



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

February 24, 2005

Mr. Steve Engel
Vista Design Group, Inc.
11634 Worchester Highway
Showell, MD 21862

RE: PLUS review – PLUS 2005-01-04; Whittington Estates

Dear Mr. Engel:

Thank you for meeting with State agency planners on February 2, 2005 to discuss the proposed plans for the Whittington Estates project to be located On the south side of Mount Joy Rd. (Road 297), northeast of Millsboro.

According to the information received, you are seeking zoning approval for a cluster subdivision with 178 residential units on 125.91 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.

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

- This proposal is located within an Investment Level 4 area according to the Strategies for State Policies and Spending and a Low Density area according to the Sussex County Comprehensive Plan. In these areas, State policies encourage preservation of agricultural and natural resources and not development. Because of its location within an Investment Level 4 area, we object to the proposal and notes that the State will not participate in any infrastructure upgrades or other improvements necessary to support this development.

Vista

Although this project is located within an Investment level 4 State Strategies Map, it is conveniently located northwest Millsboro (one-quarter-mile west of the Holly Grove Road intersection on Mount Joy Road) for services, markets and employment opportunities. Further, due to the real estate values within investment level areas 1 & 2 housing has become unaffordable for many homebuyers. This development helps address the issue of providing more affordable housing opportunities for area residents. The applicant intends to provide any necessary infrastructure upgrades as presented in their preliminary site plan and the response herein

Street Design and Transportation

- The developer should expect to be required to improve Mount Joy Road to DelDOT's local road standards from Hollyville Road to the east end of the site frontage.

Vista

The applicant fully expects to improve Mount Joy Road to Deldot local road standards.

- A second stub street leading to the Frederick Thomas parcel to the west should be added.

Vista

Please note the applicant has added a second collector stub leading to the Fredric Thomas parcel.

- The developer will be required to dedicate sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads.

Vista

The applicant agrees to provide additional dedication as required. Please note revisions adding an additional 10' wide permanent easement in the site plan adjacent to Mount Joy Road.

- A paved multi-modal path, located in a 15-foot wide permanent easement should be provided across the frontage of the site.

Vista

The applicant does not plan to add a 15-foot wide permanent easement for a multi-modal path system adjacent to Mount Joy Rd, at this time, feeling ties to the adjacent

cultural landscape is inappropriate. However the applicant does agree to provide such path systems linking the internal site features to Mount Joy Road thereby allowing multi-modal connections to be developed at a future date if the character of the surrounding landscape supports such a system.

- At least 4 of the 5 proposed cul-de-sacs should be eliminated to provide better internal road connections, improved emergency access and more of a sense of community.

Vista

The site plan has been revised eliminating all cul-de-sacs

Natural and Cultural Resources

- A qualified archaeologist should visit the site to determine if there are any archaeological sites on the property.

Vista

Noted. The applicant is receptive to a “qualified Archaeologist” visiting the site.

- All lots on the eastern portion of the site plan should be relocated and the forest preserved as community open space by permanent conservation easement.

Vista

The site plan has been revised enlarging the lot size within the wooded portions of the site reducing the impact to existing vegetation. Best management practices will be employed creating limited clearing on wooded sites to preserve forest connectivity and habitat. In addition to clearing plan BMP.'s further clearing will not be allowed within the articles of covenants and restrictions, administered by the H.O.A.

- The ponds should be sized no larger than necessary to meet the stormwater management requirements for the site and the pond should be sited in the existing open areas rather than clearing forested areas for stormwater management basins.

Vista

The site plan has been revised reducing the pond sizes to further preserve existing vegetation.

- Lots shown in the forested area along the eastern portion of the parcel should be relocated or eliminated to preserve the forested area.

Vista

See response above

- Open space for active recreation should be provided around the club. Active recreation areas and wastewater disposal sites should remain separate areas.

Vista

The site plan has been revised.

The following is a complete list of State agency comments:

Office of State Planning Coordination – Contact: Ann Marie Townshend 739-3090

The Office of State Planning Coordination notes that this proposal is located within an Investment Level 4 area according to the Strategies for State Policies and Spending and a Low Density area according to the Sussex County Comprehensive Plan. In these areas, State policies encourage preservation of agricultural and natural resources and not development. Because of its location within an Investment Level 4 area, the Office of State Planning Coordination objects to the proposal and notes that the State will not participate in any infrastructure upgrades or other improvements necessary to support this development.

Vista

Noted

If the project moves forward, we recommend that it be redesigned to reduce the number of cul-de-sacs and to remove lots from the forested area on the eastern side of the parcel.

Vista

As stated above, the site plan has been revised eliminating all cul-de-sacs.

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

The State Historic Preservation Office does not favor this project because it is located in State Strategies Level 4 area. During the meeting, the project's representatives stated that Atlantic Resource Management visited the property and concluded that there were no archaeological sites. Please be advised that a qualified archaeologist would be a more appropriate person to provide that conclusion. There is a medium probability for archaeological resources, please contact our office with any concerns.

Vista

Noted.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Because the development is proposed for a Level 4 Area, it is inconsistent with the Strategies for State Policies and Spending. Therefore DelDOT will not participate in the cost of any road improvements needed to support this development. The comments that follow are technical, and are not intended to suggest that DelDOT supports this development proposal.

- 1) The developer should expect to be required to improve Mount Joy Road to DelDOT's local road standards from Hollyville Road to the east end of the site frontage. If, as indicated in the answer to Item 37 on the PLUS form, the road has 10-foot lanes and some sort of shoulders, the improvement would consist of widening the lanes to a width of 11 feet, widening the shoulders to as much as 5 feet (right-of-way permitting), paving the shoulders and overlaying the road.

Vista

The applicant agrees to provide improvements to Mount Joy Road to local road standards from Hollyville road to the east end of the site frontage.

- 2) The developer has proposed a stub street leading to the Mountaire Farms parcel to the south. It is recommended that the County require that a second stub street be provided, leading to the Frederick Thomas parcel to the west.

Vista

Please note the applicant has added a second collector stub leading to the Fredric Thomas parcel.

- 3) Mount Joy Road is classified as a local road. Local roads in rural Delaware typically have right-of-way widths ranging from 33 to 50 feet. 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 they will require right-of-way dedication to provide any additional width needed from this project.

Vista

Please note the applicant's response to question one.

- 4) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site.

Vista

The applicant does not plan to add a 15-foot wide permanent easement for a multi-modal path system adjacent to Mount Joy Rd, at his time, feeling ties to the adjacent cultural landscape is inappropriate. However the applicant does agree to provide such path systems linking the internal site features to Mount Joy Road thereby allowing multi-modal connections to be developed at a future date if the character of the surrounding landscape supports such a system.

- 5) DelDOT supports the comment from the Office of State Planning Coordination regarding the cul-de-sacs. They recommend changing the site design to eliminate at least four of the five proposed cul-de-sacs to provide better internal road connections, improved emergency access and more of a sense of community.

Vista

As stated previously, the site plan has been revised eliminating all cul-de-sacs

- 6) DelDOT also supports the comment from Mr. Robert Ehemann, of the Department of Natural Resources and Environmental Control, on the desirability of providing sidewalks. It is noted that the response to Item 40 on the PLUS form indicates that sidewalks would be provided.

Vista

Larger lot subdivisions with wide road frontage and road designed with open ditch cross sections in a rural setting do not necessitate sidewalks along its roads.

All walkways will be designed in and around the large areas of open space connecting one to the other in addition to providing future connectivity should the local cultural landscape evolve to support such systems. .

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

Vista

The developer agrees.

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

Design Recommendation

Relocate all lots from the eastern-forested portion of the site and preserve that forest as community open space by permanent conservation easement.

Vista

As stated previously, "The site plan has been revised enlarging the lot size within the wooded portions of the site reducing the impact to existing vegetation. Best management practices will be employed creating limited clearing on wooded sites to preserve forest connectivity and habitat. In addition to clearing plan BMP.'s further clearing will not be allowed within the articles of covenants and restrictions, administrated by the H.O.A."

Soils

According to the soil survey update, Fort Mott/Henlopen complex, Rosedale/Pepperbox complex, Hammonton, and Klej were mapped in the immediate vicinity of the proposed construction. Fort Mott/Henlopen complex is a well drained upland soil that, generally, has few limitations for development. Rosedale/Pepperbox is a somewhat well-drained to moderately well-drained soil that has moderate limitations for development. Hammonton is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Klej is a transitional soil that contains both **hydric** (indicative of wetlands) and non-hydric (upland) soil components; development limitations range from moderate to severe depending on the site specific water table occurrence.

Although most of the soils on subject parcel are fairly well drained, they have limitations associated with rapidly permeable sandy surface and subsurface horizons. Such soils are conducive to nutrient leaching via groundwater or surface runoff into the surrounding watershed. In soils containing shallow water tables or found in close proximity to waterbodies, these impacts are greatly intensified.

Vista

A feasibility study has been prepared and approved by DNREC for individual onsite wastewater systems. In addition, Applied Water is currently investigating the best method for method for providing a community wastewater system best of soil conditions.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of a 3-acre palustrine wetland in the southeastern portion of the parcel.

A wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified Corps of Engineers through the Jurisdictional Determination process.

Site plans show that there will not be direct impacts to these wetlands through construction activities; however, secondary impacts of construction could be detrimental to the health of these wetlands.

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 Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

If wetland impacts are considered, please note that impacts to wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers 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) 739-4691 to schedule a meeting.

Vista

No impacts to 404 wetlands are proposed; in addition any and all wetlands will be protected during construction through standard DNREC sediment and erosion control practices.

ERES Waters

This project is located adjacent to receiving waters of Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a "nutrient-runoff-mitigation strategy" for reducing nutrients in the Inland Bays Watershed, reduction of nitrogen and phosphorus loading will be mandatory. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are authorized under federal code, states are charged with developing and implementing standards to support those desired use goals. The Jurisdictional authority for attaining these use goals will fall under the auspices of Section 11.5 of the State of Delaware's Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as "pollution control strategies."

Nutrient reductions prescribed under TMDLs are assigned on basis of water quality concerns – that is, the those regions deemed to be of greatest environmental concern will require correspondingly higher levels of nutrient reduction than those regions deemed less environmentally sensitive. In this watershed, these regions are demarcated as high and low reduction zones. The high reduction zone corresponds to the western portion of the watershed, and requires a reduction of nitrogen and phosphorus by 85 and 65 percent, respectively. The low reduction zone corresponds to the eastern portion of the watershed, and requires a reduction of nitrogen and phosphorus by 40 percent. **This project is proposed within the high nutrient reduction zone.**

Since the TMDL for the Inland Bays mandates reducing nutrient loading to waters of the Inland Bays significant nitrogen and phosphorus loading must be realized from all sources, including onsite/community wastewater systems. The Department has developed performance standards based on research by Departmental staff and Dr. Mike Hoover (North Carolina State University) for on-site wastewater treatment and disposal systems. Due to the size of a development's system, the performance standard dictates that the effluent concentration levels cannot exceed average annual nitrogen and phosphorus concentration levels of 5 and mg/l, respectively. The phosphorus standard

only applies when applicable. These performance standards are included in the proposed Pollution Control Strategy for the Inland Bays, which is currently under public review.

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

Vista

We have prepared TMDL's calculations based on the proposed method of BMP's for this project and have enclosed a copy for your review. Based on the current design the reductions are as follows:

Phosphorus reduction 71.4 %

Nitrogen reduction 86.4 %

These reductions meet and exceed minimal requirements.

Water Supply

The application states that this project will be served by a Central (Community System) On-site well. The project is located in an area where our records indicate that public water supply is not available and, as such, the Well Permitting Branch will accept applications for well permits to serve the site, in accordance with Delaware Regulations Governing the Construction and Use of Wells. Any well permit applied for on this site would require a more extensive review due to the proximity to the Mountaire Spray Irrigation Ground Water Management Zone. It should also be noted that the Water Supply Section will not accept well permit applications for potable wells on property that does not have an approved wastewater system on file with the Groundwater Discharges Branch.

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 Dale Annis at 302-739-3665.

Vista

The applicant agrees.

Sediment and Erosion Control/Stormwater Management

The amount of pond area shown on the preliminary plan appears to be in excess of what would be necessary to fulfill stormwater management requirements for the site. The ponds should be sized no larger than necessary to meet the stormwater management requirements for the site to minimize construction costs as well as future maintenance costs for the Homeowner's Association. When the engineered pond design is completed and the pond sizes are reduced, the pond should be sited in the existing open areas rather than clearing forested areas for stormwater management basins. Alternative methods of stormwater management other than clearing trees to construct a pond should be explored for the existing forested areas of the site. A 50-foot buffer of native herbaceous or woody vegetation is strongly recommended along the periphery of all proposed ponds (including stormwater).

Vista

As stated previously, the site plan has been revised reducing the pond sizes previously reviewed. Further, pond size may be reduced even further during final engineering.

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 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 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 DNREC 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.

A Certified Construction Reviewer (CCR) will be required for the site during construction. You should contact Sussex Conservation District for details regarding the CCR requirement.

Vista

The applicant is in full agreement and will comply with the above requirements.
All comments will be addressed during final engineering design.

Forests

According to 2002 aerial photos there is a large forested area within this parcel that is a component of a contiguous stretch of forest that stretches from the Indian River Bay, through the headwaters of Swan Creek. Large contiguous stretches of forest like this not only provide important water and air quality benefits, but provide important habitat for many wildlife species that depend on interior forest. Clearing portions of the forest within the parcel may reduce the habitat value of the entire forest stretch.

Site plans show that structures are proposed within the forested area. PLUS materials indicate that 43.95 acres (1,914,462 square feet) will be removed to accommodate approximately 80+ lots. The developer and County should relocate all lots within the eastern area of the site and preserve this forest. While the forested area on the western side of the site is also important, preservation of the forested area on the eastern side of the parcel should be given the highest priority.

Forested areas on-site set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Vista

As stated previously, "The site plan has been revised enlarging the lot size within the wooded portions of the site reducing the impact to existing vegetation. Best management practices will be employed creating limited clearing on wooded sites to preserve forest connectivity and habitat. In addition to clearing plan BMP.'s further clearing will not be allowed within the articles of covenants and restrictions, administrated by the H.O.A."

Open Space

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Vista

The applicant is in agreement; large planted buffers are proposed along Mount Joy Road. and the agricultural buffer along the westerly boundary. Further, additional plantings are proposed around Stormwater ponds to help create better ecosystems and prevent nuisance waterfowl

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

Nuisance Waterfowl

The stormwater ponds scattered throughout the subdivision will likely attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community residents. Although small numbers of these species are enjoyed by residents, geese and swans can quickly multiply and overwhelm the area. 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. Ponds that remain in the subdivision plan should be landscaped to deter nuisance species. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (at least 50ft) around ponds, are not as attractive to geese because they do not feel as safe from predators and other It is recommended that sidewalks be built fronting every residence and stub streets. disturbance when their view of the area is blocked. 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 number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Vista

See comment above.

Recreation

It is recommended that sidewalks be built fronting every residence and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, public mass transit stops, schools, stores, work, etc. It is also encouraged to add a stub street with sidewalks be connected to the adjacent parcel to the west.

DNREC recommends some open space around the club house for active recreation. They also recommend that active recreation sites and wastewater sites remain separate areas.

Vista

As stated above “The applicant does not plan to add a 15-foot wide permanent easement for a multi-modal path system adjacent to Mount Joy Rd, at his time, feeling ties to the adjacent cultural landscape is inappropriate. However the applicant does agree to provide such path systems linking the internal site features to Mount Joy Road thereby allowing multi-modal connections to be developed at a future date if the character of the surrounding landscape supports such a system.”

Air Quality

Air pollution threatens the health of human beings and other living things on our planet. While often invisible, pollutants in the air create smog and acid rain, cause cancer or other serious health effects, diminish the protective ozone layer in the upper atmosphere, and contribute to the potential for world climate change. Breathing polluted air can have numerous effects on human health, including respiratory problems, hospitalization for heart or lung disease, and even premature death. Some can also have effects on aquatic life, vegetation, and animals.

Once complete, vehicle emissions associated with this project are estimated to be **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of VOC (volatile organic compounds), **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of NOx (nitrogen oxides), **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of SO2 (sulfur dioxide), **Error! Not a valid link.** ton (**Error! Not a valid link.** pounds) per year of fine particulates and **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of VOC (volatile organic compounds), **Error! Not a valid link.** ton (**Error! Not a valid link.** pounds) per year of NOx (nitrogen oxides), **Error! Not a valid link.** ton (**Error! Not a valid link.** pounds) per year of SO2 (sulfur dioxide), **Error! Not a valid link.** ton (**Error! Not a valid link.** pounds) per year of fine particulates and **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of NO_x (nitrogen oxides), **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of SO₂ (sulfur dioxide) and **Error! Not a valid link.** tons (**Error! Not a valid link.** pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	13.7	11.3	8.3	0.7	1142.7
Residential	5.5	0.6	0.5	0.6	22.3
Electrical Power		2.2	7.6		1120.4
TOTAL	19.2	14.1	16.4	1.3	2285.4

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

The project's location in a Level 4 area, remote from essential services, creates challenges for mitigation on this site. However, preservation and planting of trees, as well as including bicycle and pedestrian facilities in the site plan will provide some mitigation to the air quality impacts.

Vista

Air quality and energy efficiency will in part be addressed through the planting of street and buffer shade trees that not only produce oxygen but filter chemical and particulate materials from air.

State Fire Marshal's Office – Contact: Duane Fox 302-856-5298

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

- a. **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Treatment Bld)

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**

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

c. **Accessibility**

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

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

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

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Vista

All comments listed above will be more fully addressed during final engineering. All comments will be addressed in “General Notes” and in design specifications during final engineering design.

Department of Agriculture - Contact: Mark Davis 739-4811

Overall Comments

The Delaware Department of Agriculture (DDA) and the Delaware Forest Service (DFS) recognize that this site is within a Level 4 growth zone as defined by the State Planning’s State Spending Strategies and is within an area that will be less likely to receive assistance from the state to improve local and regional infrastructure or services. As a result, DDA and DFS object to development of this site. Furthermore not only is this site located in an investment Level 4 area, according the state’s adopted “Green Infrastructure” priorities map, this parcel is identified as both high value cropland and forestland.

If the applicant further pursues development options for this site, please consider the following comments:

The Department of Agriculture commends the applicant for noting this site’s ground water recharge potential and for an attempt to forward an environmentally sensitive plan. However, the note was incorrectly stated. This eastern side of this site is located within a

fair and a good water recharge zone. The remainder of the site, as noted, has poor groundwater recharge potential. For correct groundwater recharge data, the applicant may refer to DNREC's website at www.dnrec.state.de.us/dnreceis.

In addition, for all of the above stated reasons, DDA and DFS strongly encourage the applicant to redesign the subdivision plan in deference to state agency planner's comments forwarded in consideration the unique environmental features presented at this site. DDA and DFS look forward to collaboration with the developer and landowner to design new alternatives for the management and development of this site.

County Requirements

A 30' forested buffer will be required along the western and southern edge of the development to meet the county code requirement. The Delaware Forest Service offers it assistance with the design of this buffer.

Vista

The applicant is in full agreement, please note the buffers illustrated on the site plan.

Right Tree for the Right Place

The Delaware Department of Agriculture and DFS encourage 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 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.

Vista

The applicant is in full agreement.

Forest Mitigation

The Delaware Forest Service will work with the applicant to preserve as much of the existing mature forest on this site and request the lots within the eastern area of the parcel be removed from the development to lessen the potential for forest fragmentation and to improve water quality within the area. In addition, for those trees removed within the western segment of the property the Delaware Forest Service would ask the developer to consider a forest mitigation program for this area and replace those trees removed during construction at a 1:1 ratio to add value to the environment and to improve the over social and economic value of the community.

Vista

The site plan has been revised to reduce the impact to existing vegetation by removing and or reducing the size of several ponds to limit and or reduce clearing impacts. Further the developer will be required to provide a 30' agricultural Buffer along the westerly and southerly boundary of the property further additional landscaping is proposed along Mount Joy Rd. We believe this proposed planting constitutes Forest Mitigation.

Native Landscapes

The Department of Agriculture and DFS encourage 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 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.

Vista

The applicant is in full agreement.

Open Space Considerations

The Delaware Department of Agriculture and DFS support comments made by DNREC Parks & Recreation Department to allow for improved design to open space and provide areas of connectivity to both passive and open space areas within the planned community. Furthermore, DFS offers it assistants to the developer to implement these practices, please contact Bryan Hall at (302) 698-4500.

Vista

See previous comments in regard to revised site plan

Public Service Commission - Contact: Andrea Maucher 739-4247

The project is not in a certificated area. The water service provider will need to apply to the Commission for a CPCN to serve the project.

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.

The application notes community system with no provider identified. If wastewater services are provided by a non-governmental entity, and there are more than 50 customers served, the provider will need to apply to the PSC for a Certificate of Public Convenience and Necessity (CPCN). Additional requirements may apply if the provider has not previously been awarded a CPCN by the Commission.

Vista

Currently water and wastewater are to be provided by Applied Water.

Delaware State Housing Authority – Contact Karen Horton 739-4263

The proposal is to develop 178 units on 125 acres of land located along Mount Joy Road in eastern Sussex County. According to the State Strategies Map, the proposal is located in Investment Level 4. As a general practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as Investment Levels 1 and 2, areas as outlined in the State Strategies Map. The proposal is located in an area targeted for agricultural activities and natural resource protection and therefore inconsistent with where the state would like to see new residential development.

Vista

See previous comment in regard to development within Level 4

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

Due to the number of residential units being proposed, an impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Sussex County, to keep them apprised of all development activities.

Vista

The applicant is in full agreement.

Route 24 is a coastal storm evacuation route and this development will be affected by traffic volume on this route during a coastal storm event.

Vista

Not sure if we agree with this assessment, this property is located north of Delaware Route 24 and has a more direct route to Delaware 113

Sussex County - Contact: Richard Kautz 855-7878

The developer should provide the stub road access to adjacent property as requested by DelDOT.

Vista

As previously stated. "Please note the applicant has added a second collector stub leading to the Fredric Thomas parcel."

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C).

Vista

The applicant is in full agreement and will address during presentation to Planning and Zoning.

This summer Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. It is recommended that the wastewater system be operated under a long-term contract with a capable wastewater utility that meets TMDL limits for Delaware's Inland Bays. In addition, it is recommended that they have a wastewater utility provider prior to approving the project. The proposed project is located outside of the Inland Bays Planning Area where Sussex County expects to provide sewer service. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on recorded plots.

If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or homeowners association expense.

Sussex County has recently acquired more than two thousand acres of adjacent and nearby land for future wastewater spray irrigation and other wastewater treatment systems and uses associated with industrial sites. Each future deed for parcels in the proposed development should note that the development adjoins future wastewater treatment facilities and that industrial type uses on those lands should be anticipated.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

Vista

The applicant is in full agreement.

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January 18, 2006

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

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

Sincerely,

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

Constance C. Holland, AICP
Director

CC: Sussex County
PNH Harmon LLC