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Engineering & Management, LLC

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A Wholly Owned Subsidiary

June 17, 2015

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

**Re: The Grove (FKA The Enclave at Fenwick)  
Response to PLUS Review 2015-04-01**

Dear Ms. Holland:

Thank you for your prompt response after our PLUS meeting on April 22, 2015, concerning the upcoming request to rezone the referenced property from AR-1 to MR with Conditional Use. Please accept this letter as our formal response to each comment provided.

It is understood that 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.

#### Strategies for State Policies and Spending

This project is located in Investment Level 3 according to the *Strategies for State Policies and Spending*. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments may support future growth in these areas, but please be advised that the State has other priorities for the near future. We encourage you to design the site with respect for the environmental features which are present.

**Response: It is understood that this project is located in Investment Level 3.**

#### **Code Requirements/Agency Permitting Requirements**

##### Department of Transportation -Contact Bill Brockenbrough 760-2109

- Per Section 2.2.2.1 of the Development Coordination 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. From the plan accompanying the PLUS application, DelDOT estimates that the development would generate 424 vehicle trip ends per day on a typical weekday. This number differs significantly from the volume shown on the PLUS application, which DelDOT understands to be in error. For the weekday morning

and evening peak hours, we calculate 34 and 57 vehicles per hour, respectively. Based on the evening peak hour volume, this project would warrant a TIS.

However, per Section 2.2.2.2 of the Manual, developments generating fewer than 2000 vehicle trip ends per day and fewer than 200 vehicle trip ends per hour in any hour of the day are eligible to pay the Area Wide Study Fee in lieu of conducting a TIS. This fee is calculated as \$10 per daily trip, so for this project it would be \$4,240. The AWS Fee form is found under Appendix C, page C-6, of the Manual. Payment of the fee does not exempt the developer from having to conduct a Traffic Operational Analysis (TOA) if the need for one is identified in the entrance plan review process or from participating in off-site improvements if they are determined to be necessary. Presently, DelDOT does not see a need for a TOA or off-site improvements.

To obtain a scope of work for a TIS, the applicant may have their engineer contact Mr. Troy Brestel of this office. Mr. Brestel may be reached at (302) 760-2167.

- The site access on Route 54 must be designed in accordance with DelDOT's Development Coordination Manual (formerly the Standards and Regulations for Subdivision Streets and State Highway Access), which is available at <http://www.deldot.gov/information/business/subdivisions/changes/index.shtml>.
- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage on Route 54. By this regulation, this dedication is to provide a minimum of 40 feet of right-of-way from the road centerline. 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."**
- In accordance with Section 3.2.5.1.1 of the Development Coordination Manual, if this development is proposing any gateway features such as a neighborhood sign/structure, then a permanent easement shall be established at the entrance. The easement shall be located outside of any existing and/or proposed right-of-way. It will also need to be verified that the sign/structure does not pose a sight distance and/or safety hazard.
- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Route 54. 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 to the State of Delaware, as per this plat."**
- In accordance with Section 3.4 of the Development Coordination 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:

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- o Copy of the Initial Stage Fee Calculation Form
- o Copy of the Initial Stage Review Fee
- o Gate-Keeping Checklist - Site Plan o SightDistance Spreadsheet
- o Design Checklist-Record Plan\*
- o Owners and Engineer's name and e-mail address
- o Three (3) paper sets of the Record Plan
- o Conceptual Entrance Plan
- o CD with a pdf of the Site Plan
- o Submission of the Area-Wide Study Fee (if applicable)

\*For the design checklist for the site plan, please refer to the Development Coordination Manual, Appendix D, Plan Review Checklist.

- Referring to Section 3.4.1 of the Development Coordination Manual, because the proposed development would generate more than 200 vehicle trips per day, a Pre- Submittal Meeting is required before plans are submitted for review. The form needed to request this meeting is available [http://www.deldot.gov/information/business/subdivisions/Meeting\\_Request\\_Form.pdf](http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.pdf).
- Referring to Section 3.4.2.1 of the Development Coordination Manual, a Traffic Generation Diagram is required on the Record Plan. See Figure 3.4.2-a for the required format and content.
- Referring again to Section 3.4.2.1 of the Development Coordination Manual, and specifically Figure 3.4.2-b, the record plan should show all existing entrances within 450 feet of the proposed entrance. To the west, this distance may include the Laws Point Road intersection.
- In accordance with Section 3.5 of the Development Coordination Manual, the proposed private subdivision streets should follow Sussex County's requirements for connectivity. That said, DelDOT does have comments in this regard, which they offer under Suggestions below.
- Referring to Section 3.5.4.2 of the Development Coordination Manual, projects located in Level 3 Investment Areas relative to the Strategies for State Policies and Spending that generate fewer than 2,000 Average Daily Trips (ADT) and need Entrance Plan Approval are required to install a shared-use path or sidewalk along the State-maintained road frontage if the project abuts an existing facility. DelDOT Contract 24-112-01, Route 54 Mainline Improvements, included construction of a sidewalk along the property frontage. The applicant will be required to provide continued pedestrian access across their site entrance.

- Referring to Section 3.5.5 of the Development Coordination Manual, existing and proposed transit stops and associated facilities as required by the Delaware Transit Corporation (DTC) or DeIDOT, in consultation with Sussex County, shall be shown on the Record Plan.
- In accordance with Section 3.8 of the Development Coordination 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 Route 54.
- Referring to Section 4.3 of the Development Coordination Manual, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review:
  - o Copy of the Construction Stage Fee Calculation Form
  - o Copy of the Construction Review Fee
  - o Gate-Keeping Checklist -Entrance Plan
  - o Auxiliary Lane Spreadsheet
  - o Design Checklist -Entrance Plan\*\*
  - o Pipe/Angle Spreadsheet (if applicable)
  - o Three (3) paper sets of the Entrance Plan
  - o SWM Report and Calculations (if applicable)
  - o CD with a pdf of the Entrance Plan

\*\*For the design checklist for the entrance plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist.

- In accordance with Section 5.2.5.6 of the Development Coordination Manual, Turning Movement Diagrams shall be provided to verify vehicles can safely enter and exit the site entrance. As per Section 5.2.3 of the Manual, the entrance shall be designed for the largest vehicle using the entrance.
- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance and how long those lanes should be. The worksheet can be found at [http://www.deldot.gov/information/business/subdivisions/auxiliary\\_lane\\_worksheet.xls](http://www.deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls).
- With a daily trip generation of 424 trips, assuming that traffic is evenly split to and from the west, a right turn lane is warranted for this site. Under DeIDOT Contract 24-112-01, Route 54 Mainline Improvements, a continuous center left turn lane was constructed in the area of the project frontage, so a separate left turn lane is not required.
- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required for the site access on Route 54 and shall be established in

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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 <http://www.deldot.gov/information/business/subdivisions/Intersection-Sight-Distance.xls>.

- Metes and bounds and total areas need to be shown for any drainage easements. Section 5.7.2.6 of DelDOT's Development Coordination Manual requires, in part, a minimum 20-foot wide drainage easement for storm drainage systems, open or closed, that fall outside the existing right-of-way. These easements shall be shown and noted on the record plan.

**Response: After further coordination with Bill Brokenbrough, Steve Sisson and John Fiori it was determined that:**

- No TIS was required
- No area wide study fee would be required
- A right-in turn lane into the site would be required.

Department of Natural Resources and Environmental Control -Contact Kevin Coyle 735-3495

- **Wetlands**

State regulated wetlands ARE NOT located on this property based on a review of the State wetland maps. State regulated subaqueous lands ARE NOT likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps.

Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. According to GIS SWMP maps, there are considerable wetlands regulated by the U.S. Army Corps of Engineers on this parcel. A wetlands delineation should be done by a consultant to determine actual wetland borders for setbacks and Army Corps compliance.

Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce.

The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdictional. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at

<http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm>.

Response: An on-site wetlands delineation has been conducted by Environmental Resources, Inc and Jurisdictional Determination from the Corps of Engineers will be obtained. There are no setbacks required by Sussex County form non-tidal wetlands but no disturbance is proposed.

### TMDLs

- The project is located in the low nutrient reduction zone of the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) for nutrients (e.g., nitrogen, phosphorus), and bacteria. 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 *low reduction* zone of the Inland Bays watershed calls for 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction (17 percent for marine waters) in bacteria from baseline conditions. Please view the following web link for further information on the regulatory requirements and technical analysis involved in the development of the specific TMDLs: <http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessmentTMDLs.aspx>

The Inland Bays Pollution Control Strategy (PCS) and the accompanying regulations were finalized by order of the DNREC Secretary on October 2008. The PCS regulations can be reviewed at <http://regulations.delaware.gov/documents/November2008c.pdf>.

Background information about the PCS with guidance documents and mapping tools can be retrieved from

[http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib\\_pcs.htm](http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm)

A nutrient management plan is required under the *Delaware Nutrient Management Law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project's open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

Response: Understood, the project will comply with applicable state law and DNREC regulations. Once storm water management and other project requirements have been designed, we will be able to properly calculate open space and, if the open space that will be actively managed exceeds the 10 acre threshold, a nutrient management plan will be provided by either the developer or the home owner's association depending on which entity will be applying nutrients. Much of the open space will be wooded wetlands where no nutrients will be applied.

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## Water Supply

- The project information sheets state that public water will be provided to the project by Sussex County via a central water system. DNREC records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity (CPCN) OO-CPCN-07. DNREC recommends that the developer contact Artesian Water Company to determine the availability of public water. Any public water utility providing water to the site must obtain a CPCN from the Public Service Commission. Information on CPCN's and the application process can be obtained by contacting the Public Service Commission at 302- 739-4247.

Should an on-site Public/Miscellaneous 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 area, and it must also be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

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

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

**Response: Understood. Should a well become necessary, the project will comply with applicable state laws regarding their permitting, construction and operation.**

## Sediment and Stormwater Program

- 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 Sussex Conservation District. Contact the Sussex Conservation District at (302) 856-7219 for details regarding submittal

requirements and fees

**Response:** A sediment and storm water plan will be prepared per Sussex Conservation District standards.

#### **Hazardous Waste Sites**

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

**Response:** Understood.

#### **Tank Management Section**

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C. Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.
- There are no confirmed leaking underground storage tank (LUST) projects located within a quarter mile from the proposed project area
- No environmental impacts are anticipated; however, per the UST Regulations: Part E, § 1. Reporting Requirements:
  - Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
    - The Department's 24-hour Release Hot Line by calling 800-662-8802; and
    - The DNREC Tank Management Branch by calling 302-395-2500

**Response:** Understood, thank you for the information.

#### **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               | <ul style="list-style-type: none"> <li>• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</li> <li>• Use covers on trucks that transport material to and</li> </ul>                                    |
| 7 DE Admin. Code 1113 – Open Burning   | <ul style="list-style-type: none"> <li>• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</li> <li>• Prohibit the burning of land clearing debris .</li> <li>• Prohibit the burning of trash or building materials/debris.</li> </ul>                           |
| 7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan       | <ul style="list-style-type: none"> <li>• Require, for any "federal action," a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)</li> </ul>  |
| 7 DE Admin. Code 1141- Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial | <ul style="list-style-type: none"> <li>• Use structural/ paint coatings that are low in Volatile Organic Compounds.</li> <li>• Use covers on paint containers when paint containers are not in use.</li> </ul>  |
| 7 DE Admin. Code 1144 – Control of Stationary Generator Emissions                                    | <ul style="list-style-type: none"> <li>• Ensure that emissions of nitrogen oxides (NOx), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO2), carbon monoxide (CO), and carbon dioxide (CO2) from emergency generators meet the emissions limits established.</li> </ul> |
| 7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles                                      | <ul style="list-style-type: none"> <li>• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</li> </ul>   |

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

**Response: Understood, thank you for the information.**

State Historic Preservation Office - Contact Terrence Burns 736-7404

- There are no known archaeological sites, or National Register-listed property on this

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parcel. However, if there will be any development project in the future, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is in Chapter 54 of Title 7, of the Delaware Code (7 Del. C. Ch. 54).

Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an 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 (7 Del. C. Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there 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 if there 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 the cemeteries 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. If you would like to know more information pertaining to unmarked human remains or cemeteries, please check the following websites for additional information: [www.history.delaware.gov/preservation/unmarked.html](http://www.history.delaware.gov/preservation/unmarked.html) and [www.history.delaware.gov/preservation/cemeteries.html](http://www.history.delaware.gov/preservation/cemeteries.html).

Therefore, prior to any demolition or ground-disturbing activities, the developer may want to hire an archaeological consultant to examine the parcel for any potential archaeological site or archaeological resources, such as cemetery, burial site, or unmarked human remains.

- If there is any federal involvement with the project, 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 who may 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

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role, please review the Advisory Council's website at [www.achp.gov](http://www.achp.gov)

**Response: Understood, thank you for the information. The developer is aware of and will abide by Delaware's Unmarked Human Burials and Human Skeletal Remains Law.**

### **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 the suggestions can benefit the project.

Department of Transportation -Contact Bill Brockenbrough 760-2109

- Please refer to DelDOT Contract 24-112-01, Route 54 Mainline Improvements, for the "As-Built" and "As-Acquired" plans concerning the roadway and drainage improvements constructed and the rights-of-way acquired along the property frontage.
- The property has frontage on two private roads. Laws Point Road is a privately maintained public right-of-way serving the Swann Keys and Shady Park developments and Bayville Shores Road is a private right-of-way serving the Bayville Shores development. Significantly, the intersection of Route 54 and Laws Point Road is signalized. DelDOT recommends that the developer work with the parties maintaining Laws Point Road and Bayville Shores Road to obtain access to them if possible. Doing so would provide residents of this project with either access to an existing signal in the case of Laws Point Road or the possibility of access to a future signal in the case of Bayville Shores Road. By itself, this project is unlikely to ever have signalized access and at times during the summer season left turns in and out will not be practical due to beach traffic.
- 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 March 21, 2014. The notes can be found at [http://www.deldot.gov/information/business/subdivisions/DelDOT Development Coordination Plan Sheet Notes.doc](http://www.deldot.gov/information/business/subdivisions/DelDOT%20Development%20Coordination%20Plan%20Sheet%20Notes.doc)
- The applicant should expect a requirement that all PLUS and/or TAC comments be addressed prior to submitting record, subdivision or entrance plans for review.
- Please check to determine whether any utilities will need to be relocated as part of this project.

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- The applicant should expect a requirement that any substation, wastewater facility or other utility parcels serving the site have access from an internal subdivision street with no direct access to Route 54.
- Please be advised DelDOT's check handling procedures changed in 2012. For specific information, see the letter available at <http://www.deldot.gov/information/business/subdivisions/PaymentProcedure.pdf>.

**Response: Understood, thank you for the information and recommendations.**

Department of Natural Resources and Environmental Control -Contact Kevin Coyle 735-3495

### **Soils Assessment**

- Based on soils survey mapping update, Hurlock is only soil mapping unit mapped on subject parcel. Hurlock is a poorly-drained wetland associated (hydric soil) that has severe limitations for development and is not considered suitable for development (Figure 1). DNREC strongly discourages building on hydric soils because they are functionally important source of water storage (functions as a "natural sponge"); the loss of water storage through excavation, filling, or grading of intact native hydric soils increases the probability for more frequent and destructive flooding events. The probability for flooding is further compounded by increases in surface imperviousness as building density in the area increases over time. Moreover, destruction of hydric soils increases the amount pollutant runoff (i.e., hydric soils sequester and detoxify pollutants) which contributes to lower observed water quality in regional waterbodies and wetlands.

DNREC urges the applicant to contact a licensed (Delaware Class D) soil scientist to make a site specific assessment (i.e., soil survey mapping) of the soils on this site. A list of licensed soil scientists can be obtained from the Ground Water Discharges Branch; the Branch can be reached by phone at 739-9947.

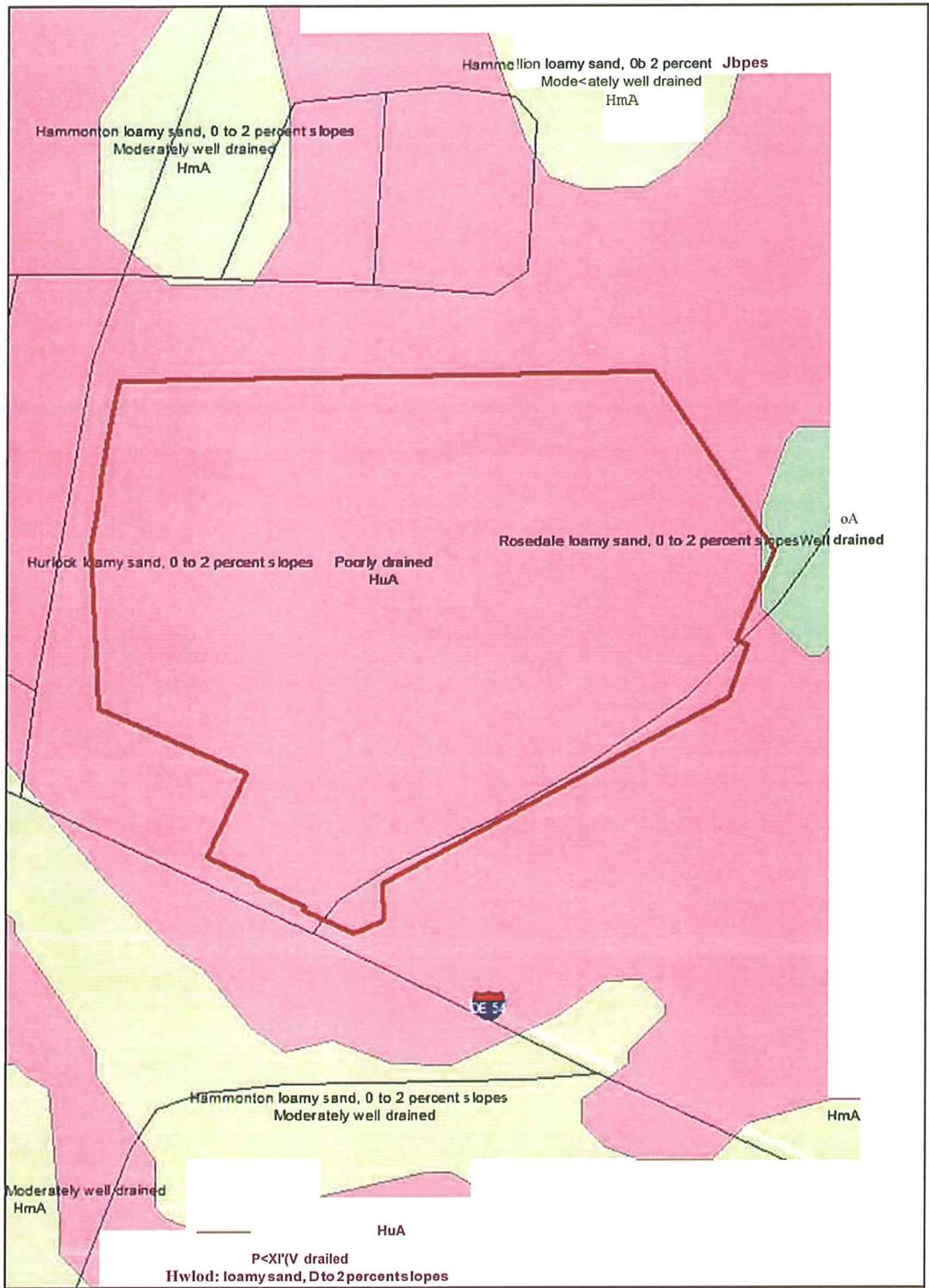


Figure 1 NRCs soil survey mapping update in the immediate vicinity of the proposed project

0 137.5 275 550 Feet

Response: Understood, thank you for the information and recommendations.

### Species and Habitat

- DNREC scientists have not surveyed the project area and in order to provide more informed comments, we request the opportunity to conduct a survey to evaluate habitat and determine the potential for species of conservation concern. Please note that our scientists have extensive knowledge of the flora and fauna of the state. The survey will be conducted at no expense to the landowner. Please contact Kate Fleming at (302) 735-8658 or at [Kate.Fleming@state.de.us](mailto:Kate.Fleming@state.de.us) if the landowner will grant a site visit.

Additionally, although leaving a forest intact is usually more beneficial to the existing wildlife and is preferential to clearing, we offer the following recommendations which if implemented will reduce impacts:

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, DNREC recommends that clearing not occur April 1st to July 31st. This clearing recommendation would only protect those species during one breeding season, because once trees are cleared the result is an overall loss of habitat.
- Given the benefit of trees in erosion control and flood abatement, tree removal for stormwater management should be minimized. This could include site plan reconfiguration to locate stormwater management facilities to non-forested areas, reducing the number and/or size of ponds, or employing alternative methods that do not require tree removal. Options should be discussed with project engineers or with the appropriate Sediment and Stormwater Plan approval agency.
- To protect the function and integrity of wetlands within the project parcel, a minimum 100-foot buffer should be left intact around the perimeter. This recommendation is based on peer reviewed scientific literature that shows an adequately-sized buffer that effectively protects wetlands and streams - in most circumstances - is about 100 feet in width. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Lot lines, roadways, and infrastructure should not be placed within this buffer zone. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms.

Response: Understood, thank you for the information and recommendations.

### Additional information on TMDLs and water quality

Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by adherence to the strategies and requirements

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described in the Inland Bays PCS, and the implementation of the following recommended BMPs:

- United States Army Corps of Engineers (USACE) approved wetlands delineation is highly recommended. According to information submitted by the applicant, a wetland delineation has not been conducted or approved by the USACE.
- Based on NRCS soil survey mapping, the entire area proposed for development contains poorly-drained wetland-associated (hydric) soils; hydric soils are considered unsuitable for development and should be avoided. Consequently, we strongly recommend that the applicant not pursue development on this parcel unless a site-specific soils evaluation by a licensed soil scientist can prove that the soil mapping conducted by the NRCS is in error.
- Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements –A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (maintaining the existing forested buffer and planting additional native vegetation to maintain this 100-foot buffer) from all waterbodies (including ditches) and wetlands (as determined by USACE approved wetlands delineation).
- Use of green-technology storm water management and a rain garden(s) (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff increases that often track post-development increases in surface imperviousness. Please contact Lara Allison at 739-9939 for further information about the possibility for installing a rain garden(s) on this parcel.
- Applicant should calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, ponds, and roads) included in the calculation for surface imperviousness. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and the environmental impacts associated with this imperviousness. Thus, omission any of the above-stated forms of surface imperviousness is not considered an acceptable BMP.
- Since this project will create additional surface imperviousness that will increase the probability for increased flooding and increased pollutant load runoff impacts to adjoining streams and wetlands in the greater Inland Bays watershed, wherever practicable, use pervious paving materials (instead of conventional asphalt and concrete)

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to mitigate these impacts. DNREC especially recommends that the applicant – at minimum - consider the use of pervious paving materials for all parking areas.

- The applicant should voluntarily 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(s); 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 help them design and implement the most effective BMPs. Please contact Jen Walls or John Martin at (Division of Watershed Stewardship) at 302-739-9939 for more information on the protocol.

**Response: Understood, thank you for the information and recommendations.**

#### **Additional information on hazardous waste sites**

- DNREC strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) and a Phase II or Facility Evaluation in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA) and the HSCA Guidance Section 2, part 2.3 (page 2-1). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the county.

Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions.

**Response: Understood, thank you for the information and recommendations.**

#### **Additional information on tank management.**

- When contamination is encountered, PVC pipe materials should be replaced with ductile

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steel and nitrile rubber gaskets in the contaminated areas.

- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

**Response: Understood, thank you for the information and recommendations.**

**Additional information on air quality.** New homes may emit, or cause to be emitted, air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from commercial spaces 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 needed to support the commercial space, 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 development were quantified. Table 2 the actual impact the Enclave at Fenwick project may have on air quality.

| Emissions Attributable to Enclave at Fenwick (Tons per Year) | Volatile Organic Compounds (VOC) | Nitrogen Oxides (NOx) | Sulfur Dioxide (SO2) | Fine Particulate Matter (PM2.s) | Carbon Dioxide (CO2) |
|--|----------------------------------|-----------------------|----------------------|---------------------------------|----------------------|
| Direct Area Source   | 1.9                              | 0.2                   | 0.2                  | 0.2                             | 7.8                  |
| Electrical Power Generation                                  | *                                | 0.8                   | 2.6                  | *                               | 390.2                |
| Mobile   | 2.8                              | 3.0                   | 0.1                  | *                               | 1,832.4              |
| <b>Total</b>   | 4.7                              | 4.0                   | 2.9                  | 0.2                             | 2,230.4              |

(\*) Indicates data is not available.

Note that emissions associated with the actual construction of the road, 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.

DNREC encourages sustainable growth practices that:

- Control sprawl;
- Preserve rural and forested areas;
- Identify conflicting land use priorities;
- Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
- Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
- Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing with only energy efficient products.** 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. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of vocs from typical architectural coating operations.

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- **Planting trees in vegetative buffer areas.** Trees reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, thereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into this project.

**Response: Understood, thank you for the information and recommendations.**

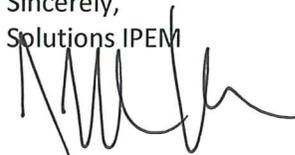
Sussex County - Contact Brady Nauman 855-7777

The Office of State Planning Coordination received a letter from Brandy B Nauman, the Housing Coordinator & Fair Housing Compliance Office for Sussex County regarding The Enclave at Fenwick PLUS application. A copy of that letter is enclosed with this letter.

**Response: Understood, thank you for the information and recommendations.**

**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.**

Sincerely,  
Solutions IPEM



Frank M. Kea, RLA

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