

August 13, 2008

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

RE: PLUS review – 2008-07-02; Deerbrook Subdivision

Dear Mr. Willey:

Thank you for meeting with State agency planners on to discuss the proposed plans for the Deerbrook Subdivision project to be located west of the intersection of Route 24 and Autumn Road.

According to the information received, you are seeking site plan review for 135 residential units on 57.63 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.

Please note that Kercher Engineering, Inc. has been contracted by Alpaco V, LLC to take-over the planning process for the proposed development. Comments to the State Planners comments are contained within this document and are identified in bold red to make them easier to distinguish. Kercher Engineering's contact information is as follows:

**Kercher Engineering, Inc.
413 E. Market Street
Georgetown, DE 19947**

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- The proposed project is located off Delaware Route 24 near Long Neck and is within an investment Level 3 and Level 4 as identified by the Strategies for Policy and Spending. In addition, the proposed has a small portion of the property within the Environmentally Sensitive Developing District as defined by the Sussex County 2003 Certified Comprehensive Land Use Plan.

Street Design and Transportation

- Presently, Autumn Road extends west from Route 24 and then turns north. Branch Road, a subdivision street, extends west from that curve and then turns north to parallel Autumn Road. The proposed subdivision access would extend west from the curve in Branch Road. DelDOT recommends that the developer work with the County to rename the east-west portion of Branch Road, such that a driver leaving Autumn Road would exit onto the new street and then turn north off of it onto Branch Road.
- As proposed, the development abuts but does not include two recorded but unbuilt stub streets off of Branch Road in the adjoining subdivision. DelDOT recommends that the developer seek to have Angel Road vacated and, include the land from the right-of-way in the proposed development to the extent possible.
- DelDOT recommends that you consider a pedestrian trail through the Abrams Road right-of-way and along Guinea Creek to connect to the cul-de-sac proposed in the west section of the development. Boardwalks would likely be needed on parts of such a trail but it would provide improved pedestrian access and would encourage walking.

Natural and Cultural Resources

- Because of drainage problems, there has been a watershed study for Guinea Creek. The proposed subdivision plan should be revised to include more green technology best management practices to reduce stormwater flow.
- Remove or relocate lots and infrastructure (stormwater ponds included) that are within 100 feet of wetlands. Based on the site plan provided, there are numerous lots, several stormwater ponds, and portions of streets which are too close to existing wetlands. Also, what measures will be taken to ensure that future homeowners do not continue to clear this buffer zone even more for pools, sheds, kennels, landscaping, etc.?

- DNREC supports the incorporation of a play area within the Deerbrook Subdivision but recommend repositioning it to a more centralized location. It is recommended that lots 89-92 be replaced with a play area

This office has received the following comments from State agencies:

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

This office has no objection to the proposed however offer the following recommendations and suggestion to further build upon the design and implementation of the proposed project:

- *Project Location* – Currently, the proposed project is located within an investment Level 3 and Level 4 as identified by the Strategies for Policy and Spending with a small portion of the property within the Environmentally Sensitive Developing District as defined by the Sussex County 2003 Certified Comprehensive Land Use Plan. Through the discussions of the PLUS meeting of July 23, 2008, the applicant is aware that this parcel and several additional parcels within this area will be included within the redefined Environmentally Sensitive Developing District as defined within 2007 Sussex County Comprehensive Plan which is pending certification by the State. The applicant should continue to work closely with the County through this comprehensive planning process to address concerns raised by the County to ensure compliance with the pending land use plan.
- *Environmental Issues* – Based upon the application provided for this project there are significant concerns raised regarding wetlands and impact to adjacent State owned lands. The applicant should contact DNREC and the Delaware Forest Service to work to address the issues rose within the remainder of this PLUS letter.
- **The proposed project is located in a General Residential (GR) zoning district and it is identified by the 2008 Sussex County Comprehensive Plan as being within a Mixed Residential Developing area. In such areas, non-residential development is not encouraged, central water and wastewater service is encouraged and possible densities could fall in the range of 4-12 units per acre. The proposed density for Deerbrook is 2.24 units/acre, significantly less than what would be permitted in the zoning district and central wastewater and water services are planned.**
- **The wetland extents shown on the plan were delineated by JCM Environmental and affirmed by the US Army Corps of Engineers during a jurisdiction determination. It should be noted that buffers from the wetland areas are now provided in the development plan. It should also be noted that forested buffers will be provided throughout the development design between the proposed development and Redden Forest.**

If you have any additional questions or require additional information or assistance from this office, please call.

State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685

No comments received.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) Under DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, the proposed development warrants a traffic impact study (TIS) and one would be required as a precondition for any DelDOT approvals. If an application pertaining to the development was accepted for review by the County before April 1, 2008, the development is grandfathered with respect to the regulations just mentioned and a TIS would not be required. As necessary, the developer may have their traffic engineer contact Mr. Troy Brestel of this office to arrange a scoping meeting for the study. Mr. Brestel may be reached at (302) 760-2167.

Alpaco V, LLC has made a contribution to DelDOT, which would be used for the development of an area-wide traffic study. Based on a letter from DelDOT, dated December 11, 2009, a TIS would no longer be required for this project.

- 2) Presently, Autumn Road extends west from Route 24 and then turns north. Branch Road, a subdivision street, extends west from that curve and then turns north to parallel Autumn Road. The proposed subdivision access would extend west from the curve in Branch Road. DelDOT recommends that the developer work with the County to rename the east-west portion of Branch Road, such that a driver leaving Autumn Road would exit onto the new street and then turn north off of it onto Branch Road.

Alpaco V, LLC has no objection to the possible remaining of said portion of Branch Road, pending a review by County staff.

- 3) As proposed, the development abuts but does not include two recorded but unbuilt stub streets off of Branch Road in the adjoining subdivision. DelDOT recommends that the developer seek to have Angel Road vacated and, include the land from the right-of-way in the proposed development to the extent possible. We recommend that they consider a pedestrian trail through the Abrams Road right-of-way and along Guinea Creek to connect to the cul-de-sac proposed in the west section of the development. Boardwalks would likely be needed on parts of such a trail but it would provide improved pedestrian access and would encourage walking.

Due to the nature of the development design, Angel Road would be vacated but the vacated lands would be made to be extensions of Lot 134 & 135 in North Sherwood Forest, as portions of those properties are being utilized to create the development access. Angel Road is not proposed as a potential access to limit vehicular movement in the vicinity. The Abrams Road right-of-way is in an area that is directly affected by Guinea Creek. It is not believed that this would be a proper access location for pedestrian movement.

- 4) DeIDOT recommends that the developer provide stub streets for future interconnections to the adjoining Norwood property to the north, west of Guinea Creek, and the adjoining Coursey properties to the south, both east and west of Guinea Creek.

Although interconnection to adjacent lands is requested, the applicant would prefer that they not be provided so as to restrict vehicular movement within the development to residents and their guests. The proposed roadway network would be private and maintained by the proposed homeowners' association. Additional traffic from potential future developments would put an increased load on these private streets, where residents and guests of proposed developments would have no financial obligation to maintain the roadway network.

- 5) The applicant's site engineer should contact the DeIDOT Subdivision Manager for eastern Sussex County, Mr. John Fiori, for more detailed comments on the proposed access. Mr. Fiori may be reached at (302) 760-2260.

If preliminary approval is granted by the Sussex County Planning Commission, detailed entrance and off-site improvement plans would be submitted to DeIDOT for technical review and eventual approval.

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

Soils

Based on the Sussex County soil survey update, Fort Mott, Hambrook, Klej, and Longmarsh were mapped on subject parcel in the immediate vicinity of the proposed construction. Fort Mott and Hambrook are well-drained upland soils that generally have few limitations for development. Klej is a somewhat poorly drained transitional soil likely to contain both wetland (hydric) and upland soil components. Longmarsh is a very poorly drained wetland associated (hydric) floodplain soil that has severe limitations for development.

Wetlands

Based on the Statewide Wetland Mapping Project (SWMP) maps, palustrine forested riparian wetlands bisect the entire central portion of the combined parcel land area. It is also likely that some unmapped palustrine wetlands may also be found on a significant portion of the Klej soil mapping unit.

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.

The developer will work with the State to assure that any State-regulated wetlands are identified within the development.

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

If State wetlands are contained within the property bounds, a jurisdiction determination by the State will be requested.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or "the Corps") manual is the only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for a field-based jurisdictional wetland delineation (i.e., 1987 USACE manual). To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant's consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the

jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.

It should be noted that a wetland delineation for this property was performed by JCM Environmental. The extents of the wetland habitat identified on the plan were determined to be Federally regulated 404, non-tidal wetlands. A jurisdictional determination was performed by the US Army Corps of Engineers to affirm the delineation. It should also be noted that the potential filling activity associated with creating Apple Ridge Run has already been permitted by the USACE.

Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882), an adequately sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all wetlands and water bodies (including ditches). The 10-foot wetland buffer proposed by the applicant is inadequate to mitigate this project's water quality impacts.

The development plan has been modified to provide 50' wide buffers from the delineated wetlands, where no lot area is included in the buffer area. Combined with building setback restrictions, a 60' buffer from the wetland areas would be maintained.

As mentioned previously, a significant portion of this parcel contains very poorly to somewhat poorly drained Longmarsh and Klej soil mapping units. 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 and Klej 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 be inconsistent with above-mentioned regulatory guidelines in the Sussex County Code.

If granted preliminary approval from the Sussex County Planning Commission, detailed sediment and stormwater management plans will be submitted to the Sussex Conservation District for technical review and eventual approval. It is

intended to rely heavily on the use of green technologies for stormwater treatment. Such systems will be designed to meet or exceed the standards established by DNREC.

The applicant should schedule an appointment with the Joint Permit Processing Committee to clarify permitting requirements. The committee facilitates one stop shopping with all involved federal and state agencies including the Corps, the U.S. Fish and Wildlife Service (USFWS), the Environmental Protection Agency (EPA), the Delaware Coastal Management Program (DCMP), and Historic Preservation, etc. Please call Denise Rawding of the Wetlands and Subaqueous Lands Section at 302.739.9943.

Impervious Cover

The applicant estimates this project's post-construction surface imperviousness to reach about 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, sidewalks, open-water stormwater management structures/ponds, and roads) in the calculation for surface imperviousness; this will ensure a realistic assessment of this project's likely post-construction environmental impacts. Therefore, the applicant should recalculate surface imperviousness with all the above-mentioned forms of surface imperviousness included. Failure to do so will significantly understate this project's true environmental impacts.

It is estimated that approximately 28% of the total developed area would contain impervious cover.

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 this project's 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.

It is intended that the use of BMP's and green technologies will drive the stormwater management design for the development. Although traditional paved surfaces are planned for the development's roadway network, the utilization of a central wastewater system, rather than septic systems, will allow for a greater percentage of the existing tree stand to remain. Forested buffers will also be maintained throughout the development.

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. Additionally, 40 percent reduction in bacteria is required.

Compliance with TMDLs through the PCS

As stated above, 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, use of pervious paving materials to 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.

The developer acknowledges the need to reduce non-point source pollution within the watershed. The use of BMP’s and other green technologies in the stormwater management design should help to reduce those associated nutrient loads. Also, being that central wastewater collection will be provided to the adjacent development as a part of this development design, there is the potential to take 70

existing septic systems off-line, thereby further reducing non-point pollutant loads within the watershed.

Water Supply

The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. Our records indicate that the project is located within the public water service area granted to Public Water Supply (a.k.a. Tidewater Utilities) under Certificate of Public Convenience and Necessity 87-WR-04.

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.

It is acknowledged that said permits will be obtained for the placement of the central water distribution system, if necessary.

Sediment and Erosion Control/Stormwater Management

- Because of drainage problems, there has been a watershed study for Guinea Creek. The proposed subdivision plan should be revised to include more green technology best management practices to reduce stormwater flow. It is suggested that the engineer contact the Sussex Conservation District and schedule a pre-application meeting before going further with the design of this subdivision.

The applicant intends on using as many BMPs and green technologies throughout the development's stormwater management design as possible. If preliminary approval is granted, detailed sediment and stormwater management plans will be submitted to the SCD for technical review and approval.

- If the proposed stormwater management areas are retained in an updated design, the access lanes will need to be wider to allow maintenance equipment to pass without interfering with residential lots.

It should be noted that, with the revised development design, more access points have been created to potential stormwater treatment areas.

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. 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) 856-2105 for details regarding submittal requirements and fees.

If preliminary approval is granted, detailed sediment and stormwater management plans will be submitted to the SCD for technical review and approval.

- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low-impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals. The Sediment and Stormwater Management Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

The applicant intends on using as many BMPs and green technologies throughout the development's stormwater management design as possible. If forested areas can be used as a part of a green technology design then the applicant will make every effort to reduce the clearing of those areas. Since a detailed stormwater management design has yet to be prepared, it is unclear how much clearing would be necessary, if at all.

Drainage

- This watershed has known drainage problems. 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 stormwater. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.

The stormwater management design for the proposed development will meet or exceed the standards established by DNREC for such facilities. It is the intent of the applicant to work with the Delaware Department of Transportation to upgrade downstream culverts. Doing so will allow for a more efficient stormwater

management design and assure that positive drainage for adjacent properties is made available.

- Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. 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.

Any drainage easement needed will be shown on the final record plan for the project and noted in any applicable deed.

- The Drainage Program recommends the creation of a maintenance plan for Guinea Creek within this subdivision. Identify maintenance access points and spoil disposal areas on the sediment and stormwater plans.

If preliminary approval is granted, detailed sediment and stormwater management plans will be submitted to the SCD for technical review and approval.

- Trees that remain or are replanted after timber harvest may not make the best trees for a subdivision. However, excessive tree removal contributes to drainage problems and requires additional stormwater measures. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

Wetland Wildlife Habitat

Wetlands possess many functions and values, including providing valuable habitat for an array of wildlife species. This project plan does not provide adequate upland buffers around the Guinea Creek tributary and associated wetlands. Lot lines and infrastructure are well within 100 feet of these wetlands, which appear to be part of the headwaters of the creek system. Cumulative impacts are also a concern for this stream system. In addition to clearing that has already occurred in the past, there are other developments that have been proposed or are already in progress in this area (e.g., PLUS 2005-05-02, Peninsula Square; PLUS 2004-11-04, Baylis Estates).

County and local buffer requirements do not appear to recognize scientific research showing that upland buffers along wetlands should be 100 feet in width (or greater) to adequately protect water quality. In addition, Upland buffers around wetlands often provide critical habitat for wetland-dependent species which utilize these buffers during a portion of their life cycle. These upland areas along wetlands provide foraging and roosting areas for birds and a travel corridor for wildlife in general.

Recommendation:

1. Remove or relocate lots and infrastructure (stormwater ponds included) that are within 100 feet of wetlands. Based on the site plan provided, there are numerous lots, several stormwater ponds, and portions of streets which are too close to existing wetlands. Also, what measures will be taken to ensure that future homeowners do not continue to clear this buffer zone even more for pools, sheds, kennels, landscaping, etc.?

Please note that the revised subdivision design provides for 50' forested buffers from any delineated wetland area, as is required by Sussex County. Providing said buffers will create a separation between the delineated wetlands and individual lots within the proposed subdivision.

Forested Wildlife Habitat Preservation

According to 2002 aerial photographs this site has been harvested in the past. DNREC is unsure what stage of regeneration the forest is currently undertaking; however, there are wildlife species which depend on early successional habitat. The applicant indicated that 11 acres of trees would not be cleared; however, those trees that remain are not going to be part of a large, contiguous block which benefits most wildlife. The existing forest will be fragmented into a relatively thin strip of trees located mostly around the perimeter of the development.

The forest on this property is mapped as key wildlife habitat within the Delaware Wildlife Action Plan. This document can be viewed via our program website at <http://www.dnrec.state.de.us/nhp>. 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 and the Delaware 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.

Recommendations:

1. Efforts should be made to minimize clearing for the footprint of homes and infrastructure. The current site plan does not leave larger connected areas of forest that many wildlife species need. Reconfiguration of the site plan could accomplish this need.
2. If the landowner/developer is interested in habitat restoration in open space areas, please contact our program botanist Bill McAvoy at (302) 653-2883. He can provide a list of plants that are native to Delaware, beneficial to wildlife, and that are suited to the hydrology and soil characteristics of the site.
3. Many wildlife species utilize trees for nesting, and we recommend clearing not occur from April 1st to July 31st to reduce potential impacts to those species. This

recommendation would only protect these species for one breeding season, because once trees are cleared, there is an overall loss of habitat.

Based on the revised preliminary subdivision plan, 6.97 acres of forested and wetlands buffers are provided and an additional 4.74 acres of delineated wetland habitat are to be permanently preserved. Since central wastewater collection and water distribution systems would be provided in the community, clearing of the property would be limited to those areas needed for the establishment of the proposed roadways, placement of homes/driveways and any stormwater treatment area that does not use the existing forest for its treatment. Any open space not needed for stormwater treatment would be left in its natural state. It is unclear as to when, or if, clearing would take place for the establishment of the proposed development. If clearing were to be planned, the applicant can use this document as a guide to understand when the State would prefer for clearing not to occur.

Potential Hunting Issue

Because the project parcel 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 by state law, 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.

A hunting notice can be placed on the final record plan and within the deeds for the individual properties if it is deemed necessary by either the State or County government.

Nuisance Waterfowl

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance. 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 lawns around ponds provide an attractive habitat for these species.

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, the property owner/land manager 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.

Recommendation:

1. Exclusion is one of the most effective methods at deterring geese. In a commercial setting such as this project, completely fencing the pond at the edge (even one foot high) may be feasible. Even though geese can fly over the fence, if they constantly have to fly between land and water the area is less desirable. If fencing is not a desired option, DNREC recommends 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. When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond. The vegetation also blocks the ability to easily move between land and water.

At this time, DRNEC does 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.) may become a burden to the property owner/land manager.

It is not envisioned that wet ponds will be established within this community for the treatment of stormwater runoff. If wet ponds were to be needed, the applicant will use the specified measures as a means of deterring the inhabitation of nuisance waterfowl.

Recreation

There are some inconsistencies with the PLUS application:

Question #11- The applicant indicates that the proposed development is in State Strategies Level 3. More than 75% of the identified parcel is located in State Strategies Level 4.

Question #34- The applicant states that the parcel does not border existing natural habitat or preserved land. The west side of this parcel adjoins the Long Tract, a 243-acre parcel of Redden State Forest. The Long Tract is protected and managed by the Delaware Department of Agriculture.

Recommendations:

1. The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. The high facility needs in Eastern Sussex County are Walking and Jogging, Bike Paths and Fishing Areas. The moderate facility needs are Picnic Areas, Skate Facilities, Canoe/Kayak Access, Hiking Trails, Swimming Pools, Playgrounds, Soccer Fields, Tennis Courts, Power Boat Access and

- Baseball/Softball Fields. These activities should be considered to provide recreation/open space for the community.
2. DNREC supports the incorporation of a play area within the Deerbrook Subdivision but recommend repositioning it to a more centralized location. It is recommended that lots 89-92 be replaced with a play area. By moving the play area to this location, you will:
 - Make the playground easily accessible and convenient to all residents of the community.
 - Increase the security of the play area. At its proposed location, the play area is isolated and not easily accessed. This could create apprehension of parents to allow their children to use this area. It also increases the incidence of vandalism.
 - Decrease the amount of disturbance in the riparian area. By eliminating lots 89-92 and replacing them with a play area, there will be far less impact on the riparian area. Additionally, there would then be no need to create a trail and bridge access through the northern portion of the riparian area.
 - Increase forest coverage and passive open space. By not disturbing the area where the playground is currently proposed, a larger block of forest will remain undisturbed.
 - 3) A development plan for Parcel #234-23.00-114.00 located on the south side of this project has been proposed. In an effort to connect communities, DRNEC recommends working with that development to create walking path/trail between the two parcels.

Please note that the playground area has been removed from the development plan. This was done to remove the playground from an isolated area and to allow the homeowners' association an opportunity to establish a recreation area that would best fit the community. The applicant does not object to having a recreation area but would like to leave the decision as to what would be placed in that area in the hands of the association, as they will ultimately be responsible for maintaining any structure or feature placed therein.

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:**

- 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.
- 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 the main thoroughfare must be constructed so fire department apparatus may negotiate it. If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Additionally, the bridge located on the access road to a portion of the subdivision must be constructed of such materials and durability so as to permit fire department apparatus rapid and unimpeded travel across 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, technical services link, plan review, applications or brochures.

It should be noted by the Office of the State Fire Marshal that central water service for the proposed development would be provided by Tidewater Utilities. If preliminary approval for the proposed project is granted by the Sussex County Planning Commission, detailed utility plans will be submitted for technical review and eventual approval.

Department of Agriculture - Contact: Scott Blaier 739-4811

The Delaware Department of Agriculture has no objections to the proposed project. The *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 3 areas.

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.

The Department would also remind the developer to comply with the County’s forested buffer requirement. This buffer is essential for separating inherently disparate land uses (agriculture and residential) and mitigating the conflict that often arises as a result.

Please note that the agricultural protection notice has been provided on the revised preliminary plan and, if approval is granted, that same notice will be on the final record plan and within the deeds of the lots created within the subdivision.

The developer should note that the project shares a boundary with Redden State Forest. We ask that the developer clearly make note of the state lands on the record plan.

Although State Forests are public lands for public use, there are rules and regulations governing their use (especially with regard to hunting, all terrain vehicle/cycle (ATVs/ATCs) and motorcycle use, dumping, etc.). The use of ATVs is strictly prohibited on State Forest property. The Department asks the developer to make sure residents are aware of the Forest’s location, and place markers or signs along the State Forest property boundary as a permanent reminder. The Department also requests the developer make a copy of the rules and regulations governing the use of State Forests available to all new residents at or before settlement. The rules can be found at:

<http://regulations.delaware.gov/AdminCode/title3/400/402.shtml>

There is also the consideration of forest fires with the development being located adjacent to such a large tract of State Forest. Proper tree maintenance, firebreaks and dwelling setbacks, proper and adequate insurance, etc. are also important issues to consider at this site.

Redden State Forest grows and harvests primarily loblolly pine. Pine timber must be thinned and burned periodically. The use of prescribed burning is an essential forestry practice that reduces the fuel on the forest floor. Smoke management associated with prescribed fires is always a concern to surrounding residents.

Without prescribed burns, leaf litter fuel will build up, and will eventually be consumed by a natural wildland fire. Fires of this nature usually burn hotter, produce more smoke, and are more difficult to bring under control. Wildland fires

complicated by high winds can cast embers large distances. This scenario can pose a serious concern for the safety of nearby residents and their property.

The encroachment of invasive species from urban areas into the forest is also inevitable as people landscape their yards. Bamboo, English Ivy, and Bradford pear are some of the more common species that establish along a forest's edge. Invasive species compete more aggressively for the same growing space, and often prevent native species from growing. Once established, invasive species are both difficult and costly to control, and will place an additional burden on the State Forest Service's already limited resources.

As with all state forests, Redden State Forest is managed for multiple uses. This includes hunting. The use of firearms for hunting, and harvesting of animals such as deer has the potential to create conflict with new residents. Often new residents living in developments such as these are unfamiliar with hunting, and are uncomfortable with discharge of firearms and the killing of animals. The Department requests that the developer make all new residents aware of these issues in advance, to avoid future complaints.

The applicant acknowledges that Redden Forest is a managed forest. If required by either the State or County government, such notices attesting to the use of the forest can be added to the deeds of the lots created within the subdivision and proper signage can be placed or relocated adjacent to those lands to notify residents of the community of the activities that take place within the managed area. The applicant does not object to taking such measures.

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. To further support this concept the Delaware Forest Service does not recommend the planting of the following species due to the high risk of mortality from insects and disease:

Callery Pear
Leyland Cypress

Ash Trees
Red Oak (except for Willow Oak)

If you would like to learn more about the potential problems or impacts associated with these trees, please contact the Delaware Forest Service for more information at (302) 698-4500.

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.

The subject property is completely wooded in its existing state. Any proposed open space not needed for stormwater treatment would remain wooded. If plantings would be required, the applicant would be willing to contact the State to identify the proper plantings that should be used.

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 proposal is for a site plan review of a 135-lot subdivision for manufactured homes located west of intersection Route 24 and Autumn Road and west of Sherwood Forest North, near Millsboro. According to the State Strategies Map, the proposal is located in Investment Level 3 area. As a general planning practice, DSHA encourages residential development in these areas where residents will have proximity to services, markets, and employment opportunities. DSHA strongly supports the development of manufactured housing communities. They can be the most economical to construct and supply an affordable option to low- and moderate-income persons. The 2008 Statewide Housing Needs Assessment indicates that much of the housing in the coastal resort area is outside of the affordability level of low- and moderate-income households. The homeownership demand forecast between 2008-2012 anticipates that there will be 2,581 households that will be first-time and affordable homebuyers in Sussex County.

According to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$275,000. However, families earning respectively 100% of Sussex County's median income only qualify for mortgages of \$168,646, thus creating an affordability gap of \$106,354. The provision of units within reach of families earning at least 100% of Sussex County's median income will ensure housing that is affordable to first-time homebuyers.

It is anticipated that the creation of this development would provide affordable housing to any and all interested families who are actively searching for such housing. A mix of modular, stick-built and mobile housing would be permitted with the community and the anticipated lot price would be approximately \$50,000.

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. Using the DOE standard formula, this development will generate an estimated 68 students.

1. DOE records indicate that the Indian River School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2007 elementary enrollment.
2. DOE records indicate that the Indian River School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2007 secondary enrollment.
3. In multiple correspondences from the Indian River School District administration, the district asserts that while the Indian River High Schools have capacity, the Indian River Middle Schools' student population exceeds student capacity.
4. This development will create additional elementary school and middle school student population growth which will further compound the existing shortage of space.
5. The developer is strongly encouraged to contact the Indian River School District Administration to address the issue of elementary and middle school overcrowding that this development will exacerbate.
6. DOE requests the developer coordinate 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.

The applicant will work with the school district to establish a proper location for a school bus stop within the community. The additional tax base created by establishing 128 new homes could help to support the expansion of the schools in the district.

Sussex County – Contact: Richard Kautz 855-7878

According to Item 30 of the PLUS application, this proposed development contains or is adjacent to perennial non-tidal rivers or non-tidal streams. Therefore, a 50-foot buffer (see Article 115-193 of the County Code of the Sussex County Zoning Ordinance) is required and the following must be shown on the appropriate plan.

1. The location of the ordinary high water line and the method or source for locating or determining such line,
2. The landward limits of the 50 foot buffer zones adjacent to the perennial rivers/streams shown in # 1 above,
3. An appropriate description of the buffer zone native vegetation consistent with the definition as contained in Article 115-193A,

4. The location of the appropriate required building setbacks for lots adjacent to the buffer zone,
5. No building setback lines within the buffer zone,
6. No wetlands within any lot,
7. No man-made encroachments or disturbances within the buffer zone
8. unless there is no alternate design option,
9. When the buffer zone will be purposely established,
10. The type/location of monuments or fencing that distinguishes the upland edge of the buffer zone,
11. A notation to the effect that all silt fences will be on the upland edge of any buffer zone required under Article 115-193 of the County Code.

Please note that the 50' buffers from the delineated wetlands have been provided in the revised subdivision design. Existing vegetation in the buffer areas will be preserved. The buffer areas are exclusive from the proposed lot areas so encroachments would be avoided.

How many lots are proposed? There are numerous "outlot" which should be considered part of the subdivision and several outlots that appear to be open space but without access. There are two lots numbered 16. Outlots should be incorporated into the subdivision or within the common area with adequate access.

128 lots are proposed within the development.

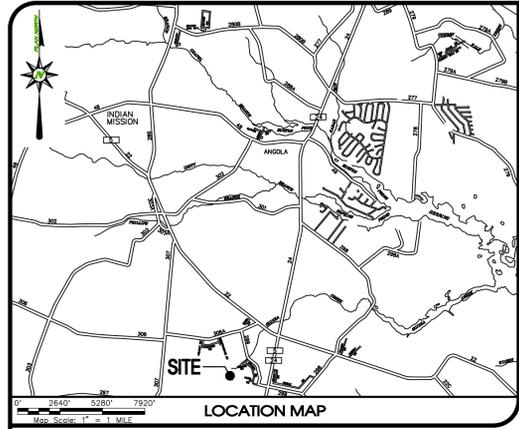
Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments 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,

Constance C. Holland, AICP
Director

CC: Sussex County



PLAN LEGEND

- SUPPLEMENTAL CONTOUR (1' INTERVAL)
- INDEX CONTOUR (5' INTERVAL)
- EXISTING PAVEMENT
- ADJACENT PROPERTY BOUNDARY
- EXISTING RIGHT-OF-WAY
- PROPOSED PAVEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED EASEMENTS
- EXISTING SOIL SERIES LIMITS
- PROPOSED ROAD CENTERLINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE

SITE DATA and ZONING SCHEDULE

EXISTING SITE USE:	VACANT PARCEL	PROVIDED:	
PROPOSED SITE USE:	128-LOT SINGLE-FAMILY HOME SUBDIVISION	MINIMUM LOT AREA	10,000 Sq. Ft.
ZONING DISTRICT:	GR - GENERAL RESIDENTIAL	MINIMUM LOT WIDTH	75 Ft.
ORDINANCE ITEM	REQUIREMENT:	MINIMUM LOT DEPTH	100 Ft.
MINIMUM LOT AREA	10,000 Sq. Ft.	MINIMUM SETBACKS:	
MINIMUM LOT WIDTH	75 Ft.	FRONT	30 Ft.
MINIMUM LOT DEPTH	100 Ft.	SIDE	10 Ft.
MINIMUM SETBACKS:		REAR	10 Ft.
FRONT	30 Ft.	MAXIMUM BUILDING HEIGHT	3 Stories (42 Ft.)
SIDE	10 Ft.	SEWER SERVICE	SUSSEX COUNTY
REAR	10 Ft.	WATER SERVICE	TIDewater UTILITIES
MAXIMUM BUILDING HEIGHT	3 Stories (42 Ft.)		
SEWER SERVICE	SUSSEX COUNTY		
WATER SERVICE	TIDewater UTILITIES		

FORESTED/WETLAND BUFFER AREA:	6.97 Ac.
OPEN/SWM SPACE AREA:	5.88 Ac.
NON-TIDAL WETLAND AREA:	4.74 Ac.
PROPOSED RIGHT-OF-WAY AREA:	7.67 Ac.
PROPOSED LOT AREA:	31.39 Ac.
PROPOSED DENSITY:	2.24 UNITS/AC.

SOILS DATA

Soils Name	Slopes	Hydrolic Soils Group
FhA Fort Mott-Henlopen Complex	0-2%	A
HmA Hammontan loamy sand	0-2%	B
KsA Kleaj loamy sand	0-2%	C
L0 Longmarsh & Indiantown soils	N/A	D
PpA Pepperbox loamy sand	0-2%	C

REVISIONS

HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

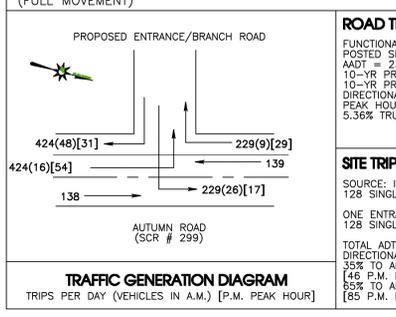
DESIGN PROFESSIONAL DATE



GENERAL NOTES

- THE PROJECT SITE IS KNOWN AS DEERBROOK SUBDIVISION, (T.P. 2-34-23-112,134 & 135), AND IS LOCATED APPROXIMATELY 95' WEST OF THE DE ROUTE 24 AND SCR #299 INTERSECTION IN LONG NECK, DELAWARE.
- A TOPOGRAPHIC AND OUTBOUND SURVEY HAS BEEN PERFORMED FOR THIS SITE BY COMPASS POINT ASSOCIATES, P.O. BOX 246, HARBESON, DELAWARE 19951. TOPOGRAPHY IS BASED ON NAVD83 AND NORTH REFERENCE IS DELAWARE STATE PLANE COORDINATE SYSTEM (NAD83).
- ALL PROPOSED ROADS SHOWN ARE PRIVATE AND ARE TO BE MAINTAINED BY THE DEVELOPER UNTIL SUCH TIME AS A HOMEOWNERS ASSOCIATION CAN PROVIDE FOR SAID MAINTENANCE.
- ALL PROPOSED STORMWATER MANAGEMENT FACILITIES ARE TO BE MAINTAINED BY THE DEVELOPER UNTIL SUCH TIME AS A HOMEOWNERS ASSOCIATION CAN PROVIDE FOR SAID MAINTENANCE.
- ALL SUBDIVISION LOTS SHALL BE ACCESSED FROM THE INTERIOR SUBDIVISION STREETS ONLY. NO DIRECT ACCESS TO ANGEL ROAD, ABRAMS ROAD OR BRANCH ROAD SHALL BE PERMITTED.
- THIS PLAN DOES NOT VERIFY TO THE LOCATION AND/OR EXISTENCE OF EASEMENTS OR RIGHT-OF-WAYS CROSSING SUBJECT PROPERTY AS NO TITLE SEARCH WAS PROVIDED.
- THE CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY SITE CONSTRUCTION ACTIVITIES.
- ALL CONTRACTORS WORKING ON THIS PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, 1989 OR LATEST EDITION.
- CONSTRUCTION MATERIALS AND PROCEDURES SHALL FOLLOW THE SUSSEX COUNTY ENGINEERING DEPARTMENT SPECIFICATIONS AND STANDARD DRAWINGS (LATEST EDITION).
- EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY COMPASS POINT ASSOCIATES. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS AN AID IN THE PROJECT DESIGN. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITY SIZE, LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION.
- BASED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) 100029 0340 J, MAP NUMBER 100050340J, DATED JANUARY 6, 2005, THIS PROPERTY IS IN A ZONE V UNSHADY WHICH IS AN AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- THE WETLANDS BOUNDARY SHOWN WAS DELINEATED BY JCM ENVIRONMENTAL CONSULTANTS, INC. NO STATE WETLANDS ARE PRESENT ON THIS PROPERTY.
- ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
- ALL CUL-DE-SACS ARE TO HAVE A 38' PAVED RADIUS. NO PARKING PERMITTED ON CUL-DE-SACS.
- IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS PART V, CHAPTER 2500, SECTION 2500.11 THE DEVELOPER SHALL PROVIDE TO THE EMERGENCY DISPATCH CENTER HAVING JURISDICTION, A PLOT PLAN OF THE DEVELOPMENT SHOWING EACH BUILDING LOCATION. THE DEVELOPER SHALL ALSO ASSIGN NUMBERS TO ALL HOMES IN A CONSECUTIVE MANNER AND HAVE PLACED THE ASSIGNED NUMBER IN A READILY VISIBLE LOCATION ON EACH HOME TO ELIMINATE CONFUSION IN THE EVENT THAT AN EMERGENCY VEHICLE IS NEEDED.
- THIS PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN ATORDED 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 CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES.
- ALL PROPOSED LANDSCAPE BUFFERS ARE TO BE MAINTAINED BY THE OWNER/DEVELOPER UNTIL SUCH TIME AS A HOMEOWNERS ASSOCIATION CAN PROVIDE FOR SAID MAINTENANCE.
- ALL SUBDIVISION LOTS SHALL HAVE FIVE-FOOT-WIDE EASEMENTS ALONG ALL LOT LINES FOR A TOTAL OF AT LEAST TEN (10) FEET ALONG A LOT LINE COMMON TO TWO LOTS. EASEMENTS OF GREATER WIDTH MAY BE REQUIRED ALONG LOT LINES OR ACROSS LOTS, WHERE NECESSARY. EASEMENTS ALONG PERIMETER BOUNDARIES OF THE SUBDIVISION SHALL BE NO LESS THAN TEN (10) FEET IN WIDTH ON THE INTERIOR SIDE OF THE BOUNDARY.
- THE DEVELOPER SHALL ENTER INTO A MODIFIED TRAFFIC SIGNAL AGREEMENT WITH DELDOT FOR THE INTERSECTION OF ROUTE 24 (JOHN J. WILLIAMS HIGHWAY) AND SCR #299 (AUTUMN ROAD). THE AGREEMENT SHALL INCLUDE PEDESTRIAN SIGNALS, CROSSWALKS AND INTERCONNECTION AT DELDOT'S DISCRETION.
- WIDEN SCR #299 (AUTUMN ROAD) TO PROVIDE 11' WIDE TRAVEL LANES AND 5' WIDE SHOULDERS FROM THE NORTHERMOST PROPERTY LINE TO ROUTE 24.
- IMPROVE THE INTERSECTION OF SCR #299 (AUTUMN ROAD) AND BRANCH ROAD IN ACCORDANCE WITH THE LANE CONFIGURATION OUTLINED IN THE TIS.
- UPON THE APPLICATION OF THE 40TH BUILDING PERMIT, THE ROADWAY IMPROVEMENTS ALONG SCR #299 SHALL BEGIN CONSTRUCTION.
- UPON APPLICATION OF THE 80TH BUILDING PERMIT, THE ROADWAY IMPROVEMENTS ALONG SCR #299 SHALL BE COMPLETELY CONSTRUCTED, FINAL INSPECTED AND ACCEPTED BY DELDOT. NO ADDITIONAL BUILDING PERMITS SHALL BE ISSUED UNTIL THESE IMPROVEMENTS ARE COMPLETELY CONSTRUCTED, FINAL INSPECTED AND ACCEPTED BY DELDOT.
- IF PRIOR TO THE CONSTRUCTION OF THE ROADWAY IMPROVEMENTS ALONG SCR #299 ADDITIONAL RESIDENTIAL AND/OR COMMERCIAL SITES ARE APPROVED THAT ARE REQUIRED TO MAKE THE SAME ROADWAY IMPROVEMENTS ALONG SCR #299, THE OWNERS/DEVELOPERS INVOLVED WILL BE REQUIRED TO SHARE IN THE COSTS OF THE IMPROVEMENTS. THE AMOUNT OF THE COST SHARING SHALL BE WORKED OUT BY THE INDIVIDUAL OWNERS/DEVELOPERS.
- IF ANY PHASE OF THIS DEVELOPMENT IS SOLD, IT WILL BE THE RESPONSIBILITY OF THE NEW OWNER/DEVELOPER TO MAKE AND/OR COMPLETE THE NECESSARY IMPROVEMENTS ASSOCIATED WITH THIS DEVELOPMENT.

TRIP GENERATION - AUTUMN ROAD (SCR #299)



ROAD TRAFFIC DATA:

FUNCTIONAL CLASSIFICATION - LOCAL
 POSTED SPEED LIMIT - 35 MPH
 AADT = 231 TRIPS (FROM 2008 DELDOT TRAFFIC SUMMARY)
 10-YR PROJECTED AADT = 1,120 x 231 TRIPS = 277 TRIPS
 10-YR PROJECTED AADT + SITE ADT = 1,583 TRIPS
 DIRECTIONAL SPLIT = 50% / 50%
 PEAK HOUR = 137.02 x 1,583 = 217 TRIPS
 5.36% TRUCKS & BUSES x 217 = 12

SITE TRIPS GENERATED:

SOURCE: ITE TRIP GENERATION MANUAL, 8th EDITION
 128 SINGLE FAMILY DETACHED UNITS (210)
 ONE ENTRANCE - FULL MOVEMENT
 TOTAL ADT FOR SUBDIVISION = 1,306 TRIPS
 DIRECTIONAL DISTRIBUTION: 457
 35% TO AND FROM THE NORTH: 457 TRIPS (35 A.M. PEAK)
 [46 P.M. PEAK]
 65% TO AND FROM THE SOUTH: 849 TRIPS (64 A.M. PEAK)
 [85 P.M. PEAK]

PLANNING COMMISSION CERTIFICATE

RECOMMENDED FOR APPROVAL BY THE PLANNING COMMISSION OF SUSSEX COUNTY ON THIS _____ DAY OF _____ 20____.

SECRETARY (ATTEST) _____

RECOMMENDED FOR APPROVAL BY THE SUSSEX COUNTY COUNCIL ON THIS _____ DAY OF _____ 20____.

PRESIDENT _____

OWNER CERTIFICATE

I HEREBY CERTIFY THAT I AM THE EQUITABLE OWNER OF THE PROPERTY DESCRIBED AND SHOW ON THIS PLAN THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

WETLANDS CERTIFICATION

THIS PROPERTY HAS BEEN EXAMINED BY JAMES C. MCCULLLEY IV, ENVIRONMENTAL CONSULTANTS, INC. (JCM-ECI) FOR THE PRESENCE OF WATERS OF THE UNITED STATES INCLUDING WETLANDS (SECTION 404 AND SECTION 10) STATE SUBAQUEOUS LANDS AND STATE TIDAL WETLANDS BASED ON THE CRITERIA SET FORTH BY THE REVIEWING AGENCIES IN THE FORM OF MANUALS, POLICIES AND PROCEDURES IN PLACE AT THE TIME INVESTIGATION WAS CONDUCTED. ANY OF THE ABOVE RESOURCES THAT WERE FOUND ON THE PROPERTY ARE CLEARLY MAPPED ON THIS PLAN IN ACCORDANCE WITH OUR FIELD INVESTIGATIONS AND DETAILED IN REPORTS BY JCM-ECI USING

JCM-ECI
 CORPORATE OFFICE
 100 LAKE DRIVE, SUITE 3
 NEWARK, DELAWARE 19702
 (302) 737-8335 PHONE
 (302) 854-5066 FAX

ALPACO V. L.L.C.
 GEORGETOWN, DE 19947
 Phone: 302.856.8177
 Fax: 302.856.3482

PRELIMINARY PLAN (Not to Be Recorded)

RECORD PLAN

DEERBROOK SUBDIVISION

INDIAN RIVER HUNDRED - SUSSEX COUNTY - DELAWARE

KERCHER ENGINEERING, INC.
 ENGINEERS • PLANNERS • SURVEYORS

413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19947
 302.854.5062 (Voice) 302.854.5066 (Fax)
 www.kercherinc.com

JOB No: 09-1009EG
 PLAN DATE: Nov. 13, 2009
 SHEET No.: 1 of 2