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October 27, 2016

Constance C. Holland, AICP
Office of State Planning Coordination
Haslet Armory
122 William Penn Street
Dover, DE 19901

RE: PLUS Response
JOHNSON CONTROLS BUILDING EXPANSION
Town of Middletown, Delaware
2011025.01

As required, please find attached a copy of the PLUS report for the Johnson Controls Building Expansion project located at 50 Patriot Drive in Middletown, DE. Below in **BOLD** is Becker Morgan's response to each comment.

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.
BMG RESPONSE: NOTED.

Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Delaware Code Title 17, Section 134 details DelDOT's authority for streets in incorporated municipalities. Patriot Drive should be labelled as a Town street with regard to maintenance.
- If the Town requires a DelDOT Letter of No Objection to Recordation (LONOR), DelDOT will review the record plan for the site in accordance with Section P.3 of the Development Coordination Manual. As Patriot Drive is a Town-maintained street, DelDOT will not participate in the Town's entrance permitting process.
- 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. The subject development would be located in the Westtown Business Park, which would have warranted a TIS. However, per Section 2.2.2.4 of the Manual, if a development is located within a Transportation Improvement District (TID) and is consistent with the Land Use and Transportation Plan for that TID, then under certain conditions DelDOT may require participation in the TID in lieu of conducting a TIS and making improvements based on the

TIS. The Business Park is located in the Westown TID, is consistent with the plan for that TID and the conditions in Section 2.2.2.4 are met.

The Westown TID pre-dates Section 2.4 of the Manual, so its administration is somewhat different from what is described there. Because contributions to the TID for industrial development are based on parcel size, the applicant has fully paid for this parcel. No additional contributions to the TID are required unless they move onto another parcel.

Technical or procedural questions regarding the TIS may be directed to our consultant, Mr. Ray Harbeson, at h4designllc@yahoo.com. Any substantive questions or concerns should be directed to Mr. Marc Coté, DelDOT's Assistant Director for Development Coordination. Mr. Coté may be reached at (302) 760-2165.

BMG RESPONSE: NOTED. THE TOWN IS NOT REQUIRING A LETTER OF NO OBJECTION TO RECORDATION (LONOR) AS PART OF THEIR RECORD PLAN REVIEW PROCESS.

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

Executive Summary.

The Johnson Controls project is located in a developing area; although there are few impacts to natural resources, there is concern for source water protection and water quality. In addition, opportunities exist to reduce the site's overall environmental impact by providing energy efficiency alternatives on-site.

This site falls entirely within an excellent groundwater recharge potential area for Middletown. Land uses in excellent groundwater recharge areas can negatively influence the quality and/or quantity of public drinking water. In addition, the site is within the Appoquinimink River watershed, which has an established Pollution Control Strategy for nitrogen, phosphorus and bacteria. To maintain surface water quality and drinking water quality in the basin, the developer is encouraged to minimize impervious surfaces within developed areas and use green infrastructure technologies where possible. These efforts will help to meet stormwater management requirements, protect the water supply and minimize impacts to nearby habitat.

BMG RESPONSE: THE PROPOSED SITE IMPROVEMENTS MEET THE SOURCEWATER PROTECTION REQUIREMENTS ESTABLISHED BY THE TOWN OF MIDDLETOWN.

The State of Delaware is threatened by climate change and has established 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. We encourage the applicant to provide safe pedestrian and bike access to the site. We also encourage the use of high performance building standards, consideration of alternative energy sources (such as

solar and geothermal), and electric vehicle charging stations to promote clean sustainable energy and reduce greenhouse gas emissions. DNREC offers a number of financial incentives to help offset some of the costs involved with these investments, including the Delaware Alternative Fueling Infrastructure Grant and the Energy Efficiency investment Fund (EEIF).

BMG RESPONSE: NOTED.

The following pages provide information about code requirements and detailed recommendations associated with this project, from various DNREC Divisions. DNREC strives to be a partner in creating sustainable development that protects environmental features and adds value to the community. The Department has resources and expertise that are available to help make this a reality, often at no expense to the landowner. Contact information for specific offices are listed below or you can contact Michael Tholstrup at (302) 735-3352.

BMG RESPONSE: NOTED.

TMDLs.

- The project is located in the greater Delaware River and Bay drainage area, specifically within the Appoquinimink River watershed. In this watershed, 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). The TMDL for the Appoquinimink River watershed calls 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. 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>

BMG RESPONSE: NOTED.

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. Since

potential contamination sources exist in the area, any well permit applications will undergo a detailed review and may require site specific conditions/recommendations along with the standard technical review and advertising which may increase turnaround time. Please factor in the necessary time for processing well permit applications into the construction schedule.

In this case there are two (2) Groundwater Management Zone sites associated with the Middletown Waste Water Treatment Facility: (1) Von Croy and (2) Cochran located within 1000 feet of the proposed project. Should you have any questions concerning these comments please contact Rick Rios, at (302) 739-9944.

BMG RESPONSE: NOTED.

Source Water Protection.

- The entire project falls within an area of excellent groundwater recharge potential for the Town of Middletown; as such, the project should be subject to the provisions of the Town’s Source Water Protection Ordinance.

BMG RESPONSE: PROPOSED SITE IMPROVEMENTS COMPLY WITH THE TOWN’S SOURCEWATER PROTECTION ORDINANCE BY INFILTRATING RUNOFF GENERATED BY THE PROPOSED BUILDING ADDITION, IN THE SAME WAY THE SITE MEETS THE ORDINANCE REQUIREMENTS IN THE EXISTING CONDITION.

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)

<p>7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products</p>	<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.
<p>7 DE Admin. Code 1144 – Control of Stationary Generator Emissions</p>	<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.
<p>7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles</p>	<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>.

BMG RESPONSE: NOTED.

Hazardous Waste.

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

BMG RESPONSE: NOTED.

Tank Management.

- If a release of a Regulated Substance occurs at the proposed project site, compliance with 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.

BMG RESPONSE: NOTED.

- 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.
BMG RESPONSE: NOTED.

○

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are known archaeological sites or a National Register listed property, on this parcel. Across the road to the north is Hedgelawn (N-118), which is listed on the National Register of Historic Places. If any project or development proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law.
- **BMG RESPONSE: NOTED. ALL PROPOSED BUILDING AND PARKING LOT EXPANSIONS ARE CONTAINED WITHIN AREAS OF PREVIOUS DEVELOPMENT. THERE IS NO PROPOSED DISTURBANCE IN THE AREA MENTIONED ABOVE.**
- 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 Unmarked Human Burials and Human Skeletal Remains Law (Del. Code: Title 7, Chapter 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. The developer should include sufficient landscaping or barrier between the house (K-3361) and development, in order to protect the house, from adverse noise and visual effects.

BMG RESPONSE: NOTED. THE PROPERTY HAS BEEN PREVIOUSLY DEVELOPED AND THERE HAS BEEN NO INDICATION OF ANY ABANDONED CEMETARIES. IF ANY ARE DISCOVERED DURING

CONSTRUCTION, WE WILL PROCEED IN ACCORDANCE WITH DELAWARE LAW.

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency 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.

BMG RESPONSE: NOTED.

Delaware State Fire Marshall's Office – Contact John Rudd 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 1500 gpm for 2-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 sites of Storage buildings, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

BMG RESPONSE: NOTED, THE ABOVE FIRE PROTECTION REQUIREMENTS WILL BE MET.

- **Fire Protection Features:**
 - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed and
 - Buildings greater than 10,000 sqft. 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

BMG RESPONSE: NOTED, THE ABOVE FIRE PROTECTION REQUIREMENTS WILL BE MET.

- **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.
- 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.

BMG RESPONSE: NOTED, THE ABOVE FIRE ACCESSIBILITY REQUIREMENTS WILL BE MET.

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- **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

BMG RESPONSE: NOTED, THE ABOVE INFORMATION WILL BE INCLUDED ON THE FINAL PLANS.

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

Soils Assessment.

- The primary soils mapped on the subject parcel are Reybold-Queponco complex (RdA), Reybold (ReB), and Woodstown (WoA). These soils are primarily well-drained and moderately well-drained with few to moderate limitations for development (Figure 1).

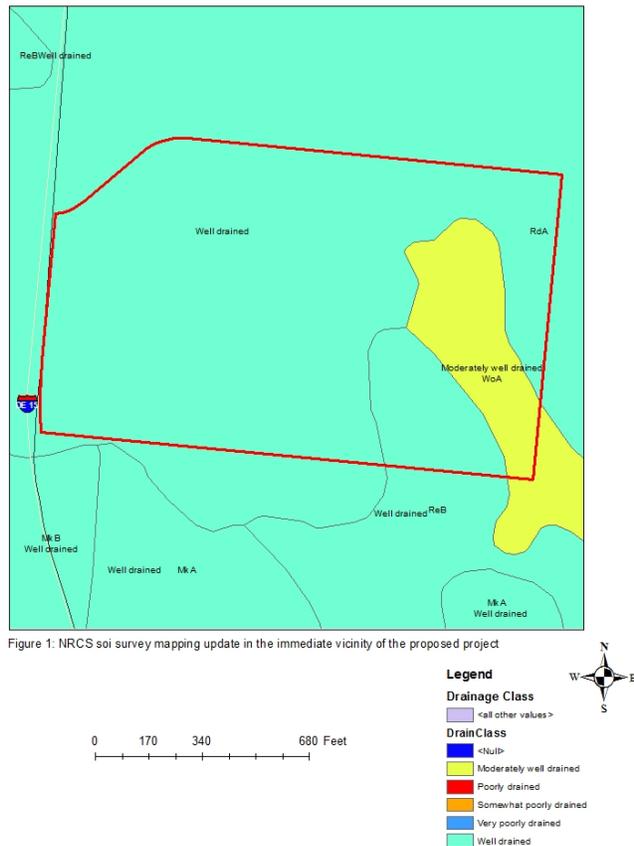


Figure 1: NRCS soil survey mapping update in the immediate vicinity of the proposed project

BMG RESPONSE: NOTED.

Additional Information on Source Water Protection.

- The applicant indicates that stormwater will be managed by an existing regional stormwater wet pond. 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 groundwater recharge potential areas which is a recommended best management practice. 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. Any impervious cover within an area of excellent groundwater recharge potential can negatively affect the quality and quantity of drinking water available.

- Excellent groundwater recharge potential areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category (excellent) is an indicator of how fast contaminants will move and how much water may become contaminated (Andres, 2004). Land use activities or impervious cover on areas of excellent groundwater recharge potential may adversely affect ground water in these areas.
- DNREC recommends:
 - 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 (Kaufmann, 2005).
 - Quantify amount of recharge lost due to impervious cover and provide for onsite water infiltration equal to or greater than the pre-development recharge rate (Kaufmann, 2005).
 - Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration
 - Use Best Management Practices (BMPs) in the design, construction, and maintenance of a storm water management system designed to address water quality with respect to nutrient and other pollutant loads.

In addition, because the excellent ground water recharge area can readily 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. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14.

<http://www.udel.edu/dgs/Publications/pubform.html#nvestigations>

Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, *Delaware Ground-Water Recharge Design Manual*: Newark, DE, Water Resources Agency, University of Delaware, p. 31.

<http://www.wr.udel.edu/swaphome/Publications/SWPguidancemanual.html>

BMG RESPONSE: ORIGINAL DEVELOPMENT AT THIS SITE WAS SUBJECT TO THE TOWN'S SOURCEWATER PROTECTION ORDINANCE. THERE WAS AN UNDERGROUND STORAGE/INFILTRATION SYSTEM CONSTRUCTED BENEATH

THE SOUTHERN PARKING AREA OF THIS PLAN DESIGNED TO CAPTURE AND INFILTRATE ROOF RUNOFF FROM THE EXISTING 400,00 SF + BUILDING IN ORDER TO MEET THE SOURCEWATER PROTECTION ORDINANCE REQUIREMENTS SET FORTH BY THE TOWN. THIS PROJECT REPRESENTS AN EXPANSION THAT ALSO PROPOSES TO INFILTRATE ROOF RUNOFF GENERATED BY THE PROPOSED BUILDING EXPANSION IN THE SAME WAY USING THE EXISTING UNDERGROUND INFILTRATION SYSTEM.

Additional information on TMDLs and water quality.

- 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(s) 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 Appoquinimink River PCS is available here: <http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>.
- In support of the PCS, the applicant is strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended BMPs:
 - Maintain and preserve as much of the existing open space as possible; we further suggest additional native tree, shrub and/or native herbaceous vegetation plantings wherever practicable.
 - 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 the associated environmental impacts.
 - Employ green-technology storm water management and rain garden(s) (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff. Please contact Lara

Allison at (302) 739-9939 for further information about the possibility of installing rain gardens on this parcel.

- 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. We strongly encourage the applicant/developer to use this protocol to help design and implement the most effective BMPs. Please contact John Martin or Jen Walls in the Division of Watershed Stewardship, at (302) 739-9939 for more information.

BMG RESPONSE: STORMWATER QUALITY AND QUANTITY MANAGMENT FOR THIS SITE WAS INCLUDED IN THE OVERALL DESIGN OF THE WESTOWN BUSINESS PARK. 70% IMPERVIOUS COVER WAS ACCOUNTED FOR ON LOT 17, ON WHICH THIS PROJECT RESIDES, DURING THE ORIGINAL DESIGN. WITH THIS BUILDING AND PARKING LOT EXPANSION, IMPERVIOUS COVER STAYS BELOW THE 70% THRESHOLD, MEANING THAT ALL STORMWATER QUALITY AND QUANTITY REQUIREMENTS ASSOCIATED WITH THIS DEVELOPMENT ARE MET.

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 DNREC-Tank Management Section.
- The DNREC Tank Management Section encourages the use of Best Management Practices (BMPs) in considering all environmental effects of activities and implementation and incorporating options to minimize the environmental footprints of activities. For more information, please visit online: <http://www.dnrec.delaware.gov/tanks/Pages/default.aspx> or contact Ross D. Elliott at DNREC-TMS with further questions, at (302) 395-2500 or Ross.Elliott@state.de.us.

BMG RESPONSE: NOTED.

Additional information on hazardous waste.

- 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 to 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 rezoned 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. SIRS should also be contacted as soon as possible at (302) 395-2600 for further instructions.

BMG RESPONSE: NOTED.

Additional information on air quality.

- Based on the information provided, the mobile source emissions (attributed to vehicle trips) were quantified. Table 2 – Projected Air Quality Emissions represents the actual impact the Johnson Controls project may have on air quality

Table 1: Projected Air Quality Emissions for Johnson Controls Extension (Based on projected estimate of 243 trips during peak season)					
Emissions Attributable to Johnson Controls Extension (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Mobile emissions	0.8071245	1.06434	*	*	*

(*) *Indicates data is not available.*

Note that emissions associated with the actual construction, 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 planners, developers and builders to consider all sustainable growth practices in development. New development 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: New Castle County currently violates 2008 standards for ozone and is considered maintenance for the particulate matter (PM) standard;
- The emission of greenhouse gases which are associated with climate change; and
- The emission of air toxics.

Air emissions generated from new development 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 – such as increased vehicular traffic.

BMG RESPONSE: NOTED, THE ABOVE FIRE PROTECTION REQUIREMENTS WILL BE MET.

Urban tree canopy

- Some green streetscape elements that the Johnson Controls could incorporate are street trees or urban trees. The PLUS site plan and maps did not illustrate the proposed landscaping features however the applicant indicated during discussions at the September 28th PLUS meeting that landscaping already exists and additional plantings will be part of the expansion. DNREC recommends additional native trees which help 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.
- **BMG RESPONSE: NOTED. A LANDSCAPE PLAN HAS BEEN PREPARED TO MEET THE TOWN OF MIDDLETOWN SPECIFIED REQUIREMENTS FOR THE PROPOSED BUILDING AND PARKING LOT ADDITIONS.**

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 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 facility. 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 also 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>.

- **BMG RESPONSE: NOTED, LANDSCAPING PROPOSED WITHIN THE PARKING LOT LIMITS WILL PROVIDE OPPORTUNITIES FOR SHADE.**

Multi-modal travel

- A component of improving 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 add sharrows or bike lanes and bike racks where needed to encourage multi-modal travel opportunities (Sharrows and striping are the easiest and most cost effective option). DNREC is pleased to see the inclusion of both existing and proposed sidewalks in the site plan, and proximity to transit route 43 (DART) that was created specifically to get warehouse workers to and from their place of employment in this area. 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/>.
- **BMG RESPONSE: NOTED, BIKE PARKING HAS BEEN PROVIDED ON-SITE.**

Clean Fuel Measures

- This measure helps to reduce localized air pollution by supporting the use of non-gasoline powered vehicles. It is recommended that diesel trucks be replaced with cleaner fuels and technologies such as propane, CNG (compressed natural gas) or electric to mitigate air quality impacts. Existing diesel trucks can be retrofitted to meet emissions standards. The nearest alternative fueling facility is located 2.7 miles to the northeast of the development site off of 301 at 1000 North Broad Street in Middletown, DE offering liquefied petroleum gas (Propane). Installing on-site electric vehicle charging stations is another strategy that promotes clean fuel usage. 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. 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 applicant have any questions or like to discuss the emission mitigation measures that will be incorporated into the Johnson Controls project, the DAQ point of contact is Lauren DeVore, and she may be reached at (302) 739-9437 or lauren.devore@state.de.us. We look forward to working together with you on this project to achieve our shared air quality goals!

BMG RESPONSE: NOTED.

Delaware State Fire Marshall's Office – Contact John Rudd 739-4394

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. It is reported that a meeting has already occurred with staff at the State Fire Marshal's Office.

BMG RESPONSE: CORRECT, FIRE MARSHAL APPROVAL HAS BEEN RECEIVED.

If you have any questions, or if we can provide any additional information, please don't hesitate to contact me.

Sincerely,
BECKER MORGAN GROUP, INC.



Christopher Duke, PE, PTOE
Associate

CDD

Cc: Rae Yingling, Town of Middletown (via email)