



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

October 21, 2005

Mr. Randy Duplechain  
Davis, Bowen & Friedel  
23 North Walnut Street  
Milford, DE 19963

RE: PLUS review – PLUS 2005-09-06; Church Hill Village

Dear Mr. Duplechain:

Thank you for meeting with State agency planners on October 5, 2005 to discuss the proposed plans for the Church Hill Village project to be located on the west side of Tub Mill Pond Road and both sides of Church hill Road.

According to the information received, you are seeking site plan approval for a 586 Planned Unit Residential (PUD) subdivision on 196 acres.

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 Kent County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

**Executive Summary**

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

### **State Strategies/Project Location**

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

### **Street Design and Transportation**

- DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- Additional right-of-way should be dedicated across from Cicada Lane to allow for a future single lane roundabout, which will improve the current geometry of the Cicada Lane and Tub Mill Pond Road intersection.
- The developer will be required to improve Tub Mill Pond Road to meet DelDOT's standard typical section for local roads (two 11-foot lanes and two 5-foot shoulders) for the length of the site frontage
- It is recommended that the streets be realigned to eliminate the two proposed cul-de-sacs.

### **Natural and Cultural Resources**

- This parcel borders or contains headwater or near headwater riparian wetlands associated with Tub Mill Branch which eventually drains to the environmentally-sensitive Mispillion River watershed and thence to the Delaware Bay. **In recognition of this concern, the Department strongly recommends that the applicant preserve the existing riparian buffer (where it still exists) in its entirety. Otherwise a 100-foot buffer width is considered the minimum acceptable distance from all wetlands and water bodies (including ditches).**
- According to the application approximately 20 acres out of 23 acres of forest are going to be preserved, however, the site plan indicates a much higher percentage

of removal. This parcel is part of a larger forest block and forest fragmentation caused by the current site plan greatly diminishes the value of this forest to a host of plant and animal species rather they are rare or not. Larger, connected areas of forest are more beneficial to wildlife than small, fragmented areas like those currently in the site plan. Forest fragmentation separates wildlife populations, increases road mortality, and increases “edge effects” that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species. Consideration should be given to reducing the number of lots and/or reconfiguring the site plan so that these lots can be moved to areas that are already cleared.

- To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that the developer minimize the amount of forest removal by relocating infrastructure (such as storm water management ponds) to areas outside of the forest and designating community open space along the forested areas. Doing so will preserve and expand the existing buffers on site and its value for birds and wildlife and it will create recreational opportunities for residents.
- In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.
- Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners
- DNREC has never surveyed this parcel, but there is a potential for the federally threatened swamp pink (*Helonias bullata*) to occur within the forested wetlands on this property. The project site should be surveyed for the presence of this federally protected plant.

The following are a complete list of comments received by State agencies:

**Office of State Planning Coordination – Contact: David Edgell 739-3090**

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

**Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685**

Nothing is known within this parcel. However, if they expand the project to include the triangle of land at the intersection of Church Hill and Tub Mill Pond roads, there is a historic house, the E. F. Hammond House (K-4814; shown on Beers Atlas of 1868), in that triangle. Two historic properties, the A. C. Holmes House (K-4815) and an agricultural complex (K-4943), both shown on Beers Atlas, are within sight of the northern half of this project. Beers Atlas also shows two Potter Est. houses and an unnamed house, now gone, within the parcel. The 1918 Cedar Creek USGS topographic map shows an additional house, which is also now gone, on Church Hill Road in the northern half of the project. There may be historic-period archaeological sites associated with these properties. There are also areas of high and medium potential for prehistoric-period archaeological sites throughout this area.

The Division of Historic and Cultural Affairs (DHCA) requests that the developer include sufficient landscaping around the northern part of the project area to block the view of the project from the adjacent historic properties. In addition, if the E. F. Hammond House will be included, they request that it be maintained on a large lot within the development. If this is not feasible, they would like the opportunity to record the house and any outbuildings before they are demolished. The DHCA would also like the opportunity to look for archaeological sites before any ground-disturbing activities take place, so they can gather some information about their location and nature.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

- 1) Tub Mill Pond Road and Church Hill Road are classified as local roads. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum

- right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- 2) Additional right-of-way should be dedicated across from Cicada Lane to allow for a future single lane roundabout, which will improve the current geometry of the Cicada Lane and Tub Mill Pond Road intersection.
  - 3) The developer will be required to improve Tub Mill Pond Road to meet DelDOT's standard typical section for local roads (two 11-foot lanes and two 5-foot shoulders) for the length of the site frontage.
  - 4) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site on both Tub Mill Pond Road and Church Hill Road.
  - 5) DelDOT commends the developer for including the proposed stub streets on the plan.
  - 6) It is recommended that the streets be realigned to eliminate the two proposed cul-de-sacs. While they acknowledge that cul-de-sacs are necessary to make efficient use of the land in environmentally constrained areas, they discourage pedestrian travel within the development and do not promote a sense of community. Where possible, they should be avoided.
  - 7) The plan shows what appear to be four storm water ponds along Church Hill Road at the site entrance. These ponds will be acceptable if the developer provides a 20-foot minimum buffer between the ultimate right-of-way and the top of slopes of the ponds and the runoff from the site is managed such that the rate and volume of the post-development runoff would not exceed the rate and volume of the pre-development runoff. The project manager for Kent County, Mr. Brad Herb of Johnson, Mirmiran and Thompson, will make a final determination in this matter when reviewing the detailed plans for the site.
  - 8) A traffic impact study (TIS) will be required for this project, and the developer's engineer now has one in progress. DelDOT would recommend that the County withhold all plan approvals for the property until the developer has completed that TIS to DelDOT's satisfaction and has adequately addressed any requirements following from DelDOT's review of that study. While the progress of the study

will depend on many factors, they would expect to have received the study and commented to the County on it by June of 2006.

- 9) It is recommended that the developer consider the use of a roundabout at the site entrance on Church Hill Road, especially if the TIS shows level of service to be an issue at that entrance. DelDOT certainly would be reluctant to place a signal in this location. If a roundabout is considered, it should be analyzed in the TIS.
- 10) As discussed at the scoping meeting for the TIS, there is a DelDOT project for the construction of a grade-separated interchange at the intersection of State Route 1 (Kent Road 8) and Thompsonville Road (Kent Road 19). That project will include the extension of Thompsonville Road from the proposed interchange to the intersection of Tub Mill Pond Road (Kent Road 119) and Churchill Road (Kent Road 404) and it is to be addressed in the TIS. However, given DelDOT's current budget shortfall, the schedule of that project is undetermined. Once that schedule has been re-established it may be necessary to add an interim case to the TIS, examining conditions just before the interchange and road extension are opened to traffic.
- 11) The developer's site engineer should contact Mr. Herb, regarding their specific requirements for the design of the streets and site entrances. Mr. Herb may be reached at (302) 266-9600.

**The Department of Natural Resources and Environmental Control – Contact:  
Kevin Coyle 739-9071**

### **Soils**

According to the Sussex County soil survey mapping Sassafra, Fallsington, and Johnston soils were mapped in the immediate vicinity of the proposed project. Sassafra is a well-drained upland soil that has few limitations for development. Fallsington is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Johnston is a very poorly-drained wetland associated (hydric) floodplain soil that has severe limitations for development.

### **Wetlands**

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine forested wetlands. PLUS application materials indicate that wetlands have been

delineated. This delineation should be verified by the Army Corps of Engineers through the Jurisdictional Determination process.

PLUS materials indicate that wetlands will not be directly impacted by construction activities. However, if impacts are anticipated please note that palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process. Disturbance to wetlands should be avoided and vegetated buffers of no less than 100 feet should be employed from all wetlands and water bodies.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

It should also be noted that this parcel borders or contains headwater or near headwater riparian wetlands associated with Tub Mill Branch which eventually drains to the environmentally-sensitive Mispillion River watershed and thence to the Delaware Bay. Headwater riparian wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since such streams are a major avenue for nutrient-laden stormwater and sediment runoff, their protection deserves the highest priority. **In recognition of this concern, the Department strongly recommends that the applicant preserve the existing riparian buffer (where it still exists) in its entirety. Otherwise – as mentioned previously - a 100-foot buffer width is considered the minimum acceptable distance from all wetlands and water bodies (including ditches).** In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation.

### **TMDLs**

A Total Maximum Daily Load (TMDL) is the maximum level of pollution for which a water quality limited water body can assimilate without compromising use and recreational goals such as swimming, fishing, drinking water, and shell fish harvesting.

Although TMDLs as a “pollution runoff mitigation strategy” to reduce nutrient loading have not yet been developed for the Mispillion River watershed to date, work is continuing on their development and they should be completed by December 2006. Therefore, until the specified TMDL reductions and pollution control strategies are adopted, it shall be incumbent upon the developer to employ best available technologies (BATS) and/or best management practices (BMPs) as “methodological mitigative strategies” to reduce degradative impacts that might be associated with proposed project.

Reducing imperviousness, planting/preservation of trees, and maintaining 100-foot minimum upland buffers from wetlands/streams - are some examples of proactive mitigative strategies that will help reduce excessive nutrient runoff and its impacts on water quality, while ensuring State compliance with imminent Federal TMDL regulatory requirements.

### **Impervious Cover**

Since residential development significantly increases the amount of impervious cover - leading to large volumes of contaminant-laden runoff which ultimately drain into streams or waterways - the applicant is strongly urged to pursue both natural and constructed Best Management Practices (BMPs) to reduce such impacts. Reducing the amount of impervious surfaces by planting more trees and/or the use of pervious paving surfaces (“pavers”) in lieu of asphalt or concrete, are examples of ways to reduce such impacts. Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline.

### **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 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 Erosion Control/Stormwater Management**

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through **Kent Conservation District**. Contact Jared Adkins at (302) 741-2600, ext. 3, for details regarding submittal requirements and fees.

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies.

### **Drainage**

The Drainage Program requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

The Drainage Program does not have a clear understanding how stormwater will be directed to the stormwater management area.

The Drainage Program requests the majority of the stormwater pipes on this project be located on drainage easements along the streets. Regarding drainage conveyances within the proposed subdivision that are not able to be located along a street, the Drainage Program strongly recommends said drainage conveyances be dedicated as a 30-foot drainage easement. All stormwater conveyances should be placed in the center of the 30-foot drainage easement.

Trees and shrubs planted within drainage easements should be spaced to allow for mechanized drainage maintenance or the reconstruction of drainage conveyances.

Existing riparian buffers should be preserved to aid in the reduction of nutrients, sediment, and other pollutants. For the further enhancement of water quality, the Drainage Program encourages additional widths of vegetated buffers on this project.

### **Forest Preservation**

According to the application approximately 20 acres out of 23 acres of forest are going to be preserved, however, the site plan indicates a much higher percentage of removal. There are at least 13 lots within the forested area and portions of 5 other lots and roadways as well. Also, the amount of forest removal will be higher once this site is built out and homes, driveways, sidewalks, roadways, and stormwater management ponds are

constructed. Future landowner activities (construction of playgrounds, sheds, swimming pools, etc.) also result in further clearing. This parcel is part of a larger forest block and forest fragmentation caused by the current site plan greatly diminishes the value of this forest to a host of plant and animal species rather they are rare or not. Larger, connected areas of forest are more beneficial to wildlife than small, fragmented areas like those currently in the site plan. Forest fragmentation separates wildlife populations, increases road mortality, and increases “edge effects” that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species.

Consideration should be given to reducing the number of lots and/or reconfiguring the site plan so that these lots can be moved to areas that are already cleared. In addition, considering the benefit of trees in flood abatement and erosion control, stormwater management ponds should not be located in the forested area. Larger, connected areas of open space are more useful to people as well as wildlife than smaller, fragmented sections that are often placed throughout subdivisions. Small ‘dead spaces’ behind lots, on corners, and in other irregular places are often underutilized and can become a maintenance problem.

### **Open Space**

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that the developer minimize the amount of forest removal by relocating infrastructure (such as storm water management ponds) to areas outside of the forest and designating community open space along the forested areas. Doing so will preserve and expand the existing buffers on site and its value for birds and wildlife and it will create recreational opportunities for residents.

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

### **Rare Species/Site Visit Request**

DNREC has never surveyed this parcel, but there is a potential for the federally threatened swamp pink (*Helonias bullata*) to occur within the forested wetlands on this property. The project site should be surveyed for the presence of this federally protected plant. Please contact our program botanist, Bill McAvoy, at (302) 653-2880 to set up a site visit. His observations would allow us to make more informed comments and allow the applicant the opportunity to avoid impacts to rare species. Please note that we also requested a site visit when this project was named PLUS 2005-09-06, Church Hill Landing.

### **Potential Hunting Issue**

Because the project parcel is part of a larger forest block, legal hunting activities may take place on adjacent properties. Hunting within 100 yards of a dwelling is prohibited and the applicant may want to contact adjacent landowners to determine if this is going to be an issue. In effect, the adjacent landowner will be losing 100 yards of their property for hunting if there is not buffer between lot lines and the adjacent property line.

### **Nuisance Waterfowl**

If stormwater management ponds are included in the site plan, they may attract waterfowl like resident Canada geese and mute swans. 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 around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

## **Recreation**

DNREC encourages the designer/builder to involve Kent County Parks and Recreation Department in the recreation components of this project. Carl Solberg can be reached at (302) 744-2490.

The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. The high and moderate facility needs in Kent County are listed below. Consideration should be given to incorporate some of these recreation opportunities into the project. For additional information about the outdoor recreation priorities, contact Bob Ehemann at 739-9235.

High priorities are Walking or Jogging Paths, Bike Paths, Swimming Pools, Picnic Areas, Playgrounds and Fishing Areas. Moderate priorities are Skate Facilities, Hiking Trails, Baseball/Softball Fields, Campgrounds, Soccer Fields, Volleyball Courts, Basketball Courts and Canoe/Kayak Access.

DNREC recommend that sidewalks be built fronting at least one side of residential streets and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, parks, public mass transit stops, schools, stores, work, etc.

## **Solid Waste**

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

## **Air Quality**

Once complete, vehicle emissions associated with this project are estimated to be 45.0 tons (89,944.9 pounds) per year of VOC (volatile organic compounds), 37.2 tons

(74,468.3 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 27.5 tons (54,944.1 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 2.4 ton (4,891.0 pounds) per year of fine particulates and 3,761.9 tons (7,523,775.0 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 18.1 tons (36,278.9 pounds) per year of VOC (volatile organic compounds), 2.0 ton (3,991.8 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 1.7 ton (3,312.6 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 2.1 ton (4,274.8 pounds) per year of fine particulates and 73.5 tons (147,066.4 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 7.2 tons (14,378.3 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 25.0 tons (50,011.6 pounds) per year of SO<sub>2</sub> (sulfur dioxide) and 3,688.4 tons (7,376,708.6 pounds) per year of CO<sub>2</sub> (carbon dioxide).

	VOC	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	45.0	37.2	27.5	2.4	3761.9
Residential	18.1	2.0	1.7	2.1	73.5
Electrical Power		7.2	25.0		3688.4
TOTAL	63.1	46.4	54.2	4.5	7523.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 7.2 tons of nitrogen oxides per year and 25.0 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,

high performance windows,  
controlled air infiltration,  
upgraded heating and air conditioning systems,  
tight duct systems and  
upgraded water-heating equipment.”

The DNREC Energy Office is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

**State Fire Marshal’s Office – Contact: John Rossiter 302-739-4394**

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal’s Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- a. **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. (Assembly, Apartments and Townhouses)
  - Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)
  - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
  
- b. **Fire Protection Features:**
  - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.

- Buildings greater than 10,000 sq.ft., 3-stories of more or 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
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **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 Tub Mill Pond Road and Church Hill Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

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

e. **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)
- Townhouse 2-hr separation wall details shall be shown on site plans
- 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

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.delawarestatefiremarshal.com](http://www.delawarestatefiremarshal.com), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Milton Melendez 698-4500**

Neither the Delaware Department of Agriculture nor the Delaware Forest Service has any objections to the Church Hill Village Application as proposed. The site is located on a long-range designated controlled development area for the county. Within these sites, The *Strategies for State Policies and Spending* encourages environmentally sensitive development in areas defined as a Growth Level 3 Zone.

In addition, this site is a part of a “good recharge” area. The Department of Agriculture and the Department of Natural Resources has mapped and evaluated ground water potential recharge throughout the state. A “good” rating designates an area as having important groundwater recharge qualities. Maintaining existing vegetation in an area with either “Excellent” or “Good” recharge designation is crucial for the overall environmental health of our state and extremely important to ensuring a safe drinking water supply for future generations. Finally, the loss of every acre of land designated as “excellent” or “good” recharge adversely impacts the future prospects for agriculture in Delaware. Again, retention of existing cover is essential to ensure an adequate future water supply for the future viability of agriculture in the First State. We encourage the developer to consider recharge potential during the design phase and during construction.

*Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

*Native Landscapes*

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

**Public Service Commission - Contact: Andrea Maucher 739-4247**

Applicant indicated Tidewater or the City of Milford; however, the project is within Artesian Water Company’s certificated service area (granted 8/23/05).

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

**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.**

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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". The signature is written in black ink and is positioned above the printed name and title.

Constance C. Holland, AICP  
Director

CC: Kent County