

TEPACHE FARMS

§ 99-9. *C. In addition to the other provisions contained within this article, an Applicant for approval of a preliminary plat shall provide that the following criteria are incorporated and addressed in the plat and the manner in which each one is incorporated and addressed through the design of the preliminary plat:*

(1) That the proposed subdivision is integrated into existing terrain and surrounding landscape.

The existing terrain and surrounding landscape is a rural area with $\frac{3}{4}$ acre lots, agricultural and forested areas. The subdivision will be integrated into the existing terrain and surrounding landscape with the maintenance of open space, trees and buffers. Careful attention was directed at the location of the lots to the adjoining properties and adjacent Burton Road. The proposed subdivision will be encompassed by a 20-foot "Forested and/or Landscaped Buffer Strip" subject to the conditions outlined in the Sussex County Subdivision Code, specifically Section 99-5. Further, existing trees on-site were avoided to the extent possible with the design of this subdivision.

(2) That all resources and resource buffers are protected in accordance with Chapters 99 and 115 herein and that floodplains are minimally used.

There are no "Resources" and the property is not within a floodplain as those terms are used and defined in Chapters 99 and 115. This determination was made after Pennoni's team performed both on-site investigations and document review. More specifically, Pennoni performed an on-site preliminary wetland investigation and delineation and determined that there are NO non-tidal wetlands on the property. In addition, Pennoni reviewed mapped soils data, available wetland inventory maps and FEMA maps which also confirmed that there no wetlands on the property.

Based upon the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) dated January 6, 2005 Map Number 10005C0165J, the subject property is located in a Zone "X" unshaded, which is an area outside the 500-year floodplain, less than 0.2% annual probability of flooding (see FEMA Floodplain Map – MAP SECTION).

(3) That natural and historic features are preserved and forest fragmentation and vegetation and soil removal is minimized. In addition, a forest assessment shall be conducted with a forest assessment report provided with the preliminary plat. If woodlands or mature forests that contain high habitat value are found, these areas shall be conserved to the maximum extent possible.

Pennoni conducted an environmental review field study of the subject property. One of the purposes of the review was to identify the presence of threatened and/or endangered species within the proposed development area through a visual site investigation. In addition to the field study, Pennoni reviewed Federal and State agency databases. The findings of these assessments indicated an absence of threatened and/or endangered species within the area of investigation. This finding was determined through both a visual site reconnaissance (field study) and a database review of the Delaware Department of Natural Resources and

Environmental Control, Division of Fish & Wildlife and Delaware Natural Heritage Program databases. The database review also yielded no State Resource Areas, no Natural Areas, and no Critical Natural Areas within the subject property. Pennoni also reviewed available historical information for indications of past usage that may have had an environmental impact on the site. This historical review included aerial photographs of the site and surrounding vicinity for the following years: 1937, 1954, 1961, 1968, 1992, 1997, 2002, 2007 and 2012. Information depicted on aerial photographs indicates active farming of the agricultural field with dwelling and farm structures present.

Forest Assessment:

Tepache Farms' wooded areas are restricted to the northwest and southwest corners of the parcel. Located in the Pine-Oak and Mixed Southern Hardwood Forest communities associated with this region, trees found here are a mixture of the following species: oaks (*Quercus* spp.), hickory (*Carya* spp.), maple (*Acer* spp.), and black cherry (*Prunus serotina*), in addition to pines (*Pinus* spp.) This area provides habitat and resources for various species, and aids in nutrient cycling. The forest appears relatively healthy, though minor invasive species encroachment and evidence of deer browse were noted. Management should focus on preserving hydrologic function, controlling invasives, and enhancing native understory diversity.

The proposed layout of the subdivision takes advantage of the former agricultural fields that make up most of the site. Existing tree areas are avoided to the extent possible, and those that remain will provide buffering to adjacent properties in addition to ecosystem services to Tepache Farms and beyond its boundaries. It is recognized that forests and their soil ecology provide important water quality, air quality and wildlife benefits both for the immediate site and for the region. All standard procedures for tree and erosion control protection will be utilized, minimizing the impact on existing vegetated areas and helping to preserve native soil. Minimal soil removal and only required grade changes will be undertaken during construction of the subdivision to help reduce the impact on tree root zones and preserve the natural state of the existing wooded areas.

(4) That open space and scenic views are preserved.

Approximately 6.03 acres (24.85%) of the project remains as open space which includes approximately 2.14 acres of the site to be planted for the "Forested and/or Landscaped Buffer Strip," as defined in § 99-5, Subsections A through J. The proposed open space exceeds the minimum required open space of "0" acres.

Scenic views for all the lots will be provided to the extent possible through the existing woods remaining as a part of this development as well as the proposed wooded buffers planted with native species that will mature to match the existing mix of hardwoods and softwoods.

(5) That the supply of potable water to future residents of the proposed subdivision is safe and adequate for their use.

All lots will have private, individual on-site wells that will be permitted by DNREC.

(6) That the means and method of sewage disposal are adequately addressed for the proposed subdivision.

All lots will have private, individual on-site septic systems permitted by DNREC.

(7) That the proposed subdivision will not pollute surface water or groundwater.

The project will provide Erosion & Sediment Control (ESC) and Stormwater Management (SWM) Best Management Practices (BMPs) which comply with DNREC standards and specifications in accordance with current guidance documents and policies. Green Technologies and Pollution Control Strategies will be implemented to reduce nitrogen and phosphorus loads to their mandated levels. Best Management Practices (BMPs) have been implemented to the greatest degree practicable to protect sensitive headwaters and other water bodies.

The stormwater management design for Tepache Farms will reduce runoff, mimic natural watershed hydrologic processes, and cause no adverse impact to property. This shall be accomplished by treating runoff at the source, disconnecting impervious surfaces, preserving or enhancing natural flow paths and vegetative cover, conserving or enhancing natural open spaces and riparian areas, and other measures that simulate natural watershed hydrologic processes. The resource protection event design will provide runoff management measures to reduce the volume of stormwater runoff generated on the property, recharge groundwater, minimize impacts to downstream channels from runoff leaving the property, and reduce pollutant loads. The stormwater practices for this project will be designed to manage and treat runoff from precipitation, preventing pollution and improving water quality. These systems utilize various techniques to remove pollutants like sediment, trash, debris, and hydrocarbons, and will also include features for groundwater recharge and peak runoff attenuation.

(8) That the anticipated method of minimization of erosion and sedimentation are adequately identified.

The Preliminary Subdivision Plan identifies the planned steps to minimize erosion and sedimentation. A combination of strategies is proposed, including erosion control measures like revegetation, soil stabilization, and diverting runoff, and sediment control measures like silt fences and sediment basins. These practices help prevent soil loss and keep sediments from entering waterways, protecting water quality and ecosystems. The project, under Delaware's Sediment and Stormwater Regulations, will implement erosion and sediment control measures in phases as construction progresses that will minimize soil disturbance and erosion at any given time. Sediment basins designed and used will create a temporary holding area for sediment-laden water, allowing sediment to settle out before the water is discharged. Sediment fences and barriers will be used to trap soil particles carried in runoff, preventing them from reaching waterways. Diverting runoff away from disturbed

areas will reduce the erosive force of water and prevent sediment from being carried away. This will involve creating diversion ditches or swales to channel water flow. Finally, stabilizing exposed soil surfaces with materials like erosion control blankets, mulch, sod, or rock/rip rap/stone will prevent erosion, especially on slopes or in areas where vegetation is difficult to establish.

(9) That changes to the groundwater levels will be minimized and that groundwater recharge is maximized as a result of the proposed subdivision and that the methods of both are adequately identified. In addition, there will not be increased rates of runoff or increased risk of flooding onto adjoining properties from the design and construction of the proposed subdivision, and the anticipated methods Used to achieve these criteria are adequately identified.

The project is not anticipated to change groundwater levels, and the stormwater management design will enhance groundwater recharge. In addition, there will be reduced risk of runoff and flooding from the property as stormwater best management practices will be used and will reduce total runoff volumes from the developed site through canopy interception, surface recharge, evaporation, engineered infiltration and evapotranspiration which are practices that delay the delivery of stormwater surface discharges. In addition, the use of best management practices will protect public health and safety as these practices eliminate negative impacts of unmanaged areas such as increased risk of flooding, degradation of water quality, increased sedimentation and reduced groundwater recharge. The site is in a good groundwater recharge area.

(10) That area property values will not be adversely affected.

Subdividing land for residential purposes, in compliance with local regulations, generally increases property values by creating attractive and marketable lots. The single-family detached housing proposed in this development will enhance and compliment the natural setting of the community and will increase in value over time. The effect on area property values will only benefit from this style of development.

(11) That any active farmland and tree farming adjacent to the proposed subdivision is adequately preserved through the design and construction of the proposed subdivision.

It is the intent of the applicant to stress the preservation of all agricultural lands which are feasible and worthwhile of such preservation. The applicant has ensured, through its planning and design, that there shall be no negative effect on the agricultural uses or agricultural farmland adjacent to Tepache Farms.

To provide a more generous transition from the adjacent agricultural lands, a 30-foot (in lieu of a 20-foot) "Forested and/or Landscaped Buffer Strip" within a 50-foot Agricultural Buffer, in lieu of the required 50-foot Agricultural Setback for as per Section 99-6 of the Sussex County Subdivision Code, has been provided for this project from the adjacent agricultural field on TM# 235-19.00-10.00. In addition, Open Space has been provided along Burton Road to maintain a rural character and reduce noise conflicts between homes and traffic.

(12) That the Applicant has notified the local school district where the proposed subdivision will be located.

The project will have a positive benefit on schools by generating economic benefits in the form of increased revenues through property taxes. The applicant shall coordinate and cooperate with the local school district's transportation manager to establish a school bus stop area, if the transportation manager deems a stop area necessary or appropriate. At the same time, the expected demographic of the purchaser and impact on the school system is not expected to create any burden from the number of pupils projected to attend the local school district.

(13) That public buildings and community facilities will not be adversely affected by the proposed subdivision.

There are no public buildings or community facilities within the nearby area. However, the proposed development will coexist with other nearby residential areas and provide minimal effects on the quality of life for adjacent land uses.

(14) That the subdivision is either within an established Transportation Improvement District or the subdivision endeavors to maintain the current Delaware Department of Transportation Level of Service on all adjacent roads and intersections after the subdivision is completed and in no event will allow the Level of Service to degrade below a Level of Service D

Tepache Farms is not located in a Transportation Improvement District. The subdivision will not allow the Level of Service to degrade below a Level of Service D. The proposed traffic being generating from the proposed 21 lots is 240 trips (120 entering and 120 exiting) on a daily basis. To support existing traffic and additional traffic from this development, road and entrance improvement plans for this project will be finalized with DelDOT and safe ingress and egress will be constructed.

(15) That the proposed subdivision will be compatible with other area land uses.

The owners and planners carefully reviewed the location of this project and the surrounding area and have endeavored to design and provide a project that integrates with the existing area and provides for appropriate transitions through buffers from the existing adjacent lands. This development provides for low density housing within an area designated for low density on the Future Land Use Map. In addition, the project has been designed to minimize any potential adverse impacts on properties that are adjacent to it.

(16) That there will be safe and efficient vehicular and pedestrian movement within the site and to and from adjacent developed properties with interconnectivity where appropriate.

The subdivision as designed and planned compliments its rural setting with a single road, Auroras Alley, and $\frac{3}{4}$ acre lots. This design is consistent with the surrounding community and is compatible with the aesthetic of the region. Individual lots and a property owned by the Nature Conservancy prevent interconnection on a majority of the Tepache Farms' boundaries.