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

November 22, 2024

Appoquinimink School District
Attn: Keith Hopkins
313 South Fifth St
Odessa, DE 19730

RE: PLUS review – 2024-10-01; Green Giant Elementary

Dear Mr. Hopkins:

Thank you for meeting with State agency planners on October 23rd, 2024 to discuss Green Giant Elementary. According to the information received, you are seeking review of a School Site Feasibility for a proposed Elementary School to accommodate 840 students within the Appoquinimink School District totaling 30.12 acres zoned R-1B (Single Family Residential - lower density).

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 the Town of Middletown 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

This project is located in a Level 2 investment area, which is consistent with the 2020 Strategies for State Policies and Spending.

Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near-term future. Because development in Level 2 is consistent with the 2020 Strategies for State Policies and Spending, the Office of State Planning Coordination supports this School Site.

Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- DelDOT has no concerns as to the feasibility of this proposal as described in the PLUS application and as discussed at the PLUS meeting.
- Once a final site plan is developed the District will still need to obtain all necessary reviews and approvals.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Staff from the Delaware Department of Natural Resources and Environmental Control (DNREC) reviewed the project submitted for PLUS review. The absence of comments regarding specific resources does not indicate that there are not additional constraints or environmental issues on site, nor does it indicate DNREC support of a project.

Stormwater Management

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency, prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the DNREC Sediment and Stormwater Program.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, (select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: DNREC Sediment and Stormwater Program at (302) 739-9921.

E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

Water Resources Protection Area and Excellent Groundwater Recharge Area
A Water Resource Protection Area corresponds with an Excellent Groundwater Recharge Area located on over 90% of the site. These are the delineated areas which contribute water to a public water supply. These areas have soils that are conducive to water infiltrating downward from surface water into groundwater. Preservation of these areas is important for replenishing groundwater supplies and ensuring drinking water for future generations.

- Applicants must comply with local ordinances for Water Resource Protection Areas which normally have requirements limiting the amount of impervious cover and types of land uses that can occur within these areas.
- The applicant must comply with all county and municipal requirements for construction and uses in Excellent Groundwater Recharge Areas.

Contact: DNREC Source Water Assessment and Protection Program at (302) 739-9945.
Website: https://dnrec.delaware.gov/water/resource-protection/water-quality-monitoring/

Wastewater Disposal Systems – Large Systems
For wastewater conveyance offsite by way of a new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance permit from the Commercial and Government Services Section.

Contact: DNREC Commercial and Government Services Section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

Wetlands and Waterways
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal wetlands in the southeast corner of the site. The application indicates that wetlands have not been delineated. The application states that the project does not propose direct impacts to the wetlands/waterways.

- State Requirements:
    - If plans change and any water features are disturbed, please contact the Wetlands and Waterways Section for more information on permitting requirements.

- Include all wetland boundaries, streams, and waterways on site plans.

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

- Federal Requirements:
  - If plans change and forested wetlands are disturbed, please contact the U.S. Army Corps of Engineers for more information on permitting requirements.

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/

Special Flood Hazard Area
According to the newest Flood Insurance Rate Maps (FIRM), the southeast corner of this parcel is situated within a Special Flood Hazard Area, specifically within the mapped 100-year floodplain (1% annual chance of flooding). The Special Flood Hazard Area identified on the site lies within zone AE. In lands contained within the 100-year floodplain, the National Flood Insurance Program's floodplain management regulations must be enforced through the local floodplain ordinance, which can have higher standards.

- The applicant must comply with the local floodplain ordinance and regulations applicable to development or construction within the 100-year floodplain. In determining the boundary of the floodplain, use the most recent FIRM maps available, which can be found at https://floodplanning.dnrec.delaware.gov/

Contact: DNREC Shoreline and Waterway Management Section at (302) 608-5500.
Website: https://dnrec.delaware.gov/watershed-stewardship/waterways/floodplains/

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

Proposed Project Parcel Flood Concern
- This parcel is located within an area of Minimal Flood Concern of 1000 years or greater. However, there is a 100 year flood plain located to the southeast corner just outside of the parcel's boundaries.

Parcel Status within County Evacuation Zone Location
- The parcel is not yet located within a New Castle County Evacuation Zone.

Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant

- The parcel is not located within the 10-mile EPZ for the Salem Nuclear Power Plant. Though it is in close proximity to the boundary.

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There are no known archaeological sites or known National Register-listed or eligible properties on the parcel. Soil is all well drained. The area has not been heavily surveyed and does not have many historic structures nearby. There is a National Register listed building 0.35 miles away, but this should not affect construction on the parcel. The parcel is close to the Appoquinimink River. The parcel appears to have been agricultural field for the majority of the 20th century.

- The parcel has a moderate potential for precontact archaeological resources and a low potential for historic archaeological resources.

- We do not recommend an archaeological survey at this time but ask that if anything changes or is uncovered during construction, to contact us immediately.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does 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):

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. (Education)

- Where a water distribution system is proposed for the site, 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 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.

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 Green Giant Rd must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.

- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

Gas Piping and System Information:

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

Required Notes:

- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”

- Proposed Use

- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units

- Square footage of each structure (Total of all Floors)

- National Fire Protection Association (NFPA) Construction Type

- Maximum Height of Buildings (including number of stories)

- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- As the District progresses with this process, please feel free to contact DelDOT for information and assistance available through our Safe Routes to School program.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Stormwater Management

- Where the site and soil conditions allow, integrate runoff reduction techniques including infiltration basins, bioretention (rain gardens), filter strips, and pavers to encourage on-site stormwater infiltration and reduce runoff.

- For improved stormwater management, preserve existing wetlands and passive open space.

Plan review agency contact: DNREC Sediment and Stormwater Program at (302) 739-9921.
E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

Drainage

- All existing drainage ditches on the property should be evaluated for function and cleaned, if needed, prior to the construction of the project.

- Environmental permits or exemptions may be required by the County Conservation District (Standard Plan), the DNREC Sediment and Stormwater Program (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Waterways Section prior to clearing and/or excavating ditch channels.

- All precautions should be taken 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.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/

Water Quality

This site lies within the Appoquinimink Watershed. Surface water quality in this watershed does not meet Federal and/or State Water Quality Standards and a Pollution Control Strategy is in place for this watershed.

- Implement vegetated buffers with a width of at least 100 feet around all water features on or adjacent to the site.

- Reduce impervious surfaces on the project site by eliminating areas of impervious pavement and/or using pervious pavement where practicable. Break up large parking lots with planted islands.

- Reduce stormwater runoff by integrating infiltration basins, bioretention (rain gardens), filter strips, and by preserving existing trees, wetlands, and passive open space.

- Reduce the necessity for nutrient application by maintaining open space as meadow or forest planted exclusively with native plants. Native plants are well-suited to our climate and require limited maintenance.

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. https://dnrec.alpha.delaware.gov/watershed-stewardship/

Forested Wetlands and Vegetated Buffer Zones

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of forested wetlands on the southeast corner of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

To reduce impacts to species associated with wetlands, the following is recommended:

- As proposed, do not disturb forested wetlands. Maintain an upland buffer of at least 100 feet along all wetlands, waterways, and sensitive habitats, including those containing existing forest or natural vegetative cover.

- Vegetated buffer zones should be identified outside of the Limit of Disturbance on the engineering plans.

- Maintain vegetated buffer zones as native species meadows or forest.

- Maintain habitat connections to undeveloped open space, which are especially important for species movement across the landscape.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/conservation/

Special Flood Hazard Area

- As proposed, locate all structures outside of the floodplain. If this is not possible, the developer should consider designing structures to a higher standard to avoid potential future flood damage and loss.

Contact: DNREC Shoreline and Waterway Management Section at (302) 608-5500. Website: https://dnrec.delaware.gov/watershed-stewardship/waterways/floodplains/

Sustainable Practices

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.

- On large expanses of impervious surfaces and asphalt, design parking areas to include trees for shading.

- Consider planting select areas with native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Consider planting select areas with meadow comprised of native species. Native plants are well-suited to our climate and require limited maintenance. Mowing in these areas should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Consider installing electric vehicle charging stations for staff and visitors. Installation costs can vary significantly depending on the parking and electricity distribution at a given location, so it is often easier and cheaper to plan for the installation at construction, rather than doing costly retrofits later. The DNREC Division of Climate, Coastal and Energy offers rebates of up to 80% of the cost of the charging station for commercial, multi-unit dwelling and other public properties. These programs address climate change goals of reducing greenhouse gas emissions and improving overall air quality (https://dnrec.delaware.gov/climate-coastal-energy/clean-transportation/).

- Consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities ((https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

Population

- The county has a population density of 1,321.50 per square mile based on the US 2020 Census report; an increase from 2010 at 1,241.00 persons per square mile. The specific census block(s) the project is located on has a total population of 0, though, with development, this will undoubtedly change. The 4 adjacent blocks aggregated bring the area to a total population of 212.

FEMA National Risk Index

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.



- According to FEMA's National Risk Index, the parcel **is** considered **relatively low** for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated as **relatively high** whereas its social vulnerability is rated as **relatively moderate.**

Renewable Energy Commitment

- Regarding energy use and consumption, the census tract utilizes **utility/natural gas** as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

- 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.

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,

David L. Edgell, AICP
Director, Office of State Planning Coordination