



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

August 18, 2015

Jamie Sechler
Davis, Bowed & Friedel, Inc.
23 North Walnut Street
Milford, DE 19963

RE: PLUS review 2015-07-09; Riverside Plaza

Dear Jamie:

Thank you for meeting with State agency planners on July 22, 2015 to discuss the proposed plans for the Riverside Plaza. According to the information received you are seeking review of a subdivision and site plan for 144 residential units on 21.34 acres on Rt. 24 in Sussex County.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

Strategies for State Policies and Spending

This project is located in Investment Level 3 according to the *Strategies for State Policies and Spending*. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments may support future growth in these areas, but please be advised that the State has other priorities for the near future. We encourage you to design the site with respect for the environmental features which are present.

Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Per Section 2.2.2.1 of the Development Coordination Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the plan accompanying the PLUS application, DelDOT estimates that the development would generate 833 vehicle trip ends per day on a typical weekday. For the weekday morning and evening peak hours, we calculate 69 and 85 vehicles per hour, respectively. Based on any of these three volumes, this project would warrant a TIS.

With that said, Section 2.2.2.2 of the Manual permits DelDOT to accept an Area Wide Study Fee in lieu of a TIS for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour. Recognizing that in 2005 DelDOT received and reviewed a TIS for a different development proposal on this site (one fast food restaurant, two high turnover sit-down restaurants and a drive-in bank) with a higher trip generation, they would be willing to accept the Fee in this case.

The Fee is calculated as \$10 per daily trip, or in this case \$8,330 and is payable when plans are submitted for the Initial Stage review. The Fee, if paid, would be banked for the funding of future traffic studies in Sussex County and does not reduce any contributions that might be assessed for off-site improvements or excuse the developer from making such contributions. Payment also does not excuse the developer from the need to conduct a Traffic Operational Analysis if DelDOT identifies the need for one in their review of the entrance plan.

Presently, the off-site improvements DelDOT foresees requiring are frontage improvements along Delaware Routes 5 and 24, a signal agreement for the intersection Routes 5 and 24 and a contribution toward DelDOT's planned safety improvements (Contract No. 24-112-09) at the intersection of Routes 5 and 24, presently scheduled for construction in Fiscal Year 2017.

To obtain a scope of work for a TIS, the applicant may have their engineer contact Mr. Troy Brestel of this office. Mr. Brestel may be reached at (302) 760-2167.

- The site access on Route 5 must be designed in accordance with DelDOT's Development Coordination Manual (formerly the Standards and Regulations for Subdivision Streets and State Highway Access), which is available at <http://www.deldot.gov/information/business/subdivisions/changes/index.shtml>.
- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage on Routes 5 and 24. By this regulation, this dedication is to provide a minimum of 40 feet of right-of-way from the road centerline on both roads. The following right-of-

way dedication note is required, “**An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat.**”

- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on both Route 5 and Route 24. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, “**A 15-foot wide permanent easement is hereby established to the State of Delaware, as per this plat.**”
- Referring to Section 3.4.2 of the Development Coordination Manual, the Initial Stage review fee shall be assessed to this project.
- In accordance with Section 3.4 of the Development Coordination Manual, a record plan shall be prepared prior to issuing “Letter of No Objection”. The following information will be required for the “Letter of No Objection” review:
 - Copy Initial Stage Fee Calculation Form
 - Copy Initial Stage Review Fee
 - Gate-Keeping Checklist – Site Plan
 - Record Plan Review Design Checklist
 - Auxiliary Lane
 - Sight Distance Spreadsheet
 - Site/Record Plan
 - Conceptual Entrance Plan
 - Submission of the Area-Wide Study Fee (If applicable)
- Referring to Section 3.4.1 of the Development Coordination Manual, because the proposed development would generate more than 200 vehicle trips per day, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request this meeting is available http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.pdf.
- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:
 - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.
 - Depiction of all existing entrances within 450 feet of the proposed entrance.
 - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- Section 3.5 of the Development Coordination Manual provides DelDOT's requirements with regard to connectivity. The requirements in Sections 3.5.1 through 3.5.3 shall be followed for all development projects having access to state roads or proposing DelDOT maintained public road for subdivisions. Private or municipal streets should follow the local land use agency's requirements for connectivity.
- Section 3.5.4.2 of the Development Coordination Manual addresses requirements for shared-use paths and sidewalks. All projects that are located in Level 2 Investment Areas relative to the Strategies for State Policies and Spending, need Entrance Plan Approval and generate at least 2,000 Average Daily Trips are required to build shared-use paths or sidewalks along their State-maintained road frontage. Projects located in Level 3 Investment Areas are required to install a shared-use path or sidewalk along the State-maintained road frontage if the project abuts an existing facility except that the Subdivision Engineer may waive the requirement where there is no facility on an abutting parcel. From Google Earth photography, no such facilities are apparent.

According to the Investment Area Map, most of the parcel's area is in Level 3, but the Route 5 frontage is in Level 2. Accordingly we will require path or sidewalk construction along the Route 5 frontage and may do so along the Route 24 frontage as well. Treatment of the Route 24 frontage should be discussed at the Pre-Submittal Meeting.

- Referring to Section 3.5.5 of the Development Coordination Manual, existing and proposed transit stops and associated facilities as required by the Delaware Transit Corporation (DTC) or DelDOT, in consultation with Sussex County, shall be shown on the Record Plan.
- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Routes 5 and 24.
- Referring to Section 4.3 of the Development Coordination Manual, the Construction Stage review fee shall be assessed to this project.
- Referring to Section 4.3 of the Development Coordination Manual, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review:
 - Copy Construction Stage Fee Calculation Form
 - Copy Construction Review Fee
 - Gate-Keeping Checklist – Entrance Plan
 - Entrance Plan Review Checklist
 - Entrance Design Checklist

- Application for Commercial Entrance Permit
 - Pipe/Angle Spreadsheet (If applicable)
 - Entrance Photo
 - Entrance Plan
 - SWM Report, Calculations and DA Maps (If applicable)
 - Sediment & Stormwater Management Project Design & Review Checklist
- In accordance with Section 5.2.5.6 of the Development Coordination Manual, Turning Movement Diagrams shall be provided to verify vehicles can safely enter and exit the site entrance. As per Section 5.2.3 of the Manual, the entrance shall be designed for the largest vehicle using the entrance.
 - In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls.

Preliminarily, it appears that a right turn deceleration lane will be needed at the entrance and that to achieve proper length it will be necessary to close the existing Boys and Girls Club access and shift their access to Road A. The plan presented may be showing that change but is not clear in that regard.

- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required for the site access on Route 5 and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at <http://www.deldot.gov/information/business/subdivisions/Intersection-Sight-Distance.xls>.

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

TMDLs

- The project is located in the low nutrient reduction zone of the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) for nutrients (e.g., nitrogen, phosphorus), and bacteria. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited waterbody” can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; *State of Delaware Surface Water Quality Standards, as amended July 11, 2004*) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the *low reduction* zone of the Inland Bays watershed calls for 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction (17 percent for marine waters) in bacteria from baseline

conditions. Please view the following web link for further information on the regulatory requirements and technical analysis involved in the development of the specific TMDLs:

<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessmentTMDLs.aspx>

- The Inland Bays Pollution Control Strategy (PCS) and the accompanying regulations were finalized by order of the DNREC Secretary on October 2008. The PCS regulations can be reviewed at <http://regulations.delaware.gov/documents/November2008c.pdf>. Background information about the PCS with guidance documents and mapping tools can be retrieved from http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm
- A nutrient management plan is required under the *Delaware Nutrient Management Law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project's open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements – or, view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

Water Supply

- The project information sheets state water will be provided to the project by Tidewater Utilities via a central water system. Our records indicate that the project is located within the public water service area granted to Public Water Supply (a.k.a. Tidewater Utilities) under Certificate of Public Convenience and Necessity 87-WR-04.
- 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.
- Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is an Underground Storage Tank associated with the Wagner Property located within 1000 feet of the proposed project.

Source Water Protection Areas

- The DNREC Water Supply Section, Groundwater Protection Branch (GPB) has determined that the parcel falls entirely within a wellhead protection areas for Sussex County (see map). The wellhead protection areas protect well owned by Tidewater Utilities Inc. (TUI) Meadows District.

Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where land use activities or impervious cover may adversely affect the quantity and quality of ground water moving toward such wells.

The site plan shows infiltration ponds for the management of stormwater (see map below). While these systems address the particulate and nutrient components of stormwater runoff, they do not address pathogens, petroleum hydrocarbons, pesticides, other organic compounds, and other inorganic compounds associated with residential land use (DNREC, 1999). Because this is wellhead protection area, there exists the potential for these constituents to enter the aquifer and compromise water quality.

GPB recommends, advanced treatment for the stormwater management facility to address the dissolved pollutant load.

In addition, because the wellhead protection area is an existing source of public drinking water and the excellent ground-water recharge area so readily affects the underlying aquifer, the storage of hazardous substances or wastes should not be allowed within these areas unless specific approval is obtained from the relevant state, federal, or local program.

Reference: Delaware Department of Natural Resources and Environmental Control, 1999, The State of Delaware Source Water Assessment Plan: Dover, DE, p. 301.



Sediment and Stormwater Program

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. 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. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.

Drainage

- The site has drainage problems during certain times of the year. The owner of this property contacted the Drainage Program in March 2013 to report flooding issues on his property. Numerous drainage complaints in the area resulted in a drainage study of the area. During most of the year infiltration works in this general area. However during wet times and high water table (typically winter-spring) the water has nowhere to go. Lack of infiltration has caused some sediment and stormwater ponds to overflow. Currently when infiltration is not working there is not a sufficient outlet for surface water to be carried off-site resulting in flooded parking lots.

Air Quality

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project:

| Table 1: Potential Regulatory Requirements | |
|---|---|
| Regulation | Requirements |
| 7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling | <ul style="list-style-type: none"> • Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Use covers on trucks that transport material to and from site to prevent visible emissions. |
| 7 DE Admin. Code 1113 – Open Burning | <ul style="list-style-type: none"> • Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibit the burning of land clearing debris. • Prohibit the burning of trash or building materials/debris. |
| 7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan | <ul style="list-style-type: none"> • Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1) |
| 7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products | <ul style="list-style-type: none"> • Use structural/ paint coatings that are low in Volatile Organic Compounds. • Use covers on paint containers when paint containers are not in use. |
| 7 DE Admin. Code 1144 – Control of Stationary Generator Emissions | <ul style="list-style-type: none"> • Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and carbon dioxide (CO₂) from emergency generators meet the emissions limits established. (See section 3.2). • Maintain recordkeeping and reporting requirements. |

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| 7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles | <ul style="list-style-type: none"> • Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes. |
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For a complete listing of all Delaware applicable regulations, please look at our website:

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

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known archaeological sites or National Register-listed property on this parcel. However, near parcel, towards the corner of John J Williams Hwy (Rt. 24) and Oak Orchard Rd (Rt. 5/Rd 297) is the Harmon School (S00165). The Harmon School (S00165) is a contributing property of the Nanticoke Indian Community Thematic Resources (S02109), and was-listed on the National of Historic Places on April 26, 1979.
- If there will any development, on this parcel, the developer should still be aware of the Unmarked Human Burials and Human Skeletal Remains Law of 1987 (Delaware Code: Title 7, Chapter 54), which pertains to the discovery and disposition process of such remains.

Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (7 Del. C. Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you would like to know more information pertaining to unmarked human remains or cemeteries, please check the following websites for additional information: www.history.delaware.gov/preservation/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml.

Therefore, prior to any demolition or ground-disturbing activities, the developer may want to hire an archaeological consultant to examine the parcel for any potential archaeological site or archaeological resources, such as cemetery, burial site, or unmarked human remains.

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Furthermore, any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at www.achp.gov.

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

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

Fire Protection Water Requirements:

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- Where a water distribution system is proposed for townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.

Fire Protection Features:

- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan

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 building 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.

- 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 the suggestions can benefit the project.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- DelDOT commends the developer for the ample sidewalks provided along the internal streets. While they appreciate that they are provided as an amenity for the residents, DelDOT recommends that the developer provide paths from the Road B sidewalks to the Route 24 sidewalk or shared-use path. A connection at the north end of the site frontage would be immediately useful in that residents would be better able to walk to the Royal Farms store on the corner of Routes 5 and 24.
- The sidewalk on the north side of Road A ends at a mid-block crossing. For safety,

DelDOT recommends that it be extended to the proposed Boys and Girls Club access.

- The developer should expect a requirement that any substation and/or wastewater facilities will be required to have access from the internal subdivision street with no direct access to the State-maintained highway.
- Please be advised that as of August 1, 2015, all new plan submittals and re-submittals, including major, minor and commercial plans, shall be uploaded via the PDCA (Planning Development Coordination Application) with any review fee paid online via credit card or electronic check. Guidance on how to do this is available on our website at <http://www.deldot.gov/information/business/subdivisions/>
- Be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of March 21, 2014. The notes can be found at
- http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_Notes.doc
- The applicant should expect a requirement that all PLUS and/or TAC comments be addressed prior to submitting record, subdivision or entrance plans for review.
- Please check to determine whether any utilities will need to be relocated as part of this project.
- The applicant should expect a requirement that any substation, wastewater facility or other utility parcels serving the site have access from an internal driveway or subdivision street with no direct access to Route 5.

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

Soils Assessment

- The soil mapping units mapped on subject parcel are all well or moderately well drained (Figure 1). These soil mapping units, generally, have few to moderate limitations for development.



Figure 1: NRCS soil survey mapping update in the immediate vicinity of the proposed construction

Additional information on TMDLs and water quality

- Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by adherence to the strategies and requirements described in the Inland Bays PCS, and the implementation of the following recommended best management practices (BMPs):

- Maintain as much of the existing open space as possible. We further suggest additional native tree and native herbaceous plantings - wherever possible – to create additional environmentally-friendly open space.
- Use green-technology storm water management and rain gardens (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff increases that often track post-development increases in surface imperviousness. Please contact Lara Allison at (302) 739-9939 for further information about the possibility for installing a rain garden(s) on this parcel.
- DNREC strongly recommends recommend that the applicant calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, ponds, and roads) included in the calculation. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and associated environmental impacts.
- Since this project will create additional surface imperviousness that will increase the probability for increased flooding and increased pollutant load runoff impacts to adjoining streams and wetlands in the greater Inland Bays watershed - we strongly encourage the applicant mitigate these said impacts through the employ of pervious paving materials – wherever practicable - instead of conventional asphalt and concrete. We particularly recommend the applicant consider pervious paving materials for all designated parking areas.
- Assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) resulting from the conversion of individual or combined land parcels to a changed land use(s); thus providing applicants and governmental entities with quantitative information about the project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Jen Walls or John Martin at (Division of Watershed Stewardship) at (302) 739-9939 for more information on the protocol.

Additional information on air quality

- Per the application, 10.60 acres of land will be proposed for “open space.” The US EPA defines open space as “any open piece of land that is undeveloped (has no buildings or other built structures) and is accessible to the public.”

The existing property lacks both sidewalks and bike paths. There are some shoulders along Oak Orchard Road, but they quickly terminate into turn lanes approaching the intersection at John J Williams Highway. The applicant indicates that sidewalks will be added as part of this project, but bike paths will not be added.

DNREC encourages developers and builders to consider all sustainable growth practices in their design, and we believe that the air quality impacts associated with the project should be completely considered. New homes may emit, or cause to be emitted, additional air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; Delaware currently violates federal health-based air quality standards for ozone.
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from new homes include emissions from the following activities:

- Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) were quantified. Table 2 – Projected Air Quality Emissions represents the actual impact Riverside Plaza may have on air quality.

| Table 2: Projected Air Quality Emissions for Riverside Plaza | | | | | |
|---|----------------------------------|------------------------------------|-----------------------------------|--|-----------------------------------|
| Emissions Attributable to Riverside Plaza (Tons per Year) | Volatile Organic Compounds (VOC) | Nitrogen Oxides (NO _x) | Sulfur Dioxide (SO ₂) | Fine Particulate Matter (PM _{2.5}) | Carbon Dioxide (CO ₂) |
| Area source emissions | 4.5 | 0.5 | 0.4 | 0.5 | 18.1 |
| Power emissions | * | 1.8 | 6.1 | * | 906.4 |
| Mobile emissions | 6.6 | 6.9 | 0.2 | 0.1 | 4255.9 |
| Total emissions | 11.1 | 9.2 | 6.7 | 0.6 | 5180.4 |

(*) Indicates data is not available.

Note that emissions associated with the actual construction of the townhouse community, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

- DNREC encourages sustainable growth practices that:
 - Control sprawl;
 - Preserve rural and forested areas;
 - Identify conflicting land use priorities;
 - Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
 - Coordinate transportation, environment, and climate protection plans with land use plans; and
 - Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

- Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:
 - **Constructing with only energy efficient products.** Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution.
 - **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.
 - **Constructing with high albedo, high solar reflectance materials.** This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
 - **Providing shade for parking areas.** Approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating stormwater.
 - **Providing charging stations for plug-in electric vehicles.** This measure helps to reduce localized air pollution by supporting the use of non-gasoline powered vehicles. Please refer to the US Department of Energy's website for electric vehicle readiness

information: http://www1.eere.energy.gov/cleancities/electric_vehicle_projects.html. Several charging stations already exist in nearby Rehoboth Beach and Lewes.

- **Encouraging the use of safe multimodal transportation.** This measure can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk or bike path, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
- **Using retrofitted diesel engines during construction.** This includes equipment that is on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees in vegetative buffer areas, particularly those areas between the property and adjacent residential properties.** Native trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

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

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

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

Delaware State Housing Authority – Contact Karen Horton 739-4263

DSHA supports the site plan review for a 144-unit townhome community on 21 acres, located at the intersection of Route 24 and Oak Orchard Road in Sussex County, for the following reasons:

- Townhomes are typically less expensive to construct and affordable to households seeking entry level homes. In addition, this proposal located in the coastal resort area of Sussex County. As such, this proposal provides an excellent opportunity to support the

local workforce in an area that lacks affordable homes. In addition, this site is in close proximity to existing services, markets, and employment opportunities.

- While large suburban homes have dominated development in Delaware for several decades, a growing body of research indicates that we are in the midst of a significant market shift. The baby boomers that once drove suburban development are now aging and are looking to downsize into something more manageable. The Delaware Population Consortium (DPC) projections for the next ten years indicate that not only will there be a large amount of suburban homes placed on the market by baby boomers, but that there will be a decline in households in age ranges that typically seek large homes. These same DPC projections show growth in the younger age ranges most likely at stages in their life and income to support apartments, condominiums and entry level homes – such as a townhome community.
- The combination of excess suburban housing supply currently on the market, additional supply being added by aging baby boomers, more stringent lending standards, along with a changing market indicate that it is critical that communities move away from large lot single family-detached housing and proactively provide a variety of housing options to meet market demand.

If you have any questions or would like more information on the above recommendations, please feel free to call me at (302) 739-4263 ext. 251 or via e-mail at karenh@destatehousing.com.

Sussex County – Contact: Janelle Cornwell 855-7878

- The proposed use requires a Conditional Use application to be submitted to the Planning Office. It was suggested prior to submission of the Site Plan that the applicant meet with the Planning Office to discuss the application.
- The project is within the boundary of the Oak Orchard Sanitary Sewer District and connection to the sewer system is mandatory.
- Sewer capacity is available on the basis of 6.67 EDU per acre (6.67 EDU x 21.34 acres = 142.34 EDU of available capacity). As proposed at 144 total units on 21.34 total acres, the project slightly exceeds sewer system design assumptions. Sewer connection points have been provided. An existing sewer easement across the property will be addressed during the concept plan review phase.
- Sussex County requires design and construction of the collection and transmission system to meet Sussex County Engineering Department's requirements and procedures. The Sussex County Engineer must approve the connection point. A sewer concept plan must be submitted for review and approval prior to any sewer construction. Attached is a checklist for preparing sewer concept plans.
- One time system connection charges will apply. Please contact Mrs. Stephanie Lynch at 302 854-5087 for additional information on charges.

- For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.
- In addition to these comments, a letter from Brandy Nauman, Sussex County Housing Coordinator & Fair Housing Compliance Officer is attached to this letter.

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,

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

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

CC: Sussex County Planning

Attachment