



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
STATE PLANNING COORDINATION

September 15, 2006

Bob Hershey  
Appoquinimink School District  
118 S. Sixth Street  
Odessa, DE 19730

RE: PLUS review – PLUS 2006-08-11; Townsend Early Childhood Center

Dear Mr. Hershey:

Thank you for meeting with State agency planners on August 23, 2006 to discuss the proposed plans for the Townsend Early Childhood Center to be located on the east side of Townsend fronting the south side of Main Street and the west side of Brook Ramble Lane.

According to the information received, you are seeking approval to develop a 26,000 sq. ft. kindergarten center on approximately 6 acres which is already partially occupied by the Townsend Elementary School.

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 Townsend is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town.

The following are a complete list of comments received by State agencies:

**Office of State Planning Coordination – Contact: Herb Inden 739-3090**

This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also designated for Institutional/Community uses in the town's Future Land Use map. 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. As this school site is located in the midst of a residential area we would encourage as much connectivity between these areas as possible. Our office has no objections to the proposed project.

**Division of Historical and Cultural Affairs – Contact: Alice Guerrant 739-5685**

The 1932 Townsend School (N-4119) on this parcel is listed in the National Register of Historic Places as a contributing element in the Townsend Historic District (N-10297). Historic maps and aerial photographs do not show any buildings towards the rear of the school, where the Early Childhood Center is planned. However, Beers Atlas of 1868 shows the A. Finlay House very close to this parcel. The 1937 USDA aerial does show the Townsend School and the Finlay House beside it. The area of the proposed construction may have archaeological remains associated with the Finlay House and also has a medium potential for prehistoric-period archaeological sites.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Finlay House, usually a good distance behind or to the side of the house. The school district should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out, and the district may want to hire an archaeological consultant to check for the possibility of a cemetery here. The DSHA will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

DelDOT will require a new entrance permit for the entrance on Main Street. The District's site engineer should contact the Subdivision Manager for New Castle County, Mr. Pao Lin, regarding specific requirements. Mr. Lin may be reached at (302) 760-2157. Access on Brook Ramble Lane is outside DelDOT's jurisdiction. DelDOT recommends that the District contact the Town regarding it.

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

### **Soils**

Based on the New Castle County soil survey update, Sassafras, Reybold-Urban Land complex, Fallsington, and Othello were mapped on the site. Sassafras and Reybold Urban Land complex are well-drained upland soils that, generally, have few limitations for development. Fallsington and Othello are poorly-drained wetland associated (hydric) soils that have severe limitations for development.

It should also be noted that some of the soils mapped (Fallsington and Othello) on the site are likely to have a seasonal high water table within one-foot of the soil surface. Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to increased flooding likely from surface water runoff emanating from future created forms of structural imperviousness (roof tops, roads, and sidewalks).

### **Impervious Cover**

Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 35 percent. However, since no site plan was submitted, it is not clear whether this estimate is reasonable or not. The applicant should recognize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks and roads) should be accounted for when calculating surface imperviousness and should make certain that these are included in the finalized calculation.

Studies link increases in impervious cover to decreases in water and habitat quality. Studies have also firmly established that irreversible declines in water and habitat quality begin once aggregate watershed surface imperviousness exceeds 10 percent. Since the amount of imperviousness generated by this project is likely to be much higher than the desirable watershed threshold of 10 percent (reported as 35%), it underscores the importance of a proactive strategy that helps reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials (“pervious pavers”) in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are examples of practical BMPs that could easily be implemented to reduce surface imperviousness.

## **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Appoquinimink watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Appoquinimink watershed, a post-development TMDL reduction level of 40 percent will be required for both nitrogen and phosphorus.

### **TMDL Compliance through the Pollution Control Strategy (PCS)**

As stated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Appoquinimink Watershed. The TMDL calls for a 40% reduction for nitrogen and phosphorus from baseline conditions. The Department developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional reductions may be possible through the implementation of Best Management Practices, such as reducing surface imperviousness, increasing passive wooded open space, and the use of appropriate stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

### **Water Resource Protection Areas**

The DNREC Water Supply Section has determined that the project site falls entirely within an excellent ground-water recharge area (see attached map). Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. As such, these soils are able to transmit water very quickly from the land surface to the water table. Consequently, ground water in these areas may very readily be adversely affected by land use activities or impervious cover.

The DNREC Water Supply Section 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 considered 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. A water balance calculation will be necessary to determine the quantity of clean water to be

recharged via a recharge basin. 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 and surface water supplies.

Ideally, relocating any open space areas to the part of the parcel within the excellent ground-water recharge area would decrease the total impervious area. Augmenting the groundwater recharge with clean rooftop run-off systems are another alternative to maintaining the quality and quantity of water recharging the aquifer.

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.

For more information refer to the Final Source Water Protection Guidance Manual for the Local Governments of Delaware

<http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html>

and

Ground-Water Recharge Design Methodology

[http://www.wr.udel.edu/swaphome/phase2/Publications/swapp\\_manual\\_final/swapp\\_guidance\\_manual\\_supp\\_1\\_2005\\_05\\_02.pdf](http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf).

Please contact the Water Supply Section at 302-739-9945 for more information.

### **Water Supply**

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

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

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

## **Sediment and Erosion Control/Stormwater Management**

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Division of Soil and Water Conservation Sediment and Stormwater Program. Contact Elaine Webb with the Sediment and Stormwater Program at (302) 739-9921, for details regarding submittal requirements and fees.

### **A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction**

Activity must be submitted to the Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval.

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique. Green Technology BMPs must be given first consideration for stormwater quality management. Since the project is within an area identified as having excellent recharge potential, Green Technology BMPs and/or infiltration practices should be utilized to the maximum extent practicable.

Each stormwater management facility should have an adequate outlet for release of stormwater. Although regulatory requirements are limited to the 2-Year and 10-Year storm events, the 100-Year storm should be analyzed for conveyance issues, particularly regarding potential off-site impacts to the adjacent residential site currently under construction. In the current condition, the Townsend Elementary School site drains offsite to Townsend Station and into the Townsend Station stormwater management wet pond. Any volume increases to the offsite stormwater pond will require re-evaluation of that pond.

It is strongly recommended that you contact the reviewing agency to schedule a preliminary 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.

### **Underground Storage Tanks**

There are three inactive LUST site(s) located near the proposed project:

Townsend Fire Company, Facility # 3-001536, Project # N9501029  
Lockhart Market, Facility # 3-000281, Project # N9501127  
Ester Johnson Property, Facility # 3-002017, Project # N9910204

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

**State Fire Marshal's Office – Contact: John Rossiter 323-5365**

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

- a. **Fire Protection Water Requirements:**
  - Water distribution system capable of delivering at least 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.
  
- b. **Fire Protection Features:**
  - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
  - Buildings greater than 10,000 sqft, 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

c. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Main Street 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.

d. **Gas Piping and System Information**

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

e. **Required Notes:**

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



- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

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

**Department of Agriculture - Contact: Milton Melendez 698-4500**

The Delaware Department of Agriculture has no objections to the proposed application.

*Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

*Native Landscapes*

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

*Tree Mitigation*

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community’s forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754.

**Public Service Commission - Contact: Andrea Maucher 739-4247**

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

**Department of Education – Contact: John Marinucci 739-4658**

The DOE supports locating school facilities on parcels with existing or reasonable access to civil infrastructure to include but not limited to:

- Roads, pedestrian walkways and shared use paths
- Waste water/sewerage and domestic water
- Electric, and telecommunications
- Storm water drainage and conveyance

School sites with public water and sewer utilities or access to public water and sewer utilities are recommended by DOE over sites requiring on-site facilities. This school site appears to offer access to adequate public civil utilities.

The DOE supports the State Strategies for Policies and Spending. When considering school facility locations, the DOE considers proximity and access to basic support services as a high priority.

The school location under consideration appears to be in investment level 2, as well as a residential location within the City of Townsend incorporated limits and as a result basic support service levels will reflect a commensurate level of service associated with investment level 2 within an incorporated local jurisdiction..

The DOE supports locating school facilities strategically within the geographic region and/or community the facility is intended to serve in order to:

- Encourage non-student pedestrian access to the school facility in an effort to reduce vehicle miles traveled to the extent practical
- Encourage student pedestrian access to the school facility, in order to contain the school's life-cycle operating costs associated with student transportation, as practicable
- Create education campuses by co-locating educational facilities and services in an effort to reduce life-cycle costs as a result of the co-located schools sharing common spaces, facilities and services.

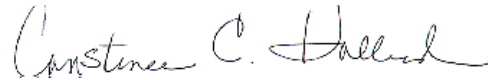
The school location under consideration appears to be strategically located geographically within the community it is intended to serve. This site will also establish an education campus providing opportunities for co-located and shared common use facilities and services.

As a result, the DOE supports this site as a school site. More specifically, DOE supports the development of this site with the construction of a 26,000 square foot Kindergarten Center by the Appoquinimink School District.

**The site plan for the proposed school would need to be reviewed through the Preliminary Land Use Service (PLUS). The school should consider the comments in this letter as the school is designed.**

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

Sincerely,

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

Constance C. Holland, AICP  
Director

CC: Town of Townsend