



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

March 22, 2017

Mr. Colm DeAscanis
CDA Engineering
6 Larch Ave., Suite 401
Wilmington, DE 19804

RE: PLUS review 2017-02-07; Middletown Crossing

Dear Mr. DeAscanis:

Thank you for meeting with State agency planners on February 22, 2017 to discuss the Middletown Crossing project. According to the information received, you are seeking review of a site plan for a 240 unit residential development with an additional 22,700 square feet of commercial space on 13.48 acres along East Main Street in Middletown.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that as the Town of Middletown have 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 Investment Levels 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

Because this development is within the Town of Middletown and the streets within and surrounding the project are Town streets, DelDOT has not regulatory comments.

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

Executive Summary.

Development of this parcel will result in increased impervious surface and new sources of greenhouse gas emissions. Opportunities exist to preserve natural resources while reducing the environmental impact on-site. As discussed at the PLUS meeting, the Department recommends reduced impervious surface cover and protection of the excellent groundwater recharge area, on which the parcel is located. Due to this source water concern, DNREC has outlined a number of best management practices to assist in protecting the resource and the overall health of the community.

The State of Delaware is threatened by climate change and has a goal of reducing greenhouse gas emissions by 30 percent by 2030. Appropriate development and re-development that provides access to public transportation, opportunities to walk and bike to shopping and recreation, and that employs energy efficient building standards are among key strategies to meet these goals. DNREC encourages the use of high performance building standards and consideration of alternative energy sources to promote clean sustainable energy and reduce greenhouse gas emissions. This could mean siting the buildings to take advantage of solar and geothermal systems, and/or including infrastructure for electric vehicle charging stations (funding assistance may be found at www.de.gov/cleantransportation). DNREC further recommends an abundant use of native vegetation and shade trees throughout the landscape, as well as other green infrastructure, where practicable, to absorb carbon dioxide, protect water quality and provide relief to residents on hot days.

The following pages provide information about applicable regulations and detailed recommendations associated with this project, from various DNREC Divisions. DNREC would like to be a partner in creating appropriate development that protects and highlights the environment as a natural amenity of the landscape. The Department has resources and expertise that are available to help make this a reality, often at no expense to the landowner.

Source Water Protection.

- DNREC has determined that the project falls entirely within an excellent groundwater recharge potential area for Middletown. Although the Town of Middletown's Source Water Protection Ordinance meets the minimum standards of protection, this protection does not limit impervious cover in excellent ground-water recharge potential areas.

Impervious cover prevents precipitation from infiltrating through the soil to the water table aquifer. Impervious cover refers to structures including but not limited to roads, sidewalks, parking lots, and buildings. Land use activities and impervious cover within an area of excellent ground-water recharge potential area has the potential to have a negative effect on the quality and quantity of drinking water available.

Excellent groundwater recharge areas are characterized as deposits of coarser grained material that have the best ability to transmit water vertically through the unsaturated zone to the water table. Recharge areas were mapped using the methods described in the Delaware Geological Survey Open File Report No. 34, "Methodology for Mapping Ground-Water Recharge Areas in Delaware's Coastal Plain" (Andres, 1991), and depicted in a series of maps prepared by the Delaware Geological Survey (Butoryak and Talley, 1993). This map category (excellent) is an indicator of how fast contaminants will move and how much water may become contaminated (Andres, 2004).

DNREC recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20 percent impervious cover. Some allowance for augmenting ground-water recharge should be implemented if the impervious cover exceeds 20 percent but is less than 50 percent of that portion of the parcel within this area. However, the development should not exceed 50 percent regardless (DNREC, 2005). A water balance calculation (environmental assessment) will be necessary to determine the quantity of clean water to be recharged via a recharge basin (Thorntwaite and Mather, 1957). The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water.

- Reduce impervious cover to less than 50 percent
 - Perform an environmental assessment report showing that water quality as well as water quantity of post development recharge is equal to or greater than pre-development recharge (Kauffman et al., 2005).
 - Quantify amount of recharge lost due to impervious cover and provide for onsite infiltration of water at least equal to or greater than pre-development recharge (Kauffman et al., 2005).
 - Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration
- The applicant indicates Bio-Retention and Underground Detention (Storm Tech) will manage stormwater. The construction phase of these types of structures requires excavation, hauling, and grading. The heavy equipment used in this phase has the capability to compact and degrade the structure of the strata (ground soil composition) that defines the area as an excellent ground water recharge area (Schueler, 2000a). Changes to the structural soil properties may cause significant reduction in recharge capacity. Installing storm-water management facilities in excellent ground-water recharge areas has the potential to contaminate the ground water beneath it and infiltrate into the aquifer (Schueler, 2000b). Applicable recommendations include:

- Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration
- Perform an environmental assessment report showing that water quality as well as water quantity of post development recharge is equal to or greater than pre-development recharge (Kauffman et al., 2005).
- Quantify amount of recharge lost due to impervious cover and provide for on-site infiltration of water at least equal to or greater (Kauffman et al., 2005)
- In addition, because the excellent ground water recharge area can so quickly affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

References:

- Andres, A. S., 1991, Methodology for Mapping Ground-Water Recharge Areas in Delaware's Coastal Plain: Delaware Geological Survey Open File Report No. 34, p. 18.
- , 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware, Delaware Geological Survey Report of Investigations No. 66, p. 14.
- Butoryak, K. R., and Talley, J. H., 1993, Delineation of Ground-Water Recharge Resource Protection Areas in the Coastal Plain of New Castle County, Delaware: Delaware Geological Survey Project Report for the Water Resources Agency for New Castle County, p. 26.
- DNREC, 2005, Source Water Protection Guidance Manual for the Local Governments of Delaware: Dover, DE, State of Delaware, Department of Natural Resources and Environmental Control, p. 144.
- Kauffman, G. J., Wozniak, S. L., and Vonck, K. J., 2005, Delaware Ground-Water Recharge Design Manual: Newark, DE, University of Delaware, Water Resources Agency, p. 31.
- Schueler, T. R., 2000a, The Compaction of Urban Soils, in Schueler, T. R., and Holland, H. K., eds., The Practice of Watershed Protection: Ellicott City, MD, Center for Watershed Protection, p. 215-218.
- , 2000b, Pollutant Dynamics of Pond Muck, in Schueler, T. R., and Holland, H. K., eds., The Practice of Watershed Protection: Ellicott City, MD, Center for Watershed Protection, p. 453-460.
- Thornthwaite, C. W., and Mather, J. R., 1957, Instructions and Tables for Computing Potential Evapotranspiration and the Water Balance: Drexel Institute of Technology, Publications in Climatology v. X, no. 3, p. 129.

Sediment and Stormwater Management.

- 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 pre-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 Town of Middletown. Contact the Town of Middletown at (302) 378-9120 for details regarding submittal requirements and fees.

Water Quality and TMDLs.

- The project is located in the greater Delaware River and Bay drainage areas, specifically within the Appoquinimink River watershed. In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets which call for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 8 percent (freshwaters) reduction in bacteria from baseline conditions. TMDLs are required by federal law, under the auspices of Section 303(d) of the Clean Water Act. 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 specific TMDL nutrient and bacterial load reductions for the Appoquinimink watershed can be viewed here:
<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessmentTMDLs.aspx>

Water Supply.

- 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 four weeks to process, which allows the necessary time for technical review and advertising.

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 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.
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.

For a complete listing of all Delaware applicable regulations, please look at our website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>

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.
- 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 (800) 662-8802; and
 - The DNREC Tank Management Section (302) 395-2500.

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There is no known archaeological site or National Register listed property, on this parcel. However, if this project or development proceeds, be aware of the Unmarked Human Burials and Human Skeletal Remains Law.

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 (Del. C. Title 7, 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 go to 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 should hire an archaeological consultant, to examine the parcel for archaeological resources and plan to avoid those sites or areas.

- If there is federal involvement, 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 the following: www.achp.gov.

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 subject development is in the Delaware Route 299 corridor. DelDOT and the Town of Middletown are contemplating the creation of a Transportation Improvement District along that corridor between Delaware Route 1 and Catherine Street. Depending on the schedule of the proposed development, it is possible that the developer could be required to contribute to that District.

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

Additional information on TMDLs and compliance through the PCS.

- In response to concerns about the need for reducing nonpoint source nutrient (nitrogen and phosphorus) and bacterial pollutants to levels sufficient to meet the prescribed TMDL reduction requirements in the Appoquinimink watershed, a multifaceted and comprehensive process known as a Pollution Control Strategy (PCS) has been developed to enable such reductions. Specifically, a PCS is a combination of best management practices and control technologies that reduce nutrient and bacterial pollutant runoff loading in waters of a given watershed to level(s) consistent with the TMDL reduction levels specified for that watershed. The PCS for the Appoquinimink River watershed consists of recommendations from the following four areas: agriculture, land preservation (open space), stormwater, and wastewater. Additional information about the Appoquinimink River PCS is available here: <http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>. In further support of the PCS, the applicant is also strongly urged to reduce nutrient and bacterial pollutants through the following recommended best management practices:
 - Maintain as much of the existing open space as possible in this parcel. DNREC suggests additional native tree, shrub and/or native herbaceous vegetation plantings in available open space, wherever possible.
 - Calculate post-construction surface imperviousness with all forms of created 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 the associated environmental impacts.

- Employ green-technology storm water management and a rain gardens (in lieu of open-water management structures) to mitigate or reduce nutrient and bacterial pollutant runoff.
- 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(s) on baseline water quality. DNREC strongly encourages the applicant/developer to use this protocol to design and implement the best management practices. Please contact John Martin in the Division of Watershed Stewardship, at (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 air quality.

- DNREC encourages developers and builders to consider all sustainable growth practices in their design, and DNREC believes that the air quality impacts associated with the project should be completely considered. New homes and businesses may emit, or cause to be emitted, 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; New Castle County is currently nonattainment for the 2008 ozone standard and maintenance for the particulate matter (PM) standard.
 - The emission of greenhouse gases which are associated with climate change, and
 - The emission of air toxics.
- Based on the information provided, emissions for mobile sources were quantified. Table 2 – Projected Air Quality Emissions represents the potential impact that the Middletown Crossing project may have on air quality.

Table 2: Projected Air Quality Emissions for the Middletown Crossing Subdivision

Emissions Attributable to Middletown Crossing Subdivision (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	7.4	0.8	0.7	0.9	30.1
Power emissions	*	2.9	10.2	*	1,510.6
Mobile emissions	11.0	11.5	0.3	0.1	7,093.2
Total emissions	18.4	15.2	11.2	1.0	8,633.9

(*) Indicates data is not available.

Note that emissions associated with the actual construction of the hotel 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.

- **Urban Tree Canopy:** Green streetscape elements that the developer could incorporate are street trees or urban trees. Native trees can help reduce emissions by trapping dust particles while replenishing oxygen. Trees also reduce energy demands by cooling during the summer and by providing wind breaks in the winter, whereby reducing heating and air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs. As a general reminder, trees that have a large leaf surface area at maturity are amenable to particulate matter (PM) collection, such as those that have hairy or sticky leaves and have high transpiration rates which result in relatively high temperature reduction.
- **Energy Efficient Options:** Constructing with energy efficient products can help your facility immensely, not only in terms of environmental sustainability but financially. Energy Star qualified products are up to 30 percent more energy efficient. Savings can 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.
- **Providing shade for parking areas** can also be of added benefit to this project. Some 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 have the additional benefit of channeling or infiltrating storm water. For more about energy efficient options, please see: <https://www.energystar.gov/> or <https://www.epa.gov/greeningepa/energy-efficiency-epa>.

- Multi-modal travel: A strategy to improve existing air quality levels is to maximize multi-modal travel through bike lanes, sidewalks and convenient access to transit opportunities. DNREC encourages the developer to incorporate sharrows or bike lanes where needed to encourage multi-modal travel opportunities (sharrows and striping are the easiest and most cost effective options). DNREC is pleased to see that there are proposed sidewalks which help to promote healthy lifestyles and choices. The elementary school children must be provided a multitude of safe transportation options and this includes biking and walking. Multi-modal travel 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 NO_x are reduced each year.

For more information on multimodal opportunities in your area, please refer to the Delaware Transit Corporation and DelDOT Gateway websites at www.dartfirststate.com and http://deldot.gov/information/community_programs_and_services/gate/. Also, for more information on the impacts of multimodal access on air quality please see the EPA's website at: <https://www3.epa.gov/otaq/>.

- Clean Fuel Measures: This strategy helps to reduce localized air pollution by supporting the use of clean diesel powered vehicles in construction activities. It is recommended that diesel trucks be replaced with cleaner fuels, technologies and controls to mitigate air quality impacts such as propane, CNG (compressed natural gas) or electric. Diesel engines can result in incomplete combustion which releases carbon monoxide (CO) and particulate matter (PM) into the ambient air. Both CO and PM are criteria pollutants which have been shown to contribute to negative health impacts. Existing diesel trucks can be retrofitted to meet emissions standards. Grants and rebates are available through the Diesel Emissions Reduction Act (DERA). See more information here: <https://www.epa.gov/cleandiesel>.
- The closest alternative fueling/electric charging facility is located at 100 N. Broad Street in Middletown, Delaware which is 1.4 miles northwest of the development location. This facility offers liquefied petroleum gas (propane).
- For rebate information on the Delaware Clean Transportation Incentive Program, please visit www.de.gov/cleantransportation. For a site map of local alternative fueling sites, please visit the Alternative Fuels Data Center website here: <http://www.afdc.energy.gov/locator/stations/>.
- Should the developer have any more questions or concerns, the DNREC Division of Air Quality point of contact is Lauren DeVore, and she may be reached at (302) 739-9437 or lauren.devore@state.de.us. The applicant is encouraged to contact DNREC to discuss emission mitigation best management practices that can be incorporated into the Middletown Crossing project. DNREC look forward to working together with you on this project to achieve our shared air quality, healthy community and quality of life goals.

Delaware State Housing Authority – Contact Karen Horton 739-4263

- DSHA supports the proposal to develop a mixed use development, including 240 rental units, on 13.48 acres on East Main Street in Middletown. As a general practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as this location. In addition, DSHA strongly supports the development of rental communities as they can be the most economical to construct and are needed to meet the needs of low- and moderate-income families. Connecting the site to the surrounding bike/pedestrian network will also promote social inclusion, facilitate alternative modes of travel to nearby areas, and provide opportunities to for outdoor recreation.
- There is a growing body of research indicating a market shift away from the large suburban homes that dominated development in Delaware for many years. 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 entry-level homes, such as those included in this proposal.

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

DPH would offer the following recommendations for consideration to the Middletown Crossing plan for development:

- DPH is pleased to see the inclusion of proposed open space indicated, in part, for passive recreation. This will enable residents to incorporate leisure activity into their daily lives. DPH would further recommend that Middletown Crossing the recreational needs and priorities identified through Statewide Comprehensive Outdoor Recreation Plan, or SCORP, for that specific area.
(<http://www.dnrec.delaware.gov/parks/information/Pages/2013Scorp.aspx>).
- DPH recommends incorporating sidewalks and internal walkways including marked crosswalks, and therefore, is extremely pleased to see the proposed Complete Streets Design. The presence of these attributes are important for improving the experience of pedestrians, and according to recent research, are indicators of a broader pattern of activity-supportive design features. Sidewalks are basic attributes for supporting pedestrian activity. Additionally, curb cuts improve this access for older adults, people with disabilities, and parents with baby strollers.
- Consider including additional bike facilities into the land use plan, such as bike signage bike parking. Bicycling is a low-cost and efficient means of active transportation that effectively improves the built environment by including non-motorized options to the transportation systems. Moreover, active transportation is of fundamental importance to

healthy living.

- Include lighting features such as streetlights, lit open spaces and low-level lighting for sidewalks and/or paths. Street lighting is needed for safety during nighttime activity and increased feelings of security. Multi-use pathways and internal connections to adjacent land, proposed open spaces, or future land developments to accommodate pedestrians and bicycles

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,



Constance C. Holland, AICP

Director, Office of State Planning Coordination

CC: Town of Middletown