



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

July 14, 2005

Ms. Kelli Racca
Landmark Engineering
100 W. Commons Boulevard
Suite 301
New Castle, DE 19720

RE: PLUS 2005-06-07, Astro Middle School

Dear Ms. Racca,

Thank you for meeting with State agency planners on June 29, 2005 to discuss the proposed plans for the Astro Middle School project to be located 17 acres at 300 Executive Drive in New Castle County. According to the information received, the Christina School District is seeking to renovate an existing building for use as a 160,335 square foot middle school in the Pencader Corporate Center.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. These comments reflect only issues that are the responsibility of the agencies represented at the meeting. The applicants will also need to comply with any Federal, State and local regulations regarding the site. New Castle County is the governing authority over the site.

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

The proposed project to reuse an existing warehouse building in a business park for a middle school is located in a Level 1 area. We appreciate the great difficulty that the Christina School District has had in locating schools in the fast developing area and understand that great care will be taken in designing the amenities for this school to accommodate this location and as such do not oppose this project

State Historic Preservation Office (SHPO) – Contact: Alice Guerrant 739-5685

The proposed conversion of a modern building into a school will have no effect on historic properties. The school district should protect the remaining area along the stream, which has a high potential for a prehistoric-period archaeological site.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

The Christina School District seeks to redevelop an existing office and warehouse building into a 160,355 square foot middle school. The building is located on an approximately 17-acre parcel (Tax Parcel 11-021.00-050) at the south end of Executive Drive, an industrial park street in the Pencader Corporate Center. The land is zoned BP in New Castle County and it would be developed by right.

- 1) The response to Question 36 on the PLUS application indicates that the proposed development will not generate additional traffic. Further explanation is needed as a middle school of the size proposed would normally be expected to generate about 2,200 vehicle trips per day.
- 2) Executive Drive is a pair of cul-de-sac industrial park streets. The subject site is located at the south end of Executive Drive and shares the south cul-de-sac with a church, and an office building and three warehouse buildings. It is understood that the church creates congestion at the intersection of Executive Drive and Corporate Boulevard before and after worship services. While traffic peaks are not expected to overlap, DelDOT is concerned that a school at this site will create similar congestion on weekdays. A traffic impact study for the school may not be required, but an operational analysis and road improvements will likely be necessary.
- 3) DelDOT does not typically require traffic impact studies for elementary and middle schools, but New Castle County's standards are more stringent. The school district should contact the New Castle County Department of Land Use to determine if they will require a TIS.
- 4) There is a 60-foot reserved right-of-way following the north property line of the site and connecting Executive Drive to Glasgow Avenue (formerly Route 896). This reservation was obtained as part of a planned system of service roads along the west side of Route 896 to serve local traffic between Four Seasons and Glasgow. A final design has not been developed. If a connection between Executive Drive and Glasgow Avenue is made, the ramp from southbound Route 896 to Glasgow Avenue would probably be eliminated. DelDOT does not have an active project to acquire the right-of-way and build the connection from Executive Drive to Glasgow Avenue, but providing another means of access to subject site would be beneficial. If New Castle County requires a TIS, this measure may be identified to mitigate the traffic impacts of the school.

- 5) The school district engineer should contact the Subdivision Manager for New Castle County, Mr. John Schneider, regarding requirements for access. Mr. Schneider may be reached at (302) 760-2263.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-3091

Green Infrastructure

A portion or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61. These areas form a network of ecologically important natural resource lands of special state conservation interest.

Green Infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest lands, greenways, cultural, historic and recreational sites, and other natural areas with conservation value. Preserving Delaware's Green Infrastructure network supports and enhances biodiversity and functional ecosystems, protects native plant and animal species, improves air and water quality, prevents flooding, lessens disruption of natural landscapes, provides opportunities for profitable farming and forestry enterprises, limits invasive species, and fosters ecotourism.

Because approximately 80 percent of the State's land base is in private hands, voluntary stewardship by private landowners is essential to Green Infrastructure conservation in Delaware. It is in this spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

Soils

Soils on the site are mapped as well-drained Sassafras and poorly-drained wetland associated (hydric) Mixed-alluvial soils.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on the site. These wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from the edge of the wetland complex. Both DNREC and the Army Corps of Engineers discourage placing wetlands within lot lines to minimize negative effects of homeowner activity.

The applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

Impervious Cover

The plan to eliminate some existing parking area is welcomed. Impervious cover resulting from the existing building and parking is about 40 percent. Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline.

TMDLs

Total Maximum Daily Loads (TMDLs) reductions for enterococci bacteria have been developed for all stream segments of the White Clay Creek 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 authorized under federal code, states are charged with developing and implementing standards to support these desired use goals. The jurisdictional authority falls under Section 11.5 of the Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as “pollution control strategies.” Based on the reduction zone prescribed for the vicinity of this project, enterococci must be reduced by 67 percent. The applicant is encouraged to use BMPs such as buffers and pervious paving materials to mitigate impacts from bacteria and nutrient-laden surface runoff.

Riparian Buffer

According to site plans, the forested area on the southern boundary of the parcel will be left intact. It is important that this forested buffer remain intact to protect the water quality and associated wetlands of Muddy Run. Buffers are integral components of aquatic and wetland habitats. They reduce sediments, pollutants, and other non-point source material that affect the function and integrity of habitat and the condition and survivability of aquatic organisms. Forested buffers also serve as habitats for many terrestrial species that are dependent on aquatic and wetlands habitats for portions of their annual life cycles.

Sediment and Erosion Control/Stormwater Management

Any proposed land disturbance exceeding 5,000 square feet will require a sediment and stormwater plan. If the only land disturbing activity will be removal of existing parking area to create open space for play fields, that activity may qualify for a waiver of stormwater quantity and quality management. In that case, if the disturbed area is less than 1 acre, the project would qualify for a standard plan.

Rare Species

There are records of *Cordulegaster bilineata* (brown spiketail) adjacent to the site and likely within the project area. This rare dragonfly depends on wetland areas for breeding and efforts to avoid impacts to wetlands associated with Muddy Run should be employed.

There are known occurrences of the federally listed bog turtle (*Glyptemys muhlenbergii*) upstream and downstream of Muddy Run, which may serve as a migration corridor. This species is federally listed and protected under the Endangered Species Act. The site may be suitable habitat for the bog turtle within wetlands associated with Muddy Run.

Because there is a potential for bog turtle to occur on this parcel, either Phase I surveys for potential habitat should be conducted or fencing should be erected around the construction site to ensure that turtles do not enter the work area. If potential bog turtle habitat is found during Phase I surveys, the applicant is required to

- 1) Consult with the U.S. Fish and Wildlife Service and DE Division of Fish and Wildlife and completely avoid all direct and indirect impacts to the wetland; or
- 2) Conduct surveys to determine if bog turtles are present. In accordance with Delaware's procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15. Phase I surveys can be conducted any time of year when snow cover is not present. If potential habitat is found, note there is a time-of-year restriction during which Phase II surveys for bog turtles must be conducted. Contact Holly Niederriter (302) 653-2880 to obtain a list of Delaware approved bog turtle surveyors.

Nuisance Geese

Ponds will likely attract resident waterfowl like Canada geese and mute swans. Typical methods of goose control utilized on golf courses are not advisable. It is easier to control a few geese than to remove a plentiful population. The best method is one of prevention. Native tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around the perimeter of ponds are recommended. Planting should be completed as soon as possible. Waterfowl do not feel safe when they cannot see possible predators in the surrounding area. The Division of Fish and Wildlife does not provide goose control services and residents will have to accept this burden (for example permit applications and fees, securing services of certified wildlife professionals). Solutions can be costly and labor intensive. Reducing the number and/or size of ponds and providing proper landscaping and monitoring techniques will minimize nuisance geese.

State Fire Marshal's Office – Contact: John Rossiter 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):

1) Fire Protection Water Requirements:

- A. 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.
- B. 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.

2) Fire Protection Features:

- A. All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- B. 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.
- C. Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- D. Show Fire Lanes and Sign Detail as shown in DSFPR.

3) Accessibility:

- A. 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 Executive Drive must be constructed so fire department apparatus may negotiate it.
- B. 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.
- C. 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.
- D. The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

- E. 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.

4) Gas Piping and System Information

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

5) Required Notes

- A. 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”
- B. Proposed Use
- C. Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- D. Square footage of each structure (Total of all Floors)
- E. National Fire Protection Association (NFPA) Construction Type
- F. Maximum Height of Buildings (including number of stories)
- G. Note indicating if building is to be sprinklered
- H. Name of Water Provider
- I. Letter from Water Provider approving the system layout
- J. Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- K. 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 www.delawarestatefiremarshal.com.

Department of Agriculture - Contact: Mark Davis 739-4811

The Delaware Department of Agriculture has no objections to development proposed for the site. *Strategies for State Policies and Spending* promote growth in the location proposed by this application.

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.

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

PLUS 2005-06-07

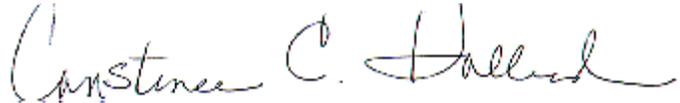
July 14, 2005

Page 8 of 8

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,

A handwritten signature in cursive script that reads "Constance C. Holland". The signature is written in black ink and is positioned above the printed name and title.

Constance C. Holland, AICP

Director

CC: New Castle County