February 27, 2018 C 2464-2

Ms. Constance C. Holland, AICP
Director
Office of State Planning Coordination
State of Delaware
122 Martin Luther King, Jr. Boulevard South
Third Floor
Dover, DE 19901

Dear Ms. Holland:

SUBJECT: VANTAGE POINT MIDDLETOWN
PLUS REVIEW 2018-01-05

We are in receipt of the written comments from the January 24, 2018 and offer the following as shown in bold below.

Strategies for State Policies and Spending

- This project is located in Investment Levels 1 according to the *Strategies for State Policies and Spending.* Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy. **Understood.**

Code Requirements/Agency Permitting Requirements

Department of Transportation - Contact Bill Brockenbrough 760-2109

- Because the site fronts on Delaware Route 1, which is part of the Federal Aid Primary Road System, it is subject to outdoor advertising regulations found in CFR 23 §131 and 17 Del. C. §1101-1120. Further, Delaware Route 299 in this area is part of the Harriet Tubman Underground Railroad Byway. As such, the applicant should expect or anticipate the following restrictions and requirements:

    - No new billboards, variable message boards, or electronic changing message sign(s) would be permitted anywhere on or off 299 that might be within 660' of edge of right of way (i.e. any closest right of way edge). This restriction would involve future entrance and signing, even if those elements are not within state right of way. **Understood. We will only have typical entrance/exit signs along with a ground monument sign identifying the development at the site entrance.**

- No on-site/premise advertising on the property for other parties within 660' of Route 299. Such an example is displaying (on-site permanent or temporary) for the institution funding this project or the contractor building it. **Understood.**

- Along the byway route, the applicant would not be permitted to advertise or direct information about themselves on other private property – i.e. no off-site advertisement or direction on private property within 660' of the right-of-way. **Understood.**

- DelDOT's Development Coordination Section subdivision will likely require one byway auto tour sign to be located in the Route 299 right-of-way. **We will work with the Development Coordination Section on the By-way sign.**

Please see http://deldot.maps .arcgis.com/apps/webappviewer/index.html ?id=03d5049bc4904165 8cf ecad5fd6ba8b9 for a Byways map and more information.

- The site access points on Delaware Route 299 and Marcus Road must be designed in accordance with DelDOT's Development Coordination Manual, A copy of the Manual is available at https ://\.vww .deldot.gov/Business/ subdivisions/index. shtml?dc=changes **Understood, entrance design will meet DelDOT requirements.**

- Pursuant to Section P.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at http://www.deldot.gov/Business/subdivision /pdf /M-eting Regue t Form.pdf?0802201 Z. The applicant's engineer met with DelDOT representatives on August 16, 2017, but should contact Mr. Pao Lin, DelDOT's Subdivision Reviewer for southern New Castle County, to verify that that meeting was sufficient. Mr. Lin may be reached at (302) 760-2157 or Pao.Lin@state.de.us. **We will meet with Mr. Lin one more time prior to submitting plans for review.**

- Section P.5 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review. **Fees will be paid as required.**

- Per Section 2.2.2.1 of the Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. The 970 vehicle trip ends per day shown on the PLUS application appears to have been calculated using a regression equation in the Institute of Transportation Engineers' (ITE) Trip Generation Manual. DelDOT believes this number

is unrealistically high but the ITE manual's data on Continuing Care Retirement Communitiesis limited to sites much larger than the one proposed. At the August meeting mentioned above, it was discussed that the developer's engineer would count traffic at a more similar site, the Summit at Hockessin, and use that data to estimate their site's traffic. DelDOT will evaluate the need for a TIS when they receive that information. **We will be conducting counts at the Hockessin site to obtain a more accurate trip generation.**

- Per Section 2.3.2 of the Manual, Traffic Operational Analyses (TOA) may be required for developments generating more than 200 vehicle trip ends per day. At the August meeting mentioned above, the applicant expressed interest in having a full access on Route 299 where the right-tum-only access is shown on the plan. DelDOT anticipates requiring a TOA to verify the adequacy of this entrance, either with or without left turn movements. Because eastbound Route 299 is narrowing across the site frontage, it is quite likely that no access on Route 299 will be feasible. **Understood. We will work with DelDOT to determine the best access for the site to SR 299 as previously discussed.**

- Section 2.5.1 of the Manual addresses signal agreements, meaning documents by which developers and others agree to fund all or part of the construction of a traffic signal. DelDOT anticipates that a signal will be warranted at the intersection of Route 299 and Marcus Road when the land on the north side of Route 299 there is developed. DelDOT will require the applicant to enter a signal agreement to cover part of the cost of that signal. **We will work with DelDOT on the requested Signal Agreement for SR 299 and Marcus Road.**

- Section 3.2.4.2 of the Manual addresses the placement of right-of-way monuments (markers) along the roads on which a property fronts, in this case Delaware Route 299 and Marcus Road. Monuments sufficient to re-establish the permanent rights-of-way after the dedication discussed below should be shown on the plan and provided in the field in accordance with this section. **Monuments will be placed at right-of-way corners if no markers currently exist.**

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Manual, DelDOT will require dedication of right-of-way along the site's frontage on Delaware Route 299 and Marcus Road. By this regulation, this dedication is to provide a minimum of 30 feet ofright-of-way from the outermost edge of the through lanes on the divided portion of Route 299 (already acquired for Delaware Route 1 construction), 40 feet from the physical centerline on the undivided portion of Route 299 and 25 feet from the physical centerline of Marcus Road. The following right-of-way dedication note is required, **"An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."** Rights-of-way and dedications should be dimensioned on the plans. **Right-of-way dedication will be provided if required.**

- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Delaware Route 299. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **"A 15-foot wide permanent easement is hereby established for the State of Delaware, as per this plat." The required easement will be provided if required.**

- In accordance with Section 3.4 of the Manual, a record plan shall be prepared prior to issuing "Letter of No Objection". The following information will be required for the "Letter of No Objection" review:

    - Initial Stage Fee Calculation Form
    - Initial Stage Review Fee
    - Gate-Keeping Checklist - Site Plan
    - Design Checklist - Record Plan
    - Sight Distance Spreadsheet
    - Owners and Engineers' name and e-mail address
    - Record Plan
    - Conceptual Entrance Plan
    - Submission of the Area-Wide Study Fee (If applicable)

Understood.

- Referring to Section 3.4.2.1 of the Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.
    - Depiction of all existing entrances within 600 feet of the proposed entrance on Route 299 and within 300 feet of the proposed entrance on Marcus Road.
    - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

Understood.

- As per the Delaware Strategies for State Policies and Spending, this development is in Investment Level 1. Referring to Section 3.5.4.2.A of the Manual, developments in Level 1 Areas are required to install a sidewalk or Shared Use Path along the length of their frontage. DelDOT anticipates requiring the applicant to provide a Shared Use Path along their frontage on Delaware Route 299. **Sidewalk/Shared Use Path will be provided.**

- Section 3.5.4.3 of the Manual, addresses walkways. As discussed at the August meeting, DelDOT anticipates requiring the applicant to provide a sidewalk into the site from their smaller frontage on Marcus Road. As drawn, the exploratory plan shows a walkway on an appropriate location but does not show how it would tie into Marcus Road and appears to show a connection to the internal network that would not meet Americans with Disabilities Act (ADA) criteria. **A sidewalk will be provided from the site to Marcus Road.**

- Section 3.5.4.2.B of the Manual, addresses where sidewalks and Shared Use Paths are required along subdivision streets. DelDOT anticipates requiring the applicant to provide a sidewalk or Shared Use Path along their larger frontage on Marcus Road. **We will provide the requested sidewalk.**

- Because the proposed development is to be constructed in the proximity of roads with a functional classification of principal arterial, freeway or interstate, specifically Delaware Route 1, the developer will be required to perform a noise analysis in accordance with DelDOT's Noise Policy, found in Section 3.6 of the Manual and may be required to provide noise abatement for residents based on that analysis. DelDOT acknowledges that there are few firms offering to do this work at this time and recommends that the applicant contact the American Council of Engineering Companies (www.acec.org). Their member directory includes a search engine that may help them to locate a firm to do the work. **DelDOT stated at the August meeting that a Noise Study would not be required for the project due to the substantial distance from the SR 1 mainline travel way to the project. We will be sending a separate letter to DelDOT concerning the noise study request.**

- In accordance with Section 3.8 of the Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Delaware Routes 1 and 299. **Understood.**

- Referring to Section 4.3 of the Manual, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review:

    - Construction Stage Fee Calculation Form
    - Construction Review Fee
    - Gate-Keeping Checklist - Entrance Plan
    - Design Checklist - Entrance Plan
    - Auxiliary Lane Spreadsheet
    - Entrance Plan
    - Pipe/Angle Spreadsheet (If applicable)
    - SWM Report and Calculations (If applicable)

    Understood. The intent of the plan is to have all stormwater recharge with no flows to DelDOT right-of-way.

- In accordance with Section 5.2.5.6 of the Manual, Turning Movement Diagrams shall be provided to verify vehicles can safely enter and exit the site entrances. As per Section 5.2.3 of the Manual, the entrances shall be designed for the largest vehicle using the entrance. **Autoturn diagrams will be provided on the Entrance Plans to ensure adequate turning movements are provided.**

- In accordance with Section 5.2.9 of the Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at bttps ://www.deldot.gov/Bu ine / ubdivision s/index.shtml. **The requested forms will be provided at the Record/Entrance Plan stage.**

- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at https://www.deldot.gov/Business/subdivisions/index.shtml. **Sight Distance triangles will be provide.**

- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated. **Existing utilities will be shown on all construction plans.**

- Section 6.2 of the Manual addresses utility construction. At the August meeting it was discussed that the applicant may want to run a sanitary sewer line in the Delaware Route 1 right-of-way to connect to the Spring Oaks sewer main and, from the exploratory plan, it appears that that is still the case. The applicant should contact Mr Robert Cunningham, Assistant Director for Right-of-Way in DelDOT's Division of Transportation Solutions, to pursue this matter further. Mr. Cunningham may be reached at (302) 760-2078 or Robert.Cunningham @stat .de.us. **Understood.**

    - Section 6.4.3 of the Manual, which pertains to the inspection and acceptance of commercial entrances, applies to the site entrances. While it has yet to be determined whether entrance improvements will be needed, if they are, then construction inspection responsibilities shall be in accordance with Figure 6.4.3-a. DelDOT's preliminary reading of this figure is that the project requires Level I inspection and that a construction inspection agreement will not be needed. **Understood.**

- Section 7.7.2 of the Manual addresses the need to provide 20-foot wide drainage easements for all storm drainage systems, open or closed, that fall outside the existing right-of-way or the drainage/utility easement. In accordance with this section, metes and bounds and total areas need to be shown for any drainage easements. The easements should be shown and noted on the record plan. **Easements will be provided if required.**

Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352
Executive Summary
Development of this parcel will result in increased impervious surface and new sources of greenhouse gas emissions. Opportunities exist to preserve natural resources while reducing the environmental impact on-site. As discussed at the PLUS meeting, the Department recommends reduced impervious surface cover and protection of the excellent groundwater recharge area, on which the parcel is located. Due to this source water concern, DNREC has outlined a number of best management practices to assist in protecting the resource and the overall health of the community. **As stated at the PLUS meeting, stormwater run-off from the project will be recharged.**

The State of Delaware is threatened by climate change and has a goal of reducing greenhouse gas emissions by 30 percent by 2030. Appropriate development and re-development that provides access to public transportation, opportunities to walk and bike to shopping and recreation, and that employs energy efficient building standards are among key strategies to meet these goals.
DNREC encourages the use of high performance building standards and consideration of alternative energy sources to promote clean sustainable energy and reduce greenhouse gas emissions. This could mean siting the buildings to take advantage of solar and geothermal systems, and/or including infrastructure for electric vehicle charging stations (funding assistance may be found at www.de.gov/cleantransportation). DNREC further recommends an abundant use of native vegetation and shade trees throughout the landscape, as well as other green infrastructure, where practicable, to absorb carbon dioxide, protect water quality and provide relief to residents on hot days. **Understood. We will consider the requests during the design process.**

The following pages provide information about applicable regulations and detailed recommendations associated with this project, from various DNREC Divisions. DNREC would like to be a partner in creating appropriate development that protects and highlights the environment as a natural amenity of the landscape. The Department has resources and expertise that are available to help make this a reality, often at no expense to the landowner.

Water Quality: TMDLs.

- The project is located in the greater Delaware River and Bay drainage area, specifically within the Appoquinimink River watershed. In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nitrogen, phosphorus, and bacteria (under the auspices of Section 303(d) of the Clean Water Act). A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited waterbody" can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; State of Delaware Surface Water Quality Standards, as amended July 11, 2004) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the Appoquinimink River watershed calls for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 8 percent (freshwaters) reduction in bacteria from baseline conditions. The specific TMDL nutrient and bacterial load reductions for the Appoquinimink watershed can be viewed here: http://www.dnrec.deJaware.gov /swc/wa/ Pages/ Watershed As essmenl MDL .aspx **Understood. As stated above, SWM will be handled with pre-treatment facilities before being recharged.**

Water Supply.

- The information provided indicates that Artesian Water Company will provide water to the proposed project through a public water system. Our files reflect that Artesian Water Company does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at (302) 736-7500. Should an on-site public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal areas, storm water management pond, and at least 150 feet from the outermost boundaries of the project. The DNREC Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells. **Artesian Water has stated that they have a right to provide water to the project. We will make sure that they contact DNREC about the discrepancy.**

- 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. **Understood.**

- 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 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. **Understood.**

Source Water Protection.

- DNREC has determined that the project falls entirely within an excellent ground-water recharge potential area for New Castle County (see attached map).

  New Castle County (NCC) refers to excellent ground-water recharge potential areas as 'recharge areas'. Recharge areas are characterized as deposits of coarser grained material that have the best ability to transmit water vertically through the unsaturated zone to the water table. The NCC recharge areas were mapped using the methods described in the Delaware Geological Survey Open File Report No. 34, "Methodology for Mapping Ground-Water Recharge Areas in Delaware's Coastal Plain" (Andres, 1991), and depicted in a series of maps prepared by the Delaware Geological Survey (Butoryak and Tally, 1993).
  - o Perform an environmental assessment report showing that *water quality* as well as *water quantity* of post development recharge is equal to or greater than pre-development recharge (Kaufmann, 2005).
  - o Quantify amount of recharge lost due to impervious cover and compaction and provide for onsite infiltration of water at least equal to or greater than pre-development recharge (Kaufmann, 2005).
  - o Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration

  Understood. We will submit an EIA to NCC as part of the approval process with recharge being accomplished to meet or exceed the current conditions for groundwater recharge.

- In addition, because the excellent ground water recharge area can so quickly affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

References:

Andres, A. Scott, 1991, Methodology for Mapping Ground-Water Recharge Areas in Delaware's Coastal Plain: Delaware Geological Survey Open File Report No. 34, p. 18.

Butoryak, Kathleen R. , and Talley, John H., 1993, Delineation of Ground-Water Recharge Resource Protection Areas in the Coastal Plain of New Castle County, Delaware: Delaware Geological Survey Project Report for the Water Resources Agency for New Castle County, p. 26.

Kauffman, G.J., Wozniak, S.L., and Yonek, K.J., 2005, *Delaware Ground-Water Recharge Design Manual:* Newark, DE, Water Resources Agency, University of Delaware, p. 31.

Pre-treatment of all stormwater will be part of this plan.

Sediment and Erosion Control/Stormwater Management

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post- development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the New Castle County Department of Land Use Engineering Section. Contact the Department of Land Use at (302) 395- 5470 for details regarding submittal requirements and fees. **E & S Plans will be prepared and submitted to NCC for approval prior to any construction on the site.**

Air Quality.

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project.

Table 1: Potential Regulatory Requirements

Regulation	Requirements
7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling	• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Use covers on trucks that transport material to and from site to prevent visible emissions.
7 DE Admin. Code 1144 – Control of Stationary Generator Emissions	• Ensure that emissions of nitrogen oxides (NOx), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (S02), carbon monoxide (CO), and carbon dioxide (C02) from emergency generators meet the emissions limits established. (See section 3.2). • Maintain recordkeeping and reporting requirements .
7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles	• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

For a complete listing of all Delaware applicable regulations, please look at our website: http://www.awm.delaware.gov/ AQM/Pages/ AirRegulations.aspx.

Understood.

Recycling.

- Delaware Law (7 *Del.* C., §6053) and Regulations (7 *Del. Admin. C.* §1305) specify that the 'commercial sector' shall participate in a comprehensive recycling program. As such, all those involved with the planning of the facilities should allocate space for collection of recyclables that would be typically generated. For example, space for a recycling dumpster should be provided adjacent to each trash dumpster.

- The Universal Recycling Law (7 *Del.* C., §6053) and Regulations (7 *Del. Admin.* C. §1305) require all waste service providers to provide recycling collection to their residential customers including multi-family residential settings. Property owners/managers must provide information to residents and help facilitate services. Every trash dumpster should have an adjacent recycling dumpster. Those involved with the planning of new facilities should allocate space for collection of recyclables.

- For more information or assistance related to recycling requirements, benefits, tools, and assistance please call Don Long, at (302) 739-9403.

Understood.

<u>State Historic Preservation Office - Contact Terrence Burns 736-7404</u>

- There is a known house on the parcel known as the Samuel Pennington House (N-00111) which is possibly a mid to late 19th century farmhouse. A survey from 1986 evaluated the house as not eligible for listing in the National Register. However, given the passage of time since it was first evaluated, the house may warrant further review to ensure that current views on integrity and significance for this property type are taken into account. Please be aware that our office received an email in early January from the Evergreen Farms Community Association of Odessa requesting that the Pennington Home be saved from demolition. The Evergreen Association may have additional information about the house not included in the 1986 survey of the house. The State Historic Preservation Office recommends finding a way to retain the house as an adaptive reuse within the development. Our office would like to request updated photographs of the farmhouse and outbuildings. **The applicant has made a submission to the NCC Historic Review Board for approval of the project.**

- If any project or development proceeds, the developer should also be aware of the Unmarked Human Burials and Human Skeletal Remains Law. Prior to any demolition or ground-disturbing activities, the developer should hire an archaeological consultant, to examine the parcel for archaeological resources, including unmarked human burials or human skeletal remains, to avoid those sites or areas. **Understood.**

- Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, within or near the boundary, of a historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. Ifthere is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see ifthere is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of thecemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. Ifyou would like to see more information, please review the following websites: **www.history.delaware.gov/preservation/umhr.shtml** and **www.history.delaware.gov/preservation/cemeteries.shtml. Understood.**

- If there is federal involvement, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers whomay plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic

Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Furthermore, any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role; please review the Advisory Council's website at the following: **www.achp.gov** **Understood.**

Delaware State Fire Marshall's Office – Contact John Rudd 739-4394

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): **The required application and fees will be provided.**

Fire Protection Water Requirements:

- Water distribution system capable of delivering at least 1000 gpm for I-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- Where a water distribution system is proposed for multi-family residential sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems. **A current Fire Flow test will be provide as part of the design process along with the water system design.**

Fire Protection Features:

- All multi-family residential buildings (apartments) will require installation of automatic sprinkler protection.
- 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

The proposed building will be fully spinklered.

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.
- 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.
- 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.
  The proposed site layout will meet the access of the State Fire Code.

Gas Piping and System Information

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

Proposed plans will show all appropriate information.

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)
- 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

Proposed Plans will show all appropriate notes.

Recommendations/ Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.**

They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project. **Understood.**

Department of Transportation - Contact Bill Brockenbrough 760-2109

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that as of August 1, 2015, all new plan submittals and re-submittals, including major, minor and commercial plans, shall now be uploaded via the PDCA (Planning Development Coordination Application) with any review fee paid online via

  https://www.deldot.gov/Business/subdivisions/pdfs/upgrades/PDCA User-Account-Request-User-Login-Project.pdf. **Understood.**

- All existing structures shown on the plan that are to be removed should be so labeled. **Understood.**

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of October 11, 2017. The notes can be found at http://www.deldot.gov/Business/subdivisions/docs/2017/Sheet_Notes.doc. **Understood.**

  Of the DelDOT General Record Plan Notes provided on the Exploratory Plan, notes, 1, 2, 3, 11 and 12 should be retained. Notes 4 through 10 apply to residential subdivisions and should be deleted. Note 13 will need to be reworded to address the correct roads but should be retained as well. **Understood.**

Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352

Additional information on TMDLs and water quality.

- In response to concerns about the need for reducing nonpoint source nutrient (nitrogen and phosphorus) and bacterial pollutants to levels sufficient to meet the prescribed TMDL reduction requirements in the Appoquinimink watershed, a multifaceted and comprehensive process known as a pollution control strategy (PCS) has been developed to enable such reductions. Specifically, a PCS is a combination of best management practices and control technologies that reduce nutrient and bacterial pollutant runoff loading in waters of a given watershed to levels consistent with the TMDL reduction levels specified for that watershed. The PCS for the Appoquinimink River watershed consists of recommendations from the following four areas: agriculture, land preservation (open space), stormwater, and wastewater. Additional information about Appoquinimink River PCS is available here: http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx **Understood.**

- In further support of the PCS, the applicant is also strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended best management practices:

- Maintain as much of the existing forest cover and open space as possible in this parcel. DNREC further suggests additional native tree, shrub and/or native herbaceous vegetation plantings in available open space, wherever possible. **Open areas will be reforested and substantial landscaping with native materials in accordance with NCC requirements will be part of the project.**

- Employ green-technology storm water management and a rain gardens (in lieu of open-water management structures) as a best management practice, to mitigate or reduce nutrient and bacterial pollutant runoff. Ifopen-water stormwater management is selected for use, they should be limited to meet their intended stormwater management function. It should also be noted that open-water stormwater ponds attract nuisance geese and nuisance algae that can contribute to the degradation of water quality. **All stormwater run-off will be pretreated with green technology practices prior to being recharged all in accordance with DNREC and NCC requirements.**

- Assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the "Nutrient Load Assessment protocol." The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) resulting from the conversion of individual or combined land parcels to a changed land use; thus providing applicants and governmental entities with quantitative information about the project's impact(s) on baseline water quality. DNREC strongly encourages the applicant/developer use this protocol to design and implement the most effective best management practices. Please contact John Martin of the DNREC Division of Watershed Stewardship, at (302) 739-9939 for more information on the protocol. **Understood.**

Additional information on air quality.

- New homes may emit, or cause to be emitted, additional air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. Air emissions generated from new homes include emissions from the following activities:
  - Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
  - The generation of electricity, and
  - All transportation activity.

- Based on the information provided, the three air emissions components (i.e. area, electric power generation, and mobile sources) for the project were quantified. Table **1** represents the potential impact the Vantage Point Middletown project may have on air quality.

Table 1: Projected Air Quality Emissions for the Vantage Point Middletown Senior Living Facility

Emissions Attributable to Vantage Point Middletown Senior Living Facility (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (S02)	Fine Particulate Matter (PM2.s)	Carbon Dioxide (C02)
Area source emissions	3.9	0.4	0.4	0.5	15.9
Power emissions	*	1.6	5.4	*	799.4
Mobile emissions	5.8	6.1	0.2	0.1	3,753.5
Total emissions	9.7	8.1	6.0	0.6	4,568.8

(*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the senior living facility, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above. **Understood.**

- Site/Project-Specific Recommendations:
  - Planting of native, low VOC emitting shade trees (see below for further clarification) to clean the air of localized pollutants and cut down on residential energy/cooling costs.
  - The use of reclaimed asphalt pavement (RAP), which reduces heat island effects on paved surfaces, reduces landfill waste, is a sustainable pavement and more economically feasible than other pavement types.
  - Use only the minimum number of parking areas to reduce the amount of impervious surface cover.
  - Shade for parking areas to reduce heat island impacts.
  - Use of energy efficient products in construction to lessen the power source emissions of the project and costs.
  - Electric vehicle charging in common areas to facilitate the shift from vehicle-centric travel to other modes.
  - Expansion of the bicycle/pedestrian network through sidewalks and bike lanes which also promote alternative forms of transportation. According to the DelDOT Gateway application, this project has an opportunity to connect to a regional bicycle road off of Middletown-Odessa Road (Route 299).

- Beautification and landscaping to generate a context-sensitive design that would blend in well with surrounding land uses while also helping to mitigate the pollution potential of the project.
  Understood.

- Tree Buffer or Canopy: Some green streetscape elements that the Vantage Point Middletown senior living facility could incorporate are a tree buffer or expansion of the Town of Middletown's tree canopy. According to the Delaware Forest Service, in 2014, Middletown's Urban Tree Canopy was 12.5 percent (933.5 acres). Native, low VOC emitting trees reduce emissions by trapping dust particles and replenishing oxygen. Every effort should be made to ensure as many original trees are preserved as possible. **The open areas on the development will be reforested/landscaped in accordance with NCC requirements.**

  Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs. **Understood.**

  All urban trees that are selected should be native to Delaware and preferably low VOC emitting trees. Every tree has a different biogenic emissions rate by which they release VOC's into our atmosphere. As a general reminder, the best trees to plant are those that have a large leaf surface area at maturity, contain leaf characteristics that are amenable to particle collection from particulate matter (PM) such as those that have hairy or sticky leaves and have high transpiration rates which result in relatively high temperature reduction. White pines, Heritage River Birch, and American Beech fall within these categories and contain these characteristics. Check out the National Tree Benefit Calculator to see the benefits planting trees can have in terms of economic and environmental value:
  https://www.arborday.org/calculator/index.cfm?utm_medium=TreeGuideMenu%2Bfeature&utm_campaign=reeCalculator **Understood.**

- Energy Efficient Options: Constructing with only energy efficient products can help your housing units immensely, not only in terms of environmental sustainability but financially. Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment as well as third-party certifications and building materials (i.e. LEED, Greenseal, EcoLogo). Every percentage of energy efficiency translates into a percent reduction in pollution. **Understood.**

Economic benefits include:

- Reduced operating costs
- Enhanced asset value and profits
- Enhanced occupant comfort and health
- Improved air, thermal, and acoustic environments

The Energy Star Program is an excellent way to save on energy costs and reduce air pollution. Providing shade for parking areas can also be of added benefit to this facility. Some approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating storm water. For more about energy efficient options, please see: https://www. nergy tar.gov/ or http ://www.epa.gov/green ingepa/energy-efficiency-epa . **Understood.**

- Multi-modal travel: A component of improving existing air quality levels is to maximize multi-modal travel through bike lanes, sidewalks and convenient access to transit opportunities. DNREC was happy to see sidewalks included in the plans for the project. DNREC encourages the developer to include crosswalks and to add sharrows or bike lanes where needed to encourage multi-modal travel opportunities. Sharrows and striping are the easiest and most cost effective option. According to the DelDOT Gateway application, there is an opportunity to connect to a regional bicycle route off of Middletown-Odessa Road (Route 299). Please see the following link for more details: http://deldot.maps.arcgis.com/ apps/we bappv iewer/index .html?id=c33fdabe66be4f9799bceb92da5900ba . Multi-modal travel can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk or bike path, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year. **Understood.**

  Also, for more information on the impacts of multimodal access on air quality please see the EPA's website at: https://www3.epa.gov/otaq/.

- Electric Vehicle Charging (EVSE) Expansion: Include electric vehicle supply equipment (ESVE)/ charging infrastructure where feasible, particularly in common areas. Incorporating electric vehicle charging capabilities in common parking areas could also be marketed as a unique selling feature while also accommodating Delaware's clean transportation goals. More information can be viewed here: D .Gov/cleantran portation **We will consider the placement of electric vehicle charging stations on the property.**

- Development Beautification: The developer is encouraged to beautify the development site with landscaping that would not only make the subdivision more attractive but also help to clean the air of any pollutants that could be emitted or transported by sources

around the development area such as pollutants from mobile sources, construction or neighboring activities. This would reduce air quality impacts on residents while also incorporating a context-sensitive design that blends well with the surrounding development and existing land uses. **A detailed landscape plan will be part of the project that not only meets the NCC requirements, but also provides an attractive site.**

- The overall project enhancements will create valued upgrades to the existing community and add air quality benefits. Should the developer have any more questions or concerns, the DNREC Division of Air Quality (DAQ) point of contact is Lauren DeVore, and she may be reached at (302) 739-9437 or lauren.devore@state.de.us. The applicant is encouraged to contact DAQ to discuss any emission mitigation measures that will be incorporated into the Vantage Point Middletown senior living facility project. DNREC looks forward to working together with you on this project to achieve our shared air quality goals. **Understood.**

Additional information on recycling and reducing water use.

- Materials and resources utilized for new development should be considered, including regionally available recycled content (i.e. carpet, concrete, countertops, furniture, siding, etc.), rapidly renewable material and certified woods. **Understood.**

- Construction Waste Management should include policies which promote efficient material use and recycling of project debris. **Understood.**

- Employ systems and appliances that increase water efficiency and reduce water use.
  - Low-flow and high-efficiency items
  - Waterless urinals
  - graywater recycling systems
  - Rainwater catchment

  Understood.

Delaware State Fire Marshall's Office - Contact John Rudd 739-4394

- The facility may be required to be licensed by the Department of Health and Social Services (DHSS), specifically the Office of Health Facilities Licensing & Certification (OHFLC). Additionally, the Center for Medicare and Medicaid Services (CMS) may impose additional requirements where applicable. It is suggested that you contact Corinna Getchell of OHFLC for additional information at (302) 283-7220. **Understood.**

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

We thank you for the opportunity of addressing your comments and look forward to a successful project.

Very truly yours,

Ted C. Williams, P.E., FACEC
President

cc: Janet Vinc
Gregory Stevens
Trupert Ortlieb
Michael J. Hoffman