



Lynne J. Strobel  
(703) 528-4700 Ext. 5418  
[lstrobel@thelandlawyers.com](mailto:lstrobel@thelandlawyers.com)

**WALSH COLUCCI  
LUBELEY & WALSH PC**

June 5, 2019

**Via E-Mail and Hand Delivery**

Denise James  
Fairfax County Department of Planning and Zoning  
12055 Government Center Parkway, Suite 801  
Fairfax, Virginia 22035

Re: Compatibility with Existing Land Use and Environmental Character  
SE 2018-HM-024  
2347 Hunter Mill Road (the "Application Property")  
Applicant: Orr-BSL Hunter Mill LLC

Dear Ms. James:

Please accept this letter in response to staff's comments related to the proposed development and its compatibility with the existing land use and environmental character.

The area surrounding the Application Property is primarily developed with single-family detached homes. The Applicant is sensitive to the existing, surrounding uses and has taken a number of measures to ensure compatibility with existing land use and environmental character. In addition to visual compatibility, where proposed architecture is residential in character and style with architectural elements that will be compatible with surrounding residential dwellings, the Applicant has reduced the building height to 35 feet, which is the maximum height permitted by the Fairfax County Zoning Ordinance (the "Zoning Ordinance") for single-family dwellings. The Applicant has also designed and located the proposed building so that its shortest side is parallel to Hunter Mill Road and has avoided the installation of new curb and gutter along the frontage of the Application Property. Other compatibility elements include setbacks that are both in accordance with the Zoning Ordinance and are comparable to existing surrounding development. In addition, though there is no open space requirement in the R-E District, the Applicant is providing approximately 75% open space. Lastly, the Applicant has ensured that there are no encroachments or impacts on the RPA or EQC located on the Application Property.

Many of the homes in the area are served by septic systems. Similarly, the Applicant proposes the use of a septic system, but has taken multiple measures to ensure that the land remains visually compatible with its neighbors and that the proposed system will be environmentally sensitive. The Applicant has designated several areas on the Application Property for the installation of drainfields, both primary and reserve. The primary drainfield will maintain the appearance of an open lawn and will be preserved in its natural state, to the extent

**ATTORNEYS AT LAW**

703 528 4700 ■ WWW.THELANDLAWYERS.COM  
2200 CLARENDON BLVD. ■ SUITE 1300 ■ ARLINGTON, VA 22201-3359

LOUDOUN 703 737 3633 ■ WOODBRIDGE 703 680 4664

possible, as approved by Urban Forest Management Division (“UFMD”) and the Fairfax County Health Department (“FCHD”). The Applicant will plant native and non-invasive grasses and/or wildflowers with shallow roots over the installed drainfield area, as approved by UFMD and FCHD, at time of final site plan. This will result in the appearance of an open meadow that is consistent with the character of the area.

As to the proposed reserve drainfield area, the Applicant will maintain the existing trees and vegetation in this location. The Applicant will only disturb the existing forested condition if it becomes necessary to utilize the reserve area. As noted by a representative of FCHD, in his thirty years of experience, only 10% of reserve drainfields have ever been ultimately utilized. The Applicant believes that the type of septic system proposed, which will distribute effluent via a drip irrigation system, further ensures that the proposed reserve drainfield will never be needed. However, in the event that any portion of the reserve drainfield is needed in the future, the system designer and the Applicant will coordinate with FCHD to incorporate a dispersal method that preserves the existing vegetation to the greatest extent possible based upon the local and state regulations in effect at that time.

The Applicant proposes a technologically advanced septic system that exceeds FCHD requirements. This type of system will ensure environmental protection, especially in the context of the proximate RPA and EQC. A traditional septic system takes the sewage waste, places it into a holding tank to allow the solids to settle and then discharges the remaining liquid into a drainfield, where the residual water percolates through the earth before it reaches the aquifer. Generally, microbes in the soil will clean the effluent before it reaches the groundwater. The length of time it takes the effluent in a drainfield to reach the aquifer is typically 5-20 years depending on the geology of the aquifer. These traditional, conventional systems are used by up to 35,000 households in Fairfax County, including those proximate to the Application Property, and by more than 40% of all residential development throughout the United States. These systems are typically characterized as Level 1 treatment systems. The quality standards for the various treatment systems have been established by the EPA, are regulated by the State of Virginia, and are administered by FCHD.

The Applicant’s proposed septic system goes substantially beyond Level 1 traditional systems by treating the effluent to Level 3 standards. What this means is that the proposed system will employ additional processes to treat the effluent, such as aeration and recirculation, and additional treatment with fixed film media. As a result, 90-95% of all contaminants in the effluent will be removed before it is discharged into the drainfield. In addition, modern technology allows for the installation of controls that dose the effluent throughout the drainfield at specific times. Recent studies have shown that effluent distributed evenly over the entire drainfield in small doses, over the course of 24 hours per day, enhances the removal of all contaminants. Just like the limited zones and times that are used to program landscaping irrigation, the Applicant intends to similarly program zones and times to dose a drainfield with effluent to optimize performance. This allows for a much more even dispersal of the effluent and allows more time for the microbes in the soil to do their work. By employing this kind of drip irrigation system, the result is that the proposed septic system will produce an effluent that is as

clean or cleaner after final treatment by the soil when compared to what is discharged from public sewer treatment systems.

The community has raised concerns related to Contaminants of Emerging Concern (“CECs”). Currently, there is no definitive wastewater treatment process known to remove 100% of the known CECs. In addition, there are no health department regulations at the National, State or County levels that address CECs because there is no established method to measure for them. However, studies appear to demonstrate that on-site soil-based treatment systems, such as the one being proposed, dissipate chemicals better than systems that might be connected to public sewer. This is because the microbes in the soil, or *the biota*, are more efficient in dissipating and cleaning any chemicals that may be present within the effluent. Furthermore, what is clear is that processes that include aeration, longer retention times in the aeration process, and dispersal into soil based receiving environments show a significant decrease in CECs compared to conventional wastewater processes employed by most publicly owned treatment systems. By including these more advanced processes into its proposed system, the Applicant’s septic system will provide the best available technology for reducing CECs.

As discussed at the most recent meeting on May 31, 2019 with representatives from both Site Development and Inspections Division (SDID) and FCHD, the Applicant is in the process of obtaining the required certification letter that will verify that the Application Property has sufficient soil capacity and loading rates to maintain a septic system. In addition, the Applicant has already submitted a Preliminary Engineering Report (PER) to FCHD, which is typically not required until site plan. According to the PER, the proposed system complies with all required setbacks of the US Environmental Protection Agency, Virginia Department of Health, Virginia Department of Environmental Quality and Fairfax County Code. In addition, for Chesapeake Bay Act counties, the requirement is for a septic field to be located outside of the RPA. The Applicant’s septic reserve area is located outside of the RPA, as required.

In relation to wells proximate to the Application Property, the proximity of a drainfield to existing or new wells generally depends on the length of the casing installed. Based on State regulations, drainfields must be least 50 feet from a well that maintains at least 50 feet of casing or at least 100 feet from a well that maintains less than 50 feet of casing. The Fairfax County Code is more restrictive, as it requires all drainfields to be at least 100 feet from any well, no matter the length of the installed casing. As depicted on the special exception plat, the Applicant’s proposed drainfields meets the more restrictive Fairfax County Code requirement and will be at least 100 feet from any nearby wells.

Furthermore, there is minimal risk that the treated effluent ultimately discharged from the Applicant’s drainfield will adversely impact the existing stream or nearby wells. This is because the health of a stream is related to the surface water and shallow groundwater, which are generally discharged into a stream. Wells are significantly deeper in order to access the aquifer, and rely upon a completely separate water system that is unlikely to interact with the stream channel. By way of example, the well of the neighboring property immediately to the North of the Application Property is 300 feet deep and is cased to 186 feet deep. Therefore, any water that

would enter the well would have to be deeper than 186 feet. Because the treated wastewater remains at the first permanent water source level and since the Applicant will be employing remediation through one of the most advanced soil-based systems, as discussed above, there is very little chance of contaminating well water or the stream.

You asked whether stormwater could saturate the Application Property resulting in an adverse impact on the septic system. The Applicant is proposing to direct stormwater into an underground detention chamber. The bottom of the chamber will be lined with an impermeable membrane to ensure that water is not infiltrating into surrounding soil. Stormwater will be held in the detention chamber for a period of time and slowly released so that the rate of release is less than what currently exists today. The stormwater management facility will include an isolator that will result in a 40% phosphorus removal credit. Greater phosphorus removal is proposed with this special exception application than previously shown on the site plan submitted for the use previously approved on the Application Property.

In addition to thoughtful design of the proposed building and septic system that preserves the open and rural nature of this sector, the Applicant proposes a number of development conditions to protect the surrounding stable residential character of the area. Among other things, the Applicant proposes various noise and light mitigation measures. For example, to reduce noise associated with ambulance response, the Applicant will contract with an independent ambulance service that will not utilize sirens. A copy of the Applicant's Proposed Development Conditions are attached for your convenient reference.

Should you have any questions regarding this letter or require additional information, please do not hesitate to contact me.

As always, I appreciate your consideration.

Very truly yours,

WALSH, COLUCCI, LUBELEY & WALSH, P.C.



Lynne J. Strobel

LJS:krt

Attachment

cc: Katie Antonucci      Michael Lynn  
David Orr                  Kevin Sitzman  
Tyler Orr                  Chris Myers  
Eric Gardner              Kathryn R. Taylor

{P0905521.DOCX / 1 Ltr to Denise James re: Compatibility 000906 000020}

## APPLICANT'S PROPOSED DEVELOPMENT CONDITIONS

SE 2018-HM-024

June 5, 2019

1. Sustainable Design. The following measures will be taken in conjunction with the construction of the proposed building identified on the Special Exception Plat prepared by Urban, Ltd., dated October 17, 2018 as revised through June 5, 2019 (the "SE Plat"). A LEED-AP will be included as a member of the design team. The LEED-AP will work with the Applicant to incorporate sustainable design elements into the proposed building. Prior to site plan approval, documentation will be provided to the Environment and Development Review Branch (EDRB) of DPZ, demonstrating that a LEED-AP is part of the design team.

Prior to the final construction bond release, the LEED-AP will submit a certification statements to EDRB, including supporting documentation as detailed below, confirming that the green building elements listed below have been incorporated into the design and construction of the proposed building.

### **Green building elements for inclusion in the project:**

- A. Native and non-invasive species, including perennials and seed mixes, will be used exclusively for landscape and other plantings on the property. Planting lists showing species and location of plantings on the landscape plan will be submitted with the site plan.
- B. LED or fluorescent lamps will be incorporated in the interior building light fixtures to the extent possible.
- C. Faucets, flush valves, and ultralow-flow plumbing fixtures that have a maximum water usage as listed below will be used in restroom facilities in the building(s). Manufacturers' product data will be provided prior to the issuance of a Non-RUP.

Water Closet (gallons per flush, gpf): 1.28

Urinal (gpf): 0.5

Showerheads (gallons per minute, gpm\*): 2.0

Lavatory faucets (gpm\*\*): 1.5

Kitchen and janitor sink faucets: 2.20

Metering faucets: 0.25

\*When measured at a flowing water pressure of 80 pounds per square inch (psi).

\*\*When measured at a flowing water pressure of 60 pounds per square inch (psi).

- D. Low-emitting materials will be used for all adhesives, sealants, paints, coatings, floor systems, composite wood, and agrifiber products. Low-emitting is defined according to the following table:

<u>Application</u>	<u>VOC Limit g/L less water</u>
Carpet adhesive	50
Rubber floor adhesive	60
Ceramic tile adhesive	65
Anti-corrosive/anti-rust paint	250
Clear wood finishes	350

- E. Energy Star or equivalent appliances and equipment for all new refrigerators, water heaters, computers, monitors, water coolers, and other appliances and office equipment, if available, will be installed. Installation locations and manufacturers' product data, including Energy Star energy guide, if installed, will be provided prior to the issuance of a Non-RUP.
  - F. Separation and storage of recyclable material will occur during construction. A copy of the contract with the recycling company will be provided within thirty (30) days of the issuance of a building permit. Additionally, the building management company will contract with a recycling company for the handling of its recyclable solid waste after a Non-RUP has been issued
  - G. Basic Commissioning will be achieved to ensure that all equipment is functioning properly prior to the issuance of a Non-RUP.
2. Asbestos. Prior to the commencement of construction, the soils on site will be tested to determine if asbestos exists. If, based on the soils analysis, it is determined that a potential health risk exists due to the presence and associated disturbance of asbestos-containing soils on the property, the Applicant will:
- A. Take appropriate measures to alert all construction personnel as to the potential health risks; and
  - B. Utilize appropriate construction techniques to minimize any potential health risks. Such techniques will include, but not be limited to, dust suppression during any blasting or drilling activities, covered transportation of removed materials presenting this risk, and appropriate disposal.
3. Transitional Screening Yard. Prior to the issuance of a Non-RUP for the proposed use, in coordination with the UFMD, the Applicant will install supplemental evergreen trees and shrubs along the northern property line to supplement existing vegetation.
4. Invasive Management Plan. At the time of the first site plan submission, an invasive management plan will be provided for the tree preservation areas shown on the SE Plat that includes the following information:
- Identification of targeted species to be suppressed or managed.
  - Identification of targeted area of invasive management or suppression.
  - Method of management or suppression.
  - Timing of treatments.

- Identification of potential areas for reforestation.
- Identification of requirement to submit monthly monitoring reports to UFMD during construction.
- Identification of approximate duration of invasive management program during construction.

5. Septic System.

- A. The Applicant will incorporate odor control devices within the design of the septic system that is submitted at time of final site plan.
- B. The Applicant will incorporate a remote monitoring system within the design of the septic system. The remote monitoring system will provide sensors in critical areas that deliver telemetry data to the system owner and operator to ensure operational compliance with specifications.
- C. Once in operation, the Applicant will retain the services of a licensed operator of the proper class, to continuously operate and maintain the system in accordance with the most recent version of the applicable regulations, code, policy and the approved operations and maintenance manual (collectively, the “applicable regulations”). The licensed operator of the system will submit maintenance reports to the Fairfax County Health Department (“FCHD”) via the State Health Departments Online Reporting System or as otherwise agreed to between the system operator and FCHD. Inspection and operation reports will be submitted based on the schedule required by the applicable regulations, but not less than quarterly. Such reports will document the results of the maintenance and inspections required by the approved system design.
- D. In conjunction with installation of the septic system, the Applicant will install monitoring wells. There will be three (3) wells drilled to approximately 30 feet depth, one upslope of the septic field and two on the downslope gradient of the drainfield, or as otherwise agreed to between the system designer and FCHD. The wells will allow sampling of the uppermost permanent source of groundwater to ensure the system is operating as designed. The licensed operator will oversee and evaluate the monitoring wells and take corrective measures, as directed by FCHD. The licensed operator will collect a sample from each of the monitoring wells to test for temperature and pH levels on-site and for fecal coliform, nitrogen, and chlorides, which will be tested at certified laboratories. If an abnormality is detected, the licensed operator will re-sample from the monitoring well to confirm the results. If test results are subsequently confirmed, the licensed operator and the Applicant will meet with FCHD to determine the appropriate mitigation method to properly correct the abnormality. The Applicant will provide quarterly reporting of the monitoring wells to the FCHD in the first year of operation, semi-annual reporting in the second year of operation, and then annual reporting in the third year and thereafter, unless there is a demonstrated need for more frequent testing to be done.

- E. Once in operation, the permit issued for the septic system will be renewed every five (5) years or as in accordance with any new local, state, and federal regulations.
  - F. Commercial type laundry associated with kitchen/dining services (such as staff uniforms, towels, and table linens), and resident bed linens and towels will be performed off-site.
6. Disposal of Medical Waste. The Applicant will comply with all local and state regulations related to disposal of medical waste. Unused medications will be disposed of offsite. In addition, the Applicant will utilize medical waste disposal companies for disposal of other medical wastes.
7. Drainfields.
- A. The Applicant will plant grasses and/or wildflowers with shallow roots over the installed drainfields as coordinated with UFMD and Fairfax County Health Department at time of final site plan. Such plantings will be native as well as non-invasive and will not require irrigation, as coordinated with UFMD.
  - B. The area for the proposed drainfields will remain open lawn and will be preserved in their natural state, to the extent possible, as approved by UFMD and Fairfax County Health Department at time of final site plan.
  - C. Existing trees will remain on the reserve drainfield, as depicted on the SE Plat, until it becomes necessary to utilize the reserve area.
  - D. If all or a portion of the reserve drainfield is required for installation of the septic system, the system designer and the Applicant will coordinate with FCHD to incorporate a dispersal method that preserves the existing vegetation to the greatest extent possible based upon the local and state regulations in effect at that time.
8. Trash Pick-Up. The Applicant will contract with a private collection company to pick up trash, which will not occur before 7:00 AM.
9. Maintenance Activities and Truck Deliveries. Maintenance activities that may require the operation of power equipment, including but not limited to lawn mowers, leaf blowers, chain saws, trimmers and edgers, as well as all other truck deliveries will take place no earlier than 7:00 AM during the week and 9:00 AM on the weekend.
10. Private Ambulance Service. The Applicant will contract with an independent ambulance service to provide private, non-emergency transportation service to area hospitals and medical facilities. Said non-emergency transport will not utilize sirens.
11. Generator. The Applicant will utilize a generator on site to provide emergency back-up for life safety equipment, food storage, and any electrical components or monitoring



equipment associated with the septic system. The Applicant will incorporate noise mitigation measures for the generator, including a sound attenuated enclosure.

12. Lighting. In addition to conforming to the provisions of Article 14 of the Zoning Ordinance on outdoor lighting, the Applicant will install parking lot lighting timers that will shut off the lights, exclusive of security lighting, between 11:00 PM and 6:00 AM.
13. Signage. Signage for the facility will be in accordance with the requirements of Article 12 of the Zoning Ordinance. Any monument sign will not be internally lit and will include downward facing lighting only.
14. Stormwater Management. Stormwater management will be provided as an underground detention chamber with features, such as an impermeable lining at the bottom as well as a layer of filter fabric, to ensure no infiltration.