



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

September 21, 2015

Mr. Hud Athey
Sussex Technical School District
17137 County Seat Highway
Georgetown, DE 19947

RE: PLUS review 2015-08-04; Sussex Tech School District

Dear Mr. Athey:

Thank you for meeting with State agency planners on August 26, 2015 to discuss the feasibility of reconfiguring the exiting school and athletic fields to build a new 1,250 student high school on 145 acres on County Seat Highway in Sussex County.

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 the 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 town.**

Strategies for State Policies and Spending

Site Search Process

In the spring of 2013 the Office of State Planning Coordination and DOE were approached by the Sussex Technical School District to assist them in their search for a new high school site. The District explained that their current structure is functionally obsolete and that their proposed solution was to build a new state-of-the-art vocational high school. Citing enrollment projections, the District suggested that they needed a school with a capacity of 2,500 students. They further explained that vocational schools need additional area due to specific construction requirements for the shops. As such, they suggested that we begin searching for sites that were between 150 and 175 acres. For reference, the DOE guidelines indicate that a 2,500 student high

school would require a site 55 acres in size¹. The enrollment capacity and the potential for expansion changed multiple times throughout the process, eventually settling at a school designed for 1,850 students with the ability to be expanded to 2,550 students in the future.

Geographically, the District expressed a strong desire to remain in the Georgetown area. They explained that Georgetown is centrally located to the entire county, which will minimize travel distances for all students. All students are currently bussed to the campus. It was expressed that even if the new school were located in a walkable environment in one of the towns, the majority of the students would still need to be bussed due to the county-wide student body. Eventually we decided to look at all viable school sites between and including Georgetown and Millsboro.

The search proved to be very challenging. First, it was difficult to find parcels or groups of contiguous parcels that were 150 – 175 acres. We lowered the threshold to 100 acres of buildable land in order to identify more viable parcels to consider. Second, it soon became apparent that there are many environmental constraints in the Georgetown and Millsboro area. The area is poorly drained, and the soils are often wet with a high water table. Numerous drainage ditches and tax ditches segment most parcels to provide for agricultural drainage. Wetlands and wooded wetlands are also quite common. These features provide technical and sometimes legal impediments to the construction of a large project like a high school campus. And finally, public utilities and adequate road infrastructure are only available within or near the municipalities, and even then only in areas under active development. The larger parcels were typically distant from this necessary infrastructure, even when the lands were consistent with the *State Strategies* and local comprehensive plans.

A total of 20 sites were considered. Of those 20, the seven most promising were evaluated in more detail through a formal PLUS review. The PLUS review narrowed those seven down to only three viable options: Options 1, 3 and 5. All three options had issues to overcome. Option 1 is in Level 4, while Options 3 and 5 contain multiple parcels to consolidate and various environmental constraints to consider in the site design. Both Options 3 and 5 are in Investment Levels 1 and 2, and would have been preferable to Option 1 from a policy perspective. After further investigation, none of these three options came to fruition either due to environmental factors and / or property owners who were unwilling to sell their land to the District.

Current Proposal:

After all of the other options were exhausted, Sussex Tech reevaluated the project and chose to focus on their current site. In May of 2015 the Governor signed legislation that has enacted a 1,250 student enrollment cap on the Sussex Technical School District (HB 100 w / HA 1). As such, the scope of the project changed from a 1,850 student capacity school, with room for expansion, to a 1,250 student school. The decreased size of the school project enabled the District the ability to consider a combination of new construction and renovation of the current

¹ Delaware Department of Education School Construction Manual, Section 4. Accessed 2/1/15 from <http://www.doe.k12.de.us/Page/1828>. Calculation: 30 acre base plus 1 acre per 100 students (30 acres + 25 acres = 55 acres).

campus, utilizing existing sewer, water and roadway infrastructure. This scenario is the topic of this PLUS Review.

State Strategies PLUS Comment:

Sussex Tech High School is currently within a Level 4 area according to the *Strategies for State Policies and Spending*. The state does not support building new schools within a Level 4 area. However, due to the fact that the school district intends to build the new school project on the site of the existing school using existing infrastructure, the State has no objections to the redevelopment of this site for a new / renovated high school project.

This comment in no way changes the policy of the Office of State Planning Coordination regarding the location of schools or other publicly funded facilities or infrastructure in Level 4. The text of the *Strategies* document identifies that “Investment Level 4 Areas may be the location for certain uses that because of their specific requirements are not appropriate for location elsewhere.”² This is one of those times when the specific requirements warrant consideration of this location in Level 4. An exhaustive search for sites in this region of Sussex County yielded no viable alternatives for relocating the school, at least in short term.

Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Bill Brockenbrough 760-2109

- As discussed in the Preface to DelDOT’s *Development Coordination Manual*, DelDOT is responsible for the regulation and control of the location, design and operation of the access points and transportation facilities that the State maintains. For that reason, they have review authority with regard to a wide range of land developments and our review processes vary with the size of the development or the change therein. If the School District chooses to renovate their existing facilities, with no change to the existing access or projected increase in traffic, DelDOT’s requirements will be minimal. If the School District proposes to change their access or significantly increase their traffic, DelDOT’s requirements will be more extensive.

DelDOT recommends that the School District have their site engineer or another appropriate design professional contact the Subdivision Reviewer for this part of Sussex County, Mr. Derek Sapp, and maintain that contact as the alternative review process progresses so that they can advise them appropriately on what level of involvement with DelDOT will be required. DelDOT does not view the requirements as being likely to affect the choice of how to proceed but identifying in a timely manner what the school district will need to do with regard to studies, plans and off-site construction could be

² *Delaware Strategies for State Policies and Spending*, 2010, page 26. Retrieved 2/4/15 from http://stateplanning.delaware.gov/strategies/2010_state_strategies.pdf

important in keeping their plans on schedule and within budget. Mr. Sapp may be reached at (302) 760-4803 or Derek.Sapp@state.de.us.

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

Wetlands.

- 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 our GIS SWMP maps, there are wetlands regulated by the U.S. Army Corps of Engineers on this parcel. The application states the wetlands have been delineated and signed off by the U.S. Army Corps of Engineers.

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>.



TMDLs.

- The project is located in the greater Chesapeake Bay drainage area. In this watershed, the EPA and the State of Delaware have developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nutrients (e.g., 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 nutrients and sediment in the Chesapeake Bay drainage area have been recently revised and made more stringent by the EPA. The TMDL by EPA now requires a 60 percent reduction in

nutrients (previously was 30 and 50 percent in N & P) and sediment from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria from baseline conditions.

- The EPA is requiring that the State of Delaware develop a Watershed Implementation Plan (WIP) and 2-year progress milestones for purposes of accelerating efforts to improve and restore waters of the Chesapeake Bay. Phase I and II WIPs are currently available for review at:
http://www.wr.dnrec.delaware.gov/Information/Pages/Chesapeake_WIP.aspx.

Water Supply.

- The project information sheets state that individual on-site well(s) will be used to provide water for the proposed project. DNREC records indicate that the project is not located in an area where public water service is available. Should an on-site Industrial, 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 central sewer lines, septic tank and sewage disposal area, and 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 current Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing each and every well.
- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the DNREC 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 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.
- Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is an Underground Storage Tank associated with the Sussex Vo-Tech School, located within 1000 feet of the proposed project. Should you have any questions concerning these comments, please contact Rick Rios, at (302) 739-9944.

Source Water Protection Areas.

- Two public wells with un-delineated wellhead protection areas exist on the northern portion of the site. Federal guidelines prohibit revealing the well locations in this public

review. Given the population increase since the last source water assessment, these wells will be delineated using a computer model. The area of these wellhead protection areas are expected to encompass a large portion of the existing sports fields.

- Impervious cover within the sports field areas should be limited to less than 35%. Stormwater management facilities should not be constructed in these areas. These measures are recommended to assure that water quantity and quality are preserved and that the cost of additional water treatment to meet Federal and State drinking water standards are not incurred.

Sediment and Stormwater Management.

- A detailed Sediment and Stormwater Management Plan must be approved prior to beginning construction. The plan must comply with the current Delaware Sediment and Stormwater Regulations.
- A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted along with NOI fee to DNREC Division of Watershed Stewardship prior to Sediment and Stormwater Plan approval. Once the construction activity is complete, as-builts have been approved, and final stabilization is established on the site, a Notice of Termination (NOT) may be submitted to terminate permit coverage for the construction activity.
- Initially, a Stormwater Assessment Study (SAS) must be completed for the project site and submitted to the DNREC Sediment and Stormwater Program. Once a complete SAS has been submitted, a project application meeting will be scheduled. At the project application meeting the methods for compliance with the Sediment and Stormwater Regulations will be discussed and submittal requirements, analysis points, and BMPs to pursue will be agreed upon.

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 1113 – Open Burning	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	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	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	Ensure that emissions of nitrogen oxides (NO _x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO ₂), carbon monoxide (CO), and carbon dioxide (CO ₂) 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.
Regulation 21 Section 10 – Emission Standards for Hazardous Air Pollutants, Asbestos	Ensure no visible residue of asbestos materials remains in the work area after all asbestos materials are removed in accordance with NESHAP. Display DANGER signs whenever airborne asbestos may be present in accordance with NESHAP and OSHA Use wet removal techniques. Dispose of all asbestos containing waste in clearly labeled sealed containers and store in a secure location awaiting transport to an authorized disposal facility, not to exceed a period of 45 days.

For a complete listing of all Delaware applicable regulations, please look at our website:

<http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

Instructions for Handling Asbestos.

- If any buildings are to be renovated or demolished, asbestos could be an issue. Please select a Certified Professional Service Firm (CPSF) from the State of Delaware’s list to inspect the facility and sample for Asbestos-Containing Materials (ACM). This list may be obtained through the Division of Facilities Management by contacting Donna Sapp at donna.sapp@state.de.us or (302) 739-5644. Once you receive the CPSF report detailing their findings as to how much, what type(s), and the location(s) of the ACM present, you can use that info to fill out the “Notification of Demolition or Renovation” form. If necessary, please select an asbestos abatement contractor from the list, and call to

schedule the work to begin three weeks (or more) from the date you mail the form to EPA. When you choose an abatement contractor, please enter the remainder of the required info on the form, to include the name of the Abatement Contractor, name of the Hazmat Hauler who will haul the ACM, and the Hazmat landfill where the ACM will be taken. Once you have completed the form, please make four (4) copies of it, and then send the ORIGINAL to USEPA at the following address:

USEPA Region III
Attn: Asbestos Coordinator
1650 Arch Street
Philadelphia, PA 19103

Send one copy to the DAQ:

DNREC/DAQ
c/o Mr. Thomas Postell
655 S. Bay Rd., Suite 5N
Dover, DE 19901

- You must wait a minimum of ten business days after EPA receives your notification, prior to any activity which may disturb asbestos-containing materials (reasoning behind waiting three weeks to begin abatement work). This allows the EPA asbestos inspectors time to coordinate and schedule a site visit if they so desire.
- Once the ACM has been abated, a post-abatement inspection by a CPSF asbestos inspector shall be performed to verify that all ACM has been removed.
- Following asbestos removal and re-inspection, normal demolition procedures may be employed to complete the demolition process.
- Please keep in mind that physical demolition and loading, transport, and landfill dumping of construction/demolition debris can be quite costly. Another option for more affordable demolition does exist. If the local fire company is interested in using the structure(s) for firefighter training, they are authorized to burn it/them to the ground upon completion of their training. This significantly reduces the volume and mass of material remaining to be loaded, transported, and dumped; thereby reducing demolition costs by a good margin. Keep in mind that this type of demolition via firefighting instruction is limited to those months not encompassed by Delaware's Ozone Season Burn Ban.

Tank Management.

- 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 confirmed leaking underground storage tank (LUST) projects are located within the proposed project parcel:
 - Sussex Tech High School, Facility: 5-000036, Project: S9807119 and S1105102 (both inactive projects)
- Seven (7) heating fuel USTs of varying capacities have been removed from the project site since 1976. Currently, one (1) 2,000-gallon heating fuel UST is listed as in service.
- The following aboveground storage tank (AST) facility is located within the proposed project parcel:
 - Sussex Vo-Tech High School Above Ground Storage Tanks, Facility: 8-000042
- 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 Section by calling (302) 395-2500.

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:
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
 - Where a water distribution system is proposed for educational 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 DSFPR

- 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.

- 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 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)
 - Provide Road Names, even for County Roads

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known archaeological sites or National Register-listed property on this parcel. However, if the development project proceeds on this parcel, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is in Title 7, of Chapter 54, of the Delaware Code.

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/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml.

- 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 role, please review the Advisory Council's website at www.achp.gov.

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.

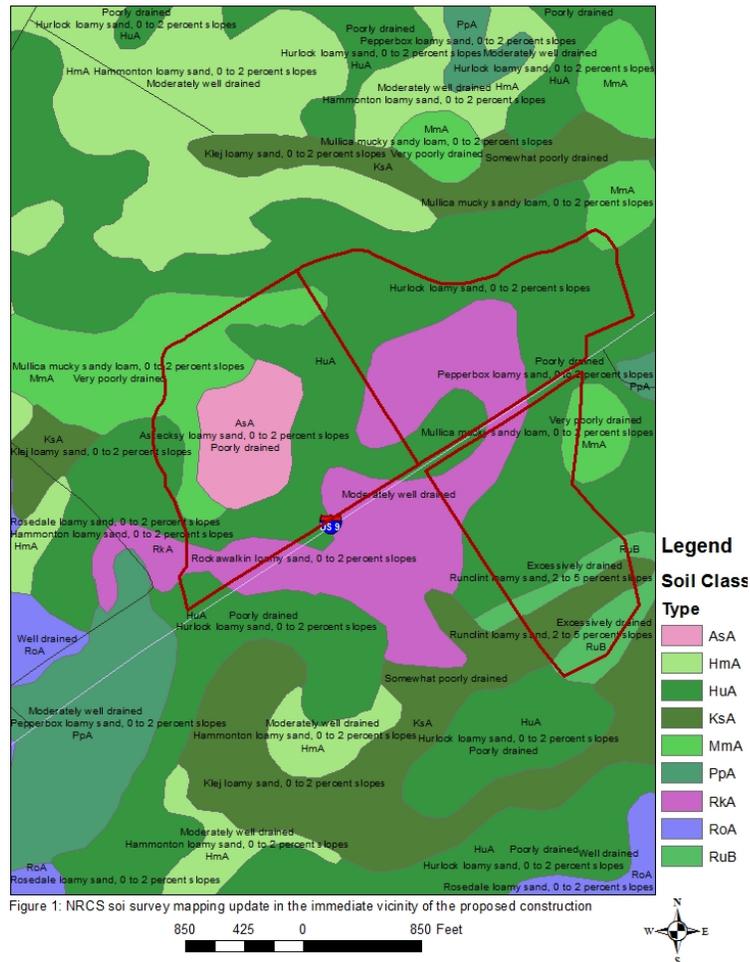
Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352

Habitat and Forest Conservation.

- DNREC Division scientists have not surveyed the project area, and according to information provided it is unclear if work will be conducted in the forested areas of the parcels in question. If these forested areas are to be affected, DNREC requests the opportunity to conduct a survey to evaluate habitat and determine the potential for species of conservation concern. Please note that DNREC scientists have extensive knowledge of the flora and fauna of the state. The survey would be conducted at no expense to the landowner. In the event that authorizations will be needed from DNREC's Coastal Management Program and/or Wetlands and Subaqueous Lands Section, they will require complete and up to date info from the Wildlife Species and Conservation Research Program as part of the review. Therefore, allowing access to the site will increase the efficiency of the State authorization process. Please contact Kate Fleming at (302) 735-8658 or Kate.Fleming@state.de.us to grant a site visit.
- In general, DNREC recommends that tree clearing be limited as much as practicable, and it would be best if site plans are configured in such a way as to limit fragmentation of the forest.

Soils Assessment.

- Based on soils survey mapping update, Askecksy (AsA), Hurlock (HuA), and Mullica (MmA), are the most environmentally sensitive soil mapping units in the immediate vicinity of the proposed project (See figure 1). Askecksy, Hurlock, and Mullica are poorly-drained very poorly-drained (hydric) soil mapping units that have severe limitations for development and should be avoided. We strongly discourage 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 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 strongly recommends contacting 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 Class D soil scientists can be obtained at the following weblink: <http://www.dnrec.delaware.gov/wr/Information/GWDInfo/Pages/GroundWaterDischargeSLicensesandLicensees.aspx>



Additional information on TMDLs and water quality.

- Compliance with the TMDL nutrient and bacterial reduction requirements specified for the Chesapeake Bay drainage watershed can be facilitated through implementation of the following recommended BMPs:
 - Retain as much of the existing forest cover as possible. Additionally, we suggest additional native tree and/or native herbaceous plantings as a means to create more environmentally-friendly open space.
 - Based on NRCS soil survey mapping, most of the area proposed for development contains poorly-drained wetland-associated hydric soils. Hydric soils are considered unsuitable for development and should be avoided. Therefore, we suggest that a site-

- specific soils evaluation by a licensed soil scientist be conducted to more precisely assess the potential presence of hydric soils in this parcel before commencing any construction activities.
- United States Army Corps of Engineers (USACE) approved wetlands delineation. According to information submitted by the applicant, wetland delineation has been conducted and approved by the USACE. However, the purported wetland delineation was not submitted to DNREC.
 - 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 (planted in native vegetation) from all waterbodies (including ditches), hydric soils, and wetlands (field delineated and approved by the United States Army Corps of Engineers). The USACE can be reached by phone at (302) 736-9763.
 - Use rain gardens and green-technology storm water management structures (in lieu of open-water management structures as currently proposed) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff/discharges from impervious surfaces. Please contact Lara Allison at (302) 739-9939 for further information about the possibility for installing rain gardens on this parcel.
 - 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. 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 associated environmental impacts.
 - 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 Chesapeake Bay watershed, we strongly encourage the use of pervious paving materials (instead of conventional asphalt and concrete) to mitigate these impacts. Consider the use of pervious paving materials for all parking areas.
 - 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 on baseline water quality. We strongly encourage the use of this protocol to help design and implement the most effective BMPs. Please contact Jen Walls or John Martin (Division of Watershed Stewardship) at (302) 739-9939 for more information on the protocol.

Additional information on tank management.

- 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 TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

Additional information on air quality.

- Asbestos handling information has been provided in this comment letter, should demolition take place. The overall scope includes 145 acres, about 30% of which are currently forested. The applicant indicates that forest removal and open space determinations are unknown at this time, as the final design scenario has not been selected.
- The existing property is generally lacking in access to multimodal transportation, as much of the surrounding land is undeveloped and is Level 4. There are no sidewalks, bike paths, or public transportation stops around the property. The developer indicates that sidewalks will be added, but, without a site plan, it is unclear whether those sidewalks will be limited to the project's interior.
- DNREC encourages developers and builders to consider all sustainable growth practices in their design, and we believe that the air quality impacts associated with the project should be completely considered. New schools may emit, or cause to be emitted, additional 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; Delaware currently violates federal health-based air quality standards for ozone.
 - The emission of greenhouse gases which are associated with climate change, and
 - The emission of air toxics.

- Air emissions generated from new schools 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 could not be quantified. DAQ was able, however, to quantify the mobile emissions based on the proposed daily trip data presented in the application and data taken from the ITE Trip Generation Manual, 8th Edition. Table 2 represents the actual impact the Sussex Technical School District project may have on air quality.

Table 2: Projected Air Quality Emissions for Sussex Technical School District

Emissions Attributable to Sussex Technical School District (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	7.39	9.74	*	*	*

(*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the school, 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, 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 an 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.
 - **Constructing with high albedo, high solar reflectance materials.** This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
 - **Providing shade for parking areas.** 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 stormwater.
 - **Providing charging stations for plug-in electric vehicles.** This measure helps to reduce localized air pollution by supporting the use of non-gasoline powered vehicles. Please refer to the US Department of Energy's website for electric vehicle readiness information: http://www1.eere.energy.gov/cleancities/electric_vehicle_projects.html. Several charging stations exist nearby in Millsboro, Lewes, and Rehoboth Beach.
 - **Encouraging the use of safe multimodal transportation.** This measure 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.
 - **Using retrofitted diesel engines during construction.** This includes equipment that is 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.

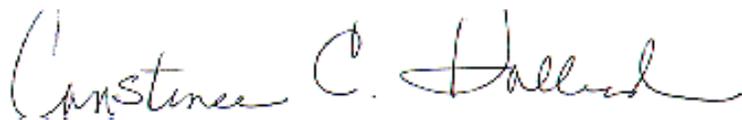
This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC Division of Air Quality (DAQ) which addresses the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Sussex Technical School District project. The DAQ point of contact is Rachel Yocum, and she may be reached at (302) 739-9402.

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.

Once it is determined if redevelopment of this site is feasible and the school design process begins, the site plan will need to be seen through PLUS. We look forward to working with the School District as you move forward in the process. Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

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

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

CC: Sussex County
Town of Georgetown