



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

October 20, 2015

Mr. Mike Riemann  
Becker Morgan Group, Inc.  
309 S. Governors Ave  
Dover, DE 19904

RE: PLUS review 2015-09-01; Worthington Apartments

Dear Mike,

Thank you for meeting with State agency planners on September 23, 2015 to discuss the proposed plans for the Worthington Apartments project. According to the information received, you are seeking review of a site plan for 384 apartments units on 37 acres in Smyrna, Kent 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 the City of Smyrna has governing authority over this land and the developers will need to comply with any and all regulations/restrictions set forth by the City.**

### **Strategies for State Policies and Spending**

- This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. 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.

### **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. However, per Section 2.2.2.2 of the Manual, for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour, DelDOT may accept an Area Wide Study Fee of \$10 per daily trip in lieu of the TIS.

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From the PLUS application, we see that the total daily trips are estimated at 2,554 vehicle trip ends per day, described as an increase of 964 trips from the presently approved use.

Based on the daily traffic volume, this project would warrant a TIS. However, a TIS was done for the use that is presently approved and the increase in traffic over that presently approved use is such that we can accept an Area Wide Study Fee in lieu of a new TIS. For this reason and because other TIS have been done in this area, which treated the presently approved use as a committed development, we find that a new TIS is not needed now.

The table below compares the uses presently approved and now proposed:

Land Use	Dwellings	ITE Code	Weekday	AM Pk Hr	PM Pk Hr
Approved					
Single-Family Houses	40	210	452	40	48
Duplexes/Townhouses	111	230	704	55	74
Total	151		1,156	95	122
Proposed					
Apartments	384	220	2,451	210	245
Increase	233		1,295	115	123

On August 20, 2015, we met with the applicant and discussed payment of the Area Wide Study Fee in lieu of a TIS but did not discuss an amount. Based on the table above, the fee would be \$12,950.

Payment of the Area Wide Study Fee does not exempt a developer from making off-site improvements and previous TIS have identified the need to improve Brenford Road. Both the applicant, in relation to other properties they are developing along Brenford Road, and the previous owner of the subject land are obligated through agreements to make some of those improvements and participate in funding others. At our meeting on August 20 we identified the need to revisit the cost shares associated with the various developments in the area.

- The site access on Brenford Road (Kent Road 42) and Rabbit Chase Lane (Kent Road 145) 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>.
- 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. Developments with 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 provides DelDOT's requirements with regard to sidewalks and Shared-Use Paths. Briefly, sidewalks or paths would be required along the site's entire road frontage. The response to Question 28 on the PLUS application indicates that there are existing and proposed sidewalks and bike paths. Apart from the sidewalks and paths in the existing Worthington development, located across Rabbit Chase Lane, this response seems to be in error; there are no sidewalks or paths along the site frontage.

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

**TMDLs.**

- The State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nitrogen, phosphorus, and bacteria (under the auspices of Section 303(d) of the Clean Water Act) for most of the watersheds in the State. 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 TMDLs for both the Leipsic River and the Smyrna River watersheds, the watersheds which the project is located, call for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDLs also call for a 75 percent (freshwater) reduction in bacteria from baseline conditions.
- 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 weblink 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 Tidewater Utilities under Certificate of Public Convenience and Necessity 04-CPCN-02.

- 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 Stormwater Management.**

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. It is strongly recommended that the owner and consultant contact the Kent Conservation District to schedule a project application 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. The plan review and approval as well as construction inspection will be coordinated through the Kent Conservation District. Contact Jared Adkins, Program Manager, at the Kent Conservation District at (302) 741-2600, ext. 3 for details regarding submittal requirements and fees (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101).

### **Tank Management.**

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C., Chapter 60; 7 Del.C., Chapter 74; and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.
- There are no confirmed leaking underground storage tank (LUST) projects located within a quarter mile from the proposed project area.
- No environmental impacts are anticipated; however, per the UST Regulations: Part E, § 1. Reporting Requirements:
  - Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
  - The Department's 24-hour Release Hot Line by calling (800) 662-8802; and
  - The DNREC Tank Management Section by calling (302) 395-2500.

**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:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106</b> – Particulate Emissions from Construction and Materials Handling	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.
<b>7 DE Admin. Code 1113</b> – Open Burning	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.
<b>7 DE Admin. Code 1135</b> – Conformity of General Federal Actions to the State Implementation Plan	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)
<b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	Use structural/ paint coatings that are low in Volatile Organic Compounds. Use covers on paint containers when paint containers are not in use.
<b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions	Ensure that emissions of nitrogen oxides (NO <sub>x</sub> ), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO <sub>2</sub> ), carbon monoxide (CO), and carbon dioxide (CO <sub>2</sub> ) from emergency generators meet the emissions limits established. (See section 3.2). Maintain recordkeeping and reporting requirements.
<b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles	Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

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, if any project proceeds on this parcel, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is in Title 7, of Chapter 54, of the Delaware Code.

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](http://www.history.delaware.gov/preservation/umhr.shtml) and [www.history.delaware.gov/preservation/cemeteries.shtml](http://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. Furthermore, 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](http://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 multi-family (apartment) sites, 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 sqft 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 Brenford Road and the access road to the subdivision from Rabbit Chase Lane 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. 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 Bill Brockenbrough 760-2109**

- The presently approved development includes planned street connections to Brunswick Drive in the Centerville/Graceville development located to the north and Rockingham Drive in the Hickory Hollow development located to the east. DelDOT accepts that the applicant wants to limit access to the proposed apartment complex and would be amenable to the Town not requiring those connections. However the Centerville/Graceville development and Hickory Hollow share a common border north of the subject lands. If the Town does not require the applicant to connect to the recorded

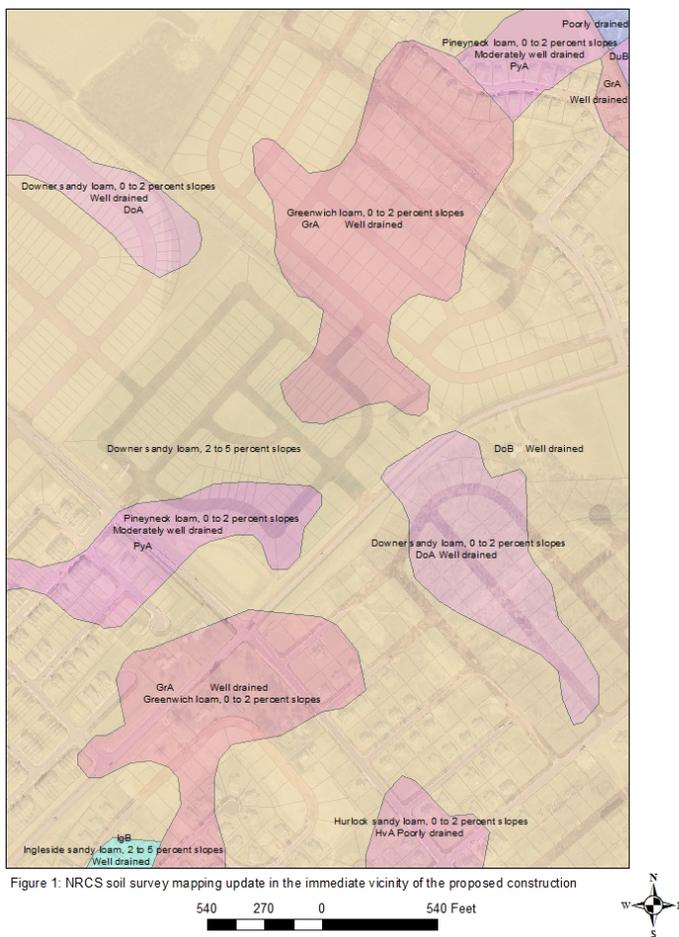
street connections in those developments, we would urge them to work with the developers of those properties to adjust their lot lines and create a direct connection between them at least for pedestrians and bicyclists.

- The concept rendering included with the PLUS Application includes a rich network of sidewalks and pedestrian paths but sidewalks connecting to Rabbit Chase Lane are noticeably absent. We would urge the Town to be sure those sidewalks are included when plans are further developed.

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

**Soils Assessment.**

- The soils on this parcel consist mostly of well-drained and moderately well-drained upland soils that, generally, have few to moderate limitations for development (Figure 1).



### **Nuisance waterfowl.**

- Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns surrounding ponds provide attractive habitat for these species.

To deter waterfowl from taking up residence in these ponds, we recommend planting the surrounding open space with a mix of native wildflower plantings (to be planted in accordance with the Sediment and Stormwater Plan approval agency requirements). It is best to mow the open space area surrounding the pond only once a year, either in February or March. If mowing must occur more often, it would be helpful to leave a minimum buffer of 15-30 feet in width to be mowed annually. This area would be necessary to adequately deter the waterfowl from inhabiting the area (when the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond). In addition to deterring nuisance waterfowl, the native wildflower mix will also serve to attract bees, butterflies, and other pollinators, and reduce run-off, which can contain oil and other pollutants that homeowners may use on their lawns and driveways. Our program botanist, Bill McAvoy would gladly assist in drafting a list of plants suitable for this site. Bill can be contacted at (302) 735-8668 or [William.McAvoy@state.de.us](mailto:William.McAvoy@state.de.us).

### **Additional information on TMDLs and water quality.**

- DNREC urges the applicant to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended BMPs:
  - Maintain and/or preserve as much of the existing open space as possible; we further suggest additional native tree, shrub and/or native herbaceous vegetation plantings, wherever possible.
  - Use green-technology storm water management and a 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 rain gardens on this parcel.
  - 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 will understate the 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 draining the greater Leipsic and Smyrna River watersheds, we strongly encourage, wherever practicable, the use of pervious paving materials (instead of conventional asphalt and concrete) to mitigate these impacts. At minimum, we recommend that the applicant use pervious paving materials for all 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; thus providing applicants and governmental entities with quantitative information about the project’s impact 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 John Martin or Jen Walls at (Division of Watershed Stewardship) (302) 739-9939 for more information on the protocol.

**Additional information on tank management.**

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

**Additional information on hazardous waste sites.**

- DNREC strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) in accordance with Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the town.

Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). DNREC's Site Investigation and Restoration Section (SIRS) should also be contacted as soon as possible at (302) 395-2600 for further instructions.

**Additional information on air quality.**

- Although the affected properties are classified by Kent County as being part of the Agricultural Conservation district, they are zoned Residential by the Town of Smyrna. The applicant indicates that the Town's current zoning will be maintained.
- The overall scope includes 37 acres, with 0 acres of forested land. According to the application, an undetermined amount of "open space," will remain after the project is complete. However, DNREC notes that the at least one of the proposed open space uses appears to be impervious in nature and not consistent with the intent 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. Such spaces may include playgrounds, green space, public seating areas, or public plazas.
- The existing property lacks sidewalks, as well as bike paths, and there is no public transportation within walking distance. The nearest DART bus stop is about 1.25 miles away on US 13. According to the current concept rendering, the applicant intends to add several landscaped walking path loops inside the development, which will allow pedestrians to travel from their homes to several green spaces, the clubhouse, and the pool. In addition, the application shows that both sidewalks and bike paths will be added as part of this project. DNREC encourages the developer to consider connectivity to nearby residential communities and Sunnyside Elementary School, which is also on Rabbit Chase Road, as plans for sidewalks and bike paths are developed.
- 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 Worthington Apartments may have on air quality.

Emissions Attributable to Worthington Apartments (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NO <sub>x</sub> )	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Area source emissions	11.9	1.3	1.1	1.4	48.2
Power emissions	*	4.7	16.4	*	2,416.9
Mobile emissions	17.6	18.4	0.5	0.2	11,349.1
Total emissions	29.5	24.4	18.0	1.6	13,814.2

(\*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the residential 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, housing, 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 percent 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](http://www1.eere.energy.gov/cleancities/electric_vehicle_projects.html). Several charging stations already exist in Smyrna and nearby Dover.
- **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 between the site and nearby residential areas.** 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 address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Worthington Apartments project. The DAQ point of contact is Rachel Yocum, and she may be reached at (302) 739-9402 or [Rachel.yocum@state.de.us](mailto: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](http://www.statefiremarshal.delaware.gov) technical services link, plan review, applications or brochures.

**Department of Public Health – Contact Laura Saperstein 744-1011**

- The Delaware Division of Public Health (DPH) is pleased to be able to participate in the PLUS application process. In keeping with its mission to protect and promote the health of all people in Delaware, DPH looks for opportunities to encourage and enhance our population's health behaviors that will result in healthy people and healthy communities.
- Community design can impact the health of a population. Studies show that persons in lower-income communities, the elderly, and children often suffer more from consequences of inadequate land-use and transportation. Additionally, we know physical activity has a direct correlation to many chronic diseases, including hypertension, diabetes and obesity. In 2013, 33.6% of Delawareans reported a BMI of "overweight;" and an additional 31% reported a BMI as "obese." To that end, DPH looks to make recommendations for land-use that can empower Delawareans to make good health behaviors a part of their daily lives.
- DPH would offer the following recommendations for consideration to the Worthington Apartments development:
  1. DPH is pleased to see the inclusion of an internal pedestrian infrastructure that proposes both sidewalks and bike paths. This will enable residents to choose walking and/or biking as an option to incorporate physical activity into daily routines.
    - a. DPH would further recommend that Worthington Apartments install pedestrian lighting on all paths and walkways to enhance the usability of active or recreational options.
    - b. Additionally, DPH recommends that the proposed configuration of sidewalks align and connect with development anticipated to the northeast and northwest.
  2. DPH also would like to commend the proposed use of open space to include a club house with pool. Active recreation is important because when individuals have access to active recreation options, they are able to incorporate leisure activity into their daily lives. Moreover, the proposed clubhouse and swimming pool align with the recreational needs and priorities identified through Statewide Comprehensive Outdoor Recreation Plan, or SCORP. (<http://www.dnrec.delaware.gov/parks/information/Pages/2013Scorp.aspx>).
  3. Consider incorporating multi-use pathways and internal connections to adjacent land, proposed open spaces, or future land developments to accommodate pedestrians and bicycles
    - a. The Worthington Apartments are within a walking distance of 0.68 miles to public facilities like the Sunnyside Elementary School along Rabbit Chase Lane

and a public transit stop as well as other mixed-use and commercial areas along Brenford Road. Locating housing developments within a reasonable distance to other facilities enables residents the option to choose active transportation that include non-motorized vehicles.

4. Consider including bike facilities into the land use plan, such as bike lanes, particularly across the frontage, turn lanes in/out at entrance, bike signage bike parking.
5. Include crosswalks at all key intersections.

**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: Kent County  
City of Smyrna