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July 6, 2006

Ms. Constance C. Holland, AICP
Director
Delaware Office of State Planning and Coordination
Haslet Armory
122 William Penn Street
Dover, DE 19901

RE: Response to PLUS Comments
The Woodlands (PLUS 2005-04-14)
Project No. D5040071

Dear Ms. Holland:

We are in receipt of State PLUS comments, dated May 24, 2005, for the above referenced project, located on the east side of County Road 84 and the north and south sides of County Road 363, a short distance from County Road 84. We hereby submit this letter in response to those comments, which have been addressed in the order that they were presented in your comment letter. Our responses are as follows:

Comments from: Office of State Planning and Coordination

This development is proposed for an Investment Level 3 and 4 area according to the Strategies for State Policies and Spending and the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. Based on the extensive data analysis used to develop the Strategies for State Policies and Spending, the presence of Investment Level 4 in the Environmentally Sensitive Developing Area is an indication of sensitive natural resources on-site. In this case, the forested areas and wetlands on-site influenced the designation as Investment Level 4.

The developer recognizes the environmental sensitivity of this area, and assures the State Planning Office that all development will be done in accordance with all local, state, and federal regulations, and with all applicable permits obtained.

Because of the sensitive nature of the site, we recommend that the proposal be redesigned to incorporate more open space and protection of natural features. Additionally, we recommend that the developer connect some of the cul-de-sacs in the proposed development, particularly the two southernmost cul-de-sacs on the northern parcel.

The developer understands the State's concerns, and assures the State that open space will be provided and natural areas will be protected as required by current regulations. The two southernmost cul-de-sacs on the northern parcel have been connected, as requested.

State Historic Preservation Office (SHPO) – Contact: Alice Guerrant 739-5685

Nothing is known in this parcel. Three historic farmsteads are located nearby, though not immediately adjacent to the parcel. There is only a low potential for historic-period archaeological sites here, but there is a medium potential for prehistoric sites in the middle of the parcel around the stream.

The State Historic Preservation Office would request that the developer maintain as much of the woods on the south as possible, to block the view of this development from the farmsteads on that side. Adding trees to the northern boundary of the parcel would also be desirable. They would be happy to work with the developer to locate any sites within the areas to be disturbed by construction and perhaps look at ways to preserve any important sites found within open space.

The developer will provide landscaping buffers adjacent to off-site agricultural uses as required by the current county code. In the interest of preserving existing trees, the developer will consider selective clearing and wooded lots for wooded areas.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) The response to Item 40 on the PLUS form indicates that there is an opportunity to connect to a larger bicycle and pedestrian network, but that no sidewalks or bicycle paths are proposed. The developer stated at the PLUS meeting that sidewalks and bicycle paths will be provided for a future connection to the Double Bridges development. It is recommended that this be done.

It is the intent of the developer to provide connectivity to the future Double Bridges development, now known as The Estuary, which is located immediately adjacent to the south-east corner of the site.

- 2) Double Bridges Road is classified as a collector road and Bayard Road is classified as a local road. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. Collector roads generally have somewhat wider rights-of-way. DeIDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on collector roads and 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.

The developer will dedicate land sufficient to provide a 40 foot right-of-way from the centerline of Double Bridges Road and a 30 foot right-of-way from the centerline of Bayard Road.

- 3) DeIDOT will also require that a multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site on both roads. Recognizing that the frontage is limited and that initially the paths would serve no purpose, they do not require that the paths be paved. However, DeIDOT will require that any necessary drainage and earthwork be completed such that when the surrounding properties develop there will be no need for a State investment to complete the path along the frontage of this property.

The developer will provide a 15' wide permanent easement along the frontage of Double Bridges Road and Bayard Road for the future construction of a multi-modal path. Site grading and earthwork will be designed in anticipation of future development and path completion.

- 4) A short distance to the south, there is a proposed development known to DeIDOT as Double Bridges. There is a traffic impact study in process for Double Bridges and the developer of this project will be required to share in some of the road improvements identified by that study.

The developer thanks the Department for this information, and assures the Department of their intent to comply with all requirements.

- 5) The street on the south side of Double Bridges Road is proposed to end as a stub street for a connection to the Double Bridges development. DeIDOT encourages such connections but we support the comment from the Fire Marshal's office regarding the need for a temporary turnaround.

The developer will provide a temporary turnaround at the street that will connect to the future Double Bridges development. The turn around will be designed in accordance with the requirements of the State Fire Marshal.

- 6) The response to Item 40 on the PLUS form indicates that sidewalks are not proposed. It is recommended that sidewalks be provided on all internal streets to encourage walking and to provide a safe environment in which to do that.

The developer will consider including sidewalks on internal streets.

- 7) It is also recommended that stub streets be provided to the agricultural parcels north and south of the part of the parcel on the north side of Double Bridges Road.

The developer understands the Department's interest in stub streets, and will consider the addition of stub streets.

- 8) The developer should consider adding a street connection to Bayard Road to provide alternative access to the development and eliminate what would otherwise be a long cul-de-sac. Regardless of whether they seek motor vehicle access on that road, the developer should provide bicycle and pedestrian access there.

The developer will provide a pedestrian/bicycle path that connects the subdivision to Bayard Road. The developer understands the Department's concerns, and will consider connecting the proposed street to Bayard Road. The project's final design will be in accordance with all applicable codes and regulations, and with all required permits and approvals.

- 9) DeIDOT supports the comment from the Office of State Planning Coordination that the two southernmost cul-de-sacs in the north part should be connected in the area of lots 57 and 58 to form a loop.

The two southernmost cul-de-sacs on the northern parcel have been connected to form a loop, as suggested.

- 10) Although it was not mentioned in the meeting, the proposed entrances are located about 50 feet east of a curve in Double Bridges Road. The developer's engineer will be required to show that adequate sight distance exists and to provide adequate sight distance if it does not exist presently.

The developer understands and assures the Department that the proposed entrances will be designed in accordance with all applicable codes and regulations, and with all the required permits from DeIDOT.

- 11) The developer's site engineer should contact the DeIDOT Subdivision Manager for Sussex County, Mr. John Fiori, regarding their requirements for access. Mr. Fiori may be reached at (302) 760-2260.

The engineer will coordinate entrance design with and obtain the required permits from John Fiori's office, as required.

The Department of Natural Resources and Environmental Control – Contact:
Kevin Coyle 739-3091
Green Infrastructure

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

The developer understands the Department's concerns, and will develop the project in accordance with all applicable codes and regulations, and with all applicable permits, and will attempt to minimize the impact to any sensitive areas that may be present on-site.

Soils

According to the soil survey update Pepperbox, Klej, and Mullica-Berryland complex were mapped in the immediate vicinity of the proposed construction. Pepperbox is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Klej is a somewhat poorly-drained transitional soil that is likely to contain both upland and wetland soil (hydric) components that may or may not be suitable for development. Mullica-Berryland complex is a very poorly-drained wetland associated (hydric) soil that has the highest severity level for development.

The developer thanks the Department for this information.

Wetlands

According to the Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested wetlands were mapped in the immediate vicinity of the proposed development.

Because there is strong evidence that federally regulated wetlands exist on site, a wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified by the Corps of Engineers through the Jurisdictional Determination process.

Impacts to wetlands should be avoided to the maximum extent practicable. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Lots should be removed in their entirety from the wetland, wetland buffers and the forested areas. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

Impacts to wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act; impacts to tidal wetlands are also regulated by the DNREC Division of Water Resources,

Wetlands and Subaqueous Lands Section. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the Wetlands and Subaqueous Lands Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

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) 739-4691 to schedule a meeting.

It is also recommended that the Farm Services Agency of the USDA be contacted to assess whether the farmed wetlands on subject parcel meet the recognized criteria for classification as "prior converted wetlands." Prior converted wetlands are farmed wetlands that have drained or altered before December 23, 1985, and no longer meet the wetland criteria established under the 404 program. Such wetlands are considered exempt from regulatory protection provided that there is no proof of a continuous "fallow period" of five years or greater in that parcel's cropping history. Parcels converted after said date regardless of cropping history are considered jurisdictional by the Army Corps of Engineers (ACOE). The contact person for assessing a parcel's cropping history is Sally Griffin at the USDA – she can be reached at 678-4182.

It is strongly recommended that the developer maintain a minimum 100-foot buffer width from landward edge of all wetlands and natural or created water bodies (including ditches). In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation. **Further, it is strongly recommended that all Stormwater management pond(s) be at least 100 feet away from all wetlands and natural or created water bodies.**

The developer understands the Department's position and desire for vegetative buffers. The developer's intent is to have all lots located outside the limit of delineated wetlands. Further, the developer reiterates that the design of vegetative buffers will meet or exceed current code requirements. The developer will consider the Department's recommendation to contact the Farm Services Agency.

ERES Waters

This project is located adjacent to receiving waters of 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 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants.

The developer understands the Department's concerns, and will coordinate with the Department to develop the project in accordance with all applicable codes and regulations, and with all applicable permits.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a "nutrient-runoff mitigation strategy" for reducing nutrients in the Inland Bays Watershed, reduction of nitrogen and phosphorus loading will be mandatory. 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 authorized under federal code, states are charged with developing and implementing standards to support those desired use goals. The Jurisdictional authority for attaining these use goals will fall under the auspices of Section 11.5 of the State of Delaware's Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as "pollution control strategies."

Nutrient reductions prescribed under TMDLs are assigned on basis of water quality concerns – that is, the those regions deemed to be of greatest environmental concern will require correspondingly higher levels of nutrient reduction than those regions deemed less environmentally sensitive. In this watershed, these regions are demarcated as high and low reduction zones. The high reduction zone corresponds to the western portion of the watershed, and requires a reduction of nitrogen and phosphorus by 85 and 65 percent, respectively. The low reduction zone corresponds to the eastern portion of the watershed, and requires a reduction of nitrogen and phosphorus by 40 percent. **This project is proposed within the low nutrient reduction zone. It should be also be noted that the applicant plans to remove a considerable portion of the existing forest cover (over 60%) – this proposed action may reduce the possibility for attaining the required TMDL loading-rate reduction for phosphorus. As mentioned previously, it is strongly recommended (and may in fact be required) that the applicant consider designing this subdivision with greater emphasis on the retention of native forest cover. Numerous sources of peer-reviewed research have shown that there is almost always a huge spike in sediment-bound phosphorus following extensive forest clearing activities.**

In order for the applicant to verify compliance with the TMDL mandate, a full nutrient accounting process known as nutrient budget should be prepared. The developer/consultant should contact Lyle Jones in the Department's Watershed Assessment Section for further information regarding the acceptable protocol for calculating a nutrient budget. He can be reached as 739-4590.

The applicant should keep in mind that the Department considers the inclusion of stormwater management and/or wastewater treatment areas as an inappropriate/inaccurate metric for open space calculations. Using the open space as the applicant presently proposes will underestimate the calculated TMDL nutrient loading rates.

The project will be developed within all current rules and regulations and under all applicable laws. The developer will work with the Department to achieve the required TMDL's

Water Supply

The project information sheets indicate that the source of water service to the project is yet to be determined. DNREC records indicate that the project is not located in an area where public water service is available. 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 wells.

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 302-739-3665.

The developer thanks the Department for this information.

Sediment and Erosion Control/Stormwater Management

1. Please submit a sediment control and stormwater management plan to the Sussex Conservation District for review. No construction (i.e. clearing, filling, grading, etc.) shall take place on-site.
2. Until a sediment control and stormwater management plan has been approved by the Conservation District.
3. Please indicate on the sediment and stormwater management plan who shall be Responsible for maintenance of the stormwater management facilities both during construction and after.
4. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.
5. During the design of the stormwater management facility please note that both stormwater quantity and quality must be addressed.
6. If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.
7. Specify First Floor elevations for all lots.
8. All ponds are required to be constructed per pond code 378.
9. Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval.
10. Please demonstrate to the Conservation District that you have an adequate outfall for the proposed stormwater facilities.
11. A CCR is required for this development since the gross acreage for the project exceeds 50 acres.
12. Please verify whether this project is located within a tax ditch watershed.
13. Due to the proximity to sensitive areas, the Conservation District will require reinforced and super silt fence to adequately protect wetland areas during the construction of the site.
14. Please contact the Conservation District when design of stormwater management facility is initiated, as they would like to work closely with you in its design.

The developer will contact the Sussex Conservation District to schedule a pre-application meeting. A Sediment and Stormwater Management Plan (SSMP) will be prepared for the site in accordance with all current applicable laws and regulations. BMP's will be utilized for the project where possible.

Rare/Threatened/Endangered Species

The proposed project lies within three miles of a known Delmarva fox squirrel (*Sciurus niger cinereus*) population at the Assawoman Wildlife Area. Delmarva fox squirrels were listed as federally endangered in 1967 and are protected by the Endangered Species Act. They generally inhabit mature forests with open understories and wet woodlands, but can be opportunistic in their habitat choice. The proposed project area contains potential habitat for Delmarva fox squirrels and the following is required:

- Contact Trevor Clark (410-573-4527) of the US Fish and Wildlife Service for proper procedures prior to beginning work. A conference with the Service is required for any projects that will directly or indirectly impact habitat within 3 miles of the Assawoman Wildlife Area fox squirrel locations;

AND/OR

- Contact Trevor Clark (410-573-4527) of the US Fish and Wildlife Service for proper procedures prior to beginning work. Have surveys conducted to determine if Delmarva fox squirrels are present. In accordance with Delaware's fox squirrel site survey procedures, surveys must be conducted by a State approved fox squirrel surveyor two times between September and May: once in the fall, and again between March 15 and May 30. A list of qualified surveyors is available upon request. Please note that surveys may confirm the presence of fox squirrels but cannot confirm absence.

The developer will work with the Department to ensure proper protection for rare species in accordance with current codes and regulations.

Potential Hunting Issue

Because the project parcels are 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 may want to 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 buffer between lot lines and the adjacent property line.

The developer will provide public notification pertaining to the development as required by code.

Nuisance Waterfowl

Stormwater management ponds may attract waterfowl like resident Canada geese and mute swans. 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. Short manicured grasses around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, property managers or owners 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 proper landscaping, monitoring, and other techniques, geese problems can be minimized.

The developer thanks the Department for its comments.

Forests

The site plan should be changed to allow for preservation of as much of the forest as possible, considering that more than 5,000 acres of forest have been lost in Delaware since 1990. According to the application, 11 out of 18 acres of the existing forest is to be cleared for infrastructure and the footprint of any structures. In reality, once this site is built out, a larger percentage of forest will have been cleared. Subsequent landowner activities will also result in additional clearing of forest. Cumulative impacts are a concern here, considering that another proposed development adjacent to this one will also remove a large percentage of existing forest. A loss in forest habitat has led to a corresponding loss of forest-dependent species and greater pressure on nearby public lands such as wildlife areas. All the displaced wildlife has to go somewhere and this often results in human-animal conflicts. We are concerned because the Miller Neck Wildlife Area is in the general vicinity and could be detrimentally affected if this site plan is used as an example for future developments in the area.

This parcel is part of a larger forest block and larger, connected areas of forest are more beneficial to wildlife than narrow buffer strips or small disconnected areas of forest. 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.

The developer will attempt to minimize the clearing of forested areas, and will practice selective/limited clearing to create wooded lots wherever possible. The developer reiterates that the project will be completed in accordance with current codes and regulations.

Underground Storage Tanks

There is one inactive LUST site(s) located near the proposed project:

Blue Hen Market, Facility # 5-000946, Project # S0104034

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel in the contaminated areas.

The developer thanks the Department for this information.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to estimate the amount of solid waste that will be generated as a result of construction and occupancy.

Using the Department's above-given estimates, a subdivision of 90 households would generate approximately $90 \times 3,600 \approx 324,000$ pounds of solid waste per year, with 900,000 pounds of construction waste.

Air Quality

Air pollution threatens the health of human beings and other living things on our planet. While often invisible, pollutants in the air create smog and acid rain, cause cancer or other serious health effects,

diminish the protective ozone layer in the upper atmosphere, and contribute to the potential for world climate change. Breathing polluted air can have numerous effects on human health, including respiratory problems, hospitalization for heart or lung disease, and even premature death. Some can also have effects on aquatic life, vegetation, and animals.

The Department of Natural Resources and Environmental Control is asking that local jurisdictions consider mitigation to help resolve this issue. Mitigation might involve limiting large new developments to growth zones, focusing development to urban areas capable of providing mass transit services, requiring more energy efficient homes which would lessen air quality impacts, and promoting walkability and bikability within and between developments and town centers.

Once complete, vehicle emissions associated with this project are estimated be 6.8 tons (13,507.1 pounds) per year of VOC (volatile organic compounds), 5.6 tons (11,182.9 pounds) per year of NOx (nitrogen oxides), 4.1 tons (8,251.0 pounds) per year of SO2 (sulfur dioxide), 0.4 ton (734.5 pounds) per year of fine particulates and 564.9 tons (1,129,850.2 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated be 2.7 tons (5,448.0 pounds) per year of VOC (volatile organic compounds), 0.3 ton (599.4 pounds) per year of NOx (nitrogen oxides), 0.2 ton (497.5 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (641.9 pounds) per year of fine particulates and 11.0 tons (22,085.1 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.1 tons (2,159.2 pounds) per year of NOx (nitrogen oxides), 3.8 tons (7,510.3 pounds) per year of SO2 (sulfur dioxide) and 553.9 tons (1,107,765.1 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO2	PM2.5	CO2
Mobile	6.8	5.6	4.1	0.4	564.9
Residential	2.7	0.3	0.2	0.3	11.0
Electrical Power		1.1	3.8		553.9
TOTAL	9.5	7.0	8.1	0.7	1129.8

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 energy office in DNREC 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.

The developer will consider the Department's comments in evaluating and making decisions regarding the energy efficiency of the project.

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):

a. Fire Protection Water Requirements:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly)
- 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. (One & Two-Family Dwelling)
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. Fire Protection Features:

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq.ft., 3-stories of more or over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

c. 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 Double Bridges Road 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. On the south side of Double Bridges Road a turn-around is required at the dead-end.
- 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.
- d. Gas Piping and System Information:
 - Provide type of fuel proposed, and show locations of bulk containers on plan.
- e. 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"
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Note indicating if building is to be sprinklered
 - Name of Water Provider
 - Letter from Water Provider approving the system layout
 - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
 - 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.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

The project will be designed in accordance with all applicable codes and regulations, and in coordination with the State Fire Marshal's office in Sussex County.

Department of Agriculture - Contact: Mark Davis 739-4811

The Delaware Forest Service does not support the development of this parcel within a Level 4 and Environmentally Sensitive Area. This development as proposed will lessen the value of the environmental resources found within and adjacent to this site. The Delaware Forest Service encourages the developer to preserve some of the larger more mature trees present within the site. The Delaware Department of Agriculture Forest Service offers it services to the developer in the re-design of this project, to learn more please contact their office at (302) 698-4500.

Though the developer understands the Department's concerns regarding development in level 4 areas, it is noted that this property is developable by-right. The developer assures the Department that the site will be developed in accordance with current codes and regulations, including required buffers.

Public Service Commission - Contact: Andrea Maucher 739-4247

The project is not in a certificated area for water. If water is requested from a private utility, that utility will need to apply to the Commission for a Certificate of Public Convenience and Necessity.

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.

If the project connects to public wastewater services from the County, and the project lies outside of the service territory established in October 2004, then the County must update the information it filed with the Commission.

The developer will be responsible to coordinate the provision of all utility connections.

Delaware State Housing Authority – Contact Karen Horton 739-4263

According to the State Strategies Map, the proposal is located in an Investment Level 3 and 4 areas and in an environmentally sensitive area. As a general planning practice, DSHA encourages residential development 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 majority of the proposed development is located in Investment Level 3, DSHA encourages a site design and layout that is compatible with existing agricultural landscape, preserves open space, and sensitive the environment.

The developer understands the State's position regarding development in the level 3 and 4 investment areas, and assures the State that the site will be developed in accordance with current codes and regulations.

Delaware Emergency Management Agency – Contact: Don Knox 659-3362

Due to the number of residential units being proposed, an impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Sussex County, to keep them apprised of all development activities. This area could experience possible flooding from a category 3 or greater hurricane. Routes 20, 26, and 113 are coastal storm evacuation routes and this project will be affected by traffic volume on these routes during a coastal storm event.

The developer will coordinate with the appropriate emergency services throughout the design process. As previously noted, no lots will be placed within the 100-year floodplain boundary, and any development in the floodplain (i.e. road crossing) will be limited and performed in accordance with all applicable regulations and permits.

Department of Education – Contact: Nick Vacirca 739-4658

88 dwelling units could generate an estimated 44 additional students for the Indian River School District. Sussex County does not have school concurrence legislation at this time. We recommend that the developer submit a package to the school district for informational purposes.

If the development is approved and built, please use the following information for school transportation planning. If there are homes more than 1/2 mile from the nearest public road (outside the development), developers should plan wide enough streets so that large school buses can access and turn around (without backing) from the furthest areas within the development while picking up and dropping off students. Should there not be any sites more than 1/2 mile from the nearest public road, provisions for appropriate pick-up and drop-off at the development entrance should be included. The developer should work closely with the school district transportation supervisor.

The developer appreciates the Department's comments, and will coordinate with the Indian River School District throughout the project's design.

The developer will be responsible to coordinate the provision of all utility connections.

Delaware State Housing Authority – Contact Karen Horton 739-4263

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The developer appreciates the Department's comments, and will coordinate with the Indian River School District throughout the project's design.

Sussex County – Contact: Richard Kautz 855-7878

The proposed community clubhouse and pool area should be relocated to be more centrally located and to eliminate impact adjacent property.

The clubhouse and pool area have been relocated, as suggested.

This project is situated in an Environmentally Sensitive Development Area. The required report should include how the PLUS comments have been addressed and how the plan has been revised accordingly.

The required project narrative will be drafted to address the PLUS comments, and will be forwarded to Sussex County for their use.

The Sussex County Engineer Comments:

The proposed project is within the Bayard Planning Area, as defined in the South Coastal Area Planning Study, Update 2004. The project request is for 88 units on 47.39 acres, which results in a gross density of 1.86 EDUs/acre. The County has no schedule to extend service to this project. It is unclear how annexation will occur. All pipelines must be constructed in accordance with Sussex County Sewer Standards and the South Coastal Area Planning Study, Update 2004.

The developer intends to connect sewer service to the future Sussex County sanitary sewer, which we understand is to be located in Double Bridges Road. The proposed sewer system for the site will be designed and constructed in accordance with Sussex County's Ordinance 38.

We believe we have successfully addressed the PLUS comments for this project, and are excited to move forward with this project. If you have any questions, please do not hesitate to contact me or Keith Rudy, P.E., at 302-730-4600.

Sincerely,
McCrone Inc.



Brian Pinkerton, P.E.
Project Manager