



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

February 10, 2006

Patrick Ryan  
French & Ryan  
223 East Market Street  
Georgetown, DE 19947

RE: PLUS review – PLUS 2006-01-03; Lake Forest School District South Elementary

Dear Mr. Ryan:

Thank you for meeting with State agency planners on January 25, 2006 to discuss the proposed plans for the Lake Forest School District South Elementary School project to be located at 301 Dorman Street in Harrington.

According to the information received, you are seeking site plan approval for a 51,977 sq. ft. elementary school on 24.6 acres.

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

**Executive Summary**

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

### **State Strategies/Project Location**

- This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. This site is also located in the City of Harrington. 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 1 is an ideal location for critical public facilities such as schools. This school site is consistent with the *Strategies for State Policies and Spending*. Our office has no objections to the proposed development of this project in accordance with the relevant City codes and ordinances.

### **Street Design and Transportation**

- DelDOT understands that the access will be changed from the plan presented to PLUS in that all access for the north parking lot would be moved to the north end of the property, separating it from the proposed bus egress. DelDOT supports that change because the plan presented at the meeting showed oncoming flows of traffic to the right, not the left, of each other.
- Dorman Street and Park Brown Road are classified as local roads. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project on both roads.
- The District will be required to improve Park Brown Road to meet DelDOT's standard typical section for local roads for the length of the site frontage. These improvements should include two eleven-foot travel lanes and two five-foot shoulders and possibly overlaying the existing through travel lanes. DelDOT will analyze the through travel lanes' pavement section and recommend an overlay thickness to the District's engineer if it is needed.

### **Natural and Cultural Resources**

- It should also be noted that some of the soils on this parcel are likely to have a seasonal high water table within a depth of one-foot from the soil surface. Building in such soils may leave prospective occupants of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding; this issue is of particular concern during periods of high-

intensity long duration rainfall events associated with tropical storms/hurricanes or “nor’easters.” Flooding probabilities may be further increased by surface water runoff emanating from created forms of structural imperviousness (roof tops, roads, and sidewalks). Therefore, the applicant should refrain from building on portions of the parcel containing mapped hydric soils or soils delineated as such by their consulting soil scientist.

- DNREC indicates that 80% of this site appears to be located in the 100 year flood plain. This could impact the stormwater management design, as well as the ultimate location of the school itself. New structures should not be constructed within the 100 year floodplain.
- It is recommended that the site engineer thoroughly evaluate the hydric soils and floodplain issues on the site before the design and configuration of the school is decided upon. Detailed soil studies and topographic surveys may be required.

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

**Office of State Planning Coordination – Contact: David Edgell 739-3090**

This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. This site is also located in the City of Harrington. 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 1 is an ideal location for critical public facilities such as schools. This school site is consistent with the *Strategies for State Policies and Spending*. Our office has no objections to the proposed development of this project in accordance with the relevant City codes and ordinances.

Although our office has no objections to the location of the school on this parcel from the perspective of the *Strategies*, we do note (with concern) that the site appears to be dominated by hydric soils and areas within the 100 year floodplain. Hydric soils and floodplain areas should be avoided as they are generally not suitable or desirable for urban development. Stormwater management may also be difficult to design and implement due to these environmental constraints. It is recommended that the site engineer thoroughly evaluate the hydric soils and floodplain issues on the site before the design and configuration of the school is decided upon. Detailed soil studies and topographic surveys may be required. It is strongly recommended that the district meet with representatives from DNREC as soon as possible to discuss stormwater management and the environmental limitations on the site.

This school site must be formally approved by the directors of the Office of State Planning Coordination, the Office of Management and Budget, and the Secretary of Education. Please submit a request for approval to our office and we will process the required paperwork.

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

There is nothing known in the area to be developed. However, this area does have high to medium potential for a prehistoric-period archaeological site. There is only a low potential for historic-period archaeological sites here. There are inventoried historic houses across Dorman St. from the existing school. This additional school building will have no effect on their setting.

While federal funding is an unknown at this time, if such funding is obtained, the school district will be required to consult with this office under Section 106 of the National Historic Preservation Act prior to any ground-disturbing activities. This would require that the school district hire a consultant to perform archaeological testing of the project area and possibly site excavations should a site be found. The DHCA will be happy to assist them through this process, which should take place as early in their project planning as possible to avoid any construction delays.

This parcel was once a farm, as indicated on Beers Atlas of 1868 as the J. Tharp House. The actual site of the house and outbuildings has already been destroyed by the earlier construction of the Chipman Middle School. However, small, rural, family cemeteries often are found in relation to historic farm complexes, up to about 1000' from 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. They will be happy to discuss these issues with the school district; the contact person for this program is Faye Stocum, 302-736-7400.

If there will be no federal funding, the DHCA would like an opportunity for their archaeologists to see if there is in fact a prehistoric-period site there and to learn something about its nature and extent before any ground-disturbing activities take place.

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

Lake Forest School District seeks to develop a 51,977 square foot elementary school on a 24.6-acre parcel (Tax Parcels MN-00-170.00-01-21.02-000) in the City of Harrington. The parcel is located between Dorman Street (Kent Road 78) and Park Brown Road (Kent Road 275) and immediately north of the Lake Forest Elementary School and the

Chipman Middle School. The land is zoned R-1 and would be developed by right. Presently the site is used for athletic fields associated with the two existing schools. The school and its access would be located on Park Brown Road, with no access to the new facility from Dorman Street.

- 1) DelDOT understands that the access will be changed from the plan presented to PLUS in that all access for the north parking lot would be moved to the north end of the property, separating it from the proposed bus egress. DelDOT supports that change because the plan presented at the meeting showed oncoming flows of traffic to the right, not the left, of each other.
- 2) Dorman Street and Park Brown Road are classified as local roads. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project on both roads.
- 3) DelDOT appreciates the provisions for pedestrian traffic to the proposed school. Sidewalks or a shared use path, located in a permanent easement, will be required along the site's frontage on Park Brown Road.
- 4) The District will be required to improve Park Brown Road to meet DelDOT's standard typical section for local roads for the length of the site frontage. These improvements should include two eleven-foot travel lanes and two five-foot shoulders and possibly overlaying the existing through travel lanes. DelDOT will analyze the through travel lanes' pavement section and recommend an overlay thickness to the District's engineer if it is needed.
- 5) The developer's site engineer should contact Mr. Brad Herb, the DelDOT project manager for Kent County, regarding our specific requirements for access. He may be reached at (302) 266-9600.

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

### **Soils**

Based on the Kent County soil survey Woodstown and Fallsington were mapped in the immediate vicinity of the proposed project. Woodstown is a moderately well-drained

soil of low-lying uplands that has moderate limitations for development. Fallsington is poorly-drained wetland associated (hydric) soil that has severe limitations for development. Approximately 60-70% of the mapped soils on this parcel were Fallsington.

It should also be noted that some of the soils on this parcel are likely to have a seasonal high water table within a depth of one-foot from the soil surface. Building in such soils may leave prospective occupants of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding; this issue is of particular concern during periods of high-intensity long duration rainfall events associated with tropical storms/hurricanes or “nor’easters.” Flooding probabilities may be further increased by surface water runoff emanating from created forms of structural imperviousness (roof tops, roads, and sidewalks). Therefore, the applicant should refrain from building on portions of the parcel containing mapped hydric soils or soils delineated as such by their consulting soil scientist.

### **Impervious Cover**

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on analyses of 2002 aerial photography by the University of Delaware, the Murderkill watershed, at that time, had about 8.1 percent impervious cover. Although this data is almost 4 years old and likely an underestimate, it illustrates the importance of a proactive strategy to mitigate for predictable and likely cumulative environmental impacts. Since the amount of imperviousness generated by this project is likely to be much higher than the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the 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 additional tree plantings are examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

The applicant should be made aware that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks and roads) should be included in the impervious surface calculation; otherwise, this project’s environmental impacts will be underestimated.

### **TMDLs**

With the adoption of Total Maximum Daily Loads (TMDLs) as a “nutrient-runoff-mitigation strategy” for reducing nutrients in the Murderkill River watershed, reduction of nitrogen and phosphorus loading will be mandatory. 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 shellfish harvesting. Nutrient reductions prescribed under TMDLs are assigned to those watersheds or basins on the basis of recognized water quality impairments. In the Murderkill watershed, the primary source of water quality impairment is associated with nutrient runoff from agricultural and/or residential development. In order to mitigate for the aforementioned impairments, a post-development TMDL reduction level of 50 and 30 percent will be required for nitrogen and phosphorus, respectively. Compliance with the post-development TMDL nutrient loading reduction requirements will be assessed via nutrient budget protocol, a computer-based model that quantifies post-development nutrient loading under a variety of land use scenarios in combination with a variety (or absence) of BMP types and intensities. This post-development loading rate is then compared with the pre-development loading rate as a means to assess whether the project meets the acceptable TMDL reduction levels. Based on a preliminary evaluation of this project using this model, the development as currently conceived **does not** meet the Murderkill River watershed TMDL nutrient reduction requirements for nitrogen and phosphorus. The applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATs) to ensure compliance. Examples of BMPs or BATs that could be used to significantly reduce nutrient loading from this project, include practices that prevent or mitigate surface imperviousness and the use of innovative or “green technology” stormwater methodologies rather than conventional open-water stormwater management. We suggest that the applicant verify their project’s compliance with the specified TMDL loading rates by running the model themselves. Please contact Lyle Jones of Watershed Section at 739-9939 for the acceptable model protocol.

### **Water Supply**

The project information sheets state water will be provided to the project by The City of Harrington via a central water system. Our records indicate that the project is located within the public water service area granted to The City of Harrington Company under Certificate of Public Convenience and Necessity 92-CPCN-07.

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 DNREC 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 DNREC 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. Ponds may be used for additional quantity management if necessary. Each stormwater management facility should have an adequate outlet for release of stormwater.

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. As of July 1, 2005, a new two-step review process is now in place. The first step, referred to as the "Conceptual SWM Plan", does not require completion of the construction drawings for submission. Additional information, including checklists, regarding these new procedures is available on the Sediment & Stormwater Program Web site.

The application notes that up to 80% of the site is indicated to be in the 100-Year floodplain. Please verify this as it could impact the proposed stormwater management design for this project.

## **Drainage**

The northern property line of this project is the main ditch of Brown's Branch Tax Ditch. There are established tax ditch right-of-ways on this property. Please contact the Kent Conservation District as well as the Brown's Branch Tax Ditch for limitations in the use of the tax ditch right-of-ways.

The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

This project is within the Murderkill River Watershed, a designated critical area, with a promulgated Total Maximum Daily Load (TMDL). Fertilizer and pesticide applications associated with the maintenance of athletic fields may lead to excessive nutrients in stormwater runoff. Please explore additional methods of reducing nitrogen and phosphorus in stormwater runoff from this site before releasing stormwater into the Murderkill River watershed.

## **Underground Storage Tanks**

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

Lake Forest Chipman Middle School, Facility # 1-000380, Project # K9204116

Jay's Quality Market Cato, Facility # 1-000138, Project # K0301004

Jay's Quality Market Paradee-Brittingham, Facility # 1-000383, Project # 1-000383

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 be 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 739-4394**

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 sq.ft., 3-stories of more or 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
- Large area building requirements (DSFPR Part II, Chapter 5) may apply if the building is over 60,000 sq.ft. on any one floor.

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 Park Brown 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.
- 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 Lake Forest School District application. The site is located on a controlled development area. The *Strategies for State Policies and Spending* encourages environmentally responsible development in areas within a Growth Level 1 Zone. This site is a part of a “good recharge” area. DNREC has mapped all ground water potential recharge areas. A “good recharge” rating is the highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in “Excellent” and “Good” recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to

ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware.

#### *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.

#### **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**

- 1) Nose-to-Tail bus loading and offloading not optimal. Please consider reconfiguring the bus loading and offloading area into a bus platform with side-by-side staggered bus parking. Side-by-side staggered bus loading and offloading operations are much safer than nose to tail operations.
- 2) Recommend consider segregating passenger vehicle traffic flow from Bus traffic patterns.

- 3) Road widths and turning radii on public roads into and on access roads on the school campus must be able to accommodate fire equipment, delivery trucks (such as an 18 wheel fuel truck) and school buses.
- 4) Provide adequate and age appropriate playground space and equipment that meets National Playground Safety Institute (NPSI) safety standards and provides ADA compliant accessibility.
- 5) Recommend securing any onsite wet storm water management ponds.
- 6) Recommend arranging curbing, fencing and landscaping barriers so as to provide the capability for emergency responders to block-off access to the school campus in the event of a school security crisis.
- 7) Provide ADA accessible walkways around the school campus as needed and connecting to existing town sidewalks.
- 8) Provide school zone and school crossing traffic control devices as required by Chapter 7 of the current Manual on Uniform Traffic Control Devices (MUTCD) as published by the FHWA.
- 9) Recommend large packaged chiller equipment and emergency generators be placed on the campus in such a way as to minimize the noise disruption to the school and the surrounding community.

**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

CC: City of Harrington  
Lake Forest School District