



March 26, 2007

Mr. Jeff Clark
Land Tech Planning
118 Atlantic Avenue, Ste. 202
Ocean View, De 19970

RE: PLUS review – PLUS 2007-02-10; Neal Property

Dear Mr. Clark:

Thank you for meeting with State agency planners on March 7, 2007 to discuss the proposed plans for the Neal Property project to be located southeast of County Road 468, 375 feet east of Route 13 near Laurel.

According to the information received, you are seeking annexation into the Town of Laurel with a LPD-OD zoning for the purpose of a 250 unit residential active adult community with a managed activity center,

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 until this parcel is annexed Sussex County is the governing authority over this land. If annexed, the Town of Laurel will be the governing authority over this parcel. Any development planned will need to comply with the appropriate regulations/restrictions.

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

- This project is located with an Investment Level 2 according to the *Strategies for State Policies and Spending* document. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed development of this project in accordance with the relevant County codes and ordinances. With that said, we note that there are environmental features on this site such as forested areas and wetlands. We encourage you to design the site with respect for the environmental features which are present. It is strongly recommended that the applicant address the environmental comments from DNREC contained within this letter.

Street Design and Transportation

- The developer should be aware of two other pending developments on Discount Land Road. All three developments will be required to improve Discount Land Road. Presently, both the Discovery project and the shopping center project have traffic impact studies in progress, which will help to define what improvements are needed.
- From the discussion at the PLUS meeting, the developer is seeking to get enough frontage on US Route 9 for an entrance there. DeIDOT would encourage you to do that.
- To improve traffic circulation and efficiency of access, especially by police and emergency medical service, within the site, DeIDOT recommends that you eliminate the 15 dead-end streets. Where that is not possible, it is recommended that you use cul-de-sacs or other turnarounds so that visitors do not need to turn around in residents' driveways.
- The property includes two strips of land, each about 25 feet wide, leading out to Discount Land Road and US Route 9. If feasible, DeIDOT recommends that these strips be used for bicycle and pedestrian connections to those roads.

Natural and Cultural Resources

- Based on Statewide Wetland Mapping Project (SWMP) mapping, palustrine scrub-shrub/forested, palustrine emergent, and palustrine unconsolidated bottom wetlands were mapped throughout much of the eastern one-third of subject parcel. These wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from the edge of the wetland complex.
- If the existing water courses existing onsite will be used for stormwater management, then it must meet the USDA NRCS Small Pond Code 378. If the existing water course will be used for quantity control only, then any water entering the pond will need to be fully treated. If the pond is intended to be used for quality and quantity treatment and control, then concurrency will be required from adjacent landowners.
- The Drainage Program recommends a 50-foot maintenance area on each side of Rogers Branch
- Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering Rogers Branch. This site will drain into Records Pond, which has existing water quality problems. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing stormwater into the Records Pond watershed.
- Large isolated pockets of open space are rarely used by residents. The developer is encouraged to designate forest resources on site as open space and reduce the size of stormwater management facilities. By designating forest resources on site as passive open space the developer can prevent the removal of trees and impacts to palustrine wetlands.
- DNREC has never surveyed this property; therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at this project site. They have records of numerous rare species downstream, therefore, maintaining adequate forested riparian buffer along Rogers Branch would be extremely important for minimizing impacts to these species and to water quality.
- DNREC suggests the applicant consider omitting or relocating some of the approximately 25 units/structures currently located within the southeastern quadrant of the site plan. There appears to be about 25 units/structures within this forested area. The GIS database and State wetland maps indicate that a rather

large part of the forest contains wetlands. Impacts to this habitat type should be avoided as it can support an array of plant and animal species. This forest is part of a larger forest block, and larger, connected areas of forest are important for the many species of wildlife especially migratory birds.

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

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

This project is located with an Investment Level 2 according to the *Strategies for State Policies and Spending* document. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed development of this project in accordance with the relevant County codes and ordinances. With that said, we note that there are environmental features on this site such as forested areas and wetlands. We encourage you to design the site with respect for the environmental features which are present. It is strongly recommended that the applicant address the environmental comments from DNREC contained within this letter.

Division of Historical and Cultural Affairs – Contact: Alice Guerrant 739-5685

Nothing is known within this parcel. Historic maps first show a building in the south central part of the parcel on the USGS 15' Seaford 1915 map. There is a small area with some potential for a prehistoric-period archaeological site, but the overall potential is low. There is a historic agricultural complex (S-5900) on County Seat Rd, towards the rear of this parcel.

In the event that a Corps of Engineers permit is required on the property, the owner/developer will be required to consult with this office and may be required to do an archaeological survey, depending on the area of the permit. We will be happy to assist him through this process.

The removal of too many trees may have an adverse effect on the nearby historic farm, causing visual and noise intrusions into its setting. We recommend that the developer maintain enough of the trees to block such intrusions.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) Discount Land Road is a local road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the

centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

- 2) The developer should anticipate a requirement to improve Discount Land Road to meet DelDOT's local road standards from the east end of the site frontage out to Route 13. Those standards include 11-foot lanes and 5-foot shoulders.
- 3) The developer should be aware of two other pending developments on Discount Land Road. One is an approximately 90,000 square foot shopping center proposed by T.M. Management, LLC, for the northeast corner of Route 13 and Discount Land Road. Their site engineering is being done by Meridian Consulting Engineers. The other is a large mixed use development, known as Discovery and proposed for the east side of Route 13 and the north side of Discount Land Road albeit not contiguous to the shopping center just mentioned. Discovery is being developed by Ocean Atlantic, with the Element Design Group handling their site design.

All three developments will be required to improve Discount Land Road, but the nature and extent of the improvements required to support Discovery will likely be greater than those needed to support this project or the shopping center. Further, the improvements needed to support Discovery can, and probably should, be phased in over time. Presently both Discovery and the shopping center have traffic impact studies in progress, which will help to define what improvements are needed.

To some extent, site access is separate from the matter of road improvements. While Discovery's frontage is somewhat removed from that of the other two properties, the access to this development and the shopping center must be coordinated.

If necessary, DelDOT can and will coordinate the efforts of the three developments, but we would prefer that the developers worked together and had one engineering firm prepare a plan for improving Discount Land Road, possibly in two or more phases. Regardless of whether they are representing the other developments as well, the developer's site engineer should contact our Subdivision Manager for Sussex County, Mr. John Fiori, regarding our specific requirements for access and off-site improvements. Mr. Fiori may be reached at (302) 760-2260.

- 4) From the discussion at the PLUS meeting, the developer is seeking to get enough frontage on US Route 9 for an entrance there. DelDOT would encourage them to

do that. Access on more than one road is usually desirable because it allows for alternative access and a better distribution of traffic. In addition, eliminating the west entrance on Discount Land Road, which is proposed if the Route 9 access becomes available, would simplify coordination with the shopping center mentioned above.

- 5) We offer the following recommendations regarding the site design:
- a) The plan includes 15 dead end streets serving 2 to 14 dwellings each. Some of these streets are necessary for the efficient development of the site, but most of them could be eliminated in favor of either loop streets or connections to adjacent streets. To improve traffic circulation and efficiency of access, especially by police and emergency medical service, within the site, DelDOT recommends that that be done. Where that is not possible, they recommend the use of cul-de-sacs or other turnarounds so that visitors do not need to turn around in residents' driveways.
 - b) The property includes two strips of land, each about 25 feet wide, leading out to Discount Land Road and US Route 9. If feasible, DelDOT recommends that these strips be used for bicycle and pedestrian connections to those roads.
 - c) A stub street should be provided to the Shockley Property (Tax Parcel 2-32-6.00-54.00) to allow for a connection to a future subdivisions that could occur on it. If feasible, a stub street should be provided to the Whaley Property (Tax Parcel 2-32-6.00-106.01) as well for the same reason. From the aerial photography on file, such a connection seems as though it may be feasible but DelDOT understands that a recently created pond may preclude it.
 - d) Stub streets should be provided to the Jester and Conaway Properties, respectively Tax Parcels 2-32-6.00-63.03 and 64.00 for the purpose of incorporating them in the subject development if they should become available. At a minimum, we recommend that cross-access easements be provided so that the owners of those properties could tie into the development's collector streets rather than accessing Discount Land Road directly if they ever redevelop their property.

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

Soils

According to the Sussex County soil survey update, Pepperbox-Rosedale complex, Hurlock and Udorthents were mapped on subject parcel. Pepperbox-Rosedale complex is a moderately well to well-drained upland soil that has moderate to few limitations for development. Hurlock is a poorly-drained wetland associated (hydric) that has severe limitations for development. Udorthents are soils that have been extensively modified through filling or grading practices and have variable site-specific limitations for development. The mapped udorthents on this parcel appear to be former borrow pits that have since filled with water.

Wetlands

Based on Statewide Wetland Mapping Project (SWMP) mapping, palustrine scrub-shrub/forested, palustrine emergent, and palustrine unconsolidated bottom wetlands were mapped throughout much of the eastern one-third of subject parcel. These wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from the edge of the wetland complex. The developer should note that both DNREC and the U.S. Army Corps of Engineers (USACE, or “the Corps”) 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.

Wetland Permitting Information

PLUS application materials indicate that wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Corps through the Jurisdictional Determination process. Please note that impacts to palustrine wetlands are regulated by the Corps through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are nonjurisdictional isolated wetlands, the Corps must be contacted to make the final jurisdictional assessment. They can be reached by phone at 736-9763. Certain drainage ditches may also be jurisdictional either under the Corps Program or through the DNREC Wetland and Subaqueous Lands program.

In addition, individual 404 permits and certain Nationwide Permits from the Corps also require 401 Water Quality Certification from the DNREC Wetland and

Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal 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) 739-9943 to schedule a meeting.

Impervious Cover

Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 36 percent. However, given the scope and density of this project, this assessment is clearly a significant underestimate. The applicant's apparent use of natural areas (wetlands or buffers) and/or areas of functional utility (stormwater management areas) to meet the County's minimum open space requirements, artificially lowers the estimated amount of this constructed surface imperviousness from this project, resulting in a significant underestimate of its actual environmental impacts. Moreover, credit for open space should not include potential jurisdictional wetlands. For that reason, a Corps-approved wetlands delineation should be conducted prior to the open space and surface imperviousness calculations. Finally, it is also apparent that some constructed forms of surface imperviousness (i.e., rooftops, sidewalks, and roads) were omitted from the applicant's calculation for surface imperviousness, and further contributes to the estimate of this parcel's surface imperviousness and environmental impacts. It is strongly recommended, therefore, that the applicant address all of the above-mentioned concerns before conducting a finalized calculation for surface imperviousness.

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

ERES Waters

This project is located adjacent to receiving waters of the Broad Creek watershed, designated as having waters of 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). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the Department to mandate BMPs to meet 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 Broad Creek 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. In the greater Broad Creek watershed, "target-rate-nutrient reductions" of 30 and 50 percent will be required for nitrogen and phosphorus, respectively. Additionally, "target-rate-reductions" of 2 percent will be required for bacteria.

TMDL Compliance through the Pollution Control Strategy (PCS)

As indicated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been proposed for the Broad Creek watershed. The TMDL calls for a 30 and 50 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria. A pollution control strategy will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses, increasing passive, wooded open space, and the use of green-technology stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Water Supply

The information provided indicates that the Town of Laurel will provide water to the proposed annexation project(s) through a central public water system. DNREC files reflect that the Town of Laurel does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. According to SB 135 that was signed on June 30, 2003 by Governor Minner, the municipality is required to give notice to the Public Service Commission when the annexation is complete. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at (302)739-4247.

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

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

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

Sediment and Erosion Control/Stormwater Management

Standard Comments:

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson, Program Manager, at (302) 856-7219 for details regarding submittal requirements and fees.

It is strongly recommended that you contact the Sussex Conservation District to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan. 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.

A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to the Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval.

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique.

Each stormwater management facility should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.

Clearly address how Stormwater Quality and Quantity Treatment will be provided. If this project is eligible for a Quantity Waiver, please make the request in the stormwater narrative citing the specific regulation.

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. 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.

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.

All ponds are required to be constructed per Pond Code 378.

Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address.

A Certified Construction Reviewer (CCR) is required for any project that is 50 acres or greater.

DNREC regulations require no more than 20 acres to be disturbed at more time. A phased erosion and sediment control plan and sequence of construction will be required.

Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open space depth of 3 feet or more that comprises 50-75 percent of the area of the pond.

Consideration should be made for any adjacent properties during the design of the project, including drainage and erosion/sediment control.

Specific Comments:

If the existing water courses existing onsite will be used for stormwater management, then it must meet the USDA NRCS Small Pond Code 378. If the existing water course will be used for quantity control only, then any water entering the pond will need to be fully treated. If the pond is intended to be used for quality and quantity treatment and control, then concurrency will be required from adjacent landowners.

Green technology best management practices are the preferred option for stormwater quality control [Delaware Sediment and Stormwater Regulations, 10.3.5].

This project is within an impaired watershed. A Total Maximum Daily Load (TMDL) has been promulgated. The applicant is encouraged to preserve any existing riparian buffers to aid in the reduction of nutrients, sediment, and other pollutants. For the further enhancement of water quality, additional widths of vegetated buffers and other water quality measures are encouraged to be implemented on this project. Additionally, the applicant should be aware that additional best management practices for storm water quality may be required by state regulation and county ordinances due to the project location in an impaired waterway.

Drainage

1. The Drainage Program recommends a 50-foot maintenance area on each side of Rogers Branch. The area should be dedicated open space and utilized for mechanized maintenance, and possible spoil placement, if the branch requires periodic maintenance or future re-construction.
2. The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
3. The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain

- cases. Therefore, catch basins placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.
4. Increase the side yard setback to 15 feet on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage easement.
 5. All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being placed next to the catch basin. Record the easement on the deed.
 6. 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.
 7. The Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on the wooded area on the southeast side of the property. The amount of proposed tree removal from this area appears excessive. The Drainage Program recommends limited tree removal in this area. Where practical, plant native trees, and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided. Even with these measures this area may not provide adequate residential drainage. A part of the wooded area is mapped as Fallsington soil, which has a high water table and poor natural drainage. Limitations for foundations for homes of three stories or less is severe due to a high water table. Crawl spaces and basements within this area are very questionable. If this area is developed as proposed, especially with crawl spaces and basements, a statement should be on the deed informing the prospective buyers that future drainage problems are very likely.
 8. Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering Rogers Branch. This site will drain into

Records Pond, which has existing water quality problems. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing stormwater into the Records Pond watershed.

For questions or clarifications, please contact Jim Sullivan at 739-9921.

Open Space

Large isolated pockets of open space are rarely used by residents. The developer is encouraged to designate forest resources on site as open space and reduce the size of stormwater management facilities. By designating forest resources on site as passive open space the developer can prevent the removal of trees and impacts to palustrine wetlands.

Rare Species

DNREC has never surveyed this property; therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at this project site. They have records of numerous rare species downstream, therefore, maintaining adequate forested riparian buffer along Rogers Branch would be extremely important for minimizing impacts to these species and to water quality. To adequately protect water quality this buffer should be at least 100 feet in width. There are both lots and infrastructure within 100 feet of this riparian wetland area (in southeastern quadrant of plan) and they should be pulled out of the buffer zone.

Forest Preservation

The applicant indicated in question #27 that this project would have a 'positive' environmental impact. Removing forest, some of which form a riparian buffer, and not having adequate wetland buffers is not ecologically a 'positive' impact. A greater effort to preserve existing trees should be made, and DNREC suggests the applicant consider omitting or relocating some of the approximately 25 units/structures currently located within the southeastern quadrant of the site plan. There appears to be about 25 units/structures within this forested area. The GIS database and State wetland maps indicate that a rather large part of the forest contains wetlands. Impacts to this habitat type should be avoided as it can support an array of plant and animal species. This forest is part of a larger forest block, and larger, connected areas of forest are important for the many species of wildlife especially migratory birds. Also, when forested areas are cleared, wildlife must disperse into the surrounding area which can result in human/animal conflicts, including interactions on the roadways. Forest removal also puts greater pressure on nearby State wildlife areas, nature preserves, State-forests and other publicly owned lands.

If trees are cleared, despite DNREC's recommendations above, they suggest that clearing not occur April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during the breeding season, because once trees are cleared the result is an overall loss of habitat.

Nuisance Geese

The applicant indicated that they were going to utilize a nuisance species management plan. We recommend that vegetative buffers comprised of tall grasses, shrubs, trees or wildflowers be included in this plan to deter nuisance waterfowl such as resident Canada geese. 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, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

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 be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

Salvage Yards

One salvage yard was found within a half mile radius of the proposed site. White Salvage (0329) is located northwest of the proposed site. This is a brand-new site. DNREC-SIRB has no comments regarding the proposed site at this time due to insufficient information. However, should any evidence of a release or imminent threat of release of hazardous substances be discovered at the subject site (e.g., contaminated soil or water), please discontinue construction activities and immediately notify DNREC

at the 24-hour emergency number (800.662.8802). Also, please contact SIRB as soon as possible at 302.395.2600 for additional requirements.

Underground Storage Tanks

There are three inactive LUST site(s) located near the proposed project:

Laurel Save, Facility # 5-000285, Project # S9911248

Uncle Willie's # 16, Facility # 5-000836, Project # S9604074

Laurel Exxon, Facility # 5-000313, Project # S9605077

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 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 with nitrile rubber gaskets in the contaminated areas.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 19.2 tons (38,372.4 pounds) per year of VOC (volatile organic compounds), 15.9 tons (31,769.7 pounds) per year of NO_x (nitrogen oxides), 11.7 tons (23,440.3 pounds) per year of SO₂ (sulfur dioxide), 1.0 ton (2,086.6 pounds) per year of fine particulates and 1,604.9 tons (3,209,801.6 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 7.7 tons (15,477.3 pounds) per year of VOC (volatile organic compounds), 0.9 ton (1,703.0 pounds) per year of NO_x (nitrogen oxides), 0.7 ton (1,413.2 pounds) per year of SO₂ (sulfur dioxide), 0.9 ton (1,823.7 pounds) per year of fine particulates and 31.4 tons (62,741.6 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 3.1 tons (6,134.1 pounds) per year of NO_x (nitrogen oxides), 10.7 tons (21,336.0 pounds) per year of SO₂ (sulfur dioxide) and 1,573.5 tons (3,147,060.0 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	19.2	15.9	11.7	1.0	1604.9
Residential	7.7	0.9	0.7	0.9	31.4
Electrical Power		3.1	10.7		1573.5
TOTAL	26.9	19.9	23.1	1.9	3209.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 3.1 tons of nitrogen oxides per year and 10.7 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. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

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

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

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

a. **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- Where a water distribution system is proposed for townhouse type dwellings it shall be capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.
- For the Community Center, the water distribution system is to be 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.
- Where a water distribution system is proposed, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

Fire Protection Features:

- All structures over 10,000 sqft aggregate, such as the proposed Community Center, will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, 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

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 roads leading into the community must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

c. Gas Piping and System Information:

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

d. Required Notes:

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- 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
- Townhouse 2-hr separation wall details shall be shown on site plans
- 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.

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed application as the owner intends to seek annexation into the Town of Laurel, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 and 3 areas.

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.

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.

Tree Mitigation

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community’s forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754.

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 Walsh 739-4263

This proposal is a site plan review of a planned active adult community for 250 units on 77 acres located on the south side of Discount Land Road, east of the intersection of Discount Land Road and US 13, near Laurel. According to the *State Strategies Map*, the proposal is located in an Investment Level 2 area and inside the growth zone. As a general planning practice, DSHA encourages residential development inside growth zones, where residents will have proximity to services, markets, and employment opportunities. According to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$246,000. However, families earning respectively 100% of Sussex County's median income only qualify for mortgages of \$174,485, thus creating an affordability gap of \$71,515. Furthermore, the elderly are the fastest growing segment of our population, specifically in Sussex County. We encourage both the Town of Laurel and the developer to coordinate setting aside some of the units to be affordable to the elderly low- and moderate-income households as part of the annexation process. In addition, coordination can be done with the Diamond State CLT to ensure the units stay affordable in perpetuity.

Department of Education – Contact: John Marinucci 739-4658

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

1. Using the DOE standard formula, this development will generate an estimated 125 students.
2. DOE records indicate that the Laurel School Districts' *elementary schools are not at or beyond 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Laurel School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2006 secondary enrollment.
4. While the Laurel School District secondary and elementary schools are not currently beyond capacity, *the district does NOT have adequate student capacity to accommodate the additional students likely to be generated from this development* given the number of planned and recorded residential sub divisions

- within district boundaries. This development is identified as an active adult community. Unless the development is age restricted by deed, the development, in conjunction with other planned developments will cause significant burden to the Laurel School District.
5. The DOE requests that the developer contact the Laurel School District Administration to address the issue of school over-crowding that this development has the potential to cause.
 6. DOE requests developer work with the Laurel School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

Sussex County – Contact: Richard Kautz 855-7878

No comment about the project. The site is to be entirely within the Laurel limits and does not directly impact County services or properties outside the town limits.

The town is encouraged to avoid the creation of new enclaves when annexing, to eliminate existing enclaves during its negotiation of the annexation agreement, and to notify the Sussex County Planning Department when the annexation becomes effective.

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: Town of Laurel
Sussex County