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ENVIRONMENTAL

MAJOR WATER QUALITY IMPACT ASSESSMENT & EXCEPTION REQUEST
1008 SPRINGVALE ROAD
FAIRFAX COUNTY, VIRGINIA

TNT PROJECT NO.: 2100

FOR

MR. & MRS. WILSON

FEBRUARY 26, 2021
REVISED: AUGUST 15, 2022

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

TNT ENVIRONMENTAL

February 26, 2021
Revised: August 15, 2022

Mr. Josh Wilson & Mrs. Jazmin Wilson
1008 Springvale Road
Great Falls, VA 22066

TNT Project #: 2100

Reference: Major Water Quality Impact Assessment (WQIA) and Exception Request Submission, 1008 Springvale Rd, Fairfax County, Virginia
Latitude: 38° 59' 23" N, Longitude: 77° 18' 55" W

Dear Mr. and Mrs. Wilson:

TNT Environmental, Inc. (TNT) is pleased to present this Major Water Quality Impact Assessment (WQIA) report for the above-referenced project in general accordance with TNT Proposal Number 2917 dated September 9, 2020. The purpose of the WQIA is to ensure protection of the Resource Protection Areas consistent with the goals, objects, and requirements of Chapter 118, Article 4 of the Fairfax County Chesapeake Bay Preservation Ordinance through (1) the identification of the impacts of proposed development or redevelopment on water quality on lands within RPAs, (2) the assurance that, where development or redevelopment does take place within RPAs, that it will be located on those portions of a site in a manner that will be least disruptive to the natural functions of RPAs; and (3) the requirement of mitigation measures which will address water quality protection.

PROJECT SITE DESCRIPTION

The project site is approximately 0.92 acres situated west of Springvale Road in Fairfax County, Virginia (*Appendix I: Figure 1- Project Location Map*). The project site is further identified by physical address 1008 Springvale Road and Fairfax County Map #: 0121-08B-0004A2. The project site is improved with an existing single-family residence and sport court. The terrain of the project site consists of gently sloping land and is within the Difficult Run drainage basin (*Appendix I: Figure 2- USGS Topographic Map*).

There is a Fairfax County Notice of Violation (Case #: 202003667) associated with the sport court improvement onsite.

SECONDARY INFORMATION REVIEW

Secondary information entails the background research and review of recorded data and/or mapping associated with the project site. Resources reviewed include but are not limited to the following:

- U. S. Geological Survey (USGS) Topographic Map, Vienna Quadrangle, 2019

- U. S. Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) Online Mapper, https://www.fws.gov/wetlands/data/mapper.html

- Natural Resources Conservation Service (NRCS), Electronic Field Office Technical Guide, Fairfax County Soils, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx
- Available aerial photography and GIS data

The USGS Vienna (2019) quadrangle map shows elevations of approximately 310 feet above mean sea level (MSL) in the western portion of the site and approximately 330 feet above MSL in the eastern portions. As shown on the USGS Map, the project site drains to Difficult Run, located within the Middle Potomac-Anacostia-Occoquan watershed and identified as Hydrologic Unit Code (HUC) 02070008. The NWI map does not depict wetland features within the project site boundaries.

The soil survey indicates that the site is underlain primarily by Wheaton-Sumerduck complex (108B) and Wheaton-Glenelg complex (105B/105C), none of which are classified by the NRCS as hydric.

GENERAL INFORMATION

Per Fairfax County Technical Bulletin Number 20-02 dated January 22, 2020, a Major WQIA submittal is required if any of the following criteria apply:

- Land disturbance in the RPA exceeds 2,500 square feet; or
- Any disturbance in the 50 seaward feet of the RPA buffer; or
- Any disturbance of wetlands or streams; or
- Additional proposed impervious area in the RPA greater than 256 square feet, and total RPA impervious surface no more than 1,000 cumulative square feet; or
- Any RPA disturbance that does not qualify for a Minor WQIA.

This project site requires a Major WQIA because it proposes greater than 256 square feet of impervious surface in the RPA. Additionally, per TNT's discussions with Fairfax County, the project will need an exception request to be filed under Section 118-6. All required information is provided below and is referenced on the enclosed Water Quality Impact Assessment Application.

The project site was first improved and purchased by the applicants in 2011. Development onsite was approved per 7996-INF-002-1 dated November 1, 2010. The RPA utilized in this submission is the site-specific RPA approved in 2010 INF submission, as discussed with Fairfax County. The existing sport court located within the RPA boundary was finished in May 2015 and the additional walkways and drainage ditch shown on aerial imagery were added to the site in September 2015. Approximately half of the sport court is located offsite on adjacent HOA property and the majority of the court is located within the RPA. The drainage ditch is located within a stormwater drainage easement and is comprised of river rock. The drainage ditch was added due to the consistent flooding that affected the house and property owners. There is a Fairfax County Notice of Violation (Case #: 202003667) associated with the sport court improvement. This application addresses the violation and mitigates for the RPA encroachment.

Additionally, per direction of Fairfax County, this application includes the required information for Article 6 submission for an exception request under Section 118-6-9.

REQUIRED INFORMATION FOR MAJOR WQIA

Section 118-4-3

The proposed project meets the criteria for the Major Water Quality Impact Assessment components as outlined in Section 118-4-3, the Fairfax County Technical Bulletin Number 20-02 dated January 22, 2020, and detailed below:

a) Based on Fairfax County GIS, an unnamed north to south trending perennial stream is located offsite to the west of the property. A county-mapped RPA boundary is identified onsite associated with offsite stream. Additionally, a floodplain easement is located onsite.

Per correspondence with Fairfax County, the use of the site-specific RPA shown on 7996-INF-002-1 is adequate for the purposes of this WQIA.

b) The project site contains nearly level land that slopes gently towards the offsite stream located to the west of the property. Due to the lack of wetlands onsite, it is unlikely that the proposed project will encounter a high groundwater table as it is at a significantly higher elevation than the existing offsite stream. Please refer to the Secondary Information section above for additional information regarding the existing topography, soils, hydrology, and geology of the site.

Per correspondence with Fairfax County, the use of the site-specific RPA shown on 7996-INF-002-1 is adequate for the purposes of this WQIA. No wetlands are located onsite or proposed to be impacted; therefore, no wetland permits are required for the project. The onsite activities are also not expected to disrupt existing surface hydrology, or significantly alter the natural flow regime to receiving waterbodies. The majority of surface water leaves the site along the northern property boundary within the stormwater drainage easement.

The vegetation located onsite consists of maintained lawn and a few landscaped trees. The location of onsite trees can be clearly seen in the most recent County aerial imagery. This imagery has been included in the application. It should be noted that prior to the violation, seven healthy trees and one dead/fallen tree located within the RPA were removed from the site and the offsite HOA property. Mitigation for this unauthorized tree removal is discussed in section 118-4-3(e) below. The portion of disturbance within the RPA will only consist of removing maintained grassland in order to plant the proposed trees and shrubs for mitigation and to remove a portion of the sport court and re-sod the disturbed area. No fill material will be placed onsite or brought onsite from an offsite source.

c) This application proposes the removal of an offsite portion of sport court, re-sodding of the disturbed area, and revegetation as a form of mitigation. The proposed improvements are the

minimum necessary to afford relief and the purpose of this WQIA is to provide mitigation for the RPA encroachment associated with the existing sport court. The removal of the offsite portion of sport court is required by the adjacent property owner. Additionally, the complete removal of the sport court and construction of a permeable court would create even more disturbance in the RPA and would defeat the purpose of this application. Due to the wet nature of the backyard, the applicants constructed the sport court to give their children a safe, dry place to play in the backyard. They desire to keep a small portion of the court for recreation as their children grow. The project site is encumbered by an onsite RPA (4,775 square feet) and several easements (8,276 square feet) which total approximately 32.6% of the property. Additionally, there is an existing well and drainfield located onsite that restricts where the sport court can be located.

Granting the exception will not confer any special privileges denied in similar situations. No more development is proposed than has been already been completed associated with the sport court. Additionally, it is customary in this area to have accessory structures located within the backyard. The court cannot be located in the front yard due to the presence of the existing drainfield.

The proposed project is not a substantial detriment to water quality. The proposed mitigation of plantings and removal of impervious surface (portion of sport court) will increase the water quality leaving the site that ultimately flows to the offsite perennial stream. Please refer to Section 118-4-3(e), below, that discusses the proposed mitigation in the form of revegetation.

This exception request is to redress conditions or circumstances that are self-created or self-imposed. The applicant is proposing to remove some of the impervious cover and revegetate previously disturbed land within the RPA in response to a NOV. The applicant will not be adding additional impervious surfaces beyond what exists today. It is understood by TNT and the applicant that a requirement of a Major WQIA is that circumstances are not self-created or self-imposed; however, this WQIA and exception request are being submitted in response to a NOV and the mitigation efforts are required by the County and adjacent property owner.

d) There are no wetlands, contiguous or otherwise, contained within the site-specific RPA or located onsite. No encroachment or disturbance to wetlands or other waters is proposed. Due to the lack of wetlands onsite, no wetland permits are required for the project.

e) The proposed conditions cited in this WQIA show an increase in impervious surface (approximately 69%) from the approved 2010 conditions. This is due to the addition of a sport court within the RPA and concrete walkways outside of the RPA, both constructed in 2015. However, with the removal of a portion of the sport court, there will be a decrease in impervious surface from the current, existing conditions (approximately 791 square feet). Please refer to the calculations table found on the site drawing in Appendix IV for specifics regarding the proposed changes in impervious cover onsite.

Though Best Management Practices are not required to meet the requirements of Chapter 124 of the County code (the land disturbance is less than 2,500 square feet and is exempt per 124-1-7.4), the proposed revegetation will offset the water quality detriment as demonstrated by the Virginia Runoff Reduction Computations (VRRM) and summarized below in Table 1.

The VRRM spreadsheet, prepared by Land Design Consultants, Inc. (LDC), has been enclosed in Appendix V. The set of calculations enclosed in this report uses the areas of the sport court and revegetation only. By replacing existing areas of maintained/mowed lawn with trees, a greater amount of precipitation will be captured. Specifically, per the VRRM, by providing 6,288 square feet (0.14 acres) reforestation within the RPA, the Total TP load will be reduced from the current pre-development load. For these calculations, pre-development pollutant loads from the site equals approximately 0.57 lbs/year. Post-development pollutant loads equal approximately 0.32 lbs/year. This factors in the removal of impervious surface (portion of sport court) and the reforestation of maintained lawn. According to the VRRM, no further treatment is needed. The hydrogeological impacts on the site will be minimal as the sport court is so small relative to the property area. The addition of the sport court had a cumulatively small impact to the recharge and water cycle, and the impervious area being left behind in inconsequential to the impact on the water cycle. In addition, the proposed plantings will assist in water quality improvement.

Table 1 – VRRM Spreadsheet Summary (Disturbed Area Only)

Type of Land Cover	Total (acres)	Total %
Pre-Development Conditions		
Forest/Open	0	0%
Managed Turf (existing yard)	0.1607	100%
Impervious Cover	0	0%
Total	**0.1607**	**100%**
Post-Development Conditions		
Forest/Open (proposed conversion from turf to forest)	0.1444	89.8569%
Managed Turf (area to remain as turf)	0	0%
Impervious Cover	0.0163	10.1431%
Total	**0.0880**	**100%**

This project will mitigate the existing RPA encroachment through RPA plantings as detailed in this assessment below and shown on the site drawing. These plantings are associated with the disturbed area for the removal of the offsite portion of sport court and the re-sodding of this area. This area is shown on the site drawing and encompasses the existing sport court

and a 5-foot work zone offset that represents the limits of disturbance to be utilized for the sport court removal. Silt fence will be utilized along the limits of disturbance during the removal and re-sodding of the sport court. Additionally, per the HOA letter enclosed, the offsite portion of fence will be removed and the holes from the fence posts refilled.

The 1,995 square feet (0.05 acres) of disturbed area within the RPA associated with the offsite sport court removal will be revegetated at a density per CBPO 118-3-3(f) and PFM Table 12.13B, as feasible.

Per PFM Table 12.13B for 0.05 acres of disturbed area within the RPA buffer, planting requirements will be met with:
109 overstory trees/ac (1.5" caliper) = **6 overstory trees**
218 understory trees/ac (3/4" caliper) = **11 understory trees**
654 shrubs/ac (1 gallon) = **35 shrubs**
30 lbs/ac perennial seed mix = **2 lbs perennial seed mix**
60 lbs/ac annual seed mix = **3 lbs annual seed mix**

Additional plantings have been proposed to mitigate for the unauthorized removal of seven healthy trees and one dead/fallen tree within the RPA on the site and on the HOA property. The seven healthy trees will be replaced at a 2:1 ratio (14 total) and the one dead and fallen tree will be replaced at 1:1 ratio (1 total) per Article 9 language and authority, as noted by Fairfax County. The 15 proposed overstory trees will be planted in addition to the abovementioned plantings for the sport court encroachment. These plantings will be installed within an approximate 6,288 square foot area of the adjacent property as permission to locate plantings here has been provided by the adjacent HOA. Locating the plantings here will maximize their water quality benefit. The planting schedule is depicted on the attached exhibit.

No heavy equipment shall be used for planting. Disturbance shall be minimized through the use of handheld tools for planting installations. Compost amended soils will be placed in the planting areas, but not on any slopes greater than 10%, and the planting area shall be placed in a continuous mulch bed.

f) Given the aforementioned conditions and constraints, the proposed development represents a project which will ameliorate existing conditions and ultimately provide for a net-benefit to water quality. This project will mitigate the proposed RPA encroachment through RPA plantings as detailed in this assessment and shown on the planting exhibit. A portion of the existing sport court will be removed, thus decreasing the total impervious surface within the RPA. There will be no addition of impervious cover in the RPA based on this application. The complete removal of the sport court and construction of a permeable court would create even more disturbance in the RPA and would defeat the purpose of this application.

There is a minimal amount of existing indigenous vegetation onsite as the majority of the site consists of maintained grassland. The prior unauthorized removal of existing trees within the

RPA will be mitigated for, as discussed above. All other existing trees within the RPA will be preserved. Additionally, the two mature trees located in the southwestern portion of the site and in the front yard shall be preserved. The location of the existing trees can be clearly seen in aerial imagery. The vegetation located within the RPA encroachment for the sport court removal only consists of maintained grass.

g) No wastewater elements, drainfields or sewer connections through the RPA are proposed for this project. No additional information has been requested at this time by the Director to evaluate the potential water quality impacts of the proposed activity.

Section 118-3-2

a) No more land shall be disturbed than is necessary to provide for the proposed work. Encroachment into the existing RPA is necessary in order to remove the offsite portion of sport court within the RPA associated with the Notice of Violation. The encroachment includes the area of existing sport court as well as 5-foot offset from the court for a safe work zone. The sport court to remain cannot be relocated due to extensive constraints including the existing infrastructure, stormwater management easement, well, and septic system/drainfield.

b) Existing indigenous vegetation will be preserved onsite. There is a minimal amount of existing indigenous vegetation onsite as the majority of the site consists of maintained grassland. All existing trees within the RPA will be preserved. Additionally, the two mature trees located in the southwestern portion of the site and in the front yard shall be preserved. The location of the existing trees can be clearly seen in aerial imagery. The vegetation located within the RPA encroachment for the sport court removal only consists of maintained grass.

c) Impervious cover has been minimized and will decrease with the proposed removal of a portion of the sport court within the RPA. Please refer to the calculations table found on the site drawing in Appendix IV for specifics regarding the changes in impervious cover onsite between the 2010 approved plans, current conditions, and the proposed conditions.

d) The proposed activities do not exceed 2,500 square feet of land disturbance.

e) Given the aforementioned conditions and constraints, the proposed development represents a project which will ameliorate existing conditions and ultimately provide for a net-benefit to water quality. This project will mitigate the proposed RPA encroachment through RPA plantings (BMP) as detailed in this assessment and shown on the planting exhibit. A portion of the existing sport court will be removed, thus decreasing the total impervious surface within the RPA.

f) There are no wetlands, contiguous or otherwise, contained within the site-specific RPA or located onsite. No encroachment or disturbance to wetlands or other waters is proposed. Due to the lack of wetlands onsite, no wetland permits are required for the project.

g) No additional onsite sewage disposal systems will be constructed.

h) No onsite agricultural activities are being conducted or are proposed onsite.

REQUIRED INFORMATION FOR EXCPETION REQUST PER 118-6-9

Section 118-6-5

The proposed project meets the general performance criteria for Resource Protection Areas as outlined in Section 118-6-5 through the submission of the required documents listed in the CPRO 118-6-5(a) through (e) items. This checklist of items can be found in the application form provided with this submission. Item 118-6-5(f) is discussed below.

Section 118-6-6

The proposed project meets the general performance criteria for Resource Protection Areas as outlined in Section 118-6-6 and detailed below:

a) The proposed improvements are the minimum necessary to afford relief and the purpose of this WQIA is to provide mitigation for the RPA encroachment associated with the existing sport court. The project site is encumbered by an onsite RPA (4,775 square feet) and several easements (8,276 square feet) which total approximately 32.6% of the property. Additionally, there is an existing well and drainfield located onsite. The revegetation and offsite sport court removal are required for mitigation and at the request of the Foxvale Farm Homeowner's Association (offsite property owner). The applicant has ensured that the work zone is the minimum necessary (5-foot offset from the sport court) to remove portions of the sport court. All other work within the RPA outside of the proposed limits of disturbance will be done by hand.

   The proposed plans remove a large section of the existing sport court in order to continue the use of the backyard and to satisfy the applicant's needs. Removal of the entirety of the sport court is an alternative to the proposed plans; however, the applicants desire to have some use of their backyard through the use of the sport court to remain. The remainder of the backyard floods regularly and is unusable during most of the year. The sport court to remain cannot be relocated elsewhere due to extensive onsite constraints including two easements (stormwater drainage and floodplain), septic system and drainfield, and well.

b) Granting the requested exception will not confer upon the applicant any special privileges that are denied by this part to other property owners who are subject to its provisions and who are similarly situated.

The Applicant here is not requesting nor would receive any special privilege denied to other similarly situated property owners, who could also conduct the required analyses and, if warranted, be considered for an exception and waiver.

The Chesapeake Bay Local Department ("CBLAD") historically was the state entity issuing guidance with respect to the Chesapeake Bay Act, including the granting of special exceptions. With regard to the meaning of conferring a special privilege, CBLAD has stated: This finding is intended to make sure that an exception request would not give the applicant something that has been denied to others in similar situations, and gets to the equity, fairness, and arbitrary and capricious aspects of any exception request and decision. For instance, a property owner requests an exception to build a pool in the RPA and neighbors have applied for and been denied a similar request. In this instance, if the exception is approved, a special privilege has been permitted for one neighbor but not the others ("Exception Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulation," September 16, 2002, revised June 13, 2009 at Page 3).

The applicant is seeking to redress the existing Notice of Violation on their property.

c) This exception request is in harmony with the purpose and intent of Chapter 118 and is not of substantial detriment to water quality. The requested exception is limited to areas of herbaceous maintained lawn and incorporates plantings of shrub and tree canopy within areas that are also currently consisting of maintained lawn. Therefore, the proposed re-vegetated area will maximize water quality protection, mitigate the effects of the buffer encroachment, and provide greater canopy coverage than the area of encroachment into the buffer area currently provides.

   In order to improve water quality further, the applicant proposes to remove impervious surface from the RPA. The proposed conditions remove approximately 791 square feet of the sport court located in the RPA. Finally, the proposed planting, as outlined in the Water Quality Impact Assessment submission and detailed below in 118-6-9, will provide additional water quality benefit through the establishment of new vegetation which will reduce runoff.

d) This exception request is to redress conditions or circumstances that are self-created or self-imposed. The applicant is proposing to remove some of the impervious cover and revegetate within the RPA in response to a NOV. The applicant will not be adding additional impervious surfaces.

   It is understood by TNT and the applicant that a requirement of an exception request is that circumstances are not self-created or self-imposed; however, this WQIA and exception are being submitted in response to a NOV and the mitigation efforts are required by the County and adjacent property owner.

e) Reasonable and appropriate conditions are imposed, as warranted, that will prevent the allowed activity from causing a degradation of water quality. In addition to the measures to

improve water quality onsite listed in section 118-6-6(c), there will be silt fence installed around the limits of disturbance during the removal of the portions of sport court onsite.

f) As requested by Fairfax County, a Floodplain Use Determination has been submitted prior to this application. No other findings have been requested of the Applicant.

Section 118-6-9

The exception meets the required findings listed in Sections 118-6-5 and 118-6-6. With the proposed revegetation, and removal of impervious cover within the RPA, the water quality benefits of the RPA plantings and increase of pervious cover will exceed the associated water quality detriments of the previous RPA encroachment. The offsite portion of sport court within the RPA will be removed and re-sodded. The sport court to remain cannot be relocated elsewhere due to extensive onsite constraints including two easements (stormwater drainage and floodplain), septic system and drainfield, and well. The proposed plans remove a large section of the existing sport court in order to continue the use of the backyard and to satisfy the applicant's needs. Removal of the entirety of the sport court is an alternative to the proposed plans; however, the applicants desire to have some use of their backyard through the use of the sport court to remain. The remainder of the backyard floods regularly and is unusable during most of the year.

The 1,995 square feet of disturbed area associated with the violation within the RPA will be revegetated at a density of 6 overstory trees per acre (1.5" DBH), 11 understory trees per acre (3/4" DBH), 35 shrubs per acre (1 gallon), 2 pounds of perennial herbaceous seed mix, and 3 pounds of annual herbaceous cover crop seed mix. Additional plantings have been proposed to mitigate for the unauthorized removal of seven healthy trees and one dead/fallen tree within the RPA on the site and on the HOA property. The seven healthy trees will be replaced at a 2:1 ratio (14 total) and the one dead and fallen tree will be replaced at 1:1 ratio (1 total) per Article 9 language and authority, as noted by Fairfax County. These plantings will be installed within an approximate 6,288 square foot area adjacent to the perennial stream on the adjacent HOA property to maximize their water quality benefit. The proposed vegetated area will maximize water quality protection, mitigate the effects of the buffer encroachment, and is greater than the area of encroachment into the buffer area. The planting schedule has been enclosed and included in Appendix IV.

TNT would like to thank you for the opportunity to provide you with this Major Water Quality Impact Assessment and Exception Request. It is in our opinion that the encroachment into the RPA should be granted as it meets the required findings listed in Section 118-4-3 and Section 118-6-9 as detailed above. Further, the water quality benefits resulting from the proposed improvement will exceed the associated water quality detriments. We look forward to assisting you further with this project and other environmental concerns you may have. If you have any questions, please feel free to contact us at any time at (703) 466-5123.

Sincerely,

TNT ENVIRONMENTAL, INC.

Avi M. Sareen, PWD, ISA-CA
Principal/President
Avi@TNTenv.com

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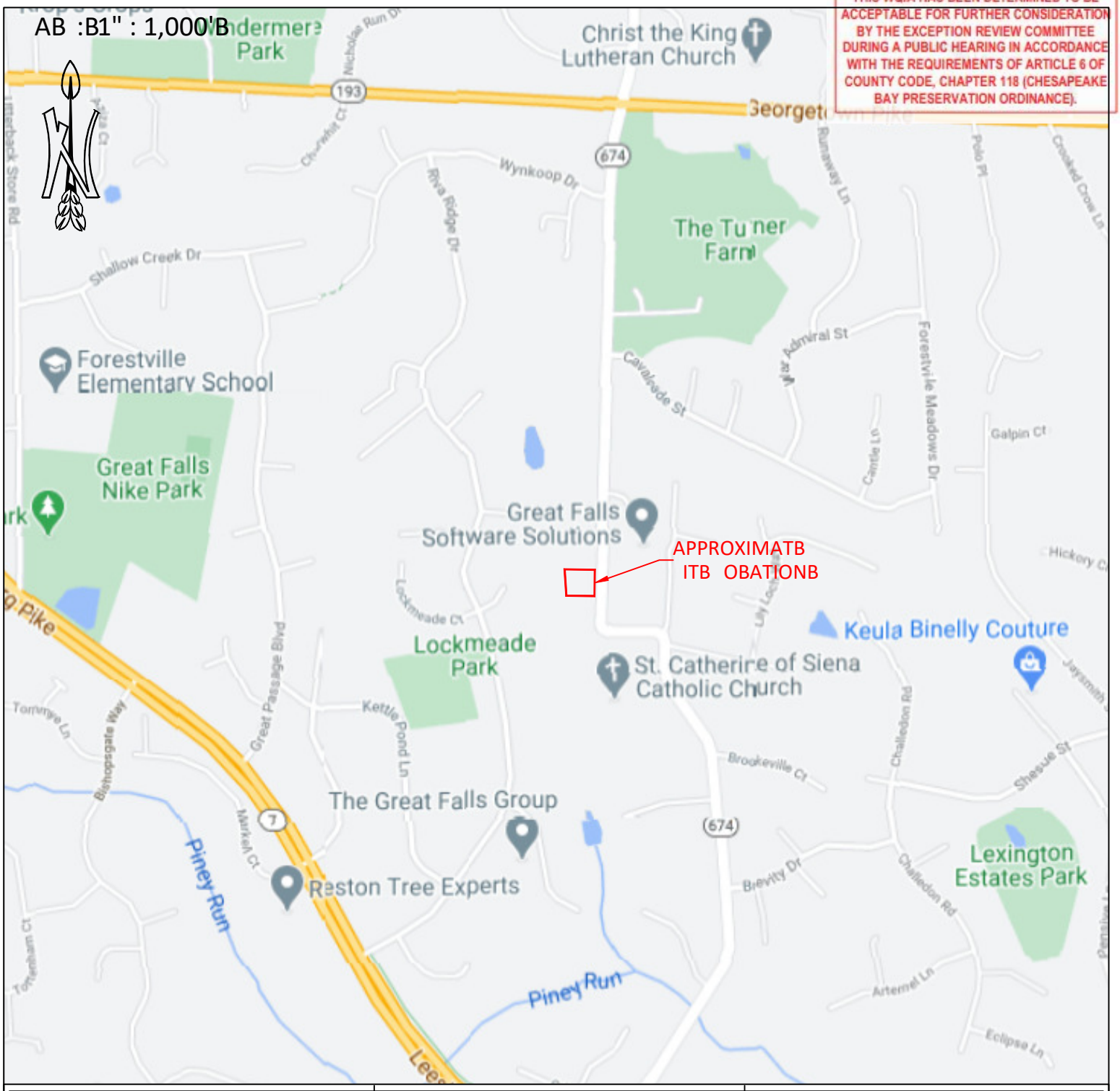
APPENDIX I

VICINITY MAP &
USGS TOPOGRAPHIC MAP



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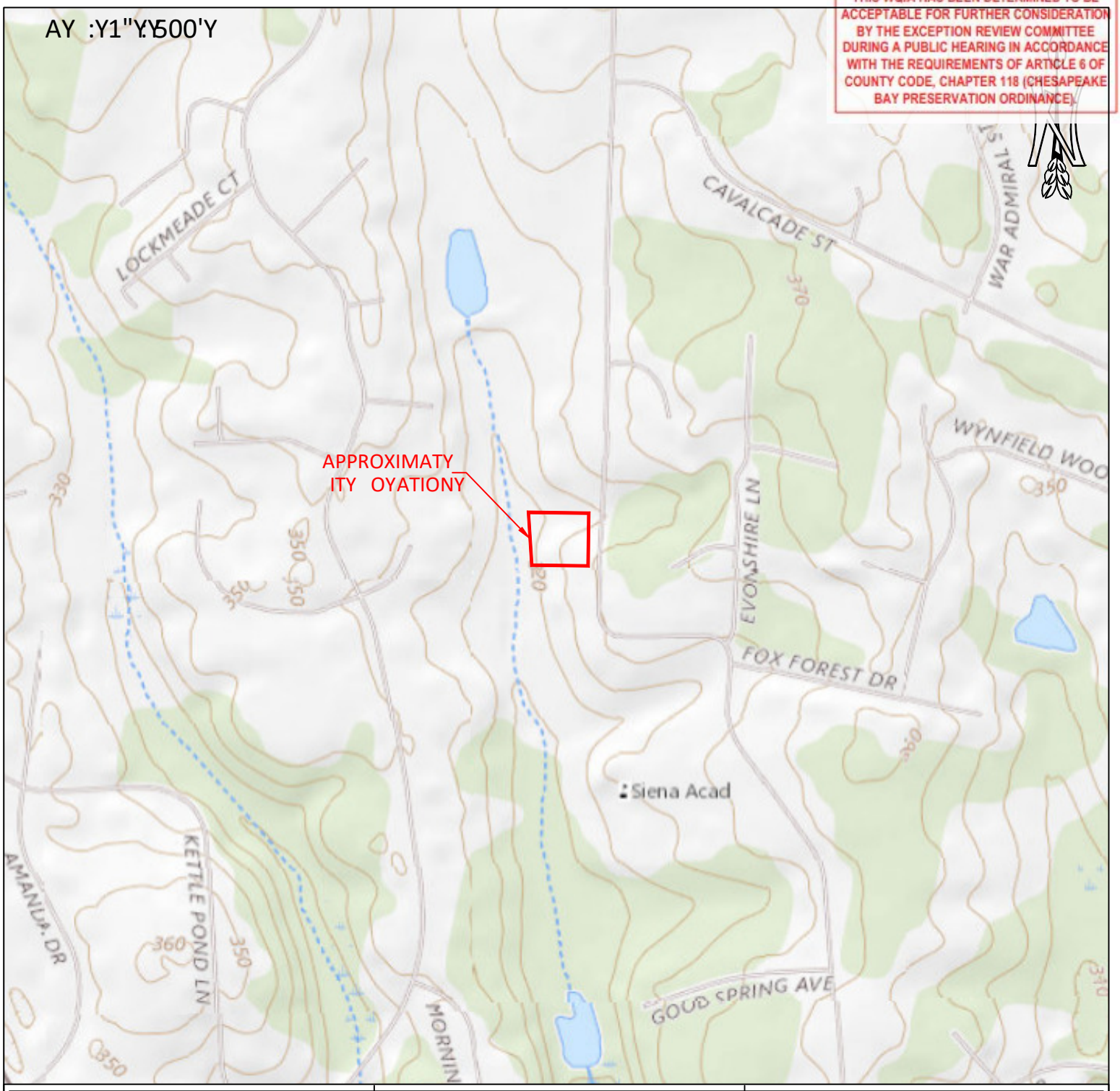

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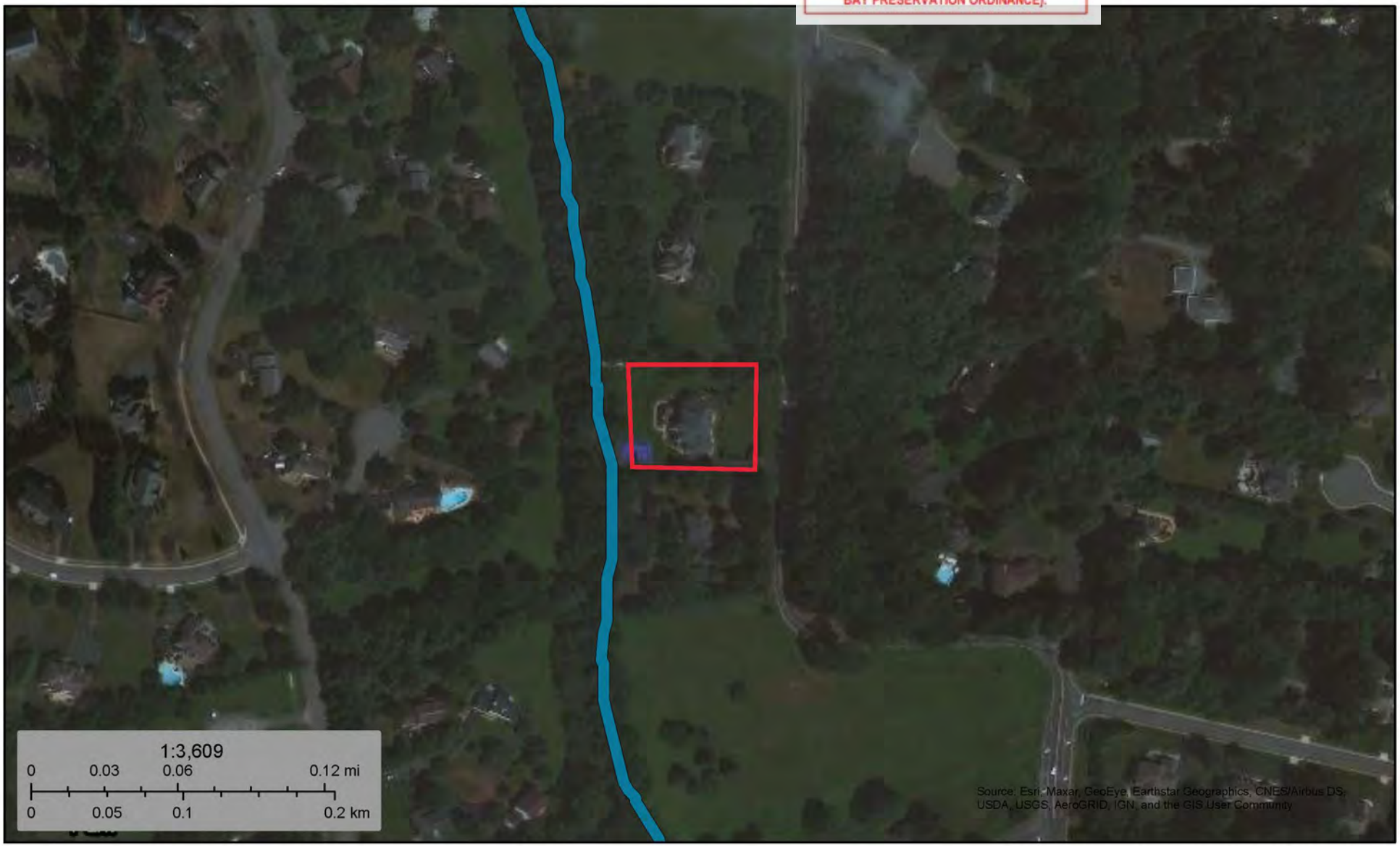
APPENDIX II

NATIONAL WETLAND INVENTORY MAP & NRCS SOILS MAP

U.S. Fish and Wildlife Service

National Wetlands Inventory

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).



February 26, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

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Hydric Rating by Map Unit—Fairfax County, Virginia
(Springvale Road)

Map Scale: 1:3,960 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Fairfax County, Virginia
Survey Area Data: Version 19, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 9, 2021—Aug 15, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
105B	Wheaton-Glenelg complex, 2 to 7 percent slopes	0	4.0	17.1%
105C	Wheaton-Glenelg complex, 7 to 15 percent slopes	0	11.3	48.6%
105D	Wheaton-Glenelg complex, 15 to 25 percent slopes	0	0.5	1.9%
108B	Wheaton-Sumerduck complex, 2 to 7 percent slopes	2	7.5	32.4%
Totals for Area of Interest			**23.3**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

APPENDIX III

PHOTOGRAPHS
& AEIRAL IMAGERY

Photograph 1: View to the north showing the front yard and drainfield located in the eastern portion of the site.

Photograph 2: View to the east showing the driveway and Springvale Road in the background.

Photograph 3: View to the north showing the front walkway and house.

Photograph 4: View to the west showing the existing sport court and backyard.

Photograph 5: View to the east showing the northern portion of the site and storm drainage easement.

Photograph 6: View to the northwest showing the drainage ditch, well, and backyard in the northwestern portion of the site.

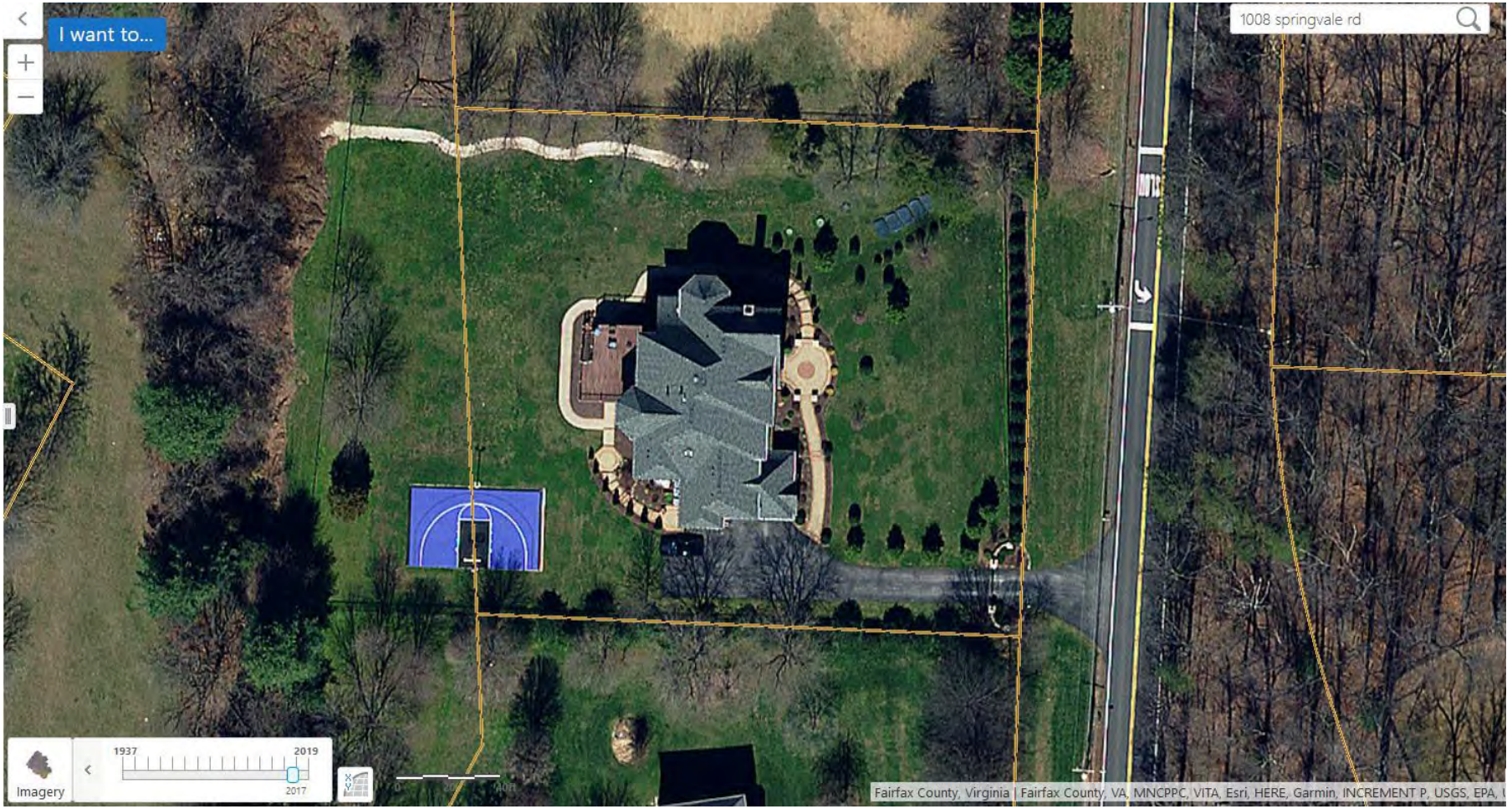
Photograph 7: View to the north showing the drainage ditch, well, and backyard in the northwestern portion of the site.

Photograph 8: View to the northwest showing the deck and screened-in porch, walkways, and backyard located in the western portion of the site.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

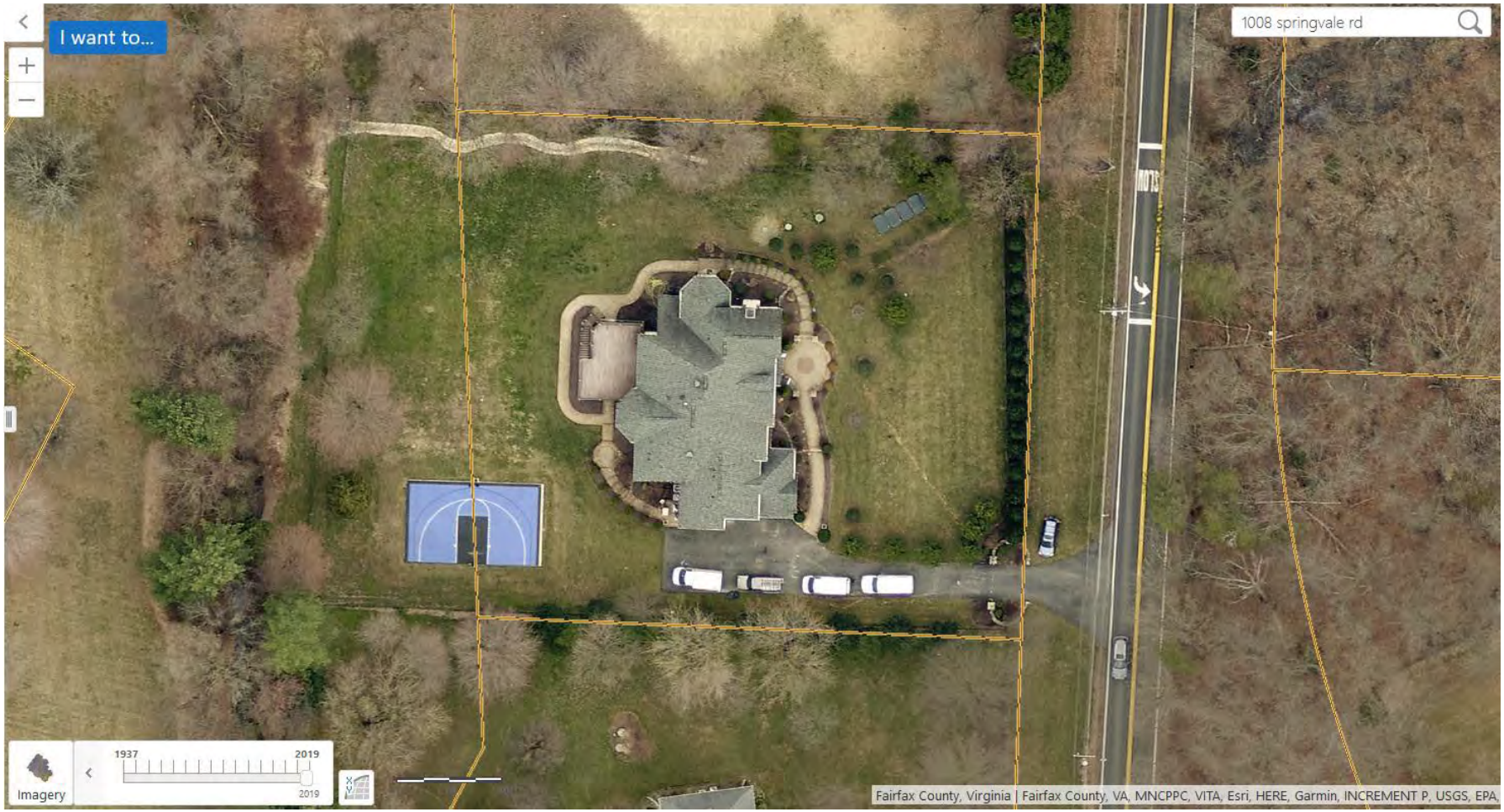
Photograph 1: 2015 aerial imagery found on Fairfax County JADE.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).



Photograph 2: 2017 aerial imagery found on Fairfax County JADE showing the appearance of the sport court, drainage ditch (river rock), and additional walkways.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).



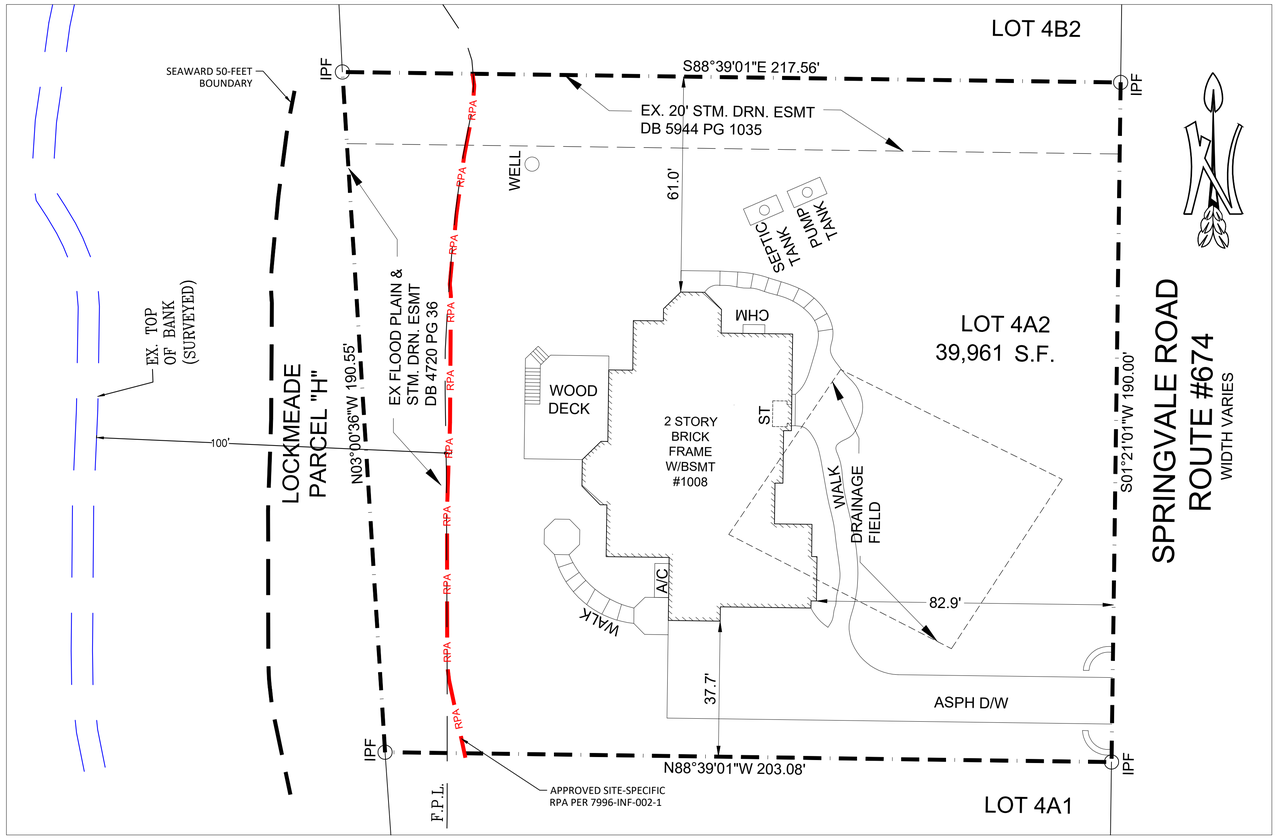
Photograph 3: 2019 aerial imagery found on Fairfax County JADE showing present day conditions.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

APPENDIX IV

WATER QUALITY IMPACT ASSESMENT PLAN SHEETS

APPROVED 2010 CONDITIONS*:



EXISTING 2021 CONDITIONS:

SCALE (IN FEET)
10 20
20 0

LEGEND

- SITE-SPECIFIC RESOURCE PROTECTION AREA (RPA)
- SEAWARD 50' BOUNDARY
- PROPERTY BOUNDARY

IMPERVIOUS AREA COMPUTATIONS

	PRE DEVELOPMENT	POST DEVELOPMENT
HOUSE & FRONT STEPS	0	3,957
SIDEWALK	0	333
DRIVEWAY	0	2,301
	0	6,591
PERVIOUS AREA	39,961	33,370
TOTAL LOT AREA	39,961	39,961

TOTAL LOT AREA = 39,961 SF OR 0.917 AC
INCREASE IN IMPERVIOUSNESS = 6,591 SF OR 0.151 AC
TOTAL PERCENTAGE OF IMPERVIOUSNESS = (6591 x 100%) / 39,961 = 16.49%

TAKEN FROM 2010 APPROVED PLAN 7996-INF-002-1

GENERAL NOTES:

1. THE EXISTING SURVEY AND CONDITIONS SHOWN HEREON WERE PROVIDED TO TNT BY LANDPRO/LAND MARX AND ASSOCIATES, LLC.

2. THE SITE-SPECIFIC RESOURCE PROTECTION AREA (RPA) DEPICTED ON THESE PLANS SHEETS WAS APPROVED PER 7996-INF-002-1. THIS RPA DELINEATION WAS DONE BY SDE, INC. (2010) FOR THE INF SUBMISSION.

3. THE LOCATION OF THE SPORT COURT IS APPROXIMATE AND BASED ON AERIAL IMAGERY.

4. *THIS SURVEY SHOWS WHAT WAS ACTUALLY CONSTRUCTED PER THE APPROVED INF PLAN (7996-INF-002-1). THIS IS NOT THE SAME SURVEY AS THE APPROVED PLANS DONE BY SDE, INC.

Project Data Sheet - HOA Property (Parcel "H")

*Total Lot Area (S.F.)	14,717
Lot Area within RPA (S.F.)	14,717
% Lot Area within RPA	100%
Date When the Lot was Created	2011
Date When RPA was designated	2003
Total Lot Disturbed Area (S.F.)	1,206
Total Disturbed Areas within RPA (S.F.)	1,206

Summary: Impervious Area Analysis Tabulation				
Description	2010 Approved Conditions	Existing 2021 Conditions	Proposed Conditions	Change in Impact (2021 vs. Proposed)
Total Lot Impervious Area (S.F.)	0	763	0	-763
Total Impervious Area in RPA (S.F.)	0	763	0	-763
Impervious Area within Seaward 50 ft RPA (S.F.)	0	0	0	0
Detailed Breakdown: Impervious Area Analysis Tabulation				
Total Sport Court (S.F.)	0	763	0	-763
Total Sport Court in RPA (S.F.)	0	763	0	-763

*The entire HOA parcel area equals 23.9 acres. This area depicts the representative area between Parcel 4A2 and the stream located on the HOA parcel. This table is intended to show the removal of the sport court on HOA property.

Project Data Sheet - 1008 Springvale Road (Parcel 4A2)

Total Lot Area (S.F.)	39,961
Lot Area within RPA (S.F.)	4,775
% Lot Area within RPA	12%
Date When the Lot was Created	2011
Date When RPA was designated	2003
Total Lot Disturbed Area (S.F.)	1,173
Total Disturbed Areas within RPA (S.F.)	789

Summary: Impervious Area Analysis Tabulation						
Description	Approved 2010 Conditions	Constructed 2011 Conditions	Existing 2021 Conditions	Proposed Conditions	Change in Impact (2021 vs. Proposed)	Change in Impact (2010 vs. Proposed)
Total Lot Impervious Area (S.F.)	7,251	8,316	9,802	9,774	-28	2,523
Total Impervious Area in RPA (S.F.)	0	0	588	560	-28	560
Impervious Area within Seaward 50 ft RPA (S.F.)	0	0	0	0	0	0
Detailed Breakdown: Impervious Area Analysis Tabulation						
Total Sport Court (S.F.)	0	0	737	709	-28	709
Total Sport Court in RPA (S.F.)	0	0	588	560	-28	560
Primary Structure Footprint (S.F.)	3,957	4,037	4,037	4,037	0	80
Primary Structure Footprint in RPA (S.F.)	0	0	0	0	0	0
Total Driveway & Walkway (S.F.)	2,634	3,619	4,368	4,368	0	1,734
Total Driveway & Walkway in RPA (S.F.)	0	0	0	0	0	0
Total Deck (S.F.)	660	660	660	660	0	0
Total Deck in RPA (S.F.)	0	0	0	0	0	0

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

ENVIRONMENTAL
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1008 SPRINGVALE ROAD
FAIRFAX COUNTY

WATER QUALITY IMPACT ASSESSMENT
2010 & EXISTING CONDITIONS

REVISIONS

DATE	COMMENTS
3/21/22	REV BY TNW

SHEET 1 OF 3

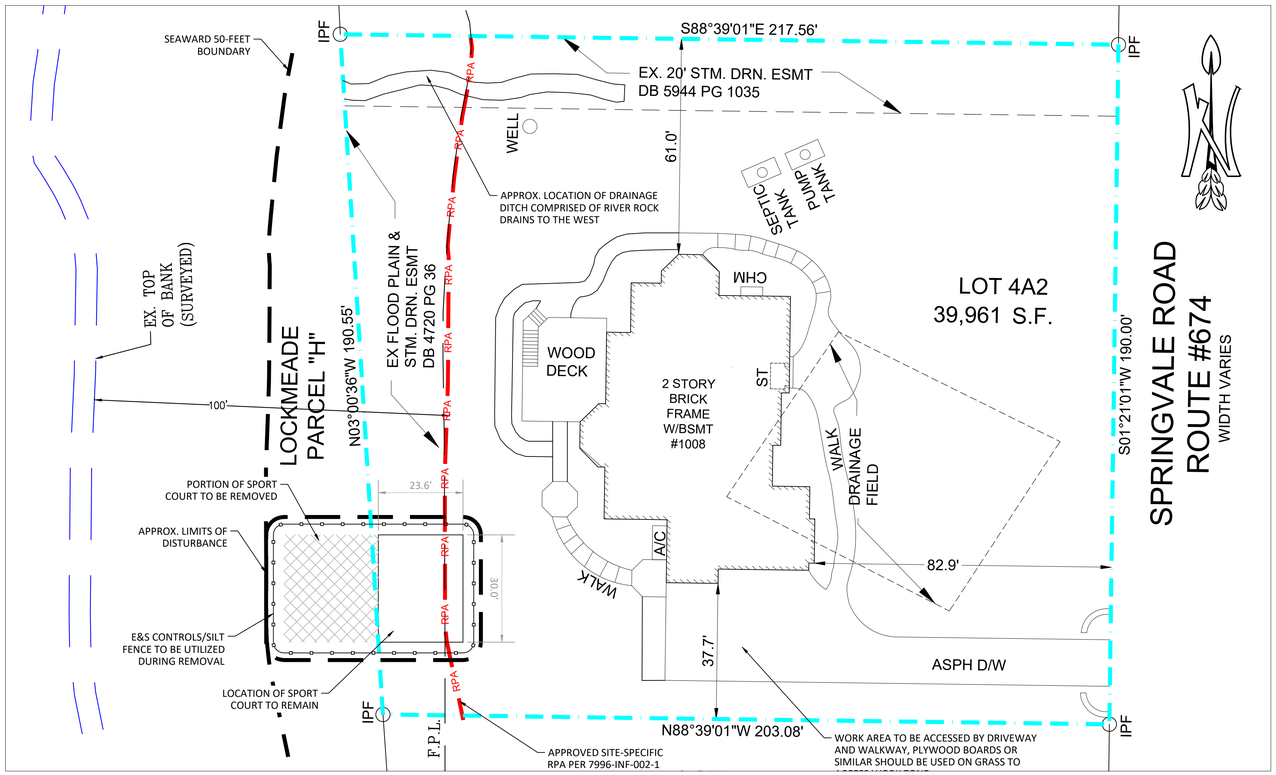
SCALE: 1" = 20'

PROJECT DATE: 2/26/21

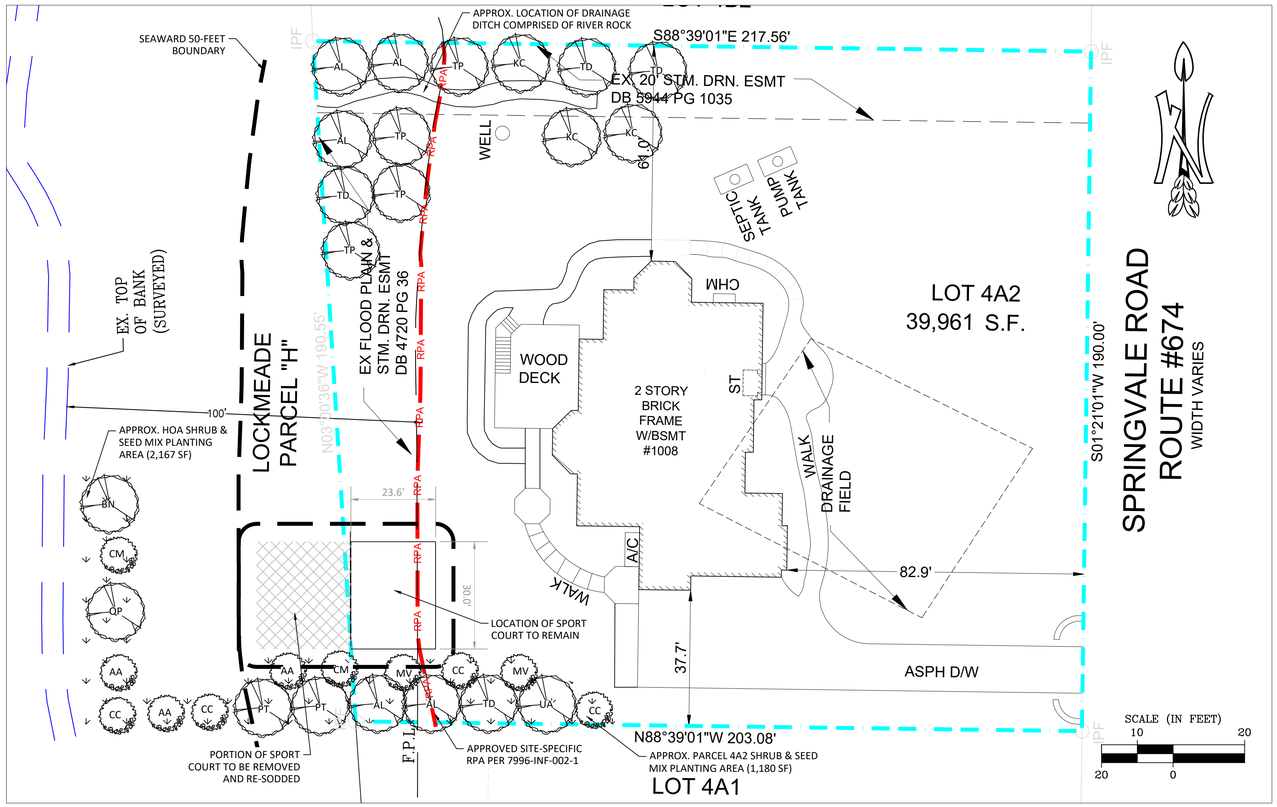
DRAFT: TNW | CHECK: AMS

FILE NUMBER: 2100

PROPOSED CONDITIONS:



PLANTING PLAN:



GENERAL NOTES:

1. THE EXISTING SURVEY AND CONDITIONS SHOWN HEREON WERE PROVIDED TO TNT BY LANDPRO/LAND MARX AND ASSOCIATES, LLC.

2. THE SITE-SPECIFIC RESOURCE PROTECTION AREA (RPA) DEPICTED ON THESE PLANS SHEETS WAS APPROVED PER 7996-INF-002-1. THIS RPA DELINEATION WAS DONE BY SDE, INC. (2010) FOR THE INF SUBMISSION.

3. THE LOCATION OF THE SPORT COURT IS APPROXIMATE AND BASED ON AERIAL IMAGERY.

4. THE REMOVAL OF THE OFFSITE PORTION OF SPORT COURT AND PLANTINGS ON THE ADJACENT PROPERTY HAVE BEEN APPROVED BY THE FOXVALE FARM HOMEOWNER'S ASSOCIATION IN ORDER TO PROTECT THE EXISTING STREAM AND PROVIDE MAXIMUM WATER QUALITY BENEFITS.

LEGEND

- SITE-SPECIFIC RESOURCE PROTECTION AREA (RPA)
- SEAWARD 50' BOUNDARY
- PROPERTY BOUNDARY
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED SPORT COURT TO BE REMOVED (849-SF)
- *GENERAL PROPOSED PLANTING AREA
- PROPOSED OVERSTORY TREE
- PROPOSED UNDERSTORY TREE

PLANTING SCHEDULE FOR SPORT COURT ENCROACHMENT (PARCEL 4A2):

Key	Common Name	Scientific Name	Size (DBH)		Quantity
Overstory Trees					
AL	American Linden	*Tilia americana*	1.5"		2
				Subtotal	**2**
Understory Trees					
MV	Sweetbay Magnolia	*Magnolia virginiana*	3/4"		2
CC	Eastern Redbud	*Cercis canadensis*	3/4"		2
				Subtotal	**4**
Shrubs					
LB	Northern Spicebush	*Lindera benzoin*	1 Gallon		4
AS	Hazel Alder	*Alnus serrulata*	1 Gallon		4
VA	Maple-Leaved Viburnum	*Viburnum acerifolium*	1 Gallon		4
CA	Silky Dogwood	*Cornus amomum*	1 Gallon		4
				Subtotal	**16**
				Total	**22**

PLANTING SCHEDULE FOR VEGETATION REMOVAL & REPLACEMENT (PARCEL 4A2):

Key	Common Name	Scientific Name	Size (DBH)		Quantity
Overstory Trees					
TP	Tulip Poplar	*Liriodendron tulipifera*	1.5"		4
TD	Bald Cypress	*Taxodium distichum*	1.5"		4
AL	American Linden	*Tilia americana*	1.5"		4
KC	Kwansan Cherry	*Prunus serrulata 'Kwansan'*	1.5"		3
				Subtotal	**15**

PLANTING SCHEDULE FOR SPORT COURT ENCROACHMENT (HOA PROPERTY):

Key	Common Name	Scientific Name	Size (DBH)		Quantity
Overstory Trees					
QP	Willow Oak	*Quercus phellos*	1.5"		1
PT	Loblolly Pine	*Pinus taeda*	1.5"		2
BN	River Birch	*Betula nigra*	1.5"		1
				Subtotal	**4**
Understory Trees					
CC	American Hornbeam	*Carpinus caroliniana*	3/4"		2
CM	Corneliancherry Dogwood	*Cornus mas*	3/4"		2
AA	Downy Serviceberry	*Amelanchier arborea*	3/4"		3
				Subtotal	**7**
Shrubs					
LB	Northern Spicebush	*Lindera benzoin*	1 Gallon		3
AS	Hazel Alder	*Alnus serrulata*	1 Gallon		4
VA	Maple-Leaved Viburnum	*Viburnum acerifolium*	1 Gallon		4
VD	Southern Arrowwood	*Viburnum dentatum*	1 Gallon		4
CA	Silky Dogwood	*Cornus amomum*	1 Gallon		4
				Subtotal	**19**
				Total	**30**

PLANTING SCHEDULE NOTES:

1. PROPOSED VEGETATION WILL BE PLANTED ONSITE TO COMPLEMENT EXISTING VEGETATION. LOCATIONS WILL BE DECIDED IN THE FIELD AND DISCUSSED WITH COUNTY ARBORISTS.

2. OFFSITE PLANTINGS WERE APPROVED BY FOXVALE FARM HOMEOWNERS' ASSOCIATION (PROPERTY OWNER) AND WILL COMPLEMENT EXISTING VEGETATION ALONG THE STREAM BANK.

3. ACCORDING TO THE PROPERTY OWNERS, 7 HEALTHY TREES AND 1 DEAD TREE WERE REMOVED ON PARCEL 4A2 PRIOR TO THE VIOLATION AND WITHOUT APPROVAL. IN ADDITION TO THE REVEGETATION FOR THE SPORT COURT ENCROACHMENT, 15 TREES WILL BE PLANTED TO SUPPLEMENT FOR THE ILLEGAL VEGETATION REMOVAL. THE 7 HEALTHY TREES WILL BE REPLACED AT A 2:1 RATIO AND THE DEAD TREE WILL BE REPLACED AT A 1:1 RATIO PER CORRESPONDENCE WITH THE COUNTY.

Project Data Sheet - HOA Property (Parcel "H")

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Lot Area within RPA (S.F.)	14,717
% Lot Area within RPA	100%
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Date When RPA was designated	2003
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Detailed Breakdown: Impervious Area Analysis Tabulation				
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Total Sport Court in RPA (S.F.)	0	763	0	-763

*The entire HOA parcel area equals 23.9 acres. This area depicts the representative area between Parcel 4A2 and the stream located on the HOA parcel. This table is intended to show the removal of the sport court on HOA property.

Project Data Sheet - 1008 Springvale Road (Parcel 4A2)

Total Lot Area (S.F.)	39,961
Lot Area within RPA (S.F.)	4,775
% Lot Area within RPA	12%
Date When the Lot was Created	2011
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Primary Structure Footprint (S.F.)	3,957	4,037	4,037	4,037	0	80
Primary Structure Footprint in RPA (S.F.)	0	0	0	0	0	0
Total Driveway & Walkway (S.F.)	2,634	3,619	4,368	4,368	0	1,734
Total Driveway & Walkway in RPA (S.F.)	0	0	0	0	0	0
Total Deck (S.F.)	660	660	660	660	0	0
Total Deck in RPA (S.F.)	0	0	0	0	0	0

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

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1008 SPRINGVALE ROAD
FAIRFAX COUNTY

WATER QUALITY IMPACT ASSESSMENT

PROPOSED CONDITIONS & PLANTING PLAN

REVISIONS

DATE	COMMENTS
12/27/21	REV BY TNW
8/15/22	REV BY AMS

SHEET 2 OF 3

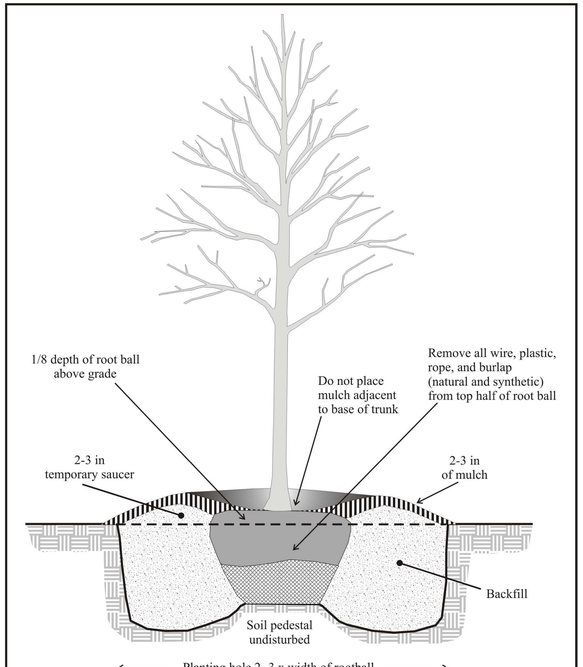
SCALE: 1" = 20'

PROJECT DATE: 2/26/21

DRAFT: TNW | CHECK: AMS

FILE NUMBER: 2100

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Reference: Section 12-0805.3A	TREE PLANTING	PLATE NO	STD NO
		8-12	

PERENNIAL HERBACEOUS SEED MIX SPECIFICATIONS (OR SIMILAR):

VA Northern Piedmont Riparian Mix

Mix Composition

21.0% ***Panicum anceps, Eastern Shore MD Ecotype*** **(Beaked Panicgrass, Eastern Shore MD Ecotype)**
18.0% ***Panicum clandestinum, 'Tioga'*** **(Deertongue, 'Tioga')**
15.0% ***Elymus virginicus, PA Ecotype*** **(Virginia Wildrye, PA Ecotype)**
15.0% ***Sorghastrum nutans, 'Tomahawk'*** **(Indiangrass, 'Tomahawk')**
7.5% ***Andropogon gerardii, 'Niagara'*** **(Big Bluestem, 'Niagara')**
5.0% ***Panicum virgatum, 'Shelter'*** **(Switchgrass, 'Shelter')**
4.0% ***Carex vulpinoidea, PA Ecotype*** **(Fox Sedge, PA Ecotype)**
4.0% ***Panicum rigidulum, PA Ecotype*** **(Redtop Panicgrass, PA Ecotype)**
2.0% ***Agrostis perennans, Albany Pine Bush-NY Ecotype*** **(Autumn Bentgrass, Albany Pine Bush-NY Ecotype)**
2.0% ***Helenium flexuosum, VA Ecotype*** **(Purplehead Sneezeweed, VA Ecotype)**
2.0% ***Senna hebecarpa, VA & WV Ecotype*** **(Wild Senna, VA & WV Ecotype)**
1.0% ***Asclepias incarnata, PA Ecotype*** **(Swamp Milkweed, PA Ecotype)**
1.0% ***Eupatorium perfoliatum, PA Ecotype*** **(Boneset, PA Ecotype)**
1.0% ***Hibiscus moscheutos, Coastal Plain NC Ecotype*** **(Crimsoneyed Rosemallow, Coastal Plain NC Ecotype)**
1.0% ***Vernonia noveboracensis, PA Ecotype*** **(New York Ironweed, PA Ecotype)**
0.5% ***Eupatorium fistulosum, PA Ecotype*** **(Joe Pye Weed, PA Ecotype)**

PERENNIAL HERBACEOUS SEED MIX NOTES:
-ERNST SEEDS "VIRGINIA NORTHERN PIEDMONT RIPARIAN" SEED MIX (ERNMX-852) AND JUTT MATTING (OR SIMILAR) SHOULD BE UTILIZED IN THE PROPOSED SEED MIX PLANTING AREA.

-PER PFM TABLE 12.13B, 30 POUNDS PER ACRE OF DISTURBANCE SHOULD BE PLANTED FOR PERENNIAL HERBACEOUS SEED MIX. FOR THE PARCEL 4A2 PROPERTY, 0.02 ACRES OF DISTURBANCE, 1 POUND OF SEED MIX SHOULD BE PLANTED. FOR THE HOA PROPERTY, 0.03 ACRES OF DISTURBANCE, 1 POUND OF SEED MIX SHOULD BE PLANTED.

ANNUAL HERBACEOUS COVER CROP SEED MIX SPECIFICATIONS (OR SIMILAR):

Cover Crop Mix

Mix Composition

75.0% ***Secale cereale, Variety Not Stated*** **(Rye, Variety Not Stated)**
12.5% ***Trifolium incarnatum, Variety Not Stated*** **(Crimson Clover, Variety Not Stated)**
7.5% ***Trifolium michelianum, Fixation*** **(Balansa Clover, 'Fixation')**
5.0% ***Raphanus sativus, GroundHog*** **(Radish, 'GroundHog')**

ANNUAL HERBACEOUS COVER CROP SEED MIX NOTES:

-NORTHERN VIRGINIA SOIL AND WATER CONSERVATION DISTRICT RECOMMENDS A COVER CROP BASIC MIX OF TRITICALE, ORCHARD GRASS, ANNUAL RYEGRASS, BLACK OATS, TURNIPS, RAPESEED, AND WHITE CLOVER. THIS MIX (OR SIMILAR) SHOULD BE UTILIZED.

- ERNST SEEDS "COVER CROP MIX" (ERNMX-135) OR SIMILAR SHOULD BE UTILIZED IN THE PROPOSED PLANTING AREA.

- PER PFM TABLE 12.13B, 60 POUNDS PER ACRE OF DISTURBANCE SHOULD BE PLANTED FOR ANNUAL HERBACEOUS COVER CROP SEED MIX. FOR THE PARCEL 42A PROPERTY, 0.02 ACRES OF DISTURBANCE, 2 POUNDS OF SEED MIX SHOULD BE PLANTED. FOR THE HOA PROPERTY, 0.03 ACRES OF DISTURBANCE, 2 POUNDS OF SEED MIX SHOULD BE PLANTED.

- SEED MIXES WILL BE APPROVED BY UFMD PRIOR TO APPLICATION.

TREE PLANTING NARRATIVE:

TREE QUALITY AND INSTALLATION:
-TREES THAT ARE PLANED SHALL BE OF THE SPECIES AND SIZE SPECIFIED ON THE APPROVED PLANS UNLESS SUBSTITUTIONS ARE APPROVED IN ACCORDANCE WITH THE PFM AND UFMD.

-ALL TREES MUST MEET THE STANDARDS SPECIFIED IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK, (ANSI Z60.1).

-ALL LANDSCAPE WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION (AT THE TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION (ANSI A300 ANSI STANDARD FOR TREE, SHRUB AND OTHER WOODY PLANT INSTALLATION AND MAINTENANCE).

TRANSPORTING, DELIVERY AND TEMPORARY STORAGE:
-PLANTS SHALL BE PROTECTED DURING DELIVERY TO PREVENT DESICCATION OF LEAVES.

-TREES AND SHRUBS SHOULD BE PLANTED ON DAY OF DELIVERY. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT UNPLANTED PLANTS BY KEEPING THEM IN SHADE, WATERED AND PROTECTED WITH SOIL, MULCH OR OTHER ACCEPTABLE MATERIAL.

-TREES AND SHRUBS SHALL NOT REMAIN UNPLANTED FOR MORE THAN TWO WEEKS.

PLANTING OF NURSERY STOCK:
-IF PLANTING IN AREAS THAT HAVE BEEN PREVIOUSLY COMPACTED, THE SOIL SHALL BE PROPERLY PREPARED (TILLED AND AMENDED AS NEEDED BASED ON SOIL SAMPLES) TO A DEPTH OF 1 FOOT PRIOR TO INSTALLATION OF LANDSCAPE MATERIAL. SOIL WITHIN INDIVIDUAL PLANTING HOLES SHALL NOT BE AMENDED.

-THE STAKING AND GUYING OF TREES IS NOT REQUIRED EXCEPT WHERE THE DIRECTOR DETERMINES THAT SITE CONDITIONS WARRANT THEIR USE. EXAMPLES OF CONDITIONS WHERE THESE METHODS MAY BE NECESSARY INCLUDE: PLANTING IN WINDY LOCATIONS, ON STEEP SLOPES, OR WHERE VANDALISM MAY BE A CONCERN. ALL STAKES AND GUYS MUST BE REMOVED WITHIN ONE YEAR OF PLANT INSTALLATION.

-MULCHING. ALL TREES AND SHRUBS SHALL BE MULCHED AFTER PLANTING, TO A MINIMUM DEPTH OF 2 INCHES, BUT NO MORE THAN 3 INCHES, WITH AN APPROPRIATE MULCH MATERIAL SUCH AS PINE BARK, PINE NEEDLES, WOOD CHIPS OR SHREDDED BARK. MULCH SHALL COVER THE ENTIRE ROOT AREA AND SAUCER; HOWEVER, MULCH SHALL NOT BE PLACED WITHIN 6 INCHES OF THE TRUNK.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

ENVIRONMENTAL
4455 Brookfield Corporate Drive, Suite 100
Chantilly, VA 20151
PH: 703-466-5123 WWW.TNTENVIRONMENTALINC.COM

1008 SPRINGVALE ROAD
FAIRFAX COUNTY

WATER QUALITY IMPACT ASSESSMENT
DETAILS & NARRATIVE

REVISIONS

DATE	COMMENTS
12/27/21	REV BY TNW
3/21/22	REV BY TNW

SHEET 3 OF 3

SCALE: NTS

PROJECT DATE: 2/26/21

DRAFT: TNW | CHECK: AMS

FILE NUMBER: 2100

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

APPENDIX V

VRRM SPREADSHEETS

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet _ Version 3.0

BMP Design Specifications List: **2013 Draft Stds & Specs**

Site Summary

Project Title: 1008 Springvale Road
Date: 44545

Total Rainfall (in):	**43**
Total Disturbed Acreage:	**0.0546**

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.1607	0.1607	100.0000
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
					0.1607	100.0000

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total	
Forest/Open (acres)	0.0000	0.0000	0.0000	0.1444	0.1444	89.8569	*
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0163	0.0163	10.1431	
					0.1607	100.0000	

*** Forest/Open Space areas must be protected in accordance with the Virginia Runoff Reduction Method**

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.1413	0.0500	0.9500	0.2500
Treatment Volume (ft^3)	82.4192	26.2086	56.2106	131.0430
TP Load (lb/yr)	0.0518	0.0165	0.0353	0.0823

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
0.5700	**0.3200**	**0.1100**

Total TP Load Reduction Required (lb/yr)	**-0.0290**	-0.0576	0.0286

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	0.3705	0.6555

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	10%

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

Total Runoff Volume Reduction (ft^3)	0.0000
Total TP Load Reduction Achieved (lb/yr)	0.0000
Total TN Load Reduction Achieved (lb/yr)	0.0000
Remaining Post Development TP Load (lb/yr)	0.0518
Remaining TP Load Reduction (lb/yr) Required	**0.0000**

**** TARGET TP REDUCTION EXCEEDED BY 0.029 LB/YEAR ****

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Impervious Cover (acres)	0.0163	0.0000	0.0000	0.0000	0.0000	0.0163
Total Area (acres)	**0.0163**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0163**

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TN Load Reduced (lb/yr)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0163	0.0163	100
					0.0163	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed

Total Impervious Cover Treated (acres)	0.0000
Total Turf Area Treated (acres)	0.0000

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

Total TP Load Reduction Achieved in D.A. (lb/yr)	0.0000
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.0000

Drainage Area B Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
					0.0000	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed

Total Impervious Cover Treated (acres)	0.0000
Total Turf Area Treated (acres)	0.0000
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.0000
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.0000

Drainage Area C Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
					0.0000	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed

Total Impervious Cover Treated (acres)	0.0000
Total Turf Area Treated (acres)	0.0000

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

Total TP Load Reduction Achieved in D.A. (lb/yr)	0.0000
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.0000

Drainage Area D Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
					0.0000	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed

Total Impervious Cover Treated (acres)	0.0000
Total Turf Area Treated (acres)	0.0000
Total TP Load Reduction Achieved in D.A. (lb/yr)	0.0000
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.0000

Drainage Area E Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0
					0.0000	

BMP Selections

Practice	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	BMP Treatment Volume (ft^3)	TP Load from Upstream Practices (lbs)	Untreated TP Load to Practice (lbs)	TP Removed (lb/yr)	TP Remaining (lb/yr)	Downstream Treatment to be Employed

Total Impervious Cover Treated (acres)	0.0000
Total Turf Area Treated (acres)	0.0000

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

Total TP Load Reduction Achieved in D.A. (lb/yr)	0.0000
Total TN Load Reduction Achieved in D.A. (lb/yr)	0.0000

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm
Target Rainfall Event (in)	2.69	3.15	4.84

Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN		98	0	0	0	0
RR (ft^3)		0.0000	0.0000	0.0000	0.0000	0.0000
1-year return period	**RV wo RR (ws-in)**	2.4597	0.0000	0.0000	0.0000	0.0000
	RV w RR (ws-in)	2.4597	0.0000	0.0000	0.0000	0.0000
	CN adjusted	98	0	0	0	0
2-year return period	**RV wo RR (ws-in)**	2.9177	0.0000	0.0000	0.0000	0.0000
	RV w RR (ws-in)	2.9177	0.0000	0.0000	0.0000	0.0000
	CN adjusted	98	0	0	0	0
10-year return period	**RV wo RR (ws-in)**	4.6034	0.0000	0.0000	0.0000	0.0000
	RV w RR (ws-in)	4.6034	0.0000	0.0000	0.0000	0.0000
	CN adjusted	98	0	0	0	0

APPENDIX VI

FOXVALE FARM HOMEOWNER'S ASSOCIATION CORRESPONDENCE

Tara Wilkins

From: Josh Wilson <josh.wilson26@gmail.com>
Sent: Wednesday, February 17, 2021 10:27 AM
To: Avi Sareen; Tara Wilkins
Subject: Fwd: Planting Permission

Hi Avi,

The HOA gave us permission to make our plantings on their property near the creek.

Josh

---------- Forwarded message ---------
From: **Josh Wilson** <josh.wilson26@gmail.com>
Date: Wed, Feb 17, 2021 at 11:00 AM
Subject: Re: Planting Permission
To: Tom Hixon <tom.hixon@cox.net>
Cc: Jazmin Wilson <jazmin.wilson00@gmail.com>

Tom,

Thank you.

Josh and Jazmin Wilson

On Wed, Feb 17, 2021 at 10:47 AM Tom Hixon <tom.hixon@cox.net> wrote:

> Josh,
>
> These would be fine as long as the County approves of them. You have permission to plant these on the HOA property where designated by the County.
>
> Tom Hixon
> President
> Foxvale Farm HOA
>
> Sent from my iPad
>
> > On Feb 16, 2021, at 5:01 PM, Josh Wilson <josh.wilson26@gmail.com> wrote:
> >
> >
> >
> > Dear Tom,
> >
> > We hope all is well. Our wetland and natural resource consulting firm is in the process of submitting our WQIA to the county for approval to correct our violation. Our firm told us that one requirement to correct our violation will be to make at least 60 plantings. They recommend that these trees and shrubs are planted as close to a natural water source as possible to protect the life of the planting. We wanted to find out from you if we have the HOA's permission to plant the trees and shrubs on the HOA's property along the creek behind our house? We have attached the planting

options to this email that the county allows to have planted in a resource protection area and that will do well in a floodplain/wet conditions. These are the plantings that we would plant, with the HOA's permission, along the creek.
>
> Please let us know if you have any questions and/or if we have the HOA's permission as soon as you are able. We will have to submit our forms to the county in the near future.
>
> Sincerely,
> Josh and Jazmin Wilson
> <WQIA Planting Schedule.xlsx>

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

APPENDIX VII

NOTICE OF VIOLATION &
COUNTY DOCUMENTS/CORRESPONDENCE

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

NOTICE OF VIOLATION
Fairfax County Chesapeake Bay Preservation Ordinance

DATE ISSUED: 07/21/2020

CERTIFIED MAIL #:7019 1640 0001 0919 3036

VIOLATION ISSUED TO: Matthew J. Wilson
Jazmin D. Wilson
1008 Springvale Rd
Great Falls, VA 22066

LOCATION OF VIOLATION: 1008 Springvale Rd Great Falls, VA 22066

TAX MAP REFERENCE: 0121 08B 0004A2

CASE #: 202003667

I inspected the above site on 7/8/2020, and observed the following violations in a **Chesapeake Bay Preservation Area:**

1. Land disturbance in the Resource Protection Area (RPA) without an approved Water Quality Impact Assessment in violation of Fairfax County Code, Section 118-4-2 and Section 118-3-2(a) and (b). The land disturbance in the RPA consists of approximately 1,500 square feet, including the construction of an unpermitted sport court.

2. Encroachment of an accessory structure or use into the RPA without an exception approval by either the Exception Review Committee or by the Board of Supervisors, when in conjunction with a rezoning or special exception approval, in violation of Fairfax County Code, Section 118-6-9.

Furthermore, Fairfax County Code, Section 118-9-1(a), provides as follows:

Any building erected or improvements constructed contrary to any provisions of this Chapter and any land disturbing activity regardless of area contrary to any of the provisions of this Chapter and any removal of vegetation in Chesapeake Bay Preservation Areas contrary to any provisions of this Chapter shall be and the same is hereby declared to be unlawful.

Department of Land Development Services
12055 Government Center Parkway, Suite 659
Fairfax, Virginia 22035-5503
Phone 703-324-1780 • TTY 711 • FAX 703-653-6678
www.fairfaxcounty.gov

You are directed to correct this violation within sixty (60) days of receipt of this order, by performing the following, corrective measures:

1. Immediately cease and desist all land disturbing activity in the RPA.

2. Remove the unpermitted sport court in accordance with County policy and procedure by:

   Submitting and receiving approval for a Water Quality Impact Assessment (WQIA) that restores the RPA to the requirements of Section 118-9-1(d).

   Restoration of the RPA shall be in accordance with the requirements of the Chesapeake Bay Preservation Ordinance and Public Facilities Manual (PFM). In addition to the plantings required by Section 118-3-3(f) and the PFM, the Director may require for any trees impacted or illegally removed from the RPA to be replaced by other trees of the same comparable species of equal value and/or be replaced by two trees for each tree impacted or removed. The replacement trees shall be two-inch caliper trees or larger. If any fill is relocated on site outside the RPA, the WQIA shall also show the area where the fill is to be placed and demonstrate that the placement of the fill shall not adversely impact the existing drainage of the land;

OR

3. Submit and receive approval for:
   a. An exception request to permit encroachment into the RPA in accordance with the requirements of Section 118-6-5, -6, and -9; and

   b. A WQIA that restores the RPA to the requirements of Section 118-9-1(d). Restoration of the RPA shall be in accordance with the requirements of the Chesapeake Bay Preservation Ordinance and PFM;

AND

4. Correct the violation in accordance with the approved WQIA.

Section 118-9-2, Criminal Violations and Penalties, states:

(a) Violators of this Chapter shall be guilty of a Class 1 misdemeanor.
(b) Each day any violation of this Chapter shall continue shall constitute separate offense.
(c) In addition to any criminal penalties provided under this Article, any person who violates any provision of this Chapter may be liable to the County in a civil action

for damages, or for injunctive relief. (32-03-118.)

Section 118-9-3, Civil Penalties, reads as follows:

(a) Any person who violates any provision of this Chapter or who violates or fails, neglects, or refuses to obey any local governmental body's or official's final notice, order, rule, regulation, or variance or permit condition authorized under this Chapter shall, upon such finding by an appropriate circuit court, be assessed a civil penalty not to exceed $5,000 for each day of violation.

Section 118-8-1, Procedures, states in relevant part as follows:

(a) An applicant aggrieved by any decision of the Director of the Land Development Services . . . in the administration of this Chapter may, within 15 days of such decision, appeal the decision to the Board of Supervisors.

and . . .

(c) Such appeal shall be filed with the Clerk to the Board of Supervisors and shall state with specificity the provisions of this Chapter which the applicant alleges to have been violated by the decision and the reasons therefore. A copy of the appeal shall also be delivered to the Director of the Department of Land Development Services within such 30-day period.

Failure to correct this violation may result in legal action under applicable state and county codes.

ISSUED BY: _____

Jesus Rico Arreola, Code Specialist II
12055 Government Center Parkway
Fairfax, Virginia 22035-5503
Phone: (703) 324-8463
Email: jjesus.ricoarreola@fairfaxcounty.gov
Authorized Agent of the Director of LDS

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

December 8, 2020

J. Matthew Wilson
1008 Springvale Road
Virginia, 22066

Reference: 1008 Springvale Road; Violation Case # 202003667 SR # 174833; Dranesville; Tax Map No: 012-1-08B-0004A2

Reference: Your Floodplain Use Determination dated September 9, 2020, FPUD/SS # 60

Dear Mr. Wilson:

Your request to permit a play court in the floodplain cannot be approved at this time. The location of the court is in conflict with the notes on the subdivision plat (1129-RPR-07-01-1):

- Note 7: "The RPA is to remain undisturbed and vegetated in accordance with the requirements of section 118-3-3(f)".
- Note 8: "Only water dependent facilities or redevelopment is permitted in the RPA".

Consider re-locating the court outside the Resource Protection Area (RPA) or obtain an exception to locate a court in the RPA. After resolving the conflicts with the subdivision plat, you may submit your request for a reconsideration.

If further assistance is desired, please contact me at 703-324-1720 or Camylyn.Lewis@FairfaxCounty.gov.

Sincerely,

Camylyn Lewis

Camylyn Lewis, P.E, CFM
Senior Engineer III, North Branch
Site Development and Inspections Division (SDID)
Land Development Services (LDS)

CL/tc

Enclosure

Department of Land Development Services
12055 Government Center Parkway, Suite 659
Fairfax, Virginia 22035-5503
Phone 703-324-1780 • TTY 711 • FAX 703-653-6678
www.fairfaxcounty.gov

cc: Dipmani Kumar, P.E., Chief, Watershed Planning and Evaluation Branch (WPEB), Stormwater Planning Division (SWPD), Department of Public Works and Environmental Services (DPWES)
James Canter, Chief, Building Inspections Branch, Building Division/Residential Branch, LDS
Anthony McMahan, Combination Plan Review Manager, Technical Services Branch, Building Division, LDS
Bigyan Shrestha, Engineer III, WPEB, SWPD, DPWES
Facilitation and Addressing Center, LDS
Steven Kendrick, Chief, Building Code Services, STS, CTSC, PACA, LDS
Nicole McMahon, Supervisor, Permit Application Center, STS, CTSC, PACA, LDS
James Anjam, Branch Manager, Technical Services Branch, Building Division, LDS
Brandy Mueller, Chief, Environmental Compliance and Enforcement (ECE) Branch, LDS
Jesus Rico, Code Specialist II, ECE, LDS
FPUD File

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

FAIRFAX COUNTY

FLOODPLAIN USE DETERMINATION REQUEST

DATE: September 9, 2020

TO: Bruce McGranahan, Director, Site Development and Inspections Division (SDID)
Land Development Services
12055 Government Center Parkway, Suite 535, Fairfax, Virginia 22035

SUBJECT: 1008 SPRINGVALE RD GREAT FALLS, VA 22066
(Print Property address, development name, section & block #s)

Plan #: _____ Permit #: _____
(If any plans associated with address), (if any permits associated with address)

Tax Map #: 0121 08B 0004A2 Magisterial District: DRANESVILLE
(As listed with the Department of Tax Administration)

REFERENCE: Request for a Permitted Use Determination within a Floodplain

We hereby request a determination from the Director that our proposed
PLAY AREA BE PERMITTED.
(Describe the scope of the work to be performed within the floodplain)
is a permitted use within the floodplain. We wish to construct A PLAY AREA / COURT WAS ALREADY CONSTRUCTED
FIVE YEARS AGO AND IS SAID TO BE IN VIOLATION (case # 202003667 sr # 174833) OF BEING IN FLOODPLAIN.

(Please provide as much information as available regarding the scope of the project and under which regulations you believe the work is permitted. Include copies of any plans or schematics showing the footprint location on the lot and the elevations of the floodplain and structures.
*If the project is an **addition** to an existing dwelling, please indicate when the existing dwelling was constructed. Also, provide: **a)** The proposed elevation of the lowest part of the lowest floor to be constructed e.g., the bottom of the floor joists or top of a concrete slab on grade and **b)** A market value cost estimate of the project.)*

This request is submitted under Section 2-903 of the Fairfax County Zoning Ordinance.

A Hold Harmless Agreement, estimated cost of construction, and house location plat showing the location of the proposed development are required at the time of submission. The Hold Harmless Agreement will only be recorded if required by the Floodplain Use Determination made by the SDID reviewer. Mail all required documentation to: Site Development & Inspection Division, 12055 Government Center Pkwy, Suite 548, Fairfax, VA 22035 or place in the drop-box located in front of the Herrity Building.

Please be sure to include your contact information below so that the response letter may be issued as soon as it is signed.

Owner Information *(please print)*

Print Name/Title: J. MATTHEW WILSON Signature: _____

Address: 1008 SPRINGVALE RD City: GREAT FALLS

State: VA ZIP: 22066

Email Address: JOSH.WILSON26@GMAIL.COM Phone #: 2029069189

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

FAIRFAX COUNTY

FLOODPLAIN USE DETERMINATION REQUEST

DATE: September 9, 2020

TO: Bruce McGranahan, Director, Site Development and Inspections Division (SDID)
Land Development Services
12055 Government Center Parkway, Suite 535, Fairfax, Virginia 22035

SUBJECT: 1008 SPRINGVALE RD GREAT FALLS, VA 22066
(Print Property address, development name, section & block #s)

Plan #: _____ Permit #: _____
(If any plans associated with address), (if any permits associated with address)

Tax Map #: 0121 08B 0004A2 Magisterial District: DRANESVILLE
(As listed with the Department of Tax Administration)

REFERENCE: Request for a Permitted Use Determination within a Floodplain

We hereby request a determination from the Director that our proposed
PLAY AREA BE PERMITTED.
(Describe the scope of the work to be performed within the floodplain)

is a permitted use within the floodplain. We wish to construct A PLAY AREA / COURT WAS ALREADY CONSTRUCTED
FIVE YEARS AGO AND IS SAID TO BE IN VIOLATION (case # 202003667 sr # 174833) OF BEING IN FLOODPLAIN.

Nearly half of the original play area is being removed, and only the portion drawn on the attached plat will still be on the property.

(Please provide as much information as available regarding the scope of the project and under which regulations you believe the work is permitted. Include copies of any plans or schematics showing the footprint location on the lot and the elevations of the floodplain and structures.
*If the project is an **addition** to an existing dwelling, please indicate when the existing dwelling was constructed. Also, provide: **a)** The proposed elevation of the lowest part of the lowest floor to be constructed e.g., the bottom of the floor joists or top of a concrete slab on grade and **b)** A market value cost estimate of the project.)*

This request is submitted under Section 2-903 of the Fairfax County Zoning Ordinance.

A Hold Harmless Agreement, estimated cost of construction, and house location plat showing the location of the proposed development are required at the time of submission. The Hold Harmless Agreement will only be recorded if required by the Floodplain Use Determination made by the SDID reviewer. Mail all required documentation to: Site Development & Inspection Division, 12055 Government Center Pkwy, Suite 548, Fairfax, VA 22035 or place in the drop-box located in front of the Herrity Building.

Please be sure to include your contact information below so that the response letter may be issued as soon as it is signed.

Owner Information *(please print)*

Print Name/Title: J. MATTHEW WILSON Signature _____

Address: 1008 SPRINGVALE RD City: GREAT FALLS

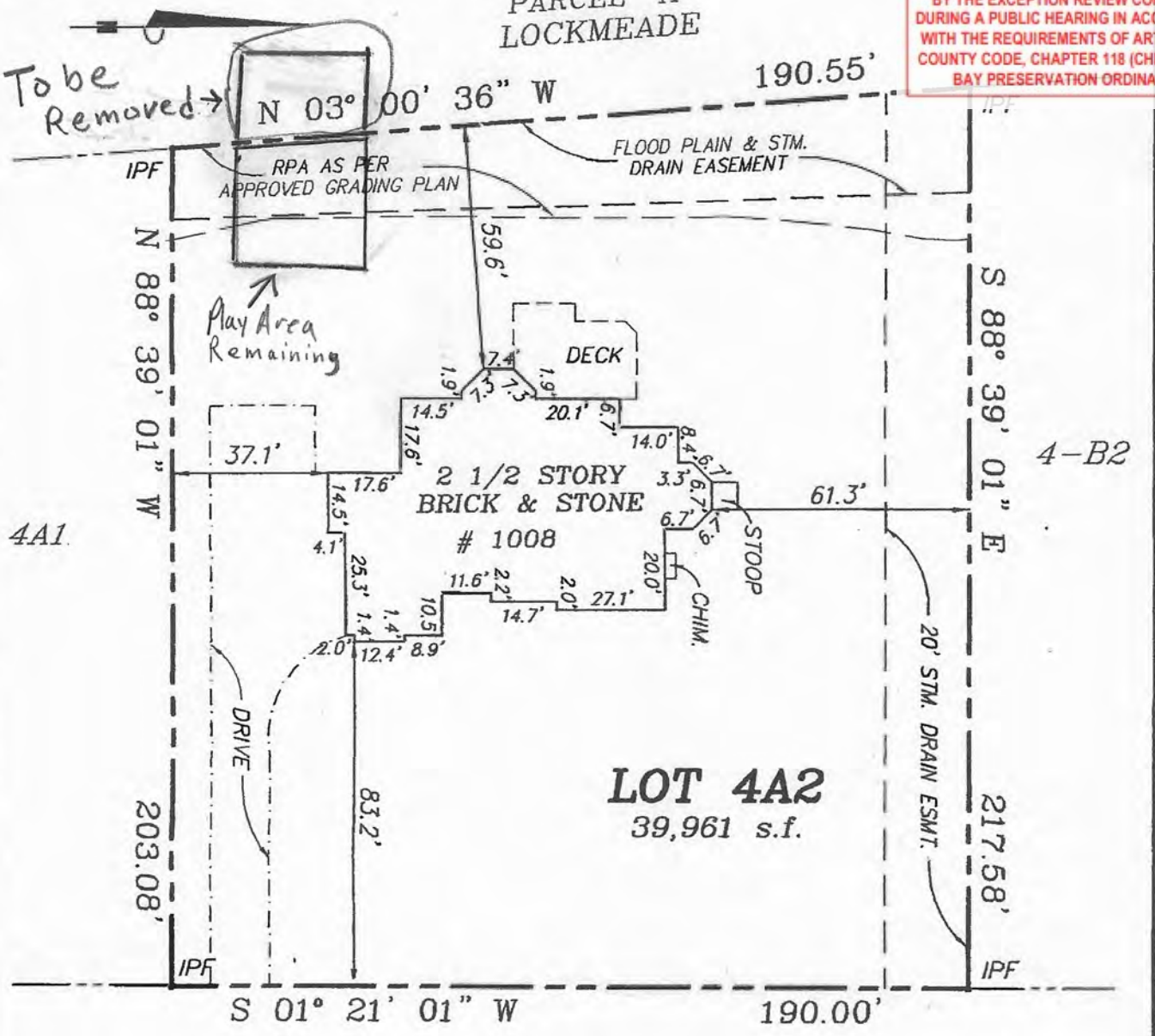
State: VA ZIP: 22066

Email Address: JOSH.WILSON26@GMAIL.COM Phone #: 2029069189

Updated June 2020

TAPE (ELECTRONIC DISTANCE METER) SURVEY AND UNLESS OTHERWISE SHOWN, THERE ARE NO ENCROACHMENTS.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).



SPRINGVALE ROAD
ROUTE #674
(WIDTH VARIES)

FINAL APPROVAL
OCT 11 2011
ZONING ADMINISTRATION DIVISION
DEPARTMENT OF PLANNING AND ZONING

LOT 4A2
RESUBDIVISION OF LOT 4A

IRENE CHARPENTIER BETTIUS PROPERTY

DRANESVILLE DISTRICT
FAIRFAX COUNTY, VIRGINIA

NOTE: ACCORDING TO HUD-FIA MAP FOR FAIRFAX COUNTY, THIS DWELLING IS SHOWN TO BE IN ZONE C, AN AREA OF MINIMAL FLOOD HAZARD.

FINAL: AUGUST 31, 2011
WALL CHECK: MARCH 22, 2011

SCALE : 1"=40'

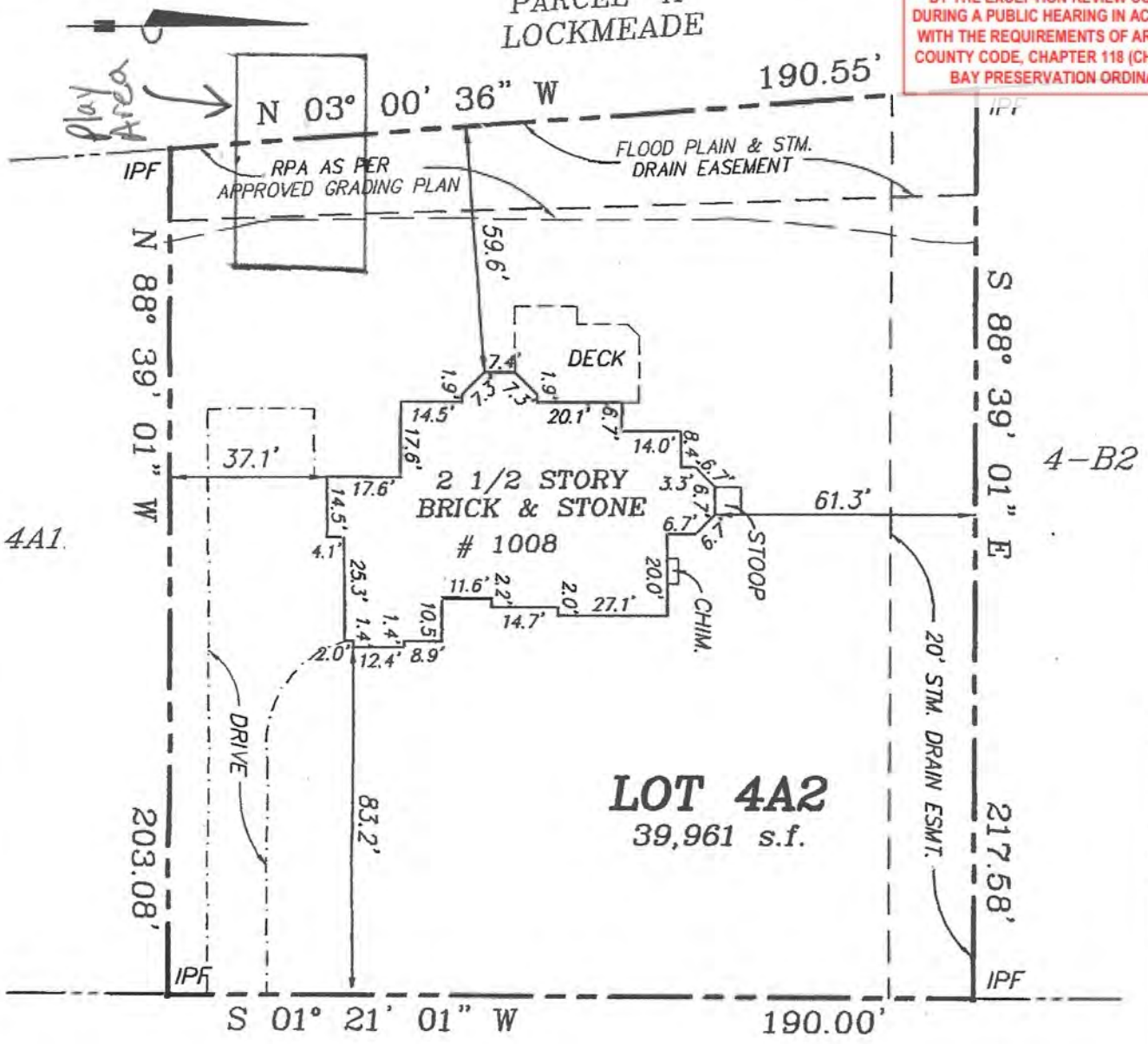
COMMONWEALTH OF VIRGINIA
WILLIAM E. RAMSEY
Certificate
No. 1126
9/1/2011
LAND SURVEYOR

TITLE REPORT NOT FURNISHED.

WILLIAM E. RAMSEY P.C.

TAPE (ELECTRONIC DISTANCE METER) SURVEY AND UNLESS OTHERWISE SHOWN THERE ARE NO ENCROACHMENTS.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).



SPRINGVALE ROAD
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FINAL APPROVAL
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LOT 4A2
RESUBDIVISION OF LOT 4A

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DRANESVILLE DISTRICT
FAIRFAX COUNTY, VIRGINIA

NOTE: ACCORDING TO HUD-FIA MAP FOR FAIRFAX COUNTY, THIS DWELLING IS SHOWN TO BE IN ZONE C, AN AREA OF MINIMAL FLOOD HAZARD.

FINAL: AUGUST 31, 2011
WALL CHECK: MARCH 22, 2011

SCALE : 1"=40'

COMMONWEALTH OF VIRGINIA
WILLIAM E. RAMSEY
Certificate
No. 1126
9/14/11
LAND SURVEYOR

TITLE REPORT NOT FURNISHED.

WILLIAM E. RAMSEY, P.C.

County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

2022 March 25 | 15:45:47 EDT

Tara N. Wilkins
TNT Environmental
4455 Brookfield Corporate Drive, Suite 100
Chantilly, Virginia 20151

Subject: 1008 Springvale Road; Irene C Betius Property, Lot 4A2; Tax Map #012-1-08B0004A2, Dranesville District

Reference: Submission Requirements: Resource Protection Area Encroachment Exception # 7996-WRPA-002 and Water Quality Impact Assessment (WQIA) # 7996-WQ-001

Dear Ms. Wilkins:

In response to your request dated March 1st, 2022, to modify the submission requirement of Section 118-6-5(c) of the Chesapeake Bay Preservation Ordinance (CBPO); the requirement to submit a plat meeting the requirements of Zoning Ordinance (ZO) 8101.2.B, was approved.

If further assistance is desired, please contact Camylyn Lewis, Senior Engineer III, at 703-324-1808 (direct), or 703-324-1720 (main office), or email at: Camylyn.Lewis@FairfaxCounty.gov. Alternatively, contact the Site Development and Inspections Division (SDID) Admin Staff at 703-324-1720 or by e-mail at: LDSSDIDAdmin@fairfaxcounty.gov, respectively.

Sincerely,

DocuSigned by:
Camylyn Lewis
3C6DA0CAC645478...

Camylyn Lewis
Senior Engineer III, SDID
Land Development Services (LDS)

CL/nm

cc: Jill G. Cooper, Clerk to the Board of Supervisors
Elizabeth Martin, Chairman, Exception Review Committee
Mr. Edward W. Monroe, Jr., Dranesville Representative

Department of Land Development Services
12055 Government Center Parkway, Suite 659
Fairfax, Virginia 22035-5503
Phone 703-324-1780 • TTY 711 • FAX 703-653-6678
www.fairfaxcounty.gov

Camylyn Lewis, Senior Engineer III, North Branch, SDID, LDS
Din Gupta, Senior Engineer III, North Branch, SDID, LDS
Bin Zhang, Chief, North Branch, SDID, LDS
Danielle Badra, Clerk to the Chesapeake Bay Exception Review Committee
Brandy Mueller, Environmental Compliance and Enforcement Coordinator, LDS
Avi Sareen, TNT Environmental, Inc.
Waiver File

Tara Wilkins

From: Hansen, Matthew <Matthew.Hansen@fairfaxcounty.gov>
Sent: Friday, March 25, 2022 12:45 PM
To: Tara Wilkins
Cc: Lewis, Camylyn M; Zhang, Bin; Avi Sareen; josh wilson; Jazmin Wilson
Subject: RE: Request for Zoning Ordinance Waiver

Hello,

It is acceptable to omit the topographic survey requirement from this submittal. The previous plat already submitted, paired with an appropriately scaled drawing of the currently constructed use are sufficient to document both the extent of impact to the RPA and serve as a base from which to produce a scaled drawing of your proposal.

Matthew Hansen, PE, CFM
Director, Site Development and Inspections Division
Dept. of Land Development Services
12055 Government Center Parkway, Suite 535
Fairfax, VA 22035-5500

Matthew.Hansen@fairfaxcounty.gov
703-324-1698

FAIRFAX COUNTY
LAND DEVELOPMENT SERVICES

From: Tara Wilkins <tara@tntenv.com>
Sent: Tuesday, March 1, 2022 2:41 PM
To: Hansen, Matthew <Matthew.Hansen@fairfaxcounty.gov>
Cc: Lewis, Camylyn M <Camylyn.Lewis@fairfaxcounty.gov>; Zhang, Bin <Bin.Zhang@fairfaxcounty.gov>; Avi Sareen <avi@tntenv.com>; josh wilson <josh.wilson26@gmail.com>; Jazmin Wilson <jazmin.wilson00@gmail.com>
Subject: Request for Zoning Ordinance Waiver

Mr. Matthew Hansen, Director, SDID,

TNT and the applicants, Josh and Jazmin Wilson, request an exception to the submission requirements of Zoning Ordinance Section 9-011, paragraph 2, specifically referenced in Section 118-6-5(c), for the Major WQIA and RPA Exception request for 1008 Springvale Road (7996-WQ-001-1 & 7996-WRPA-002-1). Specifically, we are requesting the requirement for a plat certified by a professional engineer, land surveyor, architect or landscape architect licensed by the State of Virginia to be waived only for these submissions. The plat currently shown on the plans was certified in 2011 and shows the existing house location, which was used to approximate the location of the sport court based on aerial imagery. Previous discussion with County staff led us to believe that a survey would not be necessary for this project. Since the project has been ongoing for over a year and area in question is so small, we believe a full survey and associated seal are not warranted at this time. The current plat depicts existing conditions to the best of our ability.

Thank you for your consideration on this matter.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

Sincerely,

Tara Wilkins, ISA-CA, WPIT
Environmental Project Manager

4455 BROOKFIELD CORPORATE DRIVE, SUITE 100
CHANTILLY, VIRGINIA 20151

OFFICE: 703-466-5123
MOBILE: 703-887-0212
WEB: www.TNTenvironmentalinc.com

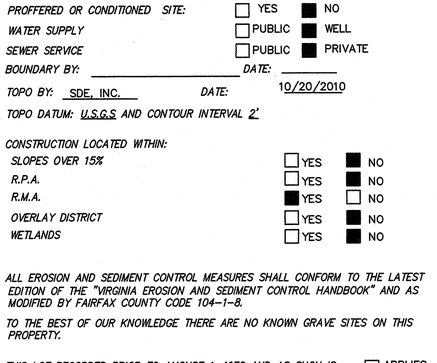
GENERAL NOTES

1. TAX MAP #: 12-1-((8B))-4A2
2. TOTAL PROPERTY ACREAGE: 39,961 SF OR 0.9174 AC
3. TOTAL DISTURBED AREA: 28,780 SF OR 0.660 AC
4. WATERSHED FOR SUBJECT PROPERTY: DIFFICULT RUN
5. ZONE: R-1

   SETBACKS:
   FRONT: 40'
   SIDES: 20'
   REAR: 25'
   MAX. BUILDING HEIGHT: 35'
6. NO TITLE REPORT HAS BEEN FURNISHED TO THIS FIRM, THEREFORE THIS PLAN DOES NOT PURPORT TO IDENTIFY OR SHOW ALL POSSIBLE EASEMENTS OR INCUMBRANCES.
7. ALL CONSTRUCTION SHALL CONFORM TO FAIRFAX COUNTY AND VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS WHERE APPLICABLE.
8. PROFFERED OR CONDITIONED SITE: ☐ YES ■ NO
9. WATER SUPPLY ☐ PUBLIC ■ WELL
10. SEWER SERVICE ☐ PUBLIC ■ PRIVATE
11. BOUNDARY BY: _____ DATE: _____
12. TOPO BY: SDE, INC. DATE: 10/20/2010
13. TOPO DATUM: U.S.G.S AND CONTOUR INTERVAL 2'
14. CONSTRUCTION LOCATED WITHIN:

SLOPES OVER 15%	☐ YES	■ NO
R.P.A.	☐ YES	■ NO
R.M.A.	■ YES	☐ NO
OVERLAY DISTRICT	☐ YES	■ NO
WETLANDS	☐ YES	■ NO

15. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE LATEST EDITION OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK" AND AS MODIFIED BY FAIRFAX COUNTY CODE 104-1-8.
16. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO KNOWN GRAVE SITES ON THIS PROPERTY.
17. THIS LOT RECORDED PRIOR TO AUGUST 1, 1978 AND AS SUCH IS NOT REQUIRED TO MEET CURRENT LOT WIDTH AND SIZE REQUIREMENTS UNDER FAIRFAX COUNTY ZONING ORDINANCE, ARTICLE 2-405. ☐ APPLIES ■ N/A
18. SEPARATE BUILDING PERMIT REQUIRED FOR RETAINING WALLS 2.0 FEET AND HIGHER.
19. FOR SLOPES 3:1 OR GREATER PERMANENT GROUND STABILIZATION COVER PER FAIRFAX COUNTY PFM SECTION 6-1503.4 SHALL BE PROVIDED TO PREVENT EROSION OF THE SLOPE BANKS. NO SLOPES GREATER THAN 2:1 ARE PERMITTED. MINIMUM 2% GRADE REQUIRED FOR ALL GRADED AREAS OF THE LOT.
20. CONTRACTOR TO STAKE OUT THE PROPERTY LINE WHERE CLEARING AND GRADING LIMITS ARE COINCIDENT OR ADJACENT TO THE PROPERTY LINE.
21. CONTRACTOR TO ENSURE NO SEDIMENT IS CONVEYED ONTO OFFSITE PROPERTIES AND FOR THE STABILIZATION OF ALL DISTURBED AREAS.
22. ALL UTILITIES CONNECTIONS ARE IN PLACE. THEREFORE NO NEW UTILITIES CONNECTIONS ARE PROPOSED BY THIS DEVELOPMENT UNLESS IT IS DEEMED NECESSARY.
23. CONTRACTOR TO MAINTAIN POSITIVE SURFACE FLOW AWAY FROM BUILDING IN ACCORDANCE WITH BUILDING CODE. BUILDING TO BE PROPERLY WATERPROOFED BY THE CONTRACTOR IN ACCORDANCE WITH BUILDING CODE.
24. CONTRACTOR SHALL VERIFY ALL GRADES WITHIN PROJECT SITE PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES BETWEEN FIELD ELEVATIONS AND ELEVATIONS ON THIS PLAN.
25. NO SUBSURFACE INVESTIGATION HAS BEEN MADE BY THIS COMPANY FOR THE SUBJECT PROPERTY.
26. CONTRACTOR SHALL INSTALL TEMPORARY TREE PROTECTION AROUND EXISTING TREES AND TAKE CARE DURING CONSTRUCTION AND GRADING ACTIVITIES. NO EXISTING TREES ARE TO BE REMOVED DURING CONSTRUCTION IF POSSIBLE. IF IT IS NECESSARY FOR MECHANIZED EQUIPMENT TO TRAVEL OVER THE EXISTING ROOT SYSTEM OF A LARGE TREE, CONTRACTOR SHALL PROVIDE MEASURES TO PROTECT THE ROOT SYSTEM FROM DAMAGE.
27. NO HAZARDOUS OR TOXIC SUBSTANCES WILL BE GENERATED, UTILIZED, STORED, TREATED, OR DISPOSED OF NOR HAVE BEEN OBSERVED ON THE SUBJECT PROPERTY.



VICINITY MAP
(N.T.S.)

EXISTING PROPERTY OWNER

NAME: VERSAILLES CUSTOM HOMES AND DEVELOPMENTS INC.
ADDRESS: 627 WALKER ROAD, GREAT FALLS, VA 22066
D.B. 21284, PAGE 2026

VDOT NOTE

1. METHODS AND MATERIALS USED SHALL CONFORM TO CURRENT COUNTY/TOWN AND VDOT STANDARDS AND SPECIFICATIONS.
2. THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
4. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1.25" DEPTH; ANY COSTS ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE DEVELOPER.
5. ALL DAMAGES TO EXISTING ROAD AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR AND WILL BE RESTORED TO THE SATISFACTION OF VIRGINIA DEPARTMENT OF TRANSPORTATION. PAVEMENT PATCH FOR UTILITY SERVICE SHALL BE IN ACCORDANCE WITH VDOT STANDARDS.
6. EXISTING DRIVEWAY WILL BE USED FOR PROPOSED REDEVELOPMENT BUILDING. NO NEW CURB CUT IS NECESSARY FOR THIS PROJECT.

EXISTING UTILITY NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF, DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR ENCOUNTERS UTILITIES OTHER THAN THOSE INDICATED BY MISS UTILITY & MEMBER UTILITY COMPANIES, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.

THE CONTRACTOR IS REQUIRED BY LAW TO NOTIFY MISS UTILITY (1-800-552-7001) AT LEAST 48 HOURS IN ADVANCE OF ANY WORK ON THIS PROJECT.

LEGAL LOT CERTIFICATE

I HEREBY CERTIFY THAT ALL APPROPRIATE COUNTY APPROVALS WERE OBTAINED IN ACCORDANCE WITH THE PROCESS REQUIRED BY THE SUBDIVISION ORDINANCE IN EFFECT AT THE TIME OF THE CREATION OF IRENE CHARPENTIER BETTIUS PROPERTY, LOT 4A2. THE LOT WAS APPROVED BY FAIRFAX COUNTY AND RECORDED IN DEED BOOK 5944, PAGE 1033 AND RECORDED MAY 4, 1984 AMONG THE LAND RECORD OF FAIRFAX COUNTY.

RESPONSIBLE LAND DISTURBER CERTIFICATION
Effective July 1, 2001.

Amendments to the Virginia Erosion Sediment Control Law, 10.1-563 and 10.1- 566 of the code of Virginia

OWNER/DEVELOPER/ INFORMATION

PROJECT NAME: 1008 SPRINGVALE ROAD PROJECT #:

DISTRICT: DRANESVILLE #1 TAX MAP AND PARCEL #: 12-1-((8B))-4A2

OWNER/DEVELOPER/ PERMITTEE: NAME: VERSAILLES CUSTOM HOMES AND DEVELOPMENTS INC.
PHONE : ADDRESS: 627 WALKER ROAD, GREAT FALLS, VA 22066
D.B. 21284, PAGE 2026

RESPONSIBLE LAND DISTURBER INFORMATION

CERTIFICATE / LICENSE HOLDER NAME: _____ PHONE :

ADDRESS:

TYPE OF CERTIFICATE: _____ CERTIFICATE/ LICENSE :

APPLICANT / AGENT SIGNATURE _____ DATE_____

FRONT YARD SURFACING LIMIT

TOTAL AREA IN FRONT YARD = 7638 SF
AREA SURFACED IN FRONT YARD = 500 SF
PERCENTAGE OF SURFACED AREA = 6.5%
ALLOWABLE PERCENTAGE FOR R-1 ZONE = 25%

6.5% < 25% (GOOD)

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IMPERVIOUS ACREAGE

DESCRIPTIONS	DEVELOPMENT LEVEL		IMPERVIOUSNESS ACREAGE COMPUTATION	
	PRE	POST	PRE	POST
SITE AREA IN ACRES	A1	A2	0.917	0.917
COMPOSITE RATIONAL C FACTOR	C1	C2	0.25	0.36
FRACTIONAL IMPERVIOUSNESS	I1	I2	0.00	0.16
TOTAL IMPERVIOUS ACRES	(A1xI1)	(A2xI2)	0.000	0.151
INCREASE IN IMPERVIOUS ACRES	(A2xI2) – (A1xI1)		0.151	

STORMWATER RUNOFF CALCULATIONS:

IMPERVIOUS C– FACTOR = 0.90
PERVIOUS C–FACTOR = 0.25
TIME OF CONCENTRATION = 5 MIN
RAINFALL INTENSITY, I2 = 5.45 IN/HR
RAINFALL INTENSITY, I10 = 7.27 IN/HR

IMPERVIOUS AREA COMPUTATIONS

	PRE DEVELOPMENT	POST DEVELOPMENT
HOUSE & FRONT STEPS	0	3,957
SIDEWALK	0	333
DRIVEWAY	0	2,301
	0	6,591
PERVIOUS AREA	39,961	33,370
TOTAL LOT AREA	39,961	39,961

TOTAL LOT AREA = 39,961 SF OR 0.917 AC
INCREASE IN IMPERVIOUSNESS = 6,591 SF OR 0.151 AC
TOTAL PERCENTAGE OF IMPERVIOUSNESS = (6591 x 100%) / 39,961 = 16.49%

"C" FACTOR

A. PRE-DEVELOPMENT
= (0 x 0.9 + 39961 x 0.25) / 39961 = 0.25

B. POST-DEVELOPMENT
= (6591 x 0.9 + 33070 x 0.25) / 39961 = 0.36

PRE-DEVELOPMENT (OVERALL)

(5 MIN Tc) Q2 =(0.25 x 5.45 x 0.917) =1.25 CFS
(5 MIN Tc) Q10 = (0.25 x 7.27 x 0.917) = 1.67 CFS

POST-DEVELOPMENT (OVERALL)

(5 MIN Tc) Q2 = (0.36 x 5.45 x 0.917) = 1.79 CFS
(5 MIN Tc) Q10 = (0.36 x 7.27 x 0.917) = 2.38 CFS

POST DEVELOPMENT CHANGE IN RUNOFF

2-YEAR 1.79 – 1.25 = 0.54 CFS INCREASE
10-YEAR 2.38 – 1.67 = 0.71 CFS INCREASE

CBPO NOTES

THIS PLAN COMPLIES FULLY WITH AMENDMENT CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE) OF THE CODE OF THE COUNTY OF FAIRFAX, EFFECTIVE NOV. 18. 2003.

WETLANDS CERTIFICATE

I HEREBY CERTIFY THAT ALL WETLANDS PERMITS REQUIRED BY LAW WILL BE OBTAINED PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITIES.

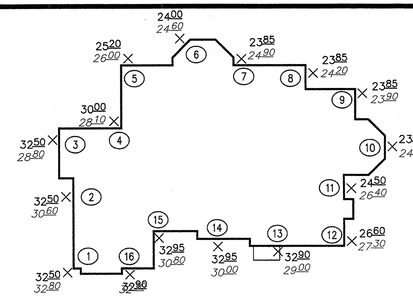
OWNER NAME: SIGNATURE: DATE: 11/15/2010

APPROVED FOR GRADING
LOT 4A2
ONLY
DIRECTOR DATE 11/16/2010

☒ A BUILDING HEIGHT CERTIFICATION

☐ A SETBACK CERTIFICATION

BASED ON A FIELD SURVERY IS REQUIRED PRIOR TO RUP ISSUANCE

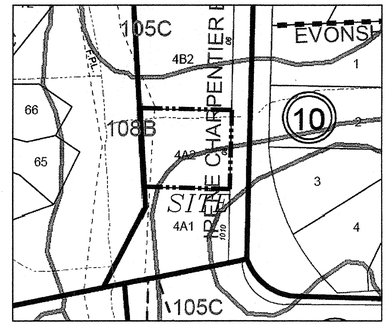


POINT	EXISTING ELEVATION	PROPOSED ELEVATION
1	332.80	332.50
2	330.60	332.50
3	328.80	332.50
4	328.10	330.00
5	326.00	325.20
6	324.60	324.00
7	324.90	323.85
8	324.20	323.85
9	323.90	323.85
10	324.70	323.85
11	326.40	324.50
12	327.30	326.60
13	329.00	332.90
14	330.00	332.95
15	330.80	332.95
16	332.30	332.90
AVE.	327.78	328.43

BUILDING HEIGHT CERTIFICATION
SCALE: 1"=20'

FRONT ELEVATION
N.T.S.

BUILDING HEIGHT = 362.69' – 327.78' = 34.91'
34.91' < 35' (OK)



SOILS MAP
(N.T.S.)

MAP UNIT SYMBOL	MAP UNIT NAME	% OF SITE	FOUNDATION SUPPORT	SUBSURFACE DRAINAGE	SLOPE STABILITY	ERODABILITY	PROBLEM CLASS, OLD	PROBLEM CLASS, NEW
108B	WHEATON-SUMERDUCK COMPLEX, 2-7% SLOPE	60%	MARGINAL	POOR	FAIR	MEDIUM	B	IVB
105C	WHEATON-GLENELG COMPLEX, 7-15% SLOPE	40%	GOOD	GOOD	FAIR	HIGH	C	IVB

Any damage to a VDOT right-of-way resulting from construction activity will require the property owner to obtain a VDOT permit and post a bond

No appurtenances in the VDOT right-of-way

BEFORE YOU START WORK YOU ARE REQUIRED TO NOTIFY THE SITE INSPECTOR AT 324 1950
FAILURE TO NOTIFY CAN RESULT IN A VIOLATION AND A CHARGE PER COMPLIANCE INSPECTION

NO EARTH DISTURBANCE OR CONSTRUCTION ALLOWED UNTIL PERMIT # 1030161167 IS ISSUED

SHEET INDEX

SDE, INC.
ENGINEERS . PLANNERS . ARCHITECTS . LANDSCAPE ARCHITECTS . SURVEYORS
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

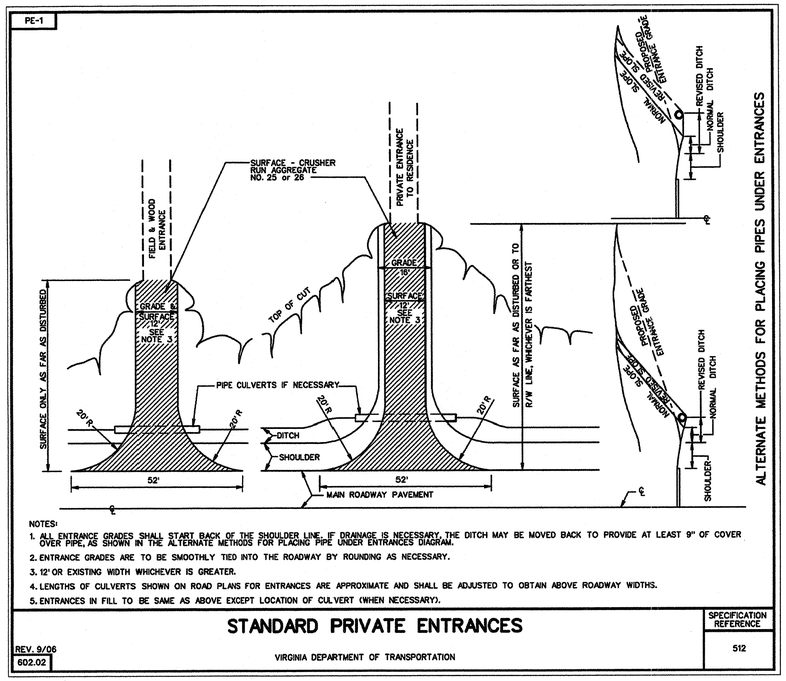
1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

GENERAL NOTES

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
PROFESSIONAL ENGINEER
11/12/10

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: N/A
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 1 OF 9

12-1-((8B))-4A2



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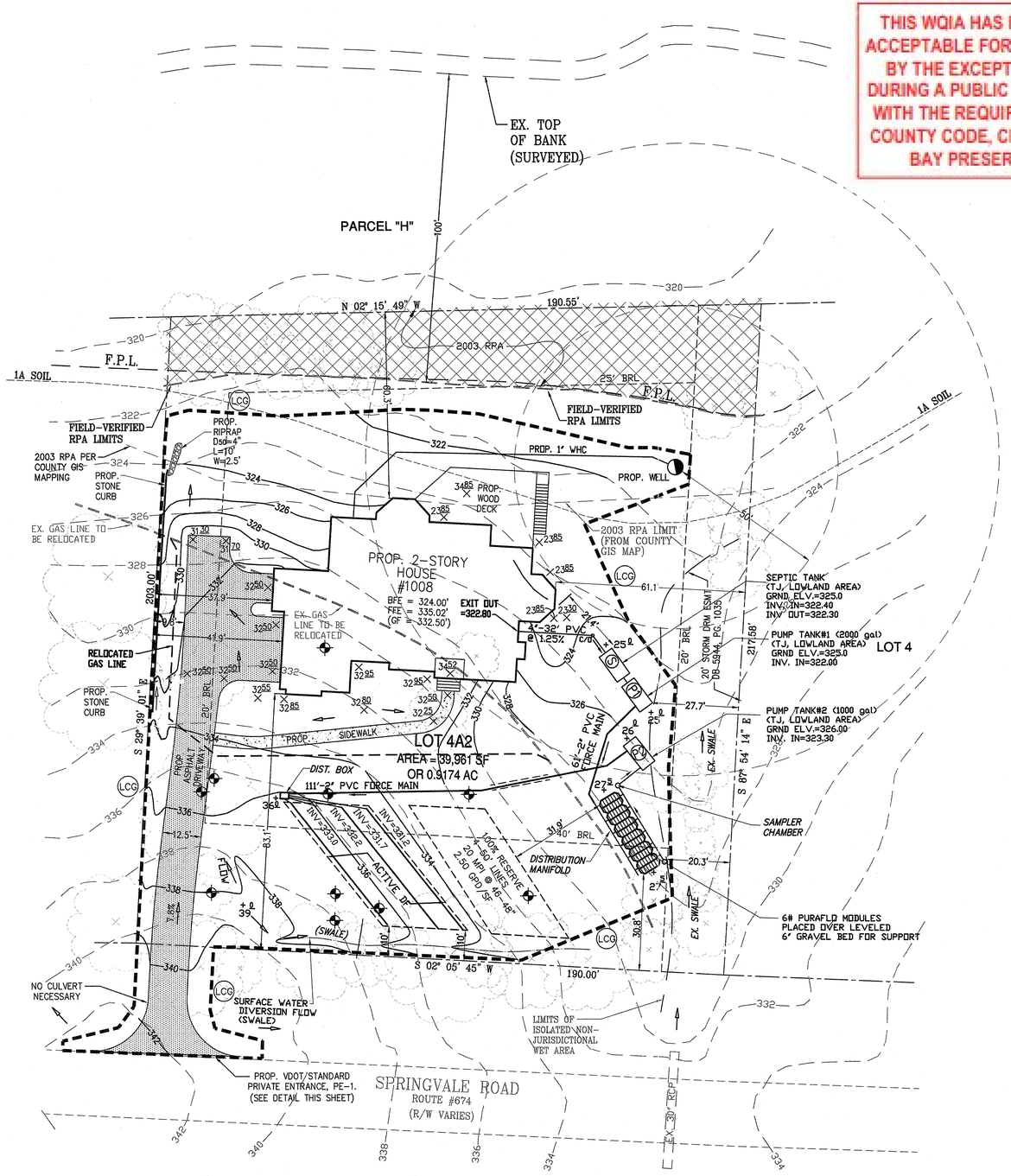


LEGEND

- EX. SPOT ELEVATION
- EX. 2' CONTOURS
- EX. TREES
- EX. TREELINE
- EX. BUILDING, DRIVEWAY, WALKWAYS, ETC.
- EX. OVERHEAD WIRES
- EX. SAN SEWER AND MANHOLE
- EX. WATER METER AND WATER LINE
- SITE PROPERTY LINE
- ADJOINING PROPERTY LINE
- APPROX. LIMITS OF CLEARING AND GRADING
- FLOW ARROW
- PROP. SIDEWALK
- COUNTY GIS RPA LINE
- FLOOD PLAIN LIMITS (F.P.L.)
- PROP. ROOF LEADER
- PROP. CLEANOUT
- PROP. SPOT ELEVATION
- PROP. CONTOURS
- PROP. WALKWAY
- PROP. BUILDING
- PROP. ASPHALT DRIVEWAY
- PROP. CURB & GUTTER
- TREE PROTECTION FENCE
- SILT FENCE WITHOUT WIRE SUPPORT
- CONSTRUCTION ENTRANCE
- FIELD-VERIFIED R.P.A.
- RPA (RESOURCE PROTECTION AREA)

VCS83

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 INCH=20 FT.

SDE, INC.

ENGINEERS . PLANNERS . ARCHITECTS . LANDSCAPE ARCHITECTS . SURVEYORS
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

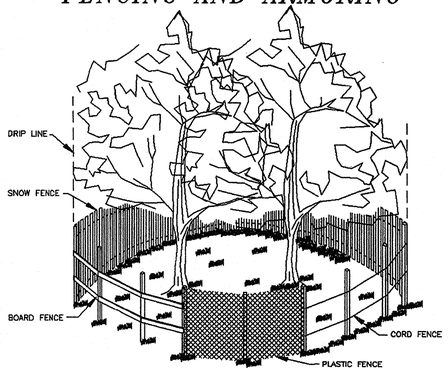
SITE GRADING PLAN

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

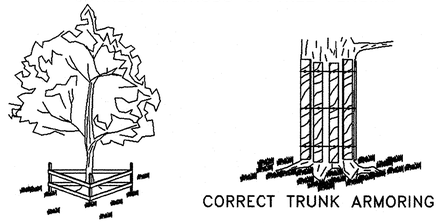
DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: 1":20'
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 2 OF 9

1992 3.38

FENCING AND ARMORING



CORRECT METHODS OF TREE FENCING



TRIANGULAR BOARD FENCE

CORRECT TRUNK ARMORING

Source: Va. DSWC Plate 3.38-2

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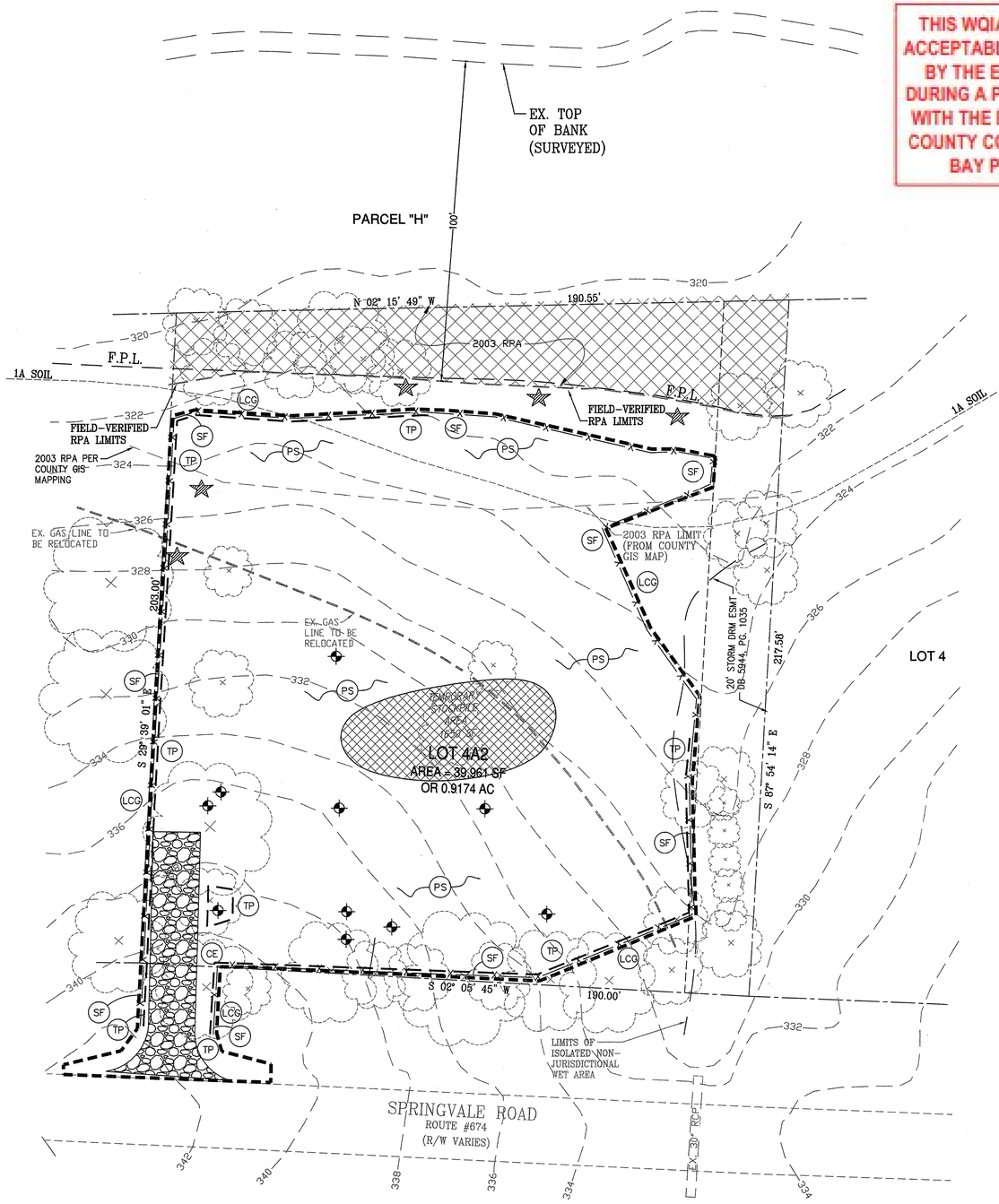


SDE, INC.
ENGINEERS . PLANNERS . ARCHITECTS . LANDSCAPE ARCHITECTS . SURVEYORS
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

EROSION & SEDIMENT CONTROL PLAN

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: 1":20'
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 3 OF 9

PROJECT DESCRIPTION

THIS PROJECT IS INFILL DEVELOPMENT IN WHICH ONE HOUSE WILL BE CONTRUCTED ON A CURRENTLY UNOCCUPIED AND RECENTLY SUBDIVIDED LOT. A NEW DRIVEWAY WILL BE ADDED ONTO SPRINGVALE ROAD ALONG WITH NEW A NEW WELL AND SEPTIC FIELD. AN EXISTING GAS LINE MUST BE MOVED AS WELL.

EXISTING SITE CONDITIONS

THE TOTAL SITE AREA IS 0.917 ACRES AND 0.660 ACRES WILL BE DISTURBED. THE DISTURBED AREA IS CURRENTLY GRASSY AND LIGHTLY WOODED MOSTLY ALONG THE EDGE. THE SITE IS MODERATELY SLOPED WITH A RELATIVELY CONSISTENT SLOPE OF 11% AS THE ENTIRE SITE SHEET FLOWS IN A WESTWARD DIRECTION TOWARDS THE REAR OF THE LOT. THERE IS AN EXISTING DRAINAGE EASEMENT ALONG THE NORTHEDGE OF THE LOT CONTAINING A SWALE THAT RECEIVES OFF-SITE RUNOFF AND FLOWING WESTWARD. THIS DRAINAGE EASMENT WILL REMAIN UNDISTURBED.

ADJACENT AREAS

THE SITE IS SURROUNDED ON ALL SIDES BY SINGLE FAMILY DETACHED HOUSES WITH LOTS ZONED R-1 AND BY SPRINGVALE ROAD IN THE FRONT. THERE IS A CREEK TO THE REAR OF THE LOT BEYOND THE PROPERTY LIMITS.

OFF-SITE AREAS

THERE WILL BE CONSTRUCTION IN THE VDOT RIGHT-OF-WAY IN ORDER TO INSTALL THE NEW DRIVEWAY ENTRANCE, AND THERE WILL BE REGRADING UP TO THE VDOT RIGHT-OF-WAY LINE FOR THE NEW SEPTIC FIELD WHICH MAY DAMAGE THE HEATLH OF EXISTING TREES AND NECESSITATE THEIR REMOVAL.

SOILS

THE SOILS ON THE SITE WITH DESCRIPTIONS AND CHARACTERISTICS ARE SHOWN ON SHEET 1 OF THIS PLAN.

CRITICAL AREAS

THE REAR PORTION OF THE LOT (WHICH WILL REMAIN UNDISTURBED) IS A DESIGNATED RPA DETERMINED BY A 100 FOOT OFFSET FROM THE TOP OF BANK OF THE EXISTING STREAM IN THE REAR. ADDITIONALLY WITHIN THE UNDISTRUBED DRAINAGE EASEMENTS THERE ARE SMALL AMOUNTS OF LAND THAT ARE PERPETUALLY WET ALTHOUGH THEY ARE NOT A PART OF CONNECTED WETLANDS. THERE IS A STEEP SLOPE ALONG THE PROPOSED RETAINING WALL ALONG THE DRIVEWAY AS WELL. CARE WILL BE TAKEN TO AVOID ANY EROSION OR ENVIRONMENTAL DISTURBANCE IN THESE CRITICAL AREAS MARKED WITH THIS SYMBOL: ☆

EROSION AND SEDIMENT CONTROL PROGRAM:

1. INSTALL A CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCE FENCE AND SUPER SILT FENCE ALONG THE LIMIT OF DISTURBANCE AS SHOWN ON THE PLAN.
3. CLEAR AND ROUGH GRADE AS NECESSARY AS INDICATED ON THE PLANS.
4. CONSTRUCT INFILTRATION TRENCH.
5. PERFORM STABILIZATION SUCH AS TEMPORARY AND PERMANENT SEEDING FOR ALL DENUDED AREAS .

SODDING (WHERE DESIGNATED ON THE PLANS OR AT THE OPTION OF THE DEVELOPER)

SODDING SHALL BE PERFORMED IN ACCORDANCE WITH VESCH SPECIFICATION 3.33.
1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. SOIL TESTS SHOULD BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. SOIL TEST MAY BE CONDUCTED BY THE STATE LABORATORY AT VPI & SU OR A REPUTABLE COMMERCIAL LABORATORY. INFORMATION ON STATE SOIL TESTS IS AVAILABLE FROM COUNTY OR CITY AGRICULTURE EXTENSION AGENTS.
3. PRIOR TO LAYING SOD, THE SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS, LARGE ROOTS, BRANCHES, STONES, AND CLODS IN EXCESS OF 1" IN LENGTH OR DIAMETER. SOD SHALL NOT BE APPLIED TO GRAVEL OR OTHER NON-SOIL SURFACES.
4. ANY IRREGULARITIES IN THE SOIL SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE FILLED OR LEVELED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
5. AREA TO BE TOP SOILED AND TOPSOIL USED SHALL FULFILL THE REQUIREMENTS OF TOP SOILING, VESCH SPEC. 3.30. NO SOD SHALL BE SPREAD ON SOIL THAT HAS BEEN TREATED WITH SOIL STERILANTS OR ANY OTHER TOXIC HERBICIDES UNTIL ENOUGH TIME HAS ELAPSED TO PERMIT DISSIPATION OF TOXIC MATERIALS.
6. SOD SHALL NOT BE LAID IN EXCESSIVELY WET OR DRY WEATHER AND SHOULD BE INSTALLED WITHIN 36 HOURS AFTER DELIVERY.
7. SOD SHOULD NOT BE LAID ON FROZEN SOIL SURFACES AND SHALL BE INSTALLED PER PLATE 3.33-1 OF VESCH.
8. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY.

PERMANENT STABILIZATION

PERMANENT SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH VESCH SPECIFICATION 3.32.
1. PERMANENT VEGETATION COVER MUST MEET THE REQUIREMENTS OF MINIMUM STANDARDS #3 (MS-3).
2. PLANT SELECTION SHALL BE BASED UPON TABLES 3.32 A&B DEPENDING ON CLIMATE, TOPOGRAPHY, SOILS, AND SITE CONDITIONS.
3. THE PLANTING SOIL MUST HAVE ENOUGH FINE GRAINED SOIL, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH AND BE FREE FROM TOXIC OR EXCESSIVE QUANTITIES OF ROOTS AND SHALL BE APPLIED IN ACCORDANCE WITH VESCH STD 3.30.
4. THE SITE WILL BE PERMANENTLY STABILIZED BY MEANS OF PERMANENT SEEDING, THE BUILDING, THE RETAINING WALL, AND ASHPALT DRIVEWAY.

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON-SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES WILL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL;
A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP WITH DISCHARGE PRESSURE GAUGE.
B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
C. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI (137.8 K Pa) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL;
A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE , HOSES AND MIST NOZZLES.
B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND THE SITE BOUNDARIES.

SILT FENCE

SILT FENCE SHALL COMPLY WITH VESCH CHAPTER 3 PAGES 21-22.
1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER, OR ETHYLENE YARN AND SHALL BE CERTIFIED BY MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS NOTED IN TABLE 3.05-B OF THE VESCH.

2. SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.

3. IF WOODEN STAKES ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A DIAMETER OF 2" WHEN OAK IS USED AND 4" WHEN PINE IS USED. WOODEN STAKES MUST HAVE A MINIMUM LENGTH OF 5'.

4. IF STEEL POSTS (STANDARD "U" AND "T" SECTION) ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT AND SHALL HAVE A MINIMUM LENGTH OF 5'.

5. WIRE FENCE REINFORCEMENT FOR SILT FENCE USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6".

6. THE HEIGHT OF A SILT FENCE SHALL BE A MINIMUM OF 16" ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34" ABOVE GROUND ELEVATION.
NOTE: SILT FENCE SHOULD BE USED FOR DRAINAGE AREAS THAT ARE NO LARGER THAN 0.25 ACRES PER 100' OF SILT FENCE LENGTH. THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100'. THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1. SILT FENCE IS BEST USED WHEN THE SLOPE ABOVE THE FENCE, EITHER CUT OR FILL, IS NOT STEEPER THAN 3:1.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR-625-02-00 EROSION AND SEDIMENT CONTROL AND COUNTY REGULATIONS.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP OF CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE OWNER SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY FAIRFAX COUNTY.

ES-6: THE OWNER IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY FAIRFAX COUNTY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: IF REQUIRED, DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

ES-10: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS.

ES-11: DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.

ES-12: A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED.

ES-13: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. ADDITIONAL SLOPE STABILIZATION MEASURES SHOULD BE PROVIDED TO PREVENT EXCESSIVE EROSION ON SLOPES.

ES-14: CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

ES-15: ADEQUATE DRAINAGE PROTECTION SHALL BE MADE WHENEVER WATER SEEPS FROM A SLOPE FACE.

ES-16: ALL STORM SEWER INLETS (IF ANY) THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED.

ES-17: ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS TO WORKING WITHIN OR CROSSING A WATERCOURSE SHALL BE MET.

ES-18: ALL UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH VESCH CHAPTER 8, PAGE 22.
A. NO MORE THAN 500 FEET OF TRENCH MAY BE OPEN AT ONE TIME.
B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

ES-19: PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE AREA, WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PUBLIC OR PAVED ROADS.

ES-20: ALL TEMPORARY EROSION/SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION WITH THE PERMISSION OF THE INSPECTOR.

MAINTENANCE PROGRAM

1. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED DAILY AND AFTER EACH SIGNIFICANT RAINFALL BY THE SITE SUPERINTENDENT FOR STRUCTURAL DAMAGE, EROSION, OR ANY OTHER UNDESIRABLE CONDITIONS. ANY DAMAGED STRUCTURES ARE TO BE REPAIRED IMMEDIATELY (PRIOR TO THE END OF THE WORKING DAY) INCLUDING RESEEDING AND MULCHING OR RESODDING IF NECESSARY.

2. TEMPORARILY AND PERMANENTLY SEEDED AREAS DAMAGED BY RAINFALL ARE TO BE RESEEDED AND MULCHED WITHIN TWO (2) DAYS AND WHENEVER GROUND COVER HAS NOT BEEN ADEQUATELY ESTABLISHED TO PREVENT EROSION.

3. ADDITIONAL SLOPE STABILIZATION MEASURES MUST BE PROVIDED FOR SLOPES WHICH ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR UNTIL THE PROBLEM IS CORRECTED.

4. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN THE DEPTH IS EQUAL TO ONE-HALF (1/2) THE HEIGHT OF THE FENCE. SILT FENCES AND SUPER SILT FENCES WILL BE CHECKED REGULARLY AND DAMAGED FENCES WILL BE REPAIRED OR REPLACED IMMEDIATELY.

5. THE MATERIAL REMOVED FROM THE EROSION AND SEDIMENT CONTROL STRUCTURES MAY BE DISPOSED OF BY SPREADING THE MATERIAL ON-SITE OR BY HAULING IT AWAY, IF NOT SUITABLE FOR PLACEMENT AS TOPSOIL.

6. NO AREA SHALL BE LEFT DENUDED FOR A PERIOD LONGER THAN SEVEN (7) DAYS EXCEPT FOR THAT PORTION OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND SEVEN (7) DAYS. IN THE EVENT SUCH MAXIMUM PERIOD IS EXCEEDED AND ANY SUCH AREAS REMAIN EXPOSED WITHOUT COVER, THE COUNTY WILL (IN THE EVENT THE DEVELOPER OR BUILDER DOES NOT) INSTALL THE NECESSARY TEMPORARY OR PERMANENT VEGETATIVE STABILIZATION MEASURES TO ACHIEVE ADEQUATE EROSION AND SEDIMENT CONTROL.

7. NO SEDIMENT CONTROL STRUCTURES SHALL BE REMOVED WITHOUT APPROVAL OF THE FAIRFAX COUNTY SITE INSPECTOR

CALL "MISS UTILITY"

TELEPHONE 1-800-552-7001FOR UTILITY LOCATION AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.

FAIRFAX COUNTY PRIORITY RATING FORM FOR E&S CONTROL

PROJECT NAME: 1008 SPRINGVALE ROAD PROJECT NUMBER:

TAX MAP: # 12-1 ((8B)) 4A2 : HAMID M. TEHRANI DATE: 10/25/2010

A. Percentage of Denuded Area to Total Site Area

		Rating
a. > 60%	[X]	5
b. 31 t0 60%	[ ]	3
c. 10 to 30%	[ ]	1

If the denuded area is greater than 10 acres, the project is initially rated a high priority.

B. Watercourse Crossing

		Rating
a. Yes	[ ]	*
b. No	[X]	0

* If yes the project is initially rated a high priority.

C. Distance of Denuded Area to Downstream Adjacent Property.

		Rating
a. < 50 -feet	[X]	5
b. 50 to 150-feet	[ ]	3
c. > 150-feet	[ ]	0

D. Distance of Any Portion of the Denuded Area to Natural Watercourse

		Rating
a. < 50 -feet	[X]	5
b. 50 to 150-feet	[ ]	3
c. > 150-feet	[ ]	0

E. Minimum Vegetative Buffer (Trees, Shrubs, Grasses and other Plants)

		Rating
a. < 50 -feet	[X]	0
b. 50 to 150-feet	[ ]	-3
c. > 150-feet	[ ]	-5

F.Distance Between the site Outfall and any Downstream, Wet Pond, Wetland, Parkland or other Land Deemed Environmentally Sensitive by the Director.

		Rating
a. < 2,500 feet	[X]	5
b. 2,500 to 5,000-feet	[ ]	3
c. > 5,000- feet	[ ]	0

G.Critical slopes Within 50-feet of Adjacent Property.

* Are there any slopes of 0 to 7%; greater than or equal to 300- feet in length ; or ,
* Are there any slopes of 7 to 15%; greater than or equal to 150- feet in length ; or,
* Are there any slopes greater than 15% and greater than or equal to 75- feet in length

		Rating
If Yes to any of the above	[ ]	5
Not applicable if critical slope is > 50-feet from adjacent property.	[X]	0

H. Soil Erodibility (Based on k Factor)

		Rating
a. High (= or > 0.37)	[X]	5
b. Medium (0.24 to 0.36)	[ ]	3
c. Low (< 0.24)	[ ]	1

TOTAL/OVERALL RATING: 25

* Vegetation in Resource Protection Area are not to be included as vegetative buffers for this application.

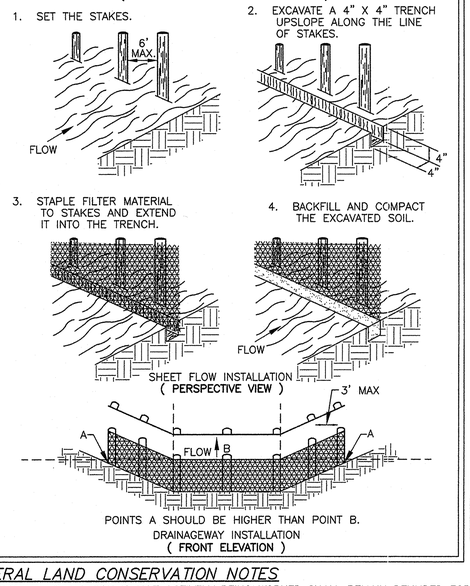
OVERALL RATING	PRIORITY (Mark with an "X")
If >22	High X
If >14 and <or =to 22	Medium
If < or = to 14	Low

PROJECT PRIORITY LEVEL: HIGH

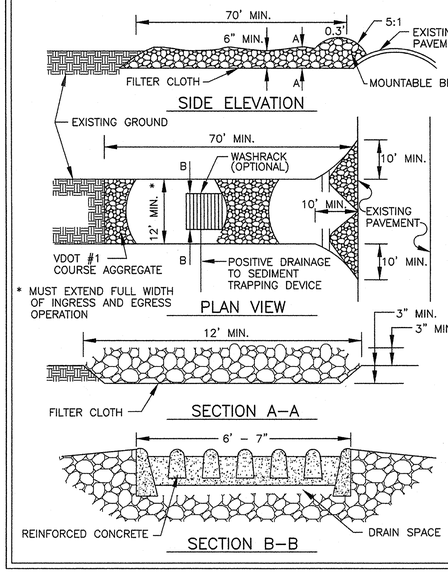
** Reserve for Fairfax County use**

APPROVED BY: _____ DATE: _____
Plan Reviewer

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)



STONE CONSTRUCTION ENTRANCE



THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

GENERAL LAND CONSERVATION NOTES

1. NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED SHALL REMAIN DENUDED FOR MORE THAN 14 CALENDAR DAYS UNLESS OTHERWISE AUTHOR-IZED BY THE DIRECTOR.

2. ALL E&S CONTROL MEASURES APPROVED WITH THE PHASE I E&S CONTROL PLAN SHALL BE PLACED AS THE FIRST STEP IN GRADING.

3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL. NO MORE THAN 500' (150 M) SHALL BE OPEN AT ANY ONE TIME.

4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL.

5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY (AS SOON AS POSSIBLE BUT NO LATER THAN 48 HR) AFTER COMPLETION OF GRADING. STRAW OR HAY MULCH IS REQUIRED. ALL SOIL STOCKPILES SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER GRADING.

6. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAIN-TAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.

7. ANY DISTURBED AREA NOT COVERED BY § 11-0406.1 AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE (4483 KG/HA) AND OVER-SEEDED BY APRIL 15.

8. AT THE COMPLETION OF ANY PROJECT CON-STRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

SDE, INC.
ENGINEERS . PLANNERS . ARCHITECTS . LANDSCAPE ARCHITECTS . SURVEYORS
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

E&S CONTROL NOTES AND DETAILS

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: N/A
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 4 OF 9

TOTAL DRAINAGE AREA TO POINT OF CONFLUENCE
A = 113.8 AC
C = 0.35

POINT OF CONFLUENCE

SITE AREA 0.92 AC

A-A A-A

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

GRAPHIC SCALE
200 0 100 200 400 800
(IN FEET)
1 INCH=200 FT.

STORMWATER MANAGEMENT CERTIFICATION

THIS SITE IN POST DEVELOPMENT CONDITIONS WILL COMPRISE OF 17.3% IMPERVIOUS AREA WHICH IS LESS THAN 18%. ALL RUNOFF WILL SHEET FLOW IN A SOUTHWARD DIRECTION THROUGH THE WOODED AREA IN THE BACK OF THE LOT. THEREFORE, NO STORMWATER MANAGEMENT PRACTICES ARE REQUIRED.

ADEQUATE OUTFALL NARRATIVE

THE SITE CONSISTS OF 0.8043 AC. OF TOTAL SITE AREA. THE ENTIRE PROPERY SHEET FLOWS DIRECTLY INTO AN UNNAMED CREEK WHICH IS ADJACENT TO THE PROERTY. THERE IS NO OFF-SITE DRAINAGE ONTO THE SITE EXCEPT FOR AN EXISTING DRAINAGE EASEMENT AND SWALE ALONG THE NORTH EDGE OF THE PROPERTY.

UNDER POST-DEVELOPMENT CONDITIONS, THE SITE WILL GENERATE A TOTAL 10-YR RUNOFF OF 2.42 CFS WITH AN AVERAGE 'C' FACTOR OF 0.36. ACCORDING TO THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL CODE 6-0203.2B, THE DOWNSTREAM DRAINAGE SYSTEM MUST BE PROVEN ADEQUATE UP TO A POINT OF CONFLUENCE AT WHICH THE TOTAL DRAINAGE AREA IS AT LEAST 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE SITE. THE CONTRIBUTING DRAINAGE AREA OF THE SITE IS 0.92 ACRES AND AT THE POINT OF CONFLUENCE IMMEDIATELY OFF THE SITE, THE TOTAL DRAINAGE AREA IS APPROXIMATELY 113.8 AC WHICH IS AT LEAST 100 TIMES THE CONTRIBUTING DRAINAGE AREA.

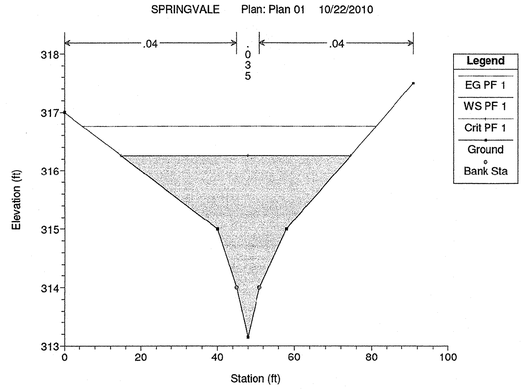
A CROSS SECTION OF THE CREEK IS SHOWN HERE WITH A HYDRAULIC ANALYSIS PERFORMED BY HEC-RAS. A FLOW ANALYSIS OUTPUT TABLE IS ALSO SHOWN WITH POST-DEVELOPMENT CONDITIONS.

THEREFORE, IT IS THE OPINION OF THE ENGINEER THAT ADEQUATE OUTFALL EXISTS FOR THIS SITE.

POST-DEVELOPMENT RUNOFF TO CROSS SECTIONS:

FOR A 100-YR STORM, Tc = 15 MIN
I = 7.05 IN/HR

SECTION A-A, Q100 = C*I*A
= 0.35*7.05*113.8
= 280.8 CFS



SECTION A-A

Plan: Plan 01 UNNAMED UNNAMED RS: 200 Profile: PF 1

E.G. Elev (ft)	316.76	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.51	Wt. n-Val.	0.040	0.035	0.040
W.S. Elev (ft)	316.26	Reach Len. (ft)	48.10	48.10	48.10
Crit W.S. (ft)	316.26	Flow Area (sq ft)	24.59	16.09	22.73
E.G. Slope (ft/ft)	0.009363	Area (sq ft)	24.59	16.09	22.73
Q Total (cfs)	280.80	Flow (cfs)	76.96	124.39	79.45
Top Width (ft)	59.74	Top Width (ft)	30.15	6.00	23.60
Vel Total (ft/s)	4.43	Avg. Vel. (ft/s)	3.13	7.73	3.49
Max Chl Dpth (ft)	3.11	Hydr. Depth (ft)	0.82	2.68	0.96
Conv. Total (cfs)	2901.9	Conv. (cfs)	795.4	1285.5	821.1
Length Wtd. (ft)	48.10	Wetted Per. (ft)	30.28	6.24	23.71
Min Ch El (ft)	313.15	Shear (lb/sq ft)	0.47	1.51	0.56
Alpha	1.66	Stream Power (lb/ft s)	91.00	0.00	0.00
Frctn Loss (ft)	0.45	Cum Volume (acre-ft)	0.03	0.02	0.03
C & E Loss (ft)	0.00	Cum SA (acres)	0.03	0.01	0.03

SDE, INC.
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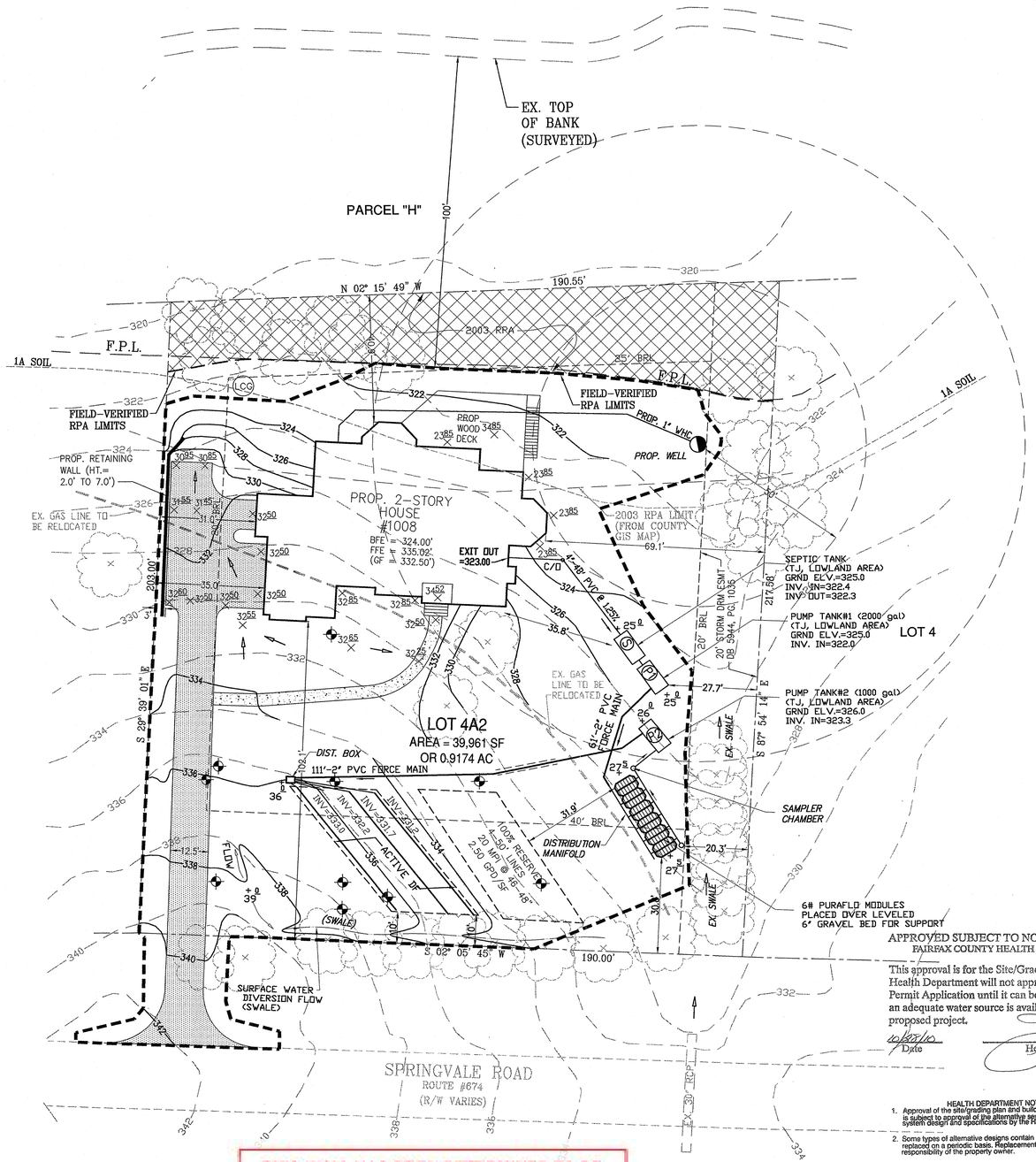
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

ADEQUATE OUTFALL ANALYSIS

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: 1":200'
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 5 OF 9



APPROVED SUBJECT TO NOTATION SHOWN
FAIRFAX COUNTY HEALTH DEPARTMENT

This approval is for the Site/Grading Plan only. The Health Department will not approve the Building Permit Application until it can be determined that an adequate water source is available to serve the proposed project.

10/27/10 Date — Health Official

HEALTH DEPARTMENT NOTES:
1. Approval of the site/grading plan and building permit application is subject to approval of the alternative sewage disposal system design and specifications by the Health Department.
2. Some types of alternative designs contain media that must be replaced on a periodic basis. Replacement of the media is the responsibility of the property owner.
3. This sewage disposal system is designed to accommodate 500 GPD peak daily flow, and 250 GPD average daily flow for a 5 bedroom, ____ kitchen, ____ laundry dwelling.

FAIRFAX COUNTY HEALTH DEPARTMENT
DIVISION OF ENVIRONMENTAL HEALTH

Approval of plat plan only. This is not a permit to install a water supply or a sewage disposal system. All existing or proposed underground utility lines and easements must be located a minimum of 10 feet from all subsurface disposal systems. No subsurface disposal systems may be in an underground utility easement. All water service lines must be located a minimum of 10 feet from all subsurface disposal systems.

10/27/10 Date — Health Official

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

GENERAL NOTES

1. STUDY PURPOSE: INSTALLATION OF A NEW SEPTIC SYSTEM WITH PRE-TREATMENT UNITS FOR A NEW 5-BEDROOM HOUSE ON VACANT LOT 4A2.
2. TAX MAP # 012-1-8B-4A2.
3. THIS PLAT IS SUBJECT TO RESTRICTIONS OF RECORD.
4. EXISTING 2 FT CONTOUR IS BASED ON FIELD RUN TOPOGRAPHIC PERFORMED BY SDE.
5. CONTRACTOR/OWNER:

   SHAWN KHORSHIDI
   1008 SPRINGVALE ROAD
   GREAT FALLS, VIRGINIA

6. THE BOUNDARY INFORMATION IS BASED ON SURVEY RECORD PLAT.
7. NEW WELL TO BE INSTALLED AT THE LOCATION SHOWN.
8. THE DRAINFIELD HAS BEEN DESIGNED WITH 100% RESERVE AREA.
9. SURFACE FLOW TO BE DIVERTED AWAY FROM THE DRAINFIELD AND NO SURFACE WATER STAGNANT ON THE DRAINFIELD.
10. NO FILLING TO BE DONE DURING THE ACTIVE DRAINFIELD GRADING.
11. UNTREATED BUILDING PAPER OR OTHER SUITABLE MATERIAL SHALL BE PLACED AT THE INTERFACE OF THE GRAVEL AND SOIL TO PREVENT MITIGATION OF FINES TO THE BOTTOM OF THE TRENCH AND COVERED WITH TOPSOIL TO THE GROUND SURFACE.
12. FORCE MAIN SHOULD BE PRESSURE TESTED IN PLACE AT PUMP SHUT-OFF HEAD BEFORE OPERATION OF THE SYSTEM.
13. THE ADSORPTION TRENCH WILL BE BOX CUT TO THE LIMIT SHOWN ON THE PLANS, AND FINISH WITH A LEVELLED SURFACE.

SIZE OF DRAINFIELD

ACTIVE FIELD (ABSORPTION TRENCHES):

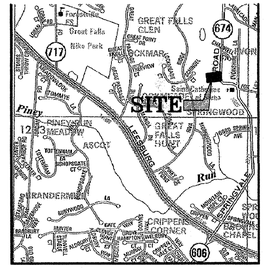
NUMBER OF BEDROOMS = 5 (BR)
ABSORPTION AREA REQUIRED
= 5 BR x 150 GAL/DAY/2.5 GAL/DAY/SQFT
= 300 SQ FT (MINIMUM 400 SQ FT)

ABSORPTION AREA PROVIDED
LENGTH = 50 FT
WIDTH = 2 FT
TRENCHES=4
AREA = 50 FTx2 FTx4= 400 SQ FT (EQUAL TO MIN.), [OK]

100% RESERVE FIELD

SAME AS ACTIVE DRAINFIELD

(NOTE: ONLY 1 KITCHEN AND 1 LAUNDRY TO BE PERMITTED)



VICINITY MAP
SCALE: N.T.S.

STRUCTURAL AND CONSTRUCTION NOTES:

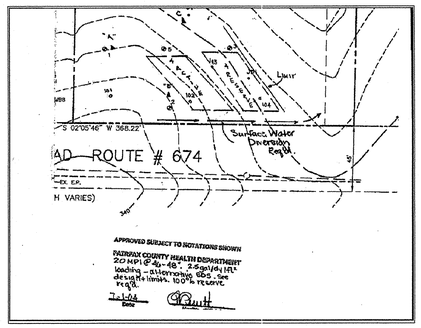
1. SEPTIC TANK: 2,000 GALLON CONCRETE SEPTIC TANK (HANOVER TOP JOINT OR EQUIVALENT) WITH ZABEL FILTER. TANK MUST BE COMPLY WITH LOCAL AND STATE HEALTH DEPARTMENT REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR PROPER SEALING OF ALL JOINTS.
2. PUMP TANK #1: 2,000 GALLON CONCRETE PUMP TANK (HANOVER TOP JOINT OR EQUIVALENT). PUMP TANK MUST COMPLY WITH LOCAL & STATE HEALTH DEPARTMENT REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEALING TANK. PUMP TO BE ZOELLER N161, 0.5 HP PUMP OR EQUIVALENT. CONTROL PANEL TO BE AN ORENCO MODEL MVD DAX PTRD BNM WITH 1" CONDUIT, PROGRAMMABLE TIME, EVENT COUNTER AND ALARM. PUMP AND ALARM TO BE SEPARATE CIRCUITS. THE PUMP WILL REMAIN ON FOR 64.8 SECONDS AND CLOSE FOR 2 HOURS.
3. FORCE MAIN (PUMP #1): 2" PVC FORCE MAIN SCH. 40, 61 FEET HORIZONTAL DISTANCE AND 10.2 FEET VERTICAL PUMP DISTANCE WITH ANTICIPATED FLOW OF 58 GPM AT THE TOTAL DYNAMIC HEAD OF 33 FT.
4. SEWER HOUSE CONNECTION: 4" PVC PIPE, SCHEDULE 40, 48 FEET LONG AND INSTALLED AT A SLOPE OF 1.25%.
5. DRAINFIELD:

   (A) ACTIVE: THE ACTIVE DRAINFIELD WILL HAVE 2 FEET WIDE TRENCH AT THE DESIGN DEPTH. THE NUMBER OF TRENCHES, SPACING AND LENGTH WILL BE AS PER DESIGNED DATA GIVEN ON THIS SHEET. CONTRACTOR IS RESPONSIBLE FOR STABILIZATION (GRADING AND SEEDING) OF SITE UPON COMPLETION OF INSTALLATION TO PROMOTE DRAINAGE AWAY FROM THE SITE.(SEE ATTACHED NOTE FOR MORE DETAILS).

   (B) RESERVE: THE SEPTIC SYSTEM WILL HAVE 100% RESERVE DRAINFIELD. THE NUMBER OF TRENCHES, LENGTH AND INSTALLED DEPTH WILL BE SAME AS ACTIVE SYSTEM.
6. SIX (6) PURAFLO MODULES ON 6" GRAVEL SUPPORTING PAD. MODULES GRAVITY FEED TO THE PUMP TANK #2. THE 2" FORCE MAIN FROM THE PUMP TANK #2 FEED TO THE DISTRIBUTION TANK.

CONTRACTOR MUST ENSURE THAT INVERT ELEVATION OF DISTRIBUTION GRID IS AS MENTIONED ON THE DESIGN". BACKFILL WITH SOIL 12" BELOW MODULE LIDS. MODULE LIDS MUST REMAIN EXPOSED.

APPROVED RATE & NOTES



DRAINFIELD NOTES

1. THE DRAINFIELD HAS BEEN DESIGNED WITH 100% RESERVE AREA.
2. SURFACE FLOW TO BE DIVERTED AWAY FROM THE LOT AND NO SURFACE WATER STAGNANT ON THE DRAINFIELD.
3. NO FILLING TO BE DONE DURING THE ACTIVE DRAINFIELD GRADING.
4. UNTREATED BUILDING PAPER OR OTHER SUITABLE MATERIAL SHALL BE PLACED AT THE INTERFACE OF THE GRAVEL AND SOIL TO PREVENT MITIGATION OF FINES TO THE BOTTOM OF THE TRENCH AND COVERED WITH TOPSOIL TO THE GROUND SURFACE.
5. FORCE MAIN SHOULD BE PRESSURE TESTED IN PLACE AT PUMP SHUT-OFF HEAD BEFORE OPERATION OF THE SYSTEM.
6. THE ADSORPTION TRENCHES WILL BE BOX CUT TO THE LIMIT SHOWN ON THE PLANS, AND FINISH WITH A LEVELLED SURFACE.

LEGEND

EP — EDGE OF PAVEMENT
EX. 2' CONTOUR
407.24 EX. SPOT ELEVATION
+ 0 / 39 PROP. SPOT ELEVATION
TEST HOLE

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 INCH=20 FT.

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
No. 23137
PROFESSIONAL ENGINEER
10/19/2010

THIS PLAN IS FOR SEPTIC SYSTEM DESIGN AND ITS LAYOUT PURPOSE ONLY.

SDE, INC.
ENGINEERS . PLANNERS . ARCHITECTS . LANDSCAPE ARCHITECTS . SURVEYORS
7777 LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

LOT 4A2, IRENE C BETTIUS PROPERTY
1008 SPRINGVALE ROAD
MAGISTERIAL DISTRICT: DRANESVILLE FAIRFAX COUNTY

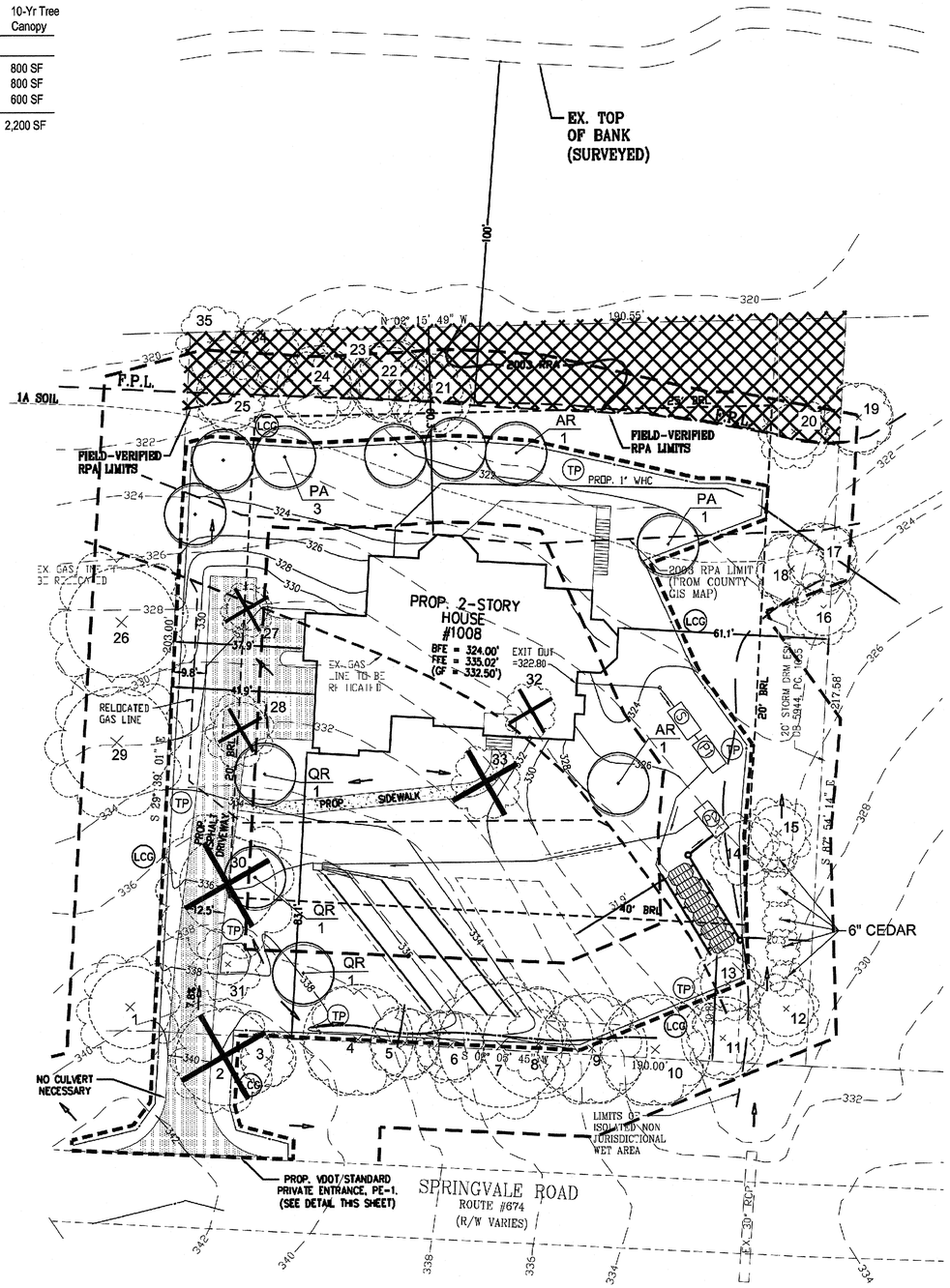
SEPTIC SYSTEM DESIGN

DESIGNED BY: SDE, INC.
DRAWN BY: S.L.
CHECKED BY: HAMID T., PE
SCALE: 1"=20'
DATE: 10/20/2010
PROJECT/FILE #
SHEET NUMBER
6 OF 9

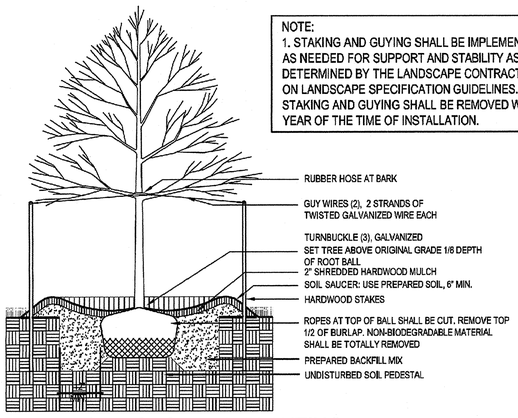
PLANT LIST

Key	Qty	Botanical Name	Common Name	Size	Type	Spacing	Remarks	10-Yr Tree Canopy Credit	10-Yr Tree Canopy
		OVERSTORY TREES							
QR	4	Acer rubrum "Red Sunset"	Red Sunset Maple	2-2.5" Cal.	B & B	As Shown	Single stem	200 SF	800 SF
PA	4	Platanus acerifolia	London planetree	2-2.5" Cal.	B & B	As Shown	Single stem	200 SF	800 SF
QR	3	Quercus rubra	Red Oak	2-2.5" Cal.	B & B	As Shown	Single stem	200 SF	600 SF
								Total -	2,200 SF

PLAN ID #	FIELD TAG #		SIZE	CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CANOPY SPREAD	TREE CANOPY CREDIT	PROBLEMS/COMMENTS	ACTION TO BE TAKEN
			DBH(in.)	R(ft.)	%		%	(ft.)	(sq.ft.)		
1	-	Pin Oak	12	12	75	Dominant	80	30	-	Off Site	-
2	-	Red Oak	14	14	80	Dominant	85	30	-	In VDOT ROW	Remove, Contact VDOT
3	-	Blue Spruce	8	8	80	Intermediate	90	15	-	In VDOT ROW	Prune, root prune, mulch
4	-	White Pine	16	16	75	Dominant	90	90	-	-	Prune, root prune, mulch
5	-	Austrian Pine	10	10	65	Intermediate	50	20	-	Broken Limbs	Prune, root prune, mulch
6	-	Austrian Pine	10	10	60	Co-dominant	60	20	-	Codomiant leaders	Prune, root prune, mulch
7	-	White Pine	18	18	75	Dominant	90	40	1200	-	Prune, root prune, mulch
8	-	White Pine	16	16	75	Dominant	90	30	700	Broken Limbs	Prune, root prune, mulch
9	-	White Pine	18	16	75	Co-dominant	90	30	700	Codomiant leaders	Prune, root prune, mulch
10	-	White Pine	16	16	75	Dominant	80	30	700	-	Prune, root prune, mulch
11	-	Yellow Poplar	12	12	75	Dominant	50	20	300	Minor Branch Die-back	Prune, root prune, mulch
12	-	Red Maple	8	8	70	Dominant	80	20	-	In Drainage Easement	-
13	-	Virginia Pine	8	8	60	Dominant	50	20	300	-	Prune, root prune, mulch
14	-	Hackberry	8	8	50	Intermediate	75	20	-	In Drainage Easement	Prune, root prune, mulch
15	-	Red Oak	8	8	60	Dominant	65	20	-	In Drainage Easement	Prune
16	-	Red Maple	8	8	75	Co-dominant	80	20	-	In Drainage Easement	Prune
17	-	Red Maple	10	10	75	Dominant	80	15	-	In Drainage Easement	Prune
18	-	Red Maple	10	10	75	Dominant	80	20	-	In Drainage Easement	Prune
19	-	Red Maple	10	10	75	Dominant	80	20	-	Off Site	-
20	-	Red Maple	(5)8	8	70	Co-dominant	75	20	-	In Drainage Easement	Prune, root prune, mulch
21	-	Pear	12	12	70	Dominant	80	20	-	-	Prune, root prune, mulch
22	-	Pear	12	12	70	Dominant	80	20	-	-	Prune, root prune, mulch
23	-	White Pine	16	16	50	Dominant	60	30	700	Chlorotic	Prune, root prune, mulch
24	-	Pear	12	12	70	Dominant	80	20	-	-	Prune, root prune, mulch
25	-	Austrian Pine	10	10	70	Dominant	65	20	300	Codomiant leaders	Prune, root prune, mulch
26	-	Silver Maple	16	16	70	Dominant	75	40	-	Off Site	-
27	-	Red Oak	6	6	75	Dominant	75	15	-	-	Remove
28	-	Red Oak	8	8	75	Dominant	80	20	-	-	Remove
29	-	Silver Maple	16	16	70	Dominant	75	40	-	Off Site	-
30	-	Red Oak	14	14	75	Dominant	75	40	-	-	Remove
31	-	Red Oak	6	6	80	Dominant	80	15	175	-	Prune, root prune, mulch
32	-	Hackberry	6, 8	8	80	Dominant	60	15	-	-	Remove
33	-	Sassafras	10	10	80	Dominant	80	15	-	-	Remove
34	-	Red Maple	(3)10	10	70	Co-dominant	80	30	700	-	Prune
35	-	Red Maple	14	14	70	Dominant	80	30	700	-	Prune
								Total Credit	6,475 SF		



NOTE:
1. STAKING AND GUYING SHALL BE IMPLEMENTED ONLY AS NEEDED FOR SUPPORT AND STABILITY AS DETERMINED BY THE LANDSCAPE CONTRACTOR BASED ON LANDSCAPE SPECIFICATION GUIDELINES. ALL STAKING AND GUYING SHALL BE REMOVED WITHIN ONE YEAR OF THE TIME OF INSTALLATION.



1 DECIDUOUS TREE PLANTING
NTS

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

TREE CANOPY COVER REQUIREMENTS

GROSS SITE AREA	39,961 SF	(0.92 AC)
- STORM DRAIN ESM'T AREA (DEDUCTION)	4,334 SF	(0.10 AC)
- DRAIN FIELD AREA (DEDUCTION)	2,000 SF	(0.05 AC)
= ADJUSTED GROSS SITE AREA	33,627 SF	(0.77 AC)
ZONING:	R-1	
TREE CANOPY COVER REQUIRED (33,627 SF X 30%)	10,088 SF	
TREE CANOPY COVER PROVIDED:		
LANDSCAPE PROVIDED	2,200 SF	
TREE SAVE AREA (6,475 SF x 1.25)	8,093 SF	
TOTAL	10,293 SF	

TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT

PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY	10,250 SF (0.23 AC)
PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY	25 %
PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE (R-1)	30%
PERCENTAGE OF CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION	7.5%
PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION	100 %
HAS THE TREE PRESERVATION TARGET BEEN MET?	YES

LEGEND:

- PROPOSED LARGE DECIDUOUS TREE
- LCG — LIMITS OF CLEARING AND GRADING
- 25' BEYOND LCG
- EXISTING TREE TO BE PRESERVED
- EXISTING TREE TO BE REMOVED
- TP — TREE PROTECTION
- CRITICAL ROOT ZONE (CRZ)

CERTIFIED ARBORIST ISA

PREPARED BY:
WM. O'KELLY RUSSELL
ISA Certified Arborist, MA-5009A
Wm O'Kelly Russell 11-15-10

0 10' 20' 40' 80'

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE
1.	11/15/10	MODIFIED PER COUNTY COMMENTS			

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

PLAN DATE
10/21/10
11/15/10

Wm. O'Kelly Russell, RLA
Planning • Landscape Architecture • Arboriculture
17485 Tripoli Blvd., Dumfries, VA 22026
(703) 221-3381
wmo_kellyrussell@hotmail.com

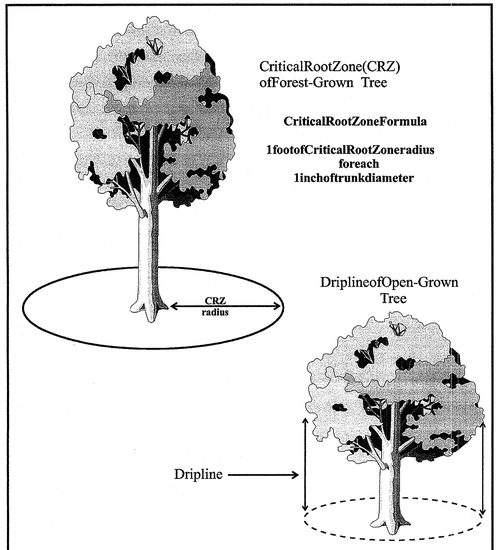
TREE CONSERVATION PLAN
1008 SPRINGVALE ROAD
MASON DISTRICT FAIRFAX COUNTY, VIRGINIA
DATE: 11-15-2010
C.I. 2'
SCALE: 1"=20'

SHEET
7 OF 9

FILE No.

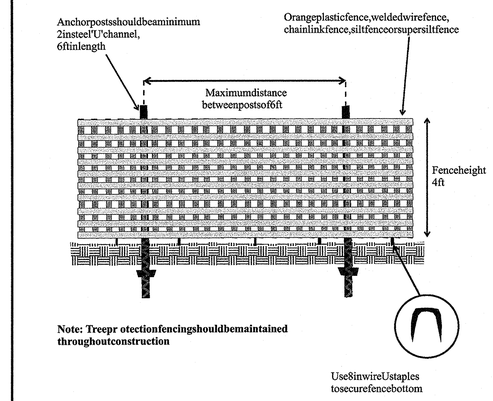
THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

FAIRFAXCOUNTY PUBLICF ACILITIESMANUAL



Ref.Sec.12-0506.2D Rev.10-08	CRITICALROOT ZONES AND DRIPLINESOF TREES	PLATENO. 2-12	STD.NO.

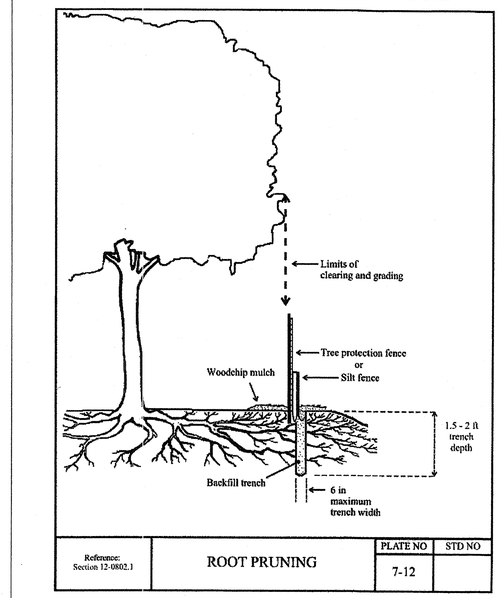
FAIRFAXCOUNTY PUBLICF ACILITIESMANUAL



Adaptedfrom: ***WoodlandConservationManual*** ,PrinceGeor geCounty ,Maryland

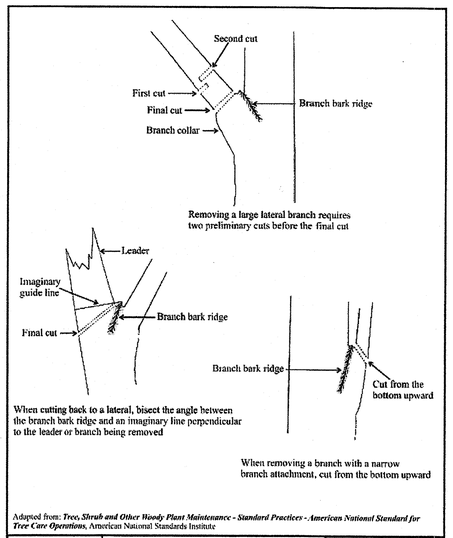
Ref.Sec.12-0703.1B Rev.10-08	TREEPROTECTIONFENCE INSTALLATION	PLATENO. 6-12	STD.NO.

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Reference: Section 12-0802.1	ROOT PRUNING	PLATE NO 7-12	STD NO

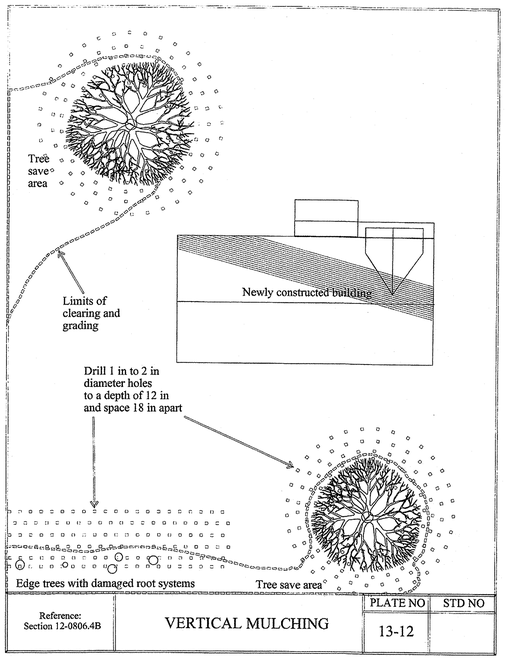
FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Adapted from: ***Tree, Shrub and Other Woody Plant Maintenance - Standard Practices - American National Standard for Tree Care Operations***, American National Standards Institute

Reference: Section 12-0805.4(C)1	PRUNING CUTS	PLATE NO 12-12	STD NO

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Reference: Section 12-0806.4B	VERTICAL MULCHING	PLATE NO 13-12	STD NO

NOTES:

1. THE LIMITS OF CLEARING AND GRADING SHALL BE ACCURATELY FLAGGED PRIOR TO ANY CONSTRUCTION ACTIVITY ON-SITE.
2. ALL INDIVIDUAL TREES TO BE SAVED WILL BE TAGGED APPROPRIATELY WITH BRIGHTLY-COLORED SURVEYOR'S RIBBON AT A HEIGHT OF 5'-6'.
3. TREE PROTECTION FENCE SHALL BE INSTALLED IN THE FIELD IN CONJUNCTION WITH THE COUNTY'S URBAN FORESTER. PROTECTION FENCE IS SUBJECT TO RELOCATION BASED UPON THE URBAN FORESTER'S REVIEW. FINAL APPROVAL BY THE URBAN FORESTER MUST BE OBTAINED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
4. TREE PROTECTION FENCE SHALL BE INSTALLED AT THE DRIPLINE OF THE TREES TO BE PRESERVED, OR AT THE LIMITS OF CLEARING AND GRADING, WHICHEVER IS A GREATER DISTANCEFROM THE TRUNK OF THE TREE TO BE PRESERVED. NOTE THAT THERE MAY BE TREES WHERE THE TREE PROTECTION FENCE MAY BE SLIGHTLY WITHIN THE DRIPLINE LIMITS. SEE THIS SHEET FOR DETAILS OF THE TREE PROTECTION TO BE UTILIZED.
5. VEHICULAR TRAFFIC AND THE STOCKPILING OF ANY CONSTRUCTION MATERIALS, INCLUDING TOPSOIL STOCK PILES, IS PROHIBITED WITHIN THE DRIP LINE OF ANY TREETO BE SAVED.
6. ROOT PRUNING IS TO BE PERFORMED WHEREVER GRADES WILL BE ALTERED WITHIN THE ROOT ZONE OF A TREE TO BE PRESERVED. THE ENTIRE AREA OF ROOT PRUNING IS TO BE COMPLETED IN ONE OPERATON. ROOT PRUNING MACHINERY SHALL BE USED TO A DEPTH OF 18". IF A TRENCHER IS USED, THE TRENCH SHALL BE BACKFILLED IMMEDIATELY TO PREVENT ROOT DEHYDRATION. WHENEVER POSSIBLE, ROOT PRUNING TRENCHES SHOULD BE MULCHED WITH WOOD CHIPS OR MULCH TO A DEPTH OF FOUR INCHES.
7. 1-2 INCHES OF MULCH SHALL BE SPREAD AT THE LIMITS OF CLEARING AND GRADING, AND A ROOT BIO-STIMULANT SHALL BE APPLIED TO THE ROOTS SYSTEMS IN THIS AREA BY A LICENSED TREE CARE PROFESSIONAL, AND/OR CERTIFIED ARBORIST.
8. MULCH AS GREAT AN AREA AS POSSIBLE AROUND TREE TO RETAIN MOISTURE, INCREASE FERTILITY OF SOIL, PROTECT ROOTS IN WINDER AND HASTEN ROOT REGENERATION.
9. WATER TREES WELL DURING JUNE, JULY AUGUST, AND SEPTEMBER.
10. A PRIVATE CERTIFIED ARBORIST SHALL BE REQUIRED TO IMPLEMENT, OVERSEE, AND MONITOR SITE WORK AS IT AFFECTS TREES DURING THE LIFE OF THE PROJECT. MONITORING OF THE PRESERVED TREES SHALL BE CONDUCTED ON A WEEKLY BASIS DURING THE INITIAL PHASES OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE SUBJECT TO REQUIREMENTS OF THE COUNTY'S URBAN FORESTER AS IT RELATES TO PRESERVATION MEASURES.
11. TREES BEING REMOVED SHALL NOT BE FELLED, PUSHED OR PULLED INTO TREES BEING RETAINED. WHEN TREES TO BE REMOVED ARE IN VERY CLOSE PROXIMITY TO TREES TO BE PRESERVED, THEY SHALL BE FELLED BY HAND, WITH A CHAIN SAW.
12. EQUIPMENT OPERATORS SHALL NOT CLEAN ANY PART OF THEIR EQUIPMENT BY SLAMMING IT AGAINST THE TRUNKS OF TREES TO BE RETAINED.
13. TRENCHING SHALL BE DONE AS FAR AWAY FROM THE TRUNKS OF TREES AS POSSIBLE.
14. ROOTS EXPOSED BY TRENCHING SHALL NOT BE LEFT EXPOSED TO AIR. THEY SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE OR PROTECTED AND KEPT MOISTENED WITH WET BURLAP OR PEAT MOSS UNTIL THE TRENCH CAN BE FILLED.
15. THE ENDS OF DAMAGED AND CUT ROOTS SHALL BE CUT OFF SMOOTHLY.
16. ALL WORK SHALL CONFORM TO THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, THE APPROVED TREE PRESERVATION PLAN, AND THE ZONING PROFFERS AND CONDITIONS, WHERE IT AFFECTS TREES.
17. TREES TO BE REMOVED WITHIN THE VDOT R.O.W, MUST HAVE WRITTEN PERMISSION TO DO SO PRIOR TO REMOVAL.

CERTIFIED ARBORIST ISA

PREPARED BY:
WM. O'KELLY RUSSELL
ISA Certified Arborist, MA-5009A

Wm O'Kelly Russell 10-21-10

No.	DATE	DESCRIPTION	REV.BY APPROVED	DATE
		REVISION APPROVED BY DIVISION OF DESIGN REVIEW		

PLAN DATE 10/21/10

Wm. O'Kelly Russell, RLA
Planning • Landscape Architecture • Arboriculture
17485 Tripoli Blvd., Dumfries, VA 22026
(703) 221-3381
wmo_kellyrussell@hotmail.com

TREE CONSERVATION PLAN
1008 SPRINGVALE ROAD
MASON DISTRICT FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=20' C.I. 2' DATE: 10-21-10

SHEET 8 OF 9

FILE No.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

RPA Boundary Location Certification
(The following certification statement is to be placed on the plan, signed, and sealed by the licensed professional submitting the plan.)

RPA Boundary Location Certification

The lot depicted on this infill lot grading plan includes an RPA. The locations of all RPA features have been verified in the field.

Checklist of RPA features which are present:

YES	NO	
☐	☑	(1) A tidal wetland;
☐	☑	(2) A tidal shore;
☑	☐	(3) A water body with perennial flow;
☐	☑	(4) A nontidal wetland connected by surface flow and contiguous to a tidal wetland or water body with perennial flow;
		(5) A buffer area as follows:
☐	☑	(i) Any land within a major floodplain;
☑	☐	(ii) Any land within 100 feet of a feature listed in (1) through (4).

Supporting Documents:

☐ Jurisdictional determination or verification letter from the U.S. Army Corps of Engineers for all Waters of the U.S.

I hereby certify that:

Each of the individual features listed above, which together comprise the RPA, have been reviewed and the locations of the features and final RPA boundary shown on the plan are in conformance with the requirements of the Chesapeake Bay Preservation Ordinance.

Signature — Date: 11/2/2010

HAMID TEHRANI, P.E. — Name

23137 — Virginia license number

WALKER CONSULTING
LOUDOUN, LLC

P. O. Box 1064
Warrenton, VA 20188

weslle@comcast.net

Ph. (540) 222-2888
Fax (360) 283-1115

October 27, 2010

U.S. Army COE
Northern VA Field Office
18139 Triangle Shopping Plaza
Suite 213
Dumfries, VA 22026

Ref: Request for Wetland Boundary Confirmation
1008 Springvale Road
Fairfax County, VA

Dear Sirs:

Please provide jurisdictional wetland/waters boundary confirmation for the above referenced parcel. The purpose of the request is to confirm the wetland boundary in the vicinity of the site and therefore allow confirmation of the RPA boundary in the area. This confirmation is required as part of the Fairfax County plan approval process for a special exception plat at the above referenced address.

Attached please find a vicinity map, site plan, and data forms based on previous field observations. Thank you for your assistance and please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,

George E. Walker Jr.
CPSS, CPG, OSE

Attachments

P. O. Box 1064
Warrenton, VA 201

October 27, 201

Suburban Development Engineering, Inc.
7777 Leesburg Pike, Suite 305N
Falls Church, VA 22043

Attn: Mr. Hamid Tehrani, P.E.

Ref: Wetland Delineation
1008 Springvale Road
Fairfax County, Virginia

Dear Mr. Tehrani:

Per your request a wetland delineation was conducted for the above referenced property. The delineation was conducted to identify where, if present, the jurisdictional wetland/waters of the U.S boundary is located in the area of the property so the Chesapeake Bay Resource Protection Area boundary could be defined.

The study consisted of a review of readily available mapping references and a field investigation to observe soils, hydrology and vegetation on and in the vicinity of the subject property. The study did identify an area which demonstrated wetland characteristics on the subject property; however, this area is not contiguous to the perennial stream which is located just west of the subject property and it is unknown if the US Army COE would claim jurisdiction over this isolated area. The stream located west of the subject property would be considered a jurisdictional water of the U.S.

Attached please find a plan showing surveyed data point locations, and the location of the wetland/jurisdictional boundary based on the observed field conditions and other available data. Also attached are the data forms for each of the data points.

Thank you for the opportunity to be of service and please do not hesitate to call if you have any questions or need additional information.

Sincerely,

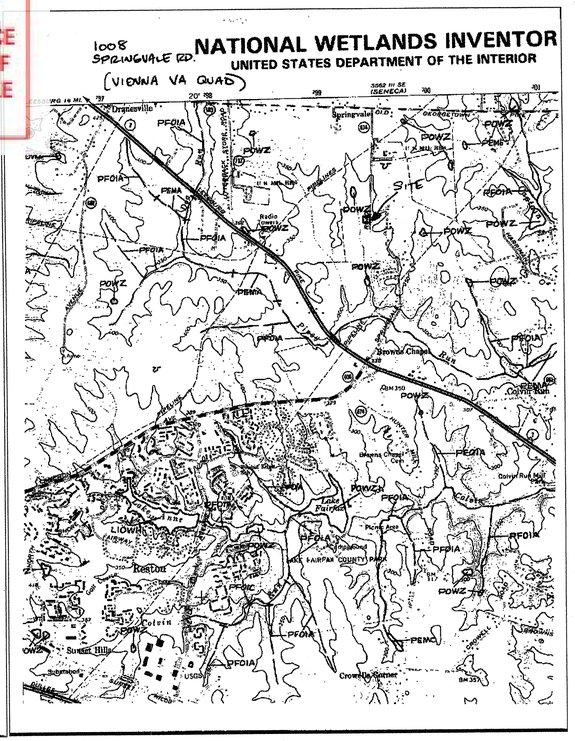
George E. Walker, Jr. CPSS, CPG, OSE

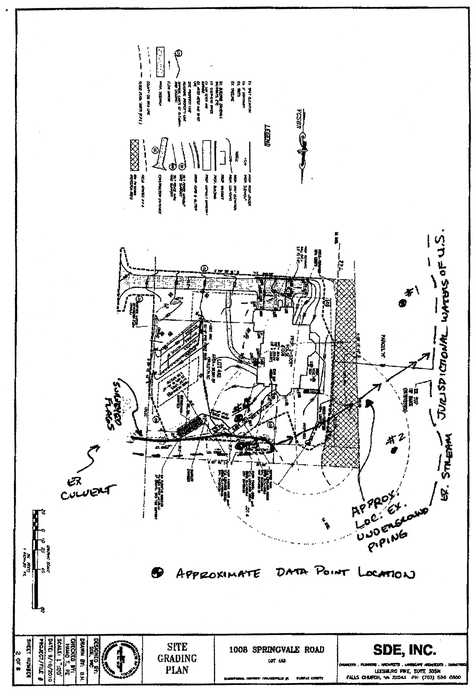
Attachment

COMMONWEALTH OF VIRGINIA
GEORGE E. WALKER JR.
Lic. No. 3401000069
10/27/10
CERTIFIED PROFESSIONAL SOIL SCIENTIST

1008 SPRINGVALE RD. (VIENNA VA QUAD)

NATIONAL WETLANDS INVENTOR
UNITED STATES DEPARTMENT OF THE INTERIOR





SITE GRADING PLAN — 1008 SPRINGVALE ROAD, LOT 4A2 — SDE, INC.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 1008 SPRINGVALE ROAD
Applicant/Owner: C/o SDE INC.
Investigator: George Walker CPSS, CPG, OSE
Date: 10/1/10
County: FAIRFAX
State: VA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)
Community ID: (#1)
Transect ID:
Plot ID:

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. EAST. REDCEDAR	T	FACU
2. RED MAPLE	T	FAC
3. EAST. RED CEDAR	S	FACU
4. ASIAT. BLACKBERRY	SHR.	FACU-
5. COM. GREENBRIER	H	FAC
6. JAP. HONEYSUCKLE	H	FAC-
7. ASIATIC. TEARTHUMB	H	FAC+
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 3/7 - 43%

Remarks:

HYDROLOGY

- ___ Recorded Data (Describe in Remarks):
  - ___ Stream, Lake, or Tide Gauge
  - ___ Aerial Photographs
  - ___ Other
- ✓ No Recorded Data Available

Field Observations:
- Depth of Surface Water: NONE (in.)
- Depth to Free Water in Pit: +18 (in.)
- Depth to Saturated Soil: +18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ✓ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

1008 SPRINGVALE RD.
DATA POINT #1

SOILS

Map Unit Name (Series and Phase): 1A+ MIXED ALLUVIAL — Drainage Class: P/SP
Field Observations Confirm Mapped Type? (Yes) No
Taxonomy (Subgroup): ___

Profile Descriptions: Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 3/2	—	—	ORGANIC SILT LOAM
4-15	B1	10YR 4/4	—	—	SILT LOAM, SOME GRAV
15-24+	B2F	2.5Y 5/2	10YR 4/4	DISTINCT/25%	HEAVY SILT LOAM

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ✓ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)
Is this Sampling Point Within a Wetland? Yes (No) (Circle)

Remarks:

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 1008 SPRINGVALE ROAD
Applicant/Owner: C/o SDE, INC.
Investigator: George Walker CPSS, CPG, OSE
Date: 10/1/10
County: FAIRFAX
State: VA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)
Community ID: (#2)
Transect ID:
Plot ID:

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. ALLEGH. BLACKBERRY	SHL	FACU-
2. ASIATIC TEARTHUMB	H	FAC+
3. CREEPING BENTGRASS	H	FACW
4. WILD LEEK	H	FACU-
5. BLACK NIGHTSHADE	H	FACU-
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 2/5 - 40%

Remarks:

HYDROLOGY

- ___ Recorded Data (Describe in Remarks):
  - ___ Stream, Lake, or Tide Gauge
  - ___ Aerial Photographs
  - ___ Other
- ✓ No Recorded Data Available

Field Observations:
- Depth of Surface Water: NONE (in.)
- Depth to Free Water in Pit: +18 (in.)
- Depth to Saturated Soil: +18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ✓ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

SDE, INC.
ENGINEERS . PLANNERS . ARCHITECTS . LANDSCAPE ARCHITECTS . SURVEYORS
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

WETLAND STUDY AND RPA DELINEATION

COMMONWEALTH OF VIRGINIA
HAMID MOGHAYEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: N/A
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 9 OF 9

1008 SPRINGVALE ROAD
DATA POINT #2

SOILS

Map Unit Name (Series and Phase): 1 A+ - MIXED ALLUVIAL — Drainage Class: P/SP
Taxonomy (Subgroup): — Field Observations Confirm Mapped Type? (Yes) No

Profile Description: Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-2	A	10YR 3/2	—	—	ORGANIC SILT LOAM
2-18	B1	10YR 5/3	10YR 4/6	DISTINCT/40%	SILT LOAM
18-24+	B2t	10YR 5/1	10YR 4/4	DISTINCT/25%	HEAVY SILT LOAM

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Approved by HQUSACE 3/92

Appendix B Blank and Example Data Forms — B3

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 1008 SPRINGVALE RD. — Date: 10/1/10
Applicant/Owner: c/o SDE, INC. — County: FAIRFAX
Investigator: George Walker, CPSS, CPSC, OSE — State: VA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID: (#3)
Transect ID: ___
Plot ID: ___

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. RED MAPLE	T	FAC	9.		
2. ASIATIC TEARTHUMB	H	FACU	10.		
3. SWAMP MILKWEED	H	OBL	11.		
4. SOFT RUSH	H	FACW	12.		
5. CREEPING BUTTERCUP	H	FACW	13.		
6. EARLY BLACKBERRY	H	FACW	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 6/6 - 100%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other
- ✓ No Recorded Data Available

Field Observations:
- Depth of Surface Water: NONE (in.)
- Depth to Free Water in Pit: +18 (in.)
- Depth to Saturated Soil: +18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ✓ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

B2 — Appendix B Blank and Example Data Forms

1008 SPRINGVALE RD.
DATA POINT #3

SOILS

Map Unit Name (Series and Phase): GLENVILLE SILT LOAM — Drainage Class: SP — 1A+ (MIXED ALLUVIAL) HYDRIC INCLUSION IN GLENVILLE MAPPED AREA
Taxonomy (Subgroup): — Field Observations Confirm Mapped Type? (Yes) No

Profile Description: Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/2	—	—	ORGANIC SILT LOAM
4-8	B1	10YR 4/3	—	—	SILT LOAM
8-18+	B2	10YR 6/1	10YR 5/6	DISTINCT/10%	HEAVY SILT LOAM
			10YR 4/4		

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ✓ Reducing Conditions (MOTTLES)
- ___ Gleyed or Low-Chroma Colors (MOTTLES)
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ✓ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks:

Approved by HQUSACE 3/92

Appendix B Blank and Example Data Forms — B3

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 1008 SPRINGVALE ROAD — Date: 10/1/10
Applicant/Owner: c/o SDE, INC. — County: FAIRFAX
Investigator: George Walker, CPSS, CPSC, OSE — State: VA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID: (#4)
Transect ID: ___
Plot ID: ___

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. MEADOW FESCUE	H	FACU-	9.		
2. CREEPING SOREL	H	FAC+	10.		
3. INDIAN STRAWBERRY	H	FACU-	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0/3 - 0%

Remarks: (YARD AREA)

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other
- ✓ No Recorded Data Available

Field Observations:
- Depth of Surface Water: NONE (in.)
- Depth to Free Water in Pit: +18 (in.)
- Depth to Saturated Soil: +18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

B2 — Appendix B Blank and Example Data Forms

1008 SPRINGVALE ROAD
DATA POINT #4

SOILS

Map Unit Name (Series and Phase): GLENVILLE (#3+) — Drainage Class: SP
Taxonomy (Subgroup): — Field Observations Confirm Mapped Type? (Yes) No

Profile Description: Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/3	—	—	ORGANIC SILT LOAM
4-14	B1	10YR 5/3	—	—	SILT LOAM
14-24+	B2	10YR 6/6	10YR 7/1	DISTINCT/20%	SILT LOAM/HEAVY SILT LOAM

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Approved by HQUSACE 3/92

Appendix B Blank and Example Data Forms — B3

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

GEOTECHNICAL REQUIREMENTS
Single Family Home @
1008 Springvale Road
Great Falls, Fairfax County, Virginia
GDE Project No.: E10018

By
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4515 Daly Drive, Suite E
Chantilly, Virginia 20151
Ph: 703-961-8130
Fax: 703-961-8133
Email: mak@geodesigneng.com

Site Geology

The site is geologically located in the Appalachian Piedmont Physiographic Province. A study of the area geology from the available literature and field observation indicates that the site is underlain by Peters Creek Schist of Early Cambrian and/or Late Precambrian age.

The Peters Creek is described as fine to coarse grained, lustrous, greenish-gray to gray, reddish weathering, quartz-rich schist and lesser mica gneiss and light to medium gray, fine to medium grained, well-bedded metagraywacke and semi-pelitic schist. The Peters Creek is polymetamorphic and has undergone a prograde event that ranges from chlorite grade to sillimanite grade. The depositional environment has been interpreted to be a turbidite under high energy conditions in a large submarine fan. The saprolite is generally thick with vein quartz a random occurrence.

Subsurface Conditions

GDE engineers observed approximately 12 inches of topsoil at the both the test locations. The soils underlying the topsoil were residual soils and described as orange brown and brown, and were classified as sandy silt (USCS Classification: ML). These soils were moist to wet near the termination depth of 8 to 8.75 feet below the existing surface grades. The residual soils extended to the hole termination depths of 8 feet and 8.75 feet below the existing surface elevations at HA-1 and HA-2, respectively. The blow counts recorded from the DCP tests performed within these soils ranged from 7 blows to 30 blows per 1.75 inch of penetration.

Groundwater Observations

GDE did not observe groundwater in the test borings during hand augering or at completion. The test borings were backfilled upon completion for safety reasons; therefore 24-hour groundwater readings were not recorded.

It shall be noted that the groundwater conditions presented in this report are based on the observations made at the time of our field activities. Fluctuations in groundwater levels are possible seasonally, especially in response to changes in precipitation. We recommend that the Contractor determine the actual groundwater levels at the time of construction to evaluate groundwater impact on the proposed construction procedures.

Site Preparation and Earthwork

The construction areas, building pad and driveway, shall be stripped of trees, vegetation, topsoil and organic matter. Following excavating the basement to the proposed elevation, the subgrade shall be observed by GDE engineer for evaluation and recommendations. Soft soils were not encountered during subsurface exploration field work. However, if any soft soils or existing uncontrolled fill are encountered at or below the basement planned subrade, they shall be removed as directed by GDE engineer or a qualified representative to suitable-bearing subgrade and replaced with approved controlled fill.

Controlled fill placement shall extend laterally beyond the structure footprint a minimum distance of 5 feet at subgrade elevation or depth of fill, whichever is greater. The fill shall be placed at a slope of 3H:1V or shallower. Controlled fill for the building pad shall be placed to an elevation 8 inches below the floor slab-on-grade. Footing trenches for the house shall be excavated after the building pad has been properly prepared.

The on-site soils classified as ML can generally be used as controlled fill subject to moisture adjustment at the time of placement. If off-site material is imported for use as controlled fill, we recommend using materials consisting of GW, GP, GM, SW, SP, SC and SM. Imported as well as on site ML and CL soils are subject to the following restrictions:

Liquid Limit	< 40
Plasticity Index	< 20

All controlled fill soils shall be free from topsoil, organics, and other unsuitable materials, and shall not contain rock fragments greater than 4 inches in their greatest dimension.

Controlled fill shall be placed in loose horizontal lifts of maximum 8 inches thick, and compacted uniformly with proper equipment. Controlled fill shall be compacted to at least ninety-five percent (95%) of the maximum dry density as established by ASTM D-698, AASHTO T-99 or VTM-1 test methods. Moisture content of the fill soils shall be

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1008 SPRINGVALE ROAD
LOT 4A2
MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

WETLAND STUDY AND GEOTECHNICAL REQUIREMENTS

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: N/A
DATE: 11/01/2010
PROJECT/FILE #
SHEET NUMBER 9.1 OF 9

maintained within plus or minus two (±2) percentage points of the optimum moisture content to facilitate efficient compaction.

An engineering technician working under the supervision of the Geotechnical Engineer shall observe site preparation and earthwork, and test controlled fill compaction for building pad and driveway.

Groundwater

Groundwater was not encountered at the locations or within the depths explored for this study. Based on the depth of excavation needed to attain the planned basement grade, we do not anticipate that a groundwater table will be encountered during construction. Perched water, however, may be encountered in construction excavations especially if construction occurs during wet seasons or following prolonged periods of heavy precipitation. It is our professional opinion that if perched water is encountered, conventional dewatering measures such as diversion ditches, interceptor drains, sump pits and pumping will be adequate for controlling it.

Demolition of Existing Structures

All existing structures, if any, including footings, slabs, basement walls, driveway, and utilities shall be removed from the proposed building pad and driveway, including 5-foot offsets. All soils undercut below the planned grades shall be replaced with controlled fill.

Any water well(s) shall be abandoned and sealed as per the Fairfax County and State Health Department regulations. The demolition of existing building and other structures shall be carried out under the supervision of the Geotechnical Engineer of Record.

Excavations

Typical earth moving equipment such as loaders, backhoes, and excavators can be used to perform the required excavations. Hoe-ramming and/or blasting is not anticipated to be needed.

Temporary excavations for basement and utilities shall be made with 1H:1V or flatter side slopes in accordance with applicable local and OSHA excavation standards detailed in 29 CFR, Part 1926, and shall be adequately protected against sudden cave-in or sloughing by using steel trench boxes or other measures. The project contractor is responsible for worker safety in and around excavations.

Utility Trench Backfill

The backfill for utility trenches shall conform to the recommendations provided in "Site Preparations and Earthwork". Cushion lifts placed within 1 foot above pipes shall be compacted with a hand tamper in two (2) 6-inch thick layers, to reduce the potential for damage to pipes. The backfill around utility manholes shall also be compacted with a hand tamper to reduce the potential for future settlements in these areas.

Foundations

Shallow foundations supported on existing residual soils or on controlled fill are adequate for the support of the proposed house. Following are our recommendations regarding foundation design and construction.

Bearing Soils and Allowable Bearing Pressure

Shallow foundations (continuous and spread footings) bearing on existing sandy silt soils or on controlled fill are considered adequate for the support of the proposed house. The footings shall not be directly supported on fat clays and elastic silt (CH and MH), and/or on silts and clays with LL>40 or PI>20, except when these soils are at least 4 feet below the exterior adjacent finished grades.

Continuous footings that bear partially on controlled fill and partially on natural soils shall be designed as grade beams 5 feet on either side of the transition. Column footings located partially in controlled fill areas shall be extended vertically downward a sufficient depth so that they bear entirely on natural soil or bed rock.

The footings shall be sized and designed on the basis of a net allowable bearing pressure not exceeding 2,000 pounds per square foot (psf), subject to the observation and approval of soil conditions at the bottom of footing excavations by GDE's Geotechnical Engineer or qualified representative.

Footing excavations shall not be left open for long periods, and shall be protected to prevent water and loose soil from entering. If the soil in excavations becomes softened by water, the soft soil shall be removed before concrete placement. If concrete can not be placed shortly after excavating footing trenches due to inclement weather conditions or any other circumstances, bottom of the footing excavations and trenches shall be protected by undercutting 3 inches and placing a 3-inch thick lean-mix concrete work mat.

Backfill around and above footings shall satisfy the controlled fill requirements described in "Site Preparations and Earthwork" of.

Depth of Footings

The embedment depth of footings shall be governed by the minimum depth requirements for protection against frost heave in accordance with the International Residential Code (IRC 2003 and/or later versions). The depth of frost in Northern Virginia is approximately 24 inches. Therefore, the footings shall be embedded at least 24 inches below the lowest adjacent exterior finished grade.

The footings shall not be supported on fat clays and elastic silt (CH, MH), and/or on silts and clays with LL>40 or PI>20. If these soils are encountered at or below the foundation grades, they shall be excavated in their entirety or to a depth of 4 feet below the lowest adjacent exterior finished grades, whichever occurs first. The soils removed shall be replaced with controlled fill placed and compacted as stated earlier in this report. Alternatively, the footings can be extended down to bear directly on high-plasticity silt/clay, provided a minimum footing embedment depth of 4 feet below the lowest adjacent exterior finished grade is achieved.

Anticipated Settlements

We estimate that footings designed on the basis of recommended allowable bearing pressures will experience a total settlement of less than 1 inch with differential settlement between adjacent walls or columns limited to ½-inch over a 30-foot span.

Below-Grade Walls

Wall Design

Below-grade walls shall be designed based on the soil type to be backfilled against the walls. In the drainage zone immediately behind the wall, the wall shall be backfilled with granular soils classified as sandy silt (ML), silty sand (SM) or more granular. The maximum wall height is 9 feet with maximum 8 feet of backfill height. Depending on the soil types to be used to backfill the basement walls, the walls can be designed as shown in the following table in accordance with the 2003 IRC and/or later versions:

Backfill Material	Wall Thickness (in)*	Vertical Reinforcement*
GW, GP, SW, & SP	8	#4 at 32 inches O.C.
GM, GC, SM, SM-SC, and ML	8	# 4 at 20 inches O.C.
SC, MH, ML-CL, and CL	8	# 4 at 16 inches O.C.

* Wall thickness and reinforcement are based on the assumption that proper drainage measures, as discussed in this report, are incorporated in the design and construction of below-grade walls.

The liquid limit and plasticity index of the backfill soils shall not exceed 40 and 15, respectively. Equivalent steel bars can be used instead of the ones given in the above table. Please refer to the 2003 IRC and later versions for additional information.

The walls shall be designed and constructed with adequate drainage to prevent the development of hydrostatic pressures in the backfill. Heavy compaction and other construction equipment shall not operate closer than 5 feet to the walls. The backfill in this zone shall be compacted with small vibratory compaction equipment such as tampers or walk-behind rollers to reduce any potential damage to the wall.

We recommend that the concrete to be used in the construction of basement walls has a 28-day compressive strength of at least 3,000 pounds per square inch (psi).

Waterproofing/Damp-Proofing

Following recommendations are provided for waterproofing/damp proofing of below-grade walls and the installation of peripheral drainage. All drains shall be daylighted at an appropriate location or into an adjacent stormwater manhole. The drain and outfall locations shall be shown on the construction plans. If outfall pipes cross any property lines, they shall be placed in recorded drainage easements. Based on the proposed basement floor elevation and planned grading, the peripheral basement drains can be discharged by gravity.

Requirements for basement drainage by gravity are presented below. Typical construction details are attached.

Basement Drain Discharge by Gravity

- Install 2-inch diameter bleeder pipes in the upper half of the footings at 8-foot intervals.
- An exterior tile drain (perforated 4-inch diameter PVC pipe) shall be installed in approximately 18 inches of VDOT No. 57 gravel along the footings with at least 2 inches of gravel below the pipe. The gravel filter shall be completely covered with a non-woven geotextile fabric (EOS #70 Sieve, Gradient Ratio 2 or less), to minimize the potential for migration of fines into the filter.
- The floor slab subgrade shall be shaped to slope uniformly towards the inner periphery of the basement. The bleeder pipes shall be covered with sufficient amount of gravel and shall be connected with the gravel blanket below the slab (average thickness of 4 inches) which is to be placed for lateral drainage and as a capillary barrier.

- The exterior faces of below-grade walls shall be coated with bituminous material or other damp proofing/water proofing coating approved by Fairfax County. Alternatively, the walls shall be treated with a penetrating concrete sealer, such as DECO-20 or an equivalent product, as a water proofing agent.
- Below-grade walls shall be backfilled as recommended in Section 3.7.
- Fine-grained soils shall be placed as a 'cap' above the wall backfill to reduce infiltration of surface water into the backfill. The cap shall be 12 to 18 inches thick and shall be graded to slope away from the house.
- Surface grades within 10 feet of houses shall slope away from the house a minimum of five percent (5%) to prevent ponding and to reduce seepage of water into basement wall backfill soils. Yards shall be graded with slopes no flatter than three percent (3%) to reduce the potential for wet yards.
- The roof drains must discharge beyond the limits of excavations for basement walls.

Floor Slab-on-Grade

The subgrade soil for floor slab-on-grade shall be proof-rolled and prepared as described in "Site Preparation and Earthwork". A free-draining, granular blanket of crushed stone or gravel shall be placed under the slab for lateral drainage and as a capillary barrier. This blanket shall be at least 4 inches thick. A 6-mil thick impermeable Polyethylene plastic membrane (vapor barrier) shall be placed between the granular blanket and the overlying concrete slab. The entire slab shall be reinforced with a welded wire fabric.

Column points and periphery walls shall be isolated from the slab to minimize the possibility of the slab cracking due to relative displacement. The slab shall be designed based on a modulus of subgrade reaction "k" of not more than 120 psi/inch.

The slab shall not be directly supported on fat clay and elastic silt (CH, MH), and/or on silts and clays with LL>40 or PI>20. If these soils are encountered at or below the subgrade elevation for slab-on-grade floor, they shall be removed to a minimum depth of 2 feet below the slab subgrade elevation and replaced with controlled fill approved by GDE Geotechnical Engineer.

THIS WQIA HAS BEEN DETERMINED TO BE ACCEPTABLE FOR FURTHER CONSIDERATION BY THE EXCEPTION REVIEW COMMITTEE DURING A PUBLIC HEARING IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6 OF COUNTY CODE, CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE).

Driveway Pavement

The driveway pavement for this project shall be constructed on subgrade soils consisting of existing soils or approved controlled fill. The pavement shall not be directly supported on fat clay/elastic silt (CH/MH), and/or on silts and clays with LL>40 or PI>20. If these soils are encountered at or below the subgrade elevation for pavement, they shall be removed to a minimum depth of 2 feet below pavement subgrade elevation and replaced with controlled fill approved by the Geotechnical Engineer.

CONSTRUCTION CONSIDERATIONS

Construction Quality Control

In order to evaluate in-situ soil conditions observed during this study and those developed during construction stage versus the design plans and specifications, the following construction items shall be observed/tested by a certified soils technician working under the supervision of the Geotechnical Engineer:

1. Controlled fill placement and compaction
2. Footing and floor slab excavations
3. concrete floor slabs and walls
4. Damp proofing/water proofing of below-grade walls and slab including the installation of peripheral drainage
5. Other inspections as required

Responsibility of Developer

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, Part 1926, Subpart P." This document was issued to better allow for the safety of workers entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the Contractor could be liable for substantial penalties.

The Contractor is solely responsible for designing and constructing stable, temporary excavations and shall shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The Contractor's "responsible person", as defined in 29 CFR Part 1926, shall evaluate the soil exposed in the excavations as part of the Contractor's safety procedures. In no case shall slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in all local, state, and federal safety regulations.

We are providing this information solely as a service to our client. GDE does not assume responsibility for construction site safety or the Contractor's or other parties' compliance with local, state, and federal safety or other regulations.

County Requirements

The Fairfax County Public Facilities Manual (PFM) requires the following:

1. All construction involving problem soils shall be performed under the full-time observation of the Geotechnical Engineer of Record.
2. The Geotechnical Engineer of Record shall furnish a written opinion to the County as to whether or not the work has been performed in accordance with the approved plans and his recommendations for work in the vicinity of the units to be occupied prior to the issuance of residential use permits.

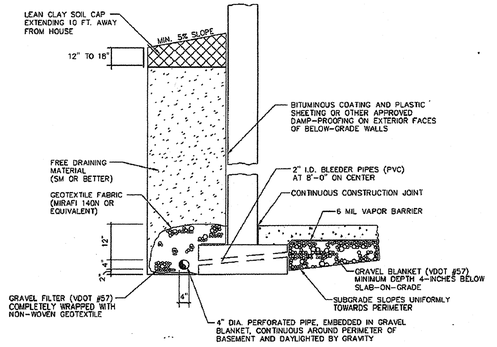
5.0 REPORT LIMITATIONS

This report has been prepared for the exclusive use of **Versailles Custom Homes** and their consultants for the specific application to the project located at 1008 Springvale Road as described herein and located in Great Falls, Fairfax County, Virginia.

The recommendations submitted are based on the available subsurface information obtained by GDE and details concerning the proposed construction provided by the client. After the project plans and specifications are finalized, GDE shall be retained and provided the opportunity to review the final design plans and specifications to evaluate that our engineering recommendations have been properly incorporated into the project documents. If there are any revisions to the proposed construction for this project or if deviations from the subsurface conditions described in this report are encountered during construction, we shall be notified immediately to determine if changes in our geotechnical engineering recommendations are required. If GDE is not retained to perform these functions, we will not be responsible for the impact of any change of conditions on the geotechnical recommendations for the project.

GDE warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

TYPICAL CONSTRUCTION FOR BASEMENT DRAINAGE BY GRAVITY



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1008 Springvale Road
TYPICAL CONSTRUCTION FOR BASEMENT DRAINAGE BY GRAVITY
Great Falls, Fairfax County, Virginia

SCALE	DATE	PREPARED BY	REVIEWED BY	PROJECT NO.
Not To Scale	October 27, 2010	T.K.	MAK	E10018

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GEOTECHNICAL REQUIREMENTS

COMMONWEALTH OF VIRGINIA
HAMID MOGHAVEMI-TEHRANI
Lic. No. 23137
11/1/2010
PROFESSIONAL ENGINEER

DESIGNED BY: SDE, INC.
DRAWN BY: B.H.
CHECKED BY: HAMID T., PE
SCALE: N/A
DATE: 11/01/2010
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SHEET NUMBER 9.2 OF 9