



**STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION**

July 20, 2011

Mr. Mark A. Russo, RLA, ASLA
4305 Miller Road
Wilmington, DE 19802

RE: PLUS review – PLUS 2011-06-07; Boyds Corner Farm

Dear Mr. Russo:

Thank you for meeting with State agency planners on June 22, 2011 to discuss the proposed plans for the Boyds Corner Farm project to be located at Boyds Corner Road and US. 13 in New Castle County.

According to the information received, you are seeking to rezone 62.78 acres from S to ST & CR for 112 single family detached homes and 146,800 sq. ft. of office and retail.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as New Castle 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 parcel is located within levels 1 & 2 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. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known cultural or historic resources such as an archaeological site, National Register-listed property, or potential cultural or historic resource on this parcel, however adjacent or just east of the parcel, across Route U.S. 13 is the Elm Grange (N-5181), which listed on the National Register of Historic Places as a contributing property of the Rebuilding of St. Georges Hundred (N-9567). According to the Pomeroy and Beers Atlas of 1868 (an historic map), it seems that there were dwellings on this parcel, which were associated with a J. Vandergrift and a couple with a W. Buchmann that were along Route 425. In addition, the USGS Topo Map of 1931 also indicated that there were dwellings approximately in the same vicinity of the ones that were indicated on the Pomeroy and Beers Atlas, and it is a possibility that may be archeological remains associated with those dwellings as well. With this in mind, it is important that the developer be aware of the Delaware Unmarked Human Remains Act of 1987, in Chapter 54 of Title 7 of the Delaware Code, which pertains to the discovery and disposition of such remains. Therefore, prior to any demolition or ground-disturbing activities, the developer should consider hiring an archaeological consultant to examine the parcel for archaeological sites, such as a cemetery or unmarked human remains.

Abandoned and unmarked family cemeteries are common on farms in Delaware. Disturbing unmarked burials triggers Delaware's Unmarked Human Burials and Human Skeletal Remains Law of 1987 (7 Del. Code Ch. 54). Such discoveries can result in substantial delays while the procedures required under this law are carried out. DHCA recommends that owners and/or developers have a qualified archaeological consultant investigate their project area for the presence of such a cemetery. If one is discovered and delineated, it is very costly to have it archaeologically excavated and the burials moved. DHCA recommends that in the event of such a discovery, the plans be redrawn to leave the cemetery on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with a homeowners association or development owner. For further information, please see following websites at:

<http://history.delaware.gov/preservation/umhr.shtml> and
<http://history.delaware.gov/preservation/cemeteries.shtml>

- 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 culture 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. Any preconstruction activities without adherence to these stipulations may jeopardize the issuance of a permit or receipt of funding if it is determined that such opportunity to comment has been foreclosed. For further information on Section 106 and the Advisory Council's role, please review the Advisory Council's website at www.achp.gov.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The proposed development meets DeIDOT's volume warrants for a Traffic Impact Study (TIS). Those warrants can be found in Section 2.3 of DeIDOT's Standards and Regulations for Subdivision Streets and State Highway Access. With that said, a TIS was submitted in October 2008 (using 2008 traffic counts) for a similar but significantly more intense development proposal. In January 2009, DeIDOT had largely completed its review of the TIS when the developer stopped work on that project. Having revisited the letter they were preparing to send in 2009, DeIDOT believes that their recommendations would be substantially the same if that study were redone today for the new proposal. If the applicant is agreeable and the County's requirements can be satisfied without new counts and additional analysis, DeIDOT would be willing to let the applicant proceed on the basis of the TIS done previously. However, if a new TIS is not needed and the proposed rezonings are granted, DeIDOT may require a Traffic Operational Analysis (TOA) in determining exact entrance locations and turning lane lengths. Some work was done in this regard in 2008 for the previous development proposal. DeIDOT will consider that work in determining what further work might be needed.
- Presently there is a Denial of Access line along the property frontage on southbound US Route 13. It exists because DeIDOT, with Federal assistance, purchased the access rights along that frontage to ensure optimal traffic operations in that area. As with the previous proposal, we believe that having one access point for the site in that area will provide for better traffic operations than not doing so. Therefore we are willing to work with the applicant to create a break in that line. DeIDOT will need to secure Federal Highway Administration approval, which we cannot guarantee. The north access point proposed along southbound US Route 13 appears to be close enough to Delaware Route 896 that it would be on the acceleration lane. Therefore in accordance with Section 9.2.1 of the Standards and Regulations, DeIDOT likely will not permit it. Similarly, the south access point proposed along southbound US Route 13 may need to be relocated farther north to avoid conflicting with the deceleration lane for Greylag Road.
- The proposed driveway access on Greylag Road is quite close to US Route 13, such that it would likely be blocked by traffic queuing back from Route 13. Also, there does not appear to be room for an adequate right turn lane into the site. Therefore we anticipate denying vehicular access there. See again Section 9.2.1 of the Standards and

Regulations. Regarding bicycle and pedestrian access, see the third comment under Suggestions.

- DelDOT supports the proposed stub street that could eventually provide a connection to Greylag Road opposite Commodore Drive, but in accordance with Section 5.1.4.2 of the Standards and Regulations, we would require a temporary turnaround feature at the end.
- One of the recommendations DelDOT was contemplating in 2009 relative to the TIS was that the developer contribute to our planned project to improve Route 896 (Boyd's Corner Road) from Cedar Lane Road (New Castle Road 427) to US Route 13. That project is on a floating schedule depending on the pace of development in the area. It is part of the Southern New Castle County (SNCC) Transportation Improvement District (TID) and we are in the process of finalizing the agreements that would establish the mechanism for developer-funded improvements. This development is within the TID and we anticipate requiring that they execute the agreement.
- If DelDOT is unable to execute the SNCC agreements we would recommend an alternative requirement for a fair share contribution to the improvements on Boyd's Corner Road.
- The proposed subdivision street extending east from the main site entrance on Boyd's Corner Road to the proposed shopping center is designed as a Type III subdivision street with a 60-foot right-of-way. That is appropriate. Similarly, because of the volumes of traffic it is likely to carry, the proposed subdivision streets extending west from the main site entrance on Boyd's Corner Road to the stub street at Village of Bayberry South, for a future connection to Shallcross Lake Road, should be designed as at least Type II subdivision streets with 60-foot rights-of-way. Chapter 5 of the Standards and Regulations provides our standards for such streets. See the second comment under Suggestions.
- In accordance with Section 3.5.4.2 of the Standards and Regulations, DelDOT will require the construction of sidewalks or shared use paths along the site frontage on US Route 13 and Delaware Route 896. These sidewalks or paths should connect to the interior of the site and a sidewalk or path should extend south from the interior of the site to Greylag Road. Please contact Mr. Pao Lin, our Subdivision Manager for southern New Castle County, to discuss the design and location of these facilities. Mr. Lin may be reached at (302) 760-2157.

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

TMDLs

- The project is located in the greater Delaware River and Bay drainage - specifically within the Appoquinimink watershed. In this watershed - under the auspices of Section 303(d) of the 1972 Clean Water Act - the State of Delaware has developed specific Total

Maximum Daily Load (TMDL) pollutant reduction targets 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 water body” 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 watershed calls for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 8 percent reduction in bacteria from baseline conditions.

- 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>

Water Supply

- The project information sheets state water will be provided to the project by Artesian Water Company via a public water system. Our records indicate that part of the project (Parcel Identification #'s 13-013.00-054 & 13-013.00-156) are located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 94-CPCN-24, however, Parcel Identification #'s 13-013.00-154 does not currently hold a CPCN to provide public water to this project. 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 302-736-7547.
- 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.

Water Resource Protection Areas

- The Water Supply Section, Groundwater Protection Branch (GPB) 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).

DNREC recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover. Some allowance for augmenting ground-water recharge should be implemented if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless (DNREC, 2005). A water balance calculation (environmental assessment) will be necessary to determine the quantity of clean water to be recharged via a recharge basin (Thornthwaite, 1957). The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water.

These DNREC recommendations appear to be consistent with NCC Unified Code Sections: 40.10.380 (B), 40.10.384 (A), 40.10.385, and 40.10.410.

- 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.

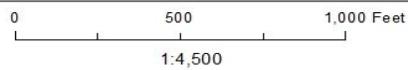
References

- 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.
- Delaware Department of Natural Resources and Environmental Control (2005): *Source Water Protection Guidance Manual for the Local Governments of Delaware*: Dover, DE, 144 p.
http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swappguidance_manual_final.pdf
- Delaware Department of Natural Resources and Environmental Control. (1999). The State of Delaware Source Water Assessment Plan: Dover, DE, p. 301.
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- Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, *Delaware Ground-Water Recharge Design Manual*: Newark, DE, Water Resources Agency, University of Delaware, p. 31.
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- Schueler, T. R., 2000a, The Compaction of Urban Soils, *in* Schueler, T.R., and Holland, H.K., eds., *The Practice of Watershed Protection*: Ellicott City, MD, Center for Watershed Protection, p. 210 - 218.

Schueler, T. R., 2000b, Pollutant Dynamics of Pond Muck, *in* Schueler, T.R., and Holland, H.K., eds., *The Practice of Watershed Protection: Ellicott City, MD*, Center for Watershed Protection, p. 453 - 460.

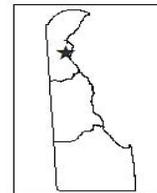
Thornthwaite, C. W., and Mather, J. R., 1957, *Instructions and Tables for Computing Potential Evapotranspiration and the Water Balance*, Volume x, Drexel Institute of Technology, Laboratory of Climatology.

Boys Corner (PLUS 2011-06-07)



Legend

-  Wellhead Protection Areas
-  Excellent Ground-Water Recharge Potential Area
-  Project Area



As of April 2011. This map is provided by the DNREC solely for display and reference purposes and is subject to change without notice. DNREC will not be held responsible for the assumed accuracy contained in the map or for the use other than its intended purpose.

Sediment and Stormwater Program

- A sediment and stormwater plan will be required for the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the revised plan as soon as possible. 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. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

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.

Tank Management Branch. Please be aware:

- 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.
- The following LUST projects with respective statuses are located within a quarter mile from the rezoning area:
 - Huber's Nurseries, Facility: 3-000645, Project: N9402061 (Inactive)
 - Meyer Property, Facility: 3-001200, Project: N9201015 (Inactive)
- 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."

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"> • 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 1113 – Open Burning	<ul style="list-style-type: none"> • Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibit the burning of land clearing debris. • Prohibit the burning of trash or building materials/debris.
7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan	<ul style="list-style-type: none"> • 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)
7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	<ul style="list-style-type: none"> • Use structural/ paint coatings that are low in Volatile Organic Compounds. • Use covers on paint containers when paint containers are not in use.
7 DE Admin. Code 1144 – Control of Stationary Generator Emissions	<ul style="list-style-type: none"> • Ensure that emissions of nitrogen oxides (NO_x), 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. (See section 3.2). • Maintain recordkeeping and reporting requirements.
7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> • Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

Delaware State Fire Marshall's Office – Contact Duane Fox 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):

- **Fire Protection Water Requirements:**
 - Where a water distribution system is proposed for Mercantile and Business type occupancies, it shall be capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
 - Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
 - Where a water distribution system is proposed for (Storage/Industrial/Mercantile) sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
- **Fire Protection Features:**
 - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
 - Buildings greater than 10,000 sq. ft., 3-stories or more, over 35 feet, or classified as High
 - Hazard, are required to meet fire lane marking requirements
 - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
 - Show Fire Lanes and Sign Detail as shown in Delaware State Fire Prevention Regulations
- **Accessibility**
 - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road at the west end to the subdivision from Boyd's Corner Road must be constructed so fire department apparatus may negotiate it.
 - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.

- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- 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.
- **Gas Piping and System Information:**
 - Provide type of fuel proposed, and show locations of bulk containers on plan.
- **Required Notes:**
 - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Note indicating if building is to be sprinklered
 - Name of Water Provider
 - Letter from Water Provider approving the system layout
 - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
 - Provide Road Names, even for County Roads

Delaware Department of Education – Contact John Marinucci 735-4199

- This development will be subject to the New Castle Voluntary School Assessment Statutes 9 Del. C. Chapter 26, § 2661 and 14 Del. C. § 103(c).

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.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The loop street proposed opposite the end of the main entrance drive on Route 896 is a concern. Specifically, if it is to have two-way traffic, some drivers will exit opposite the one-way-in access from Route 896 and could, potentially cross the street and drive against traffic. If it is to have one-way traffic, that could be difficult to enforce and could create a safety problem for drivers on the loop. Significant attention will need to be paid to the design of this feature and we may, ultimately, not permit it.
- DelDOT supports the proposed stub street to Village of Bayberry – South. However, they are concerned by the two lots (Lots 111 and 112) proposed to front on it. One of the obstacles to extending such stub streets is objections by residents to the increase in traffic that will necessarily accompany such an extension. For this reason, DelDOT recommends that the layout of this part of the development be changed such that no lots front exclusively on that stub street and the corner lot does not access the stub street. Similarly, because of the future traffic volumes expected on the street on which they would front, consideration should be given to relocating Lots 9, 10, and 113 through 116. See the sixth comment under Requirements.
- Depending on the stores in the proposed shopping center, there is the potential for significant bicycle and pedestrian traffic between Commodore Drive and the center. DelDOT recommends that the developer consider offering to provide a multi-use path along Greylag Road from Commodore Drive to the shopping center if the rezoning for commercial use is approved.
- The second comment above notwithstanding, DelDOT recommends that alternative access to the residential outparcel being created on Boyd's Corner Road, and to the Bullen, Miller and Baker/Sobolak parcels, be provided on the subdivision street that would run behind them. While that will be a busy street, it will have less traffic and therefore provide safer ingress and egress than these parcels presently have on Boyd's Corner Road. Closure of their existing access and the creation of new driveways should be at the discretion of the lot owners, but the easements to allow for those new driveways should be established on the land development plan now.
- The plan shows a DelDOT Park and Ride Lot on the southwest corner of Routes 13 and 896. That lot is now closed and all or most of the land is available for purchase. If the developer wishes to purchase it and add it to their project, they may contact our Real Estate Section. Our Assistant Chief of Real Estate, Carolyn O'Donaghue, may be contacted at (302) 326-4472 for more information in this regard.
- DelDOT does have a Park and Ride Lot open and in service on Pole Bridge Road (New Castle Road 420) at Delaware Route 1, about 0.4 miles east of this site. This lot is served

by DART Bus Routes 45 and 301. Accordingly, the Delaware Transit Corporation (DTC) is interested in working with the developer to promote transit ridership among the residents, employees and shopping patrons traveling to and from the proposed development. The developer is asked to contact Mr. Ivan Mitchell, DTC's Service Development Planner for this part of the County, to discuss this matter further. Mr. Mitchell can be reached at (302) 576-6062.

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

Additional information on TMDLs

- A pollution control strategy (PCS) is the regulatory directive requiring the implementation of various best management practices (BMPs) that help reduce transport of nutrient and bacterial pollutant runoff from all waters draining into a “greater” common watershed, with the ultimate objective of achieving the obligatory TMDL reduction requirements for that watershed. However, the PCS for the Appoquinimink watershed has not been formally completed to date. In absence of a current PCS, the applicant is urged to reduce nutrient and bacterial pollutants through the voluntary commitment to the implementation of the following recommended BMPs:
- The applicant should plant native tree and/or herbaceous vegetation in areas containing open space, wherever possible.
 - The 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, and roads) included in the calculation.
 - Since this is a commercial project that will likely generate large amounts of impervious cover, the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP to reduce the impacts associated with surface imperviousness, wherever practicable, is encouraged.
 - DNREC recommends the use of rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff from impervious surfaces.
 - 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 (e.g., nitrogen and phosphorus) and bacterial loading that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project's impact(s) on baseline water quality. We strongly

encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

Additional information on hazardous substances

- The Site Investigation and Restoration Section (SIRS) 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) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). 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.
- There is one SIRB site within a ½ mile radius of the proposed project:
 - The Boyds Corner Farm site (DE-1499) is located within the project area. A Remedial Investigation (RI) was performed in 2011. The site was used as an unauthorized dumping area for local residents. The large debris was removed within the last few years and the removal process created the soil piles, which were tested by the consultant for contaminants. A preliminary review of the data shows that there are no contaminants of concern, however, SIRS is currently waiting for the RI report to finalize any decisions.

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

- 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). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

Additional information on tanks

- When contamination is encountered, PVC pipe materials should be replaced with ductile 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 TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.
- Should the municipality anticipate being more restrictive than Delaware's Regulations Governing Underground Storage Tank Systems or Delaware's Regulations Governing Aboveground Storage Tanks, please be aware that the municipality shall be responsible for enforcing the more restrictive rules.

Additional information on Water Resource Protection Areas

- The site plans show a storm-water management pond within the area of excellent ground-water recharge potential. The construction phase of this type of pond requires excavation, hauling, and grading. The heavy equipment used in this phase has the capacity to compact and degrade the structure of the strata that defines the area as an excellent ground water recharge area (Schueler, 2000a). Changes to the structural soil properties may cause significant reduction in recharge capacity. Installing storm-water management ponds in excellent ground-water recharge areas has the potential to contaminate the ground water beneath it and infiltrate into the aquifer (Schueler, 2000b).

DNREC recommends:

- Reduce impervious cover to less than 50%
- 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).
- Quantify amount of recharge lost due to impervious cover and provide for onsite infiltration of water at least equal to or greater than pre-development recharge (Kaufmann, 2005).
- Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration

Additional information on air quality

- The air quality impacts associated with the project should be completely considered. New homes and businesses 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 new homes and businesses 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 your home and retail space, and
 - All transportation activity associated with a new home or business.

- Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) were quantified. Table 2 represents the projected impact the 116 homes in the Boyds Corner Farm subdivision may have on air quality and Table 3 represents the impact the 146,800 sq. ft. retail space may have on air quality.

Emissions Attributable to Boyds Corner Farm (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Direct Area Source	3.6	0.4	0.3	0.4	14.6
Electrical Power Generation	*	1.4	4.9	*	730.1
Mobile	5.3	5.6	0.2	0.1	3,428.4
Total	8.9	7.4	5.4	0.5	4,173.1

(*) Indicates data was not available to calculate emissions.

Emissions Attributable to the Boyds Corner Farm (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Mobile	19.9	26.3	*	*	*
Total	19.9	26.3	*	*	*

(*) Indicates data was not available to calculate emissions.

Note that emissions associated with the actual construction of the homes and retail space, 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.

- Recommendations:** DAQ 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 NO_x 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.
 - **Planting trees in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and replenishing oxygen. 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.

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 Division of Air Quality which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into Boyds Corner Farm.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- 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.

Delaware Department of Education – Contact John Marinucci 735-4199

- DOE requests developer work with the affected School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, either at the entrance to the development or interspersed throughout the development as determined and recommended by the that school district.

Delaware State Housing Authority – Contact Karen Horton 739-4263

- DSHA supports the proposal to develop 116 units on 63 acres on Boyds Corner Road and U.S. Route 13 in New Castle County. According to the State Strategies Map, the proposal is located in Investment Level 1 and 2 areas. DSHA supports this proposal because residents will have proximity to services, markets, and employment opportunities. The proposal will include units priced to be affordable to working class families.

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

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

Sincerely,



Constance C. Holland, AICP
Director, Office of State Planning Coordination

CC: New Castle County