

GENERAL NOTES

- TOWN OF VIENNA GENERAL NOTES
1. A PRE-CONSTRUCTION MEETING MUST BE HELD PRIOR TO THE START OF CONSTRUCTION. CALL 703-255-6384 TO SCHEDULE THE PRE-CONSTRUCTION MEETING.
 2. ALL CONSTRUCTION GENERATED DEBRIS MUST BE HAULED AWAY BY THE CONTRACTOR OR OWNER.
 3. PRIOR TO THE REMOVAL OF ANY TOWN TREES (TREES WITHIN THE RIGHT OF WAY), THE APPLICANT OR THEIR REPRESENTATIVE SHALL CONTACT THE TOWN OF VIENNA ARBORIST AT 703-255-6360 TO COORDINATE HAVING THE TOWN ARBORIST ONSITE DURING ALL TOWN TREE REMOVAL.
 4. TREE PROTECTION FOR ANY TOWN TREE, AS SHOWN ON PLAN, MUST BE INSTALLED PRIOR TO ANY SITE WORK.
 5. IT IS UNLAWFUL TO PERFORM ANY CONSTRUCTION ABOVE FOUNDATION CORNERS PRIOR TO APPROVAL OF SETBACKS. WORK COMPLETED IN VIOLATION OF THIS REQUIREMENT IS SUBJECT TO DEMOLITION.
 6. ALL DUMPSTERS/PODS ARE TO BE PLACED ON PRIVATE PROPERTY.
 7. FRONT ELEVATION CHECKS ARE REQUIRED.
 8. WALL CHECK SURVEYS ARE REQUIRED AND MUST BE SUBMITTED PRIOR TO CONSTRUCTION ABOVE FOUNDATION CORNERS.
 9. A CERTIFICATE OF OCCUPANCY IS REQUIRED PRIOR TO OCCUPANCY. ALL REQUIRED DOCUMENTATION AND INSPECTIONS MUST BE SUBMITTED/COMPLETED BEFORE THE TOWN OF VIENNA WILL ISSUE A CERTIFICATE OF OCCUPANCY.
 10. EXISTING SANITARY SEWER LATERALS ARE TYPICALLY CAPPED AT OR NEAR THE PROPERTY LINE. THE REUSE OF THE PORTION OF THE EXISTING SANITARY SEWER LATERAL BETWEEN THE TOWN OWNED SEWER MAIN AND THE CAPPED END MAY BE ALLOWED PROVIDING THAT A LICENSED PLUMBER CERTIFIES THAT THE EXISTING PIECE OF PIPE IS GRADED PROPERLY AND IN LIKE NEW CONDITION. THE REUSE OF A PORTION OF THE EXISTING LATERAL DOES NOT IMPLY THAT THE TOWN IS WARRANTING THE CONDITION IN ANY WAY.

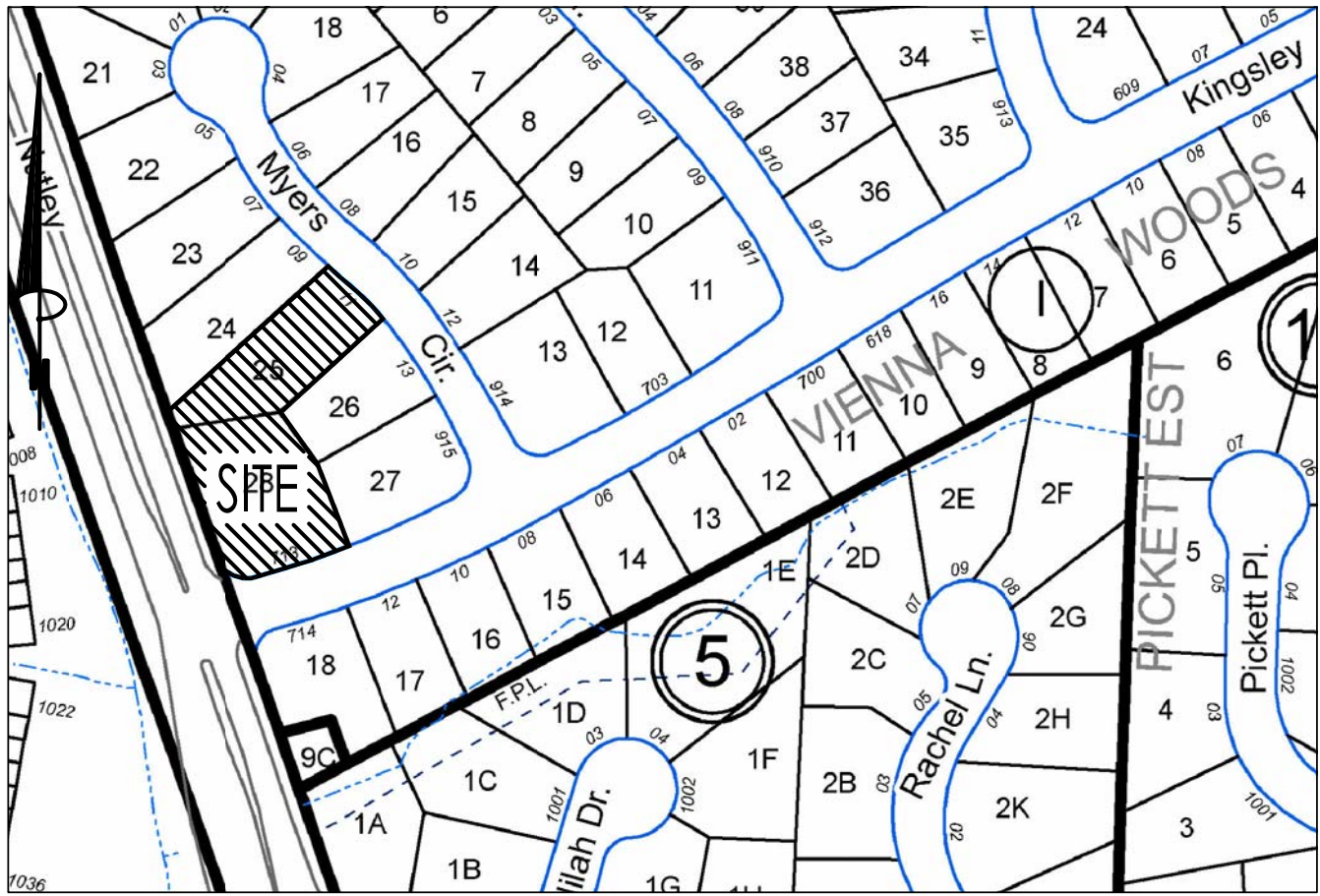
11. PRIOR TO ANY CONSTRUCTION, CONTRACTOR / DEVELOPER TO CONTACT MISS UTILITY AT 1-800-257-7777.
12. ALL CONSTRUCTION SHALL CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF VDOT AND TOWN OF VIENNA.
13. USE EXISTING DRIVEWAY FOR TEMPORARY STONE CONSTRUCTION ENTRANCE.
14. THIS PLAN HAS BEEN PREPARED WITHOUT A CERTIFIED TITLE AND DOES NOT NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY.
15. THIS PARCEL IS SHOWN ON FAIRFAX COUNTY TAX MAP: 0482 03K 0025 AND 0482 03K 0028

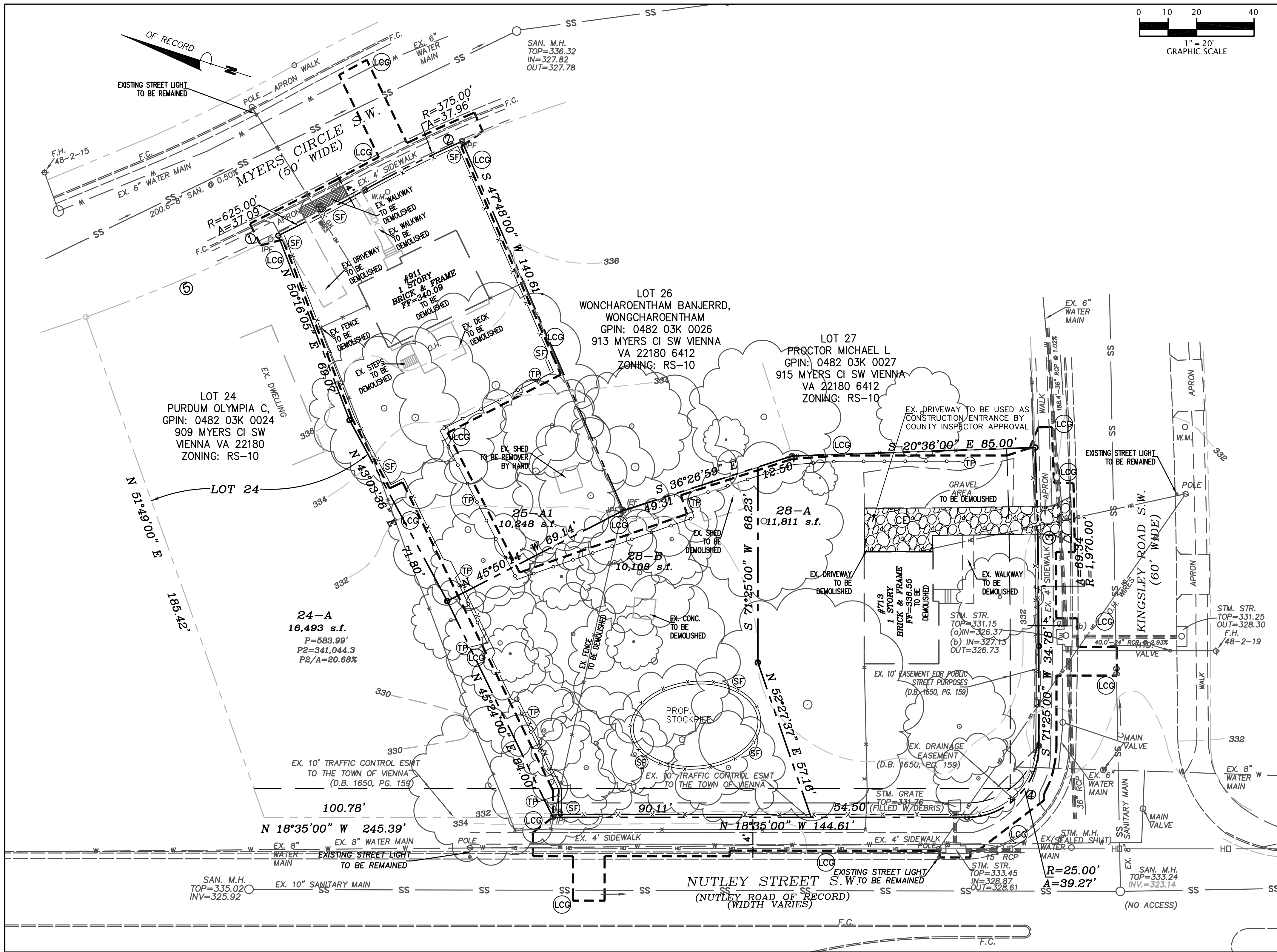
LOT NO.	TAX MAP	OWNER / SUBDIVIDER	ZONE	AREA	DESIGN ENGINEER
LT 25 BLK K SEC 8	0482 03K 0025	SHARYN COVINGTON, 10720 HUNTERS PL VIENNA VA 22181 2843 PHONE:	RS-10 (10000 3.2 DU/AC)	10,248 SF 0.2353 AC	CIVILAND, LLC. P.O. BOX 650206 STERLING, VIRGINIA 20165
LT 28 BLK K SEC 8	0482 03K 0028	713 KINGSLEY LLC, 10720 HUNTERS PL PHONE:	RS-10 (10000 3.2 DU/AC)	21,919 SF 0.5032 AC	
LT 24 BLK K SEC 8	0482 03K 0024	PURDUM OLYMPIA C, 909 MYERS CI SW PHONE:	RS-10 (10000 3.2 DU/AC)	16,599 SF 0.3810 AC	

16. TOTAL AREA OF THE SITE = (10,248 + 11,811 + 10,108) = 32,167 SF = 0.7385 AC
17. TOTAL IMPERVIOUS AREA = 7,299 SF = 0.1676 AC
18. EXISTING ZONING: RS-10 (10000 3.2 DU/AC)
19. ONSITE DISTURBED AREA = 28,600 SF (0.657 AC) AND OFFSITE DISTURED AREA = 4,600 SF (0.105 AC)
TOTAL DISTURBED AREA = 0.657 AC + 0.105 AC = 0.762 AC
20. PROPERTY HAS PUBLIC WATER AND SEWER CONNECTED.
21. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF VIENNA BUILDING CODE.
22. PERMITTEE SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY WITHIN THE RIGHT-OF-WAY DURING CONSTRUCTION. STABILIZE AREAS WITH SOD.
23. TOPOGRAPHY INFORMATION SHOWN HEREON ARE FROM PLANS OF RECORD AND FIELD RUN TOPO PERFORMED BY WILLIAM E. RAMSEY, P.C. SURVEYS ON JUNE 21, 2017 AND THE CONTOUR INTERVAL IS 2 FEET.

UTILITY NOTES:

1. CONTRACTOR TO RELOCATE THE EXISTING GAS LINE AND METER ONTO THE NEW BUILDING AS PER THE ARCHITECTURAL DRAWING AND TO REPLACE THE GAS METER IF NECESSARY.
2. CONTRACTOR TO DAYLIGHT FOUNDATION DRAIN, AS SHOWN ON SHEET 3. SEE DETAIL ON SHEET 5.
3. SANITARY AND WATER MAINS ARE TAKEN FROM AVAILABLE RECORDS. TEST PITS ARE REQUIRED TO VERIFY LOCATION AND DEPTH OF SANITARY AND WATER MAIN.





LEGEND

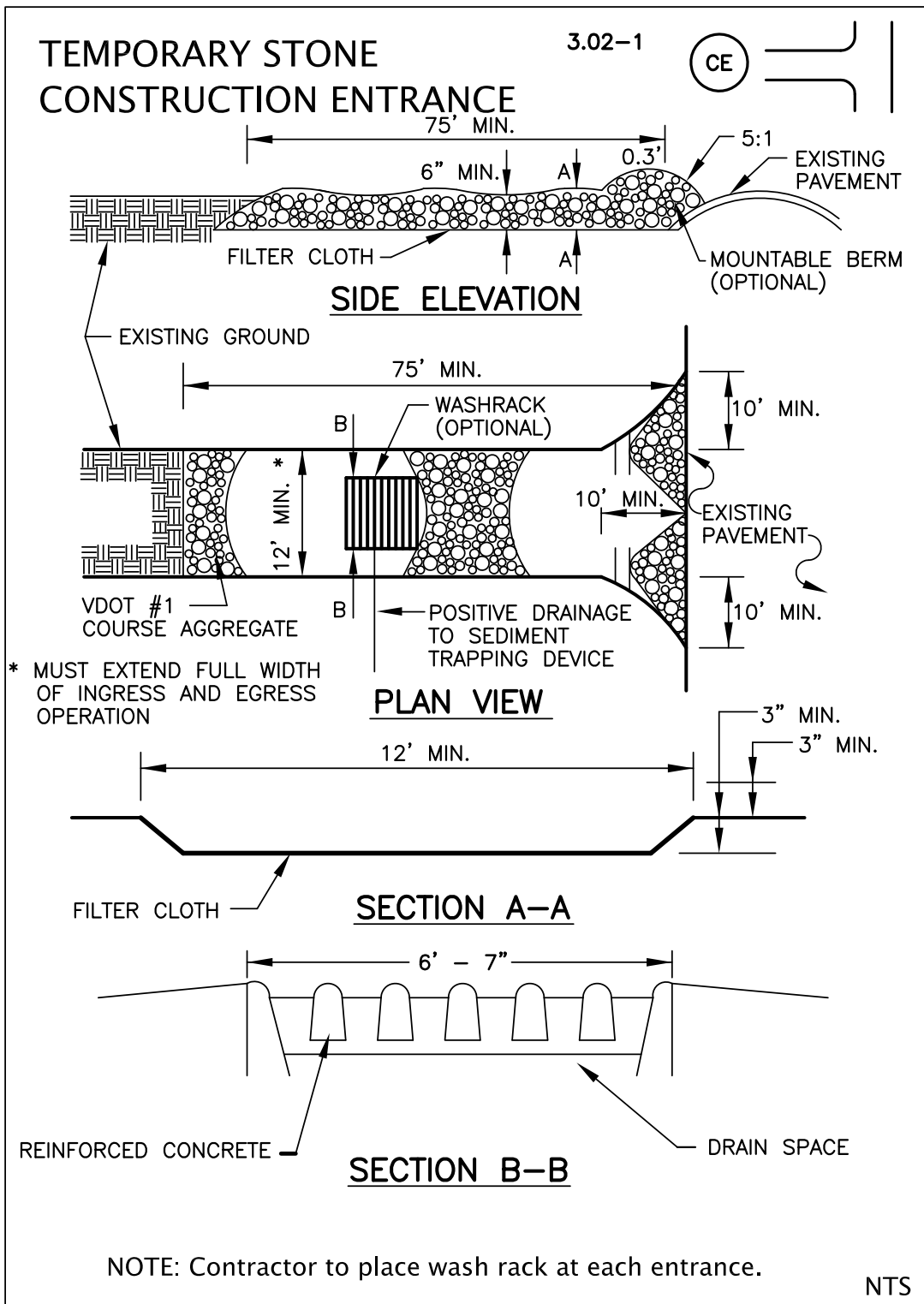
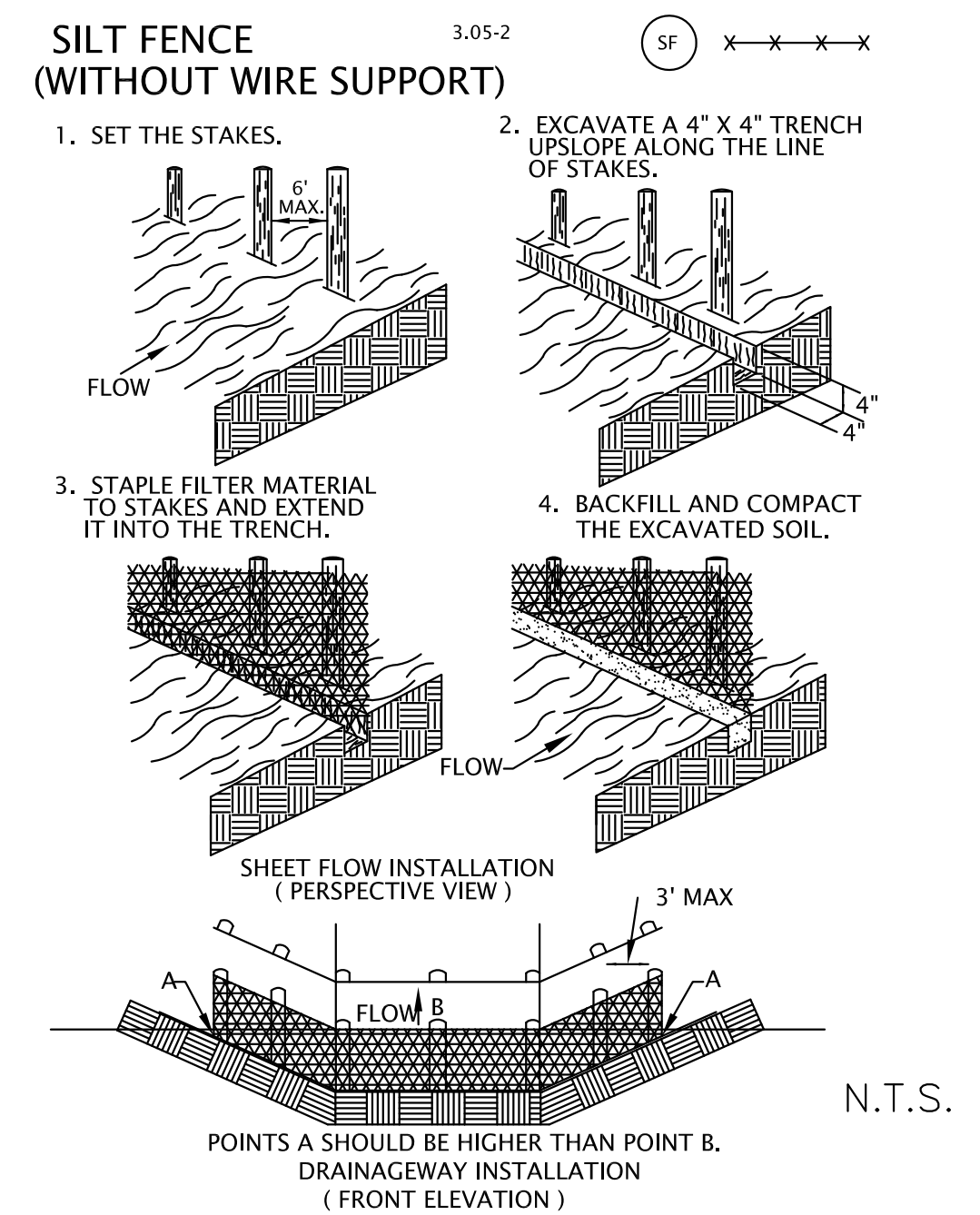
- 330 --- EXISTING CONTOUR HIGH
- 332 --- EXISTING CONTOUR NOMINAL
- - - - - PROPERTY LINE
- - - - - ADJACENT PROPERTY LINE
- W - EXISTING WATER LINE
- SS - EXISTING SANITARY MAIN
- X - X - X - EXISTING FENCE
- HD - EXISTING OVERHEAD LINE
- LCG - LIMITS OF CLEARING AND GRADING
- = = = = = EXISTING STORM
- (Tree Symbol) EXISTING TREE

EROSION AND SEDIMENT CONTROL LEGEND			
NO.	TITLE	KEY	SYMBOL
3.02	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE	[Symbol]
3.05	SILT FENCE	SF	[Symbol]
3.38	TREE PROTECTION	TP	[Symbol]

STOCKPILE NOTE: --

THE GRADING/EXCAVATION CONTRACTOR FOR THE SUBJECT SITE IS REQUIRED TO NOTIFY IN WRITING THE ASSIGNED SITE INSPECTOR REGARDING ANY EXCESS MATERIAL PROPOSED TO BE HAULED OFFSITE PRIOR TO HAULING. THE NOTIFICATION MUST INDICATE THE QUANTITY OF MATERIAL TO BE MOVED OFFSITE, THE IDENTIFICATION OF THE RECEIVING SITE WHERE THE EXCESS WILL BE TAKEN, AND ALL INFORMATION NECESSARY TO SHOW THAT SUCH RECEIVING SITE HAS BEEN PROPERLY PERMITTED AND HAS E&S CONTROLS INSTALLED.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.



NO.	DATE	REVISION	TOWN REVIEW COMMENTS
1.	MAR 2018		

CIVILAND, LLC

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DESIGN BY: FM
CHKD BY: FM
DATE: DEC 2017

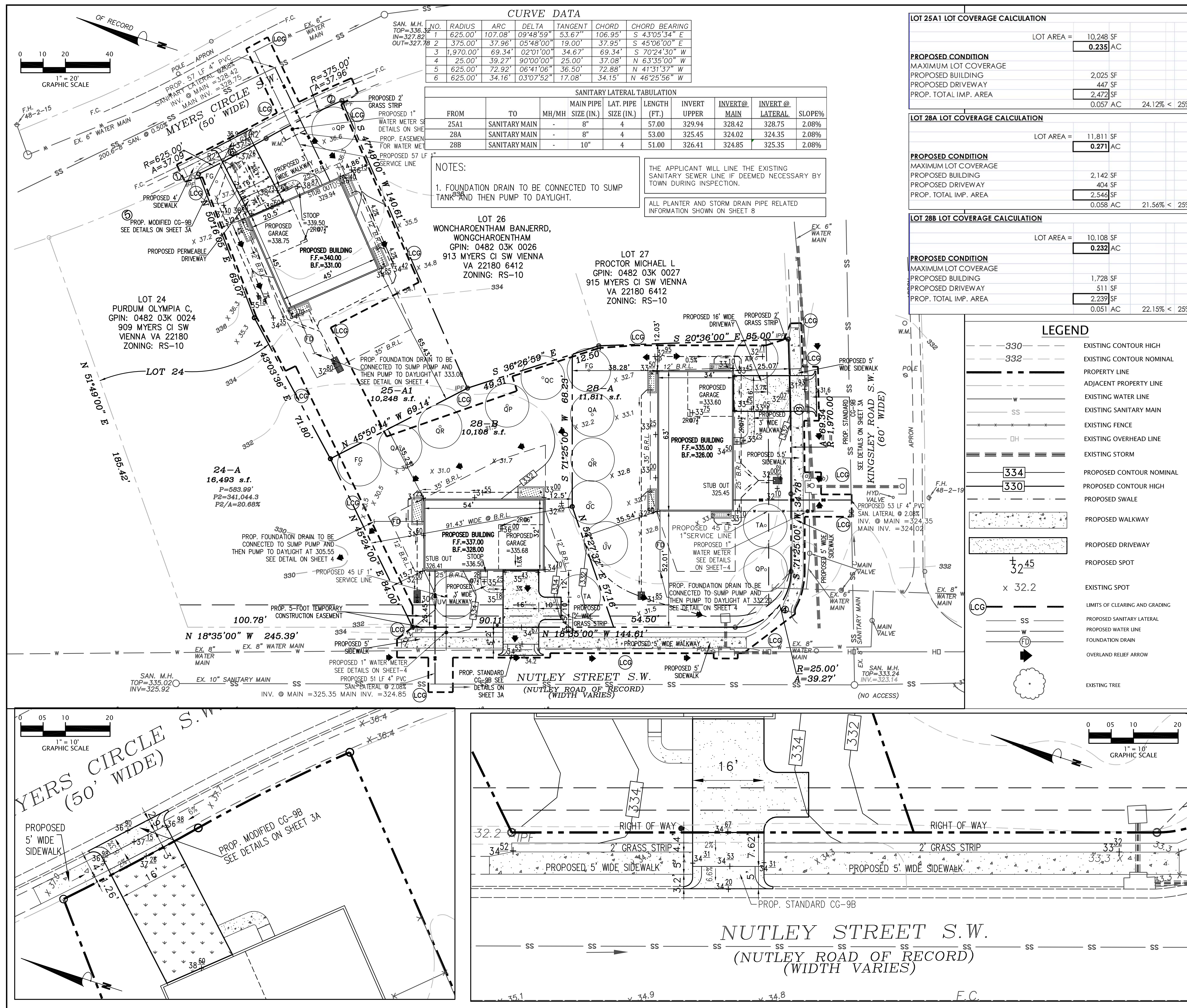
COMMONWEALTH OF VIRGINIA
FARHANG MOJGANI
Lic. No. 16844
PROFESSIONAL ENGINEER

SCALE: AS SHOWN

EXISTING CONDITION, DEMOLITION AND E & S CONTROL PLAN
RESUBDIVISION OF LOTS 25 AND 28 BLOCK K,
SECTION 8 VIENNA WOODS
HUNTER MILL TOWN OF VIENNA DISTRICT
TOWN OF VIENNA, VIRGINIA

SHEET NO. 2 OF 12

FILE NO. 17-14



Tree List for 911 Myers Cir. SW, Vienna, VA		
Additional trees to be planted:		
FG	1 2" caliper American Beech (<i>Fagus grandifolia</i>)	for 300 s. f.
QP	1 2" caliper Willow Oak (<i>Quercus phellos</i>)	for 300 s. f.
Total canopy of planted trees = 600 s. f.		

Tree List for Nutley St. SW, Vienna, VA		
FG	1) 2" caliper American Beech (<i>Fagus grandifolia</i>)	for 300 s. f.
QA	1) 2" caliper White Oak (<i>Quercus alba</i>)	for 300 s. f.
QR	1) 2" caliper Red Oak (<i>Quercus rubra</i>)	for 300 s. f.
QC	1) 2" caliper Scarlet Oak (<i>Quercus coccinea</i>)	for 300 s. f.
UV	2) 2" caliper American Elm (<i>Ulmus americana</i> Valley Forge)	for 300 s. f.
TA	1) 2" caliper American Linden (<i>Tilia americana</i>)	for 300 s. f.
QP	1) 2" caliper Willow Oak (<i>Quercus phellos</i>)	for 300 s. f.
Total canopy of planted trees = 2,100 s. f.		

Tree List for 713 Kingsley Rd. SW, Vienna, VA		
AR	1 2" caliper Red Maple (<i>Acer rubrum</i>)	for 300 s. f.
FG	12" caliper American Beech (<i>Fagus grandifolia</i>)	for 300 s. f.
QA	12" caliper White Oak (<i>Quercus alba</i>)	for 300 s. f.
QR	12" caliper Red Oak (<i>Quercus rubra</i>)	for 300 s. f.
QC	12" caliper Scarlet Oak (<i>Quercus coccinea</i>)	for 300 s. f.
UV	12" caliper American Elm (<i>Ulmus americana</i> Valley Forge)	for 300 s. f.
TA	12" caliper American Linden (<i>Tilia americana</i>)	for 300 s. f.
QP	12" caliper Willow Oak (<i>Quercus phellos</i>)	for 300 s. f.
Total canopy of planted trees = 2,400 s. f.		

Tree Calculations for 911 Myers Cir. SW, Vienna, VA
Prepared by Bill Becker, ISA Certified Arborist # MA-0216A October 23, 2017
Lot size = 10,248 s. f. requiring 2,050 s. f. tree canopy.
Preserved tree canopy = 1,500 s. f.

Tree Calculations for 713 Kingsley Rd. SW, Vienna, VA

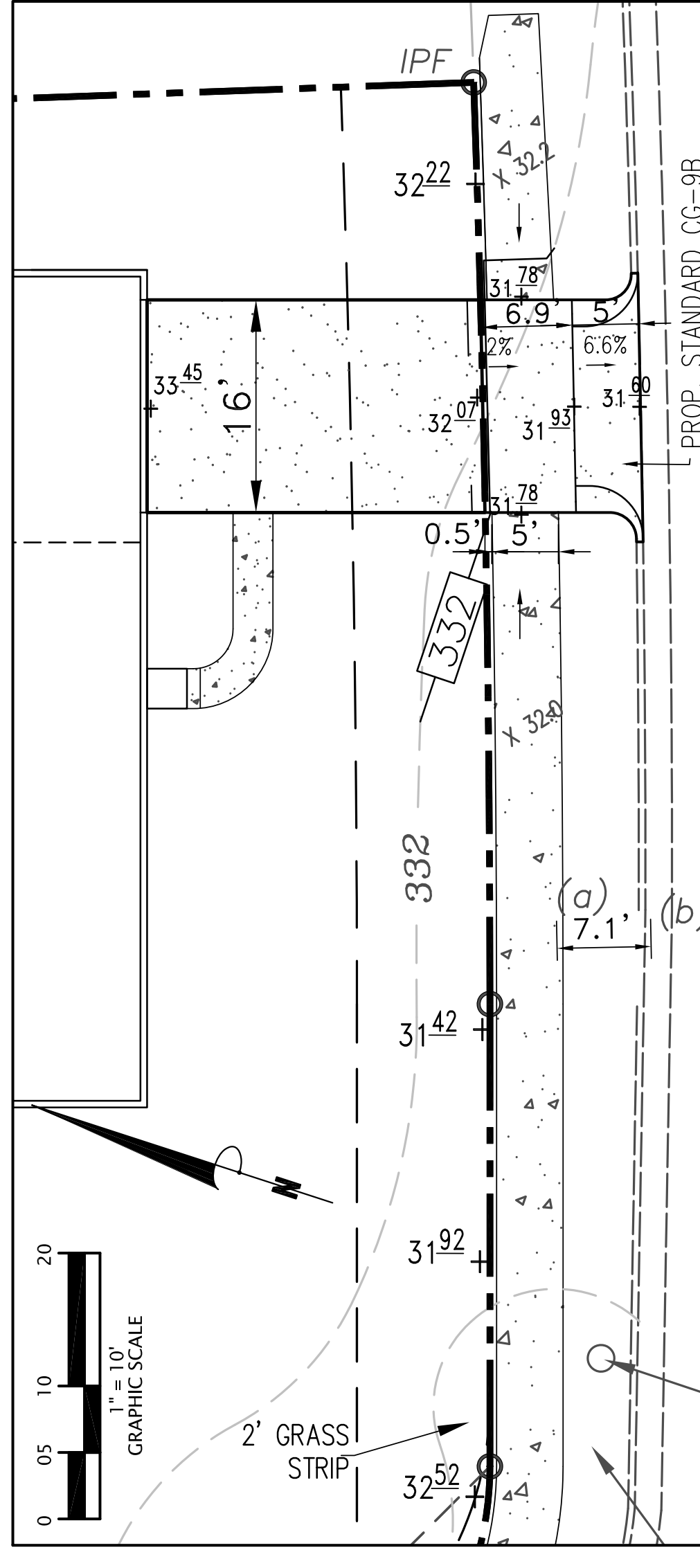
Lot size = 11,811 s. f. requiring 2,362 s. f. tree canopy.
Preserved tree canopy = 0 s. f.

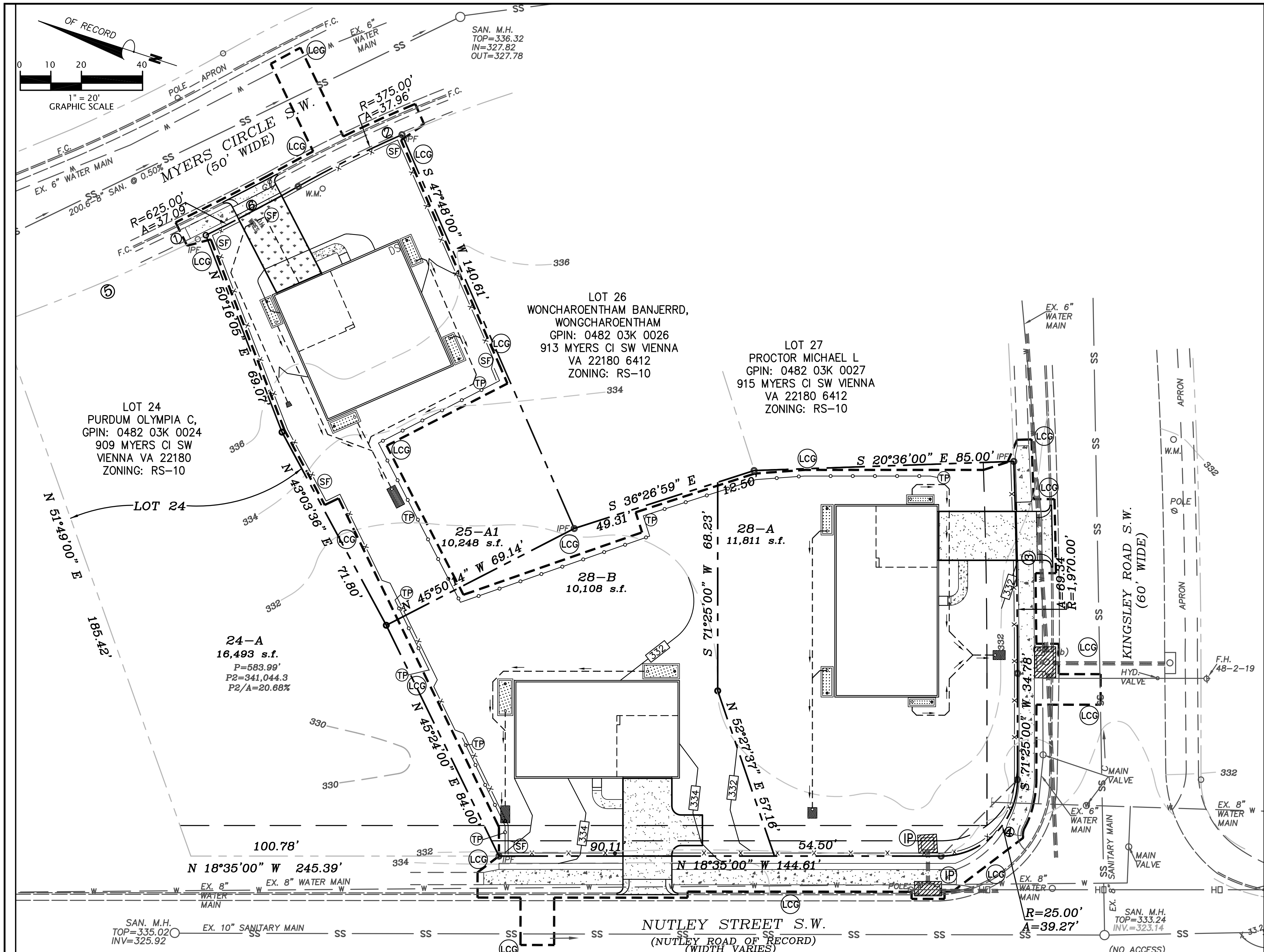
Tree Calculations for [redacted] Nutley St. SW, Vienna, VA

Lot size = 10,108 s. f. requiring 2,022 s. f. tree canopy.
Preserved tree canopy = 0 s. f.

Total for Subdivision

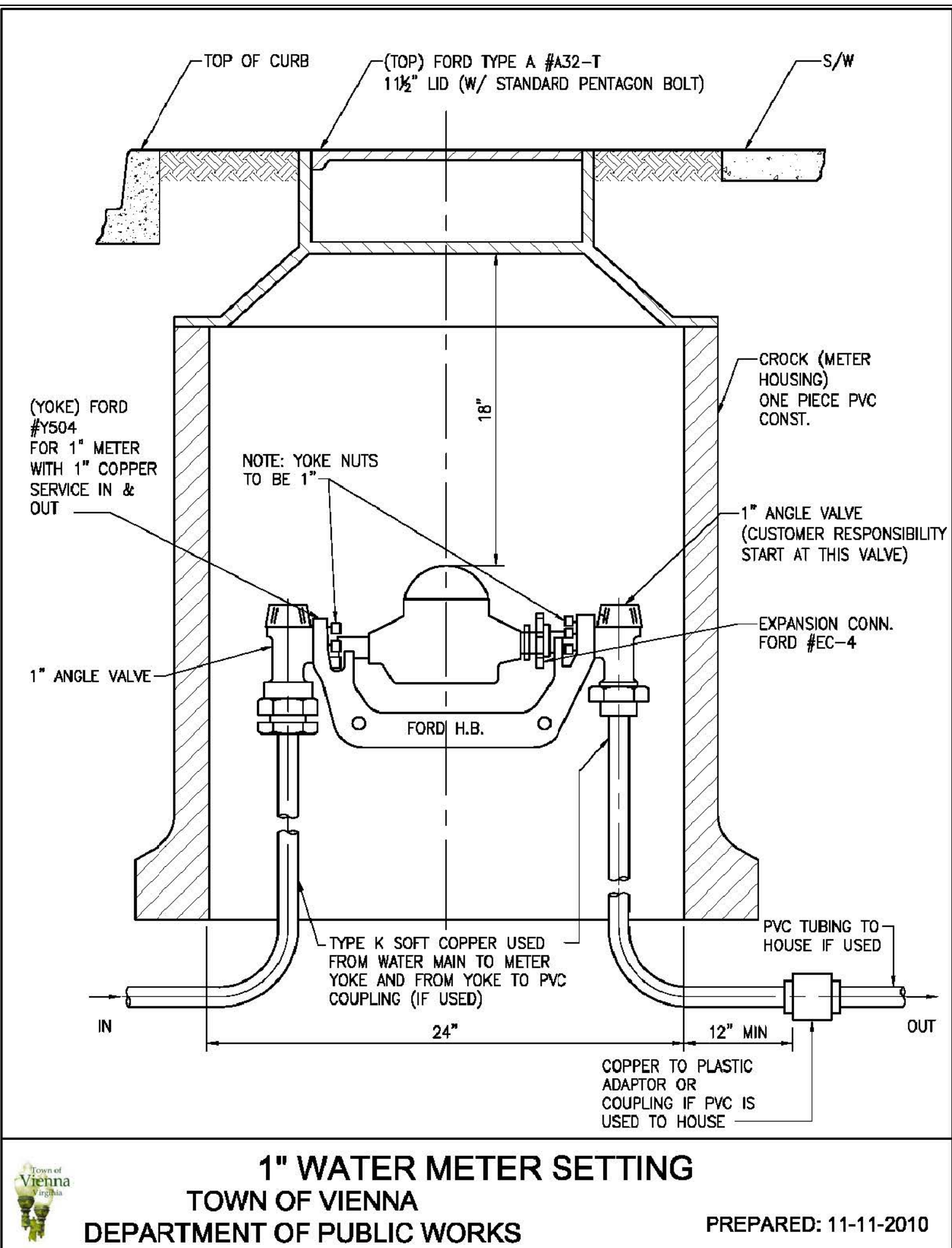
Lot size = 32,167 s. f. requiring 6,434 s. f. tree canopy.
Preserved tree canopy = 1,500 s. f.

[illegible]



LEGEND	
	EXISTING CONTOUR HIGH
	EXISTING CONTOUR NOMINAL
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING WATER LINE
	EXISTING SANITARY MAIN
	EXISTING FENCE
	EXISTING OVERHEAD LINE
	EXISTING STORM
	PROPOSED CONTOUR NOMINAL
	PROPOSED CONTOUR HIGH
	PROPOSED WALKWAY
	PROPOSED DRIVEWAY
	LIMITS OF CLEARING AND GRADING

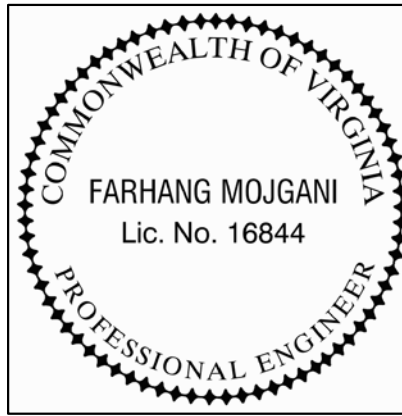
EROSION AND SEDIMENT CONTROL LEGEND			
NO.	TITLE	KEY	SYMBOL
3.02	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE	
3.05	SILT FENCE	SF	
3.38	TREE PROTECTION	TP	
7-12	ROOT PRUNING	RP	
3.07	INLET PROTECTION	IP	



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DESIGN BY: FM
CHKD BY: FM
DATE: DEC 2017



SCALE: AS SHOWN

E & S PHASE-II
RESUBDIVISION OF LOTS 25 AND 28 BLOCK K,
SECTION 8 VIENNA WOODS
HUNTER MILL TOWN OF VIENNA DISTRICT
TOWN OF VIENNA, VIRGINIA

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PLAN PROPOSES TO DEMOLISH EXISTING BUILDING, DECK, WALKWAY, STEPS AND DRIVEWAY ON LOT 25 AND LOT 28.

IT IS ALSO PROPOSED TO SUBDIVIDE THE LOT25 AND LOT28 INTO THREE (3) LOT AS LOT 25A1, LOT 28A AND LOT 28B. THE PLAN PROPOSED TO CONSTRUCT A HOUSE ON EACH LOT WITH ASSOCIATED DRIVEWAY AND WALKWAY. THE PROJECT IS ANTICIPATED TO TAKE APPROXIMATELY 9 MONTHS AND CONSTRUCTION IS EXPECTED TO BEGIN AS SOON AS PERMITS ARE OBTAINED.

ONSITE DISTURBED AREA IS 28,600 SF AND OFFSITE DISTURBED AREA IS 4,600 SF.

EXISTING PROPERTY:

THE EXISTING PROPERTY (LOT25 AND LOT28) CONSISTS OF BUILDING, DECK, WALKWAY, STEPS, DRIVEWAY, GRAVEL AND SHED. THE SITE HAS AVERAGE SLOPE OF 6% IN THE EAST AND 3-5% IN THE WEST.

ADJACENT PROPERTY

THE SITE IS BORDERED BY MYERS CIRCLE S.W. IN THE NORTH AND NORTH-EAST, NUTLEY STREET S.W. IN THE WEST, KINGSLEY STREET S.W. IN THE SOUTH AND RS-10 PROPERTIES ON TO THE OTHER SIDES.

OFFSITE AREA

OFFSITE SIDEWALK IMPROVEMENT ALONG THE RIGHT OF WAY INFRONT OF LOTS 25A1, 28A AND 28B HAVE BEEN PROPOSED. WATER AND SANITARY TIE UPS ARE ALSO PROPOSED.

CRITICAL EROSION AREAS

NO CRITICAL AREAS HAVE BEEN IDENTIFIED ON THE SITE.

SOIL

REFER TO SHEET 1 SOILS MAP AND DESCRIPTION.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROLS SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). THESE STANDARDS SHALL BE ADHERED TO UNLESS OTHERWISE AUTHORIZED BY AN AGENT OF THE GOVERNING COUNTY AGENCY.

STRUCTURAL PRACTICES

1. TEMPORARY CONSTRUCTION ENTRANCE – 3.02
EXISTING DRIVEWAY WILL BE USED AS CONSTRUCTION ENTRANCE WITH AN ACCESS FROM KINGSLEY STREET S.W. ALL MUD AND DEBRIS SHALL BE REMOVED FROM CONSTRUCTION VEHICLES PRIOR TO RE-ENTERING THE STREET. SOURCE OF WATER IS AVAILABLE ONSITE.

2. TREE PRESERVATION AND PROTECTION
TREE PRESERVATION AND PROTECTION MEASURES SHALL BE ADOPTED AS SHOWN ON THE PLAN TO PROTECT THE TREES IN THE PLOT.

3. SILT FENCE – 3.05
SILT FENCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN TO FILTER SEDIMENT LADEN SHEET FLOW FROM LEAVING THE DISTURBED AREA.

4. INLET PROTECTION – 3.07
A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN DROP INLET OR CURB INLET. THE PURPOSE IS TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.

VEGETATIVE PRACTICES

1. TEMPORARY SEEDING - 3.31
ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITHIN 14 DAYS WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING.
2. PERMANENT STABILIZATION-3.32
ALL AREAS DISTURBED BY CONSTRUCTION NOT RECEIVING PAVEMENT SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING IN ACCORDANCE WITH MINIMUM STANDARD #3.32. WHEN THE SEDIMENT HAS BUILT UP ALL EROSION CONTROL MEASURES SHALL BE CHECKED DAILY AND AFTER EVERY SIGNIFICANT RAINFALL.

MAINTENANCE OF PERIMETER CONTROLS

1. THE SILT FENC SHALL BE CLEANE TO ONE HALF OF THE HEIGHT OF THE SILT FENCE OR WHEN "BULGES" APPEAR.

THE FENCE SHALL ALSO BE CHECKED DAILY FOR RIPS TEARS, OR FALLEN SECTIONS. DAMAGED FENCE SHALL BE REPLACED IMMEDIATELY.

2. THE RESPONSIBLE LAND DISTURBER HAS PRIMARY RESPONSIBILITY FOR FIELD INSPECTION TO ENSURE THAT THE E&S CONTROL MEASURES SHOWN ON APPROVED GRADING PLANS OR SITE AND SUBDIVISION PLANS ARE ACTUALLY PROVIDED. FIELD INSPECTORS ARE AUTHORIZED TO MAKE MINOR MODIFICATIONS TO THE REQUIREMENTS SHOWN ON PLANS WHERE NECESSARY TO CONFORM TO FIELD CONDITIONS OR TO ENSURE EFFECTIVE CONTROL. MAJOR CHANGES SHALL BE CLEARED WITH THE ENVIRONMENTAL AND FACILITIES REVIEW DIVISION.

CONSTRUCTION SEQUENCE

LIMITS OF CLEARING AND PHASE I CONTROLS SHALL BE IN PLACE AND APPROVED BY THE COUNTY INSPECTOR PRIOR TO COMMENCING ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITIES. COUNTY INSPECTOR'S APPROVAL IS REQUIRED PRIOR TO PHASE II CONSTRUCTION.

PHASE I IMPLEMENTATION

1. EXISTING DRIVEWAY TO BE USED AS CONSTRUCTION ENTRANCE. ORGANIZE SOURCE OF WATER ONSITE.
2. CLEAR AREAS NECESSARY FOR THE INSTALLATION OF PHASE I PERIMETER CONTROLS.
3. INSTALL SILT FENCE AND TREE PROTECTION.
4. DEMOLISH EXISTING BUILDING, DECK, WALKWAY, STEPS AND DRIVEWAY.
5. OBTAIN TOWN INSPECTOR'S APPROVAL OF PHASE I IMPLEMENTATION AND PERMISSION TO PROCEED TO PHASE II.

PHASE II IMPLEMENTATION

1. OBTAIN INSPECTOR'S APPROVAL TO BEGIN PHASE II CONSTRUCTION ACTIVITIES.
2. COMMENCE CONSTRUCTION OF PROPOSED UTILITIES.
3. COMMENCE CONSTRUCTION OF HOUSE WITH ASSOCIATED PORCH, DRIVEWAY AND WALKWAY.
4. INSTALL PLANTERS.
5. REMOVE EXISTING DRIVEWAY USED AS CONSTRUCTION ENTRANCE.
6. ONCE ALL AREAS HAVE BEEN STABILIZED, PERIMETER CONTROLS MAY BE REMOVED FROM THE GRADE SITE, WITH THE APPROVAL OF THE COUNTY INSPECTOR.

Lime and Fertilizer Application Specs.

Lime 2 tons/acre Pulverized Agricultural Grade Limestone

Fertilizer
Mixed Grasses & Legumes 1000 lbs/acre 10-20-10 or Equiv.
Legume Stands Only 1000 lbs/acre 5-20-10 (23 lbs/acre)
Grass Stands Only 1000 lbs/acre 10-20-10 or Equiv.

Seeding Mixtures

Minimum Care Lawn
- Kentucky 31 or Turf-Type Tall Fescue OR 175-200 lbs/acre
- Common Bermudagrass** 75 lbs/acre

High Maintenance Lawn
- Kentucky 31 or Turf-Type Tall Fescue OR 200-250 lbs/acre
- Hybrid Bermudagrass (seed)** OR 40lbs/acre (unhulled)
30lbs/acre (hulled)

- Hybrid Bermudagrass
(by other establishment method see Std & Spec 3.34)

General Slope (3:1 or less)
- Kentucky 31 Tall Fescue 128lbs/acre
- Red Top Grass 2lbs/acre
- Seasonal Nurse Crop* 20 lbs/acre

Low Maintenance (Steeper than 3:1)
- Kentucky 31 Tall Fescue 93-108 lbs/acre
- Common Bermuda Grass ** 0-15 lbs/acre
- Red Top Grass 2 lbs/acre
- Seasonal Nurse Crop* 20 lbs/acre
- Sericea Lespedeza** 20lbs/acre
150lbs/acre

* Use seasonal nurse crop in accordance with seeding dates stated below:

February, March through April Annual Rye
May 1st through August Foxtail Millet
September, October through November 15th Annual Rye
November 16th through January Winter Rye

** May through October, use hulled seed. All other seeding periods, use unhulled seed. Weeping Lovegrass may be added to any slope or low maintenance mix during warmer seeding periods; add 10-20 lbs/acre in mixes.

Lime and Fertilizer Application Specs for Temporary Seeding

pH Test Rec. Application of Ag. Limestone

below 4.2 3 tons per acre
4.2 to 5.2 2 tons per acre
5.2 to 6 1 ton per acre

Fertilizer shall be applied @ 600 lbs/acre of 10-20-10 (14 lbs/1000sf) or equiv.

Temporary Seeding Application Specifications

Planting Dates Species (lbs/acre)
Sept. 1 - Feb. 15 50/50 Mix of Annual Ryegrass & Cereal (winter) Ryegrass 50-100

Feb. 16 - Apr 30 Annual Ryegrass 60-100

May 1 - Aug 31 German Millet 50

GENERAL NOTES

1. EROSION AND SEDIMENT CONTROLS ARE NECESSARY IN ORDER TO PREVENT TRANSPORTATION OF SEDIMENTS DOWNSTREAM.

INSTRUCTION TO THE CONTRACTOR

- ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL & DUST CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL 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 ACTIVITIES, 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 INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- 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: 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 TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

GENERAL LAND CONSERVATION NOTES

1. NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED SHALL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED 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 7 DAYS AFTER BACKFILL. NO MORE THAN 500' SHALL BE OPEN AT ANYONE TIME.
4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED WITHIN 7 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 48HR) AFTER COMPLETION OF GRADING. STRAW OR HAY MULCH IS REQUIRED. ALL SOIL STOCKPILES SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER GRADING.
6. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAINTAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.
7. ANY DISTURBED AREA NOT COVERED BY 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/BA) AND OVER-SEEDED BY APRIL 15.
8. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

MINIMUM STANDARDS

#1: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR MORE THAN THIRTY DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

#2: DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

#3: A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREA NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

#4: SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPLOPE LAND DISTURBANCE TAKES PLACE.

#5: STABILIZATION MEASURES SHAL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

#6: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

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

#8: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED 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 MANOR 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.

TEMPORARY SEEDING

Selection of plants should be based on the specific site and season and per VESCH Tables 3.31-B&C
Liming requirements should be based on Table 3.31-A of VESCH
Fertilizers shall be applied as 600 lbs per acre. Fertilizer shall be incorporated into top 2 -4" of soil.
Seed shall be evenly applied and small grains shall be planted no more than 1 1/2 inches deep.
Seeding made in fall for winter cover and during hot summer months shall be mulched.

PERMANENT SEEDING

Permanent vegetation cover must meet the requirements of minimum standards #3 (MS #3)
Provide a note which describe the procedure followed in selecting plant material. The selection should be based on Tables 3.32-A & B depending on climate, topography, soils and site conditions.
The planting soil must have enough fine grained soil, sufficient pore space, sufficient depth and free from toxic or excessive quantities of roots and shall be applied in accordance with std. 3.30.

SODDING

Sodded areas shall be brought to final grade in accordance with the approved plans. Soil tests should be made to determine the exact requirements for lime and fertilizer. Prior to laying sod, soil surface shall be clear of trash, debris and large objects. Quality of soil shall be state certified and ensure genetic purity and high quality. Sod shall not be laid in excessively wet or dry weather and be delivered and installed with 36 hrs. Sod should not be laid on frozen soil surface and shall be installed per Plate 3.33-I of VESCH

DUST CONTROL

Provision for dust control shall be made in accordance with STD. and SPEC. 3.39 of VESCH.

TABLE 3.32-D
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

LAND USE	SEED ¹ SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹	95-100%
	Perennial Ryegrass	0-5%
	Kentucky Bluegrass ¹	0-5%
		TOTAL: 175-200 lbs.
High-Maintenance Lawn	Tall Fescue ¹	TOTAL: 200-250 lbs.
General Slope (3:1 or less)	Tall Fescue ¹	128 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ²	20 lbs.
		TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ¹	108 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ²	20 lbs.
	Crownvetch ³	20 lbs.
		TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at <http://sudan.cses.vt.edu/him/Turf/turf/publications/publications2.html>

2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

February 16th - April Annual Rye
May 1st - August 15th Foxtail Millet
August 16th - October Annual Rye
November - February 15th Winter Rye

3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flupacea is used, increase rate to 30 lbs./acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40

FERTILIZER & LIME

- Apply 10-20-10 fertilizer at a rate of 500 lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:

- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by diskimg or by other means.
- When applying Slowly Available Nitrogen, use rates available in *Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites* at <http://www.dcr.state.va.us/saw/es&s.htm#pubs>

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

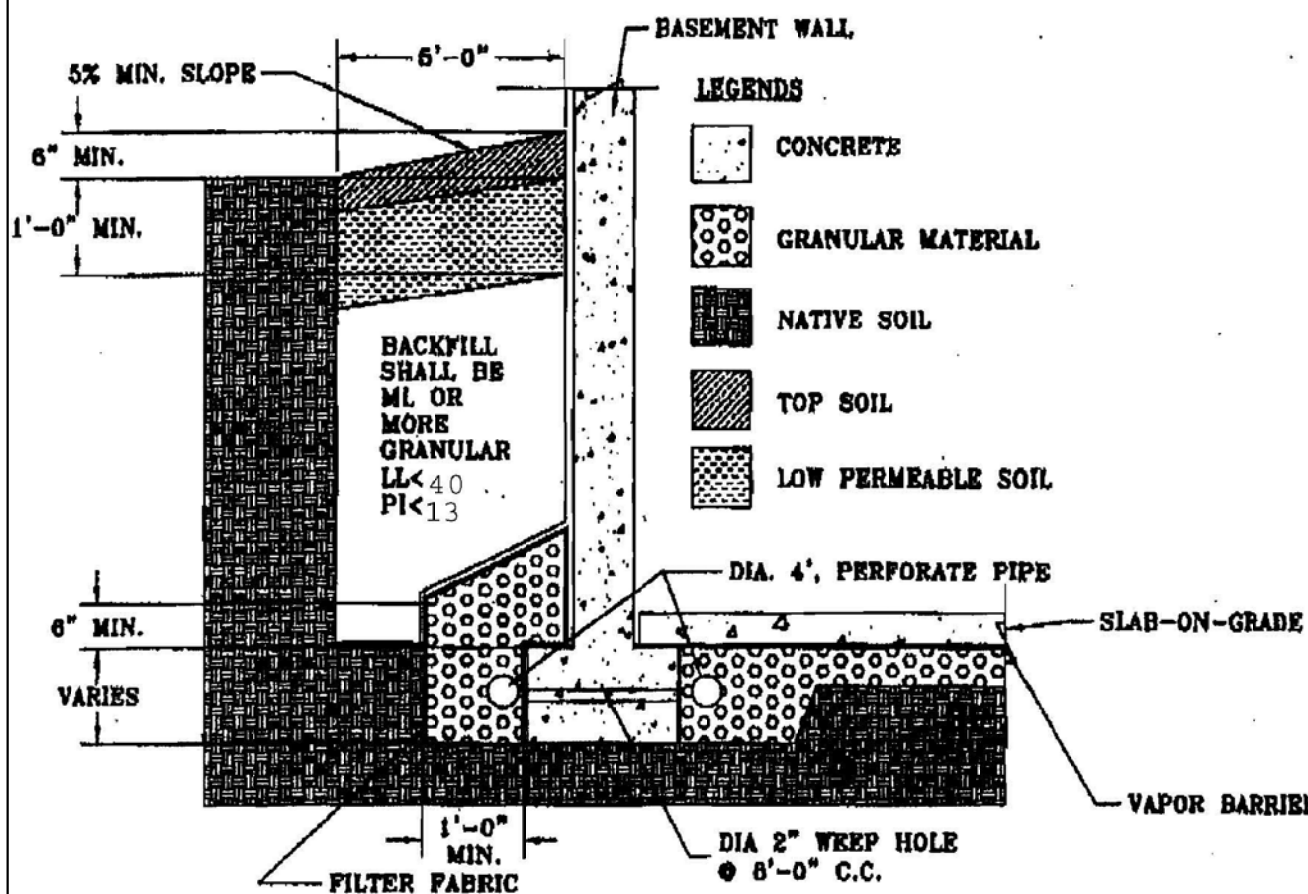
FERTILIZER & LIME

- Apply 10-10-10 fertilizer at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:

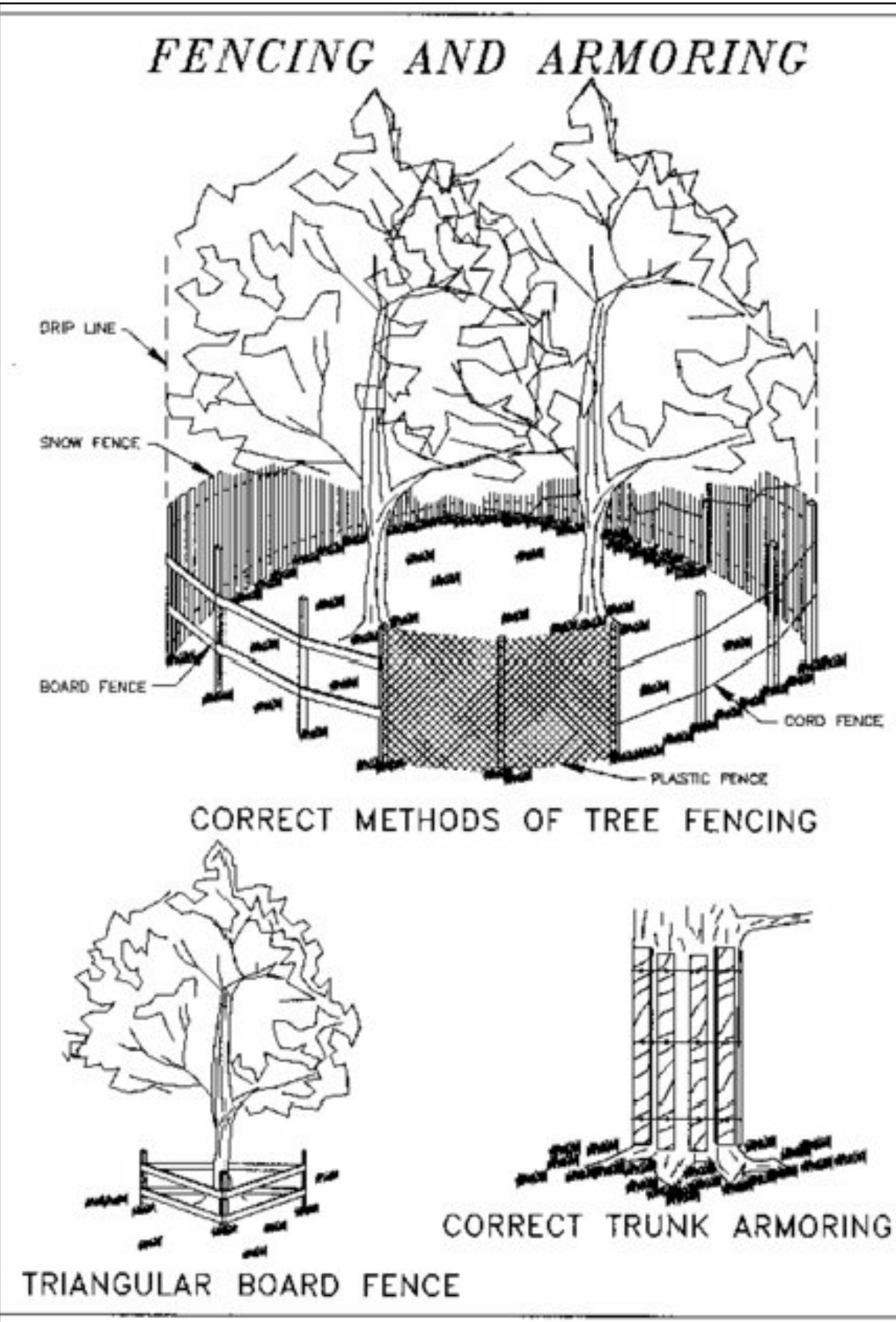
- 1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- 2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by diskimg or by other means.
- 3 - When applying Slowly Available Nitrogen, use rates available in *Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites* at <http://www.dcr.state.va.us/saw/es&s.htm#pubs>

FOUNDATION DRAINAGE DETAIL

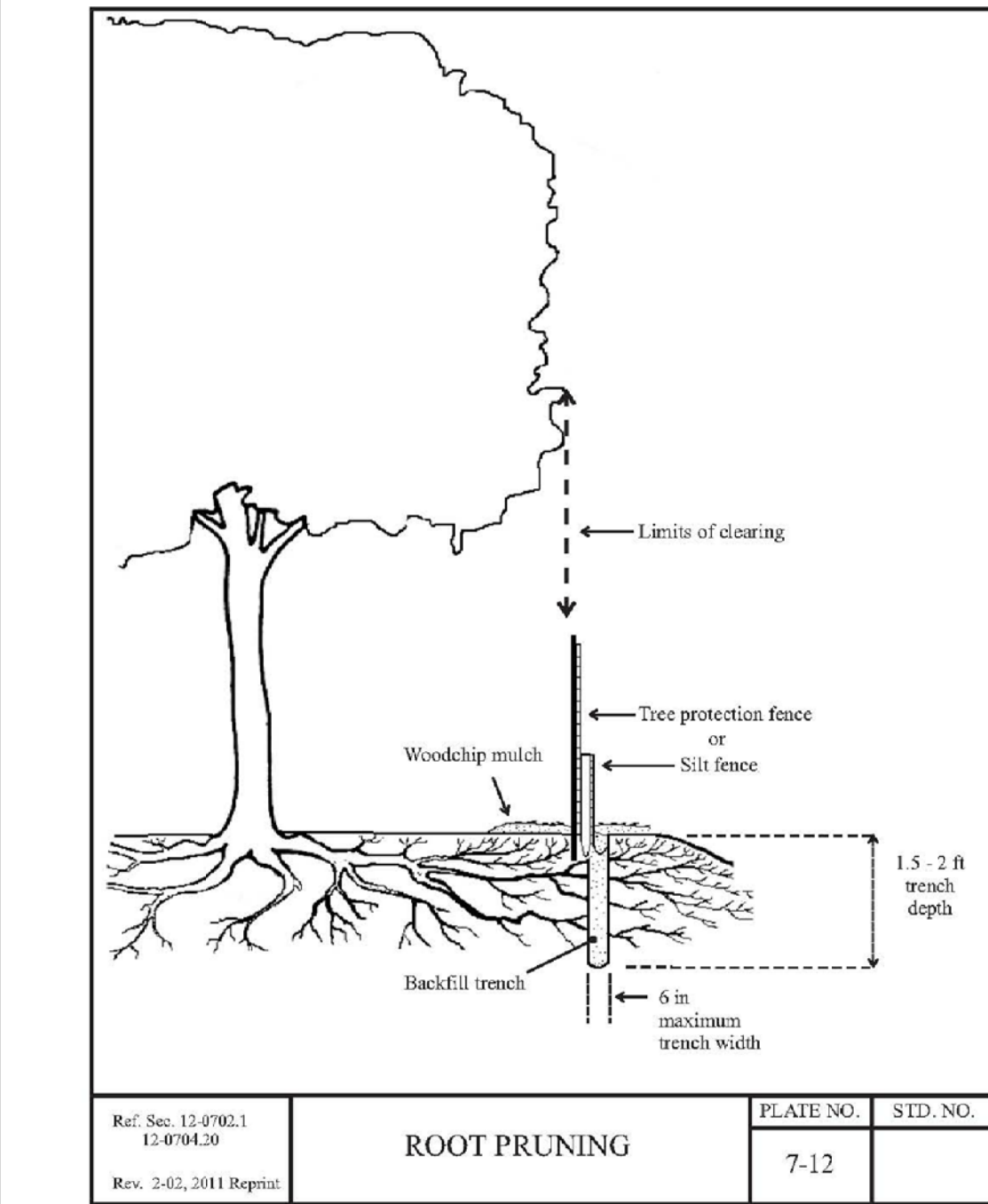


NOTES

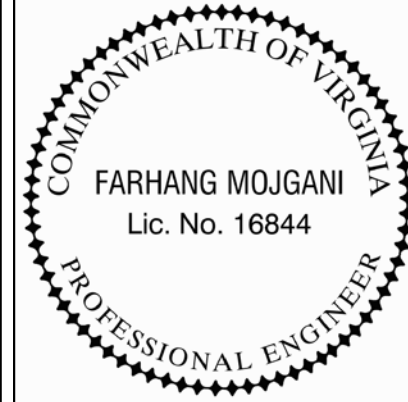
1. Foundation drain discharge shall be day lighted by gravity or ejected by sump pump.
2. Foundation drain system shall not be connected to storm sewer, unless the gradient for the 100-yr storm is at least 1 ft below the lowest floor elevation at the point of connection.
3. Roof drains must discharge at least 5 ft away from the foundation walls.
4. Wall and slab reinforcing steel shall be per structural drawings.



FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



CIVILAND, LLC

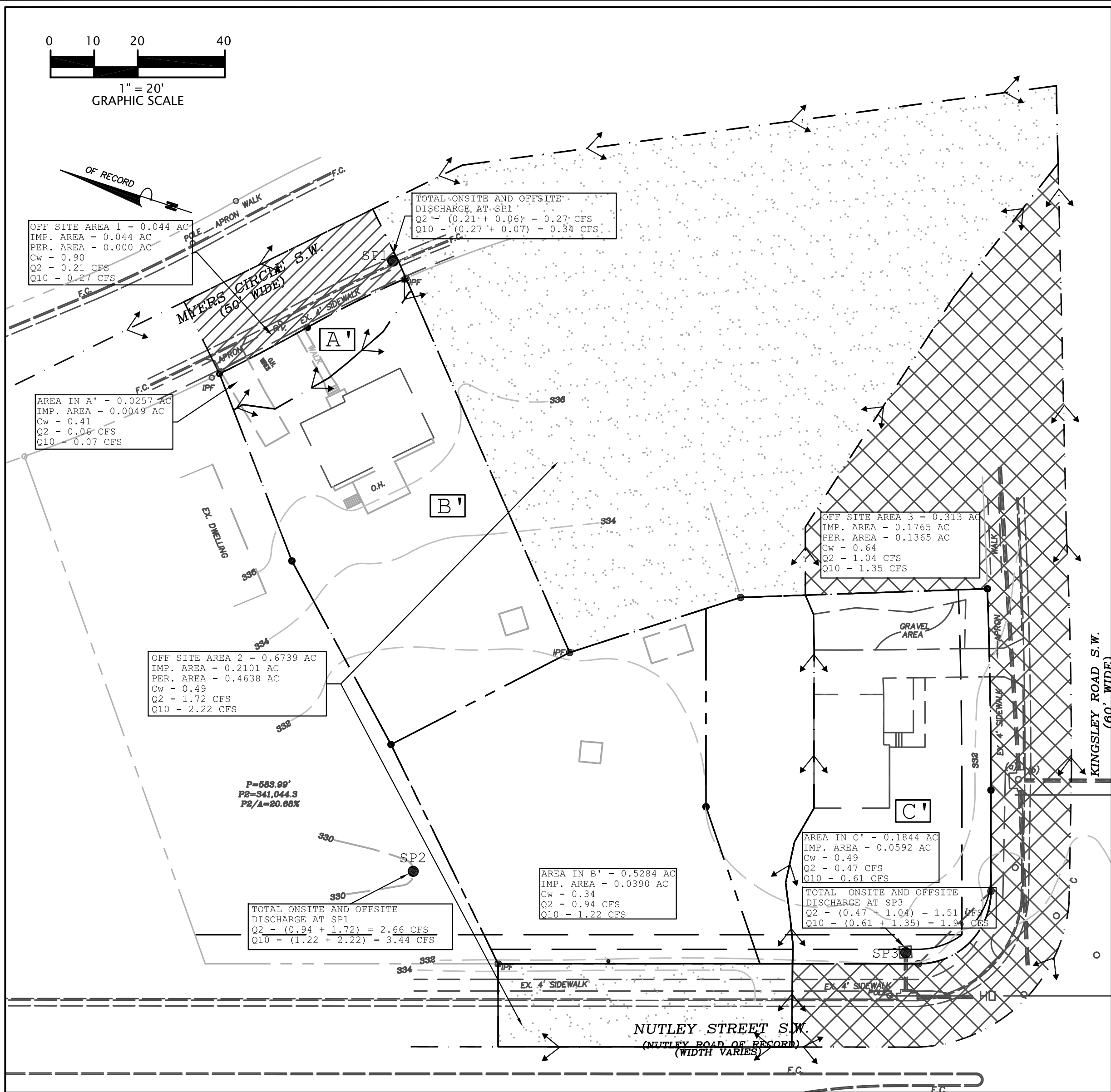


SCALE: AS SHOWN

E & S DETAILS AND NARRATIVE
RESUBDIVISION OF LOTS 25 AND 28 BLOCK K,
SECTION 8 VIENNA WOODS
HUNTER MILL TOWN OF VIENNA DISTRICT
TOWN OF VIENNA, VIRGINIA

SHEET NO. 5 OF 12

FILE. NO. 17-14



ONSITE IMPERVIOUS AREA SUMMARY CALCULATIONS			
LOT AREA =		32,167 SF	0.7385 AC
EXISTING CONDITION			
EXISTING BUILDING	1,276 SF		
EXISTING WALKWAY	103 SF		
EXISTING DRIVEWAY	281 SF		
EXISTING SHED	64 SF		
LOT #25A			
EXISTING BUILDING	982 SF		
EXISTING WALKWAY	145 SF		
EXISTING DRIVEWAY	1,452 SF		
LOT #28B			
EXISTING SHED	190 SF		
EXISTING TOTAL IMP. AREA		4,493 SF	0.1031 AC
			13.97%
PROPOSED CONDITION			
LOT #25A			
PROPOSED BUILDING AND STOOP	2,025 SF		
PROPOSED DRIVEWAY	447 SF		
PROPOSED WALKWAY	43 SF		
LOT #28A			
PROPOSED BUILDING AND STOOP	2,142 SF		
PROPOSED DRIVEWAY	404 SF		
PROPOSED WALKWAY AND STEPS	58 SF		
LOT #28B			
PROPOSED BUILDING AND STOOP	1,728 SF		
PROPOSED DRIVEWAY	407 SF		
PROPOSED WALKWAY AND STEPS	45 SF		
PROPOSED TOTAL IMP. AREA		7,299 SF	0.1676 AC
			22.69%
INCREASE		2,806 SF	0.064 AC

OFFSITE DRAINAGE AREA LEGEND

	OFFSITE AREA 1
	OFFSITE AREA 2
	OFFSITE AREA 3

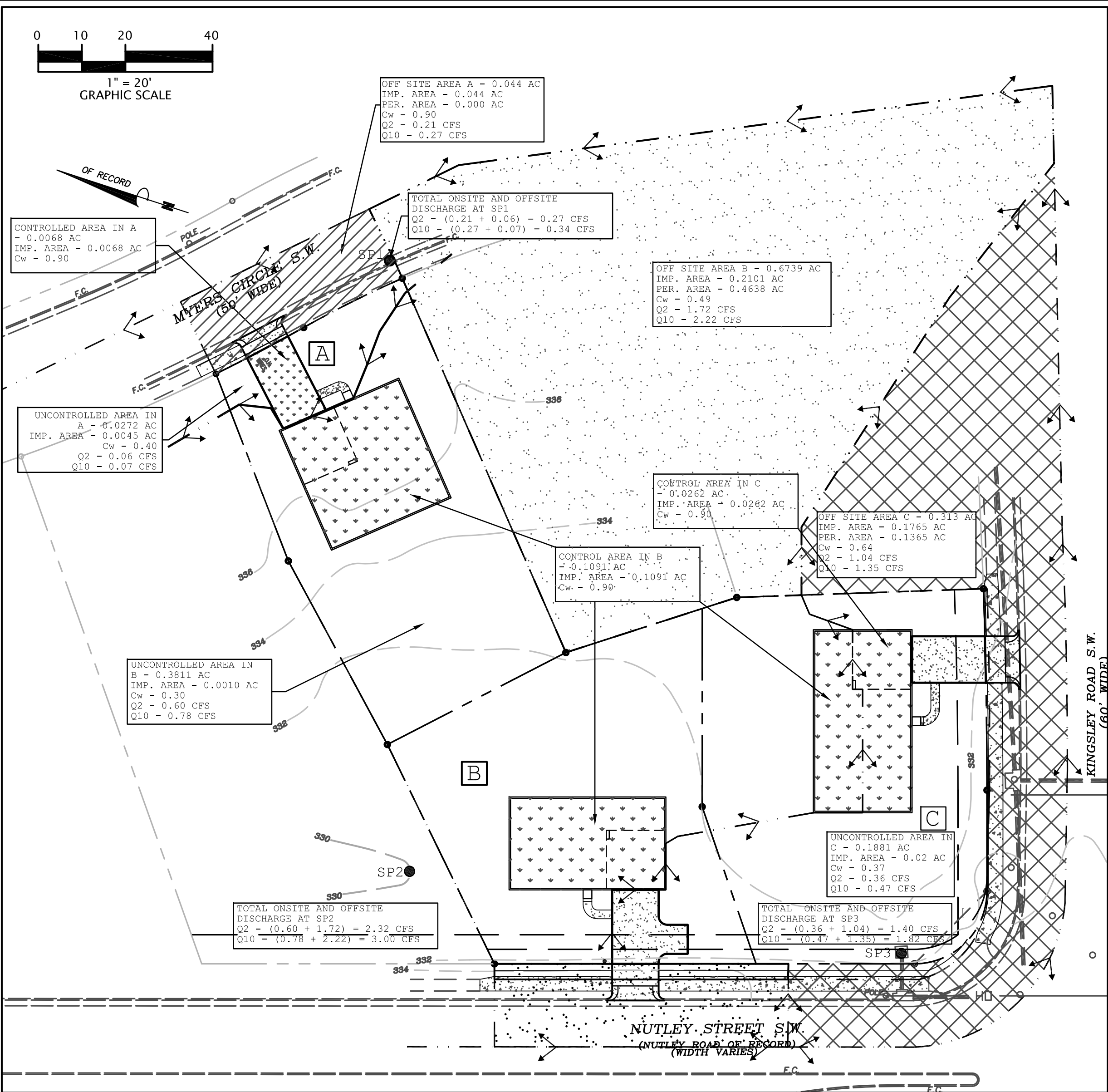


EXHIBIT - EXISTING IMPERVIOUS AREA AND ONSITE DRAINAGE DIVIDE MAP

EXHIBIT - PROPOSED IMPERVIOUS AREA AND ONSITE DRAINAGE DIVIDE MAP

PRE DEVELOPED CONDITION :

THE TOTAL SITE AREA IS 0.7385 AC.

AREA "A" OF 0.0257 AC SHEET FLOWS TO THE NORTH EAST TOWARDS THE CURB AND GUTTER ALONG MYERS CIRCLE S.W. THE RUNOFF FURTHER FLOWS TO THE EAST IN THE CURB AND GUTTER. THE RUNOFF EVENTUALLY GETS INTERCEPTED BY THE EXISTING STORM NETWORK AND JOINS HUNTERS POND.

AREA "B" OF 0.5284 AC SHEET FLOWS TO THE WEST TOWARDS THE EXISTING SWALE ON ADJACENT PROPERTY 24A. THE RUNOFF FURTHER FLOWS TO THE WEST TOWARDS THE CURB AND GUTTER ALONG NUTLEY ST S.W. THE RUNOFF EVENTUALLY GETS INTERCEPTED BY THE EXISTING STORM NETWORK AND JOINS HUNTERS POND.

AREA "C" OF 0.1844 AC SHEET FLOWS TO THE SOUTH TOWARDS THE EXISTING ONSITE INLET AND TOWARDS THE EXISTING INLET ON KINGSLEY ROAD S.W. THE RUNOFF FURTHER FLOWS DOWNSTREAM IN A CLOSED EXISTING STORM NETWORK.

EROSION AND SEDIMENT CONTROL MEASURES ARE PROVIDED TO PROTECT PUBLIC STREET AND ADJACENT PROPERTIES FROM SEDIMENTATION.

PHASE 1 OUTFALL STATEMENT:

DISTURBED AREA IN SUBAREA A SHEET FLOWS TO THE NORTH EAST TOWARDS THE CURB AND GUTTER ALONG MYERS CIRCLE S.W. DISTURBED AREA IN SUBAREA B SHEET FLOWS TO WEST TOWARDS THE EXISTING SWALE ON ADJACENT PROPERTY 24A. DISTURBED AREA IN SUBAREA C SHEET FLOWS TO THE SOUTH TOWARDS THE EXISTING ONSITE INLET AND TOWARDS THE EXISTING INLET ON KINGSLEY ROAD S.W.

THE DISTURBED AREA IS SURROUNDED BY SILT FENCE. PROPERLY CONSTRUCTED AND MAINTAINED FENCE WILL DETAIN THE PHASE I RUNOFF. SO IN OUR OPINION THE PHASE I OUTFALL IS ADEQUATE.

POST DEVELOPED CONDITION:

THE TOTAL SITE AREA IS 0.7385 AC.

AREA "A" OF 0.034 AC SHEET FLOWS TO THE NORTH EAST TOWARDS THE CURB AND GUTTER ALONG MYERS CIRCLE S.W. THE RUNOFF FURTHER FLOWS TO THE EAST IN THE CURB AND GUTTER. THE RUNOFF EVENTUALLY GETS INTERCEPTED BY THE EXISTING STORM NETWORK AND JOINS HUNTERS POND.

OUT OF AREA 0.034 AC, 0.0068 AC OF IMPERVIOUS AREA IS CONTROLLED AND DETAINED BY PERMEABLE PAVER. SO THERE IS NO INCREASE IN RUNOFF IN PROPOSED DEVELOPMENT DUE TO DETENTION. THUS, THE PROPOSED DEVELOPMENT WILL NOT HAVE ANY ADVERSE EFFECTS ONTO THE DOWNSTREAM PROPERTIES.

AREA "B" OF 0.4902 AC SHEET FLOWS TO THE WEST TOWARDS THE EXISTING SWALE ON ADJACENT PROPERTY 24A. THE RUNOFF FURTHER FLOWS TO THE WEST TOWARDS THE CURB AND GUTTER ALONG NUTLEY ST S.W. THE RUNOFF EVENTUALLY GETS INTERCEPTED BY THE EXISTING STORM NETWORK AND JOINS HUNTERS POND.

OUT OF AREA 0.4902 AC, 0.1091 AC OF IMPERVIOUS AREA IS CONTROLLED AND DETAINED BY THE PLANTERS. DUE TO PROPOSED DEVELOPMENT THE RUNOFF DECREASES BY 0.34 AND 0.44 CFS IN 2 AND 10YR RESPECTIVELY. THUS, THE PROPOSED DEVELOPMENT WILL NOT HAVE ANY ADVERSE EFFECTS ONTO THE DOWNSTREAM PROPERTIES.

AREA "C" OF 0.2143 AC SHEET FLOWS TO THE SOUTH TOWARDS THE EXISTING ONSITE INLET AND TOWARDS THE EXISTING INLET ON KINGSLEY ROAD S.W. THE RUNOFF FURTHER FLOWS DOWNSTREAM IN A CLOSED EXISTING STORM NETWORK.

OUT OF AREA 0.2143 AC, 0.0262 AC OF IMPERVIOUS AREA IS CONTROLLED AND DETAINED BY THE PLANTERS. DUE TO PROPOSED DEVELOPMENT THE RUNOFF DECREASES BY 0.11 AND 0.14 CFS IN 2 AND 10YR RESPECTIVELY. THUS, THE PROPOSED DEVELOPMENT WILL NOT HAVE ANY ADVERSE EFFECTS ONTO THE DOWNSTREAM PROPERTIES.

THUS, THE PROPOSED DEVELOPMENT WILL NOT HAVE ANY ADVERSE EFFECTS ONTO THE DOWNSTREAM PROPERTIES.

OVERLAND RELIEF NARRATIVE:

FROM THE HIGH POINT IN SUB AREA A, THE 100 YR FLOOD WILL FLOW AROUND THE PROPOSED HOUSE TO THE NORTH EAST TOWARDS THE CURB AND GUTTER ALONG MYERS CIRCLE S.W. THE RUNOFF FURTHER FLOWS TO THE EAST IN THE CURB AND GUTTER.

THE 100 YR FLOOD FROM SUB AREA B WILL FLOWS TO THE WEST TOWARDS THE EXISTING SWALE ON ADJACENT PROPERTY 24A. THE RUNOFF FURTHER FLOWS TO THE WEST TOWARDS THE CURB AND GUTTER ALONG NUTLEY ST S.W.

THE 100 YR FLOOD FROM SUB AREA P3 WILL FLOWS TO THE SOUTH TOWARDS THE EXISTING ONSITE INLET AND TOWARDS THE EXISTING INLET ON KINGSLEY ROAD S.W.

THE OVERLAND RELIEF PATH IS SHOWN BY FLOW ARROWS ON SHEET 3.

<u>PREDEVELOPED CONDITION</u>			
A" = 0.0257 AC			
IMP AREA = 0.0049 AC			
PER AREA = 0.0208 AC			
		0.41	
CW =		0.41	
I 2 = 5.23			
I 10 = 6.77			
Q2 = 0.06 CFS			
Q10 = 0.07 CFS			
<u>POST DEVELOPED CONDITION</u>			
CONTROLLED AREA A (BY PAVER) = 0.0068 AC			
IMP AREA = 0.0068 AC			
PER AREA = 0 AC			
		0.900	
CW =		0.9	
FROM PAVER = 0		CFS 2YR	
0		CFS 10YR	
UNCONTROLLED AREA A = 0.0272 AC			
IMP AREA = 0.0045 AC			
PER AREA = 0.0227 AC			
		0.399	
CW =		0.4	
I 2 = 5.23			
I 10 = 6.77			
Q2 = 0.06 CFS			
Q10 = 0.07 CFS			
<u>POST DEVELOPED ONSITE RUNOFF:</u>			
<u>From Area P1</u>			
Q2 = (0.000 + 0.06 - 0.06) =		0.00 CFS	
Q10 = (0.000 + 0.07 - 0.07) =		0.00 CFS	

PREDEVELOPED CONDITION			
B" = 0.5284 AC			
IMP AREA = 0.0390 AC			
PER AREA = 0.4894 AC			
0.34			
CW = 0.34			
I 2 = 5.23			
I 10 = 6.77			
Q2 = 0.94 CFS			
Q10 = 1.22 CFS			
POST DEVELOPED CONDITION			
CONTROLLED AREA B (BY PLANTER) = 0.1091 AC			
IMP AREA = 0.1091 AC			
PER AREA = 0.0000 AC			
0.900			
CW = 0.9			
FROM PLANTER = 0		CFS 2YR	
0		CFS 10YR	
UNCONTROLLED AREA A = 0.3811 AC			
IMP AREA = 0.0010 AC			
PER AREA = 0.3801 AC			
0.302			
CW = 0.3			
I 2 = 5.23			
I 10 = 6.77			
Q2 = 0.60 CFS			
Q10 = 0.77 CFS			
POST DEVELOPED ONSITE RUNOFF:			
<u>From Area P1</u>			
Q2 = (0.000 + 0.60 - 0.94) =		-0.34	CFS
Q10 = (0.000 + 0.77 - 1.22) =		-0.44	CFS

PREDEVELOPED CONDITION			
C" = 0.1844		AC	
IMP AREA = 0.0592		AC	
PER AREA = 0.1252		AC	
		0.49	
CW =	0.49		
I2 = 5.23			
I10 = 6.77			
Q2 = 0.47		CFS	
Q10 = 0.61		CFS	
POST DEVELOPED CONDITION			
CONTROLLED AREA C (BY PLANTER) = 0.0262 AC			
IMP AREA = 0.0262 AC			
PER AREA = 0 AC			
0.900			
CW =	0.9		
FROM PLANTER = 0		CFS	2YR
0		CFS	10YR
UNCONTROLLED AREA C = 0.1881 AC			
IMP AREA = 0.0200 AC			
PER AREA = 0.1681 AC			
0.364			
CW =	0.37		
I2 = 5.23			
I10 = 6.77			
Q2 = 0.36		CFS	
Q10 = 0.47		CFS	
POST DEVELOPED ONSITE RUNOFF:			
<u>From Area P1</u>			
Q2 = (0.000 + 0.36 - 0.47) =		-0.11	CFS
Q10 = (0.000 + 0.47 - 0.61) =		-0.14	CFS

CIVILAND, LLC

P.O. BOX 650206 STERLING, VIRGINIA 20165
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Farhang@civilandva.com

DESIGN BY: FM
CHKD BY: FM
DATE: DEC 2017

COMMONWEALTH OF VIRGINIA
FARHANG MOJGANI
Lic. No. 16844
PROFESSIONAL ENGINEER

SWM & DRAINAGE DIVIDE PLAN
RESUBDIVISION OF LOTS 25 AND 28 BLOCK K,
SECTION 8 VIENNA WOODS
HUNTER MILL TOWN OF VIENNA DISTRICT
TOWN OF VIENNA, VIRGINIA

NO. DATE REVISION
1. JAN 2018 TOWN FIRST REVIEW COMMENTS
2. MAR 2018 TOWN REVIEW COMMENTS

SHEET NO. 6 OF 12
FILE NO. 17-14

Worksheet 4: Graphical Peak Discharge method

Project911 MYERS CIRCLE-SW

ByFM

DateDEC-2017

LocationTOWN OF VIENNA

CheckedFM

DateDEC-2017

Check one: ☒ Present ☐ Developed

DA-A

1. Data

Drainage area A_m = 0.000053 mi² (acres/640)

Runoff curve number CN = 83 (From RRM)

Time of concentration T_c = 0.083 hr (From worksheet 3)

Rainfall distribution = II (I, IA, II III)

Pond and swamp areas sprea throughout watershed = 0.00 percent of A_m (0.00 acres or mi² covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
(Use CN with table 4-1)

5. Compute I_a/P

6. Unit peak discharge, q_p csm/in
(Use T_c and I_a/P with exhibit 4-II)

7. Runoff, Q in
(From worksheet 2) Figure 2-6

8. Pond and swamp adjustment factor, F_p
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond ans swamp area.)

9. Peak discharge, q_p ft³/s
(Where $q_p = q_u A_m Q F_p$)

Storm #1Storm #2Storm #3

1210

2.623.174.87

0.4100.4100.410

0.1560.1290.084

9869931000

1.151.583.06

1.01.01.0

0.060.080.16

Worksheet 4: Graphical Peak Discharge method

Project911 MYERS CIRCLE-SW

ByFM

DateDEC-2017

LocationTOWN OF VIENNA

CheckedFM

DateDEC-2017

Check one: ☐ Present ☒ Developed

DA-A

1. Data

Drainage area A_m = 0.000053 mi² (acres/640)

Runoff curve number CN = 85 (From RRM)

Time of concentration T_c = 0.083 hr (From worksheet 3)

Rainfall distribution = II (I, IA, II III)

Pond and swamp areas sprea throughout watershed = 0.00 percent of A_m (0.00 acres or mi² covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
(Use CN with table 4-1)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
(Use T_c and I_a/P with exhibit 4-II)

7. Runoff, Q in
(From worksheet 2) Figure 2-6

8. Pond and swamp adjustment factor, F_p
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond ans swamp area.)

9. Peak discharge, q_p ft³/s
(Where $q_p = q_u A_m Q F_p$)

Storm #1Storm #2Storm #3

1210

2.623.174.87

0.3530.3530.353

0.1350.1110.072

9919971000

1.271.733.25

1.01.01.0

0.070.090.17

Worksheet 4: Graphical Peak Discharge method

Project911 MYERS CIRCLE-SW

ByFM

DateDEC-2017

LocationTOWN OF VIENNA

CheckedFM

DateDEC-2017

Check one: ☒ Present ☐ Developed

DA-B

1. Data

Drainage area A_m = 0.000765 mi² (acres/640)

Runoff curve number CN = 82 (From RRM)

Time of concentration T_c = 0.083 hr (From worksheet 3)

Rainfall distribution = II (I, IA, II III)

Pond and swamp areas sprea throughout watershed = 0.00 percent of A_m (0.00 acres or mi² covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
(Use CN with table 4-1)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
(Use T_c and I_a/P with exhibit 4-II)

7. Runoff, Q in
(From worksheet 2) Figure 2-6

8. Pond and swamp adjustment factor, F_p
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond ans swamp area.)

9. Peak discharge, q_p ft³/s
(Where $q_p = q_u A_m Q F_p$)

Storm #1Storm #2Storm #3

1210

2.623.174.87

0.4390.4390.439

0.170.140.09

9839901000

1.091.512.96

1.01.01.0

0.821.142.26

Worksheet 4: Graphical Peak Discharge method

Project911 MYERS CIRCLE-SW

ByFM

DateDEC-2017

LocationTOWN OF VIENNA

CheckedFM

DateDEC-2017

Check one: ☐ Present ☒ Developed

DA-B

1. Data

Drainage area A_m = 0.000765 mi² (acres/640)

Runoff curve number CN = 83 (From RRM)

Time of concentration T_c = 0.083 hr (From worksheet 3)

Rainfall distribution = II (I, IA, II III)

Pond and swamp areas sprea throughout watershed = 0.00 percent of A_m (0.00 acres or mi² covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
(Use CN with table 4-1)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
(Use T_c and I_a/P with exhibit 4-II)

7. Runoff, Q in
(From worksheet 2) Figure 2-6

8. Pond and swamp adjustment factor, F_p
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond ans swamp area.)

9. Peak discharge, q_p ft³/s
(Where $q_p = q_u A_m Q F_p$)

Storm #1Storm #2Storm #3

1210

2.623.174.87

0.4100.4100.410

0.1560.1290.084

9869931000

1.151.583.06

1.01.01.0

0.861.202.34

DA-A

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre)	0.034		1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.62	2.62	4.87	4.87		
CN	83	85	83	85		
S=1000/CN-10	2.05	1.76	2.05	1.76		
0.2S	0.41	0.35	0.41	0.35		
RV=(P-0.2S) ² /(P-0.2S)+S	1.15	1.27	3.06	3.25		

$Q_{Post Development} \leq I.F. * (Q_{pre-development} * RV_{pre-development}) / RV_{Developed}$

I.F		0.9	
CHANNEL PROTECTION		FLOOD CONTROL	
Qpre-development	0.06	Qpre-development	0.16
QPost Development	0.07	QPost Development	0.17
RVPost Development (with runoff reduction)	1.26	RVPost Development (with runoff reduction)	3.26
Qallowable/QPost Development	0.05	Qallowable	0.15
Qallowable/QPost Development	0.78	Qallowable/QPost Development	0.88
Vs/Vr	0.18	Vs/Vr	0.18
Vs	0.23	Vs	0.59
Storage required (cf)	28	Storage required (cf)	72

DA-B

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre)	0.4902		1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.62	2.62	4.87	4.87		
CN	82	83	82	83		
S=1000/CN-10	2.20	2.05	2.20	2.05		
0.2S	0.44	0.41	0.44	0.41		
RV=(P-0.2S) ² /(P-0.2S)+S	1.09	1.15	2.96	3.06		

$Q_{Post Development} \leq I.F. * (Q_{pre-development} * RV_{pre-development}) / RV_{Developed}$

I.F		0.9	
CHANNEL PROTECTION		FLOOD CONTROL	
Qpre-development	0.82	Qpre-development	2.26
QPost Development	0.86	QPost Development	2.34
RVPost Development (with runoff reduction)	1.13	RVPost Development (with runoff reduction)	3.07
Qallowable	0.79	Qallowable	2.18
Qallowable/QPost Development	0.92	Qallowable/QPost Development	0.93
Vs/Vr	0.18	Vs/Vr	0.18
Vs	0.20	Vs	0.55
Storage required (cf)	362	Storage required (cf)	983

DA-C

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre)	0.2143		1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.62	2.62	4.87	4.87		
CN	83	83	83	83		
S=1000/CN-10	2.05	2.05	2.05	2.05		
0.2S	0.41	0.41	0.41	0.41		
RV=(P-0.2S) ² /(P-0.2S)+S	1.15	1.15	3.06	3.06		

$Q_{Post Development} \leq I.F. * (Q_{pre-development} * RV_{pre-development}) / RV_{Developed}$

I.F		0.8	
CHANNEL PROTECTION		FLOOD CONTROL	
Qpre-development	0.38	Qpre-development	1.02
QPost Development	0.38	QPost Development	1.02
RVPost Development (with runoff reduction)	1.16	RVPost Development (with runoff reduction)	3.11
Qallowable	0.38	Qallowable	1.00
Qallowable/QPost Development	0.99	Qallowable/QPost Development	0.98
Vs/Vr	0.18	Vs/Vr	0.18
Vs	0.21	Vs	0.56
Storage required (cf)	162	Storage required (cf)	435

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(703) 404-0363 • Fax (703) 404-0443

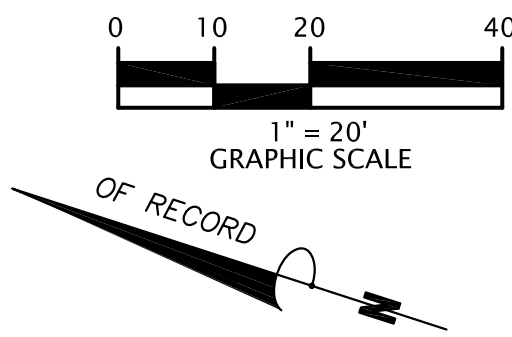
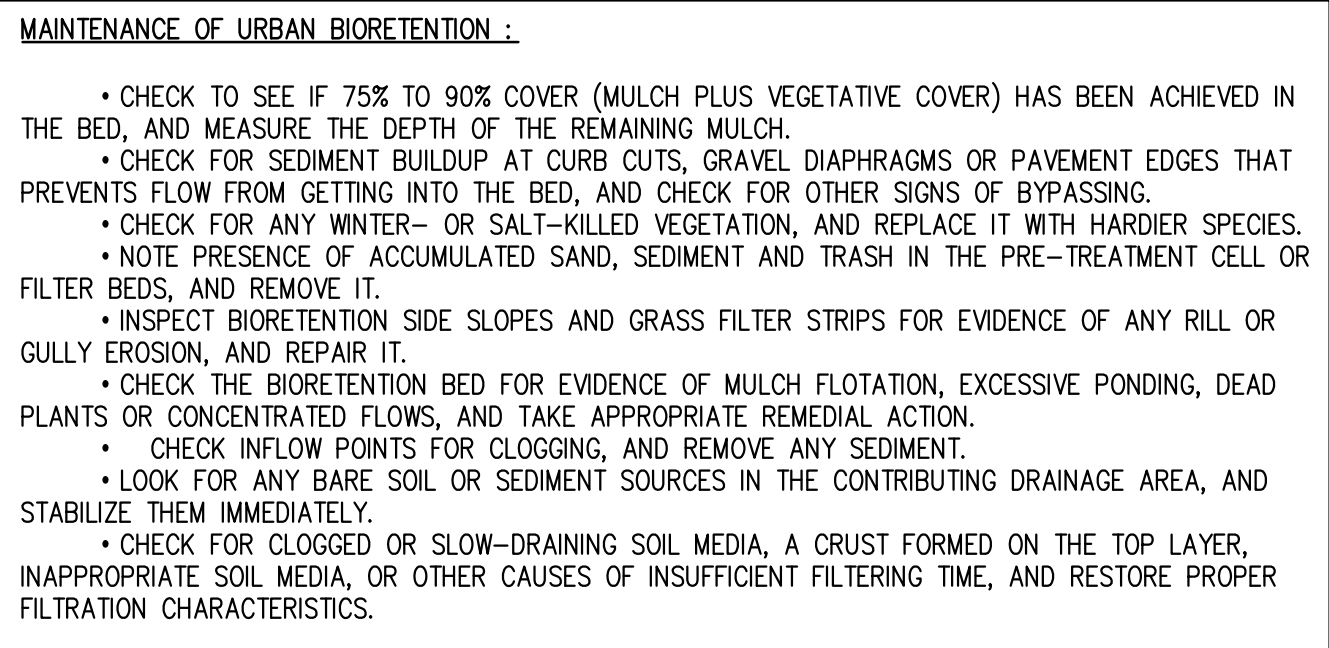
Farhang@civilandva.com

DESIGN BY:

CHKD BY:

ENERGY BALANCE CALCULATION
RESUBDIVISION OF LOTS 25 AND 28 BLOCK K,
SECTION 8 VIENNA WOODS

HUNTER MILL TOWN OF VIENNA DISTRICT
TOWN OF VIENNA, VIRGINIA

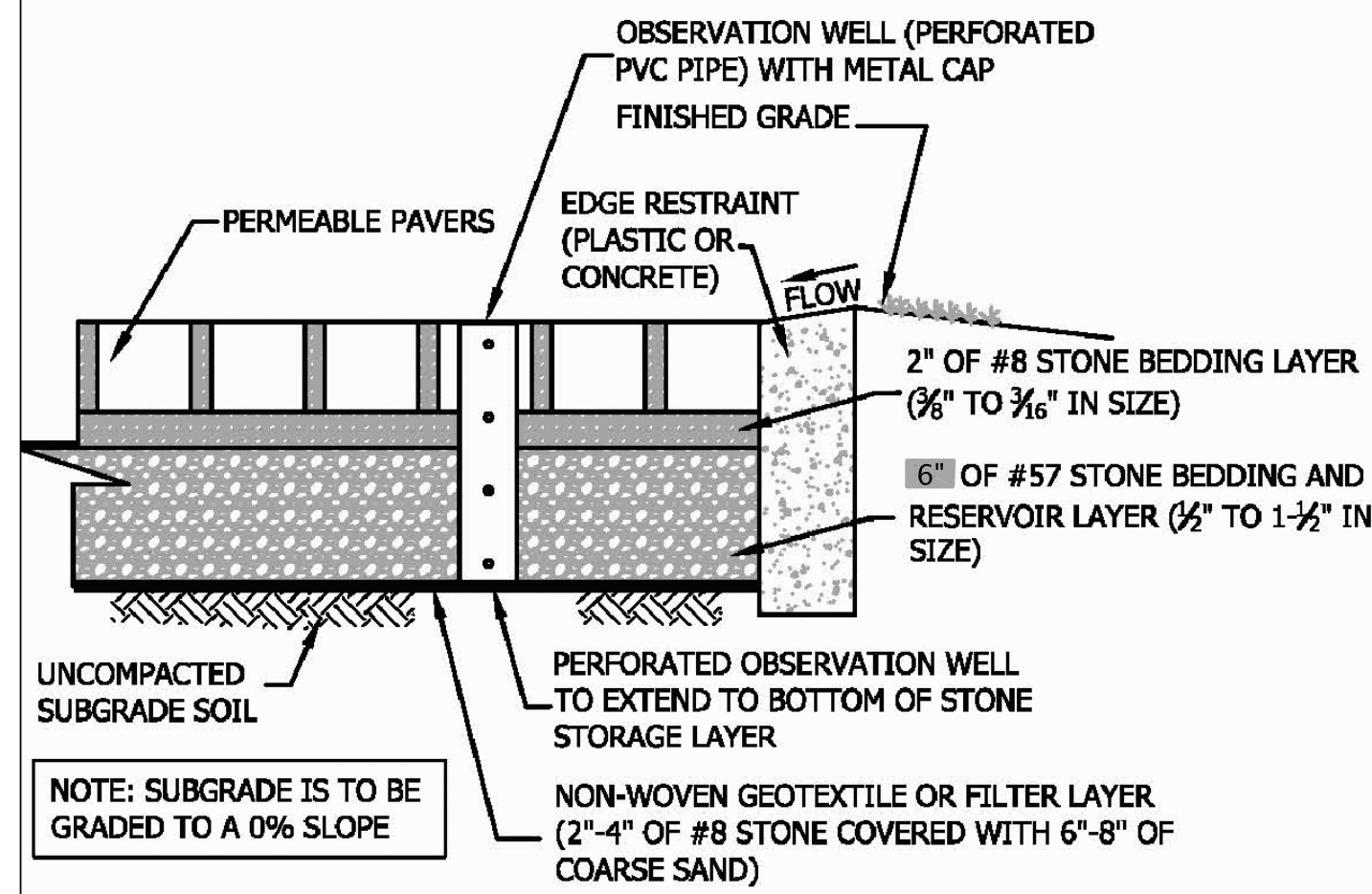


Storm Water Planter Design Tabulation										
Planter Number	Roof Area	Volume Required	Effective Depth	Surface Area required	Planter Box			Volume Provided	Number Of planter/ Shrubs	Type Of Planter
					Length	Width	Height			
1	507	0.95 x 507 x (1/12) 40.14	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	40.14 / 1.84 = 21.81	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
2	506	0.95 x 506 x (1/12) 40.06	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	40.06 / 1.84 = 21.77	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
3	506	0.95 x 506 x (1/12) 40.06	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	40.06 / 1.84 = 21.77	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
4	506	0.95 x 506 x (1/12) 40.06	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	40.06 / 1.84 = 21.77	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
5	500	0.95 x 500 x (1/12) 39.58	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	39.58 / 1.84 = 21.51	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
6	500	0.95 x 500 x (1/12) 39.58	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	39.58 / 1.84 = 21.51	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
7	864	0.95 x 864 x (1/12) 68.40	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	68.40 / 1.84 = 37.17	11	4	3.83	(11.00 x 4.00 x 1.84) 80.96	7	SWAMP AZEALA
8	864	0.95 x 864 x (1/12) 68.40	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	68.40 / 1.84 = 37.17	11	4	3.83	(11.00 x 4.00 x 1.84) 80.96	7	SWAMP AZEALA
9	571	0.95 x 571 x (1/12) 45.20	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	45.20 / 1.84 = 24.57	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA
10	571	0.95 x 571 x (1/12) 45.20	1 + (0.25 X 1.75) + (1 X 0.4) 1.84	45.20 / 1.84 = 24.57	9	3	3.83	(9.00 x 3.00 x 1.84) 49.68	5	SWAMP AZEALA

Dry Well Design Tabulation										
Drywell Number	For Structure	Volume Provided (CF)	Volume Ratio	Remaining Run-off Volume - CF (From RRM sheet)	Treatment volume required (CF)	Length (FT)	Width (FT)	Height (FT)	Void Ratio	Treatment volume Provided (CF)
Drywell-1	For Planter 1, 2, 3 & 4	(9.00 x 3.00 x 1.84) + (9.00 x 3.00 x 1.84) + (9.00 x 3.00 x 1.84) + (9.00 x 3.00 x 1.84)	0.432	226	25 % of 226 x 0.4320	7.00	3.00	3.00	0.40	25.20
		198.72			24.41					
Drywell-3	For Planter 5 & 6	(9.00 x 3.00 x 1.84) +(9.00 x 3.00 x 1.84)	0.216		25 % of 226 x 0.2160	3.50	3.00	3.00	0.4	12.6
		99.36			12.20					
Drywell-5	For Planter 7 & 8	(11.00 x 4.00 x 1.84) +(11.00 x 4.00 x 1.84)	0.352		25 % of 226 x 0.3520	5.75	3.00	3.00	0.4	20.7
		161.92			19.89					
Drywell-4	For Planter 9 & 10	(9.00 x 3.00 x 1.84) +(9.00 x 3.00 x 1.84)	1.000	54	25 % of 54 x 1.0000	4.00	3.00	3.00	0.4	14.4
		99.36		13.50						

For Planter - 1(3' X 9')		For Planter - 2(3' X 9')		For Planter - 3(3' X 9')		For Planter - 4(3' X 9')		For Planter - 5(3' X 9')	
Length	= 9 FT	Length	= 9 FT	Length	= 9 FT	Length	= 9 FT	Length	= 9 FT
Width	= 3 FT	Width	= 3 FT	Width	= 3 FT	Width	= 3 FT	Width	= 3 FT
Surface Area	= 27 SQ. FT	Surface Area	= 27 SQ. FT	Surface Area	= 27 SQ. FT	Surface Area	= 27 SQ. FT	Surface Area	= 27 SQ. FT
For Ponding:		For Ponding:		For Ponding:		For Ponding:		For Ponding:	
Ponding Depth	= 1 FT	Ponding Depth	= 1 FT	Ponding Depth	= 1 FT	Ponding Depth	= 1 FT	Ponding Depth	= 1 FT
Storage	= 27	Storage	= 27	Storage	= 27	Storage	= 27	Storage	= 27
(27 X 1 X 1)		(27 X 1 X 1)		(27 X 1 X 1)		(27 X 1 X 1)		(27 X 1 X 1)	
Filter Media		Filter Media		Filter Media		Filter Media		Filter Media	
Filter Media Depth	= 1.8 FT	Filter Media Depth	= 1.8 FT	Filter Media Depth	= 1.8 FT	Filter Media Depth	= 1.8 FT	Filter Media Depth	= 1.8 FT
Storage	= 12 CFT	Storage	= 12 CFT	Storage	= 12 CFT	Storage	= 12 CFT	Storage	= 12 CFT
(27 X 1.75 X 0.25)		(27 X 1.75 X 0.25)		(27 X 1.75 X 0.25)		(27 X 1.75 X 0.25)		(27 X 1.75 X 0.25)	
Gravel Sump		Gravel Sump		Gravel Sump		Gravel Sump		Gravel Sump	
Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT
Storage	= 11 CFT	Storage	= 11 CFT	Storage	= 11 CFT	Storage	= 11 CFT	Storage	= 11 CFT
(27 X 1 X 0.4)		(27 X 1 X 0.4)		(27 X 1 X 0.4)		(27 X 1 X 0.4)		(27 X 1 X 0.4)	
Total Storage Of Planter	= 50 CFT	Total Storage Of Planter	= 50 CFT	Total Storage Of Planter	= 50 CFT	Total Storage Of Planter	= 50 CFT	Total Storage Of Planter	= 50 CFT

For Planter - 6(3' X 9')		For Planter - 9 (9' X 3')		For Planter - 10 (9' X 3')		For Planter - 7 (4' X 11')		For Planter - 8 (4' X 11')	
Length	= 9 FT	Length	= 9 FT	Length	= 9 FT	Length	= 11 FT	Length	= 11 FT
Width	= 3 FT	Width	= 3 FT	Width	= 3 FT	Width	= 4 FT	Width	= 4 FT
Surface Area	= 27 SQ. FT	Surface Area	= 40 SQ. FT	Surface Area	= 40 SQ. FT	Surface Area	= 44 SQ. FT	Surface Area	= 44 SQ. FT
For Ponding:		For Ponding:		For Ponding:		For Ponding:		For Ponding:	
Ponding Depth	= 1 FT	Ponding Depth	= 1 FT	Ponding Depth	= 1 FT	Ponding Depth	= 1 FT	Ponding Depth	= 1 FT
Storage	= 27	Storage	=	Storage	=	Storage	= 44	Storage	= 44
(27 X 1 X 1)		(40 X 1 X 1)		(40 X 1 X 1)		(44 X 1 X 1)		(44 X 1 X 1)	
Filter Media		Filter Media		Filter Media		Filter Media		Filter Media	
Filter Media Depth	= 1.8 FT	Filter Media Depth	= 2.5 FT	Filter Media Depth	= 2.5 FT	Filter Media Depth	= 1.8 FT	Filter Media Depth	= 1.8 FT
Storage	= 12 CFT	Storage	= 25 CFT	Storage	= 25 CFT	Storage	= 19 CFT	Storage	= 19 CFT
(27 X 1.75 X 0.25)		(40 X 2.5 X 0.25)		(40 X 2.5 X 0.25)		(44 X 1.75 X 0.25)		(44 X 1.75 X 0.25)	
Gravel Sump		Gravel Sump		Gravel Sump		Gravel Sump		Gravel Sump	
Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT	Gravel Sump Depth	= 1 FT
Storage	= 11 CFT	Storage	= 16 CFT	Storage	= 16 CFT	Storage	= 18 CFT	Storage	= 18 CFT
(27 X 1 X 0.4)		(40 X 1 X 0.4)		(40 X 1 X 0.4)		(44 X 1 X 0.4)		(44 X 1 X 0.4)	
Total Storage Of Planter	= 50 CFT	Total Storage Of Planter	= 81 CFT	Total Storage Of Planter	= 81 CFT	Total Storage Of Planter	= 81 CFT	Total Storage Of Planter	= 81 CFT



MAINTENANCE OF PERMEABLE PAVEMENT:

MAINTENANCE OF PERMEABLE PAVEMENT IS DRIVEN BY ANNUAL INSPECTIONS THAT EVALUATE THE CONDITION AND PERFORMANCE OF THE PRACTICE. THE FOLLOWING ARE SUGGESTED ANNUAL MAINTENANCE INSPECTION POINTS FOR PERMEABLE PAVEMENTS:

- THE DRAWDOWN RATE SHOULD BE MEASURED AT THE OBSERVATION WELL FOR THREE (3) DAYS FOLLOWING

STORM EVENT IN EXCESS OF 1/2 INCH IN DEPTH. IF
STANDING WATER IS STILL OBSERVED IN THE WELL AFTER
THREE DAYS, THIS IS A CLEAR SIGN THAT CLOGGING IS A
PROBLEM.

- INSPECT THE SURFACE OF THE PERMEABLE PAVEMENT FOR EVIDENCE OF SEDIMENT DEPOSITION, ORGANIC DEBRIS, STAINING OR PONDING THAT MAY INDICATE SURFACE CLOGGING. IF ANY SIGNS OF CLOGGING ARE NOTED, SCHEDULE A VACUUM SWEEPER (NO BROOMS OR WATER SPRAY) TO REMOVE DEPOSITED MATERIAL. THEN, TEST SECTIONS BY POURING WATER FROM A FIVE GALLON BUCKET TO ENSURE THEY WORK.

VA DEQ STORMWATER DESIGN SPECIFICATION NO. 7

PERMEABLE PAVEMENT
VERSION 1.8, MARCH 1, 2011 PAGE 23 OF 25

INSPECT THE STRUCTURAL INTEGRITY OF THE PAVEMENT SURFACE, LOOKING FOR SIGNS OF SURFACE DEGRADATION, SUCH AS CURB LUMPING, CRACKING, SPALLING OR BROKEN PAVERS, REPLACE OR REPAIR AFFECTED AREAS, AS NECESSARY.

- CHECK INLETS, PRETREATMENT CELLS AND ANY FLOW DIRECTION STRUCTURES FOR SEDIMENT BUILDUP AND STRUCTURAL DAMAGE. NOTE IF ANY SEDIMENT NEEDS TO BE REMOVED.

• CONTACT THE CONDITION OF THE OBSERVATION WELL AND MAKE SURE IT IS STILL CAPPED.

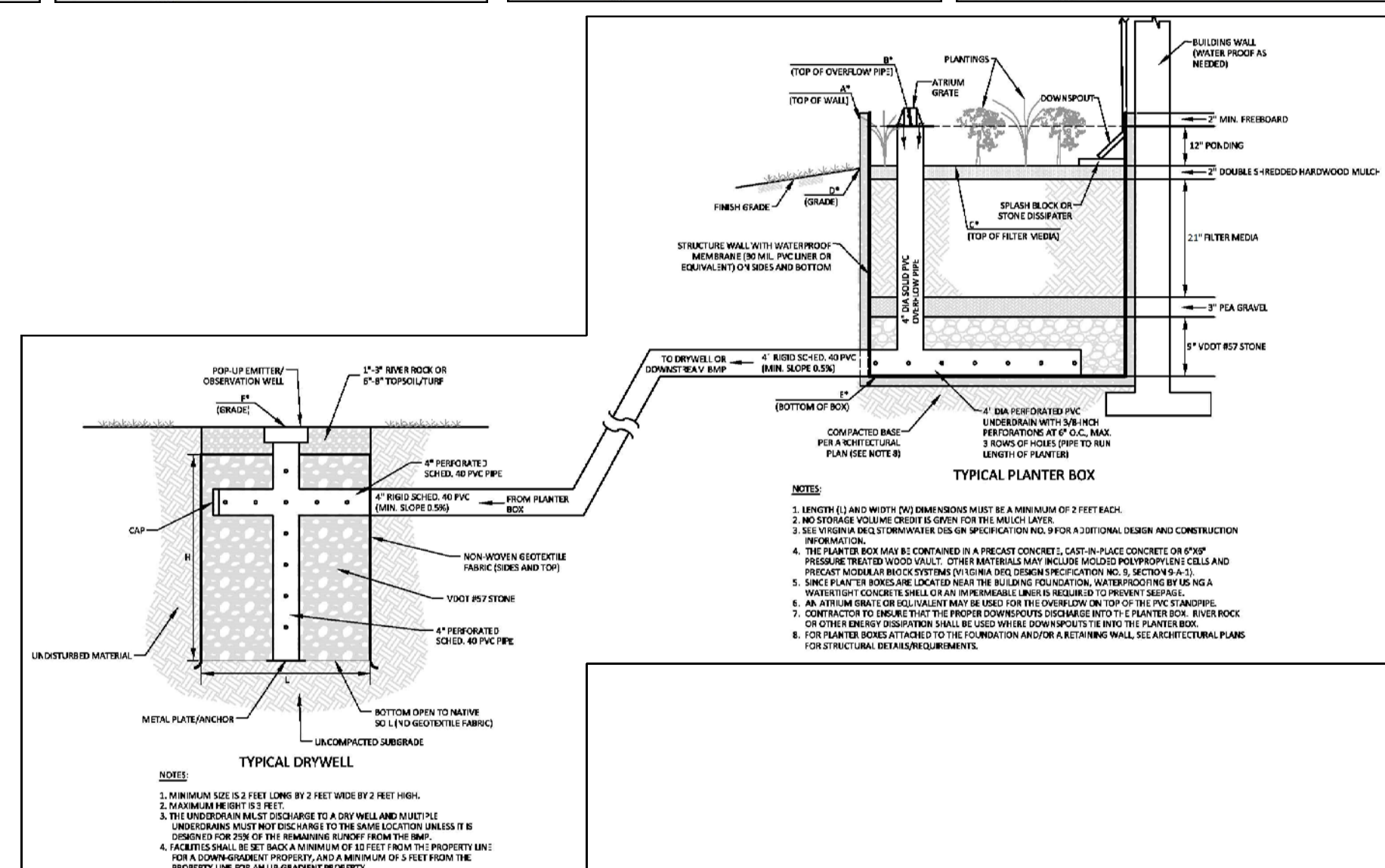
• GENERALLY INSPECT ANY CONTRIBUTING DRAINAGE AREA FOR ANY CONTROLLABLE SOURCES OF SEDIMENT OR EROSION.

URBAN BMP DESIGN DATA						
PLANTER BOX ID	ELEVATION					
	A	B	C	D	E	F
1	339.00	338.84	337.84	338.00	334.92	332.80
2	337.38	337.22	336.22	334.70	333.30	332.80
3	338.50	338.34	337.34	336.40	334.42	333.30
4	337.88	337.72	336.72	334.85	333.80	333.30
5	336.92	336.76	335.76	333.50	332.84	331.85
6	336.43	336.27	335.27	332.90	332.35	331.85
9	337.55	337.39	336.39	333.10	332.72	332.00
10	338.33	338.17	337.17	333.10	333.50	332.00
7	334.78	334.62	333.62	331.25	330.70	330.20
8	335.20	335.04	334.04	333.00	331.12	330.20

STOARGE REQUIRED FOR DA-A = 28 CFT (BY ENERGY BALANCE CALCULTION ON SHEET 07)
STORAGE PROVIDED (BY PERMEABLE DRIVEWAY) = $0.5 \times 296 \times 0.4 = 59$ CFT
TOTAL STORAGE PROVIDED = 59 CFT > 28 CFT

STOARGE REQUIRED FOR DA-B = 362 CFT (BY ENERGY BALANCE CALCULATION ON SHEET 07
STORAGE PROVIDED (BY PLANTER) = (50 X 6) + (81 X 2) = 462 CFT
TOTAL STORAGE PROVIDED = 462 CFT > 362 CFT

STOARGE REQUIRED FOR DA-C = 162 CFT (BY ENERGY BALANCE CALCULATION ON SHEET 07)
STORAGE PROVIDED (BY PLANTER) = (81 X 2) = 162 CFT
TOTAL STORAGE PROVIDED = 162 CFT > 162 CFT



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

© 2011 BMP Standards and Specifications

© 2013 Draft BMP Standards and Specifications

Project Name: 911 Myers CIR, SW

Date: OCT, 2017

CLEAR ALL (Outgoing)

data input cells

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Pre-Development Land Cover (acres)

Post-Development Land Cover (acres)

Constants

Runoff Coefficients (Rv)

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

LAND COVER SUMMARY -- POST DEVELOPMENT

Treatment Volume and Nutrient Load

Post-Development Requirement for Site Area

Nitrogen Loads (Informational Purposes Only)

Drainage Area A

Drainage Area B

Drainage Area C

Site Results (Water Quality Compliance)

Area Checks

Site Treatment Volume (ft³)

Runoff Reduction Volume and TP By Drainage Area

Nitrogen Load Reduction Achieved (lb/yr)

Total Phosphorus

Site Results (Water Quality Compliance)

Area Checks

Site Treatment Volume (ft³)

Runoff Reduction Volume and TP By Drainage Area

Nitrogen Load Reduction Achieved (lb/yr)

Total Phosphorus

Runoff Volume and Curve Number Calculations

Drainage Area Curve Numbers and Runoff Depths*

Drainage Area A

Drainage Area B

Drainage Area C

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

BMP Design Specifications List: 2013 Draft Stds & Specs

Update Summary Sheet

Print Preview

Print

Site Summary

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

Post-ReDevelopment Land Cover (acres)

Site Tv and Land Cover Nutrient Loads

Site Compliance Summary

Drainage Area Summary

Drainage Area Compliance Summary

Drainage Area A Summary

Drainage Area B Summary

Drainage Area C Summary

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img@civiland.com

DATE DEC 2017

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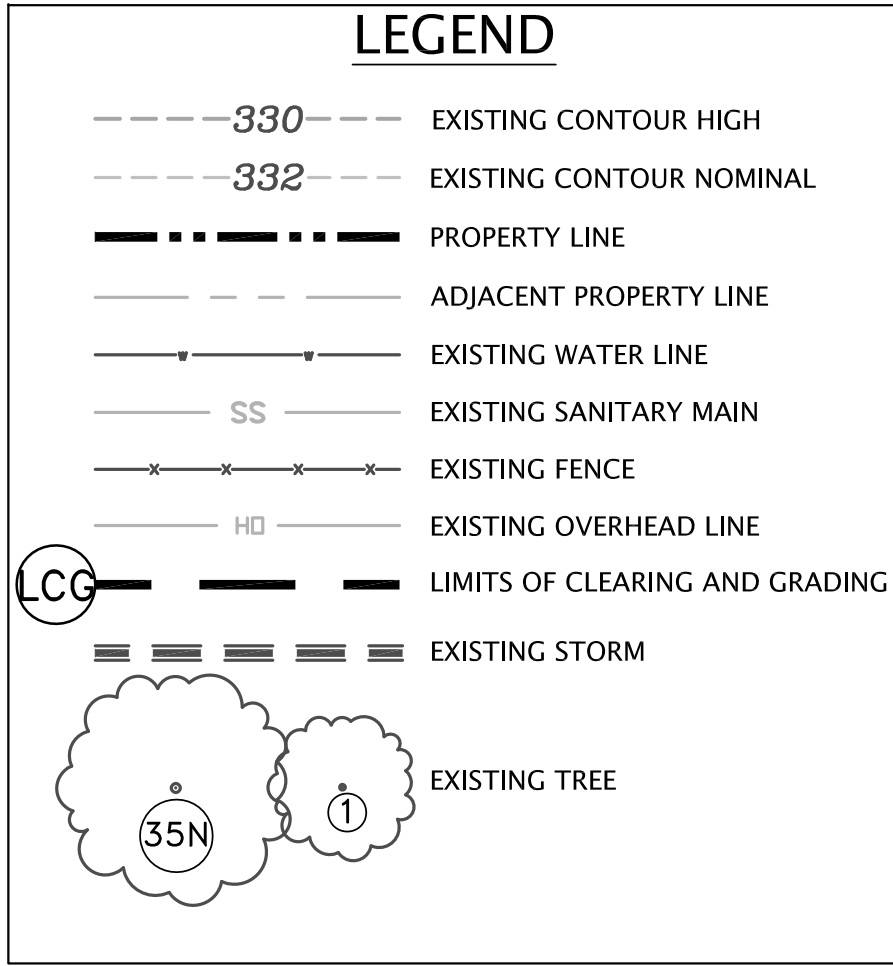
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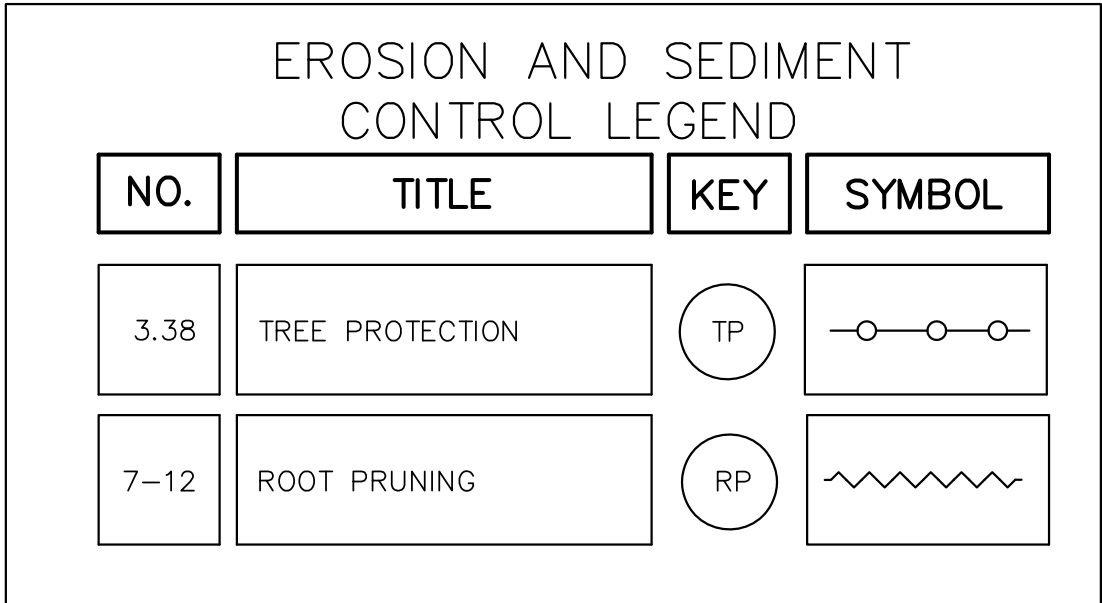
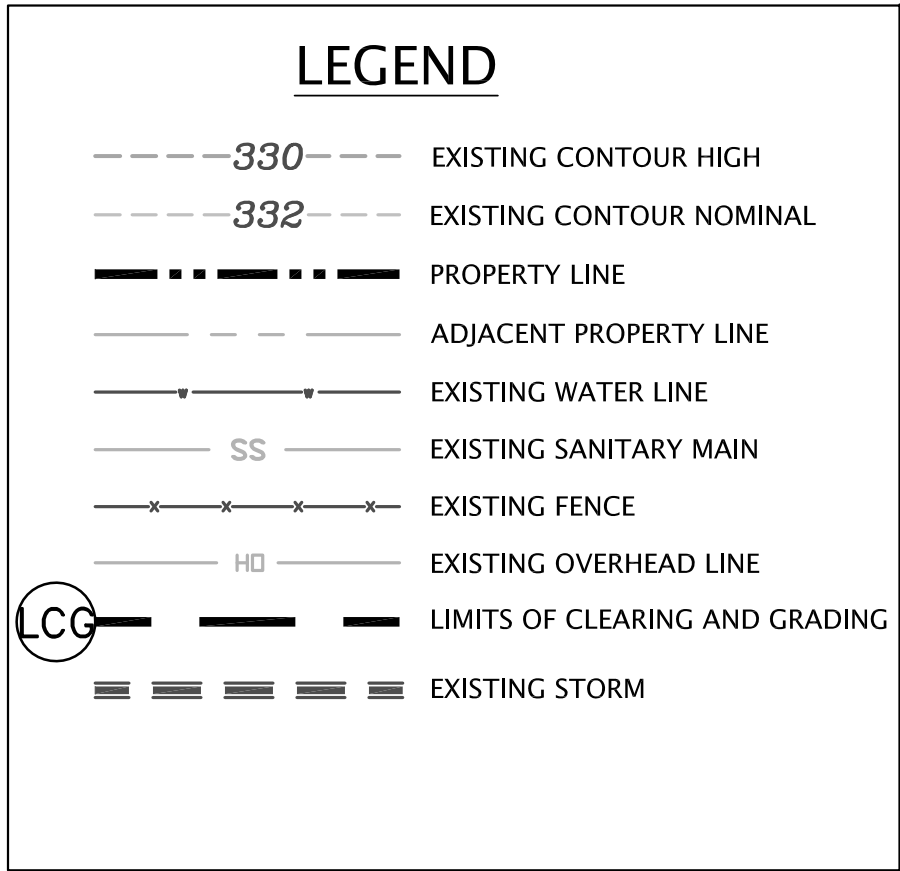
COMMONWEALTH OF VIRGINIA

FARHANG MOJGANI

Lic. No. 16844

PROFESSIONAL ENGINEER

[illegible]



Tree List for 713 Kingsley Rd. SW, Vienna, VA						
Prepared by: Bill Becker, ISA Certified Arborist # MA-0216A October 23, 2017						
Lot size = 11,811 s. f. requiring 2,362 s. f. tree canopy.						
Preserved tree canopy = 0 s. f.						
N denotes neighbor's tree. E denotes City ROW tree.						
Tree #	Common Name Botanical name	DBH	Condition	Life Exp.	Preservation Measures	Canopy Sq. Ft.
28	Red Maple <i>Acer rubrum</i>	40"	Fair, has cavity	>7	Remove – within limits of disturbance.	N/A
29	Red Maple <i>Acer rubrum</i>	28"	Good	>10	Remove – within limits of disturbance.	N/A
30	Crab Apple <i>Malus sylvestris</i>	6"	Fair	>10	Remove – within limits of disturbance.	N/A
31	Eastern Redcedar <i>Juniperus virginiana</i>	16"	Good	>10	Remove – within limits of disturbance.	N/A
32	Arbor Vitae <i>Thuja occidentalis</i>	20"	Good	>10	Remove – within limits of disturbance.	N/A
33	Kwanzan Cherry <i>Prunus kwanzan</i>	16"	Good	>10	Remove – within limits of disturbance.	N/A
34N	Red Maple <i>Acer rubrum</i>	16"	Good	>10	Save – install protective fence. Root prune along fence.	N/A
35N	Red Maple <i>Acer rubrum</i>	26"	Good	>10	Save – install protective fence. Root prune along fence.	N/A

Becker Landscaping & Tree Service

10698 Moore Dr.
Manassas, Va. 20111
703-330-5204

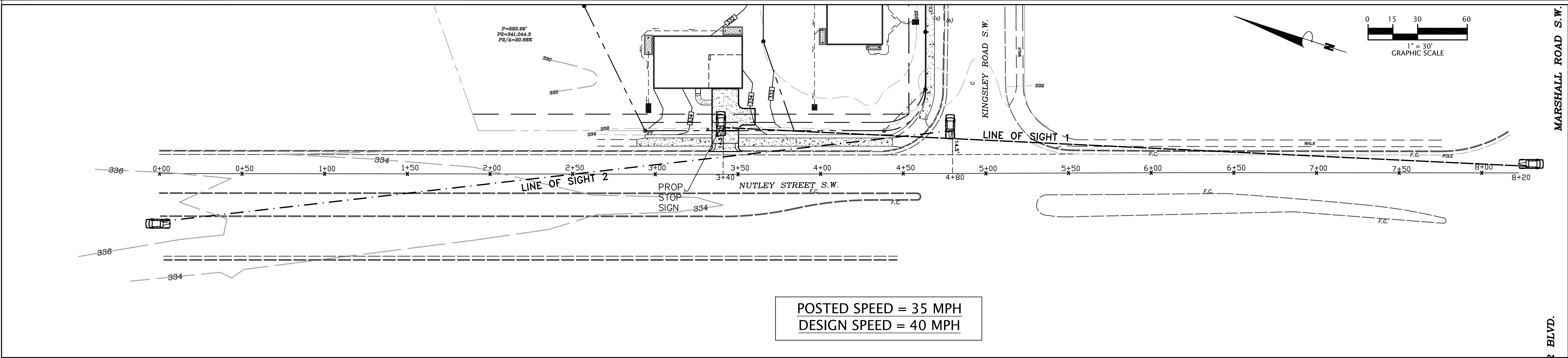
Narrative of Tree Preservation

713 Kinsley Rd. SW, Vienna, Va.

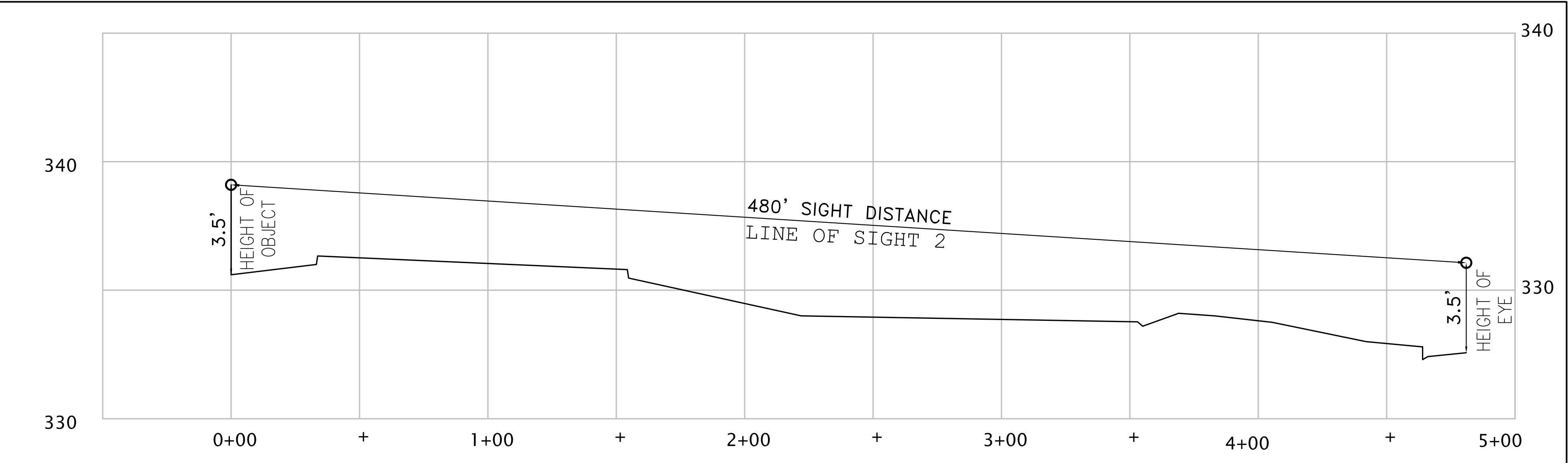
1. All tree preservation activities shall be done according to the Town of Vienna Tree Protection, Preservation and Replacement Guide dated May 2014 (Updated September, 2015) and meet industry standards as specified by the International Society of Arboriculture and the American National Standards Institute. Any treatments or activities specified not meeting these standards will be as specified and approved by the Vienna Urban Forester.
2. Excavation and demolition shall occur. Prior to excavation super silk fence which will also function as tree protective fence shall be installed. Signs shall be placed every 50' indicating the tree protection areas. No activity, materials or equipment shall go beyond the tree protective fence which shall remain in place until completion of construction.
3. Root pruning shall be performed for trees # 34N and 35N. This will be a trench 18" deep with the roots cut so there is no tearing or pulling of roots beyond the trench wall.
4. Due to the scope of construction all of the existing trees are to be removed. The canopy coverage requirements will be met through the planting of trees.
5. There are no dead or hazardous trees to be removed in the tree preservation area.
6. There are no human health or safety risks in forested areas.
7. There are no "Heritage", "Specimen", "Memorial" or "Street" trees on this lot or neighboring lots.
8. New trees and shrubs shall be planted according to the Town of Vienna Tree Preservation and Planting Specifications Manual.

Bill Becker

ISA Certified Arborist # MA - 0216A
October 23, 2017

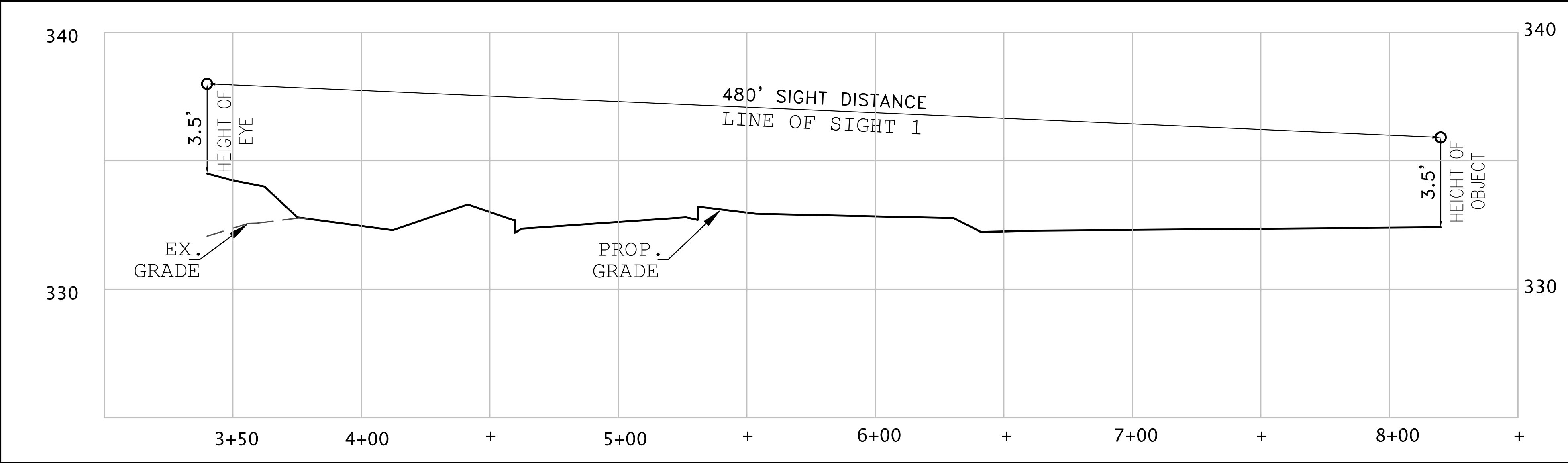


SIGHT DISTANCE PROFILE



PROFILE OF LINE OF SIGHT 2
(FROM INTERSECTION OF NUTLY STREET S.W. AND KINGSLEY ROAD S.W.)

SCALE: HOR. 1"=30'; VER. 1"=3'



PROFILE OF LINE OF SIGHT 1
(FROM THE ENTRANCE OF LOT 28-B)

NO.		DATE	REVISION
1.	JAN 2018	TOWN FIRST REVIEW COMMENTS	
2.	MAR 2018	TOWN REVIEW COMMENTS	
DESIGN BY:		CHKD BY:	DATE
FM		FM	DEC 2017

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(703) 404-0363 • Fax (703) 404-0443
Farhang@civilandva.com

FARHANG MOJGANI
Lic. No. 16844
PROFESSIONAL ENGINEER

SCALE: AS SHOWN

SIGHT DISTANCE PLAN
RESUBDIVISION OF LOTS 25 AND 28 BLOCK K,
SECTION 8 VIENNA WOODS
HUNTER MILL TOWN OF VIENNA DISTRICT
TOWN OF VIENNA, VIRGINIA

SHEET NO.	12	OF 12
FILE NO.	17-14	