zoned AR-1 in Sussex County and would be developed by right.

DelDOT comments are as follows:

- 1) New Road is classified as a local road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore we will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- 2) DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage and to provide a 10-foot wide shared use path within that easement.
- 3) The proposed development does not meet DelDOT's current warrants for a traffic impact study (TIS). However, under new standards that we expect to adopt this calendar year, a TIS would be warranted for this site, so we will revisit the need for a study as part of the site plan approval process.
- 4) Regardless of whether a TIS is required, the developer should anticipate a requirement to improve New Road, at least within the limits of the property frontage, to meet DelDOT's local road standards. Those standards include 11-foot lanes and 5-foot shoulders. Depending on the condition of the existing road, a longer improvement may be required. A pavement overlay may also be required.
- 5) DelDOT recommends that Millie Drive be extended north and south, and the south leg of Stony Creek Drive be extended west, to provide stub streets to the adjoining properties. They further recognize that there is a recorded subdivision plan, Fenwick West, for the land immediately north of this property and that that plan does not provide for an interconnection. However, because the plan for Fenwick West is relatively old (about 20 years) it is reasonable to expect that it will be revised before that property is developed. If so, they will recommend the connection to Millie Drive then.

The developer's site engineer should contact our Subdivision Manager for eastern Sussex County, Mr. John Fiori, regarding our specific requirements for access and off-site improvements. Mr. Fiori may be reached at (302) 760-2260.

**The Department of Natural Resources and Environmental Control – Contact:  
Kevin Coyle 739-9071**

#### **Investment Level 4 Policy Statement**

This project is proposed for an Investment Level 4 area as defined by the *Strategies for State Policies and Spending* and is also located outside of a designated growth area in the relevant municipal and county certified comprehensive plans. According to the *Strategies* this project is inappropriate in this location. In Investment Level 4 areas, the State's investments and policies, from DNREC's perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional state investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development.

With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., non-attainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.

This particular development certainly compromises the integrity of the State Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are the increase in impervious cover and the loss/fragmentation of 29.7/46.5 acres of forest or 64%. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits

or other authorizations for this project shall be considered in light of the project's conflict with our State growth strategies.

### **Soils**

Based on the Sussex County soil survey update, Hammonton, Pepperbox, and Hurlock were mapped in the immediate vicinity of the proposed construction. Hammonton and Pepperbox are moderately well-drained soils of low-lying uplands that have moderate limitations for development. Hurlock is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Approximately 70 percent of the mapped soils on this parcel are mapped as Hurlock.

Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or "nor'easters." This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (roof tops, roads, sidewalks, and stormwater management structures).

**Based on the Chapter 99, Section 16A of the Sussex County Code (paraphrased), lands compromised by improper drainage or flooding potential pose significant threats to the safety and general welfare of future residents and, therefore, shall not be developed. Soils mapped as Hurlock fit the criterion for improper drainage or high flooding potential and should be avoided. The Watershed Assessment Section believes permitting development on such soils would violate the above-stated provision of the Sussex County Code.**

### **Wetlands**

Based on the Statewide Wetland Mapping Project (SWMP) maps, palustrine forested wetlands were mapped over much of this parcel.

Impacts to Palustrine wetlands are regulated by the U.S. Army Corps of Engineers (USACE, or "the Corps") through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Corps also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Management Program (DCMP) Section. Each of these certifications represents a separate permitting process. Please be advised that

nationwide permits have been suspended in Delaware and are pending further coordination with the Corps. Therefore, contrary to past practices, Coastal Zone Management approval can no longer be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMP office at 302.739.9283. The proposed stream crossing may require a permit from the State of Delaware, Department of Natural Resources and Environmental Control, Division of Water Resources, Wetlands and Subaqueous Lands Section. To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting.

### **Wetland Buffers**

DNREC strongly encourages the applicant to have wetland delineations conducted by a certified wetland scientist. According to our wetland database, there are two sizable areas of isolated wetlands on tax parcel 5-33-19-9.0. The site plan only depicts one of these wetland areas and it appears to be smaller. Although isolated wetlands do not have regulatory protection, they none the less possess important wetland values and functions and should still be protected from disturbance. They also can support an array of plant and animal species. There are also wetlands associated with Roy Creek that appear to be larger in our database than that depicted on the site plan. There is a stormwater management pond that is too close to these wetlands and should be pulled out of the protective buffer zone. This buffer zone is important for the function and integrity of the wetlands, protects water quality, and serves as habitat for wildlife and wetland dependent species. There should be at least a 100-foot upland buffer around all wetland areas. This buffer zone should not contain lot lines or infrastructure and be permanently protected so future clearing is less likely to occur.

### **Impervious Cover**

Based on information provided by the applicant in the PLUS application form, this project's post-development surface imperviousness is estimated to reach 16 percent. However, given the scope and density of this project (i.e., as viewed from the conceptual project layout) this estimate appears to be a significant underestimate. When calculating surface imperviousness, it is important to include all forms of constructed surface imperviousness (i.e., rooftops/building structures, sidewalks, stormwater management structures, swimming pools, and roads) in the calculation for surface imperviousness; this will ensure a realistic assessment of this project's likely post-construction environmental

impacts. Surface imperviousness should be recalculated with all of the above-mentioned forms of constructed surface imperviousness included.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

### **ERES Waters**

This project is located adjacent to receiving waters of the Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

### **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. This project is located in the low nutrient reduction area requiring a 40 percent reduction in nitrogen and phosphorus, respectively. Additionally, 40 percent reduction in bacteria will also be required.

### **Compliance with TMDLs through the PCS**

As stated above Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. The TMDL calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. Additionally, a 40 percent reduction in bacteria will also be required from baseline conditions. A Pollution Control Strategy (PCS) will provide the regulatory framework for achieving them. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses (and wetlands), increasing passive, wooded open space which helps reduce surface imperviousness (i.e., pervious pavers), and the use of green-technology stormwater management technologies.

The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

### **Water Supply**

The project information sheets state that Tidewater Utilities will be used to provide water for the proposed project. Our records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity (CPCN) number 06-CPCN-45. It is recommended that the developer contact Artesian Water Company to determine the availability of public water. Any questions concerning CPCNs should be directed to the Public Service Commission at 302-739-4247. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any well(s).

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

### **Sediment and Erosion Control/Stormwater Management**

- Contact the Sussex Conservation District to discuss maintenance agreements.
- There have been several drainage and/or stormwater management concerns in the vicinity of this project over the years. There is also significant development pressure in the area which could lead to future drainage problems. The existing stream/wetland crosses New Road; this is a poorly draining area. A downstream analysis may be required to ensure no downstream impact. This concern will be brought up during the pre-application meeting, which should be set up as soon as practical, and as early in the process as possible.

The DNREC Sediment and Stormwater Program ensure sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, DNREC does not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site over 5,000 square feet. Because the Sediment and Stormwater Program is in the process of revising its state regulations it is a good idea to contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

Because of the parcel's location in an impaired watershed and the amount of impervious surface typically associated with new development, the applicants should incorporate green technology best management practices and low impact development practices to reduce stormwater flow and meet water quality goals.

## **Drainage**

The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. The engineer is encouraged to meet with downstream landowners to obtain their concerns of current drainage as well as the additional drainage impact this project will have on the area. Please notify downstream landowners if there will be a change in the volume of water released on them.

The Drainage Program does not support the removal of trees for the creation of stormwater management areas. However, the Drainage Program recognizes that tree removal is unavoidable in some cases. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in rear yards in certain cases. Therefore, catch basins placed in rear yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, kennels, and other structures placed along the storm drains, or within 10 feet of the catch basins, can hinder drainage patterns as well as future maintenance to the storm drains or catch basins. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.

The Drainage Program recommends placing restrictions on obstructions within the drainage easements to ensure access for periodic maintenance or future re-construction. The Drainage Program requests all drainage easements be recorded on deeds. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.

## **Open Space**

The developer is strongly urged to consider alternatives to mowed grass within community open space areas, especially along stormwater management facilities upon development of this parcel. Mowing and other maintenance costs from lawn areas can become a substantial burden. There may be areas that are appropriate for warm or cool

season grasses. The maintenance costs associated with meadow type grasses are much lower than those of lawn grasses, and provide food and habitat for birds and other wildlife and can help reduce non-point source pollution. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at: <http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/>.

### **Site Visit Request**

DNREC has never surveyed this site; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site.

In order to provide more informed comments, our program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. Please note that our scientists have decades of experience in comprehensive rare species survey methods. They have extensive knowledge of the flora and fauna of the State and are the most qualified in making rare species identifications. Surveys are conducted at no cost or liability to the landowner/developer and a report of the survey will be drafted for the applicant's use. Please contact Bill McAvoy, Robert Coxé or Kitt Heckscher at (302) 653-2880 to set up a site visit.

### **Forest Preservation**

This site is entirely forested and considering the fact that over 20,000 acres of forest have been cleared since 2003, and a corresponding loss of forest dependent species has occurred, reducing forest loss within the State is extremely important. Cumulative forest loss throughout the State is of utmost concern to the Division of Fish and Wildlife which is responsible for conserving and managing the State's wildlife (see [www.fw.delaware.gov](http://www.fw.delaware.gov) and the Delaware State Code, Title 7). Because of an overall lack of forest protection, we have to rely on applicants and/or the entity that approves the project (i.e. counties and municipalities) to consider implementing measures that will aide in forest loss reduction.

Although not every tree will be cleared by this project, it will result in the loss and conversion of 47 acres of wildlife habitat into a 'residential woods' which is not as functional or valuable from a wildlife standpoint. More specifically, it will result in fragmentation of a larger, connected forest block. Larger, connected forested areas are more beneficial to wildlife, especially birds that require large interior forested areas for breeding. Forest fragmentation separates wildlife populations, increases road mortality,

and increases “edge effects” that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species. In addition, when forested areas are cleared and fragmented, wildlife must either co-exist with the new residents or disperse into the surrounding area. Either scenario can result in human/animal conflicts, including interactions on the roadways.

**DNREC encourages the applicant to consider preservation of this forest block and many incentive-based programs for wildlife management are available to private landowners through our agency. Please contact Shelley Tovell at (302) 735-3600 if the landowner(s) is interested in more information.**

If preservation is not considered then we strongly recommend:

1. Reducing the size of the development by omitting lots and associated infrastructure so that a larger area of connected forested open space is left intact.
2. Efforts should be employed to minimize the amount of clearing needed for the footprint of homes and infrastructure. If feasible, mechanisms should also be put in place to reduce future clearing by landowners, such as deed restrictions or conservation easements.
3. A method of stormwater management that does not require tree clearing should be employed if deemed feasible. It often does not make sense to clear trees which function in flood abatement to create a pond with the same purpose. Alternate methods which do not require tree clearing should be considered.
4. If trees are cleared despite our objections, they should not be cleared from April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat.

### **Plant Rescue**

Since woodlands and wetlands are to be destroyed, filled, or disturbed, it is recommended that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society’s nursery. Plants will then be used in restoration projects and/or sold at the Society’s annual native plant sale. This can be done at no expense or liability to the developer/landowner”. Please contact Lynn Redding at (302) 736-7726,

(lynn\_redding@ml.com) or William A. McAvoy at (302) 653-2880,  
(william.mcavoy@state.de.us).

### **Potential Hunting Issue**

Because the project area is part of a larger forest block, legal hunting activities may take place on adjacent properties. Hunting within 100 yards of a dwelling is prohibited and the applicant should contact adjacent landowners to determine if this is going to be an issue. In effect, the adjacent landowner will be losing 100 yards of their property for hunting if there is not a buffer between lot lines and the adjacent property line. There is also noise associated with hunting, such as the discharge of firearms or dogs barking when pursuing game.

### **Nuisance Waterfowl**

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Both of these ponds are fairly large and if it is feasible to reduce the size, it should be considered.

Short manicured lawns around ponds provide an attractive habitat for these species. We recommend native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. This type of habitat is not as attractive to geese because their view of the surrounding area is blocked and they can't scan for predators. At this time, we do not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) can become a burden for the homeowners association.

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the size of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

### **Air Quality**

Once complete, vehicle emissions associated with this project are estimated to be 6.9 tons (13,814.1 pounds) per year of VOC (volatile organic compounds), 5.7 tons (11,437.1

pounds) per year of NOx (nitrogen oxides), 4.2 tons (8,438.5 pounds) per year of SO2 (sulfur dioxide), 0.4 ton (751.2 pounds) per year of fine particulates and 577.8 tons (1,155,528.6 pounds) per year of CO2 (carbon dioxide).

***However, because this project is in a level 4 area, mobile emission calculations should be increased by 118 pounds for VOC emissions for each mile outside the designated growth areas per household unit; by 154 pounds for NOx; and by 2 pounds for particulate emissions. A typical development of 100 units that is planned 10 miles outside the growth areas will have additional 59 tons per year of VOC emissions, 77 tons per year of NOx emissions and 1 ton per year of particulate emissions versus the same development built in a growth area (level 1,2 or 3).***

Emissions from area sources associated with this project are estimated to be 2.8 tons (5,571.8 pounds) per year of VOC (volatile organic compounds), 0.3 ton (613.1 pounds) per year of NOx (nitrogen oxides), 0.3 ton (508.8 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (656.5 pounds) per year of fine particulates and 11.3 tons (22,587.0 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.1 tons (2,208.3 pounds) per year of NOx (nitrogen oxides), 3.8 tons (7,681.0 pounds) per year of SO2 (sulfur dioxide) and 566.5 tons (1,132,941.6 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	6.9	5.7	4.2	0.4	577.8
Residential	2.8	0.3	0.3	0.3	11.3
Electrical Power		1.1	3.8		566.5
TOTAL	9.7	7.1	8.3	0.7	1155.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.1 tons of nitrogen oxides per year and 3.8 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,  
high performance windows,  
controlled air infiltration,  
upgraded heating and air conditioning systems,  
tight duct systems and  
upgraded water-heating equipment.”

The DNREC Energy Office is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

We also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

**State Fire Marshal’s Office – Contact: Duane Fox 856-5298**

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal’s Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

a. **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.

- Where a water distribution system is proposed for the Clubhouse building, it shall be capable of delivering at least 1000 gpm for 2-hour duration, at 20-psi residual pressure and a fire hydrants shall be within 400 feet.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

**b. Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from New Rd (CR 391) must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**c. Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

**d. Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: [www.statefiremarshal.delaware.gov](http://www.statefiremarshal.delaware.gov), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Scott Blaiher 698-4500**

The Department is opposed to development in areas designated as Investment Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* do not support isolated development of these areas. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.

More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware's resource industries - agriculture, forestry, horticulture - and the related industries they support. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. We oppose the creation of isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation.

Section 1, Chapter 99, Code of Sussex Section 99-6 may apply to this subdivision. The applicant should verify the applicability of this provision with Sussex County. This Section of the Code states:

G. Agricultural Use Protections.

- (1) Normal agricultural uses and activities conducted in a lawful manner are preferred. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land uses adjacent to land used primarily for agricultural purposes shall be subject to the following restrictions:

- (a) For any new subdivision development located in whole or in part within three hundred (300) feet of the boundary of land used primarily for agricultural purposes, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

“This property is located in the vicinity of land used primarily for agricultural purposes on which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities.”

- (b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes.

This site overlaps the State’s Green Infrastructure Investment Strategy Plan. The Forest layer is present on the entire site. This designation identifies areas of the state that have viable and valuable forest land, as discussed in Governor Minner’s Executive Order Number 61. Areas such as these should be preserved as such, and not developed for residential use.

The Delaware Department of Agriculture supports growth which expands and builds on existing urban areas and growth zones in approved State, county and local plans. Where additional land preservation can occur through the use of transfer of development rights, and other land use measures, we will support these efforts and work with developers to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries.

*Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of

appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource. Please feel free to contact the Delaware Forest Service at (302) 698-4500 for more information.

### *Native Landscapes*

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

### **Public Service Commission - Contact: Andrea Maucher 739-4247**

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

### **Delaware State Housing Authority – Contact Vicki Powers 739-4263**

This is a proposal for a site plan review of 90 single-family homes on 47 acres located on New Road between State Routes 20 and 54 near Frankford. As a general planning practice, DSHA encourages residential development only in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas outlined in the State Strategies Map. Since the proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development, DSHA does not support this proposal.

### **Department of Education – Contact: John Marinucci 735-4055**

This proposed development is within the Indian River School District boundaries. DOE offers the following comments on behalf of the Indian River School District.

1. Using the DOE standard formula, this development will generate an estimated 45 students.

2. DOE records indicate that the Indian River School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Indian River School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2006 secondary enrollment. In multiple correspondences from the Indian River School District administration, the district asserts that while the Indian River High School has capacity, the Indian River Middle Schools' student population exceeds student capacity.  
NOTE: September 30, 2007 District enrollments are in the process of being certified.
4. This development will create additional elementary school and middle school student population growth which will further compound the existing shortage of space. The developer is strongly encouraged to contact the Indian River School District Administration to address the issue of elementary school over-crowding that this development will exacerbate.
5. DOE requests developer work with the Indian River School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

**Sussex County – Contact: Richard Kautz 855-7878**

Lots 7-11 appear to be within the established Henry C. Johnson Tax Ditch boundary.

Because this project is an AR-1 ESDA subdivision, the developer is allowed to reduce the lot size to provide for mitigation of the impact on environmental factors. The reduction of the proposed 90 lots from 20,000 sq. ft. to an average lot size of 10,355 sq. ft. allows for almost 20 acres of useable open space merely through the reduction in lot size. Yet, only 17 acres of usable open space, not including stormwater management and wetlands, is provided. Also, because this project is situated in an Environmentally Sensitive Development Area, the required report should include how this requirement and the PLUS comments have been addressed and how the plan has been revised accordingly. Use of Low Impact Design principals and Green Technology helps address the environmental issues.

The Sussex County Engineer Comments:

The proposed project is in a planning area of the Fenwick Island Sanitary Sewer District (FISSD) and connection to the sewer system is mandatory. The proposed project does not adjoin the FISSD and it is uncertain at this time, how the project can receive sewer

service. A request for annexation must include additional parcels in order to establish adjacency with the existing boundary of the FISSD and it will be the developer's responsibility to obtain the participation of additional property owners. The project is within planning study and capacity assumptions for sewer service from the FISSD.

The proposed development will require a developer installed collection system in accordance with Sussex County standard requirements and procedures. In addition, it will be the developer's responsibility to install regional infrastructure from an approved connection point in accordance with the South Coastal Area Planning Study Update. The Sussex County Engineer must approve the connection point. The Sussex County Engineering Department requires that a Sewer Concept Plan be submitted for review and approval prior to requesting annexation to the FISSD. A checklist for preparing conceptual plans was handed out at the meeting along with the County's policy and steps for extending sewer district boundaries. All costs associated with extending sewer service will be the sole responsibility of the developer. One-time system connection charges will apply. Please contact Mrs. Christine Fletcher at 302 85-5086 for additional information on charges.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP  
Director

CC: Sussex County